April 15, 1930. W. H. ROWE 1,754,527

VENDING MACHINE CABINET

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Fig. 4

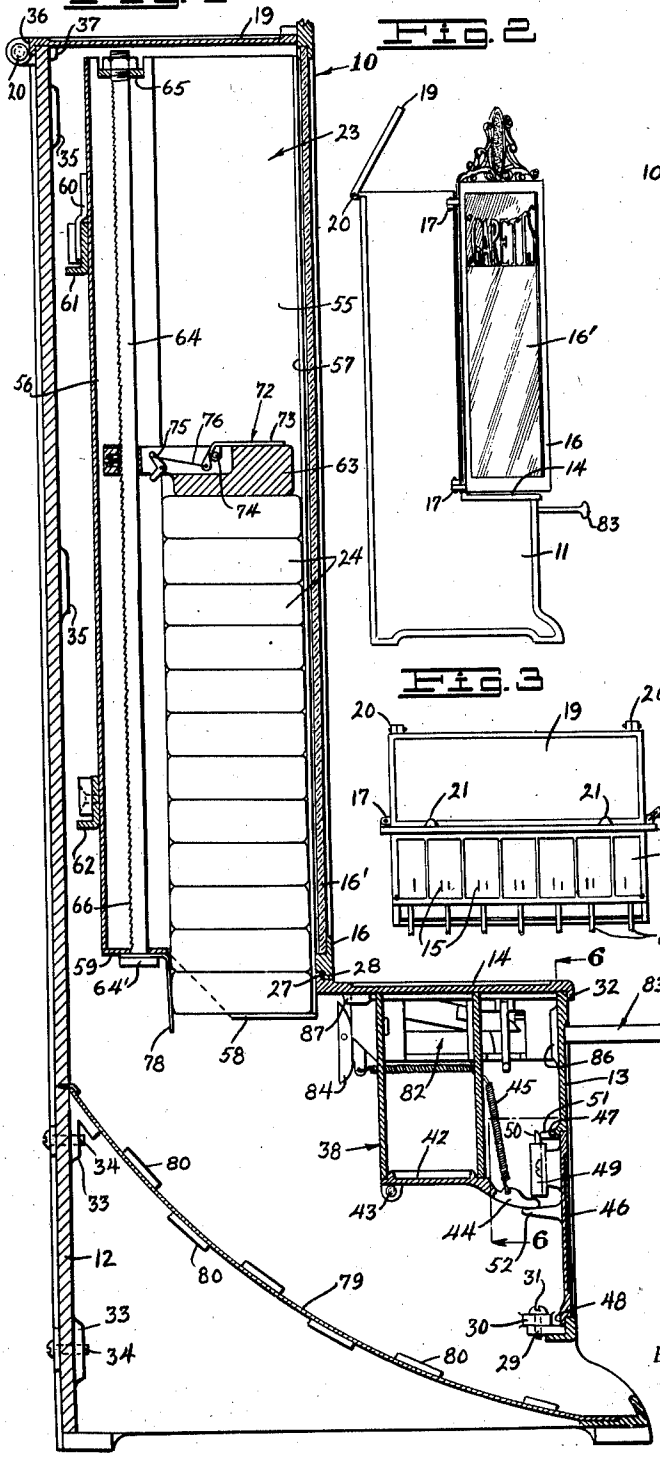


Fig. 2

Fig. 1

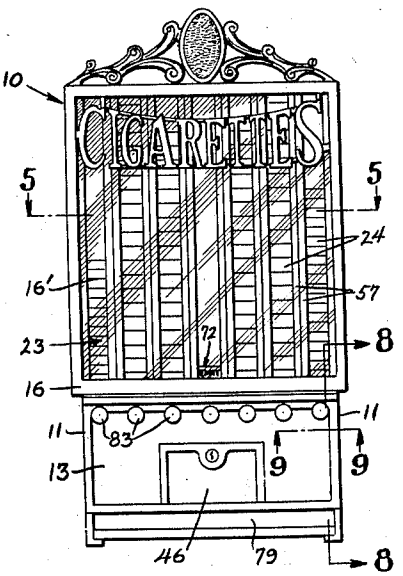
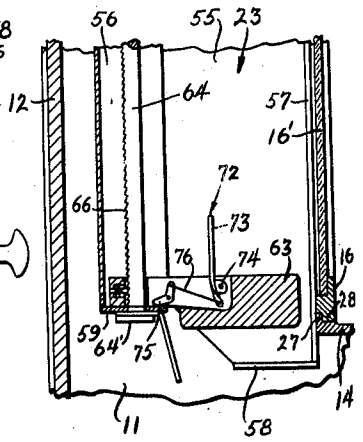


Fig. 3

Fig. 7



INVENTOR.
W. H. ROWE
BY
ATTORNEY.

