

R. H. HELSEL.
TICKET DISPENSING MACHINE.
APPLICATION FILED OCT. 20, 1917.

1,304,975.

Patented May 27, 1919.

Fig. 1

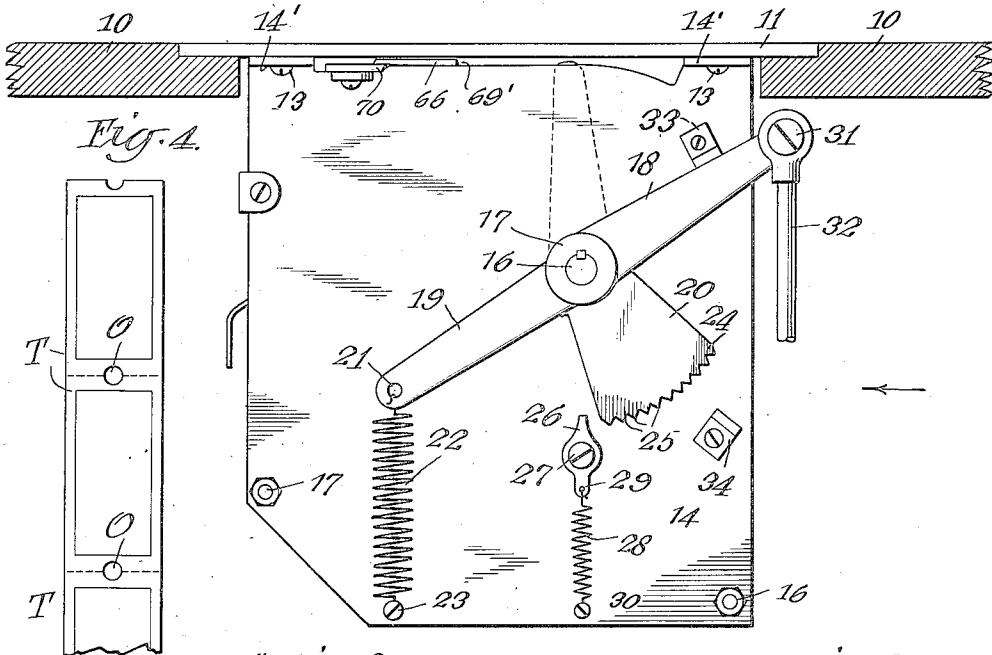


Fig. 4

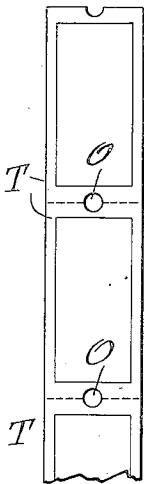


Fig. 3

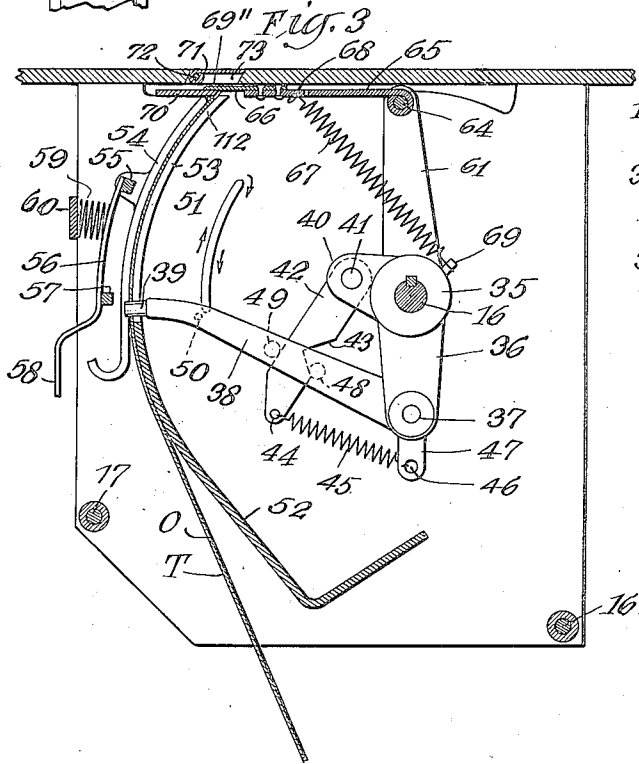
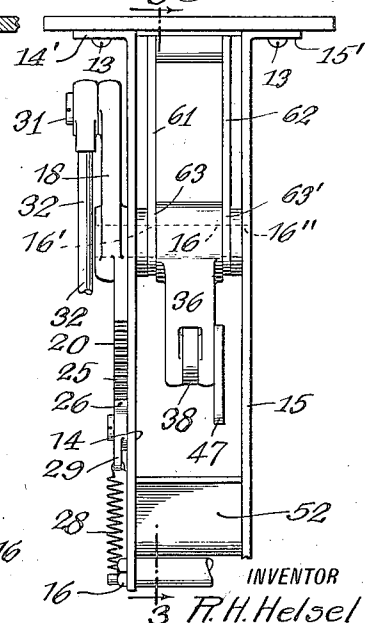


