S. L. W. COE.

STAMP OR TICKET VENDING MACHINE.

APPLICATION FILED OCT. 22, 1912.

1,080,138.

Patented Dec. 2, 1913.

3 SHEETS—SHEET 1.

Fig. 4.

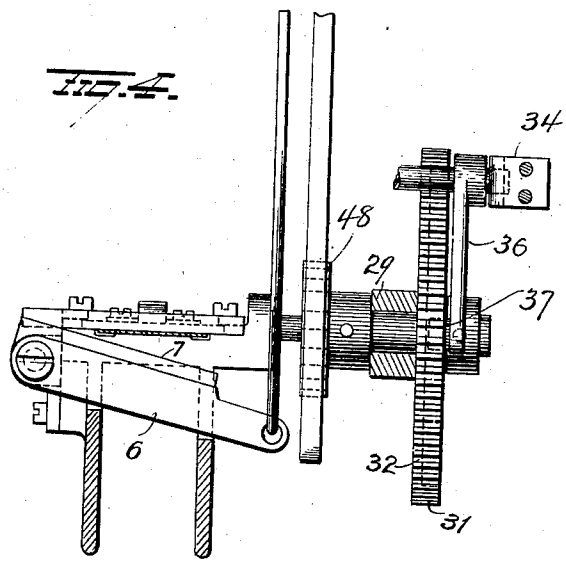


Fig. 1.

Witnesses
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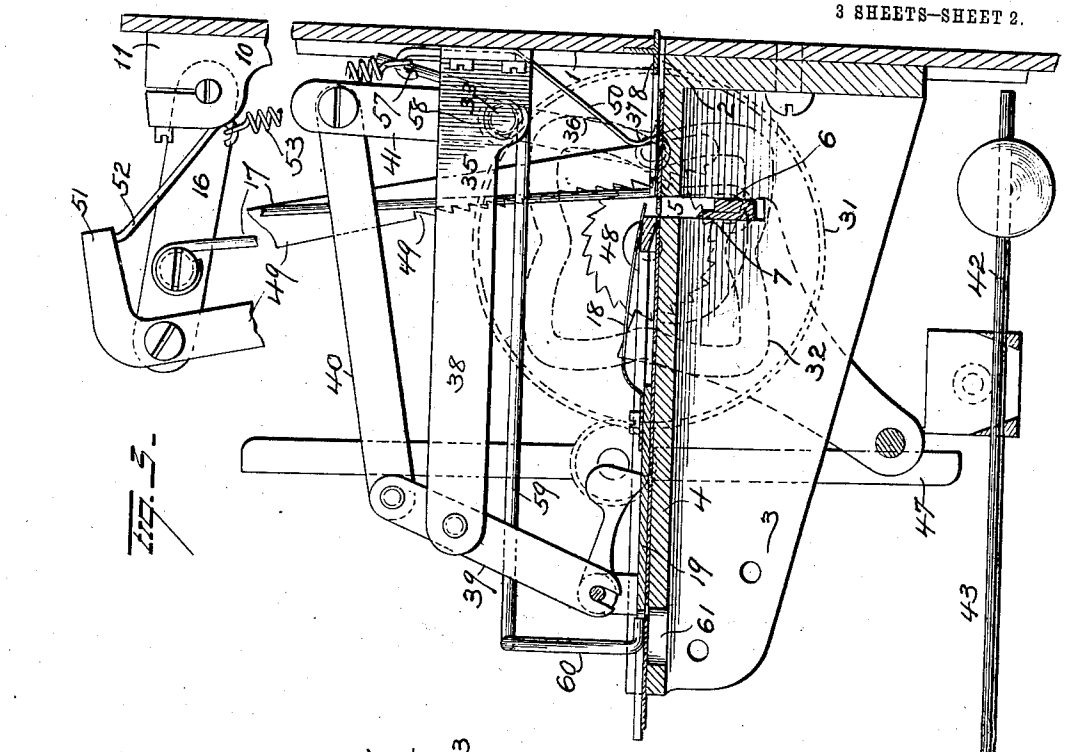


Fig. 3.

