

Nov. 3, 1925.

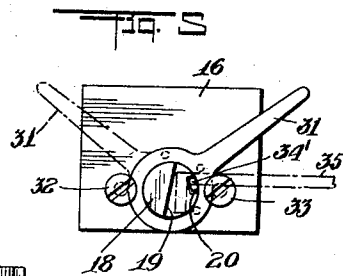
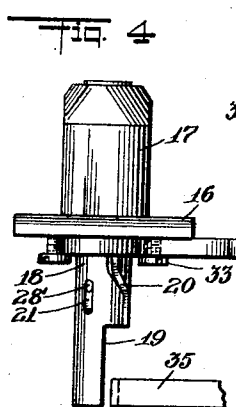
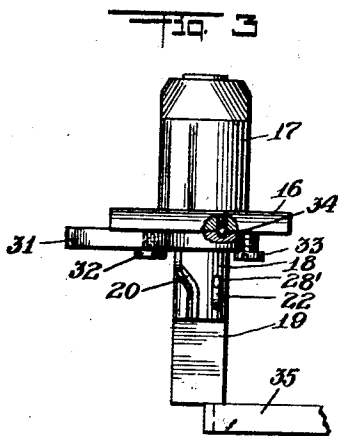
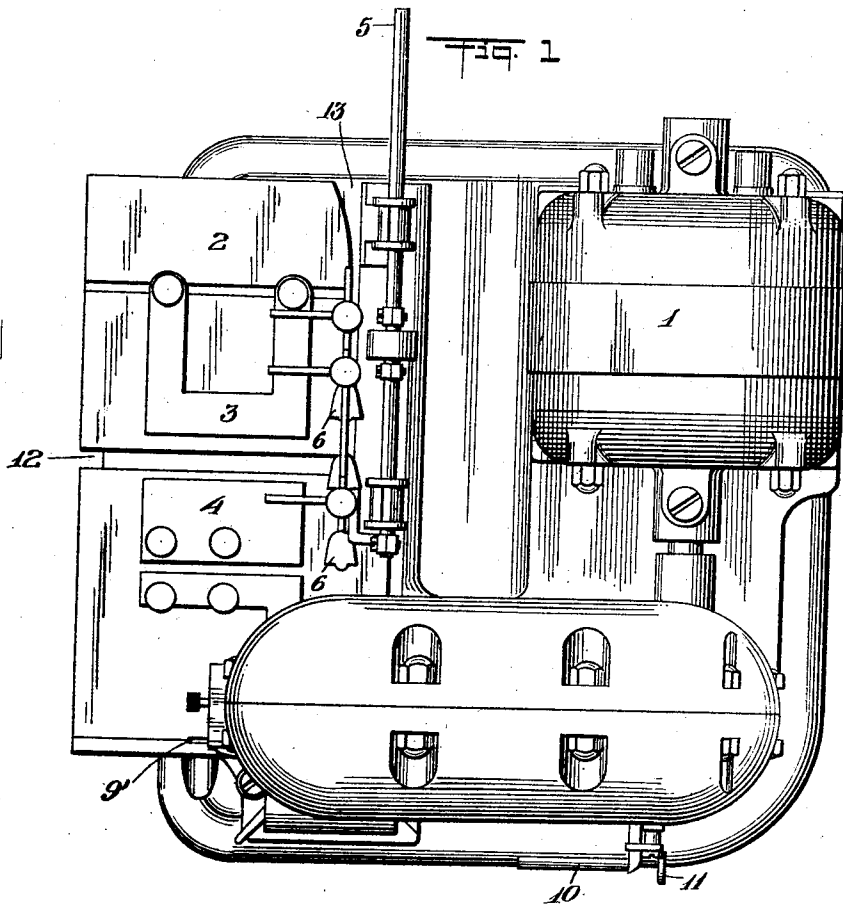
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E. L. KINCH

