Jan. 22, 1957 J. WEIMONT 2,778,019

MACHINES FOR ATTACHING TICKETS TO MERCHANDISE

Filed Feb. 24, 1953 5 Sheets-Sheet 1

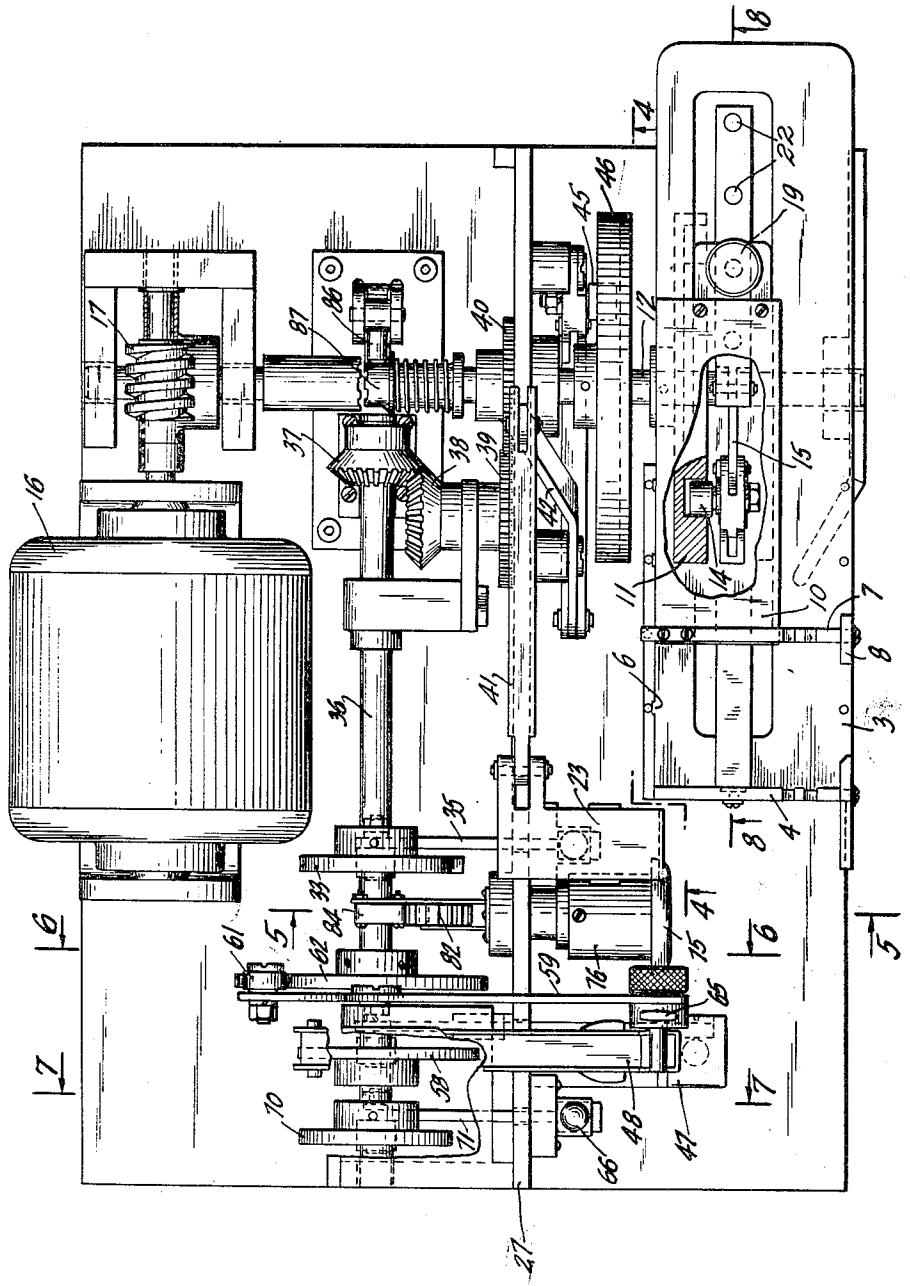


FIG. 1.

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FIG. 10.

