

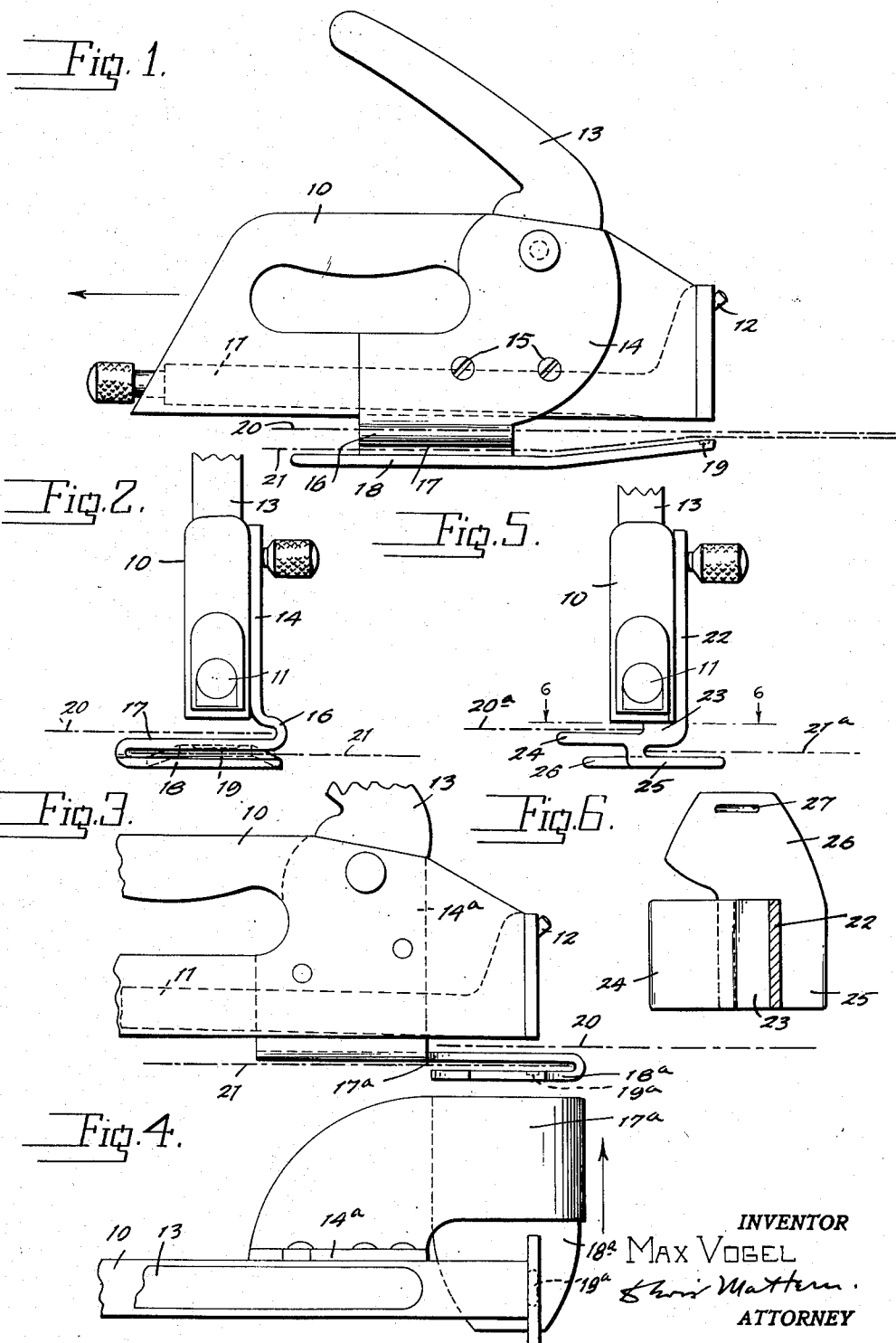
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STAPLING MACHINE FOR CLOSING FLAPS OF CARTONS AND THE LIKE

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STAPLING MACHINE FOR CLOSING FLAPS
OF CARTONS AND THE LIKE

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1 Claim. (Cl. 1—49)

The present invention relates to a stapling machine for closing flaps of cartons or the like, and has for an object to provide a stapling machine which may be engaged with either the overlapping or abutting relatively stiff cardboard flaps of a carton, or other similar structure, in a manner to provide a staple end bending anvil beneath the flaps and a staple driving means above them, and which may be longitudinally engaged and disengaged with said flaps, to the end that the flaps, which in a carton are concealed at the underside and therefore not ordinarily accessible to the placing of a stapling machine anvil beneath them, may be stapled together.

It is particularly proposed to provide a stapling machine having a novel type of sliding base or foot which may be engaged beneath and about the edges of the flaps and which provides longitudinal passages in the direction of the flaps and through which the flaps pass as the stapling machine is longitudinally moved.

