

L. C. PECK.
STAMP VENDING MACHINE.
APPLICATION FILED SEPT. 12, 1911.

1,061,865.

Patented May 13, 1913.

4 SHEETS-SHEET 1

Fig. 1.

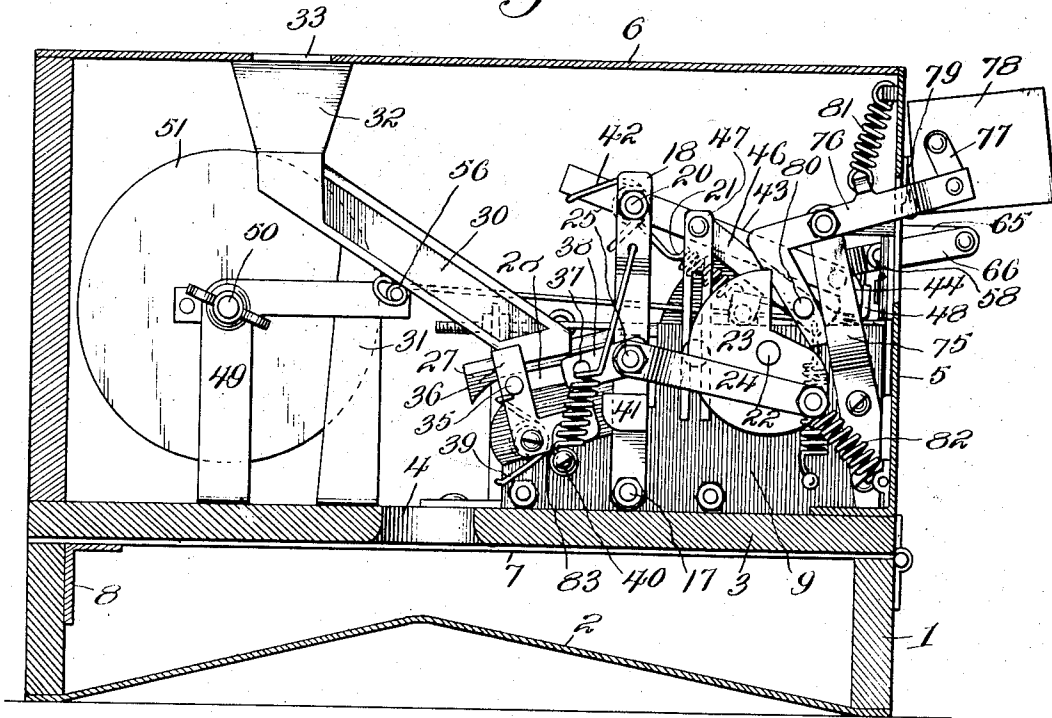
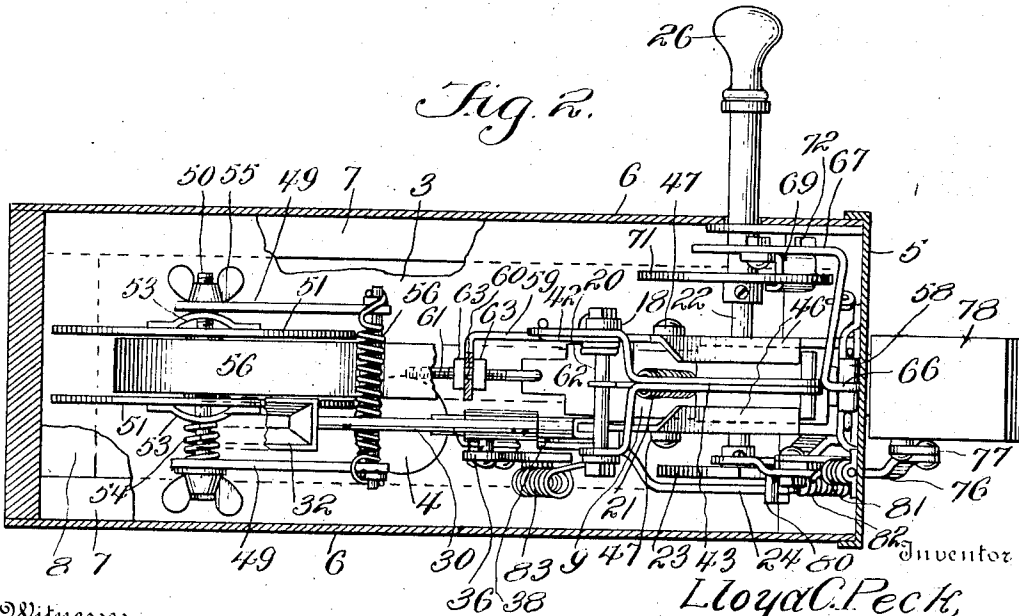


Fig. 2.