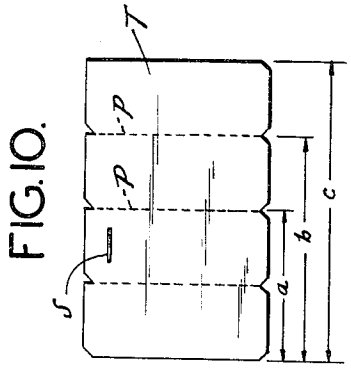


FIG. 2.

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FIG. 3.

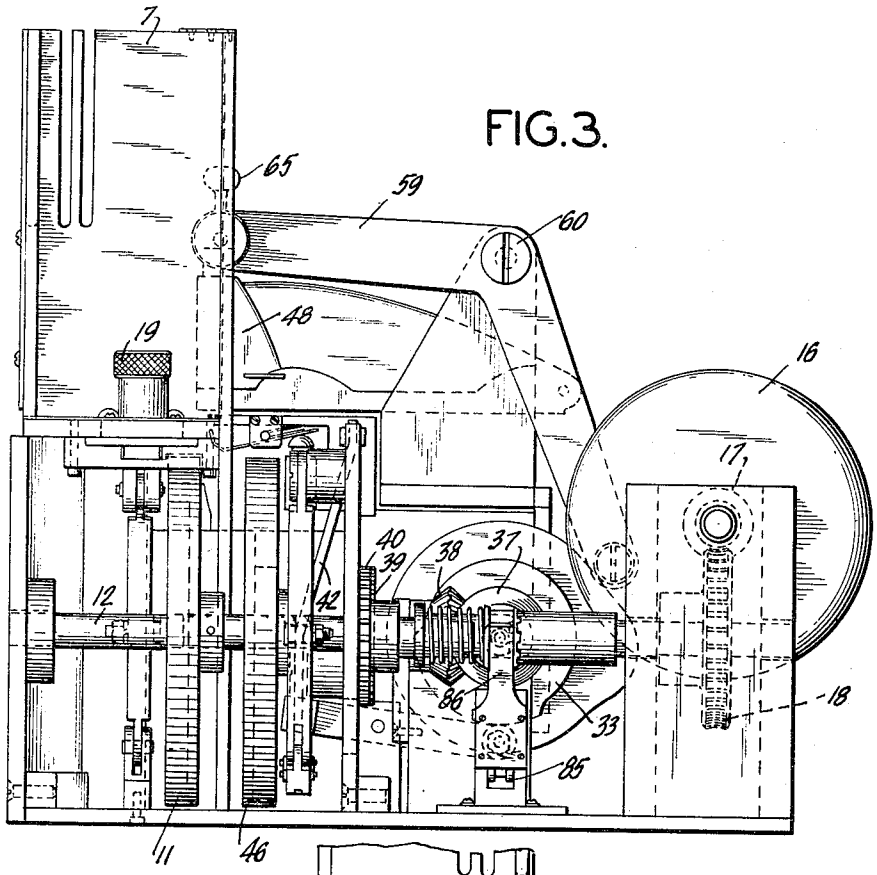
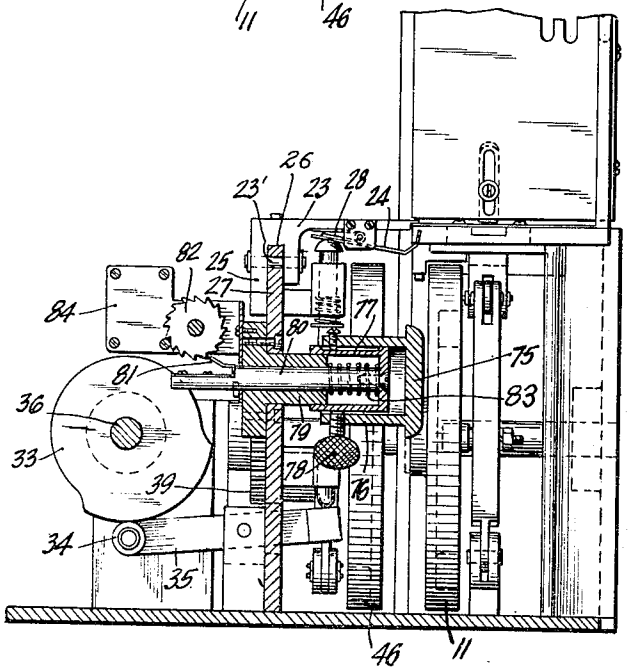


FIG. 5.



