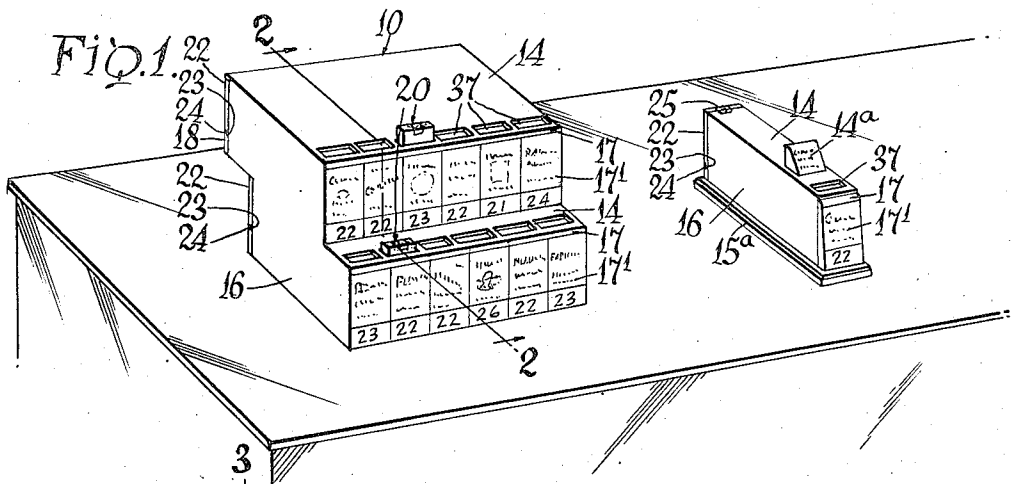
Feb. 25, 1958 K. HAUSLADEN 2,824,666

PACKAGE VENDING DEVICE

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Fig. 1.



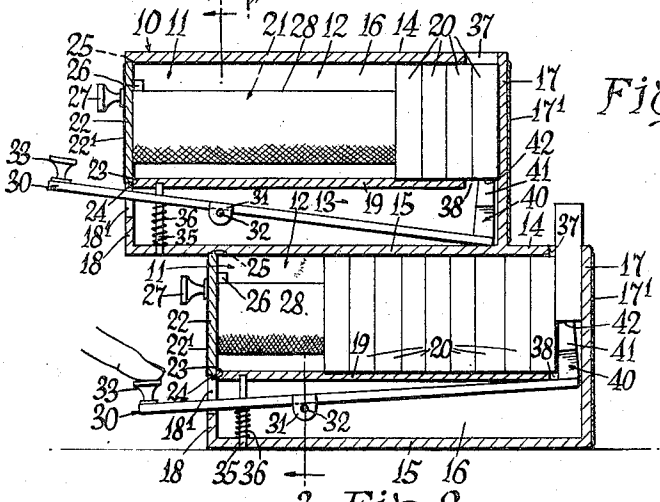
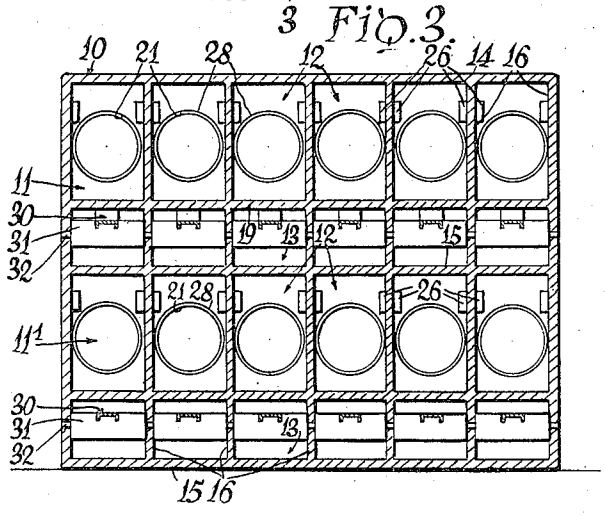
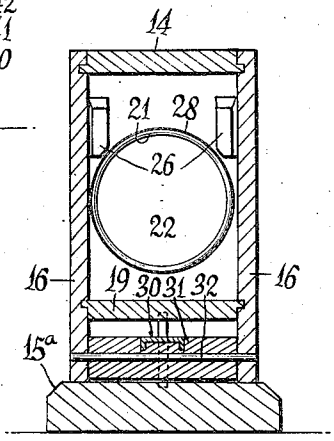


Fig. 2.



