

1,342,858.

3 SHEETS—SHEET 1.



Geo. P. Kimmel.

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W. H. MILES.
NEWSPAPER VENDING MACHINE.
APPLICATION FILED FEB. 1, 1918.

Patented June 8, 1920.
3 SHEETS—SHEET 2.

Fig. 3.

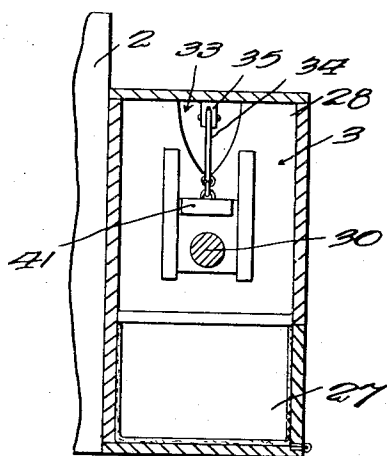
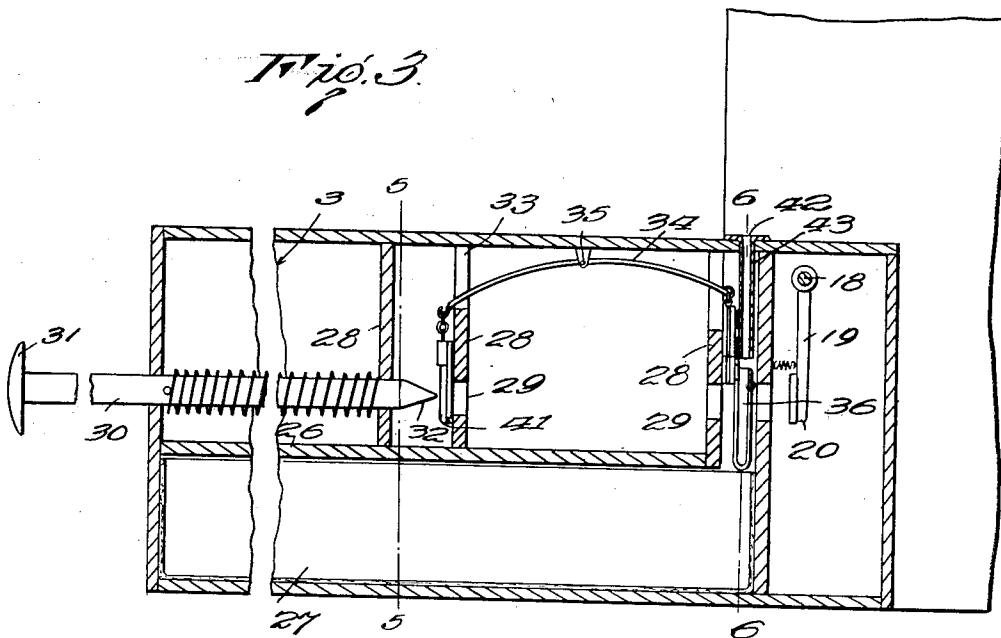


Fig. 5.

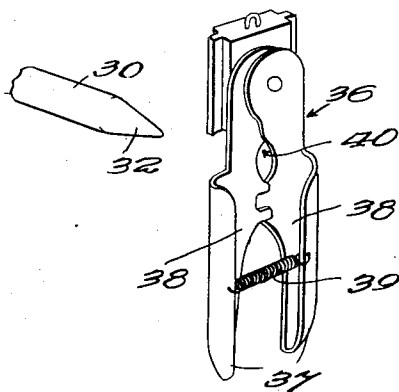


Fig. 7.

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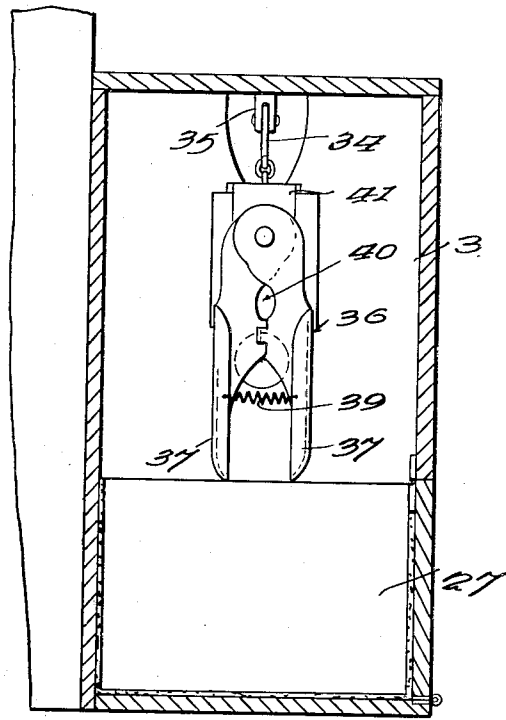


Fig. 6.

