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A. B. JONES.
VENDING MACHINE.
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Patented Feb. 1, 1910.

2 SHEETS—SHEET 1.

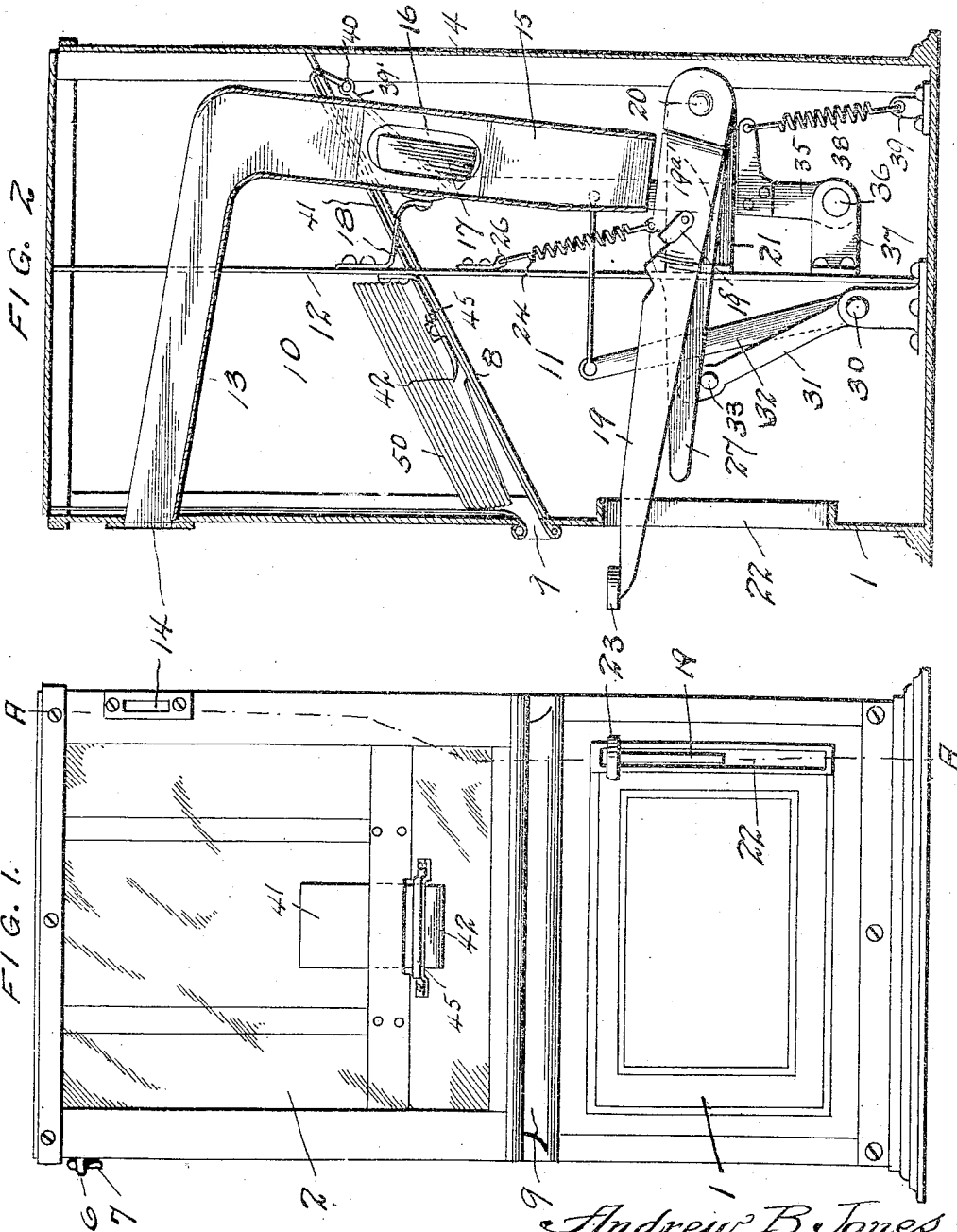


FIG. 1.

FIG. 2.

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2 SHEETS--SHEET 2.



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UNITED STATES PATENT OFFICE.