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MACHINES FOR ATTACHING TICKETS TO MERCHANDISE

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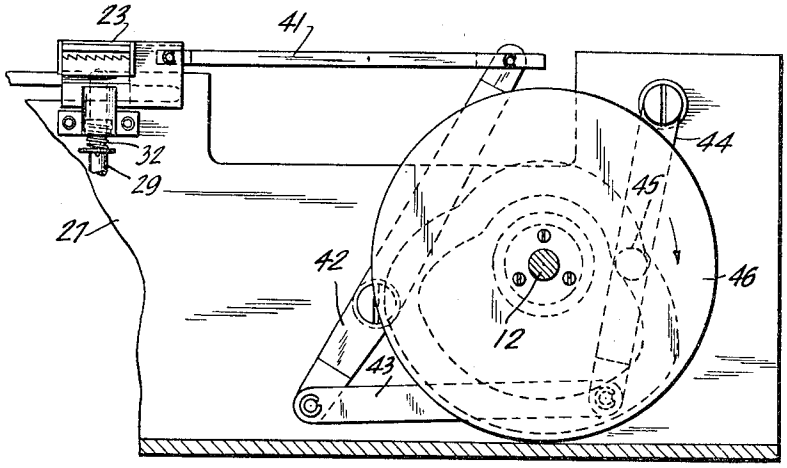


FIG. 4.

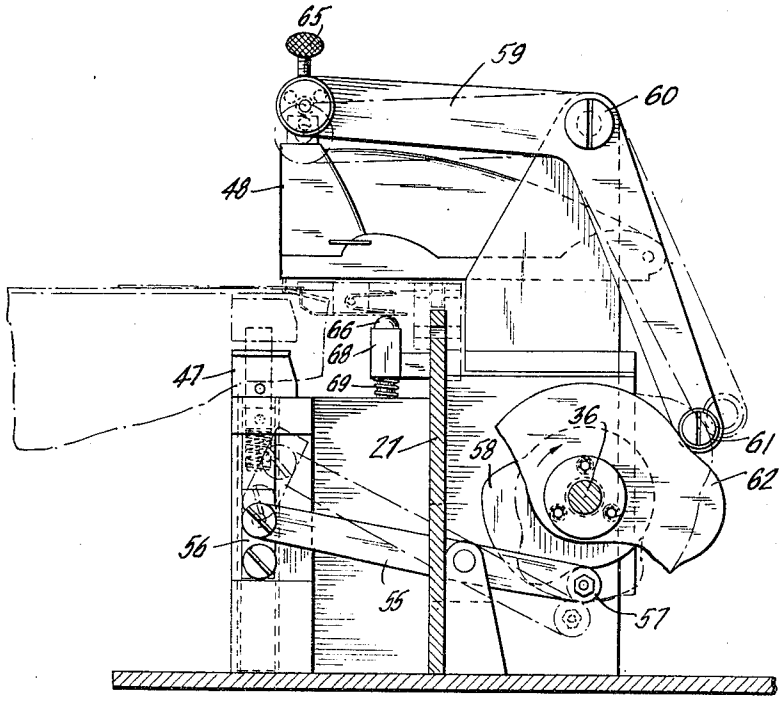


FIG. 6.

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MACHINES FOR ATTACHING TICKETS TO MERCHANDISE

Filed Feb. 24, 1953 5 Sheets-Sheet 5

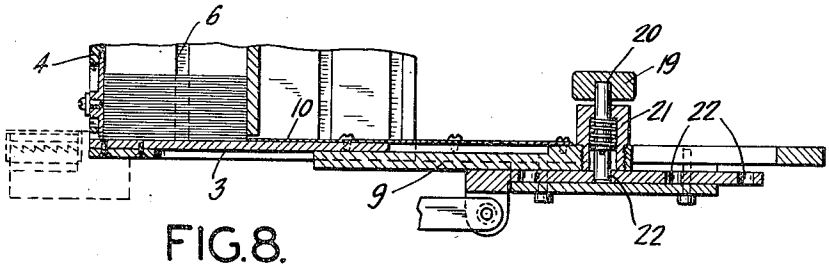


FIG.8.

