

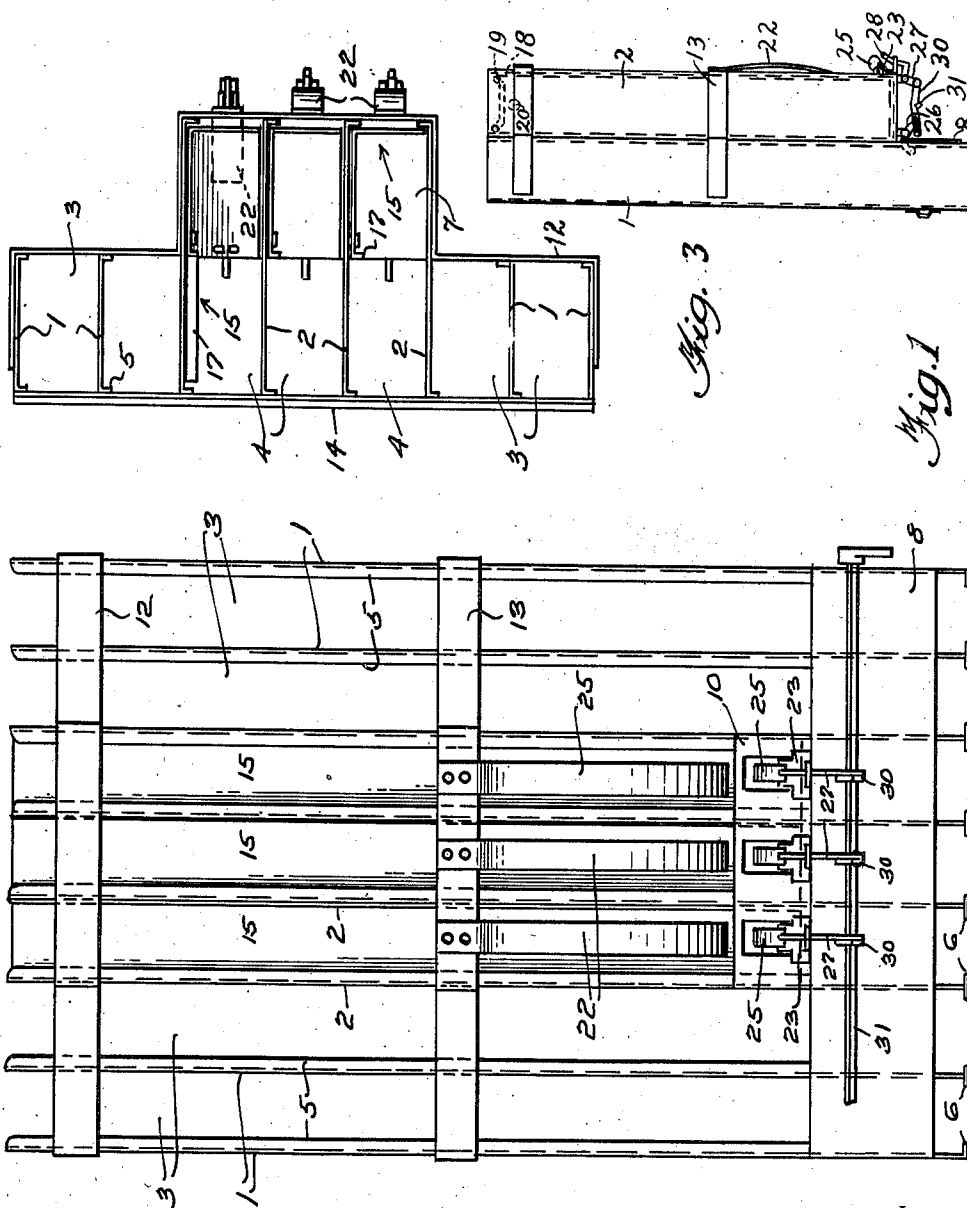
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F. D. VOGEL
VENDING MACHINE MAGAZINE

