July 9, 1929. D. CAMERON 1,720,588

VENDING MACHINE

Filed April 11, 1928 3 Sheets-Sheet 1

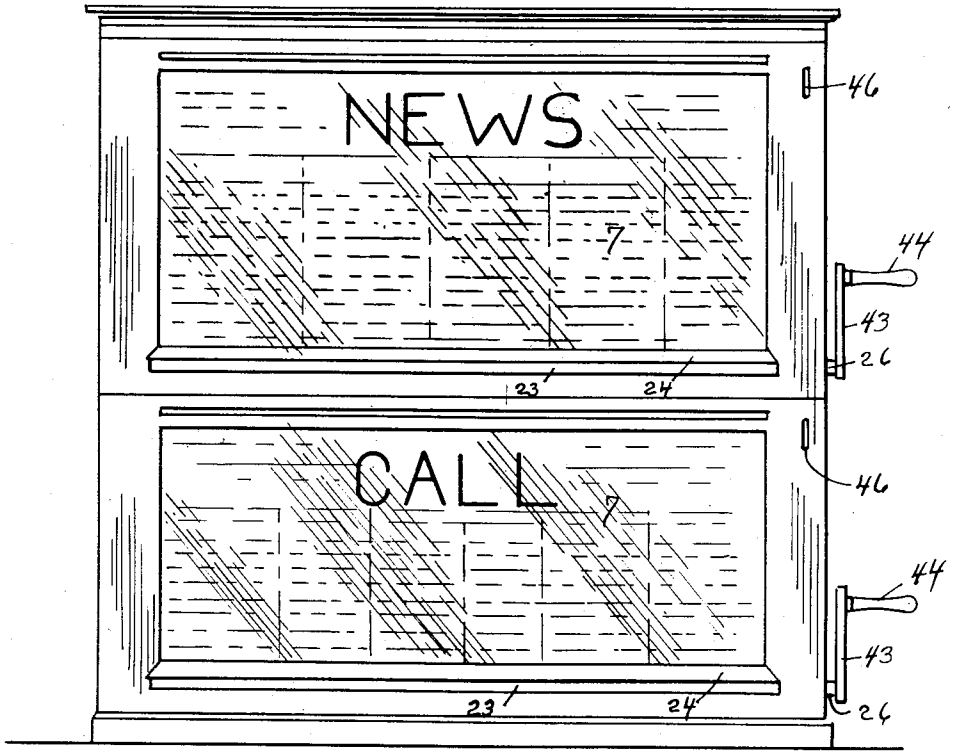


Fig. I.

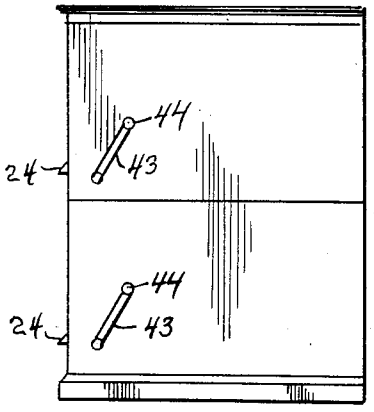


Fig. II.

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VENDING MACHINE

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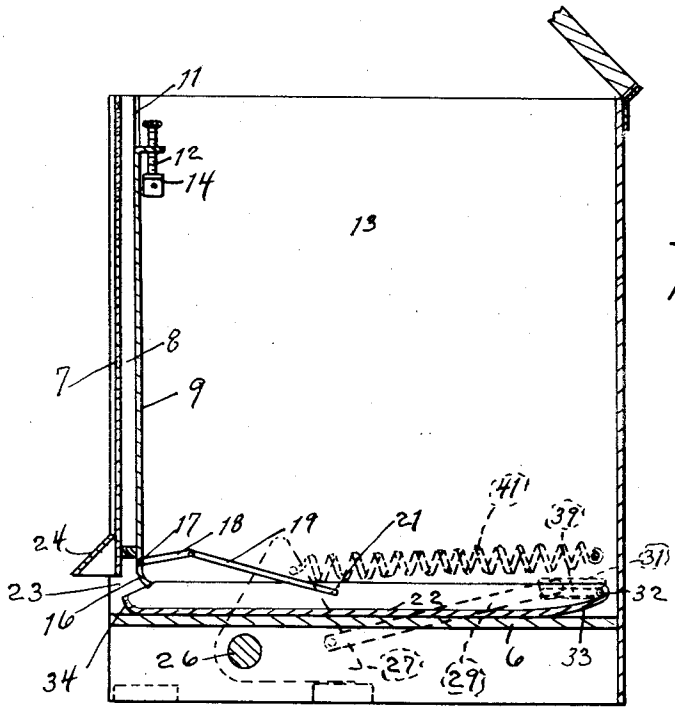


Fig. III.

