(No Model.)

S. W. SHOREY.

BUTTON FASTENER.

No. 371,381. Patented Oct. 11, 1887.

Fig: 1.

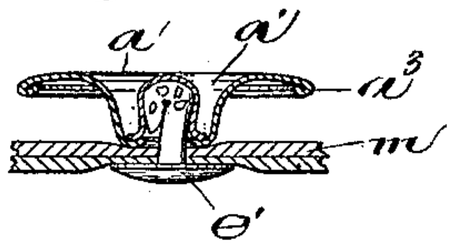


Fig: 2.

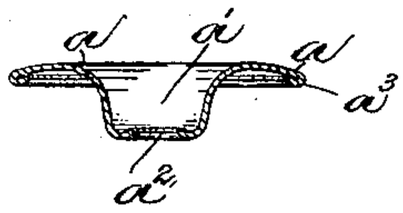


Fig: 3.

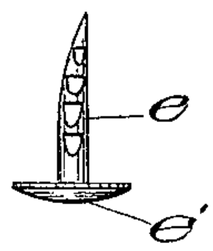


Fig: 4. Fig: 5.

Fig: 7.

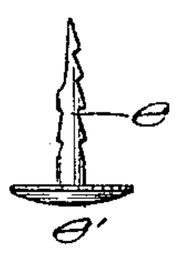


Fig: 8.

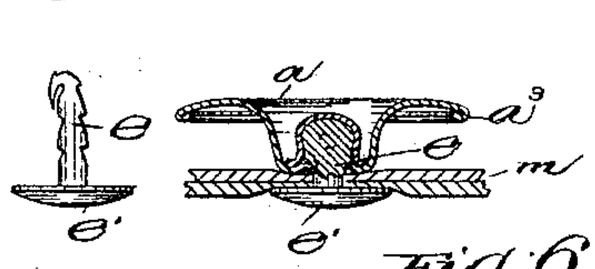


Fig: 9.

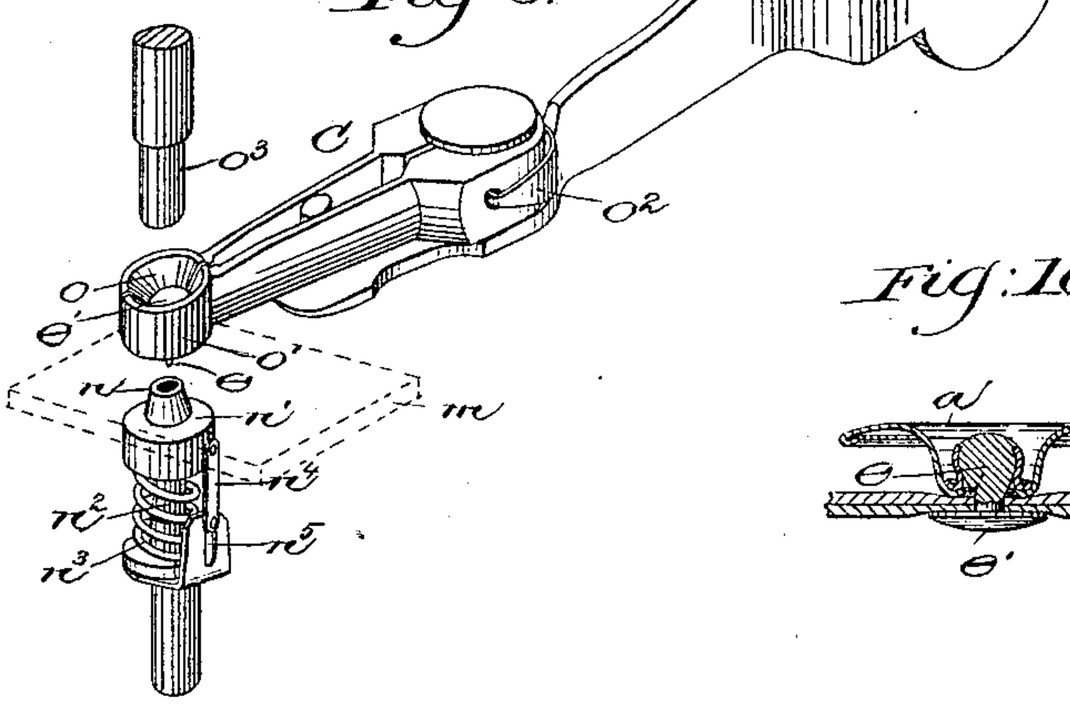
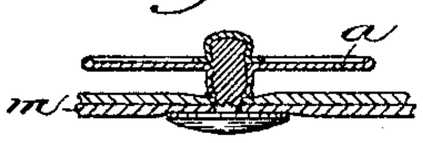


Fig: 10.

Fig: 11.



Witnesses.
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UNITED STATES PATENT OFFICE.

SAMUEL W. SHOREY, OF BOSTON, MASSACHUSETTS.

BUTTON-FASTENER.

SPECIFICATION forming part of Letters Patent No. 371,381, dated October 11, 1887.

Application filed January 15, 1887. Serial No. 224,420. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL W. SHOREY, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Button-Fastenings, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to construct a button of the class oftentimes termed "suspender-buttons," and also to provide efficient means for fastening the same to any material rapidly and cheaply.