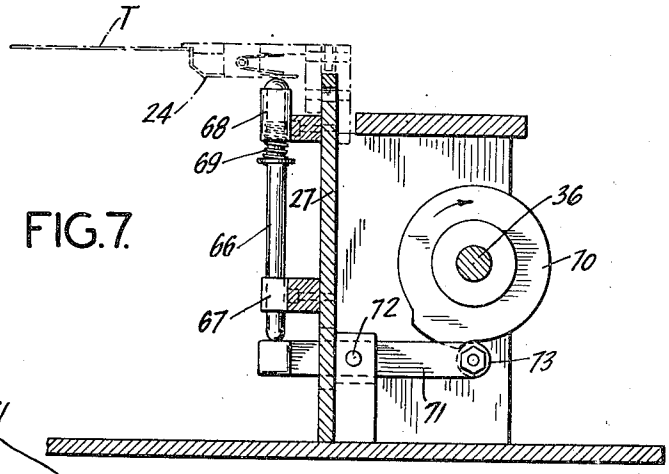


FIG.7.

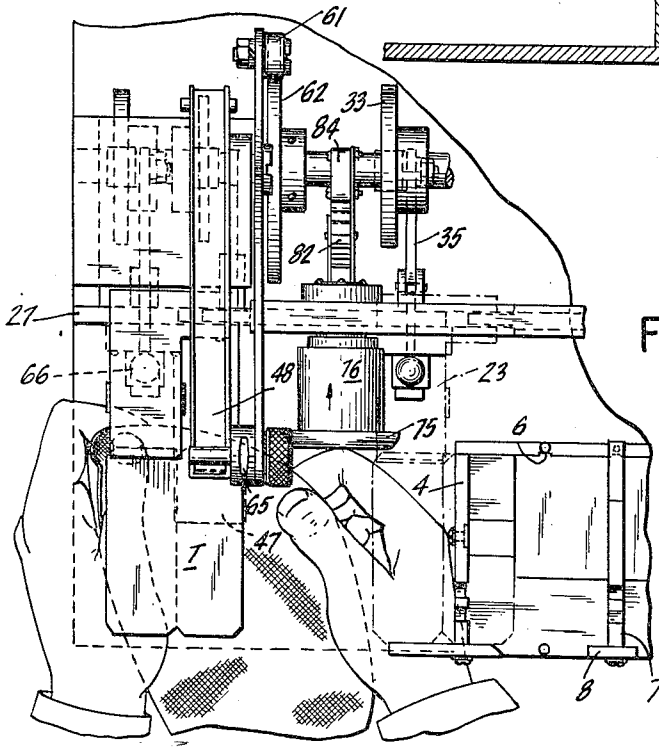


FIG.9.

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MACHINES FOR ATTACHING TICKETS TO MERCHANDISE

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Application February 24, 1953, Serial No. 338,369

6 Claims. (Cl. 1—3)

This invention relates to machines for attaching tags or tickets to articles of merchandise, particularly soft goods, textiles, garments and the like.

Such tags or tickets are used widely in connection with the sale of such merchandise, usually carrying printed indicia thereon giving price and other information regarding the article. Such tags or tickets have been attached to the merchandise in a variety of ways, as by pins, staples, clips, strings and the like, the choice of the attaching means depending on the nature of the merchandise and the preference of the merchant.

Staples have long been used as a tag and ticket attaching means, but when so used, the staples have been permanently attached to the tags, being attached to the article by clinching the legs of the staple after passing them through the article. Machines have been developed for attaching such tags to merchandise and have been widely used. Such tags or pin tickets, as they are frequently called, are quite satisfactory, but have the disadvantage that the projecting legs of the staples make such tickets bulky and awkward to handle.

Stapling devices are known which carry a supply of preformed wire staples, feed the staples to an attaching position, drive the staple legs through one or more thicknesses of material, and clinch the staple legs. Such devices have been widely used in business establishments for fastening papers and for special purposes. They have seldom, if ever, been used for attaching tags, tickets or labels to merchandise.

It is an object of the present invention to provide a machine in which any one of several styles of such stapling devices may be incorporated and operated to automatically attach a tag, ticket or label to merchandise. It is a further object to provide means for automatically feeding a tag, ticket or label to attaching position, and for holding it in attaching position during the attaching operation. It is a further object to provide conveniently located means for controlling the operation of the machine while the operator holds the merchandise in attaching position.

Other objects and advantages of the invention will appear hereinafter.

