No. 897,217. PATENTED AUG. 25, 1908.

W. C. MAYO & J. HOULEHAN.

TICKET SELLING MACHINE.

APPLICATION FILED JUNE 23, 1907.

2 SHEETS—SHEET 1.

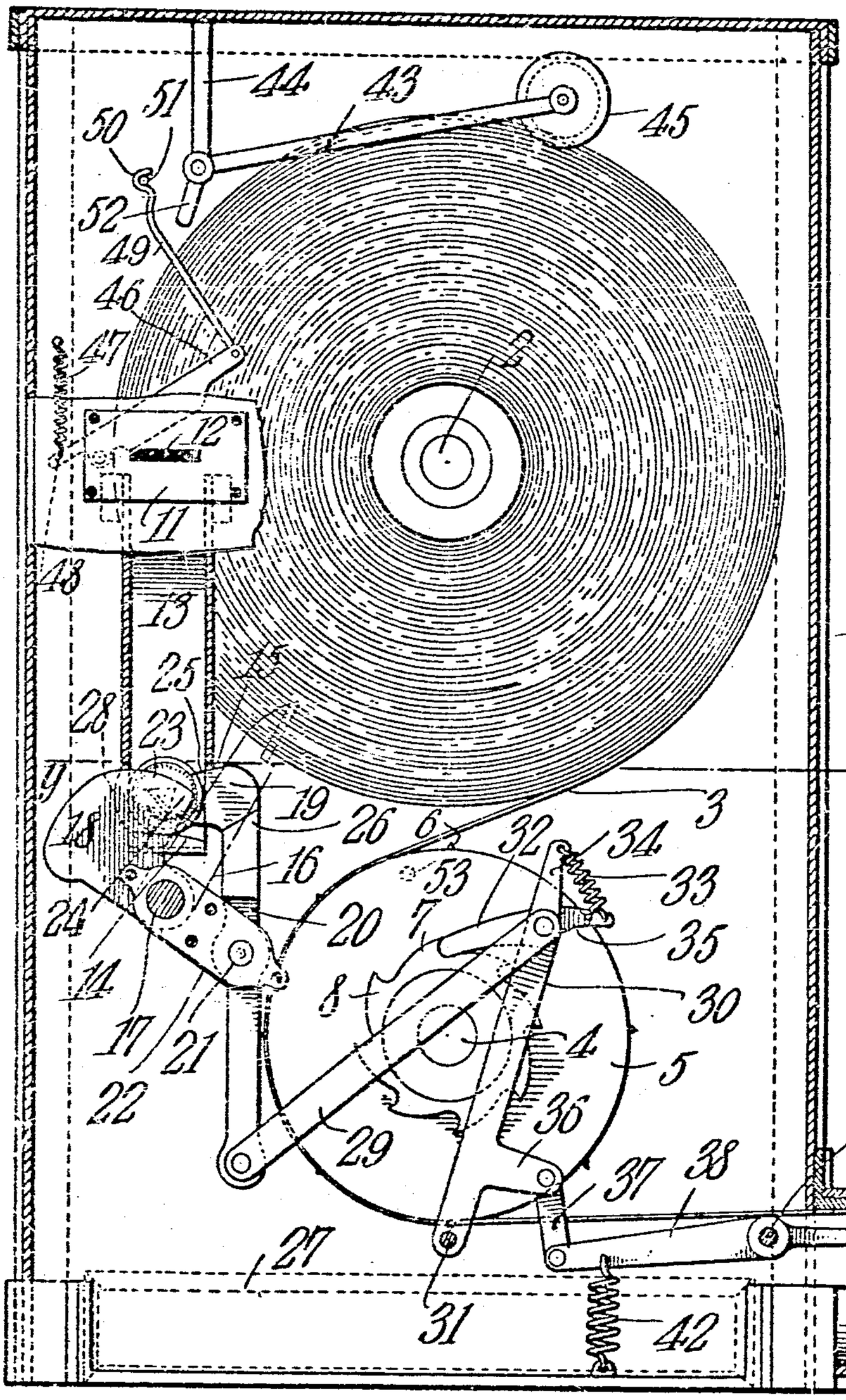

Fig. 1.

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No. 897,217. PATENTED AUG. 25, 1908.

W. C. MAYO & J. HOULEHAN.

TICKET SELLING MACHINE.

APPLICATION FILED JUNE 26, 1907.

