

F. J. SCHUMANN.
STAMP VENDING MACHINE.
APPLICATION FILED JAN. 12, 1909.

Patented May 3, 1910.

2 SHEETS—SHEET 1.

957,112.

Fig. 1.

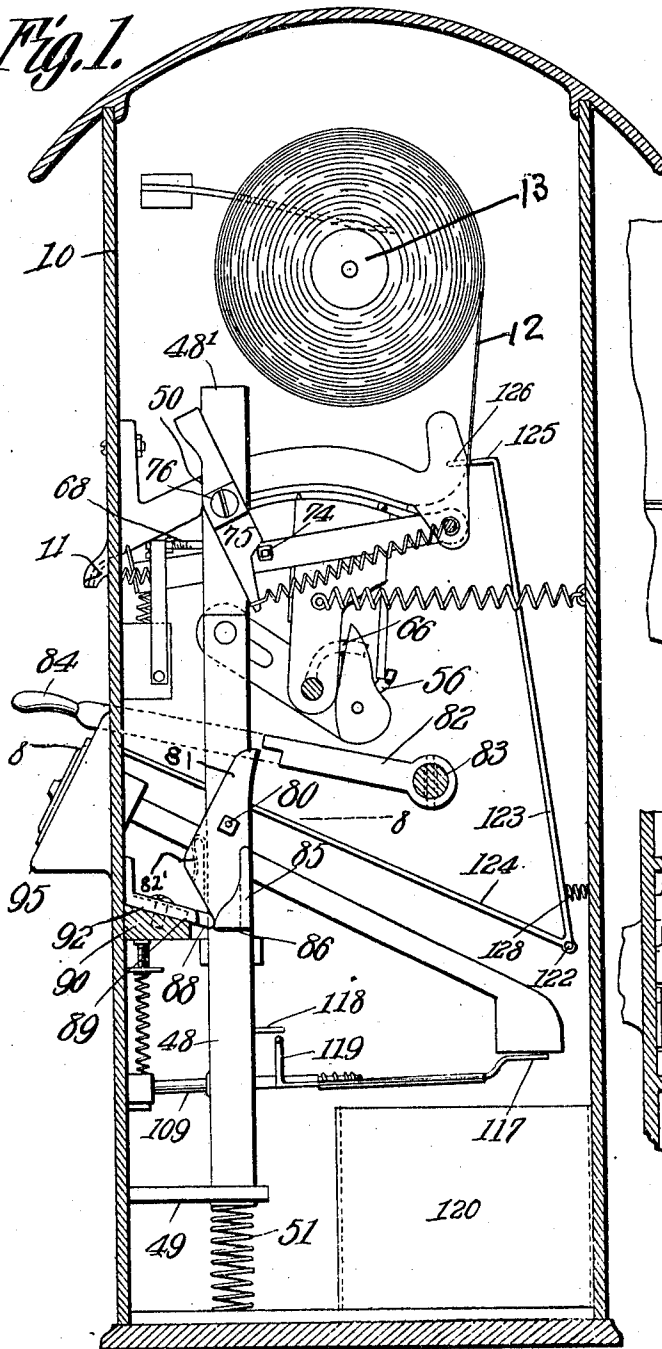


Fig. 7.

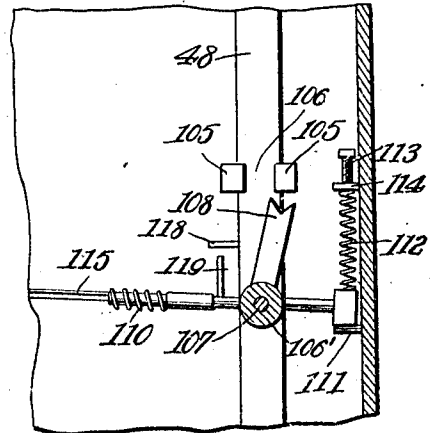
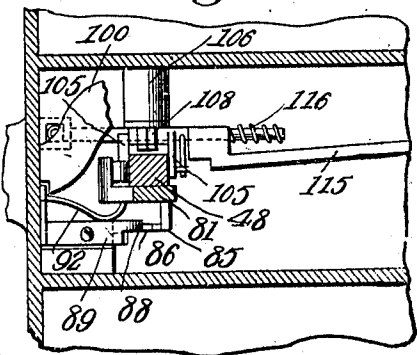


Fig. 8.



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2 SHEETS—SHEET 2.