3 Fig. 3.

Fig. 8.



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Fig. 4.

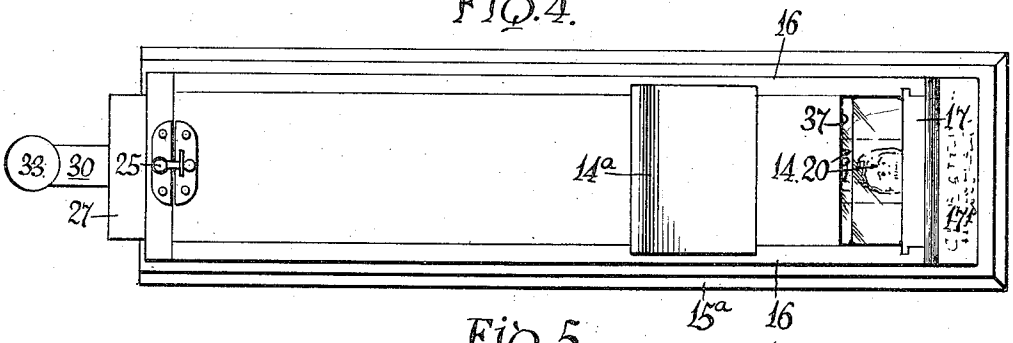


Fig. 5.

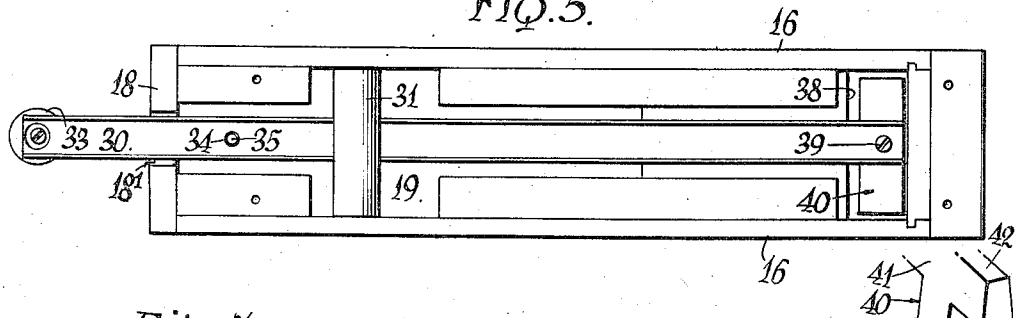


Fig. 7.

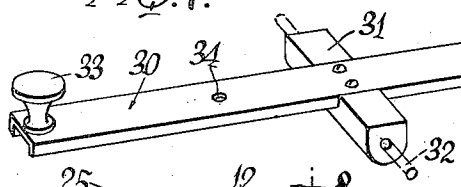


Fig. 6.

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PACKAGE VENDING DEVICE

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3 Claims. (Cl. 221—232)

My invention relates to package vending machines and more particularly to package vending devices which do not require the use of a coin for their operation.

A great many coin operated package vending machines are in more or less satisfactory use today, however a considerably greater number of packages are stored in open racks or on open shelves and are sold over the counter by salespeople. The coin operated package vending machines, being quite complex mechanisms, are expensive to manufacture and service so that the selling price of packages so vended, is usually higher than the price of a package bought over the counter. For example, a package of cigarettes which sells over the counter for 22¢ costs 25¢ when purchased from a cigarette vending machine.

As in the case of many packaged goods, the profit on a single package of cigarettes is relatively small, and when they are arranged in open places in a manner to facilitate their location, removal and sale more or less pilfering occurs and reduces the small net profit more or less.

The objects of my invention are to provide a simple and inexpensive vending device which is manually operable to quickly vend packages; to provide a vending device which does not require a coin for its operation; to provide a vending device which encases a plurality of packages in a manner to make pilfering of the packages difficult; to provide a vending device which may be conveniently arranged to facilitate locating a desired brand of packaged goods; and to provide a vending device which, after being manually operated by a sales-person to position a single package for removal from the device by a purchaser, is automatically reset for successive package positioning and vending operations.

