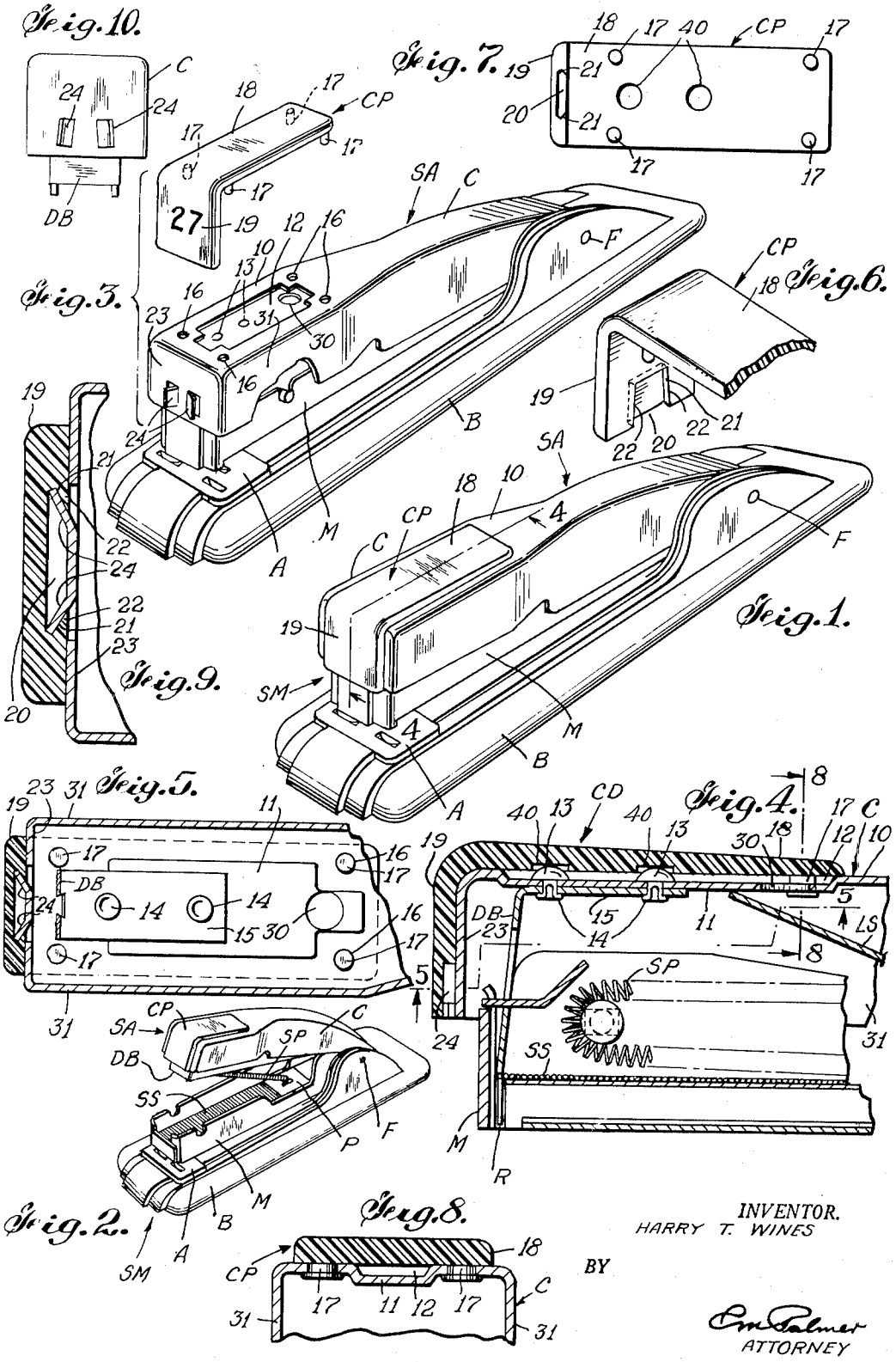
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STAPLING MACHINE

