

M. ELZAS.
VENDING MACHINE.

APPLICATION FILED SEPT. 11, 1911 RENEWED JUNE 29, 1912.

1,052,229.

Patented Feb. 4, 1913.

3 SHEETS-SHEET 1.

Fig. 2.

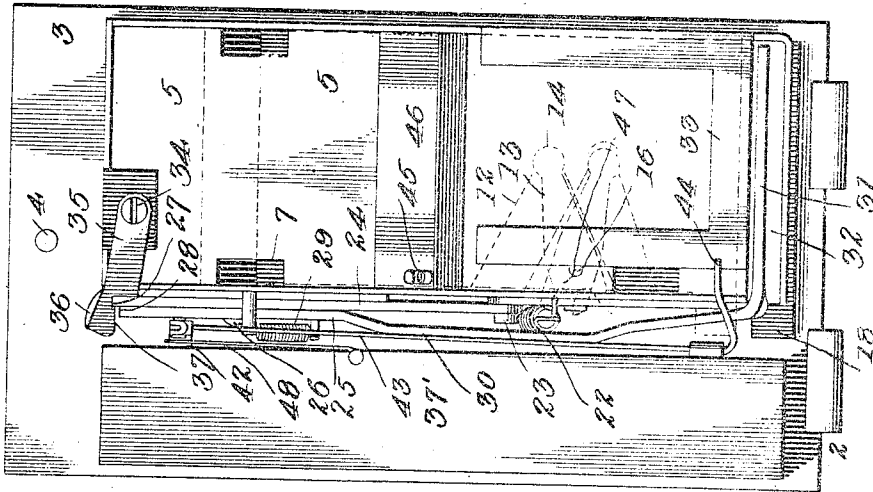
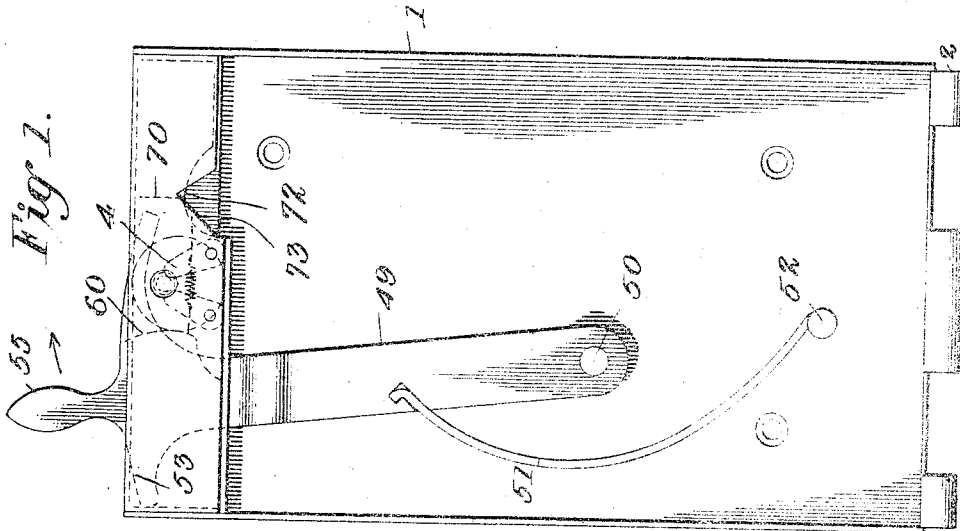


Fig. 1.