2 SHEETS—SHEET 2.

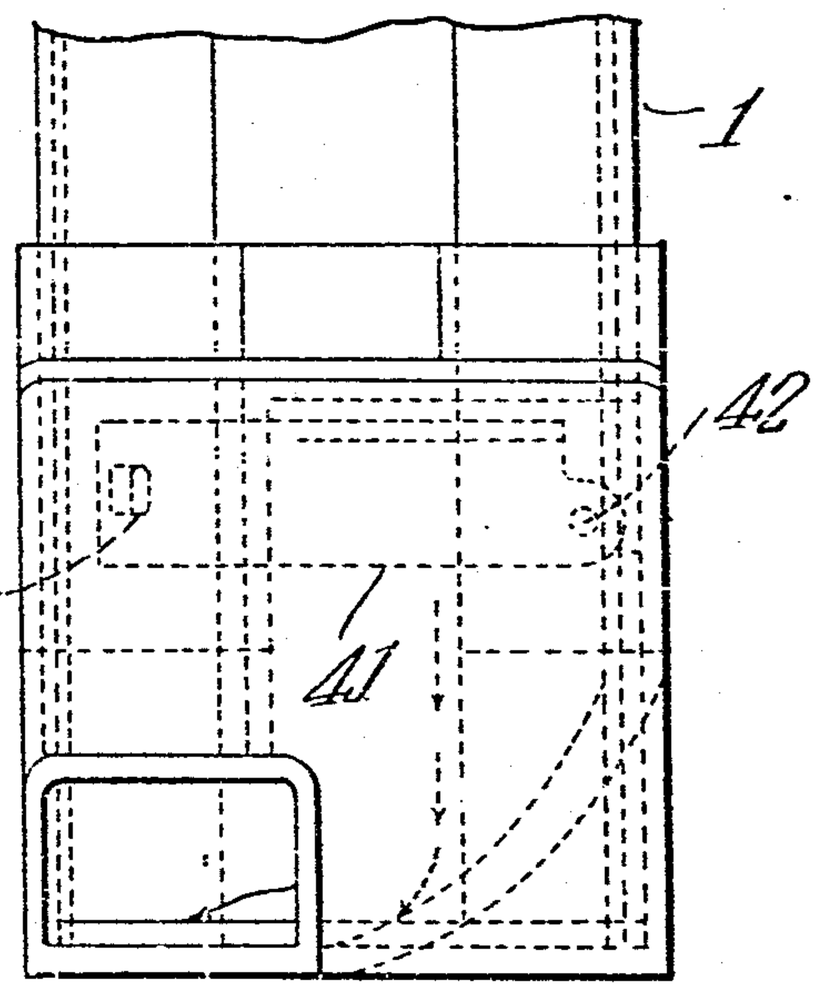
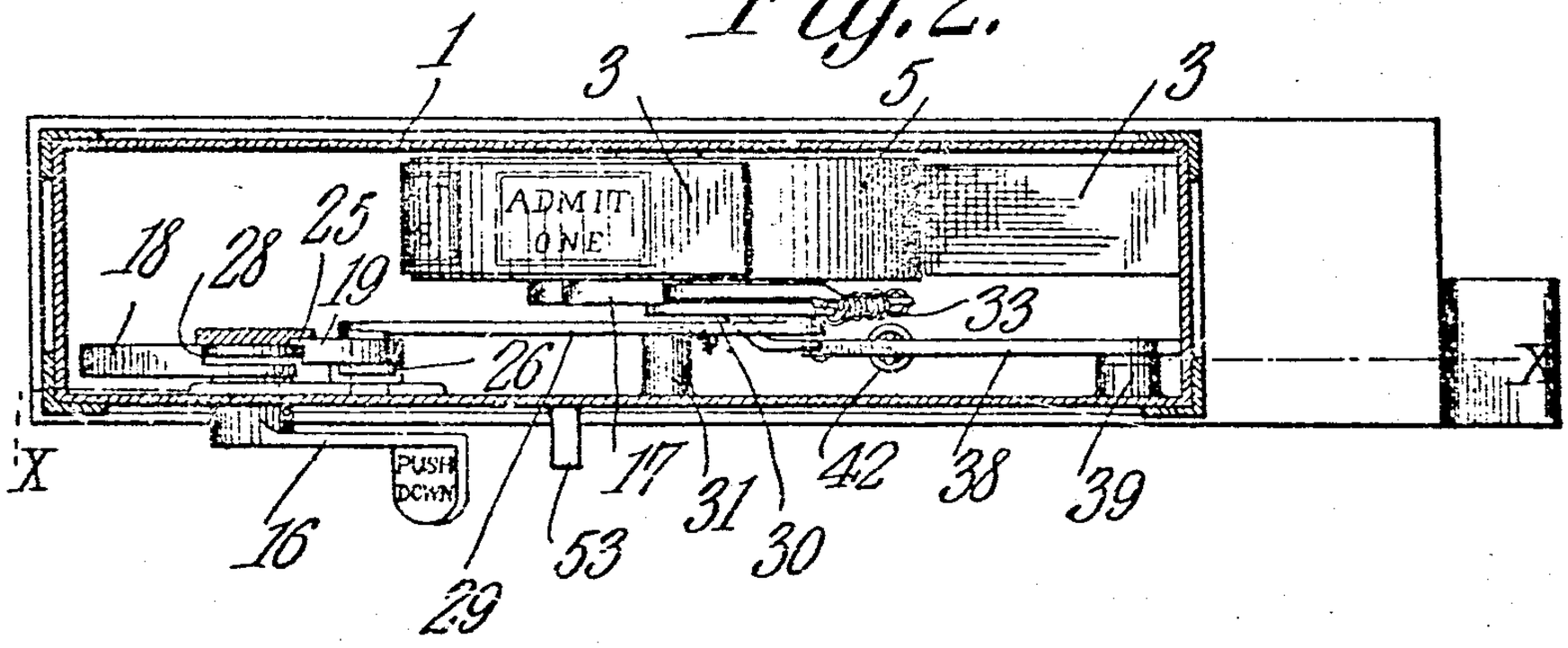