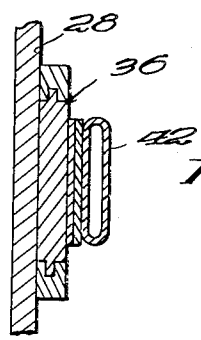


Fig. 8.

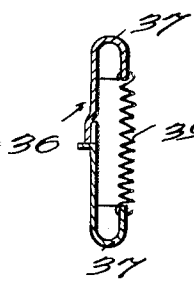


Fig. 9.

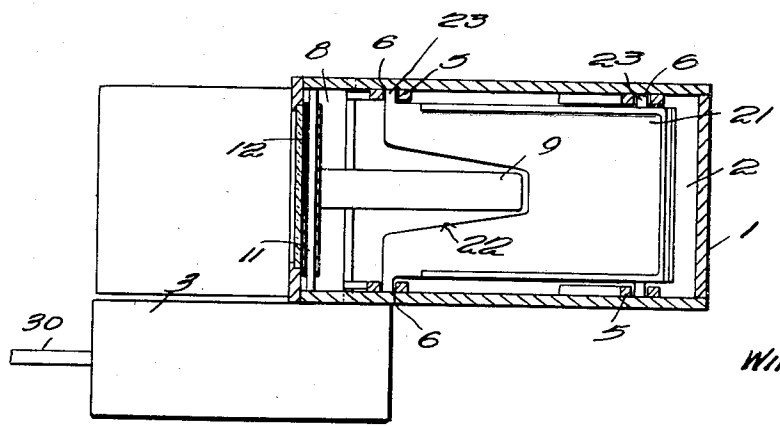


Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM HOLLIDAY MILES, OF CLEVELAND, OHIO.

NEWSPAPER-VENDING MACHINE.

1,342,858.

Specification of Letters Patent.

Patented June 8, 1920.

Application filed February 1, 1918. Serial No. 214,865.

To all whom it may concern:

Be it known that I, WILLIAM H. MILES, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Newspaper-Vending Machines, of which the following is a specification.

This invention has reference to vending apparatus and the invention relates more particularly to an improved newspaper vending machine.

The invention has for its dominant object to provide a machine for vending newspapers and other publications or the like, the contents of the machine being discharged therefrom upon the insertion of a coin which will act upon the control apparatus in a manner to permit the discharge or dropping of a newspaper into the discharge chute of the machine, whereupon it will be reset for a second or further operation.

As an object of equal importance the invention aims to provide a novel coin control means, whereby the machine can be operated to cause the discharge of a newspaper therefrom, said means being actuated by the weight of the coin dropped into the machine and serving to permit depression of the operating plunger.

Yet another object of the invention is to provide novel means for effecting the release of the coin from the control means subsequent to the unlocking of the plunger and operation thereof.

Other independent objects are to provide features of construction of portions of the machine which tend toward the attainment of the aims irrespective of the relation in which they are used.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth, and scope of the application of which will be indicated in the following claims.

In the accompanying drawings, wherein is shown one of various possible embodiments of my invention:

Figure 1 is a perspective of the improved vending machine,

Fig. 2 is a vertical section through the article compartment thereof,

Fig. 3 is a vertical fragmental section through the coin control compartment,

Fig. 4 is a horizontal section through the machine,

Fig. 5 is a vertical section taken on the line 5—5 of the Fig. 3,

Fig. 6 is an enlarged sectional view taken on the line 6—6 of the Fig. 3,

Fig. 7 is a detail in perspective of the coin receiving means,

Fig. 8 is a transverse section through the coin receiving means showing the mounting of the same,

Fig. 9 is a transverse section through the pivotal arms of the coin receiving means, and

Fig. 10 is a fragmentary detail in perspective of the shelf releasing catches and the trip means therefor.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Having more particular reference to the drawings, 1 represents the casing of the improved vending machine in its entirety the same being divided into two compartments, namely, an article containing compartment 2 and a coin control mechanism containing compartment 3.