In accordance with this invention a circular disk or flat piece of metal is stamped, pressed, or formed into suitable shape to present a central recess or concavity provided with an opening, and the fastener herein shown as a tack, preferably having a serrated shank, is forced through the material to which the button is to be attached from its inner side, the tack passing through the said opening and entering an eyelet of suitable size and shape placed above the said opening, the point of the tack being upset or overturned or clinched within the said eyelet, to thereby firmly fasten the disk to the material. The eyelet may have either an opening or closed end, as desired. To rapidly attach the buttons, I place the eyelet in a suitable yielding hollow or tubular sleeve or receptacle of sufficient size to receive it, said sleeve or receptacle moving over or upon a lower plunger. The disk having the central recess or concavity is placed upside down upon the eyelet contained within the yielding sleeve or receptacle. A suitable carrier having spring-controlled jaws is arranged to receive the fastener in position above the yielding eyelet-receptacle, and a plunger operated by any suitable means is arranged to descend and force the fastener from the carrier downward through the material which is placed beneath it above the overturned button, and thence through the opening in the button and into the eyelet, and as the eyelet-receptacle descends by pressure it moves upon or over the lower plunger in order that said plunger may operate as an anvil to upset, overturn, or clinch within the eyelet the point of the tack, to thereby firmly attach the eyelet to the fastener and hold the disk or button in position against the material.

Figure 1 shows in vertical section a button fastened to a piece of material in accordance with this invention. Figs. 2, 3, 4, and 5 are separate details of the button, the fastener, and eyelet to be described; Fig. 6, a perspective view of a portion of the machine arranged to drive the fastener and set the button; and Figs. 7, 8, 9, 10, 11, details and modifications to be referred to.

The button consists of a circular disk, *a*, cut from a flat piece of metal stamped or pressed to contain a central recess or concavity, *a'*, having an opening, a^2. The outer edge of the disk *a* is overturned, as at a^3, to present a smooth edge. The recess *a'* is of sufficient depth to receive an eyelet, *c*, placed above the opening a^2, the flanged edge of the said eyelet resting upon the disk around the opening.

A suitable fastener, herein shown as a tack, having a shank, *e*, preferably serrated, and a head, *e'*, is passed through the material, as *m*, the point of the tack passing through the opening a^2 and entering the eyelet *c*, where it is upset, overturned, or clinched to thereby firmly secure the fastener and eyelet together, and consequently set the button firmly upon the material, this concavity *a'* thus serving as the neck or shank for the button.

The eyelet may have a closed or an opened end, as shown in detail, Figs. 4 and 5.

As a rapid means for securing the button to the material *m*, I employ a machine, the principal operating parts of which are shown in perspective, Fig. 6. This machine consists of a tubular or hollow sleeve or receptacle, *n*, mounted to descend or slide upon a post or lower plunger, n^2, against the tension of a spring, n^3, a suitable limiting-stop, n^4, following in a slot, n^5, determining the limit of movement of the said sleeve or receptacle.

The eyelet is placed in the tubular or hollow sleeve or receptable with its flanged end uppermost. A suitable carrier, C, having separable jaws *o o'*, is placed above the anvil, the said jaws being shaped to receive, when held together by the spring o^2, a fastener, such, for instance, as a tack, *e e'*.

The plunger o^3, shown as located above the carrier C, may be operated by any suitable mechanism to force the tack, rivet, or other suitable fastener from the carrier downward into the eyelet-receptacle.

The operation of the machine is as follows:

The eyelet is placed within the receptacle *n* with its flanged edge uppermost. The button upside down is placed upon the eyelet or receptacle, so that the eyelet occupies a position within the recess or cavity formed in the button. The tack is then placed between the jaws *o o'* of the carrier. The material *m* (see dotted lines, Fig. 2) is placed between the point of the tack in the carrier and the button upon the anvil, and the plunger is made to descend, forcing the tack downward through the material and through the opening in the button and into the eyelet *c*. The eyelet *c* nearly or entirely fills the tubular receptacle *n*, so that when the point or shank of the fastener enters the eyelet and pressure is brought upon it the said eyelet-receptacle is moved downward over upon the lower plunger, n^2, which plunger serves as an anvil or abutment against which the point of the fastener is brought to bear, to thereby upset, overturn, clinch, or wedge the said fastener securely within the eyelet, to thereby attach the eyelet to the fastener with the button and the material between; or, in other words, the button will thus be securely attached to the material by the fastener, the head of which bears against the rear side of the material, while the eyelet attached to the fastener bears against the face of the button.

By this invention a very cheap button is made, and, being attached by the fastener and eyelet in the manner described, cannot readily be torn off or detached. By employing the eyelet which occupies a position at the central depression of a button the said eyelet will be entirely concealed in such a manner as to prevent any other material from catching or tearing upon it, and by the method herein described of applying the fasteners the buttons may be rapidly attached to any material.

In Fig. 10 I have shown an open-ended eyelet secured in the same manner as above described, and in Fig. 11 I have shown the central concavity or neck of the button contracted in diameter and an eyelet placed upon the face of the button, the tack being upset or clinched within both the neck and eyelet.

It is obvious that instead of making the central concavity or neck integral with the button or disk, it may be made separate and riveted or otherwise attached to it.

I claim—

1. The combination, with a button, of an eyelet placed on one side of the button, the flange of which rests against the button, and a tack passed through the button from the opposite side and entering the eyelet and upset within said eyelet, the said tack and eyelet cooperating together to form a fastening for the button, substantially as described.

2. The combination, with a button having a central depression or cavity and an opening, of an eyelet placed within the cavity or depression, the flange of which rests against the button, and a tack passed upward through the opening in the button, from that side opposite the eyelet, entering and upset within said eyelet to thereby firmly attach the eyelet and tack together to form a fastening for the button, substantially as described.

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

SAMUEL W. SHOREY.

Witnesses:

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FRED L. EMERY.