Fig. 3.

Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM C. MAYO AND JOHN HOULEHAN, OF EL PASO, TEXAS, ASSIGNORS OF ONE-THIRD TO GEORGE E. BRIGGS, OF BARSTOW, TEXAS.

TICKET-SELLING MACHINE.

No. 897,217. Specification of Letters Patent. Patented Aug. 25, 1908.

Original application filed February 2, 1907, Serial No. 355,458. Divided and this application filed June 26, 1907. Serial No. 380,983.

To all whom it may concern:

Be it known that we, WILLIAM C. MAYO and JOHN HOULEHAN, citizens of the United States, residing at El Paso, in the county of El Paso, State of Texas, have invented a new and useful Ticket-Selling Machine, of which the following is a specification.

This invention has reference to improvements in ticket selling machines, and its object is to provide means whereby tickets stored in the form of a continuous web may be delivered one by one, each time a suitable coin is inserted in the machine. The web is fed forward by mechanism operated through the intermediary of the inserted coin, the tickets being finally cut from the web and delivered to the customer.

The present invention relates more particularly to the mechanism for feeding the web and delivering the tickets, the particular means whereby the inserted coin is employed as the intermediary for transmitting motion between a manually operated handle exterior to the machine and the web of tickets, whereby the tickets are advanced one by one and finally cut from the web, forming the subject-matter of our application No. 355,458 for ticket vending machines, filed February 2, 1907, of which this application is a division.

The present invention consists essentially in means whereby a roll of tickets is fed to a delivery orifice by a lever-and-link system timed to advance the roll the length of a ticket each time an operating handle exterior to the machine is moved, and then to sever the ticket by a suitable knife when the parts are returned to their normal positions, the operation being under the control of an inserted coin so that the web cannot be advanced unless the proper coin has been placed in the machine, since it is through the intermediary of such coin that the exterior operating mechanism is connected with the interior operating mechanism.

The invention will be fully undertsood from the following detailed description, taken in connection with the accompanying drawings forming part of this specification, in which,—

Figure 1 is a vertical section on the line x—x of Fig. 2, with parts shown in elevation; Fig. 2 is a cross section on the line y—y of Fig. 1; and Fig. 3 is an end elevation of the delivery portion of the machine.

Referring to the drawings, there is shown a casing 1 of suitable construction within which, near its upper end, is mounted a shaft or spindle 2 for carrying a roll consisting of a continuous web 3 upon which the tickets to be delivered by the machine may be printed. In the lower portion of the casing there is another shaft 4 upon which is mounted a toothed disk 5, the teeth 6 of which are spaced a distance equal to the length of a ticket, and fast upon this disk 5 is a toothed ratchet wheel 7 having as many teeth 8 as there are teeth 6 on the disk 5. The ticket web is fed from the roll carried upon the shaft 2 over and around the disk 5, which latter is located immediately below the roll, and the web ultimately reaches an opening 9 leading into a receptacle 10 where the ticket falls within reach of a customer after having been severed from the web by means to be hereinafter described. It will be seen that the toothed disk 5 engages and actuates the web 3, drawing it from the roll and delivering it to the opening 9.