2,309,802

Filed May 28, 1941

2 Sheets-Sheet 1



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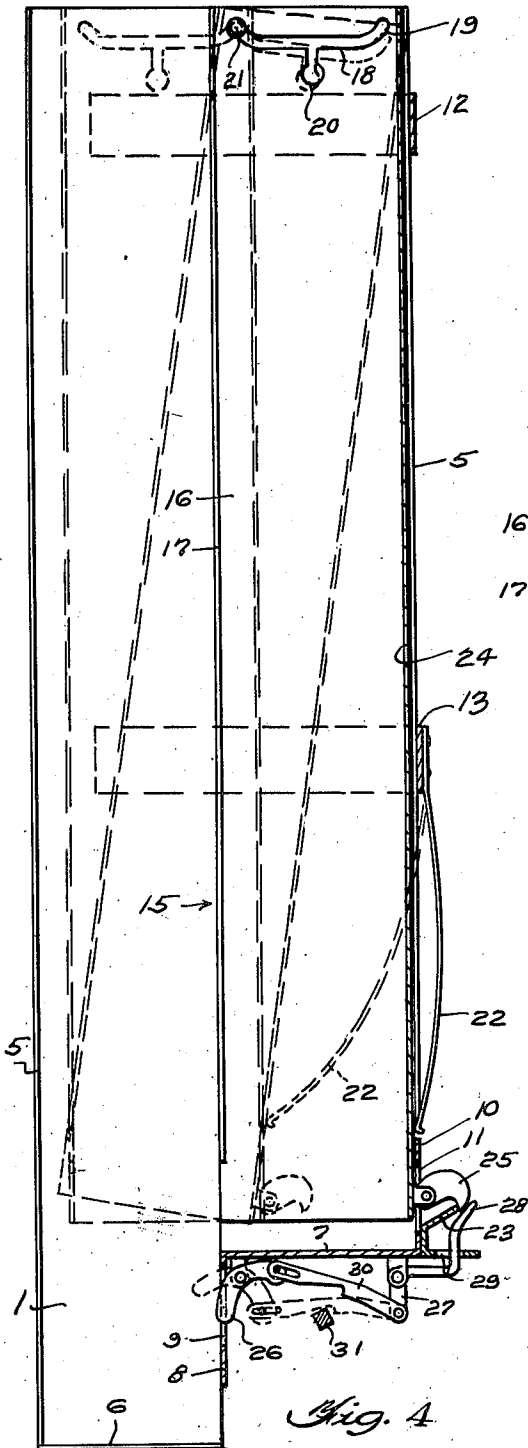


Fig. 4

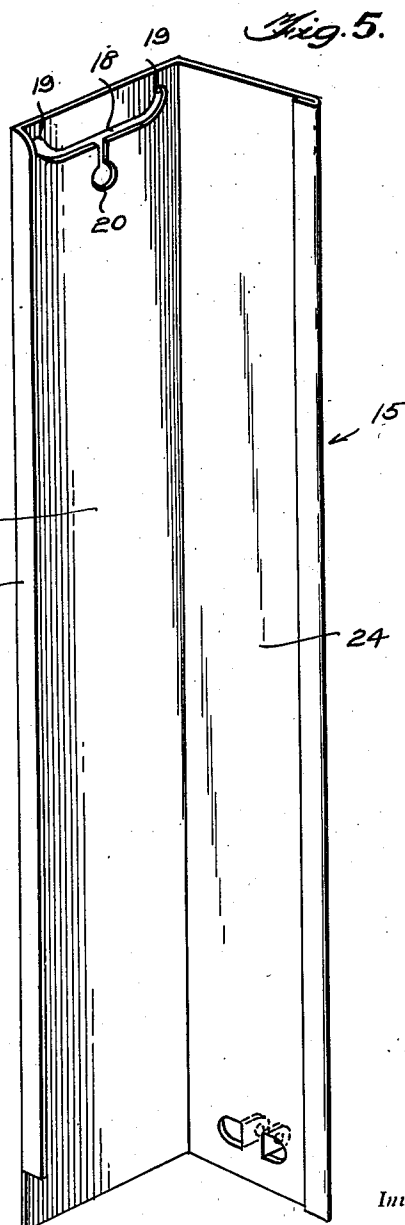


Fig. 5

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VENDING MACHINE MAGAZINE

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2 Claims. (Cl. 312-42)