PIN TICKET MACHINE

Filed Nov. 20, 1923

2 Sheets-Sheet 1



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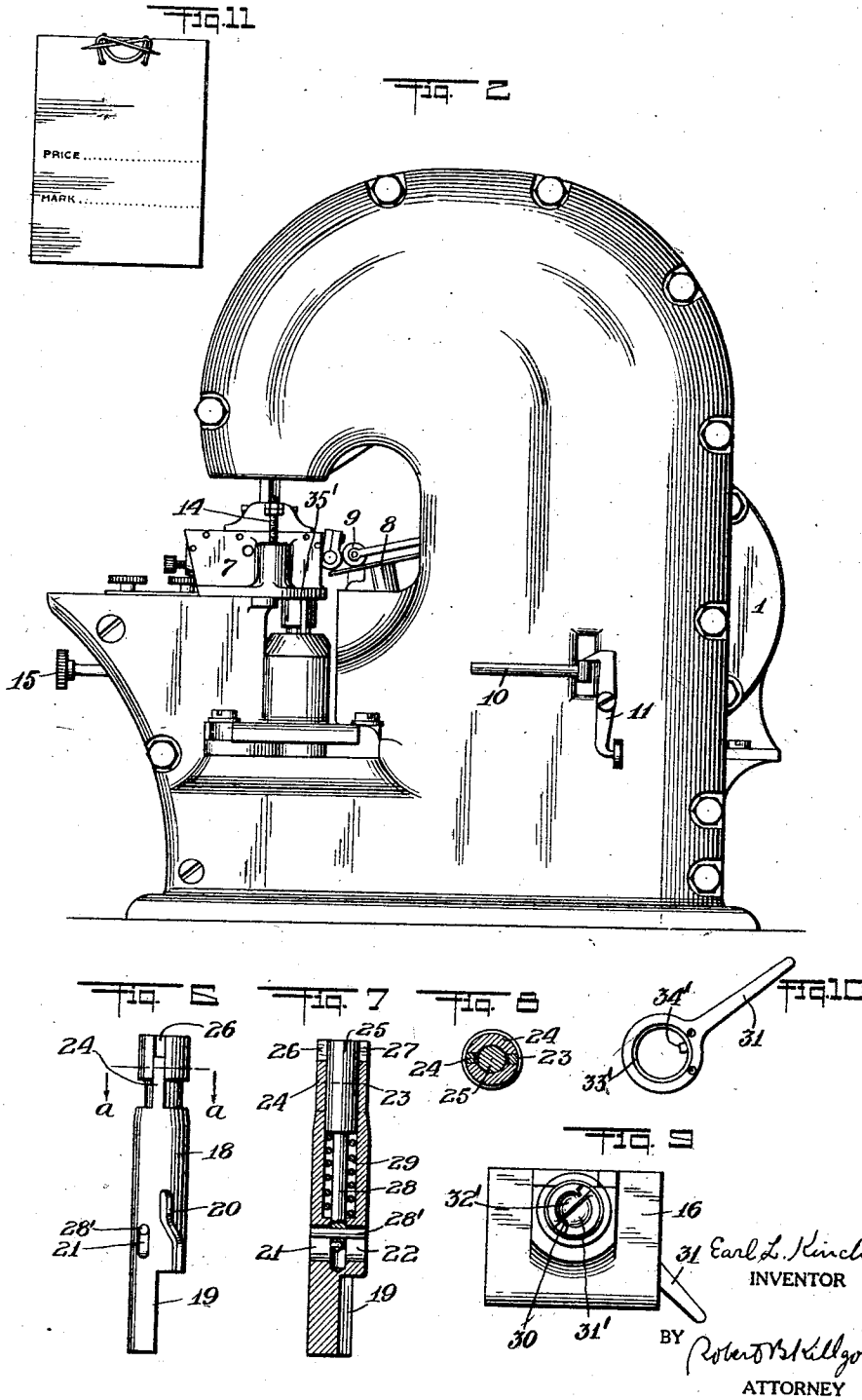
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2 Sheets-Sheet 2



UNITED STATES PATENT OFFICE.

EARL L. KINCH, OF WATERBURY, CONNECTICUT, ASSIGNOR TO WATERBURY BUCKLE COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT.

PIN-TICKET MACHINE.

Application filed November 20, 1923. Serial No. 675,872.

To all whom it may concern:

Be it known that I, EARL L. KINCH, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Pin-Ticket Machines, of which the following is a specification.

My invention relates to pin ticket machines which feed pin tickets, either singly or in strips, to and from a printing point, prints them, cuts them apart if in strip form, and finally affixes or clinches them to the goods, and it is my object to produce such a machine, preferably power driven, which can be adjusted to operate either on single or gang strip tickets, of varying sizes if desired, and in which any or all of the printing, cutting or clinching mechanism may be rendered operative or inoperative and which will perform single or continuous cycles of operations as desired. A further and specific object is to provide clinching means which will cross the pins on the goods instead of spreading them so that they will not project beyond the edges of the tickets to stick into the hands of persons handling the tagged goods or catch into other goods.