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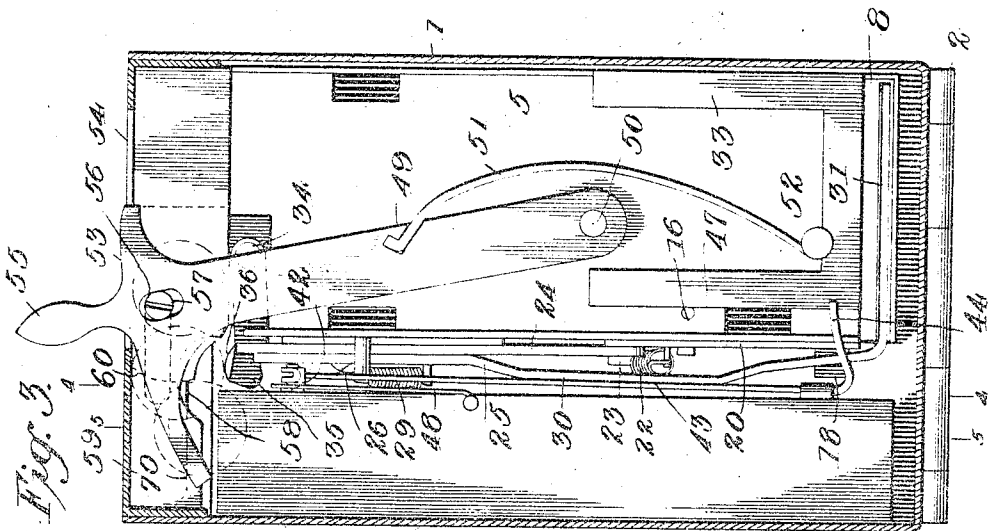
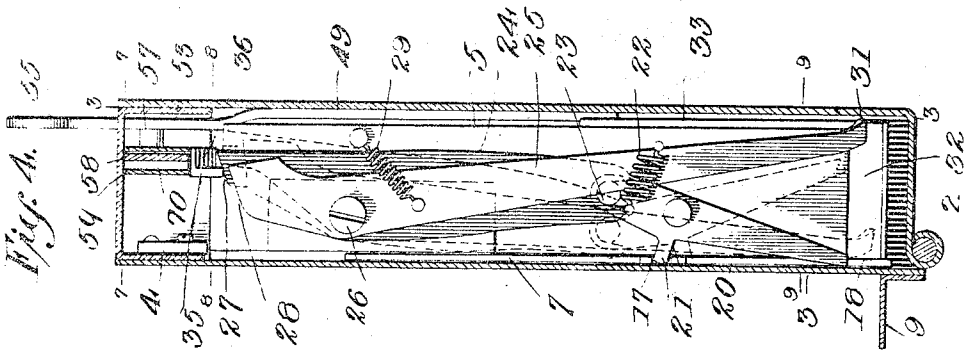
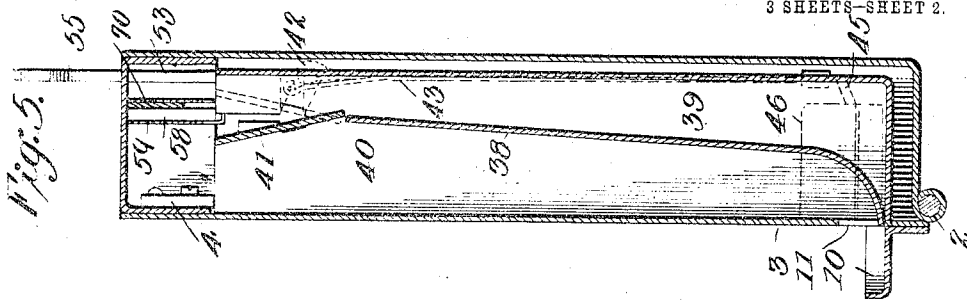
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3 SHEETS-SHEET 2.



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3 SHEETS-SHEET 3.

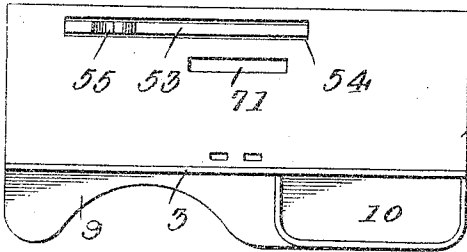


Fig. 6.

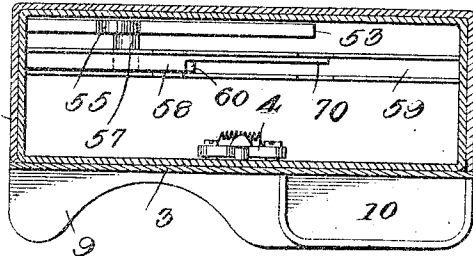


Fig. 7.