Fig. 2



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REUBEN H. HELSEL, OF LONG ISLAND CITY, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE AUTOMATIC TICKET SELLING AND CASH REGISTER COMPANY, OF NEW YORK, N. Y., A CORPORATION.

TICKET-DISPENSING MACHINE.

1,304,975.

Specification of Letters Patent.

Patented May 27, 1919.

Application filed October 20, 1917. Serial No. 197,565.

To all whom it may concern:

Be it known that I, REUBEN H. HELSEL, a citizen of the United States, and a resident of Long Island City, Queens county, New York, have invented certain new and useful Improvements in Ticket-Dispensing Machines, designed to issue tickets serially from a strip of tickets each time the machine is caused to operate.

The object is to provide a machine of this class which is very simple in its construction, certain in its operation, and which will automatically adjust itself so that the tickets will be issued in serial order, and the tickets cut from the strip along their proper line of severance.

Another object is to so construct the machine that the tickets will be fed serially and properly severed should the ticket strip become disarranged in the machine without destroying more than one ticket.

Other objects will appear from the hereinafter description and claims.

The present invention is an improved and simplified construction of ticket dispensing mechanism and can be used in a machine such as I have illustrated in my application, Serial No. 175,474, filed June 8th, 1917.

In the drawings accompanying and forming a part of this specification, wherein the preferred embodiment of my invention is illustrated, the same reference characters are used to designate the same parts in the various views:

Figure 1 is a side elevation of the machine embodying my invention set in a counter or table support;

Fig. 2 is an end elevation, viewed in the direction of the arrow in Fig. 1;

Fig. 3 is a section on line 3—3 of Fig. 2;

Fig. 4 is a plan of a section of a strip of tickets, consisting in this instance of three tickets.

Referring to the drawings reference numerals, 10 designates the table or counter in which the machine is mounted, 11 is a plate to which the frame of the machine is secured by screws 13, 14 is one of the side plates and 15 is the other side plate, which are secured together by bolts 16 and 17. At the upper edges of the plates 14 and 15 respectively are flanges 14' and 15', which set or fit against the underside of the plate 11 and to which they are secured by the bolts

13. The main operating shaft 16 is journaled at 16' and 16'' in the side plates 14 and 15, and splined to this shaft is a lever 17, having three arms 18, 19 and 20 integrally connected with each other. One end of a spring 22 is secured at 21 to the lever 19 and the other end of the spring is secured to a stud 23 fixed to the plate 14 as shown. The end 24 of the arm 20 is a sector of an arc, the radius of which is drawn from the center of the shaft 16, and the outer surface 24 is serrated at 25, and so constructed and arranged as to engage with the free end of the pawl 26, which is pivoted at 27, the pawl being normally held in a vertical position by means of a spring 28 secured at the other end 29, which spring is secured at the other end to a fixed stud 30 on the plate 14. This construction insures the motion in each direction being completed, and thereby prevents a partial or incomplete operation. To the end of the arm 18 is pivoted a rod 32 at 31, which rod 32 may be suitably secured to either a foot lever, a hand lever, or the core of a solenoid (not shown) as will be easily understood in order to reciprocate the rod 32, to rock the lever 17 and shaft 16 for the purposes hereinafter described.

