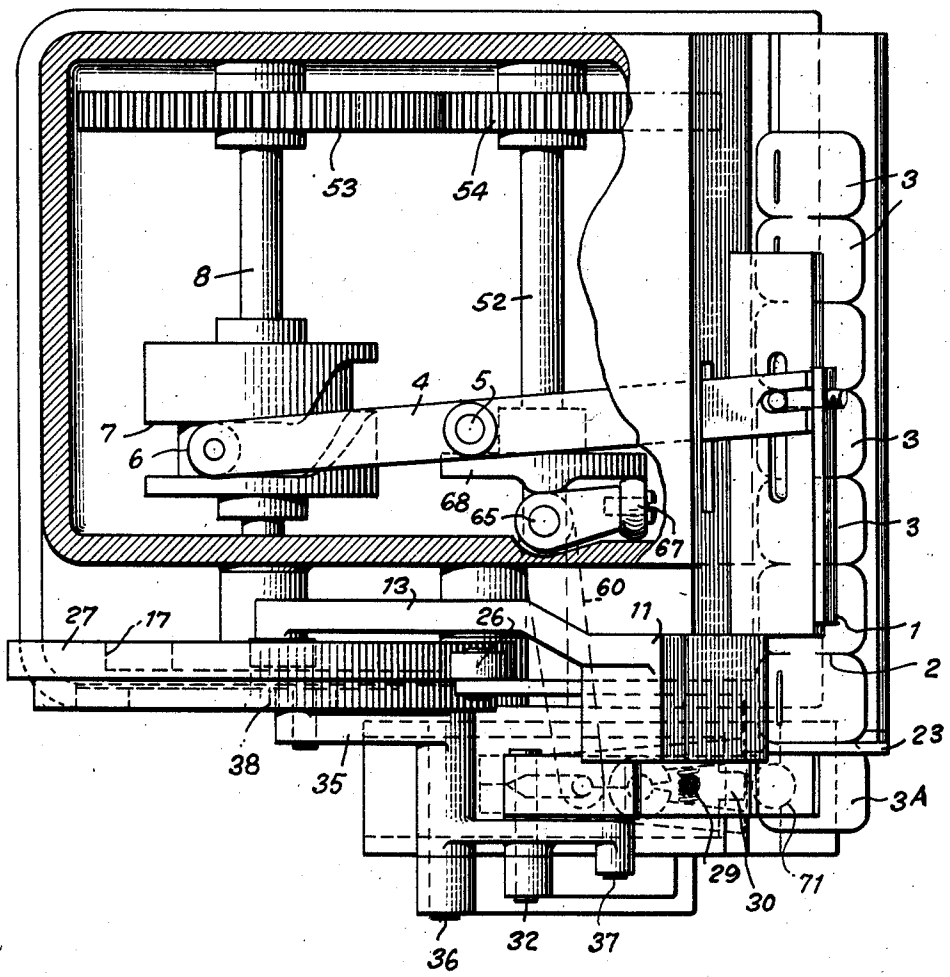
May 5, 1942. J. WEIMONT 2,281,896

MARKING MACHINE

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Fig. 1.