The article containing compartment 2 has a sub-compartment 4 arranged therebeneath, the forward end of which is open in order that the paper supporting shelves, hereinafter described, may be readily removed as they fall from said compartment 2 into the sub-compartment. Secured to and arranged in spaced relation with respect to the opposite side walls of the compartment 2 are guide walls 5, said walls being provided with pairs of vertically disposed slots or ways 6 which ways, as will be noted, are offset as at 7, for a purpose which will be subsequently described. Communicating with the forward portion of the article containing compartment 2 and arranged between the forward ways 6 is an article discharge chute 8 having a finger 9 extending diagonally upwardly into said compartment and for a distance beyond said forward ways 6. In this connection, it is to be noted that the compartment 2 is bottomless and as a consequence, communicates with the sub-compartment 4.

The forward wall of the article containing compartment 2 is provided with an opening normally covered by a transparent pane 10 whereby the contents of said com-

partment may be readily viewed. Supported on rollers 11 journaled in bearings secured to the inner sides of said forward wall at points adjacent the upper and lower ends of the pane 10 is an endless web 12 having advertising matter arranged on one side thereof while the words "Sold out" or "Empty" are arranged upon the opposite side thereof. This web 12 is provided with a tongue or tab 13 having connection with a cord 14, which cord in turn has a weight 15 secured to the lower end thereof. The weight 15 is received upon the pile of newspapers or other publications arranged in the article containing compartment and of course moves therewith as the contents are exhausted. Hence, a downward pull will be imparted to the tab 13 and when the last publication has been discharged from the article containing compartment, the weight will have caused the side of the web bearing the words "Sold out" or "Empty" into a position adjacent the pane 10 whereat they may be readily viewed by other persons. Of course, when the compartment 2 is refilled the web is moved to its normal position whereupon the advertising matter is displayed through the pane 10.

Catches or trips 16 are pivotally mounted on the side walls of the article containing compartment and are adapted to move between slotted portions 17 formed in the guide walls 5, whereby the same may be arranged across the forward ways 6 formed therein and thereby afford effectual supporting means for the forward end of the newspaper supporting shelves, which will be presently described. These trips 16 are operated by connection with a shaft 18 extending transversely through the casing 1 and having its extremities journaled in suitable bearings formed therein. That portion of the shaft which is arranged in the compartment 3 is provided with a depending arm 19, the lower portion of which is enlarged as at 20 for an obvious purpose.

As means for supporting the newspapers in the compartment 2 I provide a plurality of shelves generally indicated by the numeral 21, the base portions of which are recessed as at 22, while laterally disposed fingers 23 extend therefrom at points adjacent the various corners of the same. Receptacles 24 are carried on the upper faces of each of the shelves and a spring finger 25 is secured to the rear wall of one thereof and extends into the same, said finger serving as means for receiving the weight 15 therein. As will be understood, the laterally extending fingers 23 are received in the ways 6 formed in the guide walls 5 and as a consequence, the various shelves 21 are arranged in nested relation. Thus, as the lower one is emptied of its contents and dropped into the sub-compartment 4 the

next shelf will be moved into position to permit the discharge of its contents into the chute 8 and the dropping thereof subsequent to such discharge into the sub-compartment 4. Due to the provision of the recessed portion 22, the finger 9 will be permitted to engage and remove the newspaper from the shelf when the same is released before its drop into the sub-compartment and as a consequence, said newspaper will be delivered into the chute 8. The compartment 3 is provided with a horizontally disposed partition 26, while the forward portion thereof is open to permit the introduction of a money drawer 27 therein; the partition 26, obviously, affording a compartment for said drawer. Supported in the compartment 3 are a plurality of vertically disposed pieces 28, the same being formed with alined openings 29 through which a slidable plunger 30 is passed, said plunger, obviously, passing through a suitable opening formed in the side wall of the compartment 3 into engagement with the openings 29. A knob 31 may be and preferably is formed upon the forward portion of the plunger 30 while the rear portion of the same is tapered as at 32, for a purpose which will be subsequently described. As will be noted, one of the pieces 28 is recessed as at 33 and receives one end of an arm 34 therethrough, said arm being pivoted intermediate its ends to the top of the compartment 3 as at 35 and having its opposite end passing through a recessed portion formed in the adjacent piece 28 and connected to a coin receiving element designated by the numeral 36. Said coin receiving element comprises a pair of pivotally connected members 37 having the outer marginal portions thereof flanged to provide guide ways 38 for a coin, the lower ends of said guide ways being closed. A contractile spring 39 has its opposite ends engaged with the arms and serves as means for normally drawing the same together, thus, preventing the dropping of a coin held therebetween. The inner portions of the arm 37 are recessed as at 40 to provide a substantially annular opening when alined and are adapted to receive the tapered end 32 of the plunger 30 therethrough, whereby said arm 37 will be forced apart and as a consequence, the coin held therebetween permitted to drop from the same. The forward end of the arm 34 is pivotally connected to a shutter 41, which shutter is adapted to be arranged over the openings 29 formed in the intermediate piece 28, thus, preventing the passage of the plunger 30 therethrough until the same is moved upwardly due to the engagement of a coin or other weighted article with the receiving element 36.