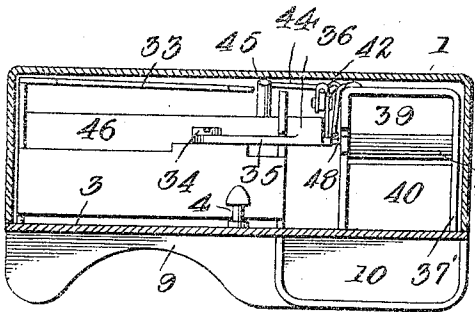


Fig. 8.

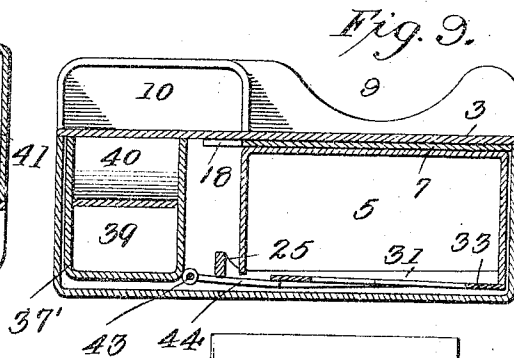


Fig. 9.

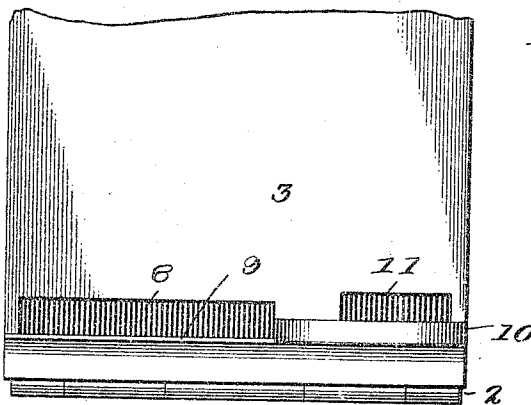
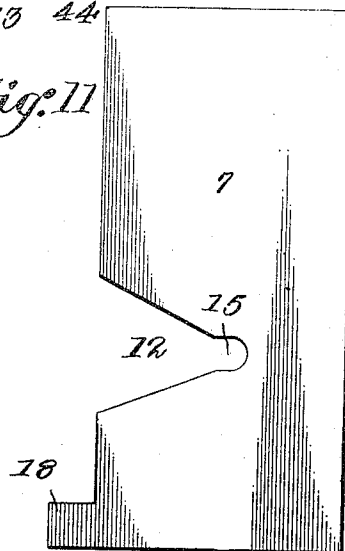


Fig. 10.

Fig. 11.



Inventor

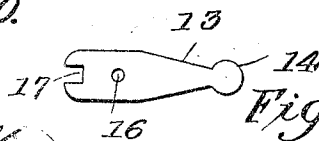


Fig. 12.

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UNITED STATES PATENT OFFICE.

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VENDING-MACHINE.

1,052,229.

Specification of Letters Patent.

Patented Feb. 4, 1913.

Application filed September 11, 1911, Serial No. 648,867. Renewed June 29, 1912. Serial No. 706,827.

To all whom it may concern:

Be it known that I, MARTIN ELZAS, a subject of the King of Great Britain, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification.

The present invention relates to vending machines adapted to sell chewing gum, chocolate or other articles placed in small packages.

An important object of this invention is to provide a vending machine, which is compact and easy to operate.

A further object of this invention is to provide means for returning the coin in case the machine is empty.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same, Figure 1 is a side view of the body portion or casing, Fig. 2 is a similar view of the door, showing the elements carried thereby, Fig. 3 is a vertical sectional view taken on line 3--3 of Fig. 4, Fig. 4 is a transverse vertical sectional view taken on line 4--4 of Fig. 3, Fig. 5 is a similar view taken on line 5--5 of Fig. 3, Fig. 6 is a plan view of the machine, Fig. 7 is a horizontal sectional view taken on line 7--7 of Fig. 4, Fig. 8 is a similar view taken on line 8--8 of Fig. 4, Fig. 9 is a similar view taken on line 9--9 of Fig. 4, Fig. 10 is a fragmentary front elevation of the lower end of the machine, Fig. 11 is a side elevation of a reciprocatory door, and, Fig. 12 is a side view of a lever operating the reciprocatory door.

