

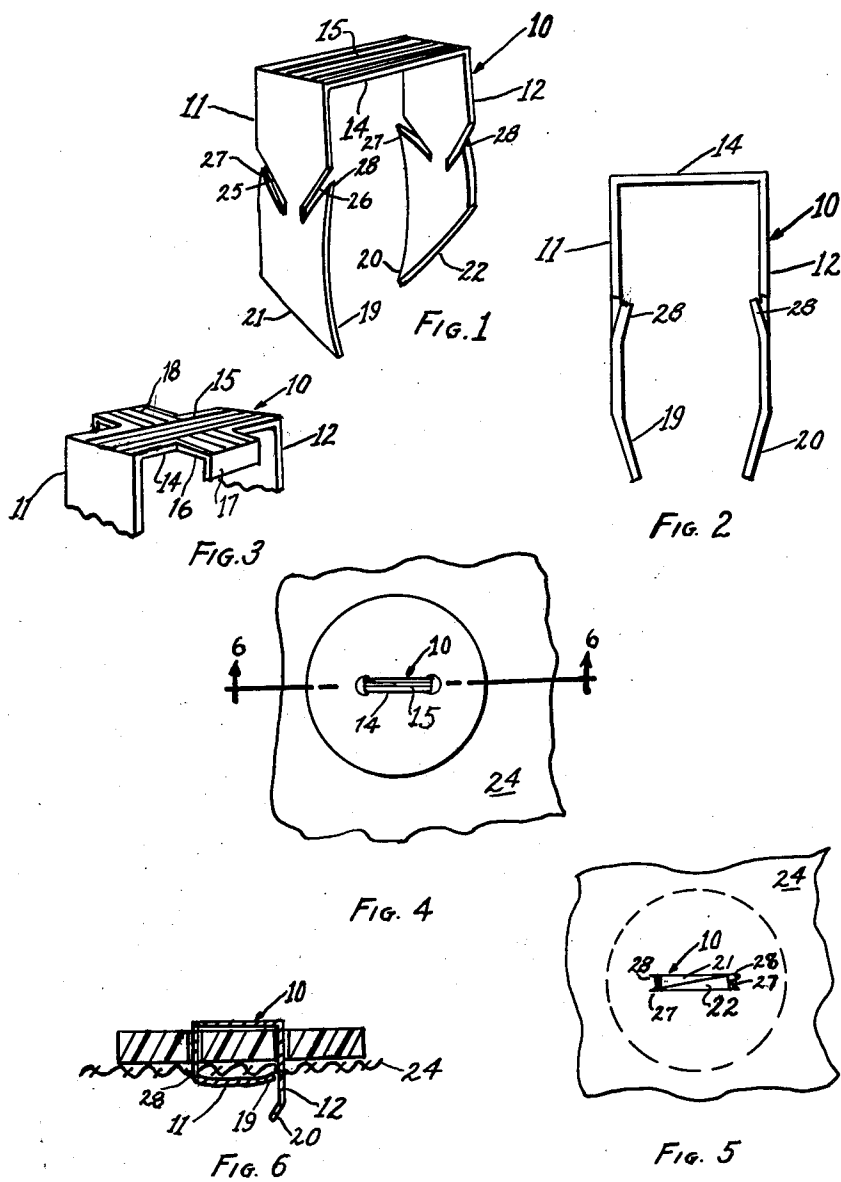
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STAPLE FOR ATTACHING BUTTONS

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## UNITED STATES PATENT OFFICE

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## STAPLE FOR ATTACHING BUTTONS

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This invention relates to fasteners, and more particularly to an originally-separate staple for attaching buttons and the like to the material to which they are to be applied.

Buttons are quite frequently utilized as fasteners on numerous pieces of wearing apparel, and they are quite often before the eyes of the public, such as the buttons of men's shirts and women's blouses, etc. It is therefore necessary that any missing buttons be immediately replaced. The buttons are originally attached to the material by sewing; however, many men, of the so-called "bachelor type" find it difficult to sew the buttons back on the garment, in such a manner that they appear neat and are so positioned that they properly cooperate with the original button-hole. It is also desirable for laundries, which have countless buttons to replace to have a way of speedily replacing missing buttons, and it often is necessary for housewives to devote time to replacing buttons which could be utilized more effectively in other tasks.

An object of the invention, therefore, is to provide a staple which has the appearance of thread, and which will permit a button to be rapidly and easily replaced in the position from which it became disengaged without the necessity of sewing.

Among the other objects of the invention are, to provide a staple that is originally separate which can be inserted through the holes in the button, and set by hand manipulation which is of such construction that when it is set it cannot become disengaged in normal usage, and in which all the points grip into the material so that the danger of scratching is minimized; to provide a staple that is cheap to manufacture in quantity production; and to generally improve upon staples of the kind described.

