

G. TROMBLEY.
STAMP VENDING MACHINE.
APPLICATION FILED APR. 9, 1910.

986,247.

Patented Mar. 7, 1911.

3 SHEETS—SHEET 2.

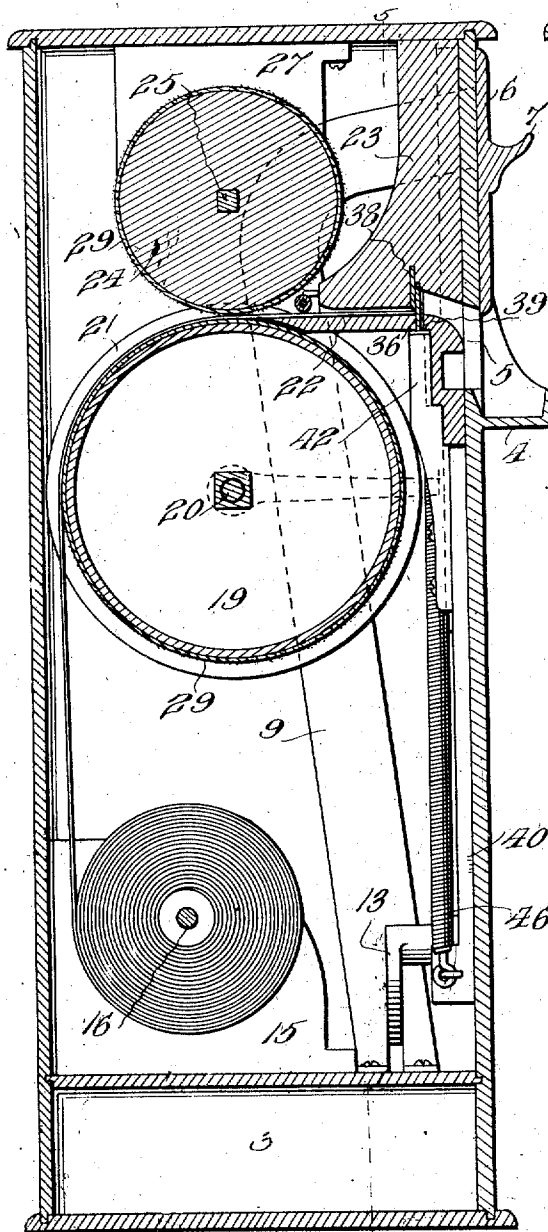
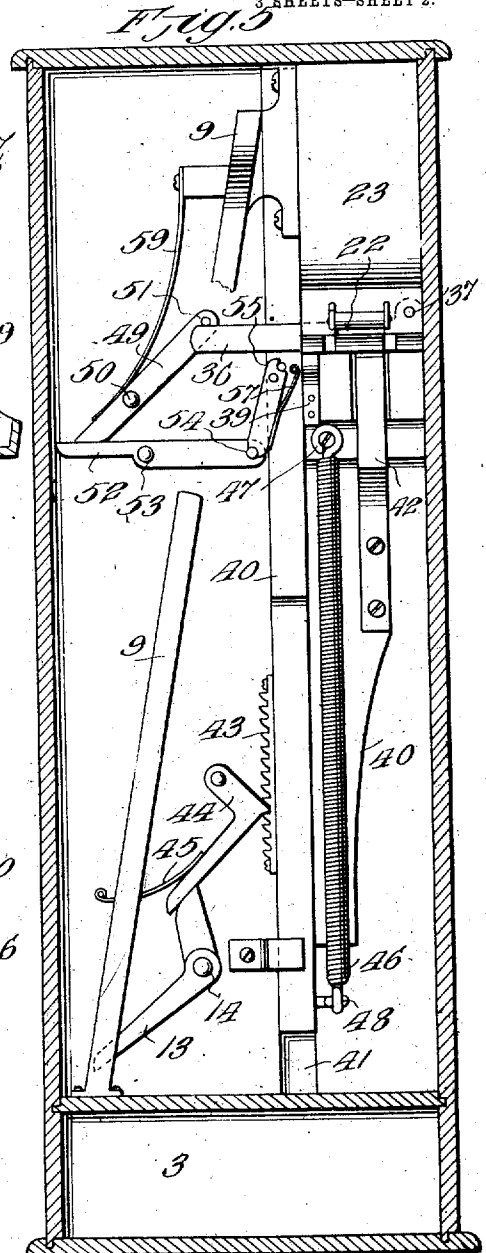


Fig. 2.