Witnesses

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4 SHEETS—SHEET 2.

Fig. 3.

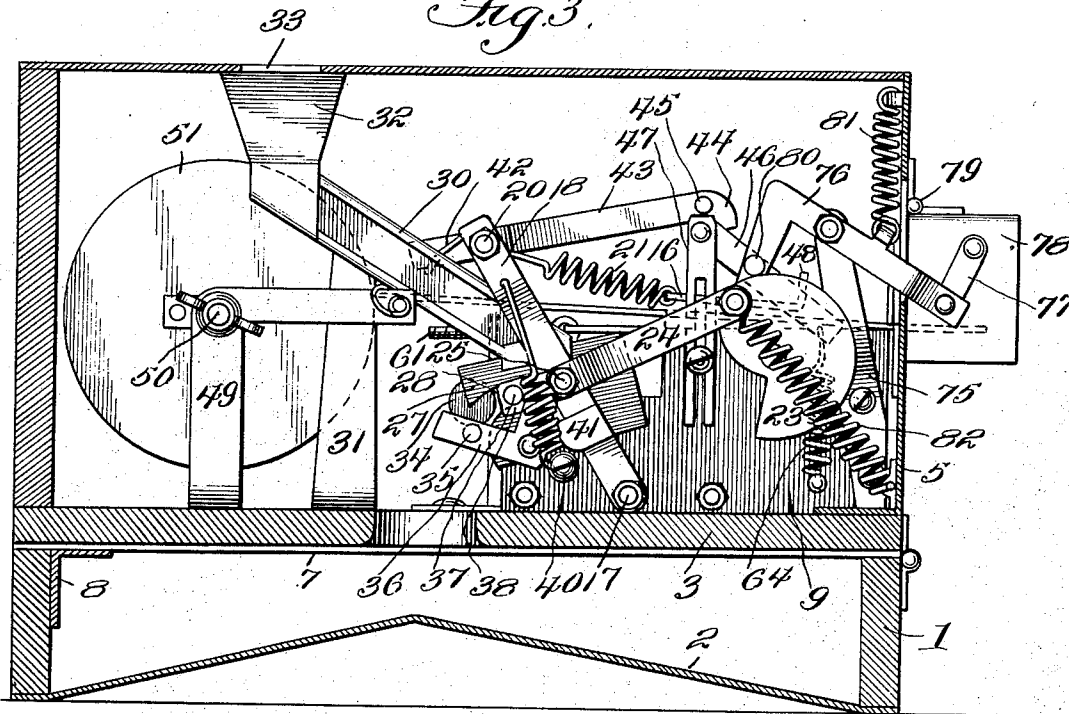


Fig. 4.

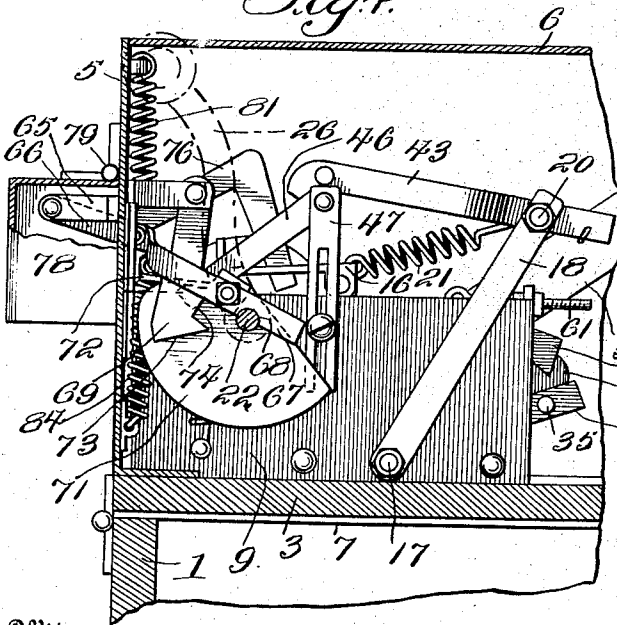
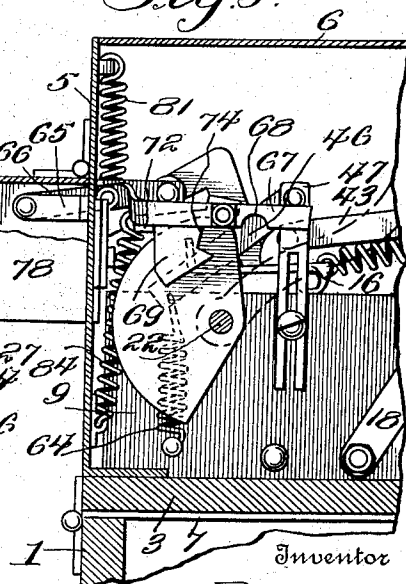


Fig. 5.