In the drawing Fig. 1 is a top view of my machine; Fig. 2 a side view; Fig. 3 a view, partly in section, of the clinching mechanism in operative position; Fig. 4 a like view of the clinching mechanism in inoperative position; Fig. 5 a view of the clinching mechanism control lever; Fig. 6 a view of the clinching plunger proper; Fig. 7 a sectional view of the structure of Fig. 6; Fig. 8 a sectional view of the structure of Fig. 6 on the line *a-a* thereof; Fig. 9 a top view of the clinching mechanism; Fig. 10 a view of the control lever; and Fig. 11 a view of a pin ticket with the pins clinched by my improved mechanism.

The complete machine comprises five main groups of mechanism. First:—the driving mechanism. Second:—the feeding mechanism. Third:—the printing mechanism. Fourth:—the cutting mechanism. Fifth:—the clinching mechanism.

The invention herein described and claimed relates particularly to the clinching mechanism which differs from previous devices for this purpose in that the pin points are crossed or bent toward one an-

other as shown in Fig. 11 instead of away from one another so that the danger of puncturing the skin and infecting it in handling the goods is reduced to a minimum.

The machine comprises an electric driving motor 1 provided with a clutch; feeding mechanism consisting of a slotted plate 2 with adjustable guides 3 and 4 thereon and a reciprocating, partially rotating rod 5 carrying adjustable pusher fingers 6; printing mechanism consisting of a chase 7 carrying the type, and ink platen 8 and an ink roller 9; a cutting off knife 9' is located between the printing and clinching mechanism; and finally the clinching mechanism as herein-after specifically described.

To operate the machine the motor is put into continuous operation and the clutch lever 10 is pushed down to engage the clutch between the motor and the mechanism and may be locked in that position by the detent 11. This clutch mechanism is so constructed that it will operate continuously when the clutch lever is held down or will enable the machine to perform a single cycle of operations if simply pushed down and immediately returned to its initial position, the motor being in continuous operation.

If in single form the pin tickets are pushed between the guides 3 and 4 with the depending pins in the slot 12 until they come under the pusher fingers 6 which are reciprocating with the rod 5. The stroke of these fingers is equal to one pin ticket and they lift clear by a partial rotation of the rod on the return stroke. When the tickets are under the pusher fingers the pins are in the slot 13 which is at right angles to the slot 12 and are then pushed along to the printing point. The ink roller 9 passes over the platen 8 and across the type in the chase 7 and then returns to the platen after which the chase descends and prints the ticket. The next stroke of the feeding mechanism pushes the ticket over the clinching device and as the succeeding ticket is printed a spring plunger 14 on the chase frame holds the previously printed ticket over the clinching mechanism so that when goods to which tickets are to be affixed are placed over the clinching mechanism the up stroke of the clinching plunger will push the goods over the pins and clinch them.

If strip tickets are used the operation is the same except that the tickets and depend-

ing pins are entered initially in the slot 13 and a cut off knife between the printing and clinching mechanism severs them, the knife being thrown into or out of operation by a slide 15.

The clinching mechanism which is the subject-matter of this application consists of a plate 16 secured in the frame of the machine with a tubular guide 17 thereon. A tubular plunger 18 reciprocates in the guide tube and has a step 19 cut in its lower end, a cam groove 20 cut in its face and a pair of opposed slots 21—22 through its walls. The upper end of this plunger has two opposed upstanding posts 23 and 24. A second stepped plunger 25 with two opposed grooves 26 and 27 slips over the posts 23 and 24 with the reduced stem 28 inside the plunger 18, a coil spring 29 normally holding the plunger 25 in an outward position and a pin 28' passes through the stem 28 and the slots 21 and 22 to act as a guide and stop.

The head or end face of this plunger 25 is peculiarly recessed as shown in Fig. 9. It has the central blade 30 with the semi-circular pockets eccentrically disposed on either side thereof with the projected ends almost closing the slots 26 and 27.

A control lever 31 is mounted on the under side of the plate 16 and partially rotates thereon, screws 32 and 33 acting as stops. To avoid jarring out of position a ball and socket spring check 34 shown in Fig. 3 is employed.