With the above and other objects in view embodiments of the invention are shown in the accompanying drawing and these embodiments will be hereinafter more fully described with reference thereto and the invention will be finally pointed out in the claim.

In the drawing:

Fig. 1 is a side elevation of a stapling machine, according to an exemplary illustrated embodiment of the invention, the flaps to be stapled being shown in dot-and-dash lines.

Fig. 2 is a rear view thereof.

Fig. 3 is a side elevation of a modified form of the invention.

Fig. 4 is a top plan view of the construction shown in Fig. 3.

Fig. 5 is a rear elevation of a further modified form of the invention.

Fig. 6 is a horizontal sectional view taken along the line 6—6 of Fig. 5.

Similar reference characters indicate corresponding parts throughout the several figures of the drawing.

Referring to Figs. 1 and 2 of the drawing, the stapling machine body 10, as shown in the exemplary illustrated embodiment, is of flat-iron shape, and is provided with a staple carrying rail 11 and a staple driver 12, operated by a hand lever 13, these parts being of usual construction, and adapted to drive the usual type of U-shape staples, which are mounted in strip form on the rail and individually fed to the driver.

The base member which is secured to the stapling machine body 10 comprises a side plate 14

secured by screws 15 upon one side wall of the body, and a guide base or foot, of S-shape in cross-section, consisting of an outwardly curved recess forming portion 16 at the lower end of the plate 14, a horizontal arm portion 17 extending in spaced relation beneath the body and disposed in rearwardly spaced relation to the driver end of the body, and a horizontal arm portion 18, bent in reverse direction to the arm portion 17 and extending in spaced relation beneath it. The arm 18 projects both to the front and rear of the arm 17, the front projecting part being bent upwardly and provided near its forward end with an anvil groove 19 in line with the staple driver.

As shown by the dot-and-dash lines the overlapping flaps 20 and 21 of the carton, or the like, are engaged respectively between the base of the body 10 and the arm 17, and between the arms 17 and 18, the guide foot being capable of engaging these flaps at one end, and then being moved longitudinally along them. The upward bending of the forward end of the arm 18 brings the two flaps together beneath the staple driver, the staple being driven through them by operation of the handle 13 and being clinched at the underside by engagement of the staple legs with the anvil groove 19. The machine is then moved in the direction of the arrow to the next stapling point, and finally is disengaged from the flaps at the end opposite to the starting end.

In Figs. 3 and 4 I have shown a modification in which the guide foot is so arranged that the staple machine is in right angular relation to the longitudinal edges of the flaps to be stapled, whereas in the form shown in Figs. 1 and 2 it is parallel to these edges. In this case the guide foot comprises a side plate 14^a, secured to one side of the staple body 10, an upper arm 17^a bent at a right angle to the plate 14^a and extending outwardly and forwardly therefrom, and a lower arm 18^a bent beneath the arm 17^a and projecting therefrom at one side beneath the staple driver, where it is provided with an anvil groove 19^a.

The flaps 20 and 21 are engaged in a similar manner to the first embodiment and during the stapling operation the machine is moved in the direction of the arrow.

In the case of stapling flaps having abutting edges, the modification shown in Fig. 5 is preferably employed. The guide base or foot comprises a side plate 22 secured to one side of the body 10 and having a right angularly extending ledge portion 23 extending beneath the body to

an extent slightly less than half its width, and upon this ledge portion there are formed a pair of arms 24 and 25 disposed in spaced parallel planes and extending in opposite directions, the upper arm 24 forming with the base of the body a space to receive the flap 20^a and the lower arm 25 forming with the base of the ledge portion 23 a space to receive the flap 21^a, the inner end of this space being disposed slightly beyond the vertical plane of the inner end of the ledge portion 23, so that the abutting edges of the flaps may be freely received in the respective recesses. The lower arm 25 is provided with a forwardly projecting portion 26 having an anvil groove 27 disposed beneath the staple driver in a similar manner to the other embodiments.

I have illustrated and described preferred and satisfactory embodiments of my invention, but it will be obvious that changes may be made therein within the spirit and scope thereof as defined in the appended claim.

Having thus described my invention what I claim and desire to secure by Letters Patent is:—

In a stapling machine for stapling flaps of car-

tons or the like, a staple driving part, and a flap guiding base secured to said staple driving part formed from a single piece of sheet metal bent to shape comprising a vertically disposed attaching portion, an upper horizontal flap supporting portion bent outwardly and then inwardly from said attaching portion to provide a material edge receiving recess, and a lower horizontal flap supporting portion bent from and extending in the opposite direction from said upper portion, said upper and lower portions being disposed in spaced planes to receive the respective flap edges, the said lower portion having a portion extended laterally with respect to said upper portion and inclined upwardly to a point contiguous to the plane of said upper portion and having a staple leg bending anvil surface also contiguous to the plane of said upper portion whereby the flap supported by the said upper portion remains substantially flat and the flap supported by said lower portion is guided upwardly into engagement with said first mentioned flap to be stapled.

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