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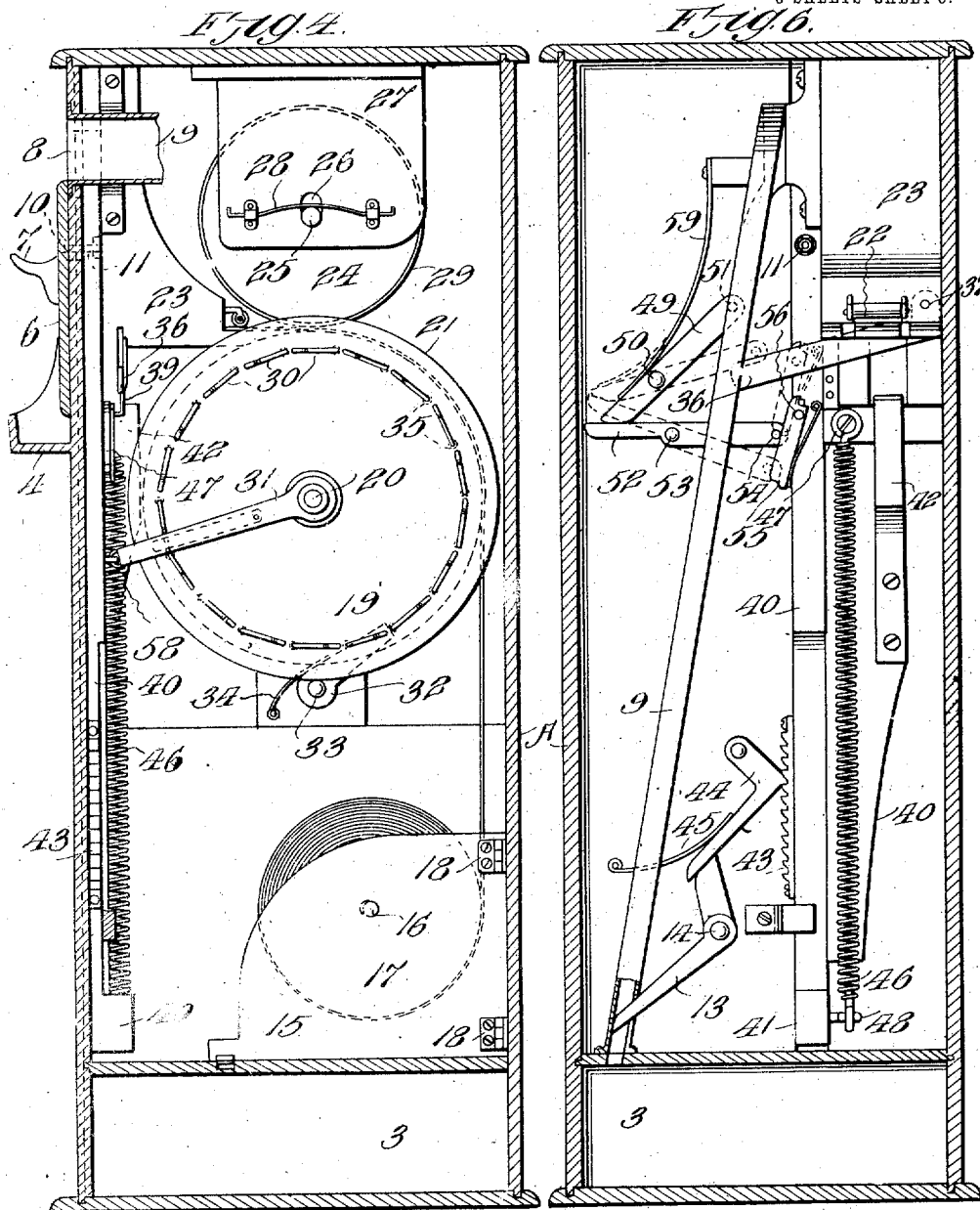
Attorney

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UNITED STATES PATENT OFFICE.

GEORGE TROMBLEY, OF BLOOMINGDALE, NEW YORK, ASSIGNOR OF ONE-HALF TO
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STAMP-VENDING MACHINE.

986,247.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE TROMBLEY, a citizen of the United States, residing at Bloomingdale, in the county of Essex and State of New York, have invented new and useful Improvements in Stamp-Vending Machines, of which the following is a specification.

This invention relates to a stamp vending machine of that type in which a stamp is severed from a ribbon by means of a knife which can be set into operation by the deposit of a coin, the ribbon being fed one step by the operation of a slide each time a purchaser uses the machine.

The invention has for one of its objects to improve and simplify the construction and operation of machines of this character so as to be comparatively simple and inexpensive to manufacture, reliable and efficient in use, readily manipulated, and so designed as to be tamper proof.