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4 SHEETS-SHEET 3.

Fig. 6.

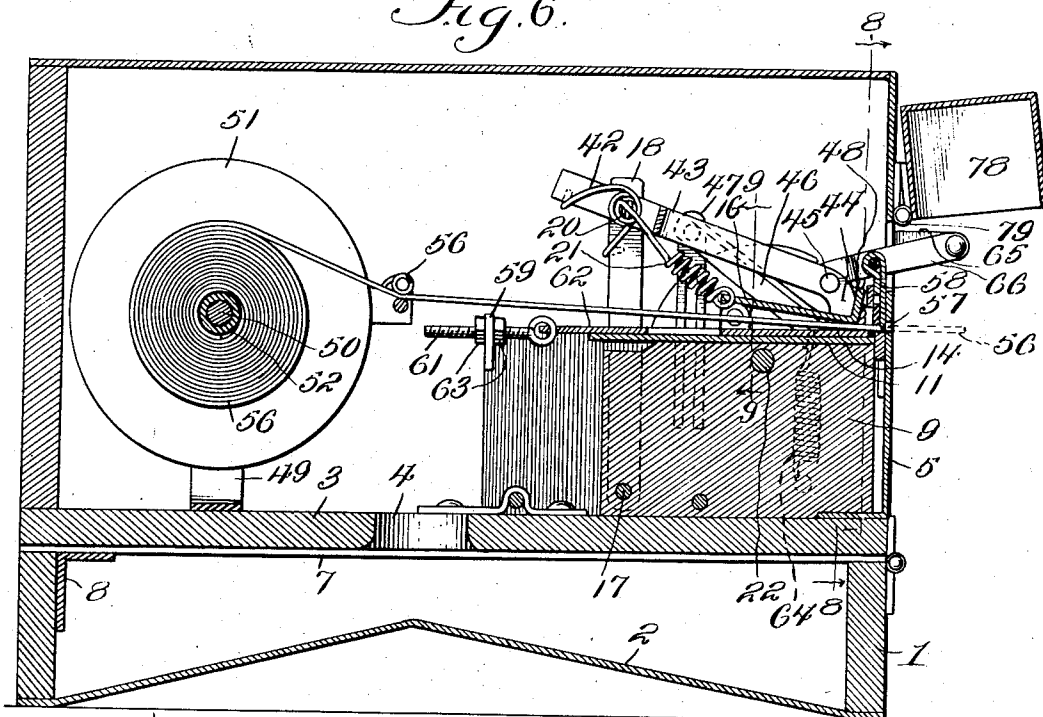


Fig. 7.

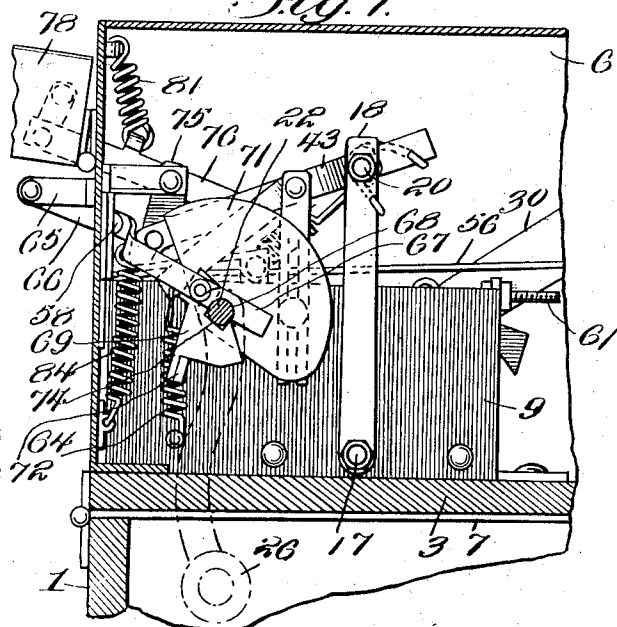
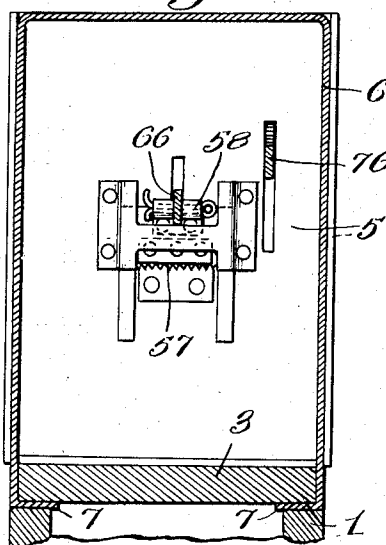