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STAPLING MACHINE

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4 Claims. (Cl. 1—3)

This invention relates to a stapling machine of the type having a normally raised pivoted and depressible arm utilized to drive a foremost staple of a staple strip out of a staple strip containing magazine. More specifically the invention is directed to a swingable arm comprising complementary components characterized by a one piece swingable cap and effective closure means for the cap. One object of the invention resides in the provision of novel means for quickly securing the closure means to the front part of the cap which includes diverging ears struck out and projecting forwardly of the front wall of the cap for frictionally cooperating with the walls of a dovetail recess interrupting a front depending reach of the closure to facilitate prompt assembly of the cap and closure and to permit the depending reach to abut and be held flatwise against the front wall of the cap. Another object is realized in initially slidably and frictionally interlocking the depending reach of the closure with the front wall of the cap and subsequently appropriately anchoring the horizontal reach or impact receiving striker of the closure to the top wall of the cap. Another object is to utilize the closure means for convenient assembly with the cap without however weakening the front wall of the latter in the matter of effectively maintaining at all times the depending side walls of the cap a constant or predetermined distance apart as desired. Another object is to provide improved closure means for a stapling machine cap characterized by a horizontal reach superimposed on and secured flatwise against the top wall of the cover to conceal unsightly portions thereof incident to manufacture and to conceal the rivets anchoring the staple driving blade to top wall of the cap and further characterized by the front depending reach which serves to carry appropriate identifying indicia. Other important objects and functional and structural features of the invention will appear from the following detailed specification taken with the accompanying drawings wherein:

Fig. 1 is a perspective view of the stapling machine according to my invention and shown closed.

Fig. 2 is a view similar to Fig. 1 on a smaller scale and showing the stapling machine partly open.

Fig. 3 is a partly exploded view of Fig. 1, showing the cap and its closure plate unassembled.

Fig. 4 is a longitudinal sectional view on the line 4—4 of Fig. 1.

Fig. 5 is a horizontal sectional view on the broken line 5—5 of Fig. 4 without however showing the leaf spring which normally holds the swingable depressible arm elevated.

Fig. 6 is a fragmentary perspective view of the closure plate.

Fig. 7 is a bottom view of the closure plate.

Fig. 8 is a transverse sectional view on the line 8—8 of Fig. 4.

Fig. 9 is an enlarged fragmentary view of Fig. 5, and

Fig. 10 is a front view of the swingable plunger carrying arm before the closure plate is secured thereto.

In the drawings, the stapling machine SM comprises; a base B carrying a suitable staple clinching anvil A disposed below magazine M which contains the wire staple strip SS urged forwardly towards raceway R of the magazine by pusher or follower P adapted to be actuated by an appropriate spring SP upon swingable displacement of the depressible arm SA towards or away magazine M. Both magazine M and arm SA are pivotally mounted on fulcrum pin F. This type of stapling machine is well known in the art. However, arm SA includes cap C which is preferably of sheet metal and is provided with a top wall 10 having the indented portion 11 defining shallow relief recess 12 in which heads 13 of the spaced rivets 14 extend. Rivets 14 anchor the horizontal reach 15 of the staple driving blade DB to cap C, which is held normally raised by a suitable leaf spring LS, partly shown in Fig. 4.

Preferably top wall 10 of the one piece sheet metal cap C is interrupted by the locating apertures or openings 16 adapted to receive posts 17 depending from the horizontal reach 18 of the closure plate CP which preferably is of a suitable plastic.

Integrally depending from reach 18 at its front end is the vertical reach 19 provided with the dovetail recess 20 defining spaced rearwardly converging faces 21 on the opposing tapered and spaced lips 22.