Another object of the invention is the provision of a novel cutting mechanism for severing the stamps of the ribbon each time a coin is deposited in the machine.

Another object of the invention is the provision of an actuator which normally closes the mouth of the coin chute and requires to be actuated to permit the mouth to be exposed so that a coin can be introduced and the actuator is so arranged that it will cover the stamp discharging opening when in position to permit of a coin to be inserted and in this way an instrument cannot be introduced into the discharge opening to extract the stamps.

With these objects in view, and others as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawings, which illustrate one embodiment of the invention:—Figure 1 is a front perspective view of the vending machine showing the actuator or slide in normal by full lines and in set position for setting the stamp severing mechanism by dotted lines. Fig. 2 is a vertical section on line 2—2, Fig. 1. Fig. 3 is a detail sectional view showing the actuating slide and cutting knife in a different

position from that in Fig. 2. Fig. 4 is a 55 vertical section of the machine. Fig. 5 is a vertical section taken on line 5—5, Fig. 2 and showing the parts of the stamp severing mechanism in normal position. Fig. 6 is a similar view showing the said mechanism in 60 set position.

Similar reference characters are employed to designate corresponding parts throughout the several views.

Referring to the drawing A designates 65 the casing of the machine which may be of any suitable size and shape and constructed of any suitable material. At one side of the casing is a door 1, which swings on hinges 2, so that the casing can be opened in order to inspect the mechanism, supply a new roll 70 of stamps when necessary and to remove the coins, the latter being collected in a chamber 3 at the bottom of the casing. On the front of the casing is a stamp receiver or holder 75 4 disposed under the stamp discharging opening or mouth 5 of the machine. Arranged above the mouth 5 is an actuator in the form of a slide or plate 6 that has a handle 7 and when this slide is moved down- 80 wardly it not only sets the stamp cutting or severing mechanism but exposes the opening 8 of the coin chute 9 and covers the discharge opening 5 for the stamps so that the stamp feeding device cannot be interfered 85 with by the introduction by a wire or other instrument through the discharge opening. The front of the casing has a vertical slot 10 through which extends a bolt 11 or other fastening for connecting the actuating slide 90 with a suitable part of the cutting mechanism. Supported on the front wall of the casing and disposed within the latter is the coin chute 9, and at the lower end thereof there is arranged a detent or coin actuated 95 trip 13 which is pivoted at 14 on the front wall of the casing, so that a coin passing down the chute will strike the detent and thereby set off the stamp cutting mechanism.

The stamps are in the form of a ribbon 100 r which can be wound into a roll and arranged in a compartment 15 in the bottom of the casing, the roll being freely rotatable on a shaft 16 rigidly secured to one wall of the casing. One side of the roll containing 105 compartment 15 consists of a plate 17 mounted on hinges 18 so that by swinging the plate laterally a roll of stamp ribbon can

be placed on the shaft 16. Above the roll is a feeding wheel 19 mounted to freely turn on an axle 20. This wheel, which has peripheral flanges 21, is disposed approximately tangential to the stamp discharging opening so that the ribbon can pass upwardly behind the wheel and thence forwardly over the same to the discharge opening of the machine, the ribbon passing through a guide passage 22 formed in a casing or block 23 that is supported on the front wall of the casing between the wheel and discharge openings. Coöperating with the feed wheel is an idler or friction roll 24 that has its axle 25 disposed in vertical slots 26 in a bearing bracket 27 secured to the top of the machine. Engaging the axle 25 are springs 28 which press the wheel 24 downwardly into engagement with the wheel 19. The thickness of the friction wheel 24 is such that it can work between the flanges 21 of the wheel 19 and the periphery of each wheel is covered with sand-paper 29 so as to obtain a better grip on the ribbon of stamps and besides the sand paper on the wheel 19 prevents the ribbon from adhering thereto should the mucilage become soft from dampness in the air. By shifting the friction roll or wheel 24 upwardly and laterally, it can be engaged with one of the flanges of the wheel 19 and thus be supported off the periphery of the latter wheel while the stamp ribbon is being applied to the wheel 19. The free end of the ribbon is inserted into the passage 22 as far as it will go, it being limited by the knife or cutter which severs the stamps.