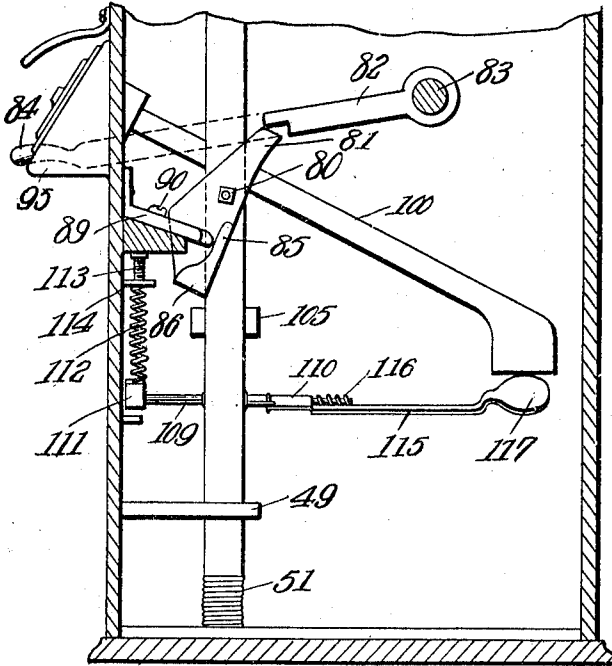


Fig. 2.

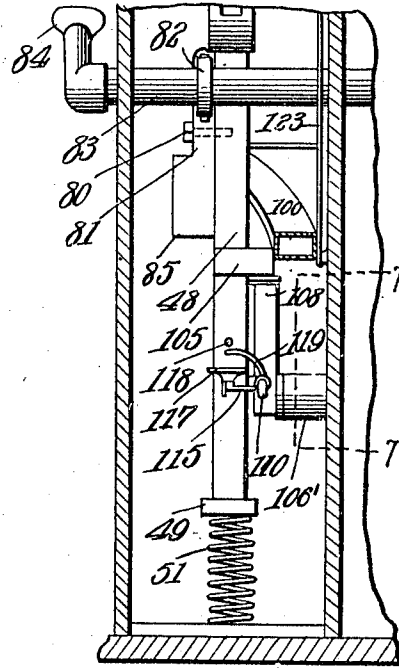


Fig. 3.

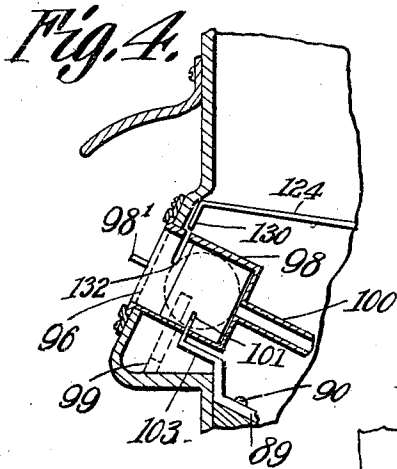


Fig. 4.

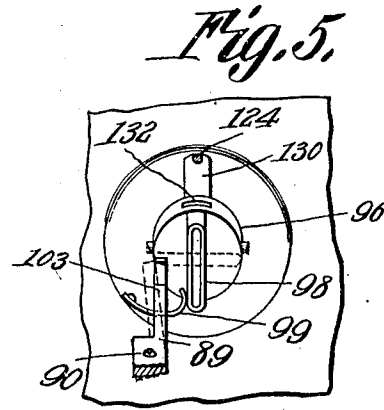
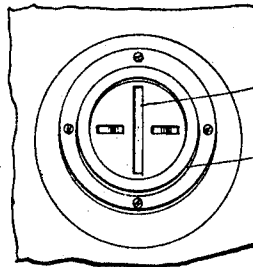


Fig. 5.

Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK J. SCHUMANN, OF BETHLEHEM, PENNSYLVANIA.

STAMP-VENDING MACHINE.

957,112.

Specification of Letters Patent.

Patented May 3, 1910.

Original application filed September 29, 1908, Serial No. 455,314. Divided and this application filed January 12, 1909. Serial No. 471,910.

To all whom it may concern:

Be it known that I, FRANK J. SCHUMANN, a citizen of the United States, residing at Bethlehem, in the county of Northampton and State of Pennsylvania, have invented a new and useful Stamp-Vending Machine, of which the following is a specification.

This invention relates to coin or check controlled mechanism for use in connection with vending and other machines.