In the drawings wherein is illustrated a preferred embodiment of the invention, the numeral 1 designates a preferably rectangular casing forming the main or body portion of the machine. At its lower end, as shown at 2, this casing has a door 3 hinged thereto, which is adapted to close the open side of the casing. The door 3 may be held in its closed position by means of a lock 4, of any well known or preferred type.

Rigidly mounted upon the door 3 is a casing or magazine 5, for holding the articles to be vended. The magazine 5 is spaced from the door 3 and a reciprocatory

door 7 is placed therebetween, for controlling the passage of the articles through an opening 8 formed in the lower end of the door 3, as clearly shown in Fig. 10. The articles discharged through the opening 8 are caught by a horizontal tray 9, upon one end of which is formed a coin tray 10, to catch the coins returned through an opening 11. The reciprocatory door 7 is provided intermediate its ends with a cut-out portion 12, within which is disposed a lever 13, carrying at one end a cylindrical head 14 operating in an opening 15. The lever 13 is pivotally mounted upon the door 3, as shown at 16. The lever 13 has its opposite end forked to form an opening 17. At its lower end the door 7 is provided with an extension 18. Pivotally mounted upon one side of the magazine 5, as shown at 19, is an intermediate lever 20, having its lower end normally disposed near and above the extension 18. This intermediate lever is provided intermediate its ends with a tooth 21, to fit within the opening 17 of the lever 13. A retractile coil spring 22 tends to hold the lever 20 in its normal position and returns the same to this position when moved therefrom. At its upper end the lever 20 is provided with a trunnion 23, operating within the lower forked end of an operating lever 24.

Disposed upon the outer side of the operating lever 24, is a main operating lever 25, and these two operating levers are supported by a common pivot 26. The operating lever 24 extends above the main operating lever 25 and is provided at its upper end with a cam face 27. The upper end of the main operating lever 25 is also provided with a cam face 28, disposed below the cam face 27, as shown. The main operating lever 25 has connection with a retractile coil spring 29, which returns the lever to its normal position when moved therefrom. The lever 25 has its intermediate portion 30 offset, so that it does not interfere with the operation of the levers 13 and 24. The main operating lever 25 is provided at its lower end with a transverse horizontal extension 31, passing through an opening 32 formed in the side wall of the magazine 5. The extension 31 is disposed behind the lowermost article. The articles are held from displacement by a guard 33. Pivottally connected with the upper end of the magazine 5, as shown at 34 in Fig. 2,

is a coin operated lever 35, constituting common means to operate the levers 24 and 25. The lever 35 is provided with a horizontal head 36, having its upper wall curved longitudinally, as shown. Lever 35 is provided with a face 37, to engage the cam faces 27 and 28.

A coin receptacle 37 is rigidly mounted upon the door 3 and is disposed upon one side of the main operating lever 25. This coin receptacle is provided internally with a partition wall 38, forming chutes 39 and 40, the chute 40 being adapted to conduct a coin through the opening 11 and the chute 39 serving to hold the coins placed therein until they are removed by the proper person. At the upper end of the partition wall 38 is a pivoted deflector or wing 41 provided with an arm 42 operating through a suitable opening in the receptacle 37. To this arm is pivotally connected a depending rod 43, having its lower end provided with a transverse horizontal extension 44, disposed below and in the path of travel of an extension 45 of a weight 46, which is disposed upon the articles. The extension 45 is adapted to travel in a space 47. The arm 42 is normally held in one position by a spring 48.