The feeding wheel 19 is adapted to move step by step a distance equal to a stamp and this feeding movement takes place when the knife or cutting mechanism is set by the downward movement of the slide 7. For this purpose, the wheel 19 is provided with ratchet teeth 30 arranged on one side and coöperating therewith is a pawl 31 fulcrumed on the axle or shaft for the wheel 19, the pawl being provided with a spring or equivalent tooth which engages the ratchet teeth. Every time the arm or pawl 31 is depressed during the setting of the cutting mechanism, the feed wheel will turn one step and feed the ribbon forwardly to bring the next stamp to the knife or cutter. Backward movement of the wheel 19 is prevented by a hold-back pawl 32 fulcrumed at 33 and held by a spring 34 into engagement with pegs or teeth 35 on the side of the wheel opposite from the ratchet teeth.

Arranged at the forward end of the passage 22 is a cutter 36 which swings in a vertical plane on a pivot 37, and the upper edge of this cutter or knife is sharpened so that the stamp is severed on the up-stroke of the knife and extending across the top of the passage is a stationary knife 38 which

assists in the severing of the stamps. The knife 36 moves over a yielding abutment in the form of a spring 39 which is bowed rearwardly so as to engage the swinging plate with considerable friction and hold the same raised after a stamp has been cut. This spring does not form a positive clutch but readily permits the cutter or knife to be depressed when the slide 7 is pressed downwardly. The slide 7 is connected by the bolt 11 with a reciprocatory element 40 in the form of a rod which is movable in a vertical guide groove 41 in the front wall of the casing and on this rod is a striking element or hammer 42 so arranged that it will engage under the cutter 36 and raise the same. On the rod or bar 41 are ratchet teeth 43 with which engages a pawl 44 held yieldingly toward the teeth by a spring 45 and the free end of this pawl is engaged by the detent 13. The hammer or striking element is adapted to be suddenly and forcibly raised by a stiff extension spring 46 that has its upper end anchored at 47 to the front wall of the casing and its lower end connected at 48 to the element 40, and this spring is under tension when the cutting mechanism is set, and hence when the detent is actuated by a coin, the pawl 44 will be released so that the spring 46 can be brought into play to actuate the knife or cutter 36. The knife 36 is adapted to be set by means of a lever 49 fulcrumed at 50 on the front wall of the casing and on this lever is a pin 51 or projection which engages the free end of the knife to move the latter downwardly. The lever 49 is actuated by another lever 52 fulcrumed at 53 in such position that it engages the arm of the lever 49 opposite from that carrying the pin 51. On the inner end of the lever 52 is a pin or projection 54 with which is adapted to engage a pivoted catch or dog 55 on the slide actuated element 40. The catch or dog 55 is pivoted at its upper end 56 and the lower end is yieldingly held projected from one side of the element 40 by a spring 57.

When the parts are in normal position the knife 36 is raised and the dog 55 disposed above the projection 54 on the lower lever 52, and hence as the element or hammer carrier 40 is pressed downwardly by the slide 7, the dog 55 will oscillate the lever 52 which will in turn oscillate the lever 49 and cause the pin or projection 51 thereof to swing the knife 36 downwardly to open position so that the next stamp can feed forwardly between the knives, it being understood that the feeding wheel 19 is moved one step during the setting of the cutting mechanism since the pawl or arm 31 has its free end connected at 58 with the element 40. The levers 49 and 52 are returned to normal position, as soon as the dog or catch 55 passes off the pin or projection 54, by a

spring 59 which presses against the lever 49 and holds it against the lever 52. During this downward movement of the element 40, the holding pawl 44 will automatically come into play and block the cutting mechanism in set position, as shown in Fig. 6, and as soon as a coin is introduced into the machine the pawl will be released by the detent so that the hammer will strike the knife during the upward movement of the element 40 so as to thereby sever the stamp which drops out of the opening 5 into the rest or holder 4, and during this severing movement the actuating slide 7 will be raised to close the coin chute. The knife 36 remains in closed position since it is held by the spring 39, and the knife thus prevents a wire or other instrument from being inserted into the machine through the opening 5. In operating the machine, the user has merely to press downwardly on the slide 7 and then deposit a coin in the opening 8, the slide being released at the same time so that the mechanism will automatically discharge the stamp.

From the foregoing description taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention relates, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes may be made when desired as are within the scope of the claims.

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

1. A machine of the class described comprising a ribbon-feeding device, a cutter, a setting mechanism for the cutter including an actuator, means for releasing the mechanism, and a stamp-discharging means, said actuator being arranged to close the last-mentioned means when the said mechanism is operated to move the cutter to open position.

2. A machine of the class described comprising a casing having a stamp discharging opening, a stamp feeding means, a cutter, and operating means for the cutter and stamp feeding means including a slide actuator arranged to normally uncover the said opening and movable to position to cover the stamp discharging opening during the opening of the cutter.