April 15, 1930. W. H. ROWE 1,754,527

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Fig. 5

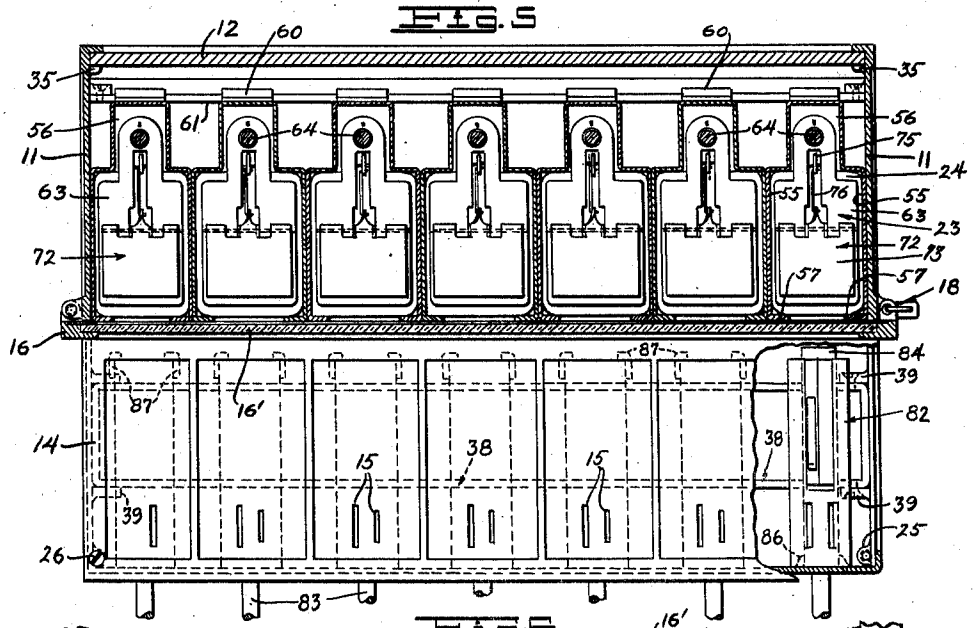


Fig. 6

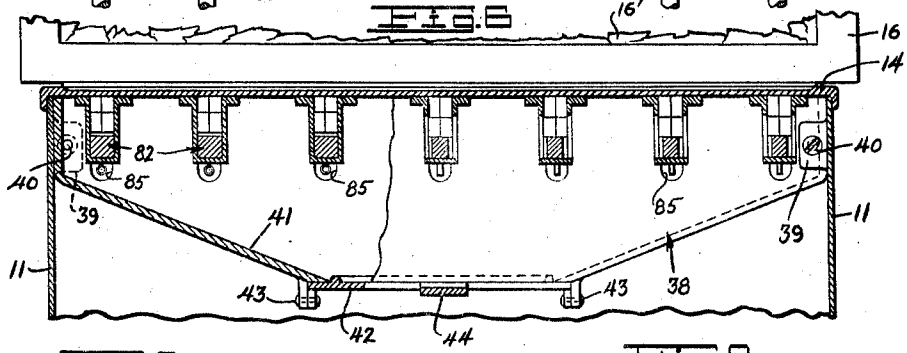


Fig. 8

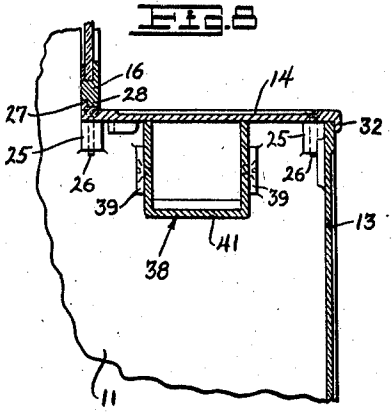


Fig. 10

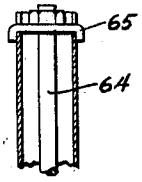


Fig. 9

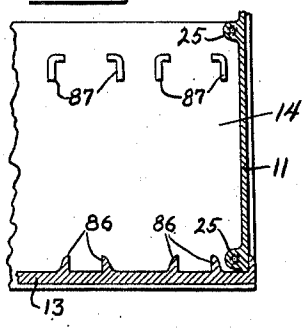
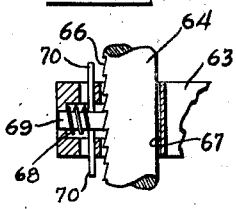


Fig. 11



INVENTOR.
W. H. ROWE
BY
ATTORNEY.

Patented Apr. 15, 1930

1,754,527

UNITED STATES PATENT OFFICE

WILLIAM H. ROWE, OF LOS ANGELES, CALIFORNIA

VENDING-MACHINE CABINET

Application filed March 21, 1927. Serial No. 176,847.

This invention relates to vending machines.

The general object of the invention is to provide an improved cabinet for coin actuated vending machines.

Another object of the invention is to provide improved article containers for a vending machine.

Still another object of the invention is to provide a vending machine with novel means for retaining a stack of articles to be vended in close relationship.

A further object of the invention is to provide a visible signal which will be automatically actuated when a stack of the vendable articles has become exhausted.

A further object of the invention is to provide a novel coin receptacle and novel means for locking the same.

Other objects and advantages of this invention will be apparent from the following description taken in connection with the accompanying drawings wherein:

Fig. 1 is a front view of a vending machine embodying the features of my invention.

Fig. 2 is a side elevation of the vending machine showing the front door and the top lid opened.

Fig. 3 is a top plan view of the vending machine.

Fig. 4 is an enlarged central vertical section through the vending machine cabinet.

Fig. 5 is a section taken on line 5—5 of Fig. 1.

Fig. 6 is a section taken on line 6—6 of Fig. 4.

Fig. 7 is a fragmentary section of the lower end of an article container showing the exhausted signal actuated.

Fig. 8 is a section taken on line 8—8 of Fig. 1.