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VENDING-MACHINE.

948,226.

Specification of Letters Patent.

Patented Feb. 1, 1910.

Application filed December 1, 1908. Serial No. 465,513.

To all whom it may concern:

Be it known that I, ANDREW B. JONES, a citizen of the United States, residing at Lexington, in the county of Fayette and State of Kentucky, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification.

My invention relates to improvements in vending machines and among its objects is the provision of a machine for vending envelops, or articles of like character, operated in conjunction with a coin, whereby the delivery of the article is effected. Also to improve certain features of construction in this class of machines and to provide simple and effective devices for delivering the envelop with absolute certainty, from a stack or pile, without marring or soiling.

The invention consists essentially in a machine of this character wherein a coin is utilized to render an actuating lever operative in combination with the envelop delivery mechanism, and also means for returning the parts of the mechanism to normal positions.

The invention further consists in novel features of construction and combinations and arrangements of parts as hereinafter set forth and claimed.

In the accompanying drawings I have illustrated one example of the physical embodiment of my invention constructed according to the best mode I have so far devised for the practical application of the principles.

Referring to the drawings in which like reference characters indicate similar parts: Figure 1 is a front view of the machine, the envelops being omitted. Fig. 2 is a sectional view on line A—A of Fig. 1, illustrating a stack or pile of envelops supported in the casing. Fig. 2^a is a diagrammatic detail view. Fig. 3 is a rear view of the machine, the back of casing being removed for convenience of illustration. Fig. 4 is a view of the operating mechanism, the parts shown in the position they assume after delivering an envelop, but not yet returned to their normal positions, with the actuating lever yet depressed.

The casing which incloses the mechanism and in which the envelops are supported, is preferably rectangular in shape, and is

composed of metallic front portion 1 and glass portion 2; side and rear walls 3 and 4, and preferably a removable wall or door 5 which provides access to the interior of the casing for replenishing the stock of envelops. This door may be locked by means of a staple 6 and fastening device 7. The casing is divided longitudinally by the partition 8, which is preferably inclined, for a purpose to be disclosed later, and at the front of the casing terminates at a longitudinal slot 9 formed in the front wall of the casing. This partition divides the casing into upper and lower compartments 10 and 11 in which the envelops and operating mechanism are respectively located. A second partition 12 extends vertically of the casing and forms a supporting wall upon which some parts of the mechanism are secured.

The usual coin slot 13 is provided, starting at the opening 14 in the front of the casing and extending rearwardly with an incline toward the back of the casing, and the drop portion 15 terminates just above a pocket or coin receptacle, to be described. The leg 15 of the coin slot is cut away at 16, and into this cut away portion or opening, the bell 17 projects a sufficient distance to be in the path of a falling coin as it passes through the leg 15 of the coin slot. Thus as the coin falls and strikes the bell, a signal is given. The bell is supported by means of the hanger 18 secured to the vertical partition of the casing.

The actuating lever 19 is pivotally supported at 20 on the bracket 21, the bracket being secured to the vertical partition 12, and this lever extends through the vertical slot 22 in the front of the casing. The lever is depressible, as by means of pressure on the button or handle 23, against the tension of spring 24 which is secured to the eyelet 25 on the lever and bracket 26 on the partition.

The operating lever 27 is free to move on the pivot 20 and is located close to the lever 19. Both these levers are free to turn on the pivot and are free of each other except when connected by a coin. To this end a pocket or recess is formed by the offset walls 19^a of lever 19, just below the termination of the coin slot, and a projecting lug 19^b extends across the upper portion of this recess, the lug preferably being integral with the

plate 19^a secured to the lever 19. The operating lever 27 is provided with a rib or flange 28, curved as shown, and projecting into the recess of the lever 19, and the lower end of this rib is spaced far enough from the lug 19^b to receive a five-cent piece therebetween. Thus a nickel falling through the coin slot is guided by the curved rib in its movement until it is wedged between these portions of the actuating and operating levers, and during the presence of this coin the two levers are connected to move together.