Fig. 8.



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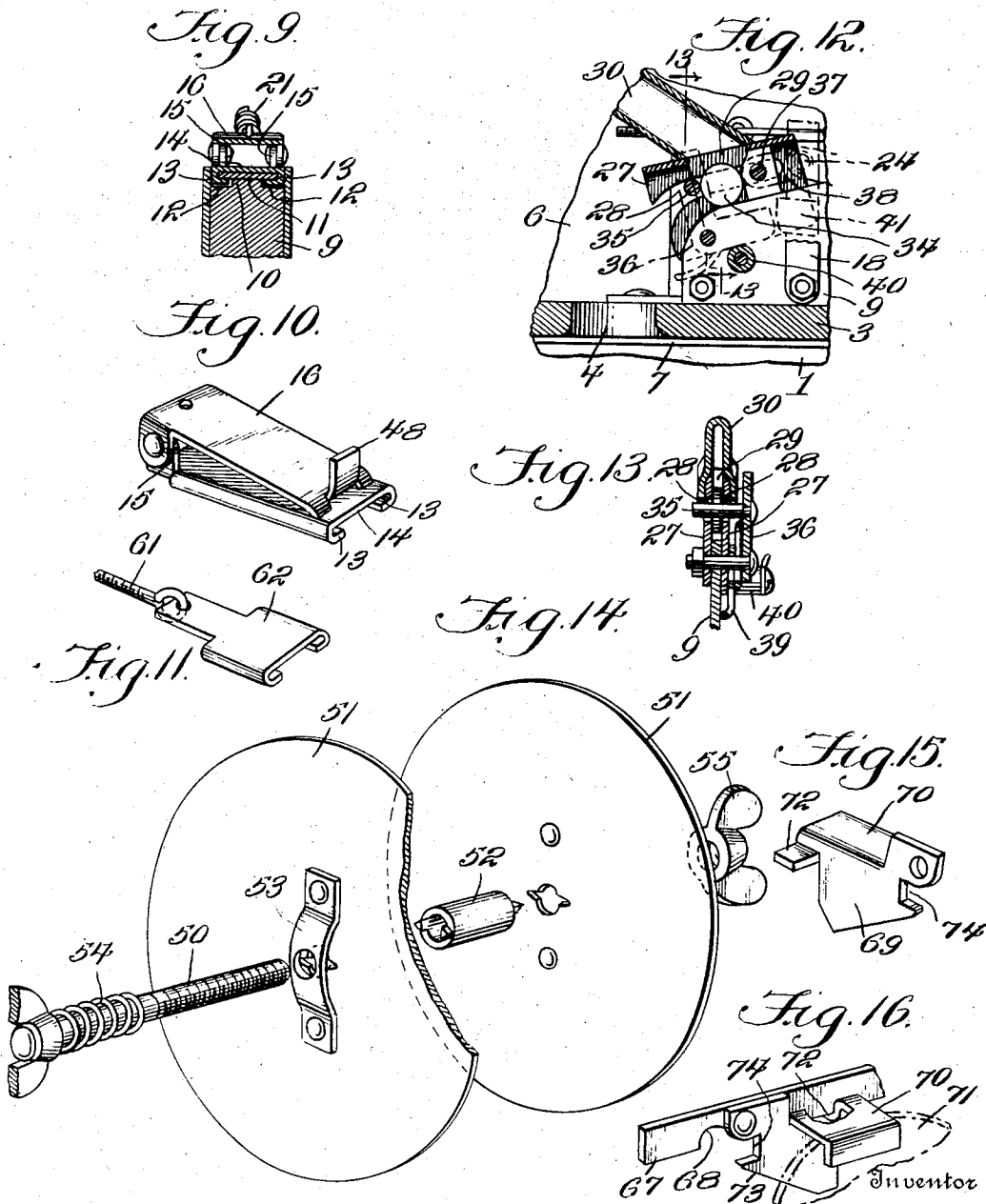
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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

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STAMP-VENDING MACHINE.