Struck out of front wall 23 of cap C are the forwardly diverging ears 24 adapted to be received in the open bottom dovetail recess 20 interrupting vertical reach 19. Forwardly diverging ears 24 slidably guide downward linear movement of vertical reach 19 in the assembly of closure plate CP with cap C. As closure plate CP is further moved downwardly relative to the cap, pins 17 are received in the locating openings 16 and heads 13 of rivets 14 are received in notches 40 of reach 18. Ultimately upper horizontal reach 18 strikes top wall 10, hence preventing further downward displacement of the closure plate CP. Ears 24 are also frictionally or wedgeably embraced by the spaced faces 21 of lips or terminals 22, thus closely holding reach 19 of the closure plate to abut against the front wall 23 of cap C.

After closure CP is fully forced down on cap C, posts or pins 17 are appropriately upset against the inside surface of the indented portion 11. It follows that closure plate CP is now effectively anchored against slippage in any direction relative to the cap.

Closure plate CP conceals the unsightly appearance of rivet heads 13, the indentation 11, post receiving openings 16 and pilot opening 30 and apart from rendering the stapling machine more attractive, closure CP may carry on its front face suitable identifying indicia as "27."

It will be observed that the sides 21 of dovetail recesses 20 (Fig. 6) of vertical reach 19 slightly converge in a direction towards horizontal reach 18 to permit convenient reception of the struck out diverging lips or ears 24 which are also biased to slightly converge in an upward direction (Fig. 10). Even though ears 24 are struck out of front wall 23, the latter serves to hold sides 31 of cap a predetermined distance apart, as desired.

Various changes may be made in the details of construction and arrangement of parts without departing from the spirit of the invention or sacrificing any of the advantages thereof inherent therein.

I claim:

1. In a stapling machine having an arm, a cap carried by said arm and comprising a top wall provided with spaced openings and a front depending wall integral with said top wall and provided with forwardly projecting spaced ears, closure means comprising a depending reach including a recess for receiving said ears and including spaced lips defining in part spaced sloping surfaces of said recess for frictionally cooperating with said ears for holding said depending reach flatwise and abutting against

said front wall, said closure means comprising a horizontal reach disposed flatwise on said top wall for concealing said openings and having a front end integral with said depending reach and having depending posts fitting within said openings and secured against said top wall.

2. In a stapling machine having an arm, a cap carried by said arm and comprising a top wall provided with spaced openings and a front depending wall integral with said top wall and provided with forwardly projecting spaced and forwardly diverging ears, one piece closure means comprising a depending reach including a recess for receiving said ears and including spaced lips defining in part spaced sloping surfaces of said recess for frictionally cooperating with said ears for holding said depending reach flatwise and abutting against said front wall, said closure means comprising a horizontal reach disposed flatwise on said top wall for concealing said openings and having a front end integral with said depending reach and having depending posts fitting within said openings and secured against said top wall.

3. In a stapling machine having an arm, a cap carried by said arm and comprising a top wall provided with spaced openings and a front depending wall integral with said top wall and provided with forwardly projecting spaced forwardly diverging ears, closure means comprising a depending vertical reach including a recess for receiving said ears and including spaced and opposing lips

defining in part spaced forwardly diverging sloping surfaces of said recess for frictionally cooperating with said ears for holding said vertical reach flatwise and abutting against said front wall, said closure means comprising a horizontal reach disposed flatwise on said top wall for concealing said openings and having a front end integral with said depending means and having depending posts fitting within said openings and secured against said top wall.

4. In a stapling machine having an arm carrying staple driving means, a cap carried by said arm and comprising a top wall provided with spaced openings and a front depending wall integral with said top wall and provided with forwardly projecting spaced ears, said top wall having an indented portion, fastening means securing said driving means to said indented portion, closure means comprising a depending reach including a recess for receiving said ears and including spaced lips defining in part spaced sloping surfaces of said recess for frictionally cooperating with said ears for holding said depending means flatwise and abutting against said front wall, said closure means comprising a horizontal reach disposed flatwise on said top wall for concealing said openings and fastening means and having a front end integral with said depending reach and having depending posts fitting within said openings and secured against said indented portion.

No references cited.