A preferred embodiment of the invention selected for purposes of illustration is shown in the accompanying drawings, in which,

Figure 1 is a top plan view of the machine.

Figure 2 is a front elevation partly broken away.

Figure 3 is an end elevation.

Figure 4 is a section on the line 4—4 of Figure 1.

Figure 5 is a section on the line 5—5 of Figure 1.

Figure 6 is a section on the line 6—6 of Figure 1.

Figure 7 is a section on the line 7—7 of Figure 1.

Figure 8 is a section on the line 8—8 of Figure 1.

Figure 9 is a plan view of the attaching station, showing the manner in which the merchandise is held for an attaching operation.

Figure 10 is a plan view of one style of tag which may be used in the machine.

Referring to the drawings, the machine is adapted to feed and attach tags or tickets of different widths or tags or tickets comprising varying numbers of separable sections. Thus, in Figure 10 a style of ticket T is illustrated which comprises four identical sections separated by lines of perforations P along which the sections may be detached. With this form of multi-section tag, now being used increasingly for accounting and inventory control, the number of sections required varies with the requirements of store and of the accounting system used. In some cases a two section ticket as indicated by *a* is adequate. In other cases, three sections as indicated by *b*, or in some cases four sections as indicated by *c* are required.

Such tickets are supplied without staples, although the position where the staple S is placed when the tag is attached is indicated. In the machine illustrated, this will be the position of the staple regardless of the number of sections in the ticket.

A magazine 1 is provided in which a suitable supply of tickets may be stacked. The magazine comprises a fixed back plate 2 attached to a base plate 3 to which is also attached a fixed side plate 4 carrying a corner plate 5. Slots 6 are milled in the back plate to receive an adjustable side plate 7 carrying a corner plate 8. By suitably locating the adjustable side plate, the magazine may be adapted to accommodate tickets of different sizes.

Tickets are fed from the magazine, one by one, by a slide 9 which moves back and forth along the base plate, said slide having a thin blade 10 to engage and move the bottom ticket in the stack. The slide is actuated by cam 11 on shaft 12 through lever 13 having a roller 14 in engagement with the cam. Lever 13 is connected to slide 9 by link 15. Shaft 12 is driven by motor 16 through worm 17 and gear 18. The amplitude of the feed motion of slide 9 is always the same regardless of ticket size, but the feeding position of the blade may be adjusted on the slide by knob 19. This knob carries a spring pressed pin 20 which is slidable in the boss 21 to engage a series of spaced apertures 22 in the slide. In the machine illustrated, there are four such apertures properly spaced to position the blade for feeding tickets of various widths.

The feeding of the ticket by the slide 9 advances the ticket to a position where its top edge enters the space between the jaws 23 and 24 of a clamp. Upper jaw 23 has a depending portion 25 with a groove 26 therein which straddles the upper edge of plate 27 and slides thereon, being guided by a pin 23′ which passes through a slot 27′ in the plate. Lower jaw 24 is pivoted on 23 and normally held in closed position by spring 28. During the feed motion of slide 9, however, the clamp is opened to receive the ticket by engagement of the head of pin 29 with the lower jaw 24. Said pin is mounted to slide in brackets 30, 31 and is normally pressed downwardly by spring 32. It is pushed upwardly to open the clamp by cam 33 which is connected thereto through roller 34 and lever 35. Cam 33 is mounted on shaft 36 which is connected to shaft 12 in one to one ratio by bevel gears 37, 38 and spur gears 39, 40. Shortly after the feed motion of slide 9 has been completed, the roller 34 rides off the high portion of the cam allowing the clamp to close to grasp the ticket.

Immediately thereafter, the clamp carrying the ticket advances the ticket to attaching position. For this purpose, the jaw 23 is connected by link 41 to lever 42 which, in turn, is connected by link 43 to lever 44 carrying roller 45 which engages cam 46 on shaft 12.

Figure 9 shows the parts in attaching position. The clamp, gripping the upper edge of the left hand section

of a two section ticket T, is in its extreme position of advance (the high section of cam 46) and the right hand section of the ticket is located above the anvil 47 in position to be stapled by actuation of the stapling head 48. The clamp dwells in this position while the stapling operation is performed.