1,061,865.

Specification of Letters Patent.

Patented May 13, 1913.

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To all whom it may concern:

Be it known that I, LLOYD C. PECK, a citizen of the United States, residing at Sylvan Grove, in the county of Lincoln and State of Kansas, have invented new and useful Improvements in Stamp-Vending Machines, of which the following is a specification.

This invention relates to vending machines and more particularly to stamp vending machines.

One of the principal objects of the invention is the provision of means in a machine of this character for preventing fraudulent operation thereof either during the projection of the stamp or when the machine is in normal position.

A further object of the invention is the provision of novel means actuated in the operation of the machine for throwing the hood or covering over the stamp opening while the stamp is being projected and for otherwise closing the stamp opening and locking said closing means against operation from the outside.

A further object of the invention is the provision of a stamp vending machine having a coin controlled mechanism and a coin controlled lock therefor which is normally operative to lock the parts of the machine against operation and which is actuated by the coin and a portion of the mechanism in the operation thereof to throw the lock to inoperative position and permit the operation of the parts.

Another object of the invention is the provision of a coin controlled stamp vending mechanism in which a roll of stamps is used having means for adjusting the length of feed of said stamps so that either a long or a short stamp may be dispensed with equal facility.

A still further object of the invention is the provision of a machine of this character having a stamp severing gate which is raised when the stamps are dispensed and which is automatically closed when the stamp is projected the proper distance and automatically locked in closed position so as to prevent fraudulent raising of the gate.

Further objects of the invention will appear as the following specific description is read in connection with the accompanying drawings, which form a part of this application, and in which:—

Figure 1 is a vertical longitudinal section

through the machine showing the operating parts thereof in side elevation. Fig. 2 is a top plan view with the casing in section. Fig. 3 is a view similar to Fig. 1 showing the parts in partially operated position. Fig. 4 is a fragmentary elevation with the casing in section taken from the side of the machine opposite to that of Fig. 1 and with the parts in partially operated position. Fig. 5 is a view similar to Fig. 4 with the parts further operated. Fig. 6 is a vertical longitudinal section taken through the center of the machine. Fig. 7 is a view similar to Fig. 4 with the parts in normal position. Fig. 8 is a detail vertical section on the line 8—8 of Fig. 6. Fig. 9 is a detail vertical section on the line 9—9 of Fig. 6. Fig. 10 is a detail perspective view of the stamp slide. Fig. 11 is a similar view of the adjusting plate. Fig. 12 is a detail elevation with parts in section showing the coin controlled mechanism. Fig. 13 is a section on the line 13—13 of Fig. 12. Fig. 14 is a dissected perspective view of the stamp drum parts. Fig. 15 is a perspective view of the gate lock and trip. Fig. 16 is a similar view of the lock and its associated parts when used as a gate trip.

Referring more particularly to the drawings, 1 represents a base which is in the form of a receptacle having a bottom 2 inclined from the center toward each end, for a purpose which will hereinafter be described. The sides, end and bottom of the base form a money receptacle or till in which the coins used for controlling the operation of the machine are deposited. Hinged to one end of the members of the base is a table 3 upon which the mechanism of the vending machine is carried. This table is provided with an opening or port 4 through which the coins pass after being discharged from the mechanism, as will hereinafter be described.

To the hinged end of the table 3 is secured a flange plate 5 and slidably mounted over the table and adapted to cover the mechanism is a casing 6 having inturned flanges 7 to engage beneath the table 3 and having a depending flange 8 bridged between the sides of the casing and adapted to enter the money receptacle and abut against the inner side of the end member opposite that to which the table is hinged. This member 8 effectually prevents removal of the casing while the table 3 is resting upon the recep-

tacle or base and is held in such position in any suitable manner, as by a hasp lock or the like.

Extending vertically from the table 3 is a wall 9 which is provided with a reduced extension 10 upon which a plate 11 is secured. This plate overlaps the extension at either side and forms grooves 12 in which the inwardly turned flanges or fingers 13 of the stamp slide plate 14 are adapted to run. This plate is provided with upwardly turned ears 15 at its rear end upon which is pivoted the stem gripping arm 16 between which and the plate 14 the stamps pass. Secured to a shaft 17 which extends through the wall 9 are a pair of arms 18 whose upper end is connected by a shaft 20 forming a tying part for one end of the spiral spring 21, the opposite end of the spring being connected to the rear end of the arm 16 so as to retract the same when the arms 18 are thrown to the position shown in Fig. 3, as will be hereinafter described.