I also spline or otherwise rigidly mount upon the shaft 16 the hub of a lever 35 between plates 14 and 15, the said hub being of the bell crank type, which has arms 36 and 40 projecting therefrom. A feeding lever 38, provided with a projecting finger 39 at its free end for engaging the holes of the tickets T, is pivoted at 37 to the free end of the arm 36.

To the other arm 40 which projects from the hub of the lever 35 is pivoted at 41 an arm 42 having a notch 43 in the underside thereof. This arm 42 has attached to its free end at 44 a spring 45, the other end of the spring being secured at 46 to an arm 47 rigidly secured to and projecting from the lever arm 36. Studs or pins 48 and 49 project from the side of the arm 38 between which will reciprocate the arm 42, the notch 43 of which engaging on either side with the stud 48 during the reciprocation of the arm 42 between the studs. A pin or stud also projects from the lever 38 and engages on either side of a curved lug 51 during the reciprocation of the lever, its path be-

ing in the direction of the arrows shown in Fig. 3. A fixed curved plate 52 over which the tickets are fed is secured between the plates 14 and 15, through which plate 5 is a slot 53 forming a track for the reciprocation of the finger 39 of the lever 38. The strip of tickets T, which may be stored in the machine either on a reel or folded in magazine fashion, is held to the outer surface of the plate 52 by spring-pressed arms 54, so shaped as to fit the outer surface of the plate 52, one of which is situated respectively on each side of the slot 53. The arms 54 are respectively pivoted at 55 to the end of the lever 56, said lever being journaled at 57 to the plates 14 and 15, and provided at 58 with a free end so the lever may be operated by hand pressure. A spring 59, situated between a fixed lug 60 and the lever 56, normally holds the fingers 54 against the strip of tickets, which, as has been stated, rests against and is fed over the plate 52.

I also spline or otherwise rigidly secure to the shaft 16 the arms 61 and 62 at 63 and 63'. At the upper ends of the arms is a pin 64 to which is pivoted one end of the plate 65, to the other end of which is provided a knife blade 66. The plate 65 has a spring 67 secured to its underside 68, the other end of the spring being secured at 69 to a lug on the hub of the lever 35. The knife blade 69 is fitted at its sides in suitable tracks or ways 69' and 69'' scored into the upper sides of the plates 14 and 15. A fixed knife blade 70 to operatively co-act with the movable blade 66 is secured to the upper portions of the plates 14 and 15 as shown, the knife edge of which is situated just at one side of the free end of plate 52. A cover 71 is pivoted at 72 so that a slot 73 may be normally closed through which slot the tickets are fed.

In the operation of the machine the connecting rod 32 is reciprocated by any of the means above specified, thus causing a rocking movement of the shaft and the levers which are splined thereto. The pawl 26, pivoted at 27, requires a continuous movement thereof until the lever 18, which is normally held against the stop 33, strikes the lower stop 34, at which point the pawl 26 will be freed from the sector 24. This movement of the shaft and levers will also cause the movable knife edge to be drawn away from the fixed knife edge, and the lever 38 will be moved upwardly, the stud 50 engaging the upper surface of the curved lug 51.