Referring to Figure 6, it will be observed that the normal level of the anvil face is considerably below the level of the ticket held by the clamp. During the stapling operation, the anvil is raised to the broken line position of Figure 6, that is, immediately below the plane of the clamped ticket. For this purpose, the anvil is mounted on a pin 51 which extends into the recessed end of a rod 52 which is mounted for vertical movement in plate 53, a relatively stiff spring 54 being interposed between the pin 51 and rod 52. The rod 52 is connected to lever 55 through a link 56, and the rear end of lever 55 carries a roller 57 which engages cam 58 on shaft 36. The high side of the cam 58 is timed to cause the anvil to be lifted to the broken line position of Fig. 6 after the ticket has been advanced to stapling position but before the stapling head is operated.

The stapling head is operated by a lever 59, pivoted at 60 and carrying a roller 61 engaging a cam 62 on shaft 36. The other end of the lever carries a pin 63 which engages the stapling head, said pin extending through a boss 64 and being held therein by a thumb screw 65. By removing the pin 63, the stapling head may be opened for reloading.

After the stapling operation has been completed, the jaw 24 is opened to release the ticket. For this purpose a pin 66 is provided having a head positioned to engage the jaw 24 when it is in the stapling position of Fig. 9. Said pin is mounted to slide in brackets 67, 68 and is pressed downwardly by a spring 69. It is pushed upwardly to open the clamp on completion of the stapling operation by a cam 70 on shaft 36, through lever 71 pivoted at 72 and carrying a roller 73 engaging the cam.

The operation of the machine is controlled by a large push button 75 mounted adjacent the anvil so that it may be easily operated by the right hand of the operator who is holding the article to be tagged as shown in Fig. 9. As shown in Fig. 5, the button has a tubular shank 76 which telescopes over a tubular shell 77 and can be adjusted thereon by loosening the thumb screw 78. The shell 77 in turn telescopes over the stud 79 and slides thereon. Fixed to the shell 77 is a pin 80 which extends through the stud, carrying a finger 81 which operates the ratchet wheel 82. The push button, shell and pin are normally retracted by the spring 83 as shown in Fig. 5, but when pushed forward by the operator turns the ratchet 82 which momentarily closes a switch in the housing 84 to energize a solenoid 85 to trip the release 86 of a standard one turn clutch assembly 87. Ordinarily, the motor and worm 17 turn continuously and are only connected to shaft 12 for operation of the machine when the clutch is engaged by operation of the push button. On completion of one revolution of shaft 12, the clutch is again released.

It will be understood that the invention may be variously modified and embodied within the scope of the subjoined claims.

I claim as my invention:

1. Apparatus for stapling unstapled tickets to merchandise, comprising, in combination, means for feeding separated, individual unstapled tickets from a supply thereof, means for receiving an unstapled ticket which has been fed by said feeding means and for holding said ticket during a stapling operation, means for advancing said receiving means from the position where it receives the ticket to stapling position, and means for driving a staple through said ticket and for clinching said staple to said ticket.

2. Apparatus as set forth in claim 1 in which said receiving means is a pair of spring pressed gripping jaws, and in which said advancing means moves said jaws and ticket in the same direction as the ticket feeding movement.

3. Apparatus as set forth in claim 1 in which said receiving means is a pair of gripping jaws, and in which means are provided for opening said gripping jaws to receive said ticket as it is fed from the supply, and in which means are provided for opening said jaws to release said ticket after completion of the stapling operation, and in which said advancing means moves said jaws and ticket in the same direction as the ticket feeding movement.

4. Apparatus as set forth in claim 1 in which said means for driving and clinching said staple includes a stapling head and an anvil, said anvil having its clinching face located a substantial distance below the level of a ticket which has been advanced to stapling position, and means operated in timed relation with said advancing means for raising said anvil to engage said ticket at the end of its advancing stroke.

5. Apparatus for stapling unstapled tickets to merchandise, comprising, in combination, an anvil having a staple clinching face on which an article of merchandise may be supported, means for advancing an unstapled ticket to a position parallel to said clinching face but spaced a substantial distance from said face, means operated in timed relation with said advancing means for moving said anvil and merchandise to engage said ticket at the end of its advancing stroke, and means for driving a staple through said ticket and merchandise and for clinching said staple against said anvil while said anvil is held in engagement with said ticket.

6. Apparatus as set forth in claim 5 including an operating push button located closely adjacent said anvil and operable by a hand which is holding the merchandise on the anvil.

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