Passing through the wall 9 and journaled therein is a shaft 22 having secured to one side thereof a cam 23 to which is eccentrically pivoted a connecting rod 24, the opposite end of which is pivoted to one of the arms 18, as shown at 25. The shaft 22 is rotated by a handle 25 which projects through the casing 6 in a direction to first throw the arms 18 rearwardly to the position shown in Fig. 2 and then forwardly to normal position, as shown in Fig. 1, the plate 14 and arm 16 being retracted by the spring, as will hereinafter be described, after the arm 18 has traveled a predetermined distance toward its rearward position.

Secured to one side of the wall 9 is a plate 27 which is slotted longitudinally, as shown at 28, and is provided with a groove in each wall of the slot, as shown at 29, to receive a coin from the coin chute 30 which is supported upon the standard 31 and has a receiving funnel 32 positioned immediately below the coin slot 33 in the top of the casing 6.

The coin, which is shown at 34 in Fig. 3, drops down in the groove 29 of the plate 27 between the transversely extending pin 35 carried upon the locking bell crank lever 36 and a transversely extending pin 37 carried upon the end of a projecting link 38. The pins 35 and 37 travel in the slot 28 and the link 38 is pivoted upon the pin 25 projecting from the arm 18 to which the connecting rod 24 is attached. The bell crank lever 36 is normally thrown to the position shown in Fig. 1 by a spring 39 and is limited in its movement by a stop 40 which lies in the path of the forward leg of the lever. This stop positions the forward leg of the lever in the path of a lug 31 carried by the arm 18, so that the arm 18 cannot move to

its rearward position until the coin of the proper denomination is seated in the grooves of the plate 27. When the coin is in this position and the arm 18 moved rearwardly by the action of the cam and connecting rod, the pin 37 will force the coin against the pin 35, thus tilting the lever 36 and carrying its forward leg out of the direct path of the lug 41. The under side of the forward leg of the lever is formed into a cam which is adapted to first be engaged by the lug 41 and finally engaged by the pin 25 so that, after the lever has been tilted so as to carry the pins 35 and 37 out of alinement with the coin, the lever will be moved backwardly until the coin is discharged over the pin 35 and dropped through the opening 4 in the table 3.

Pivoted upon the shaft 20 and having its forward end held normally in depressed position by a spring 42 is a tongue 43 having a depending forward end 44 and a transverse pin 45 which extends upon both sides of the arm. In the rearward movement of the arm 18 the tongue 43 is moved rearwardly, the pin 45 riding up over the inclined ways 46 pivoted upon adjustable standards 47 carried upon opposite sides of the wall 9. When the pin 45 drops off the inclined ways 46 the depending end 44 will drop upon the arm 16 and, as the arm 18 is moved forwardly, will engage a stop 48 which projects vertically from the forward end of the arm 16 and forces said arm 16 into engagement with the plate 14, at the same time moving both the arm and the plate 14 forwardly over the guide plate 11 to the flange 5 of the machine.

Projecting vertically from the table 3 are a pair of standards 49 which have removably mounted therein a threaded shaft 50 upon which is journaled a drum comprising disks 51 removably connected to a journaling sleeve 52. Each disk on the drum is provided with a bolt spring 53, one of which bears against one of the standards 49 and the other one of which is engaged by a spiral spring 54 which surrounds the shaft 50 between the standard and said spring. The shaft is held removably in the standards by means of a thumb nut 55 which is threaded upon one end of the shaft so that, by removing the shaft and disconnecting the parts of the drum, a new roll of stamps 56 may be placed upon the sleeve 52 and the drum again mounted in the standards. The stamp strip passes forwardly from the roll, through a tension device 56, and between the arm 16 and the plate 14 to the forward end of the machine, where it is adapted to pass through an opening 57 in the front plate 5.

In the rearward movement of the plate 14 and its associated arm 16 the stamp strip is held against movement therewith by a

gate 58 which is raised when the plate 14 and arm 16 move forwardly, as will be hereinafter described, so that as the arm 16 grips the strip to the plate 14 the strip is caused to move through the opening 57 for a predetermined distance determined by the amount of retrograde movement of the plate 14.