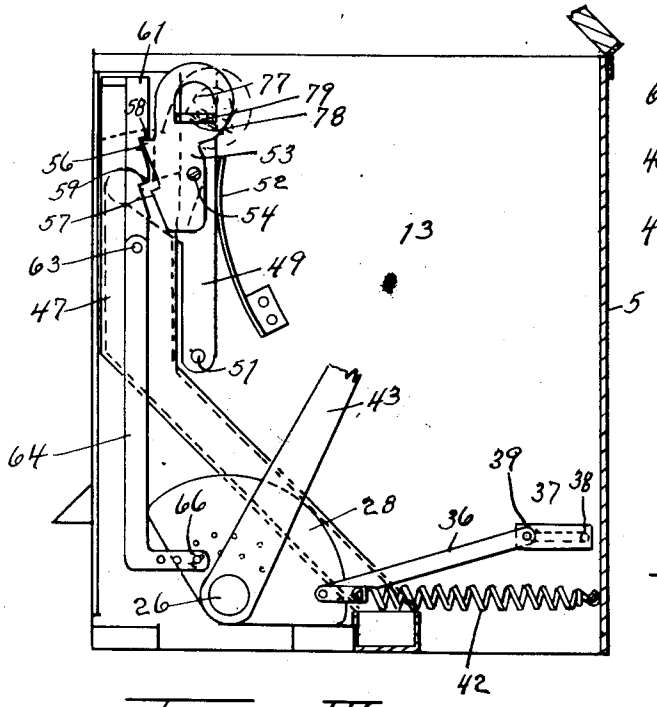


Fig. IV.

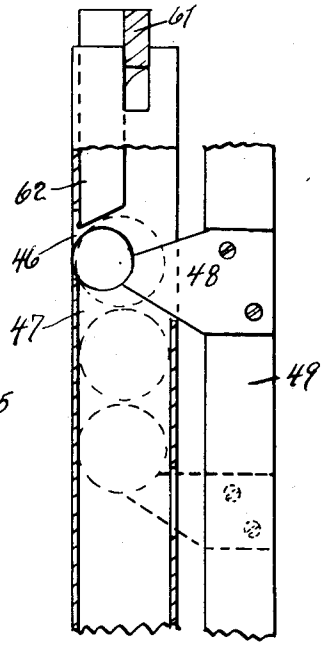


Fig. V.

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VENDING MACHINE

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Fig. VI.

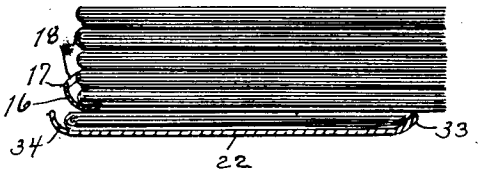


Fig. VII.

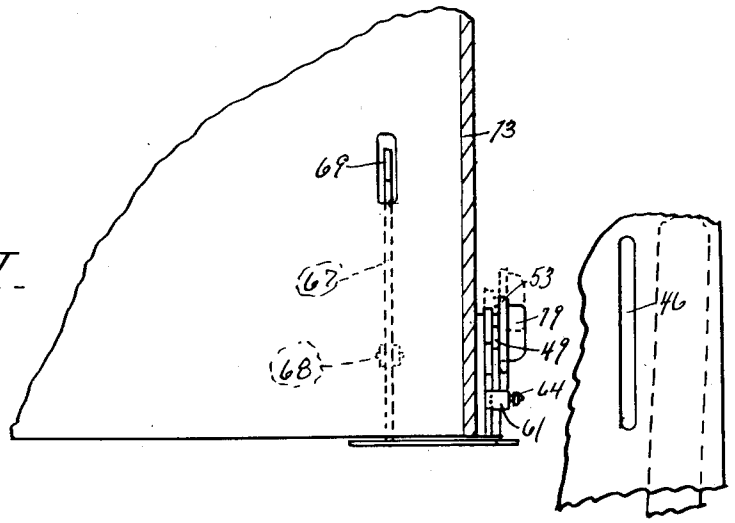
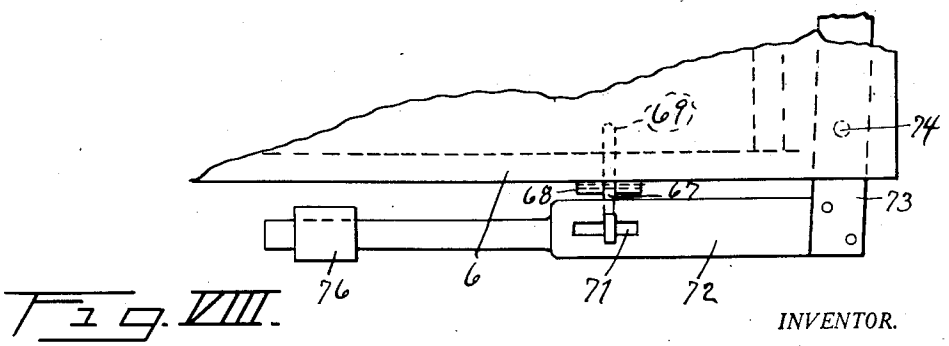


Fig. VIII.



