

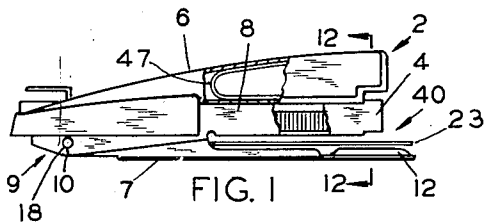
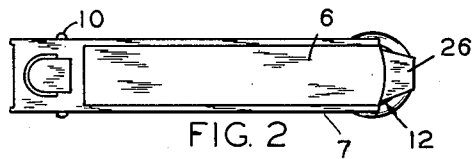
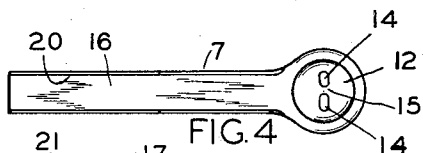
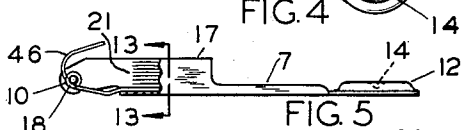
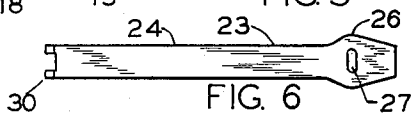
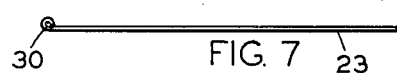
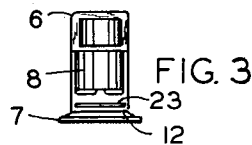
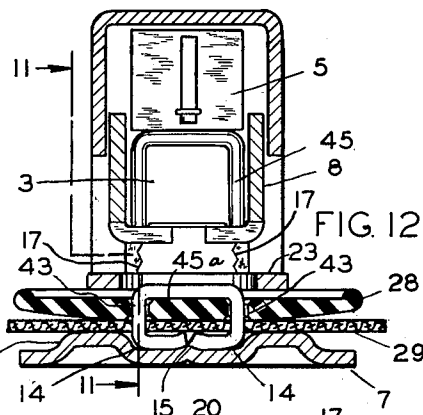
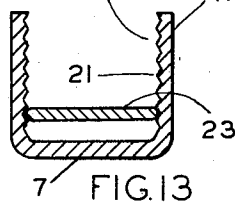
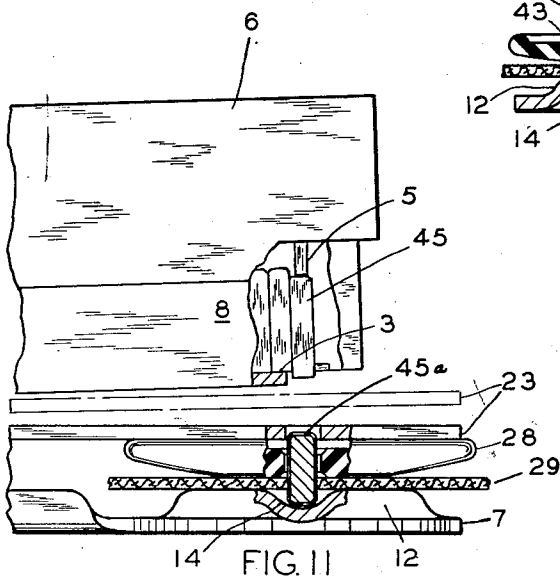
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BUTTON STAPLER

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BUTTON STAPLER

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2 Claims. (Cl. 1—3)

This patent pertains to an improved button stapler.

One of the objects of the invention is to provide a magazine type stapling device which will hold a number of specially formed staples and is adapted to hold a button on a portion of fabric so that one of the staples from said magazine may be forced through the holes of the button and clinched on the opposite side of the fabric, whereby the button is attached to the fabric by a single operation.

Another object is to provide means in connection with a stapling device for holding a button on fabric in a predetermined position so that a staple from the stapling device may be clinched through the button and the fabric in one operation.

Still another object is to provide a stapling device with a magazine adapted to hold staples of a type particularly adapted to secure a button to fabric.

Still another object is to provide a series of preformed staples made with a metal core covered with a plasticisable substance which will prevent corrosion of the metal and which can be colored in any suitable manner.

A still further object is to provide a stapling device which has an anvil for clinching staples of the type mentioned and which has a centrally positioned edge clincher so that the sharp bottom edges of the staple legs are turned inwards, whereby they will not snag or cut other fabric.

Other objects will appear hereinafter.

I attain the foregoing objects by means of the peculiar construction, the devices, parts and combinations of parts shown in the attached drawings in which—

Figure 1 is a side elevation of a stapling device incorporating my improvements for stapling buttons to fabric;

Figure 2 is a plan view thereof;

Figure 3 is an end elevation thereof;

Figure 4 is a plan view of the base of the stapler showing the clinching anvil;

Figure 5 is a side elevation of said base;

Figure 6 is a plan view of the button holding clamp bar;

Figure 7 is a side elevation thereof;

Figure 8 is a plan view of a button holding staple, drawn on an enlarged scale;

Figure 9 is a front elevational view thereof;

Figure 10 is a section of said staple taken substantially on line 10—10 of Figure 9;

Figure 11 is a side elevation of the stapling end of the stapler, drawn on an enlarged scale with the button holding clamp bar and anvil and portions of a button shown in section taken substantially on line 11—11 of Figure 12;

Figure 12 is a front end view of the stapling mechanism of the stapler with parts sectioned off substantially on line 12—12 of Figure 1; and

Figure 13 is a transverse section of the rear portion of the base of the stapling mechanism, drawn on an enlarged scale and sectioned substantially on lines 13—13 of Figure 5.