The present invention relates to new and useful improvements in vending machine magazines of the type comprising a plurality of comparatively deep or double compartments for the reception, one in back of the other, of two columns or stacks of merchandise and has for its primary object to provide, in a manner as hereinafter set forth, novel means for facilitating the loading of the back portions of said compartments.

Another very important object of the invention is to provide a vending machine magazine of the aforementioned character which embodies unique means, controlled by the front stack of merchandise, for automatically discharging the rear stack of merchandise into the ejecting mechanism of the machine when said front stack is about to become exhausted.

Other objects of the invention are to provide a vending machine magazine of the character described which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact, light in weight and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein—

Figure 1 is a view in side elevation thereof.

Figure 2 is a rear elevational view.

Figure 3 is a top plan.

Figure 4 is a vertical sectional view.

Figure 5 is a perspective view of the pivotally, shiftably and removably mounted chute or guide.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a plurality of spaced, vertical outer plates 1 and a plurality of comparatively wide or deep intermediate plates 2. The plates 1 and 2 are arranged to define outer compartments 3 for the reception of single stacks of merchandise and double intermediate compartments 4 for the reception of two stacks of merchandise. Right angularly extending retaining flanges 5 are provided on the vertical edges of the plates 1 and 2.

Flanges 6 are provided on the lower ends of the plates 1 and 2 for supporting the front stacks of merchandise with the lowermost articles thereof in position to be ejected. As illustrated to advantage in Figure 4 of the drawings, the rear portions of the double compartments 4 are provided with an elevated bottom 7 on which the

merchandise rests. Depending from the front of the bottom 7 is an integral plate 8 which is fixed to the rear edges of the plates 1 and 2. The plate 8 has formed therein vertical slots which communicate with the compartments 4, the purpose of which slots will be presently set forth. Rising from the back of the bottom 7 is a flange 9 having openings 11 therein the purpose of which will also be presently set forth. Mounted on the backs of the plates 1 and 2 are upper and lower metallic bars 12 and 13, respectively. Fixed on the lower front portions of the plates 1 and 2 is a bar 14. The elements 7, 8, 9, 12, 13 and 14 rigidly secure the plates 1 and 2 in spaced relation.

Pivotally and slidably mounted in the compartments 4 are removable metallic chutes 15 of angular cross section. The side walls 16 of the chutes 15 are provided, on their front edges, with guide flanges 17. Formed transversely in the upper portions of the chute side walls 16 are slots 18 which terminate in upwardly curved end portions 19. Communicating with the slots 18 are keyhole slots 20. The slots 18 accommodate headed pins 21 on one side of the compartments 4 for pivotally and shiftably suspending the chutes 15 therein. The keyhole slots 20 facilitate the mounting of the chutes 15 and the removal thereof. Springs 22 are mounted on the bar 13 and engage with the lower end portions of the chutes 15 for swinging said chutes forwardly in the compartments 4.

Mounted on the flange 9, below the openings 11, are angular keepers 23. Pivotally mounted on the lower end portions of the back walls 24 of the chutes 15 are hooks 25 which the openings 11 accommodate and which are engageable with the keepers 23 for releasably securing said chutes 15 in retracted or inoperative position against the tension of the springs 22, as shown in full lines in Figure 4 of the drawings.

Pivotally mounted beneath the front portion of the bottom 7 are arcuate merchandise controlled levers 26 which are operable in the slots 9. Pivotally mounted beneath the rear portion of the bottom 7 is a plurality of bellcrank levers 27. Rising from one end of the bellcrank levers 27 are cam fingers 28 which are adapted to disengage the hooks 25 for releasing the lower ends of the chutes 15. The cam fingers 28 are operable in slots 29 which are provided therefor in the lower portions of the keepers 23. The levers 27 are connected to the levers 26 for actuation thereby through the medium of ratchet bars or links 30.