Appropriately located on one side of the casing is a plate 11 in which is formed a coin-receiving slot 12 opening into a vertical coin chute 13, the bottom 14 of which is closed and slightly inclined as shown, while one side of the lower end of this coin chute is cut away, as shown at 15, to admit of the passage of certain portions of the operating mechanism.

Exterior to the casing there is an operating lever 16 upon which may be displayed a suitable legend indicating the direction in which the lever is to be moved. This lever is mounted upon an arbor 17 suitably journaled in the casing and carrying at its inner end a dog 18 so located as to normally lie partly within the lower end of the coin chute 13. Also, normally contained within this lower end of the coin chute 13 is the upper curved head 19 of a lever 20, the other end of which lever is pivotally mounted upon a stud 21 projecting from a plate 22 fast on the inner side of the casing and also constituting a support for the arbor 17. The dog 18 has formed on one side, so as to partially embrace a coin, a cheek 23 terminat-

ing in a nose 24, and the curved end 19 of the lever 20 has formed thereon a lip 25 so located as to partially embrace the other side of the coin when it reaches the bottom of the chute.

Now, on moving the lever 16 in the proper direction about its axis the dog 18 is carried toward the curved head 19 of the lever 20 and a coin inserted between these two parts will transmit motion from the dog 18 to the lever 20. In the path of the nose 24 of the dog 18 the lever 20 has formed on it a lug 26, and the upper face of the cheek 23 is so curved as to constitute a cam face which, on the continued movement of the dog on its axis ultimately comes in contact with the lug 26 and forces the lever 20 to turn on its pivot more rapidly than is the movement of the dog 18; therefore, the head 19 is caused to move away from the dog 18 and the coin is allowed to drop into a receptacle 27 located in the bottom of the casing, as indicated in Fig. 1. At the junction of the cheek plate and the body of the dog 18 there is formed a sharp edge 28 which will be brought against a cord or wire, if fastened to a coin by an unscrupulous person, and any effort to withdraw the coin will result in the severing of this cord or wire and the coin will therefore fall into the receptacle provided for it. The other end of the lever 20 is connected by a link 29 to a rock-arm 30 mounted on a stud 31 fast on the casing near the lower end thereof, adjacent to the disk 5 and ratchet wheel 7 thereon. Near the upper end of this rock-arm there is pivoted a pawl 32 controlled by a spring 33 between and fast to projecting fingers 34 and 35 on the rock-arm 30 and pawl 32 respectively. During the movement of the lever 20 under the action of the dog 18 and a coin between the lever and dog, and the further movement of the lever 20 under the direct action of the dog 18, the rock-arm 30 is moved by means of the connecting link 29 in a direction to rotate the disk 5 to draw the ticket web from the roll mounted on the shaft 2 and also to force it through the opening 9. When the lever 16 is released by the user the parts all return to their normal positions through the action of a spring to be described, and then the pawl 32 is moved out of engagement with the tooth by which it actuated the disk 5 and is moved back into engagement with another tooth on the ratchet 7.

Near the pivotal point of the rock-arm or lever 30 it is provided with a right angle arm 36 whereby this portion of the lever is converted into a bell-crank lever and by means of a link 37 the member 36 of the lever 30 is connected to one end of another lever 38, pivoted at 39 to the casing and having an end 40 projecting from the other side of the pivot into engagement with a knife plate 41 pivoted at 42′ so as to move across the slot 9 at the ticket delivery end of the machine and thereby shear off the tickets after they have been projected through said slot. The action of the parts controlling the knife 41 is so timed that this knife will reach the portion of the web to be severed after the web has been projected a sufficient distance to correspond to the length of a ticket; that is, the knife moves into position to sever the ticket during the return stroke of the actuating mechanism to normal position, at which time the ticket web has already been moved a sufficient distance through the opening 9 and is then stationary.

In order that the several parts may be returned to their normal position after the operating lever is released, there is provided a spring 42 fast to a fixed portion of the casing and to the lever 38, so that when the operating lever 16 is moved by a customer this spring will be put under stress and when the lever is released the spring will return all the parts to their initial position.