To permit the introduction of a coin into the compartment 3 and its engagement with the receiving element 36, a slot 42 is ar-

ranged in the top of said compartment and alined with a chute 43, the lower end of which is arranged adjacent the upper ends of the arms 37 of said receiving element 36.

5 In operation and assuming that the compartment 2 is filled, a coin is dropped into the slot 42 and upon engaging the receiving element 36 will weight the same sufficiently to cause the raising of the shutter 41 carried
10 upon the opposite end thereof. With the shutter raised, the plunger 30 may be depressed and caused to engage with the enlarged portion 20 of the arm 19. As the arm 19 is rocked, the trips 16 connected
15 thereto will be moved away from the ways 6 formed in the guide walls 5 and as a consequence, the forward end of the adjacent newspaper supporting shelf 21 will be permitted to drop downwardly into the off-set
20 portion 7 of the forward ways. During such movement of the shelf, the finger 9 will engage and remove the newspaper therefrom and as a consequence, the forward end of the shelf will be permitted to drop free
25 of the ways 6 whereupon the rear end thereof will be carried slightly forwardly due to the off-setting of the rear ways 6, whereupon it will be dropped into the sub-compartment 4. Due to the removal of a shelf
30 21 from the compartment, the weight 15 connected to the cord 14 will be lowered and as a consequence, the web 12 engaged by the remaining end of said cord will be moved a step. During the depression of the plunger
35 30 and the operation of the trips 16, the pivotally connected arms 37 will be forced apart due to the passage of said plunger through the alined recesses formed therein. Thus, the coin held between the arms 36 will
40 be dropped into the money drawer 27 and with the element 36 thus relieved of the weight of the coin, the same will return to its normal position immediately upon disengagement of the plunger 30 therefrom.
45 Hence, the shutter 41 will be again moved over the opening in the adjacent piece 28 and thereby prevent further operation of the plunger until another coin is dropped into the machine. As the various shelves 21
50 are relieved of their papers, the same of course drop into the compartment 4 as hereinbefore stated. When the entire contents of the machine have been exhausted, the same is indicated by the matter on the web
55 12. Refilling of the machine may be effected by swinging the forward and top walls of the compartment upwardly, it of course being understood that said walls are pivotally connected to each other and that
60 the top wall is pivotally connected to the compartment 2 as at 44. Any suitable form of locking means may be employed for securing the walls in position over the compartment 2.

I desire to have it understood that the improved vending machine may be used for vending papers varying in cost by duplicating the mechanism of the article and coin control compartments and by varying the weight of the shutter 41 to cause counterbalancing of the same when the proper coins
70 are inserted into the machine, thus, permitting detention of the plunger 30 and the discharge of a paper from the machine.

Manifestly, the construction shown is capable of considerable modification and such modification as is within the scope of my claims, I consider within the spirit of my invention.

I claim:

1. In a vending machine, a casing, article and coin control compartments in said casing, a discharge chute for the article compartment, means for releasably supporting articles in said article compartment, a plunger slidably mounted in the coin control compartment engageable with said releasing means, a plurality of apertured pieces arranged in the coin control compartment, a lever pivotally mounted in said coin control
80 compartment, a shutter pivotally connected to one end of said lever and arranged over the opening in one of said pieces, and coin receiving means carried by the remaining end of said lever for moving said shutter
85 upwardly to expose the opening in the adjacent piece upon the insertion of a coin, said receiving means being engaged by the plunger subsequent to the receiving of a coin for releasing the same and permitting its return to normal position.

2. In a vending machine, a casing, article and coin controlled compartments in said casing, a discharge chute for the article compartment, means releasably supporting articles in said article compartment, a longitudinally movable plunger having a pointed terminal engageable with the article supporting means to actuate the latter, a vertically movable shutter normally obstructing
105 movement of the plunger, a lever connected with the shutter, pivotally connected coin receiving members connected with the opposite terminal of the lever having the adjacent portions recessed for the reception of the terminal of the plunger whereby the coin receiving members are separated to release the coin engaged therewith, said coin receiving members being operable, upon reception of a coin, to counterbalance and elevate the shutter to permit operation of the plunger, and means normally retaining the coin receiving members in coin receiving position.

In testimony whereof I affix my signature hereto.

WILLIAM HOLLIDAY MILES.