3. A stamp vending machine comprising a casing having a stamp discharging opening, a stamp feeding device in the casing, a cutter in the casing, an actuating mechanism for the cutter, means for releasably holding the mechanism set, and a device for setting the mechanism including a slide normally uncovering the said opening and

adapted to be initially moved to cover the opening during the setting of the said means.

4. In a vending machine of the class described, the combination of a casing having a discharge opening, a feeding mechanism in the casing, a cutter disposed at the opening and normally closing the same, a device for setting the cutter and including an actuator arranged to close the said opening during the setting movement of the cutter, and a device for effecting the release of the cutter.

5. A vending machine of the class described comprising a cutter, a ribbon feeding device, means for simultaneously moving the cutter to set position and actuating the device for feeding the ribbon forwardly, a striking element separated from the cutter and arranged to impart a blow thereto for severing the ribbon, and a means for holding the first-mentioned means in set position.

6. A vending machine of the class described comprising a cutter, a ribbon feeding device, means for simultaneously moving the cutter to set position and actuating the device for feeding the ribbon forwardly, a striking element separated from the cutter and arranged to impart a blow thereto for severing the ribbon, a clutch for holding the cutter yieldingly in the position to which it is moved by the striking element, and a device for holding the first-mentioned means in set position.

7. A vending machine of the class described comprising a ribbon feeding device, a mouth through which the severed portions of the ribbon discharge, a cutter arranged in coöperative relation with the mouth, a spring for yieldingly holding the cutter in a position to close the mouth, a mechanism for moving the cutter to open the mouth and for actuating the feeding device, and a striking element arranged to impart a blow to the cutter.

8. A vending machine of the class described including a movable cutter, a leaf spring frictionally engaging the cutter, a feeding passage across which the cutter extends when engaged with the said spring, means for moving the cutter to set position, and a striking element for moving the cutter on the cutting stroke.

9. A vending machine of the class described including a movable cutter, a leaf spring frictionally engaging the cutter, a feeding passage across which the cutter extends when engaged with the said spring, means for moving the cutter to set position and movable away from the cutter after the latter is set, an actuator movable into engagement with the cutter for moving the same on the cutting stroke, and a device controlling the actuator.

10. A vending machine of the class described including a stamp guiding means, 130

a cutter normally disposed across the same, means for yieldingly holding the cutter in such position, a device arranged to engage the cutter and move the same to said position, means for recovering the said device, an actuator for moving the cutter on its cutting stroke, and means for holding the actuator in position for action.

11. A vending machine comprising a cutter, a device for engaging the cutter and moving the same in one direction, means for removing the device from the cutter after it has been moved thereby, a striking element arranged to move independently of the cutter and strike the same for moving the latter on its cutting stroke, and a means controlling the said element.

12. A vending machine comprising a cutter, a device for engaging the cutter and moving the same in one direction, means for removing the device from the cutter after it has been moved thereby, a striking element arranged to move independently of the cutter and strike the same for moving the latter on its cutting stroke, a means controlling the said element, and a quick-acting device for moving the element on its striking stroke.

13. A vending machine comprising a cutter, a reciprocating hammer-carrying element, means actuated by the element to move the cutter in one direction and automatically released from the element to move away from the cutter, a hammer on the element for striking the cutter, and an automatically locked device arranged to engage the element to hold the same in set position and releasable to permit the element to operate.

14. A vending machine comprising a cutter, a reciprocatory element, a lever engaging the cutter, a second lever engaging the first, a dog on the element engaging the second lever to operate both levers together

to cause the cutter to move in one direction and the dog being automatically released from the second lever before the element has finished its movement, a spring acting on the first lever to move the same away from the cutter, a hammer on the element, a spring actuating on the element to cause the hammer to strike the cutter and move the same on its cutting stroke, and a device for holding the element in set position with the spring under tension.

15. A vending machine comprising a ribbon feeding roll having peripheral flanges, a friction roll mounted to engage the periphery of the first mentioned roll between the flanges and movable away from the first mentioned roll and laterally to permit the friction roll to be supported on a flange of the feeding roll, and an actuating means for the feeding roll.

16. A vending machine comprising a casing having a discharge opening, a ribbon feeding device in the casing including a ratchet pawl, a cutter arranged in coöperative relation with the opening, a reciprocatory element in the casing, a hammer on the element for striking the cutter to move the same on its cutting stroke, a spring-returned device actuated by the element to move the cutter to set position, means for connecting the pawl with the element, a spring for moving the element from set position to actuate the cutter by a hammer and return the pawl, a device for holding the element in set position, and means outside the casing and connected with the element for moving the same to set position against the tension of the said spring.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE TROMBLEY.

Witnesses:

ORIN OTIS,
E. W. WHITE.