The inner end of this lever 31 is a ring 33' encircling the plunger and has an inwardly projecting pin 34' which engages the cam groove 20 on the plunger 18. The operating lever 35 has an up and down swinging motion and when in contact with the bottom of the plunger 18 as shown in Fig. 3 will cause the compound plunger to rise but if the lever 31 is swung over the pin 34 engaging the groove 20 will partially rotate the compound plunger until the step clears the operating lever 35 as shown in Fig. 4 after which the lever will rise and fall without operating the clinching mechanism.

Assuming that a pin ticket with its depending pins is over the clinching mechanism and the goods to which it is to be affixed are laid over the tubular guide 17 the compound plunger rises until pins are forced through the goods, the ticket and goods being held by the pin 14 and against the anvil 35' on the chase 7 (best shown in Fig. 2) which has previously descended. The pins extend into the grooves 26 and 27 in the upper plunger 25 and on the continued rise of the compound plunger the cam groove 20 engaging the pin 34' gives the compound lever a partial rotation bending or twisting the pins crosswise (as shown in Fig. 11) into the pockets 31' and 32'. On

the continued lift the upper plunger 25 cannot rise any further by reason of the anvil on the chase and the lower plunger 18 continues to rise so that the posts 23 and 24 will come up and drive the pins on the ticket flat on the under side of the goods.

It is apparent from the foregoing that my machine is capable of many uses in a department, or other store, and that it can be used as a printing press to print tickets to be subsequently affixed to goods by hand or otherwise, either with or without cutting strips of tickets, and that previously printed tickets may be fed through the machine and affixed to the goods.

It is obvious that the feeding, printing and cutting mechanism used may be varied at will without interfering with the peculiar clinching mechanism described herein and which forms the basis of this application.

I claim:—

1. Clinching means for pin ticket machines comprising a guide, a tubular plunger therein provided with upwardly extending opposed posts, a second plunger in the first plunger, yielding means between the two plungers for normally maintaining the second plunger in outward position with respect to the first, said second plunger being provided with grooves engaging the posts on the first plunger, a knife-like projection on the end face of the second plunger, said face being recessed on either side of the projection and means for reciprocating and partially rotating the compound plunger.

2. Clinching means for pin ticket machines comprising a guide, a tubular slotted plunger therein, opposed posts extending beyond the end thereof, a second stepped plunger in the first plunger, a spring in side the first plunger surrounding the second plunger, a pin passing through the second plunger under the spring and through the slots in the first plunger, the second plunger having slots engaging the posts on the first plunger, a knife-like projection on the end face of the second plunger, said face being provided with eccentric pockets on either side of the projection and means for reciprocating and partially rotating the compound plunger.

3. Clinching means for pin ticket machines comprising a guide, a tubular plunger therein provided with a cam groove on its outer face, posts extending above said plunger, a second plunger in the first plunger provided with slots engaging the posts on the first plunger, yielding means between the two plungers holding the second plunger in an outward position with respect to the first, a knife-like projection on the end face of the second plunger, said face being provided with eccentrically disposed pockets on either side of the projection, a pin mounted on the

guide engaging the cam slot on the first plunger and means for reciprocating the compound plunger.

5 4. Clinching means for pin ticket machines comprising a guide, a tubular plunger therein, said plunger being stepped at its lower end and provided with a cam groove on its outer face, opposed posts projecting beyond its upper end, a second plunger within the first plunger provided with slots engaging the posts on the first plunger, yielding means between the two plungers normally holding the second plunger in outward position with respect to the first plunger, a knife-like projection on the end face of the second plunger, said face being provided with eccentrically disposed pockets on either side of the projection, a swinging control lever mounted on the guide and encircling the first plunger, a pin thereon en-

gaging the cam groove on the first plunger whereby the lower, stepped end of the first plunger may be moved into or out of operative contact with means for reciprocating it.

25 5. Clinching means for pin ticket machines comprising a plunger having slots adjacent to one end into which pins on tickets are adapted to extend, a knife-like projection on the end face of said plunger, said end face being provided with recesses on either side of the projection with wall extensions almost closing the slots whereby pins on tickets will be bent and crossed on reciprocating and partially rotating the plunger. 30 35

In testimony whereof I have affixed my signature.

EARL L. KINCH.