The numeral 49 designates a manually operated lever, pivoted at its lower end with the casing 1, as shown at 50. The lever 49 has connection intermediate its ends with a spring 51, the lower end of which is connected with the casing 1, as shown at 52. This spring tends to hold the lever 49 in the position shown in Fig. 1. The lever 49 is provided intermediate its ends with a segment 53, operating in a slot 54, formed through the top wall of the casing 1. The upper end of the lever 49 is in the form of a head 55, which is disposed exteriorly of the casing 1. The segment 53 is provided with an upstanding opening 56, for receiving a screw 57, or the like, attached to a head 58, which is disposed to reciprocate within a horizontal track 59, having an opening formed in its side wall for receiving the screw 57. The head 58 has its inner end provided with a curved face 60 and a thin plate or extension 70, cooperating with the side wall of the track 59 to form a pocket for receiving a coin inserted through the coin opening 71. The track 59 has its bottom wall cut away to form an opening 72, which is in alinement with an opening 73 formed upon a portion of the casing 1. When the door 3 is closed the head 36 of the lever 35 is brought within the opening 72, so that it will be engaged by a coin carried by the head 58. The deflector 41 is normally disposed to one side of the lever 35, so that the coin after operating the lever 35, will fall within the coin collecting chute 39.

The operation of the machine is as follows: The operator inserts a coin in the opening 71 and the same passes into engagement with the extension 70. When the head 55 is swung in direction of the arrow, the head 58 will move the coin so that it is brought in engagement with the head 36 of the lever 35, whereby the lever 35 is swung downwardly. The coin falls out of the track 59 and owing to the normal position of the deflector 41 is conducted into the retaining chute 39. When the lever 35 is moved downwardly its face 57 engages cam face 27 of the operative lever 25, so that lower end of said operating lever is swung forwardly, causing a similar movement of the upper end of the intermediate lever 20. The lower end of the intermediate lever is now moved from proximity to the extension 18 and the tooth or lug 21 is swung downwardly, causing the lever 13 to swing and elevate the door 7, whereby the opening 8 is uncovered. Subsequently to the movement of the operating lever 25, the face 37 of the lever 35 is brought into engagement with the cam face 28 of the main operating lever 25, whereby the lower end of the main operating lever is swung forwardly and the horizontal extension 31 will push the lowermost article through the opening 8. As soon as the coin disengages the head 36, the springs 22 and 29 return the different elements to their normal positions. As the articles are discharged from the machine the weight 46 travels downwardly, and as soon as the last article has been discharged the extension 45 of the weight will engage extension 44 of the rod 43, whereby this rod is moved downwardly and the deflector swung to occupy the position shown in dotted lines in Fig. 5. The coin will now be discharged into the return chute 40 and returned to the operator.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that certain changes in the size, shape and arrangement of parts may be made without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:—

1. A vending machine of the character described, comprising a reciprocatory door provided with an extension, a pivoted lever disposed near the door so that a portion thereof is normally disposed in the path of travel of said extension, whereby the door cannot be improperly operated, means connecting said lever and door whereby the latter may be moved by the former, and means to move said lever.

2. A vending machine of the character described, comprising a plurality of levers

having a common pivot point and corresponding ends extending one beyond the other and provided with cam faces, and a pivoted lever to engage said cam faces to move said levers.

3. A vending machine of the character described, comprising a plurality of pivoted levers having corresponding ends provided with cam faces, a movable element disposed near said cam faces to engage the same to move said levers, and means to move said element.

4. A machine of the character described, comprising a movable door to control the discharge of the articles from the machine, a movable lever disposed near the door and having a portion thereof normally disposed in the path of travel of a portion of the door to prevent improper movement of the door, connecting means between the mov-

able door and lever whereby the latter may operate the former, and means to move said lever.

5. A machine of the character described, comprising a movable door to control a discharge of the articles, means to move said door including a movable lever, discharging mechanism including a movable lever disposed near the first named lever, said first named lever having a portion thereof extending beyond the corresponding portion of the second named lever, and a common actuating element to engage such portions of said levers.

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

MARTIN ELZAS.

Witnesses:

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JOSEPH ROSENZWEIG.