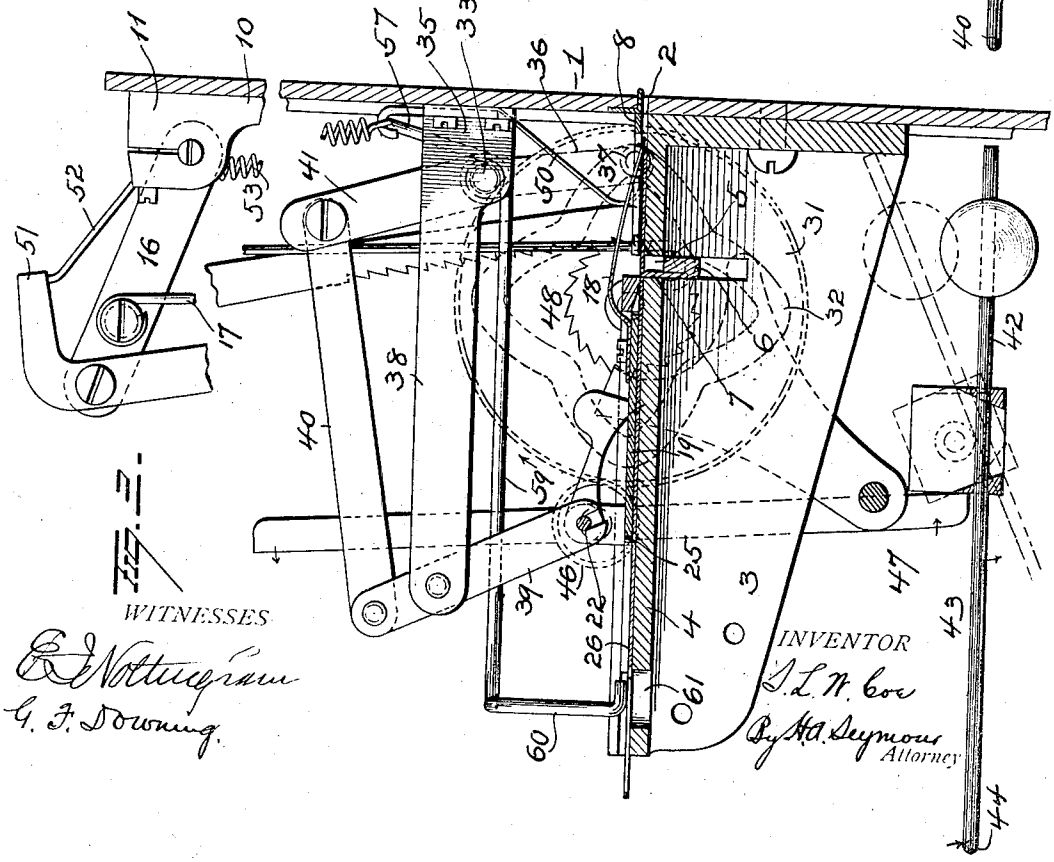


Fig. 2.

WITNESSES

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3 SHEETS—SHEET 3.

Fig. 5.

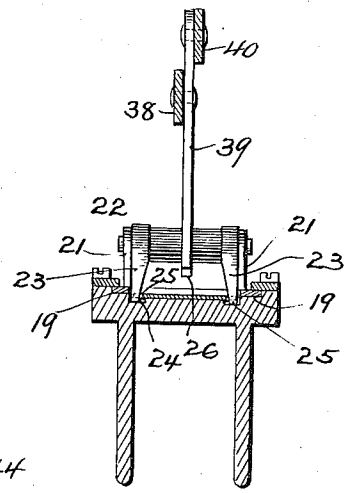
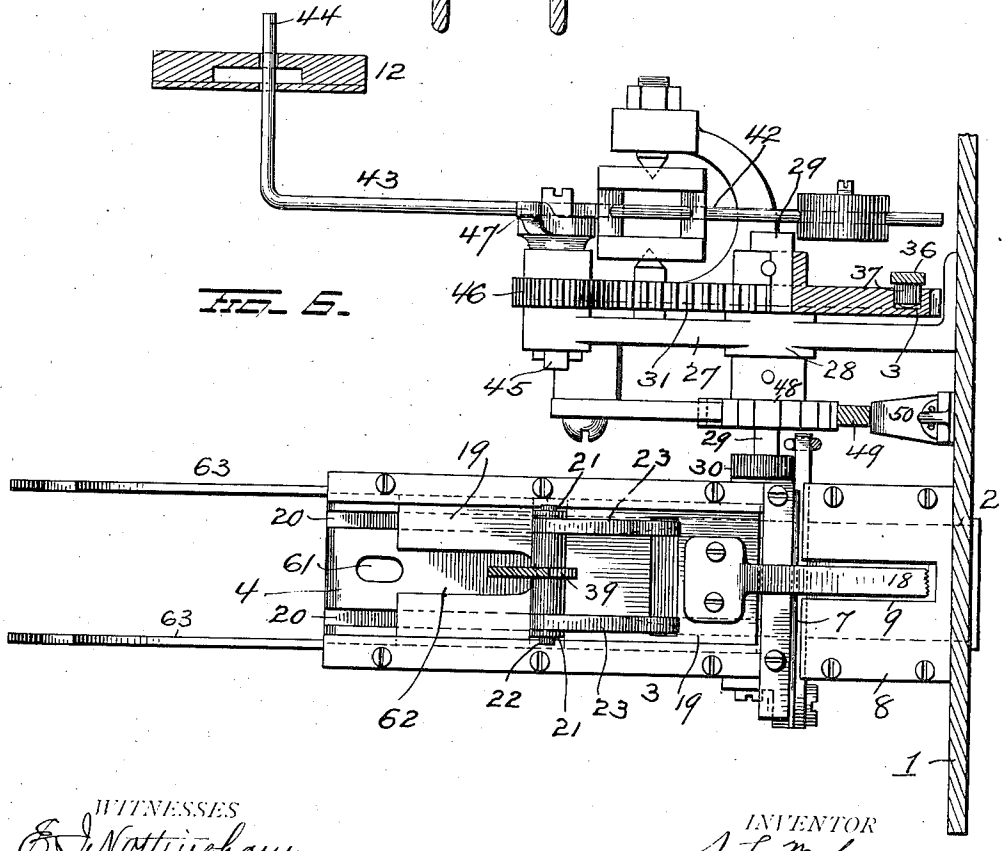