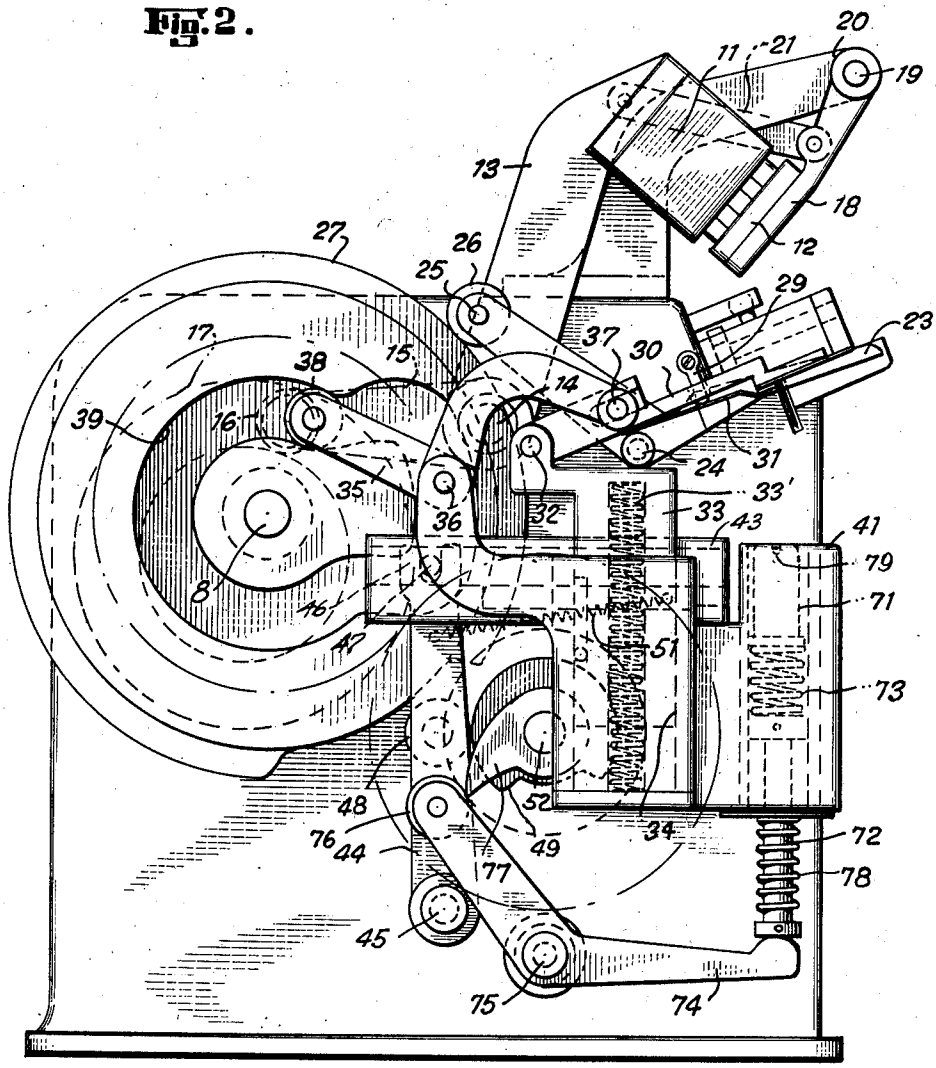
INVENTOR
Joseph Weimont
BY
Emery, Vanney, Whittemore & Dix
ATTORNEY

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MARKING MACHINE

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Fig. 2.



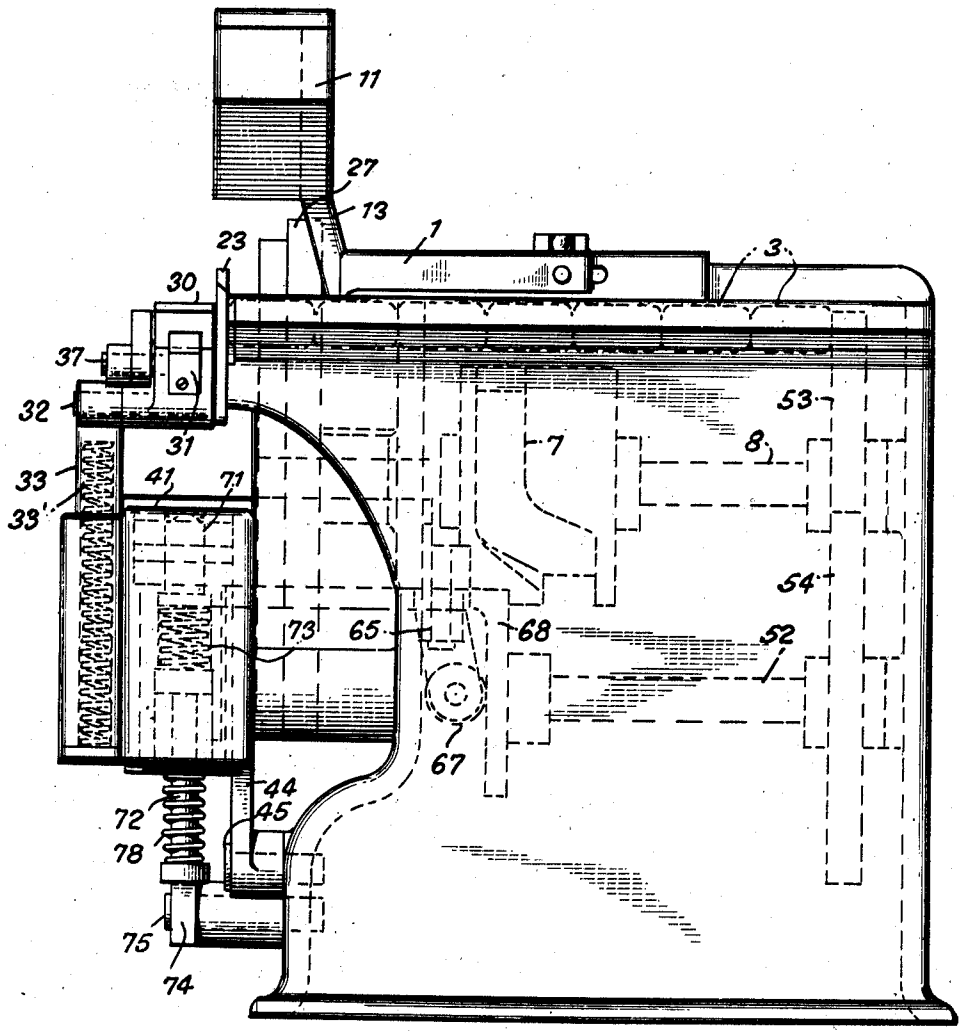
INVENTOR
Joseph Weimont
BY
Emery, Vanny, Whittemore & Dix
ATTORNEY