Supported upon the shaft 30 are two rocker arms 31 and 32. Arm 31 is provided with a lug or bearing portion 33 which is normally in contact with the under edge of the operating lever 27, and is slidable thereon. The rocker arm 32 is connected by rod 34 to the pivoted lever arm 35 which is adapted to rock on its bearing 36 supported by bracket 37. A spring 38 connected at 39 tends to hold the lever arm 35 in a rearward location. This rocker arm in its movement is adapted to move the envelop delivery means, and to this end is connected by link 39' to the envelop ejector at the pivot point 40. The ejector 41 is a flat plate having a turned up end 42 and a bent rear portion 43 for the pivotal connection 40.

The ejector is adapted to reciprocate forward and backward, sliding up and down the incline of the partition 8, a slot 44 being cut in the partition to accommodate the travel of the bent end 43. The ejector is guided in its movement by passing under the cleat 45.

The operation of the device is as follows: A coin is pushed through the slot in the front of the machine and passes rearwardly through the slot and drops down through the vertical leg thereof, striking and ringing the bell in its descent. The coin falls into the recess between the actuating and operating levers and is held therein as above described. The actuating lever is now depressed on its pivot, carrying with it the operating lever, against the tension of spring 24. The operating lever bears down on lug 33, rocking the two arms 31 and 32 with the shaft 30. The rocking of arm 32 pulls on rod 34, thus drawing the lever arm 35 forward on its pivot, and through the medium of the link 39' the ejector is carried forward. As the ejector moves forward, the curved up front end 42, engages under the flap of the lowermost envelop 50, as clearly shown in Fig. 2, and the continued forward movement of the ejector forces the envelop through the front longitudinal slot 9. The envelop having been delivered, the purchaser will naturally release the lever 19, which lever will through the medium of the heavy spring 24 be immediately and forcibly returned to normal position, removing the pressure from

the coin. At the same time the arm 35 will be drawn back into position by the spring 38 secured thereto, said spring 38 being lighter, that is, of less tensile strength than the spring 24. The return movement of the arm 35 forces back the ejector secured thereto, while at the same time it rocks the shaft and forces the arm 31 and thus the lever 28 upward into their normal position. It will be readily understood that since the spring 38 is attached to a projection on the arm 35 near its pivot point a slight resistance applied to the upper end of the lever will greatly retard the movement thereof, and as the spring has to operate a number of parts to return them to normal position, said lever and other parts will offer considerable resistance and will consequently be returned to position at a much slower rate than is the lever 19, and as the pressure of the goods will bear down upon the ejector and cause it to bind against the plate on which it is mounted, there will be a noticeable retardance of the return of the lever 27 to normal position. Since the coin is barely supported at all times by the lower end of the steeply sloping abutment 28, the moment the retaining pressure of the lug 19^b is removed said coin will drop to the bottom of the machine, and it will be understood that a very slight difference in the rate of movement of the two levers will produce this result, although in practice I make them move at greatly different rates of speed, as will be understood from the foregoing.

From the above description taken in connection with the drawings it is evident that I have produced a mechanism which will fulfil the purposes set forth as the object of my invention.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

In a vending machine, the combination with the frame, of an inclined partition secured therein and dividing the frame into two superposed compartments, said frame having a slot formed therein just above the lower end of the partition, an ejector mounted on the partition and adapted to work through said slot, said ejector having a curved rear end adapted to project downward through and move in a slot formed in the partition, a rock lever pivotally secured to the frame, a link operatively connecting the lever to the end of the ejector, a rock shaft journaled in the base of the machine, said shaft being provided with a pair of arms, a link connecting one of the arms with the rock lever, an abutment carried by the other arm, an actuating lever and an operating lever mounted on a common pivot near the rear of the machine, said operating lever being so positioned as to contact with the abutment on the rock arm for moving

the latter, and the actuating lever being provided with an upper and the operating lever with a lower abutment, said abutments together forming a pocket to receive a coin to
5 lock the levers together, a heavy spring for instantly returning the actuating lever to position and remove the pressure from the coin to permit it to drop out of the pocket,

and a lighter spring for more gradually returning all the other parts to position. 10

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

ANDREW BOURNE JONES.

Witnesses:

O. B. AMBROSE,

GEO. B. ROSE.