In the drawings:

Figure 1 is a perspective view showing one form of my device adopted for vending a plurality of different brands of cigarette packages and a second form adopted for vending a single brand of cigarette packages, both forms being shown mounted on the top of a show case.

Figure 2 is a longitudinal sectional view of the multiple brand vending form of my device shown in Figure 1 and is taken about on the line 2—2 thereof.

Figure 3 is a transverse sectional view taken about on the line 3—3 of Figure 2.

Figure 4 is a top plan view of the single brand form of my vending device shown in Figure 1.

Figure 5 is a bottom plan view of the single brand form of my vending device with the bottom wall removed to more clearly show the operating mechanism.

Figure 6 is a central longitudinal sectional view of the vending device shown in Figure 4.

Figure 7 is a perspective view of the operating lever of both forms and

Figure 8 is a transverse section taken about on the line 8—8 of Figure 6.

In Figures 1 through 3 a housing generally indicated by the numeral 10 is formed with a set of upper and lower

compartments 11 which are horizontally disposed with the upper set rearwardly offset from the lower set to allow vending packages from the latter and are formed with parallel top and bottom walls 14 and 15, parallel side walls 16 and front and rear walls 17 and 18 respectively. The top wall 14 of the lower compartment is formed as a coplanar forward extension of the bottom wall 15 of the top compartment to conserve space and material. A partition 19 extending between the side walls in parallel relation to the top and bottom walls of each compartment serves to divide each compartment into an upper chamber 12, and a lower chamber 13. Each of the chambers 12, being of rectangular cross-section of a size to slidably receive either a king-size of regular size package of cigarettes 20 in an upright position (Figure 3), are made long enough to house ten packages of cigarettes (a carton) and means for moving the packages 20 forwardly in their chamber. Each chamber is provided with a package moving means which is preferably formed of a section of helically wound spring wire to form a compression spring 21 which has one end anchored to a removable portion 22 of the rear wall 18 of its chamber and its free end bearing against the rearmost package of the packages of cigarettes 20 contained therein, thereby to resiliently urge all or a lesser number of the packages forwardly in their chambers.

The rear wall portions 22 may be removably secured to the housing 10 to normally close the rear ends of their chambers 12 in any suitable manner. For example each portion 22 may have its lower end provided with projections 23 formed and arranged to interengage with recesses 24 formed in the fixed portion of the rear wall 18, its upper end provided with a latch 25 engageable with the housing, its inner face provided with lugs 26 spaced to enter the chamber 13 and engage its side walls 16 to prevent it from shifting laterally, and may be provided with a suitable finger piece or knob 27 to facilitate its removal and replacement.

Upon any of the chambers 12 being emptied its portion 22 together with its spring 21 are removed, thus allowing that chamber to be quickly reloaded with ten more packages of cigarettes which, when the portion 22 is replaced and latched, are forced forwardly in the chamber by the spring 21. The spring 21 is preferably encased by a protective flexible covering 28 which may be made of any suitable material.

Each of the chambers 13 is provided with a manually operable lever 30 which is pivoted intermediate its ends by being secured to the center of a transversely disposed fulcrum member 31 which is pivotally mounted on a pivot rod 32 which extends longitudinally through the member 31 and transversely through the side walls 16.

The outer end portion of each of the levers 30 extends through an opening 18′ in the rear wall 18 of its chamber and this extension has its free end provided with a finger piece or knob 33 by which the lever is operated.

Each lever 30, rearwardly of its fulcrum member 31, is provided with an opening 34 (Figure 7) which fits loosely over a vertically disposed pin 35. The pin 35, having its opposite ends anchored in the bottom wall 16 and the partition 19 is provided with a coil compression spring 36 one end of which bears upon the bottom wall 16 and the other end of which bears against the underside side of the lever 30, thereby acting to hold the lever in an inwardly and downwardly inclined normal position and to return the lever to its normal position automatically after the lever has been depressed and released (Figures 2 and 6).

The inner end of the top wall 14 of each upper chamber 12 terminates short of its front wall 17 to provide a package delivery opening 37 and the inner end of each partition 19 terminates short of the front wall 17 to pro-

vide a similar opening **38**. A T-shaped package ejecting block **40** is secured across the inner end of each lever **30** by a suitable screw **39** (Figures 5 and 6) and includes a head **41** which is of a size and formed to pass freely through the associated opening **38**.