May 5, 1942. J. WEIMONT 2,281,896

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Fig. 3.



INVENTOR
Joseph Weimont
BY
Emery, Vanney, Whittemore & Dix
ATTORNEY

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Fig. 4.

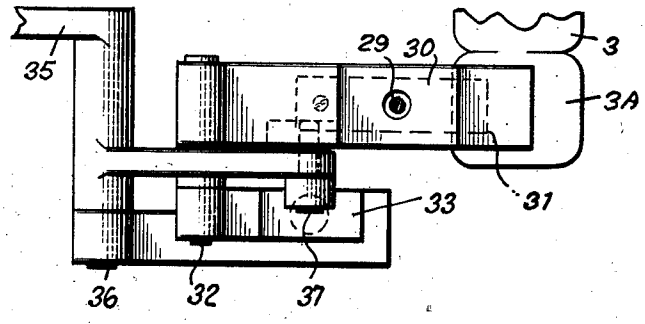


Fig. 6.

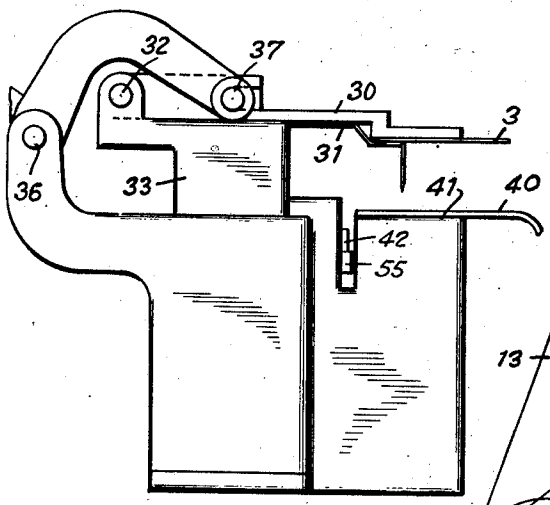


Fig. 5.