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Patented July 9, 1929. 1,720,588

UNITED STATES PATENT OFFICE.

DANIEL CAMERON, OF SAN FRANCISCO, CALIFORNIA.

VENDING MACHINE.

Application filed April 11, 1928. Serial No. 269,184.

This invention relates to improvements in vending machines and has particular reference to a machine for vending newspapers, magazines and the like periodicals.

The principal object of the invention is to provide means whereby a single newspaper or magazine may be delivered to a customer who places a coin in the coin controlled mechanism of the device.

Another object is to produce a device which is positive in its operation.

Another object is to produce a device which is simple in construction and therefore one wherein the article being dispensed will not become jammed.

A further object is to provide means whereby pilfering of the dispensing device will be impossible.

A still further object is to provide means whereby various coin arrangements may be effected so that periodicals of different values may be dispensed.

Other objects and advantages 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 front elevation of two of my devices placed one above the other,

Figure 2 is an end elevation of Figure 1 on a reduced scale,

Figure 3 is an enlarged detail cross section of my device,

Figure 4 is an end elevation partly broken away in order to disclose the coin mechanism,

Figure 5 is an enlarged fragmentary detail view of the coin mechanism,

Figure 6 is an enlarged fragmentary detail view showing the manner of dispensing,

Figure 7 is a fragmentary detail view showing the means for closing the coin controlled slot, and

Figure 8 is an enlarged fragmentary detail view showing the slot closing means in front elevation.

In employing my device it is proposed to superimpose a number of the devices in vertical alignment and to insert in each separate device newspapers or the like periodicals, each device holding a particular newspaper.

The device consists essentially of a rectangular box-shaped structure, the back of which is indicated by the numeral 5 and the bottom by the numeral 6. A glass plate 7 forms the front of the box like structure behind which is a space 8 in which a newspaper may be displayed. A sliding plate 9 is supported in grooves 11 carried in the end walls 13 of the box-like structure. This plate 9 is adjustably supported by adjusting screws 12 one of which is located at each end of the plate and are adapted to contact brackets 14 mounted upon the ends of the walls 13. This plate 12 has a hinged member 16 pivoted as at 17 to the lower edge thereof.

An arm 18 is rigidly secured to the member 16 and is in turn pivoted to a link 19 which is pivoted as at 21 to the dispensing slide 22, which rests upon the bottom 6. This slide 22 is adapted to be projected through an opening 23 formed below the glass plate 7 and protected by a rain shield 24.

In order to actuate the dispensing plate 22 I provide a shaft 26 which projects from end to end of the device at a point below the bottom 6. This shaft carries plates 27 and 28 at its respective ends. These plates are immovably secured to the shaft 26. The plate 27 is connected by a link 29 to a plate 31 which plate is in turn connected by a pin 32 to the dispensing plate 22.

It is noted from Figure 3 and Figure 6 that the rear edge of this dispensing plate is curved upwardly as shown at 33 and the forward end is curved upwardly as shown at 34, the purpose of which will be later seen. The plate 28 has pivotly connected thereto a link 36 which is in turn connected to a plate 37 which plate carries a pin 38 connected to the dispensing plate 22 but at the opposite side from the pin 32. These pins 32 and 38 each slide in slots 39 formed in the end walls 13. In order to retract the dispensing plate 22 I provide springs 41 and 42 which have one end connected to the end walls 13 and have their opposite ends connected to the plates 27 and 28 respectively. An operating lever is shown at 43 which operating lever carries a handle 44.

The operation of the structure thus far described is as follows:—

A pile of articles to be dispensed such as newspapers is placed within the box-like container so as to lie upon the dispensing plate 22 as illustrated in Figure 6. Assuming that the coin controlled mechanism has been operated so as to release the dispensing mechanism, then by pulling forwardly upon the

handle 44 motion will be transmitted to the shaft 26 and the plates 27 and 28. This will transmit motion through the links 29 and 36 to the dispensing plate 22 which will cause the plate to move forwardly. As soon as this plate commences to move, the links 19 and the lever 17 will act to cause the curved member 16 to lift upwardly as illustrated in Figure 6. This upward movement will support the front edge of the pile of papers permitting only the lowermost paper to pass therebeneath.