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Similar numerals refer to similar parts in the several views.

The stapler 2 as here concerned is of a well known type having a magazine for holding a number of staples, including a slide 3, spring mechanism to feed the staples toward the stapling plunger 5 and a cap piece 6 which operates the stapling plunger when depressed. The stapler also includes a base 7 to which the magazine frame 8 and the top case 4 are attached by a hinge structure 9 which includes a hinge pin 10.

The base 7 has an anvil 12 at its outer end provided with clinching depressions 14 which are transversely positioned and between which a raised clinching point 15 is provided. The rear portion of the base includes a channel 16 formed by raised laterally positioned flanges 17. The base is provided with a transverse hole 18 in its rear portion to receive hinge pin 10. The inner faces 20 of flanges 17 are provided with serrations 21, and these contact the edges 24 of the rear portion of the button positioning bar 23 so as to detain it in various raised or lowered positions relative to base 7.

The button positioning bar 23 has an enlarged outer head portion 26 which is pierced with an elongated transversely extending hole 27 through which a staple may be driven to enter the holes of a button 28, which in turn is to be attached to fabric 29.

The rear end of bar 23 is provided with a transverse hinge bearing 30 which is adapted to receive and journal on hinge pin 10.

The inner portion or core 35 of each staple is made of metal of any suitable type. The staple is U-shaped as shown particularly in Figures 9 and 12 and includes a top bar 36 and two legs 37 depending therefrom. The metal core 35 is coated with a suitable pliant plasticisable covering 38 which may be dyed various colors as desired. It is to be understood that staples of this type are made in groups which may be fed as a unit into the magazine of the stapler 2 in a manner well known to the stapling art. These staples differ from the usual wire staples, however, in that the core is flattened transversely of the staple. This provides a wider holding area on both the button and the fabric after the staple is clinched.

A spring 46 resiliently hinges case 8 upward from base 7, and spring 47 urges cap piece 6 upward so that plunger 5 is withdrawn to normal open position as shown in Figure 11.

In use, since the magazine is maintained by said spring means above the base 7, the throat 40 is normally open. Fabric 29 to which a button is to be attached is placed on the anvil within the throat area. Before this is done, however, the button holding bar 23 is raised as far as possible above the anvil to admit both the fabric and the button. The serrations 21 on the inner faces of flanges 17 hold this bar in raised position. The button is next placed in the position desired on the fabric and the button hold-down bar 23 moved downward onto the button. This bar then holds the button in position on the fabric. The button is then rotated or moved slightly so that its holes 43 are aligned with the slotted opening 27 in the hold-down bar. Since the outer staple 45, as well as plunger 5, are in register with opening 27 and depressions 14 this adjustment positions the button so that the legs of staple 45, which is just below plunger 5, will enter the holes in the button and clinch in the anvil depressions 14.

The operation is completed by pressing down on the cap piece 6 so that the plunger forces the foremost staple 45 in the magazine down through the hold-down bar 23 and onto the button to position 45a so that its legs 37 enter the holes 43 in the button 28 and are forced through the fabric 29 and at the same time contact the recess 14 in the anvil 12 so that they are clinched as

shown in Figure 12 with their ends pointing inward toward each other. Contact of the ends with the raised portion 15 of the anvil further clinches the ends inward and upward toward bar 36 so that the rough edges of the ends of the staple are clinched toward the bar 36.

The button is thereupon firmly attached to the fabric, and since the staple has a wide holding area attachment is maintained without damaging the fabric.

I claim:

1. In a button stapler including a frame having a case including a magazine for holding staples, a base including an anvil having staple clinching depressions hinged at one end to said frame, a cap piece hinged at one end and having its free end extending above said frame and operating a plunger arranged to force the forward staple downward into the depressions of said clinching anvil, spring means normally separating the free end of said cap piece from said frame, and spring means normally hinging said frame from said base, to provide an open throat between said base and said frame at their unhinged ends, in combination with a button positioning bar having an inner end hinged to said base, parallel lateral edges, and an enlarged head portion at its outer end provided with a slot in register with said plunger and the clinching depressions in said anvil; said base having upturned lateral flanges with longitudinal serrations on their inner faces adapted to yieldably engage the lateral edges of said bar so that it will be held above said anvil, when desired, to admit fabric and a button thereon into the stapler throat, and may be lowered to hold said button on said fabric in desired stapling position.

2. In a button stapler including a frame having a case including a magazine for holding staples, a base includ-

ing an anvil having staple clinching depressions hinged to said frame, a cap piece hinged above said frame operating a plunger arranged to force the forward staple from said magazine and drive the legs of said staple downward into the depressions of said clinching anvil, spring means normally separating said cap piece from said frame, second spring means normally separating the free ends of said frame and said base to provide an open throat between said base and said frame at their unhinged ends, in combination with a button positioning bar having an inner end hinged to said frame and base, parallel lateral edges, and an enlarged head portion at its outer end provided with a parallel slot in register with said plunger and the clinching depressions in said anvil; said base having upturned lateral flanges with longitudinal serrations on their inner faces adapted to yieldably engage the lateral edges of said bar so that it will be held above said anvil to admit fabric, and a button thereon, into the stapler throat and may be lowered to hold said button on said fabric in desired stapling position, said anvil having a clinching point between said staple clinching depressions adapted to turn the abutting edges of the ends of clinched staple legs upward, to eliminate snagging edges on said staple points.

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