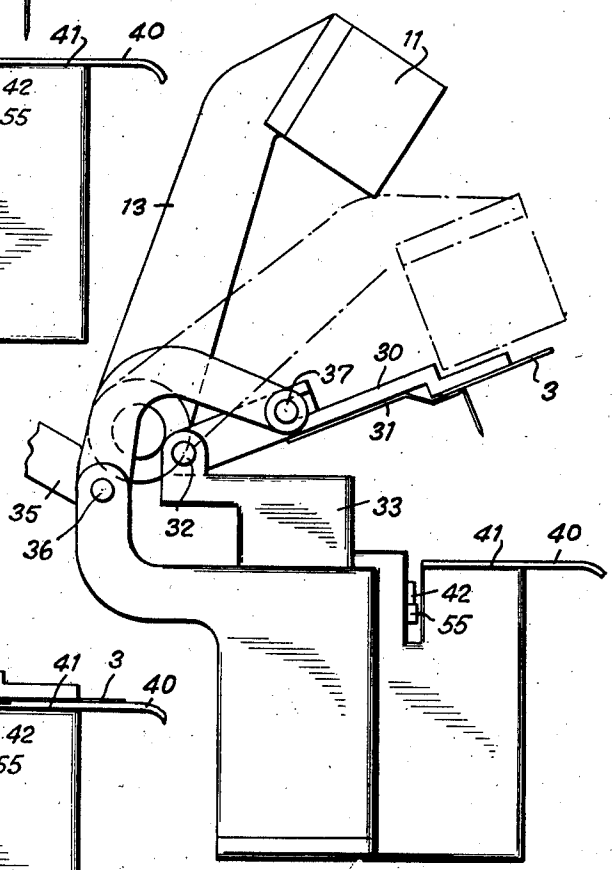
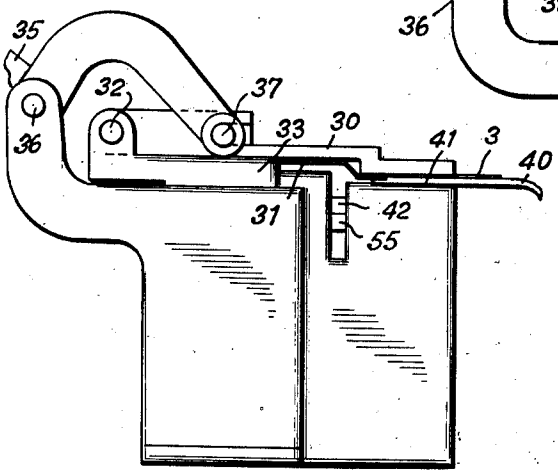


Fig. 7.



INVENTOR
Joseph Weimont
BY
Emery, Vanney, Whittemore & Dix
ATTORNEY

May 5, 1942. J. WEIMONT 2,281,896

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Fig. 8.

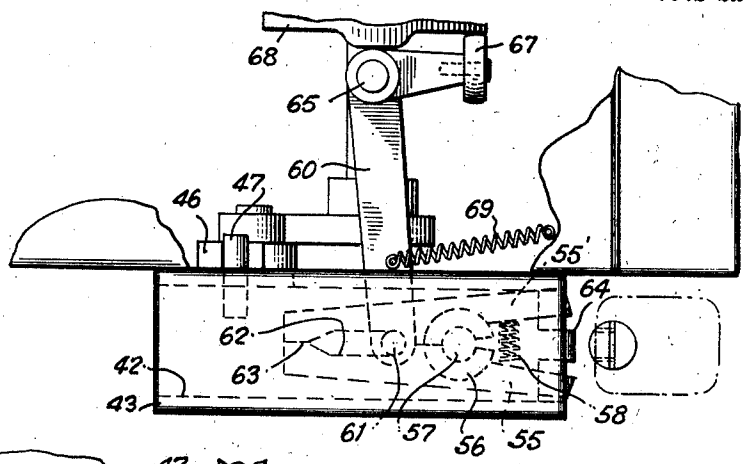


Fig. 9.

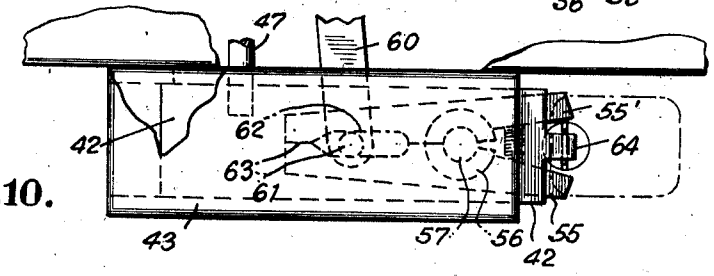


Fig. 10.

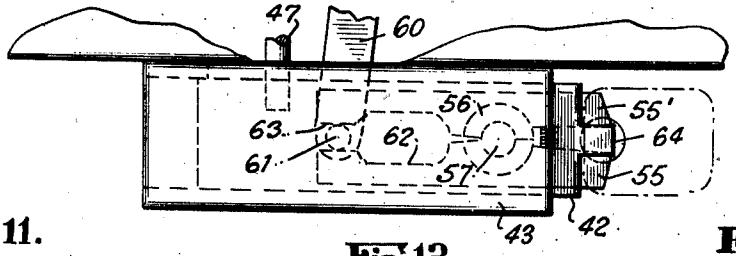


Fig. 11.