Extending transversely beneath the ratchet bars 30 is a shaft or the like 31 of polygonal cross section. The shaft 31 may be connected in any suitable manner to the dispensing mechanism of the machine for oscillation thereby.

It is thought that the operation of the device will be readily apparent from a consideration of the foregoing. Briefly, to load the rear portions of the double compartments 4, the chutes 15 are shifted forwardly on the pins 21 to the position suggested by the vertical broken lines in Figure 4 of the drawings. Of course, the slots 18 permit this. When the chutes 15 have been loaded with packages of cigarettes or other merchandise they are returned to the full line position of Figure 4, the lower ends of said chutes being swung rearwardly against the tension of the springs 22 for engaging the retaining hooks 25 with the keepers 23. The front portions of the compartments 4 are now loaded. The merchandise in the front portions of the compartments 4 retains the levers 26 in the full line position of Figure 4 of the drawings, thereby supporting the ratchet bars 30 in elevated position out of engagement with the shaft 31. Thus, when the shaft 31 is oscillated with the operation of the machine nothing occurs. When the front stacks of merchandise in the compartments 4 are to become exhausted thereby freeing the levers 26 the ratchet bars 30 swing downwardly by gravity and come to rest across the shaft 31. Then, upon actuation of the shaft 31 the bell cranks 27 are rocked for swinging the cams 28 into contact with the hooks 25 for disengaging said hooks from the keepers 23. Thus released, the lower ends of the chutes 15 are swung forwardly by the springs 22 to substantially the position illustrated by the inclined broken lines in Figure 4 of the drawings. From the foregoing it will be seen that the rear stacks of merchandise will be directed into the lower front portions of the compartments 4 to be dispensed by the usual ejecting mechanism. As hereinbefore stated, the keyhole slots 20 permit the chutes 15 to be readily mounted in the compartments 4 and removed therefrom.

It is believed that the many advantages of a vending machine magazine constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to

which will fall within the scope of the invention as claimed.

Having described the invention, what is claimed as new is:

5 1. A vending machine magazine of the character described including a compartment for the reception of front and rear stacks of merchandise, said compartment comprising opposed side walls, a chute, including a side wall, pivotally
10 mounted in the rear portion of the compartment for swinging movement into the front portion thereof for discharging the rear stack of merchandise into said front portion, said chute further being shiftable bodily into the front portion
15 of the compartment for receiving the rear stack of merchandise, the side wall of the chute having a substantially U-shaped slot in its upper portion, and a headed pin projecting from one of
20 the side walls of the compartment and operable in the slot for pivotally, shiftable and detachably suspending the chute in the compartment, said side wall of the chute further having an inverted keyhole slot therein communicating with
25 the first-named slot and constituting means for receiving and guiding the headed pin to said first-named slot.

2. A vending machine magazine of the character described comprising a compartment for the reception of front and rear stacks of merchandise, said compartment including a back
30 wall having an opening in its lower portion, an angular keeper, having a slot therein, mounted on said back wall adjacent the opening, a chute pivotally suspended in the back portion of the compartment, a spring operatively engaged with
35 said chute for swinging the lower end thereof into the front portion of the compartment, a pivoted hook on said chute engageable with the keeper through the opening, an oscillating shaft of polygonal cross-section, a bell crank lever piv-
40 otally mounted on the compartment, a cam finger on one end of said bell crank lever operable in the slot and engageable with the hook for disengaging said hook from the keeper for freeing
45 the chute for actuation by the spring, a ratchet bar pivotally connected to the other end of the bell crank lever, said ratchet bar extending transversely across the shaft and being engage-
50 able thereon for actuation thereby for rocking the bell crank lever, and means controlled by the front stack of merchandise for supporting the ratchet bar out of engagement with the shaft.

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