The principal object of the invention is to provide a machine in which the delivery mechanism or equivalent device is locked at more than one point and can only be released after the coin or check has passed fully into the machine and is beyond the control of the intending purchaser.

A further object of the invention is to provide a mechanism especially adapted for use in connection with machines intended for the vending of stamps or merchandise of different values and to so construct the mechanism as to permit adjustment for the purpose of vending stamps or other articles on the insertion of one or more coins, for instance, one cent stamps may be discharged on the insertion of a cent, two cent stamps on the insertion of two cents, and so on up to stamps or other articles of any value.

With these and other objects in view as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, as will be more fully hereinafter described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is a sectional elevation of a stamp vending machine provided with a coin or check controlled mechanism constructed and arranged in accordance with the invention, the parts being in the normal position of rest ready for the insertion of a coin. Fig. 2 is a similar view of the lower portion of the machine showing the positions which the parts assume after the insertion of a coin or coins and the completion of the down stroke of the operating lever. Fig. 3 is a rear elevation of a portion of the coin controlled mechanism,

the casing being shown in section. Fig. 4 is a vertical section on an enlarged scale illustrating the coin entrance slot. Fig. 5 is a rear elevation of the same. Fig. 6 is a front elevation of the coin entrance slot. Fig. 7 is a transverse sectional view on the line 7—7 of Fig. 3. Fig. 8 is a sectional plan view on the line 8—8, Fig. 1.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawing.

The present application is a division of an application for Letters-Patent for stamp vending machines filed by me on September 29, 1908, Serial No. 455,314, and for convenience and a better understanding of the invention a portion of the stamp delivering mechanism has been illustrated and is briefly described herein.

The working parts of the machine are arranged within a suitable casing formed of any desired material and provided with a discharge slot through which the stamps are delivered. The stamps are printed on a long narrow strip of paper wound on a roller and said strip is fed through perforating and severing devices for the purpose of detaching single stamps from the end of the strip at each operation. The strip feeding, perforating and cutting mechanisms are all under the control of a vertically movable rod which is normally locked in elevated position and which is released on the insertion of a coin or coins of predetermined size, value or weight. The lower portion of the rod is guided by a bracket carried by the casing and its upper end is connected to the stamp vending and delivering mechanism. This rod is constantly urged upward by a helical compression spring extending between the bottom of the rod and the bottom of the casing.

Projecting from one side of the main operating rod or bar is a pin on which is pivoted a lever that is operated upon by a spring tending to turn it clockwise that is to say, to move its lower arm in the direction of the front of the casing. The upper end of this lever is arranged to be engaged by a lever that is rigidly secured to a transversely disposed shaft that extends through the side wall of the casing and carries a handled operating lever.

Under normal conditions the lever 81 is held out of the path of the lever 82, so that unless a coin is inserted the operating lever may be freely manipulated without operating the machine. When a coin is inserted the lever 81 is moved over to the position shown in Fig. 2, so that the lever or arm 82 may engage therewith in order to effect transmission of movement from the main operating lever to the main bar 48.

Projecting from one face of the lever 81 is a shoulder 85 from the lower outer edge of which extends a forwardly projected flange 86 having a curved upper edge. This flange is normally engaged by a tongue 88 projecting from the inner arm of a lever 89 that is pivoted on a stud 90 carried by a fixed portion of the casing and under the control of a deposited coin. In practice, the tongue 88 normally engages the edge of the flange 86 and holds the lever 81 in the inoperative position shown in Fig. 1. When a coin is inserted, however, the lever is swung on its pin 90 and the tongue 88 passes inward behind the flange so that the spring 82 may then operate to move the upper end of the lever 81 into the path of the operating lever. The lever 89 is acted upon by a spring 92 that operates to resist the movement of the lever when engaged by the deposited coin, so that there is always a tendency of the tongue 88 to again swing outward into a position in alinement with the edge of the frame 86. When the main operating rod moves downward the flange 86 is carried below the tongue 88 and the spring 92 will then restore the lever 89 to its initial position, the tongue being then immediately above, but out of contact with the rounded face of the frame 86. As the rod 48 moves upward the rounded face of the flange will engage the tongue 88 and the lever 81 will again be restored to the inoperative position shown in Fig. 1, out of the path of movement of the main operating lever.