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

SARA L. W. COE, OF NEW YORK, N. Y.

STAMP OR TICKET VENDING MACHINE.

1,080,138. Specification of Letters Patent. Patented Dec. 2, 1913.

Application filed October 22, 1912. Serial No. 727,168.

To all whom it may concern:

Be it known that I, SARA L. W. COE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Stamp or Ticket Vending Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in vending machines and more particularly to coin controlled mechanism for delivering stamps, tickets and the like,—the object of the invention being to so construct a stamp or ticket vending machine as to avoid the use of a feed drum, such as have been heretofore employed in such machines.

A further object is to construct the mechanism in such manner as to insure the delivery of a single stamp or ticket when a coin is inserted into the machine, and prevent the possibility of a customer from so manipulating the machine as to obtain more than one stamp or ticket at each operation of the mechanism.

With these objects in view the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings; Figure 1 is a vertical sectional view of a mechanism embodying my invention; Figs. 2 and 3 are sectional views showing different positions which the parts assume during the operation of the machine; Fig. 4 is a detail view (partly in section) showing the severing device and adjacent parts; Fig. 5 is a sectional view, partly in elevation, showing portions of the strip feeding means, and Fig. 6 is a horizontal sectional view.

1 represents a face plate to be secured in a suitable casing (not shown) and this plate supports the mechanism within the casing. The plate 1 is provided with a discharge slot 2 for stamps or tickets. To the rear face of the said face plate, an elongated bracket 3 is secured and provided with a platform 4 in line with the discharge slot 2. The platform 4 is made with a transverse slot 5 at a distance in rear of the face plate approximately equal to the length of a stamp or ticket and in line with one wall of the slot 5, a knife bar 6 is secured over the platform 4. One end of a blade 7 is pivotally connected at one end with one side of the bracket 3 and extends transversely across said bracket in line with the transverse slot 5 in the platform, so as to coöperate with the knife bar for severing a stamp or ticket from a strip. Over and spaced slightly from that portion of the platform 4 forwardly beyond the transverse slot 5, a guide plate 8 is located, and this plate is provided with an elongated open slot 9 for a purpose hereinafter described.

A bracket 10 is secured to the face plate 1 near its upper end and made with a portion 11 of a coin chute 12. A shaft 13 is located over the portion 11 of the coin chute and supported by the bracket 10. This shaft is provided with an arm 14 which depends into the part 11 and is normally disposed in line with the coin-inlet-slot 15 in the face plate 1. The shaft 13 is also provided with a rearwardly projecting arm 16, with which the upper end of a rod 17 is connected, the lower end of said rod being connected with the free end of the blade 7, so that when the shaft 13 is turned by the engagement of a coin with the depending arm 14, the arm 16 will be elevated to transmit motion (through the rod 17) to the blade for raising the latter to sever a stamp or ticket from a strip. After a stamp or ticket has been thus severed, it will be projected through the discharge slot 2 by means of a spring finger 18 secured to a carriage 19 and movable in the elongated slot 9 of the guide plate 8. The carriage 19 is freely movable over the platform 4 and is guided at its side edges by ways 20. Lugs or ears 21 project upwardly from side edges of the carriage and support a transverse rod or pin 22, on which two dogs 23 are loosely pivoted. The teeth of these dogs are disposed in parallel grooves 24 in the platform 4 and adapted to engage notches 25 in the side edges of a stamp or ticket strip 26 between the stamps or tickets of said strip. If a perforated, instead of a notched stamp or ticket strip be used, a number of dogs or pins may be employed to engage in the perforations.