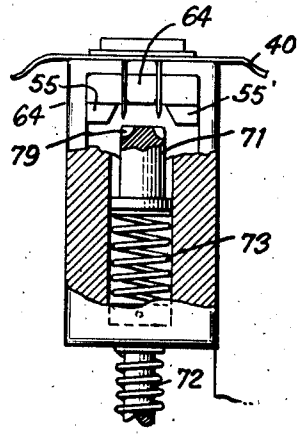


Fig. 12.

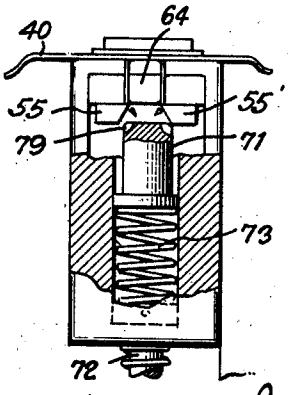
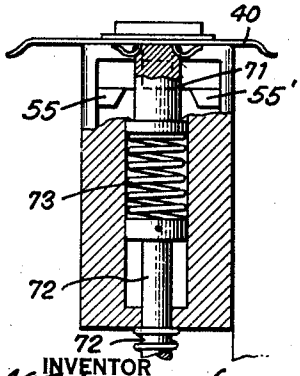


Fig. 13.



INVENTOR

Joseph Weimont

BY

Emery, Vanney, Whittemore & Dix

ATTORNEY

Patented May 5, 1942

2,281,896

UNITED STATES PATENT OFFICE

2,281,896

MARKING MACHINE

Joseph Weimont, Bogota, N. J., assignor to A. Kimball Company, New York, N. Y., a corporation of New York

Application August 28, 1940, Serial No. 354,465

9 Claims. (Cl. 93—88)

This invention relates to marking machines adapted to handle pin tickets, and pertains more particularly to machines which not only print suitable indicia on the tickets, but also attach the printed ticket to the merchandise to be marked.

In the use of pin tickets it is required that the pins or staples be reasonably sharp in order that they may easily penetrate the goods to which the ticket is to be attached. Sharp pins have been objectionable, however, because they are apt to scratch or cut the hands of salesmen and customers handling the goods, and also because they are apt to snag and tear other articles of merchandise.

It is an object of the present invention to provide a machine for attaching pin tickets to merchandise in which the pins are caused to penetrate the goods, and then, before spreading and clinching the pins, the sharp ends of the pins are cut off, so that after clinching, the ends of the pins are relatively blunt and harmless.

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, partly broken away to show the interior of the machine.

Figure 2 is a side elevation.

Figure 3 is a front elevation.

Figure 4 is a top plan view of the ticket holder and connected parts.

Figures 5, 6 and 7 are side elevations of the ticket holder showing successive stages of operation.

Figures 8, 9 and 10 are top plan views of the pin cut off mechanism showing successive stages of operation.

Figures 11, 12 and 13 are front elevations, partly in section, of the pin cut off and attaching mechanisms showing successive stages of operation.

The strip feeding, printing and inking, and cut off mechanisms of the machine illustrated in the drawings are generally similar to those illustrated and described in prior Patents Nos. 1,837,450, 1,986,655 and 1,936,678 to which reference may be had for a more complete description of such mechanisms. The said mechanisms are all old in themselves, and are illustrated herein merely to show the manner in which such mechanisms cooperate with the mechanisms for cutting off and clinching the pins, as hereinafter described. It will also be understood that other forms of strip feeding, printing and inking, and cut off mechanisms may be used in connection with the pin cut off and clinching mechanisms hereinafter described.

In the machine illustrated, the strip feeding mechanism comprises a feed pawl 1 adapted to engage notches or slits 2 in the ticket strips 3, which said pawl is actuated by lever 4, pivotally mounted at 5. The said lever carries a roller 6 which rides in the cam 7 mounted on the main drive shaft 8. The said shaft may be operated in any suitable manner, as by a hand wheel (not shown), or it may be motor driven, as for example in the manner illustrated in Patent No. 2,027,736. As will be understood, the said feed mechanism advances the ticket strip intermittently, step by step, one tag length at a time.

The printing and inking mechanism includes the printing head 11 and ink pad 12. The printing head is mounted on arm 13 of a bell crank pivoted at 14, the other arm 15 of which carries a roller 16 which rides in cam 17. The ink pad is carried by holder 18 pivoted at 19 to bracket 20, and is actuated by motion of arm 13 through link 21 in the usual manner.