In order to accomplish the adjustment of the stamp projection, the frame 57 is secured to and extends rearwardly from the wall 9 and is provided with an opening 60 through which a rod 61 is adapted to pass. This rod 61 is connected at its forward end to a limiting plate 62 which slides upon the guiding plate 11 and is held in adjusted position by the nuts 63, threaded upon the rod 61. It has been found, in practice, that in order to secure the most efficient action the plate 14 and its associated arm 16 should not be retracted until the tension of the spring 21 is sufficient to tilt or raise the forward end of the arm 16 from the plate 14. In order to accomplish this the inclined ways 46 are held down upon the arm 16 by springs 64 until the tension of the spring 21 is sufficient. Each time the plate 14 and the arm 16 will be rapidly withdrawn from beneath the inclines and the plate 14 will abut against the stop plate 62.

Projecting outwardly from the front plate 5 is a standard 65 to which is pivoted an arm 66 which passes through the front plate and is pivoted to the gate 58. The arm is then bent at right angles so that in outline it is substantially Z-shaped, its rearwardly extending leg 67 being notched, as shown at 68, to receive the shaft 22. Pivoted to the rearwardly extending leg 67 is a combined tripping and locking dog 69 which is provided with an L-shaped flange 70 which overhangs the cam wheel 71 secured to the end of the shaft 22. The tongue 72 which extends beneath the leg 67 so as to limit the upward movement of the dog when actuated by the cam provides an abutment which raises the leg 67 and thereby the gate 58. When the cam 71 has been rotated so that the locking dog drops off of the same, the lower cam edge 73 will engage the shaft 22 and ride over the same until the shaft 22 enters the notch 68, at which time the dog will swing beneath the shaft and position its locking notch 74 so that it will engage the shaft and prevent the leg 67 from rising should any attempt to operate the gate from the outside be made.

When the cam 71 is again turned the dog 69 is thrown out of the position shown in Fig. 7 to the position shown in Fig. 4. The dog is thus released from the shaft and the arm 67 carried up by the dog.

Secured to and extending up from the wall 9 is a standard 75 to the upper end of which is pivoted a bell crank lever 76, one end of

which passes through the front plate 5 and is pivotally connected to a link 77 in turn pivoted upon a hook 78 hinged at 79 to the front plate so as to cover the opening 57. The inner depending end of the lever 76 is provided with a transverse pin 80 which lies in the path of the cam 23 and is adapted to be engaged thereby so as to receive the inner end of the lever and lower the outer end when the arms 18 are moved rearwardly. The cam 23 holds the hood 78 in depressed position until the stamp is fully projected, at which time the pin 80 drops off the cam and the hood is raised by a spring 81 which is connected to the lever 76 and to the front plate 5. If necessary a spring 82 may be used to retract the arms 18 and a spring 83 is preferably employed to retard the forward movement of said arms.

In the operation of the device a coin is inserted through the slot 33 into the chute 30 and passing down through said chute drops into the grooves of the plate 27 between the pins 35 and 37. By rotating the crank 26 the shaft 22 is turned in its bearings and the cam 23 forces the connecting rod rearwardly which also carries the arms 18 rearwardly and with them the tongue 43, the pin 45 of the latter element causing it to ride up upon the inclines 46 free of the arm 16 and the plate 14. The coin is pushed forwardly below the bell crank lever 36 out of the path of the lug 41. A continued rearward movement of the arms 18 causes the pin 45 to pass the inclines 46 and the tongue to drop under the influence of the spring 42 upon the plate 16. At this time the cam 71 wipes the locking dog out of engagement with the shaft and brings its tongue 72 into engagement with the under side of the arm 67. A continued movement of the crank will cause the return of the arms 18 with the pin 45 traveling beneath the inclines and with their springs 64 and the spring 42 of the tongue holding the arm 16 down upon the plate 14, thus clamping the stamp between the arm and plate. When the tongue comes into contact with the abutment 48 the arms 16 and plate 14 move forwardly carrying with them the stamp strip. It will be of course understood that at this time the gate 58 is completely raised and the stamp strip is free to move through the opening 57. The projected end of the stamp is covered by the hood which prevents any fraudulent manipulation of the strip while the gate is open. The pin 80 and the dog 69 drop off their respective arms 23 and 71, at the same time permitting the spring 84, which is connected to the arms 67, to close the gate and the spring 81 to raise the hood.

Having thus described the invention, what I claim as new is:—

1. In a vending machine, a receptacle, a table hinged upon the receptacle, a casing

slidably mounted upon the table, means carried by the casing and coacting with the receptacle to prevent the removal of the casing from the table, and vending mechanism carried on the table within the casing.