Secured to the front of the casing is an escutcheon 95 within which is mounted a small tubular casing 96, the outer end of which is closed save for a coin slot 97, and from the face of the closed end of the casing project small ribs 98' which may be engaged by the finger for the purpose of turning the tubular casing through an arc of 90°. The coin slot 97 communicates with a short inclined chute 98 that extends through the tubular casing and the entrance mouth of the slot is normally disposed in a vertical position, the casing being operated upon by a spring 99 that tends to restore and maintain the casing with the slot in this position. The chute 98 is inclined, so that after the insertion of a coin and the turning of the casing until the slot is approximately horizontal, the coin may slide down through the

chute 98 to the main stationary coin chute 100 leading to the interior of the machine. One edge of the entrance chute 98 is cut away leaving an opening 101 across which a portion of the entered coin extends, and when the tubular casing is turned, the coin will engage an arm 103 that projects from the inner end of the lever 89 and will transmit movement to said lever 89 for the purpose of releasing the lever 89 and allowing the latter to assume operative position. Should no coin be inserted, the tubular casing 96 may be freely turned without operating the lever 89, and after each movement of the casing it is restored to its initial position by the spring previously referred to. After the movement of the lever 81 to operative position the bar 48 is still locked and the deposited coin operates by gravity on a second releasing device which cannot be moved to release position except by a coin or coins of the proper weight, and the insertion of slugs or counterfeits of incorrect weight would, therefore, prove inefficient in releasing the parts.

Secured to or formed integral with the main operating rod 48 is a lug 105 having a vertical slot 106, and this lug coöperates with a three-armed lever 106' in forming the second lock for the operating rod. The lever 106' is mounted on a stud 107 and has an approximately vertical arm 108 and a pair of approximately horizontal arms 109 and 110. The arm 109 carries a pawl 111 having a recessed upper face for the reception of a spring 112, the upper end of which engages against the lower end of a screw 113 that is mounted in a threaded opening formed in a stationary bracket 114. This screw may be readily adjusted for the purpose of allowing the lever to move to operative position under any predetermined weight, for instance, the weight of a cent when the machine is used for the vending of one cent stamps, or under the weight of two consecutively inserted cents when the machine is used for the vending of two cent stamps, and so on. The upper end of the arm 108 of the lever engages under the lug 105, and the rod will be held locked until the arm 108 assumes a strictly vertical position in alinement with the vertical slot in the lug. The weight of the coin or coins is imposed on the arm 110 of the lever and if the weight be insufficient the arm 108 will not move up to the vertical position, or if the weight be in excess of that of the coin or coins for which the machine is adjusted the arm will swing across and beyond the vertical position so as to move beyond the slot and still remain in locking position with reference to the lug 105. The arm 110 of the lever is preferably in the form of a circular rod on which is mounted an arm 115 that is normally held in a horizontal position by a torsion spring 116. At

the outer end of the arm 115 is a coin receiving disk or plate 117 that is arranged at the discharge end of the coin chute so that the coin will pass from the chute on to the plate. If the coin inserted be one for which the machine is adjusted its weight will depress the arm 115 and arm 110 without, however, turning the arm 115 with reference to the arm 110 and the lever 106' as a whole will swing on its pivot against the stress of the spring 112 and the arm 108 of the lever will then be brought to vertical position in order to permit downward movement of the main operating rod 48. The coin is retained on the disk or plate 117 until after the main operating rod has moved downward a sufficient distance to insure the entrance of the upper portion of the arm 108 into the vertical slot of the lug 105, and then a pin 118 projecting from the rear face of rod 48 will engage a pin 119 carried by the arm 115 and the latter will be turned on the arm 110 against the resistance offered by the spring 116. This will tilt the plate 117 to such position as to insure the discharge of the coin into the lower portion of the casing or into a suitable money receptacle 120.

To prevent the insertion of a coin when the machine is empty, provision is made for blocking the coin slot and preventing any rotative movement of the tubular casing 96. In the lower rear portion of the casing is arranged a rod 122 on which is pivoted a bell crank lever having two arms 123 and 124. The upper arm 123 is provided with a forwardly bent finger 125 which bears against the stamp strip at a point in alignment with an opening 126 that is formed in the lip 20. The finger is held lightly against the strip by a small spring 128 and so long as the strip remains intact the bell crank lever remains stationary. If, however, the last stamp has passed beyond the opening 126, the finger 125 will pass into said opening and the lower approximately horizontal arm 124 of the lever will then swing downward. At the front end of the arm 124 is a plate 130 that is arranged to enter a recess 132 formed in the tubular casing 96 and extending also across the upper portion of the entrance chute 97. This plate 130 will effectually block the chute so that no coin can be inserted, and at the same time the plate will interlock with the walls of the opening 132 and will prevent rotative movement of the casing 96.