The cut off mechanism includes knife 23, pivoted at 24, and having a rearwardly extending arm 25 carrying a roller 26 operated by cam 27.

During the operating cycle of the parts thus far described, the end ticket of the strip is printed during the early stages of the cycle, the printer head 11 swinging downwardly to the printing position as shown in Figure 5. Immediately after the printer head swings upwardly, the feed pawl 1 advances to feed the end ticket one tag length to the position 3A shown in Figure 1. Immediately thereafter the knife 23 is operated by cam 27 to sever the end ticket from the strip.

As the strip is fed forward, the end ticket is received in a holder comprising bar 30 and spring clip 31. As shown in Figure 2, the spring clip is held open by finger 29 to permit the end ticket to be inserted between the bar and the clip as the strip is fed forward. The bar supports the end ticket while it is being severed from the strip and thereafter the clip grips the ticket against the bar and carries the severed ticket to position for operation of the pin cut off and clinching mechanisms. The said holder is pivoted at 32 to a slide 33 which moves vertically in sleeve 34, being normally held in elevated position, as shown in Figures 2, 5 and 6, by spring 33'. The holder is actuated by lever 35, pivoted at 36, one arm of which has a pin and slot connection with bar 30 at 37, and the other arm of which carries

a roller 38 which rides in cam 39. As will be observed, initial motion of lever 35 under the influence of cam 39 causes the bar 30 to swing about pivot 32. This continues until the under side of the bar engages the upper face of the slide 33 as shown in Figure 6. Thereafter the motion of the holder is linear and vertical. In this connection, it may be explained that the goods 40 to which the ticket is to be attached are held by the operator against the anvil 41 as shown in Figures 5, 6 and 7, and that the pins penetrate the goods during movement from the position shown in Figure 6 to the position shown in Figure 7. Consequently it is advantageous that the movement of the ticket during penetration be linear rather than swinging movement.

The parts are held temporarily in the position shown in Figure 7 by the dwell in the cam 39, and during this time the pin cut off mechanism is operated to cut off the pointed ends of the pins.

The pin cut off mechanism is best shown in Figures 8 to 13 inclusive, and comprises a slide 42 adapted to move in a horizontal plane in the holder 43 which may be mounted on the machine casing in any suitable manner. The slide 42 is reciprocated by lever 44, pivoted on the casing at 45, and having a forked end 46 engaging the pin 47 which is secured in the slide. Lever 44 carries a roller 48 which rides on cam 49, being held in engagement therewith by spring 51. Cam 49 is mounted on counter shaft 52 extending across the machine parallel to the main shaft 8 and is driven by the main shaft through gears 53, 54.

Mounted on the slide 42 for reciprocation therewith are a pair of knives 55, 55', each provided with one half of a split boss 56 surrounding the pin 57 on the slide 42, and about which the said knives may pivot as hereinafter explained. The cutting edges of the knives are normally spread apart, as shown in Figure 8, by spring 58, but may be actuated for cutting purposes by lever 60. This lever carries a pin 61 which extends into slot 62 between the knives, which slot is of a length sufficient to permit free reciprocating motion of the slide 42 without actuation of the knives. If, however, after the slide 42 has advanced to the position shown in Figure 9, the arm 60 is moved from the position shown in Figure 9 to the position shown in Figure 10, the knives will swing about the pin 57 due to the action of the pin 61 on the converging cam surfaces 63.

In this connection, it will be noted that the slide 42 is provided with a projection 64 which, when the slide is advanced, extends between the pins (Figures 10, 11 and 12) and provides a fixed abutment with which the knives cooperate to shear off the ends of the pins as shown in Figure 12.

The arm 60 is part of a bell crank pivoted at 65, the other arm 66 of which carries a roller 67 which rides on cam 68 carried on shaft 52, being held against said cam by spring 69.

Continuing the description of the operating cycle, it will be remembered that the end ticket has been received in the holder and thereafter has been severed from the strip. Soon thereafter the holder is moved downwardly as illustrated in Figures 5, 6 and 7. Meanwhile, the slide 42 is advanced so that the abutment 64 will lie between the pins. The knives are then actuated to cut off the ends of the pins, after which the slide is retracted to the position shown in Figure 8.