For the purpose of apprising a customer that the machine is empty, should such be the case, there is provided a follower arm 43 pivotally mounted on a stud 44 projecting down from the top of the casing. This follower arm 43 carries upon one end a roller 45 engaging the periphery of the web roll mounted upon the shaft 2, and which roller is heavy enough to fall by gravity and follow the web roll as the diameter of the latter decreases.

Secured to the casing adjacent to the opening 12 in the plate 11 there is a pivotal shutter plate 46 under the control of a spring 47 fast at one end to the casing and at the other end to a finger 48 on the plate 46 at one side of the pivot point of said plate, so that the tendency of this spring is to move the plate across the opening 12 and thereby close said opening. The plate 46 under such conditions abuts against the upper end of the coin chute 13. The plate 46 is held away from the opening 12 by a hooked rod 49 having a hook 50 arranged to engage a fixed pin 51 projecting from the side of the casing, and this pin is located in the path of an angle finger 52 fast on the arm 43, so that as the arm is lowered by the exhaustion of the ticket web the finger 52 will be moved toward and will be ultimately brought into engagement with the hooked rod 49 and will force the hook 50 out of engagement with the pin 51, whereupon the spring 47 will immediately move the plate 46 across the opening 12 and so close the same, thus notifying a customer that the machine is out of commission. It will be seen, of course, that the relative lengths of the arm 43 and the finger 52 are such that the movements are properly timed to perform the functions ascribed to these parts.

The plate 46 may either carry or be made to actuate a suitable legend which will notify the intended customer that the machine is empty.

It will be observed that should an attempt be made to operate the machine without first inserting a coin, the nose 24 of the dog 18 will find a seat on top of the lug 26 of the lever 20 and the whole mechanism will be effectually locked against operation. It is only when a coin of the proper size is inserted in the machine that the nose 24 and the cam face formed by the cheek 23 will engage the face of the lug 26, because the coin has caused a sufficient movement of the lever 20 upon its pivot to enable the nose 24 to escape from contact with the top of the lug 26.

In order to limit the downward movement of the operating lever 16, there is arranged in the path of the same, on the outside of the casing, a stop pin 53, shown in full lines in Fig. 2, and the position of which, as well as the normal position of the lever 16, are shown in dotted lines in Fig. 1.

We claim:—

1. In a ticket-selling machine constructed for the delivery of tickets from a web of the same, a feeding disk for the web, a ratchet-wheel on the disk, a rock-arm pivotally supported at one end and having an angle extension near the pivot end, a pawl on the free end of said arm in operative relation to the ratchet-wheel, a knife for severing the tickets from the web, a lever engaging said knife, a link between the lever and angle extension of the rock-arm, a spring secured to the lever for returning all the parts to normal position, and means for reciprocating the rock-arm.

2. In a ticket-selling machine constructed for the delivery of tickets from a web of the same, a feeding disk for the web, a ratchet-wheel on the disk, a rock-arm pivotally supported at one end and having an angle extension near the pivot end, a pawl pivoted to the rock-arm and extending beyond the same on the side remote from that end of the pawl engaging the ratchet-wheel, a spring connecting the extended end of the pawl to the rock-arm, a knife for severing the tickets from the web, a lever engaging said knife, and a link connecting the lever and angle extension of the rock-arm, a spring fast to the lever for returning all the parts to normal position, and means controllable from the outside of the machine for moving the rock-arm to actuate the feeding disk.

3. In a ticket selling machine constructed for the delivery of tickets from a web of the same, a feeding disk for the web, a ratchet wheel carried by said disk, a rock-arm, a pawl pivoted thereto at a distance from the free end of the arm and also having an extension beyond its pivot point in a direction opposite the engaging end of the pawl, said pawl being in operative relation to the ratchet on the disk, a spring connecting the extensions of the arm and pawl and tending to maintain the pawl in engagement with the ratchet, an operating lever for the rock-arm, means controllable from the outside of the machine for moving the operating lever to rotate the web-feeding disk, a knife for severing the tickets, a lever between said knife and the rock-arm, and a spring connected to the knife-controlling lever and tending to maintain the parts in their normal position and to return them thereto when moved therefrom by the exterior operating means.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

WILLIAM C. MAYO.
JOHN HOULEHAN.

Witnesses:
MABEL O. FAHNESTOCK,
WILLIAM H. GENN.