The mechanism hereinafter described serves to reciprocate the carriage 19 in such manner that when a stamp or ticket has been severed, the carriage will be moved back a distance about equal to the length of

a stamp or ticket and permit the teeth of the dogs 23 to engage the notches in the strip ready to force the strip forward a distance equal to the length of a stamp or ticket.

When the carriage moves rearwardly as above described, the forwardly-projecting spring finger 18 will ride lightly over the severed stamp or ticket (rearward movement of the latter being prevented by the knife bar 6 acting as an abutment) and as the carriage completes its rearward movement, the spring finger will ride on the knife bar 6 and thus be raised from the severed stamp. The forward movement of the carriage will now cause the finger 18 to engage and project the severed stamp or ticket and the engagement of the dogs 23 with the notched strip, will feed the latter forwardly a distance approximately equal to the length of one stamp or ticket.

A bracket 27 is secured to the face plate 1 laterally from the bracket 3, and provided with a bearing 28 for a horizontal shaft 29,—said shaft also having a bearing in a lug 30 on the bracket 3. A gear wheel 31 is secured to the shaft 29 and is provided in one face with a star-shaped cam groove 32. A shaft 33 is mounted in lugs 34—35 secured to the plate 1 in a plane above that of the shaft 29, and said shaft 33 is provided with an arm 36 having a pin 37 at its free end to cooperate with the cam groove 32. The lug 35 is extended to form a fixed arm 38, to the free end of which, a lever 39 is pivotally supported between its ends. The lower end of this lever is loosely attached to the rod or pin 22 on the carriage 19. A rod or pitman 40 is attached at one end to the short arm at the upper end of the lever 39 and at its other end to an arm 41 secured to the shaft 33. From this construction and arrangement of parts it is apparent that when the cam wheel 31 is turned, motion will be transmitted to the carriage 19 to reciprocate the same in the manner and for the purpose hereinbefore explained. The extent of rotation of the wheel 31 and the consequent extent of reciprocating movements of the carriage 19, will be regulated by trip mechanism controlled by a coin. This mechanism comprises a trip lever 42 pivotally mounted in the bracket 27 and having an arm 43, the free end of which terminates in a finger 44 projecting into the coin chute 12 so as to be in the path of a coin passing through said chute. A short shaft 45 is mounted in the bracket 27 and carries a pinion 46 meshing with the wheel 31. The short shaft 45 also carries a flier 47 to engage the trip lever 42. It is apparent that when a coin depresses the trip lever, the flier 47 will be released and the gears will be permitted to turn (when propelled as presently explained) for operating the stamp or ticket feeding and discharging mechanism. After the coin has passed the trip lever, the latter will assume its normal position so as to coöperate with the flier to stop the mechanism.

A ratchet wheel 48 is secured to the shaft 29 and receives motion from a ratchet bar 49 which is pressed into engagement with the ratchet wheel by a spring 50. The ratchet bar 49 is pivotally attached in proximity to its upper end, to the arm 16 on shaft 13. The upper end of the ratchet bar is provided with a forward extension 51 having a hook-shaped member 52, with which latter, the upper end of a spring 53 is connected,—the lower end of said spring being attached to the face plate 1 and constituting the motive power for driving the mechanism. When a coin is inserted into the machine, the shaft 13 will be turned and the arm 16 raised as previously explained, and the spring 53 will be distended, so that when the mechanism is released, the stored power of the spring will be exerted to propel the mechanism to feed the stamp strip, and discharge the stamp which had been severed when the coin first entered the coin slot and before the release of the feeding and discharging mechanism.

It is desirable in machines of this character to close the coin slot when the machine is empty. For this purpose, the devices now to be described will be employed.