When the tickets are in normal position, the fingers 39, when in the position as shown in Fig. 3, will enter the hole O of a ticket and will move the strip of tickets a distance which is sufficient to feed a ticket out of the slot 73. When the feeding lever has

finished the feeding movement, the ticket will be in a position to be severed by the knife blades 66 and 70 as shown. Should the ticket strip be out of proper position, the end of the lever 39 will move up underneath the ticket until it engages the hole O of the ticket and will continue to feed the ticket strip throughout the rest of its movement. This will cause a ticket to be severed at the proper place across the line adjoining the ticket.

The parts as shown in Figs. 1 and 2 are in the positions which they assume when the machine is ready for operation. As just described, the knives are opened and the ticket strip is fed by positive movement of the foot or hand of the operator or by the movement of the core of the solenoid when engaged by a switch push button in circuit with the coil. After the completion of the feeding, the rod 32 is released, and the parts controlled by it will resume their position by the force of the spring 22 thereby causing the knives to come together to sever the ticket, and the feed lever 38 to be moved downward to take its position at the lower end of the slot 53 and into the hole O of the next ticket. The length of the slot 53 is equal to the length of a ticket, so that during one operation a single ticket is fed and severed from the strip.

The curved guiding member 51 is so situated that the pin 50 carried by the strip feeding lever 38 will move along the upper surface of the guide when the feed member is positively moved upward and along the under surface of the guide when said member is moved downward by the spring 22.

It is to be understood the drawings and the above description are merely illustrative and the invention is not to be limited in any respect except as designated in the subjoined claims.

Having thus described and explained my invention, I claim and desire to secure by Letters Patent:

1. A ticket dispensing mechanism comprising an oscillating operating shaft, a reciprocating strip feeding member movably carried by said shaft, means for causing said feeding member to engage a ticket strip during its forward movement to thereby advance the strip a distance corresponding with a single ticket, means to cause said feeding member to move out of engagement with the strip during its return movement, a guide plate over which the ticket strip passes and which plate is provided with a slot along which a portion of said feeding member moves in advancing the ticket strip, and yieldable means located adjacent said slot for holding the ticket strip against said guide plate.

2. A ticket dispensing mechanism comprising an oscillating operating shaft, and

reciprocating strip feeding member movably carried by said shaft, means for causing said feeding member to engage a ticket strip during its forward movement to thereby advance the strip a distance corresponding with a single ticket, means for causing said feeding member to move out of engagement with the ticket strip during its return movement, a guide plate over which the ticket strip passes and which plate is provided with a slot along which a portion of said feeding member moves in advancing the ticket strip, a strip holding member located adjacent said slot for holding a ticket strip against said guide plate, and a spring acting upon said holding member to force the same against said guide plate.

3. A ticket dispensing machine comprising an oscillating operating shaft, a reciprocating strip feeding member operated by said oscillating shaft, means for causing said feeding member to engage a ticket strip during its forward movement to thereby advance the ticket strip a predetermined distance, means for causing the feeding member to move out of engagement with the strip during its return movement, a guide plate over which the ticket strip passes and which plate is provided with a slot along which a portion of said feeding member moves in advancing the ticket strip, yieldable means located adjacent said slot for holding the ticket strip against said guide plate, and a movable knife connected to be operated by said oscillating shaft and positioned to sever a ticket from the strip as it is advanced thereto.

4. A ticket dispensing machine comprising an oscillating operating shaft, a reciprocating strip feeding member operated by said oscillating shaft, means for causing said feeding member to engage a ticket strip during its forward movement to thereby advance the ticket strip a predetermined distance, means for causing the feeding member to move out of engagement with the strip during its return movement, a movable knife connected to be operated by said oscillating shaft and positioned to sever a ticket from the strip as it is advanced thereto, a guide plate over which the ticket strip passes and which plate is provided with a slot along which a portion of said feeding member moves in advancing the ticket strip, a strip holding member located adjacent said slot for holding the ticket strip against said guide plate, a spring acting upon said holding member to force the same against said guide plate, and a progressively acting reverse stop means associated with said operating member and operative to prevent reversal in the direction of its motion until the operating member completes its full stroke in each direction.