2. A vending machine comprising a receptacle, a table hinged thereto, a casing slidably mounted over said receptacle, and adapted to enter the receptacle to prevent the removal of the casing from the table, and vending mechanism carried by the table within the casing.

3. A vending machine comprising a receptacle, a table hinged to the receptacle and adapted to support the vending mechanism, a casing comprising a top, side members and an end member, inwardly turned flanges on the side member adapted to lie beneath the table whereby the casing may be slidably mounted upon the table, a bridge piece connecting the free edges of said side member and adapted to enter the receptacle when the casing has its end abutting the free end of the table, said bridge piece adapted to prevent removal of the casing from the table when the latter is closed upon the receptacle.

4. In a vending machine, a casing having a stamp aperture, mechanism within the casing for projecting the stamps through said aperture, a hood actuated by said mechanism for closing the aperture during the projection of the stamps, means for holding the stamps and closing the aperture when the hood is raised, and means for locking said closing means against fraudulent operation.

5. In a vending machine, a casing having a stamp aperture, mechanism mounted in the casing for projecting stamps through said aperture, means hinged to the casing and operated by said mechanism for covering said aperture when the hood is raised, and means for locking said gate in closed position against operation from the outside of the casing.

6. In a vending machine, a casing having a stamp aperture, mechanism therein for projecting stamps through said aperture, a hood operated by said mechanism for covering an aperture during the projection of the stamps, a reciprocating gate carried by the casing, means actuated in the operation of said mechanism for opening said gate while the stamps are being projected, means for closing said gate and simultaneously raising said hood, and means for locking the gate in closed position against operation from the outside of the casing.

7. In a vending machine, a casing having a stamp aperture, mechanism within the casing for projecting the stamps through the aperture, a hood actuated by said mechanism for covering the aperture during the projection of the stamps, a spring for raising said hood after the projection of the

stamps, and means actuated simultaneously with the raising of the hood for closing said aperture and locking the stamps against projection.

8. In a vending machine, a casing having a stamp aperture, mechanism therein for projecting stamps through said aperture, a hood actuated by said mechanism for covering the aperture during the projection of the stamps, means for closing said aperture independent of the hood, means acting simultaneously with the closing of the hood for raising said aperture closing means, a spring to raise said hood after the stamps have been projected, and means acting simultaneously with the raising of the hood for moving said closing means to close the aperture and to lock the stamps against movement.

9. In a vending machine, a casing having a stamp aperture, mechanism within the casing for projecting stamps through said aperture and including a cam wheel, a hood actuated by said mechanism for covering the aperture during the projection of the stamps, a gate for closing the aperture independent of the hood, a lever pivoted to the casing and to the gate, means carried by the lever and actuated by said cam wheel in the operation of the mechanism for raising the gate, said means adapted to connect with a part of the mechanism for locking the gate in closed position, and a spring for closing the gate and placing said locking means in locking position.

10. In a vending machine, a stamp projecting means including a cam wheel, a gate for preventing the projection of the stamps, a lever pivoted to said gate, a shaft for operating said mechanism, a tripping dog pivoted to the lever and actuated by the cam wheel to raise the lever and the gate, and a spring for returning the lever and gate to normal position when released by the cam, said tripping dog adapted to engage beneath the shaft to lock the gate in closed position.

11. In a stamp vending machine, stamp projecting mechanism comprising a reciprocable stamp gripper, resilient means for idly moving said gripper to stamp gripping position, a projecting tongue adapted to actuate said gripper, and means for raising the tongue out of engagement with the gripper in the retrograde movement of the same, said means adapted to hold the tongue upon the gripper and cause the latter to grip the stamps and positively project the gripper.

12. In a vending machine, stamp projecting mechanism including a reciprocable gripper adapted to receive the stamp strip, a spring carried by the projecting mechanism and connected to one member of the gripper for idly moving said gripper to gripping position, an adjustable stop for limiting the movement of the gripper to de-

5 terminate the length of stamp to be projected,
a gripper engaging and projecting tongue
actuated by the mechanism, and means to
release the same from gripping in the retro-
grade movement thereof and to press the
same into engagement with the gripper in
the projecting movement thereof, said means
adapted to hold the gripper against retro-
grade movement for a predetermined length

of time during the retrograde movement of 10
the tongue.

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

LLOYD C. PECK.

Witnesses:

CONRAD E. PECK,
ROY E. FREY.