Fig. 9 is a section taken on line 9—9 of Fig. 1 with the coin actuated plungers removed.

Fig. 10 is a fragmentary top end view of the article weight slide rod and

Fig. 11 is a fragmentary view of the article weight showing the catch mechanism thereof.

Referring to the drawings by reference characters I have indicated a cabinet embodying the features of my invention at 10. The cabinet includes L-shaped side members 11 joined in the rear by a back 12 and in the front by a front plate 13. The cabinet is provided with a shelf 14 above the front plate 13 and has a plurality of coin slots 15 therein. Above the shelf 14 there is a door 16 hinged as at 17 to one of the sides 11 and provided with locking means 18 at the other side of the cabinet. The door 16 preferably includes a transparent panel 16′ shown as a piece of glass.

The top of the cabinet is provided with a lid 19 which is hinged to the rear part of each side 11 as at 20 and fits below a set of lugs 21 on the door 16 when the door is closed. When the door 16 is opened as in Fig. 2 the lid 19 may be swung up, thus allowing complete access to a plurality of storage compartments 23 in which the packages to be vended, shown as packages 24 of cigarettes, are arranged.

The shelf 14 is secured to lugs 25 of each of the side walls 11 by countersunk screws 26 and locked in position, when the door 16 is closed by an upstanding flange 27 (see Fig. 8) which abuts a downwardly extending flange 28 of the door 16, thus even though the front screws 26 are removed the shelf 14 cannot be removed so long as the door 16 remains closed. Furthermore the rearward set of screws 26 are arranged beneath the door 16 when it is in a closed position so that the rear set of screws cannot be removed unless the door 16 is swung open.

The front plate 13 is provided with rearwardly extending lugs 29 which are secured to lugs 30 of each of the side walls 11 by means of screws 31. The front plate is retained in position adjacent the top by engaging a downwardly extending flange 32 integral with the shelf 14.

