This invention relates to pinticket manufacturing and attaching machines and is an improvement over the structure shown and described in U. S. Letters Patent No. 1,503,745, granted on August 5, 1924, to Max O. Claus for Label Attaching Machines.

The cutting knives have a shear action. This is enabled by providing the movable knives with a stem, which stem is out of center with the knife action, whereby the movable knife has a shearing action with the stationary knife. Said stem is held in place by a plate having a slot the walls of which engage a cutout of the stem. This stem acts as a pivot for the movable knife, said stem having a ball at its other end, and a washer with a concave depression of the same curvature as the ball, said plate having means fastening it in spaced relation to the machine frame.

The invention will be more fully described hereinafter, embodiments thereof shown in the drawings, and the invention will be finally pointed out in the claims.

In the accompanying drawings,

Fig. 1 is a front view;

Fig. 2 is a side view;

Fig. 3 is a perspective view of the knife or scissor holder, shown in spaced position.

Similar characters of reference indicate corresponding parts throughout the various views.

Referring to the drawings, the machine may be considered divided into two parts, the upper part A and the lower part B. A strip paper 10, a scissor 12 for cutting off the paper, a printing mechanism 13, for printing and feeding the paper, and the stapling die member 14, together with their operative parts, are arranged in the upper part A. In the lower part B a horizontal table or platform 18 extends the width and length of the machine, permitting passage at the rear thereof of certain operative parts extending from the lower part B to the upper part A. A central vertical wall 19 extends from the bottom of the machine to the table 18, and the upward portion 130 beyond where the mouth ends supports the base plate 21 with screw 20a, and a second vertical wall 20 extends from the bottom of the machine to the table 18, and the upward portion 130 beyond where the mouth ends (see Figs. 2, 20a and 20b) supports the base plate 21 with screw 20c. Also, on these walls 19 and 20, operative parts below the base plate 21 are supported.

A horizontal base portion 21 for the operative parts comprising the upper part A, which is spaced from the table 18, which is located in the lower part B, a distance about equal to that necessary to allow room for the material to be stapled or tagged.

An adjustable mouth guide 25 of general U shape which has on the upper edge of one of its legs, a hook portion 27 at its front end, and a hook portion at its rear end, and also an inwardly extending flange 28 with an adjustable screw 29. The base portion has at one longitudinal side thereof an upwardly extending flange 22 and has at its other longitudinal side a downwardly extending flange 23. The screw 29 serves to press against the flange 22 for locking the guide 25 in a fixed position. The other leg 26a extends under the flange 23. The front portion 30 has a height substantially equal to the space between the table 18 and the base portion 21, that is, about the amount of space needed for the entry and free passage of the material to which the ticket is to be applied. The lower surface of the base portion 21, the upper surface of the table 18 and the front surface of the front wall 30 of the guide 25, form a mouth for the passage of material at the rear of the staple attaching mechanism generally indicated by 16 and 14. The guide 25 may be placed in any desired position and then secured in position. In Fig. 2, the dotted lines 30 show another position of the front portion of the guide 25 than that shown in full lines. The extent of movement of the guide 25 is determined by abutment 33, in the form of a screw, at the front and by the walls 19 and 20, which are extending upwardly beyond the table 18 to support the base plate 21.

The operating plate 11, is so designed that it is in a convenient position in respect to the mouth, whatever its adjustment may be. This plate releases the clutch mechanism which in turn starts the machine. At the right end of the table 18, and normally at the level thereof, is a plate 35 hinged to the table 18 and to the underside of the plate 35, a lever 37 is pivoted which lever is connected with a crank arm pivoted to the starting shaft 38. The plate 35 has a vertical member 36 which extends below the table 18. By arranging the material in proper position all that is necessary is to press the plate 35 downwardly momentarily and then release. The machine sets in operation and it continues to operate until the ticket has been made and fastened.

The improvement is found in the scissor action.

The blades 40 and 41 are pivoted to a central stem 42, having an end ball 43, and having near its other end 44, diametrically opposite cutouts.
45. A plate 46 has a slot 47, the walls of which engage the cutouts 45. A washer 48 with a concave depression is provided, into which depression the ball 42 seats. The plate 46 acts as a tension member and a lock for the stem 42. The plate 46 acts also as a spring for the purpose of keeping the upper or moving knife 43 together with tension against the stationary knife 41. A screw 44 fits into the slot 45 to support the plate 46 on the supporting block 51. The knife 41 is secured to the upper base portion by a screw 52. The knife 43 has a cam plate 53 which is operated by the roller 54. The stem 42 is out of center with the knife action causing the knife 43 to be moved in a downward and inward motion, while it is operating against the stationary knife 41. This shear action facilitates the cutting of the paper. The tension plate 45, the concave washer 48, and the out of center stem 42, cooperate together to give the movable knife 43, the shear action described. Regardless of the position of the stem in the support 51, the movable knife 43 has a floating tension and is in cutting alignment due to the self adjustment of the washer to the ball. Also, regardless of the direction of the pull of the resilient plate 46 on the stem, the blades are held together, by ball adjusting itself to the washer. The floating tension allows the movable knife 43 to be in cutting alignment with the stationary knife 41.