Immediately after the retraction of the slide, the attaching mechanism is operated. The attaching mechanism comprises a clinching head 71 adapted to be actuated by plunger 72 through a relatively stiff spring 73. The plunger is operated by a lever 74 pivoted at 75 and carrying a roller 76 riding on cam 77, the roller being held against the cam by spring 78. The clinching head is provided with inclined grooves 79 which engage the pins and spread them laterally as the plunger moves upwardly to the position shown in Figure 13.

As soon as the clinching operation is completed, the holder moves upwardly until restored to the position shown in Figures 2 and 5 at which time the operating cycle is complete.

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. In a machine for attaching tickets to merchandise, which said tickets are provided with attaching pins projecting from one surface thereof, in combination, means to support the merchandise in attaching position, means to receive and carry a ticket to attaching position and to pass said pins through the merchandise while advancing to attaching position, means to cut off the sharp ends of the pins, and means to spread the pins to attach the ticket to the merchandise.

2. In a machine for attaching tickets to merchandise, which said tickets are provided with attaching pins projecting from one surface thereof, in combination, means to support the merchandise in attaching position, means to receive and carry a ticket to attaching position and to pass said pins through the merchandise while advancing to attaching position, a slide, a pair of knives pivotally mounted on said slide, means for advancing said slide to cutting position, means to actuate said knives to cut off the ends of the pins, and means to spread the pins to attach the ticket to the merchandise.

3. In a machine for attaching tickets to merchandise, which said tickets are provided with attaching pins projecting from one surface thereof, in combination, means to support the merchandise in attaching position, means to receive and carry a ticket to attaching position and to pass said pins through the merchandise while advancing to attaching position, a slide having a projecting portion adapted to fit between the pins, a pair of knives mounted on said slide in shearing relation to said projecting portion, means for advancing said slide to cutting position with said projecting portion located between the pins, means to actuate said knives to cut off the ends of the pins, and means to spread the pins to attach the ticket to the merchandise.

4. In a machine for attaching tickets to merchandise, which said tickets are provided with attaching pins projecting from one surface thereof, in combination, means to support the merchandise in attaching position, a ticket holder, a plunger, said holder being pivotally mounted on said plunger, means for swinging said holder on said plunger and thereafter moving said holder and plunger linearly to attaching position, said pins passing through the merchandise while advancing linearly to attaching position, and means to spread the pins to attach the ticket to the merchandise.

5. In a machine for attaching tickets to merchandise, which said tickets are provided with attaching pins projecting from one surface there-

of, in combination, means to support the merchandise in attaching position, a ticket holder, a plunger, said holder being pivotally mounted on said plunger, a lever having a lost motion connection to said holder, cam means for operating said lever to swing said holder on said plunger and thereafter to move said holder and plunger linearly to attaching position, said pins passing through the merchandise while advancing linearly to attaching position, and means to spread the pins to attach the ticket to the merchandise.

6. In a machine for attaching tickets to merchandise, which said tickets are provided with attaching pins projecting from one surface thereof, in combination, means to support the merchandise in attaching position, a ticket holder, a plunger, said holder being pivotally mounted on said plunger, means for swinging said holder on said plunger and thereafter moving said holder and plunger linearly to attaching position, said pins passing through the merchandise while advancing linearly to attaching position, means to cut off the sharp ends of the pins, and means to spread the pins to attach the ticket to the merchandise.

7. In a machine for attaching tickets to merchandise, which said tickets are provided with attaching pins projecting from one surface thereof, in combination, means to support the merchandise in attaching position, a ticket holder, means to move said ticket holder linearly to pass the pins through the merchandise while advancing to attaching position, means to cut off the sharp ends of the pins, and means to spread the pins to attach the ticket to the merchandise.

8. In a machine for attaching tickets to merchandise, which said tickets are provided with attaching pins projecting from one surface thereof, in combination, means to support the merchandise in attaching position, means to feed a strip of tickets intermittently, means to sever a ticket from said strip, means to receive said severed ticket and to carry the same to attaching position and to pass said pins through the merchandise while advancing to attaching position, means to cut off the sharp ends of the pins, and means to spread the pins to attach the ticket to the mechandise.

9. In a machine for attaching tickets to merchandise, which said tickets are provided with attaching pins projecting from one surface thereof, in combination, means to advance a ticket toward the merchandise and to pass said pins through the merchandise, and means to cut off the sharp ends of the pins.

JOSEPH WEIMONT.