A vertically movable shutter 54 having an opening to expose the coin slot, is mounted in the face plate 1 and has connected with its lower end, a bar 55 having a shoulder 56. This shoulder is engaged by an arm 57 to normally support the shutter in its raised position. This arm may be formed at one end of a wire loosely coiled, as at 58, on the shaft 33, and this wire is extended to form a rearwardly projecting arm 59 provided at its rear end with a depending finger 60 to rest on a stamp or ticket strip on the platform 4. Directly below the lower end of the finger 60, the platform 4 is provided near its rear end with a hole 61, and the rear portion of the carriage 19 is made with a slot 62 to permit said carriage to reciprocate without interference with the finger 60. When the rear end of a stamp or ticket strip has passed the finger 60, the latter will be free to drop through the hole 61, and thus permit the arm 57 to be moved away from the shoulder 56 on bar 55,—thereby releasing the shutter to close the coin slot. The stamp or ticket strip will preferably be wound on a suitable spool mounted in slotted plates 63 secured to the bracket 3.

Various slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope and hence I do not wish to restrict myself to the precise details herein set forth.

Having fully described my invention what

I claim as new and desire to secure by Letters-Patent, is:—

1. In a machine of the character described, the combination with a platform, of feeding and discharging devices, a cutter for severing a stamp or ticket from a strip, driving mechanism for the feeding and discharging devices, means for releasing said driving mechanism, and means for operating said cutter prior to the release of said driving mechanism.

2. In a machine of the character described, the combination with a platform, of feeding and discharging devices for stamps or tickets coöperating with said platform, a cutter disposed in position to sever a stamp or ticket from a strip on the platform, driving mechanism for the feeding and discharging devices, trip devices for said driving mechanism, and means for operating said cutter prior to the operation of said trip devices.

3. In a machine of the character described, the combination with a platform, of a reciprocating carriage over said platform, feeding dogs on said carriage, a discharging finger projecting from said carriage, driving means for the carriage, and means for tripping the driving means.

4. In a machine of the character described, the combination with a platform, of a reciprocating carriage over the same, dogs on said carriage for feeding a strip over said platform, a cutter in advance of said carriage for severing a stamp or ticket from said strip, a finger projecting from the carriage for discharging the severed stamp or ticket, operating means for the cutter, and driving means for the carriage.

5. In a machine of the character described, the combination with a platform, of a reciprocating carriage, feeding and discharging devices mounted on said carriage, a cam wheel, connections between the cam wheel and carriage, and means for driving said cam wheel to reciprocate the carriage.

6. In a machine of the character described, the combination with a platform, of a reciprocating carriage over the platform, feeding and discharging devices mounted on said carriage, a cam wheel, connections between said cam wheel and carriage for reciprocating the latter, driving means for the cam wheel, and trip devices for controlling the operation of said driving means.

7. In a machine of the character described, the combination with a platform, of a reciprocating carriage over the same, feeding and discharging means mounted on said carriage, a cam wheel, connections between said cam wheel and carriage for reciprocating the latter, a ratchet wheel mounted to rotate with the cam wheel, a reciprocating ratchet bar meshing with said ratchet wheel, means for moving said ratchet bar in one direction, a spring for moving the ratchet bar in the other direction, and trip devices for controlling the operation of the cam wheel.

8. In a machine of the character described, the combination with a platform, of a reciprocating carriage over the same, feeding and discharging devices mounted on the carriage, a fixed arm, a lever pivoted between its ends to said arm and connected at one end with the carriage, a pitman connected with the other arm of said lever, a rock shaft provided with an arm connected with said pitman, a cam wheel, an arm projecting from the rock shaft and coöperating with said cam wheel, means for driving the cam wheel, and means for controlling the operation of said cam wheel.

9. In a machine of the character described, the combination with a platform, and feeding means and discharging means coöperating therewith, of a cutter for severing a stamp or ticket from a strip in advance of the feeding means and in rear of the discharging means, and means for operating said cutter.

10. In a machine of the character described, the combination with a platform, and feeding means and discharging means coöperating therewith, of a cutter in advance of the feeding means and in rear of the discharging means, a shaft, means for turning said shaft, an arm projecting from said shaft, a rod connecting said arm with the cutter, and means for reciprocating the feeding and discharging means.

11. In a machine of the character described, the combination with a platform having a transverse slot, of a cutter to enter said slot, a transverse bar over the platform in line with the rear wall of said slot, means for operating the knife reciprocating means for feeding a strip past the cutter and a reciprocating finger for discharging a stamp or ticket severed from said strip, said transverse bar coöperating with the discharging finger to raise the same at the rear end of its throw.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

SARA L. W. COE.

Witnesses:
H. T. WERDEN,
G. BERNARD.