With the lever **30** in its normal position its inner end rests on the bottom wall **16** and the top surface **42** of the head **41** lies in the plane of the top surface of the partition **19**, thus supporting the foremost package of cigarettes in the plane of the other packages and allowing these packages to successively slide thereacross when the foremost package is entirely removed from the device. It will be apparent that when the lever, block and foremost package of cigarettes are in their normal lowered positions, the top of the foremost package of cigarettes is exposed, but since it lies below the top wall **15** and since the delivery opening **37** is only slightly larger than the package it cannot be readily pilfered. It will also be apparent that when the knob **33** is depressed by finger pressure the block **40** swings through the opening **38** and raises the foremost package to an elevated position in which its top portion may be grasped to completely remove the package from the device (Figures 2 and 6).

The purpose of superposing and offsetting the multiple sets of compartments in the form of my vending device shown in Figures 1 through 3 is, as stated above, to conserve space, however when space saving is unimportant any number of the single compartment form of my vending device shown in Figures 4 through 8 may be used and arranged as desired.

The front wall **17** of both forms as indicated in Figure 1 are preferably provided with suitable markings or labels **17'** to quickly indicate to the buyer the brand name and the price of the packages of cigarettes contained in each compartment and the portion **22** of the rear wall **18** of both forms are preferably provided with suitable markings or labels **22'** to assist the seller in quickly locating and dispensing or vending the desired brand of cigarettes.

The two forms of my vending device, aside from the multiplicity of compartments in one form, are essentially the same excepting that in the single compartment form, the bottom wall **15***a* is removable and extended beyond the side walls, and the top wall **14** is provided with a block **14**[a] formed and arranged to receive and display additional advertising matter.

In both forms of my vending device the operating mechanism is the same and since the predetermined distance the foremost package is raised is such that only the upper portion of the package projects above the top wall, the action of the spring **21** causes the package to remain in its elevated position when the lever and block return to their normal positions through the action of the spring **36**. Thus elevated and held the package may be thereafter grasped and completely removed from the device. The elevated position in which the package is held for removal may be conveniently determined by the forward end of the lever **30** abutting the forward end portion of the partition **19** (Figures 2 and 6). The advantage of my means for partially ejecting and holding the package in a position to be grasped and removed is that no additional means are required to receive and hold the package pending its removal.

Notwithstanding that it has been elected to show and describe my package vending device as adopted for use in vending packages of cigarettes, it will be understood that the principles of my invention are adoptable for vending other packaged goods and that various modifications and rearrangements of the component parts of my device may be made within the scope of the appended claims, wherein I claim:

1. A package vending device comprising a housing formed to provide a chamber, a single partition extending longitudinally of the chamber and arranged to divide it into a larger upper compartment and a smaller lower compartment longitudinally coextensive therewith, said partition terminating short of one end wall of the housing to provide a passageway between said compartments, the upper compartment slidably receiving a plurality of end supported packages and being provided with a package delivery opening in its top wall opposite to and alined with said passageway, means in the larger compartment for resiliently urging the packages toward said one end wall, over the passageway and beneath the delivery opening, and a single first-class lever pivotally mounted within and extending longitudinally through the lower compartment, the outer end of the lever being extended beyond the end wall of the housing remote from the passageway for operation by finger pressure and the inner end of the lever being formed and located for swinging movement through said passageway to move the foremost of the packages upwardly through the delivery opening when finger pressure is applied to the outer end of the lever.

2. A package vending device as set forth in claim 1 wherein the inner end portion of the partition also serves as a stop to limit the package delivering swinging movement of the lever to a distance less than that required to fully move the package from its chamber, whereby during its delivery each package is partially ejected by such movement of the lever and being held in its elevated position by the resilient means may be grasped and removed.

3. A package vending device as set forth in claim 1 wherein a head is rigidly secured to the inner end of the lever, said head approximating the area of and being freely movable through the passageway when the lever is swung from its normal position by finger pressure on its outer end and the mass of the head together with the length of that portion of the lever arm to which it is secured is such that the head and the lever return to their normal positions when finger pressure is removed from the outer end of the lever.

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