In the preferred form of my invention the staple is originally separate and is U-shaped. It may be constructed of a light gauge sheet metal treated to resist corrosion. It is so constructed that the legs of the staple can be inserted through the holes in the button, and extend through the fabric. The tips of the legs are bent slightly and each tip biased oppositely so that when the legs are bent over the tips will engage the fabric, and will also lie adjacent to each other without overlapping. The legs may also be slitted by two downwardly converging slits which are positioned in such a manner that when the legs are bent over the slits will be so positioned that they will engage the fabric and prevent disengagement by back-pull.

Further objects, and objects relating to details

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and economies of construction, manufacture and use will more definitely appear from the detailed description to follow.

My invention is clearly defined in the appended claims. In the claims, as well as in the description, parts are at times identified by specific names for clarity and convenience, but such nomenclature is to be understood as having the broadest meaning consistent with the context and with the concept of my invention as distinguished from the pertinent prior art. The best form in which I have contemplated applying my invention is illustrated in the accompanying drawings forming part of this specification, in which:

Fig. 1 is a perspective view of the staple for use with a button having two holes.

Fig. 2 is a side elevation of the staple showing how slits and tips are bent inwardly.

Fig. 3 is a perspective view of the staple for use with a button having more than two holes.

Fig. 4 is a top plan view showing the staple inserted through the holes in the button.

Fig. 5 is a bottom plan view of a button with the staple attached.

Fig. 6 is a section view on line 6—6 of Fig. 4.

Fig. 7 is a side elevation of a staple having four legs.

Referring now to the drawings and more particularly to Fig. 1, the staple 10 is U-shaped having legs 11 and 12, or as in Fig. 7 having two sets of parallel legs 11, 11 and 12, 12, and cross piece 14. The staple may be constructed of a thin gauge sheet metal which has been treated to prevent corrosion; since the staple will often be used on garments subjected to launderings or sweat it is undesirable to use materials that will rust and present an unsightly appearance. The legs 11 and 12 are in spaced parallel relationship, and so adapted that they can be inserted through the holes 13 in a button 18. The legs 11 and 12 are connected at one end by the cross-piece 14. The cross-piece 14 may be engraved to simulate threads 15 so that when the staple attaches the button to the material it will have the appearance that the button has been sewn unto the material rather than mechanically attached.

When the staple is utilized with a button which has more than two holes the cross-piece 14 may be provided with a short portion 16. This portion 16 will be so angularly disposed that depending flanges 17, 17 can be inserted through the holes which are not occupied by the legs 11 and 12 of the staple. The portion 16 may also be engraved to simulate threads 18. This thread-

ing 18 will be angularly disposed similarly to the portion 16.

The legs 11 and 12 are provided with tips 19 and 20 which are bent slightly inward, that is, the tips are slightly bent toward the opposite leg. The tips are also cut on opposite diagonals 21 and 22 so that when the legs of staple are folded over in such a position that the button will be secured to the material the tips 19 and 20 will embrace the material 24 and the tips 19 and 20 with the diagonals 21 and 22 will lie adjacent to each other, as shown in Fig. 5. Having the tips so bent and biased will prevent any sharp edges which could snag the material or inflict scratches.

The legs 11 and 12 are provided with angular slits 25 and 26 which converge inward and downward toward the angular cut tips 19 and 20. The slits 25 and 26 define biased portions 27 and 28, and these portions are slightly inwardly bent toward the other leg the same as the tips. The slits are so positioned that when the legs 11 and 12 are folded over the biased portions 27 and 28 will protrude outward at right angles and slightly past the remaining upper portion of the legs 11 and 12 which passes through the button, as shown in Fig. 6. This will permit the biased portions 27 and 28 to embrace the material to which the button is to be applied and thereby any back-pull (disengaging the lower portions of the legs from their folded over position) will be prevented when tension is put on the button such as when the button is put through the buttonhole. This will prevent the button from becoming disengaged after it has been attached. The inward bend will prevent any sharp edges which could snag or scratch.

The staple is inserted through the holes in the button which are normally utilized in sewing the button to the material to which the button is to be applied, and then extended through the material. The legs of the staple are then bent over, and the slightly bent tips and the angular portions are forced into the material resulting in a smooth contour with no opportunity for snags or scratches.

The material used in manufacturing the staple may be colored so that it will match the material to which the button is to be applied thereby presenting a more harmonious and pleasing combination.

What I claim is:

1. A device for fastening a button to a shirt, said device comprising: a staple formed from a strip of flat, relatively narrow, readily deformable, non-corrosive material having a crossbar and depending legs, the legs being adapted to telescope through the holes of the button and being at right angles adjacent the crossbar, each leg being provided with downwardly converging angular slits defining biased portions, the biased portions being so positioned that when the legs are folded the biased portions will extend past the legs, the tips of the legs being slightly inwardly bent, and being cut on opposite biases, the tips being so adapted that when the legs are folded the tips will embrace the material and lie adjacent to each other without overlapping.

2. A device as in claim 1 in which the crossbar is engraved to simulate threads.

3. A device as in claim 1 in which there are angularly disposed extensions to the crossbar, and the extensions having short depending legs adapted to be inserted in holes in the button.

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