In order to accommodate for the various thicknesses of various papers, the plate 9 may be raised or lowered by means of the screws 12 thereby controlling the lowermost point of the swing of the curved member 16. By curving the rear portion of the dispensing plate upwardly as at 33, I cause the rear end to compress the issue being dispensed thereby giving the issue greater rigidity and thus forcing the same to slide evenly beneath the pile of superimposed papers without the customary buckling effect which would otherwise occur.

As soon as the paper has been moved through the opening 23 it is grasped by the purchaser and pulled from the device. The springs 41 and 42 now function to return the parts to their normal position. In order to accomplish the operation just described, it is first necessary to unlock the controlling mechanism through the depositing of a coin in the coin opening 46, which coin will move into a coin chute 47 where it will come into contact with the nose 48 of a locking lever 49, which locking lever is pivoted as at 51 to one of the end pieces 13 and is held in engagement with the coin chute by a spring 52. This locking lever carries a locking paul 53 which is pivoted thereto as shown at 54 and has ratchet teeth 56 and 57 formed thereon. These ratchet teeth are adapted to engage ratchets 58 and 59 respectively formed upon a plunger rod 61. This plunger rod has an offset head carrying a pusher 62 (see Figure 5) and is pivoted at its lower extremity as shown at 63 to a pull rod 64, which pull rod is adjustably secured as shown at 66 to the plate 28.

In order to prevent the depositing of coins in the coin opening 46, after the last paper is dispensed I provide a lever 67 which is pivoted as at 68 to the bottom 6. One end of this lever extends upwardly through the bottom 6 and the tray 22 as shown at 69 (see Figures 7 and 8.) The front end of this lever is slidably held in a slot 71 formed in the leg 72 of an L-shaped member 73 which is pivoted as at 74 to the front plate of the cabinet which carries the glass plate 7. The upper end of this L-shaped member is normally out of alignment with the opening 46 through the fact that the weight of the papers within the device rests upon the end 69 of the lever 67 but as soon as the last paper has been removed, this end 69 will project upwardly through the opening thus permitting the opening 46 to be closed by the upward extremity of the L-shaped member 73. In order to make this action more positive a counter weight 76 may be employed if desired.

Referring now to Figure 4 it will be noted that the locking pawl 53 has a semi-circular opening 77 formed therethrough. This permits of a pivoted key 78 passing therethrough, which key is pivoted as at 79 to the locking lever 49. The result is that when this key 78 is in position shown in this figure the ratchet 56 will underlie the ratchet tooth 58. When the key is moved through an arc of one hundred and eighty degrees, the locking pawl will be moved to the dotted line position of this figure, with the result that the ratchet 57 will underlie the tooth 59 and at the same time the locking lever 49 will be moved a slight distance rearwardly. The result is that when the device is in the full line position of this figure, if a dime is deposited and the mechanism actuated the dime will be of sufficient diameter to engage the nose of the member 48 so that when the pusher 62 moves downwardly the locking lever 49 will be moved rearwardly against the tension of the spring 52 thus withdrawing the ratchet 56 from beneath the ratchet tooth 58.

When the locking pawl is in the dotted line position of this figure and a nickel is deposited, then the same will be of sufficient diameter to still engage the member 48 and cause the actuation as above described. When it is desired to use several coins as for instance, a three cent paper, the member 48 is moved to the dotted line position of Figure 5 with the result that it is then necessary to insert three coins before the plunger 62 will cause the unlocking action before it is depressed.

It will thus be seen that I have produced a device wherein coins of different dimensions may be employed for actuating the release mechanism, and further I have provided means for dispensing papers or the like, one at a time without the same being mutilated.

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 various changes relative to the material, size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:—

1. In a device of the character described, a box-like structure, a slidable dispensing plate positioned in said box-like structure, a shaft transversely positioned beneath said box-like structure, plates carried on the ends of said shaft, links connected to said plates

and to said dispensing plate, means for rotating said shaft, said dispensing plate having upturned ends and a curved member positioned above said dispensing plate and spaced therefrom, said plate being adapted to overlie the article to be dispensed and to support the forward edge of the article superimposed upon the article being dispensed.

2. In a device of the character described, a box-like structure, a slidable dispensing plate positioned in said box-like structure, a shaft transversely positioned beneath said box-like structure, plates carried on the ends of said shaft, links connected to said plates and to said dispensing plate, means for rotating said shaft, said dispensing plate having upturned ends and a curved member positioned above said dispensing plate and spaced therefrom, said plate being adapted to overlie the article to be dispensed and to support the forward edge of the article superimposed upon the article being dispensed, and means for adjusting said curved member to or away from said dispensing plate.

In testimony whereof I affix my signature.

DANIEL CAMERON.