In practice it is found desirable to employ a bank or series of machines arranged side by side for the vending of stamps of different values, and in such cases the main shaft 83 extends continuously through all of the machines and is provided at one end with a single operating lever 84, while a small lever 82 is carried by the shaft at a point within each of the casings.

While the machine has been described as intended for use in connection with the vending of stamps, it is obvious that it may be successfully used for the vending of other articles, such, for instance, as soda checks, car tickets, admission tickets for theatrical and other amusement places, and in various other connections where stamps, tickets, or the like may be printed on a strip or band.

The device is preferably provided with one of the ordinary full stroke mechanisms in order to insure a full stroke of the operating lever at each operation, but this mechanism being of known type has been omitted from the drawings for the sake of clearness.

What is claimed is:—

1. In a stamp vending machine, a casing having a discharge slot and a coin slot, means for feeding predetermined lengths of a stamp strip through the discharge slot, and means for blocking the coin slot having a constant tendency to the active position and held against movement toward the active position by the presence of a single run of the stamp strip directed toward the discharge slot.

2. In a stamp vending machine, a casing having a discharge slot, and a coin slot, means for feeding predetermined lengths of a stamp strip in the direction of the discharge slot, a stamp strip guide having a recess, a pivoted lever having an arm bearing against the stamp strip and arranged to enter the recess when the stamp strip is exhausted, and a coin slot locking member carried by said lever.

3. In a stamp vending machine, a casing having a discharge slot, a revoluble member having an entrance chute for the coin, a recessed guide over which the stamp strip passes, means for feeding predetermined lengths of the stamp strip in the direction of the discharge slot, a lever pivoted within the casing and having an arm bearing against the stamp strip and arranged to enter the recess when the stamp strip is exhausted, and a plate carried by said lever and arranged to engage said revoluble member to prevent rotative movement thereof, said plate serving also to block the coin chute.

4. In a vending machine, an operating rod within the machine, a manually operable lever, a shaft carrying the same, an arm carried by said shaft, a lever mounted on the rod and normally out of the path of movement of said arm, a locking lever engaging the rod carried lever and normally holding the same in inoperative position, and a coin chute having a revoluble section whereby an entered coin may be brought into engagement with the locking lever to move the latter to release position.

5. In a vending machine, an operating rod within the casing of the machine, a manually

operable lever, a shaft carrying the same, an arm on said shaft, a lever pivoted to the rod and having a flanged shoulder, said lever being normally held out of the path of movement of the arm, a locking lever having a tongue engaging the flange, and means whereby a deposited coin is brought into engagement with the locking lever to move the latter to release position.

6. In a vending machine, a casing, an operating rod within the casing, a shaft, a manually operable lever on the shaft, an arm carried by the shaft, a lever carried by the rod and normally held out of the path of movement of the arm, said lever having a projecting shoulder provided with a rounded flange, and a coin operated locking lever having a tongue normally engaging said flange.

7. In a vending machine, a casing, a manually operable member extending through the casing, an operating rod within the casing, a rod locking member responsive to an inserted coin to release the rod, a connecting member between the rod and the manually operable member, and means responsive to the inserted coin for causing the coupling of the manually operable member to the rod prior to the release of the rod.

8. In a vending machine, a casing, a manually operable member extending through the casing, an operating rod within the casing, a rod locking member responsive to the weight of an inserted coin to release the rod, a connecting member between the rod and manually operable member, and means

responsive to the size of the inserted coin for causing the coupling of the manually operable member to the rod prior to the release of the rod.

9. In a vending machine, a casing, a manually operable member extending through the casing, an operating rod within the casing, a rod locking member responsive to the weight of an inserted coin to release the rod, a connecting member between the rod and manually operable member, means responsive to the size of the inserted coin for forcing the coupling of the manually operable member to the rod prior to the release of the rod and means for directing the coin into engagement with the said coin responsive devices.

10. In a vending machine, an operating member, a slotted lug projecting therefrom, a three armed lever, one of the arms of the lever being arranged to move into alinement with the slot, a second arm forming a poise, means for adjusting the resistance of the poise arm, a plate carrying arm pivoted to the third arm of the lever and arranged to receive a deposited coin, and means for automatically turning the plate carrying arm to discharge the deposited coin.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FRANK J. SCHUMANN.

Witnesses:

G. W. M. RIEGEL,
J. M. DETRITHE.