The back 12 which is preferably made of wood is shown as secured to lugs 33 of each of the side walls 11 by screws 34, by a plurality of lugs 35 also integral with each of the side walls 11 and by a downwardly extending flange 36 and lugs 37 provided on the lid 19.

Arranged below the shelf 14 I show a coin receptacle 38 secured to the lugs 39 on each

of the side walls 11 by screws 40. The bottom wall 41 of the coin receptacle is inclined downwardly from each side towards the center where a trap door 42 is provided. The door 42 is hinged at the rear thereof to the bottom walls 41 as at 43 and is provided at the front thereof with a projecting tongue 44. The door 42 is adapted to be normally held in a closed position by a spring 45.

To allow the removal of the contents of the coin receptacle 38 I provide in the front plate 13 a removable closure 46. The closure 46 at its upper edge fits in front of a downwardly extending flange 47 integral with the front plate 13 (see Fig. 4) and at the lower edge the closure is provided with a downwardly extending flange 48 which fits behind the front plate 13. Adjacent the top edge of the closure 46 a lock 49 is provided, the bolt 50 of which fits behind a lug 51 integral with the front plate 13. On the rear of the front plate 13 adjacent the lock 49 and spaced therefrom a lug 52 is provided which engages the tongue 44 and which will, when the front plate 13 is in position, cause the door 42 to become immovable by reason of the engagement between the tongue and the lug 52.

Any desired number of storage compartments 23 may be provided. Each compartment comprises side walls 55, a rear channel 56, front flanges 57 and bottom flanges 58 which serve as supports for the packages 24. The flanges 58 do not extend the full length of a storage compartment and the bottom 59 of the channel 56 is spaced above the flanges 58 to allow packages 24 to be expelled from the storage compartment. The rear of the channel portion 56 has a lip 60 secured thereto which is adapted to fit over the upwardly extending portion of an angle bar 61 thereby removably supporting the storage compartment 23. The angle bar 61 is secured to each of the sides 11 and another angle bar 62 is provided adjacent the lower end of the storage compartments to help retain them in position.

A weight 63 is provided in each of the storage compartments for retaining the packages of cigarettes in close stacked relationship. This weight 63 is guided by the side walls of the storage compartment and also by a vertical rod 64 which extends the length of the storage compartment and is held in position by a head 64′ engaging the bottom 59 of the channel 56 and a cross member 65 at the top of the channel (see Fig. 10). The rear portion of the rod 64 is ratchet toothed as at 66. The weight 63 has an aperture 67 therethrough adapted to surround the rod 64 and at the rear of the weight I provide a latch mechanism 68 having a bolt 69 adapted to coact with the ratchet teeth 66 on the rod 64 to prevent the weight 63 from moving away from the packages 24 if in the act of pilfering any person should open the cabinet and try to jostle the contents therefrom. A cross bar or handle 70 on the bolt 69 allows the bolt to be disengaged from the ratchet teeth 66 for allowing the weight to be moved upward when the storage compartment is being filled.

I may also provide a signaling means 72 on the weight 63 which will become visible when the entire contents of the storage compartment has been discharged. The signal 72 comprises a plate 73 pivoted to the weight as at 74 and connected to a pivoted bell crank 75 by a rod 76. The plate 73 normally lies flush with the top of the weight 63, that is so long as there is a package in the storage compartment as shown in Fig. 4. When the entire contents of the storage compartment have been expelled as seen in Fig. 7 the bell crank 75 will strike against the bottom 59 of the channel and cause the plate 73 to be swung to a vertical position thereby making visible any warning that may be printed upon the front face of the plate 73, such as "Empty" as shown in the central storage compartment of the cabinet in Fig. 1.

On the underside of the channel bottom 59 I provide a flat piece of spring material 78 bent to press against the lowermost package in the storage compartment. The spring 78 is quite flexible but nevertheless prevents the contents of the storage compartment from being jostled out through the discharge opening in the storage compartment.

For guiding the expelled packages to within reach of a customer I provide a discharge slide 79 preferably made of a flat piece of metal and held in position between a plurality of lugs 80 on each of the side members 11.