5. A ticket dispensing mechanism com-

prising a suitable supporting frame, an operating shaft journaled in bearings carried by said frame, a curved strip guide plate suitably supported by said frame and having an elongated slot therein, a reciprocating strip feeding member carried by and pivotally connected with said operating shaft and provided with a pin arranged to enter the plate slot and to engage a ticket strip during the forward movement of the feeding member, means to limit the movement of the feeding member proportionate to the length of a single ticket, means to cause the feeding member to engage the ticket strip during its movement in one direction and to move into non-engaging position when moved in the reverse direction, an actuating lever affixed to the operating shaft, stops positioned in the path of said actuating lever to limit the movement thereof, a stationary knife blade positioned adjacent the top of the guide plate, a guideway formed in the supporting frame, a movable knife slidable along said guideway and connections from the operating shaft to said movable knife whereby the latter is retracted from the stationary knife blade during the feeding of the ticket strip and moved into co-action with the said latter blade during the return movement of the parts, substantially as described.

6. A ticket dispensing mechanism comprising a suitable supporting frame, an operating shaft suitably journaled, a curved strip guide-plate suitably supported and provided with an elongated slot therein, a reciprocating strip feeding member operatively connected to the operating shaft and operating through said plate slot to engage and feed the ticket strip, a resilient strip retaining means arranged adjacent the guide-plate, said retaining means consisting of a fulcrumed lever, a spring pressing thereon, and curved engaging arms pivotally carried by the lever and arranged to engage the ticket strip on each side of the guide-plate slot, means to oscillate the operating shaft and means to limit the movement of the parts.

7. A ticket dispensing mechanism comprising a suitable supporting frame, an operating shaft suitably journaled, a curved strip guide-plate suitably supported and provided with an elongated slot therein, a reciprocating strip feeding member operatively connected to the operating shaft and operating through said plate slot to engage and feed the ticket strip, a resilient strip retaining means arranged adjacent the guide-plate, said retaining means consisting of a fulcrumed lever, a spring pressing thereon, curved engaging arms pivotally carried by the lever and arranged to engage the ticket strip on each side of the guide plate slot and a lever extension on the lever for manually

releasing the retaining means, means to oscillate the operating shaft and means to limit the movement of the parts.

8. A ticket dispensing mechanism comprising a suitable supporting frame, an operating shaft suitably journaled, a curved strip guide-plate suitably supported and provided with an elongated slot therein, a reciprocating strip feeding member operatively connected to the operating shaft and operating through said plate slot to engage and feed the ticket strip, a resilient strip retaining means arranged adjacent the guide plate, said retaining means consisting of a fulcrumed lever, a spring pressing thereon, curved engaging arms, pivotally carried by the lever and arranged to engage the ticket strip on each side of the guide plate slot and a lever extension on the lever for manually releasing the retaining means, means to oscillate the operating shaft, means to limit the movement of the parts and a knife operated by the operating shaft and adapted to sever a ticket from the strip after each feed movement of the feeding member.

9. In a ticket dispensing machine, a ticket strip feeding mechanism comprising an oscillating shaft, a bracket member carried by

said shaft, a reciprocating strip feeding member pivotally connected with said bracket, means carried by the feeding member to engage the strip, a controlling cam member pivotally connected to the bracket and having two reversely acting inclined surfaces thereon adapted to engage a pin carried by the feeding member, a fixed guide member, arranged to be engaged by the feeding member on opposite surfaces, an actuating spring connected to the cam member and said guide member, said spring being operative to change the relation of the feeding member with respect to the cam member and cause the pin on the feeding member to alternately engage the inclined surfaces of the cam member whereby the latter will shift the feeding member to engage the opposite side of the guide at the end of its movement in each direction.

In witness whereof I have hereunto set my hand at the city, county and State of New York, this 17 day of October, 1917.

REUBEN H. HELSEL.

In presence of—

ALEXR. DONEGAN,
ERNEST C. MANN.