The ball adjusts itself to the washer and makes the knife blade alignment independent of the supporting block 51. The printing head 13 is supported on a shaft 58 which rotates in bearings 59. These bearings 59 form part of a plate 60 which is pivoted at a shaft 61. These bearings also provide additional space for easy adjustments for larger or smaller printing heads, for longer and shorter tickets. Below the plate 60 is a second plate 72 which is fixed by screws to the base portion 21. The roller 70 (Fig. 1) is on a shaft 71 supported by the closed ends 12 of the cylindrical casing 73. This casing has a rectangular window or opening 70 to permit the printing head 13 to contact with the inking roller 70, and the shaft freely rotates in the ends 12 of the casing 73. The casing 73 has extensions 76, with openings therein, through which a supporting shaft 77 passes. One end of this shaft 77 is fixed to an extension 78 on the printing head support 79. The supported end of this shaft 77 is adjustable in its position in two directions. One direction, by means of a screw 80 which enables the shaft to be rotated when the screw 80 is loose. A tension spring 81 is fixed on the shaft 77 and is adapted to press against the casing 73. This spring 81 then presses the casing 73 against an adjustable stopping mechanism 82 on the printing head support 79. The stopping mechanism 82 is held in place and adjusted by screw 83. Thereby, the inking roller 73 is held in the proper position for the printing head to receive the necessary inking. The adjustment of the shaft 17 in the other direction is to align the inking roller to the printing head. This is done by screw clamp 84, which holds the shaft 77 in the proper position to position to obtain the best alignment with the type face.

A tension and a retention device 120 is used to retain the paper or wire on the roller and at the same time gives it tension. This consists of a slotted plate 121, which seats around the paper roller shaft 122, which has a hole for the entrance of a coiled spring 123. A like device is used for wire roller.

An essential feature of the invention underlying the improvements, is the printing of an unprinted strip of paper 10, at the front of the machine, where the ticket is entirely manufactured, in that, it is printed, registered and cut off. This manufacture of the ticket is immediately above the mouth entrance. The knives 40 and 41 of scissors are disposed entirely above the mouth entrance. The paper 10 moves into the mouth of the machine by the aid of the friction of the material or garments. The printing roller is also disposed entirely above the mouth. All operative parts between the upper and lower parts A and B, are disposed at the rear of the mouth, thereby leaving the mouth open for the material or garments. The mouth opening is regulated by the adjustment of the guide 25.

The operative parts shown in the drawings and not above specifically described are substantially like those in U. S. Letters Patent No. 1,508,745, of August 9, 1924, granted to Max. O. Claus, with such differences as will appear, and are now described for completeness sake.

The main shaft 15 is connected with a clutch mechanism for the starting and automatic stopping of the machine. This clutch mechanism 90 is described in detail in U. S. Letters Patent No. 1,584,846, of May 18, 1926, to Max. O. Claus. The main shaft 15 makes one revolution per ticket. A cam 91 drives the staple making mechanism 16. Cam 93 operates the lever 54 (Fig. 1) pivoted at 94a to a standard 94b, by means of a roller held against cam 93 by spring 94d attached to 54. The lever 54 moves the member 55 through the locking mechanism 96, and lever 95 moves the lever 51 pivoted at 98 to an upright 99. The end of the lever 91, drives a plate 100 guided by rods 101 in a downward motion to move the knife 43 downwardly against the knife 41. This downward motion also moves the ticket carriage 122, which is pivoted at 103 to the plate 100. On plate 100 a stapling anvil or die 14 is supported, which coacts with the stapling mechanism 16 of part B.

On the main shaft 15 is secured a sprocket 106 over which a chain 107 passes, which chain is guided by idlers 108 and 109 having their shafts supported in the upper part A, namely on plate 21. The chain 107 also passes over a sprocket 110, on the shaft 58 (see Fig. 1). It will be noted that the chain 107, is re-entering, so as not to interfere with the mouth C before described. The turning of the shaft 15 of part B turns the shaft 58 of part A, one revolution for the feeding, printing of the paper and inking of the type.

The one revolution of shaft 15 is divided into four parts. The first part is used for the feeding of the paper and its printing, also the feeding of the wire. The second part is used for the cutting of the paper and carrying it together with the staple die 14 to the staple mechanism 16, and also for the cutting and the bending of the wire into the form of a staple. The third part is used for pushing the staple through the garment and through the ticket, contacting with the die 14, bending the ends of the staple wire inwardly and completing the fastening. The fourth part is the returning of the operative parts back to their initial position.

This is a divisional application of Serial No. 744,021, filed April 30, 1947. Another divisional application of said parent application was filed Oct. 25, 1948, under Serial No. 56,329, and is now pending.

I have described several forms of my invention, but obviously various changes may be made
In the details disclosed without departing from
the spirit of the invention as set out in the follow-
ing claims:

I claim:

1. In a pinticket manufacturing and attaching
machine, having a support, a pair of knives at
one side of said support, and a stem on said sup-
port, extending through the knives to the other
side of the support, for pivoting said knives, the
combination of a washer on said stem and resting
at one of its sides against said knives, said washer
having a concave depression in its other side, a
ball on the end of said stem of substantially the
same contour as the depression and adjustably
fitting into said depression, and resilient means
for drawing the ball into the depression to hold
the knives together, whereby regardless of the
position of the stem on the supports, the movable
knife has a floating tension and in cutting align-
ment due to the self adjustment of the washer
to the ball.

ROBERT W. CLAUS.

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file of this patent:

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