For expelling the contents of the storage compartment I provide a plurality of coin controlled plungers 82. These plungers 82 as shown are of substantially the same type as shown and described in my co-pending patent application Serial No. 176,848, filed in the U. S. Patent Office March 21, 1927 and as the particular construction of the plunger mechanisms form no part of the present invention I do not deem it necessary to go into a detailed description thereof other than to say that the plungers include an actuating stem 83 which extends through the front plate 13 and an ejector pawl 84. The plungers 82 are adapted to be removably supported by the side walls of the coin receptacle 38 by providing in the side walls of the coin receptacle, apertures 85 of the same configuration as the plungers. The plungers are also further positioned by inwardly extending lugs 86 on the front plate 13 and downwardly extending lugs 87 on the shelf 14 (see Fig. 9).

When one of the plungers 82 has been freed by inserting coins therein through the coin slots 15 and moved towards the rear of the cabinet the pawl 84 will abut the lowermost package in the storage compartment

and force it rearwardly off of the flanges 58 against the tension of the spring 78 which will, as soon as the package is free from the flanges 58, impel it forward and out on the discharge chute 79. Before the package is released from the flanges 58 the coins in the plunger 82 will fall into the coin receptacle 38.

From the foregoing description it will be apparent that I have provided an efficient and serviceable vending machine cabinet including novel features.

What I claim is:

1. A vending machine cabinet comprising a pair of L-shaped side walls, a back member, a closure door and a front plate, a top member for said cabinet, said back member being secured on said side walls, means to hold said back member rigid when said top member is in a closed position, said top and said closure door being hingedly mounted, means for securing said closure door in a closed position, means on said closure door coacting with said top member for retaining said top member rigid when said closure door is in a closed position, said front plate being secured on said side walls.

2. A vending machine cabinet comprising a pair of side walls, a back member, a shelf connecting said side walls, a closure door above said shelf and a front plate below said shelf, a top member for said cabinet, said back member being secured on said side walls, means to hold said back member rigid when said top member is in a closed position, said top and said closure door being hingedly mounted, means for securing said closure door in closed position, means coacting with said top member for retaining said top member rigid when said closure door is in a closed position, said shelf being secured by means inaccessible when said closure door is in a closed position, and means on said shelf coacting with means on said closure door for preventing the removal of said shelf when said closure door is in a closed position, and means coacting with said front plate for preventing the removal of said front plate when said shelf is in a fixed position.

3. A vending machine cabinet comprising a pair of L-shaped side walls, a back member, a transversely extending shelf connecting said side walls, a closure door above said shelf and a front plate below said shelf, a top member for said cabinet, said back member being secured on said side walls, means to hold said back member rigid when said top member is in a closed position, said top and said closure door being hingedly mounted, means for securing said closure door in closed position, means for retaining said top member rigid when said closure door is in a closed position, said shelf being secured by means inaccessible when said closure door is in a closed position, and means coacting with means on said closure door for preventing the removal of said shelf when said closure door is in a closed position.

4. A vending machine cabinet comprising a pair of L-shaped side walls, a back member, a transversely extending shelf connecting said side walls, a closure door above said shelf, a front plate below said shelf, a top member for said cabinet, said back member being secured on said side walls, means to hold said back member rigid when said top member is in a closed position, said top and said closure door being hingedly mounted, means for securing said closure door in closed position, means on said closure door coacting with said top member for retaining said top member rigid when said closure door is in a closed position, said closure door including a transparent portion, said shelf being secured by means inaccessible when said closure door is in a closed position, and means on said shelf coacting with means on said closure door for preventing the removal of said shelf when said closure door is in a closed position, said front plate being secured to each of said side walls and means coacting with said front plate for preventing the removal of said front plate when said shelf is in a fixed position.

5. A vending machine cabinet comprising a pair of L-shaped side walls, a back member, a shelf connecting said side walls, a closure door above said shelf and a front plate below said shelf, a top member for said cabinet, said back member being secured on said side walls, means to hold said back member rigid when said top member is in a closed position, said top member being hingedly mounted, means for securing said closure door in closed position, means coacting with said top member for retaining said top member rigid, means for preventing removal of said shelf when said closure door is in a closed position, and means for preventing the removal of said front plate.

In testimony whereof, I hereunto affix my signature.

WILLIAM H. ROWE.