

Aug. 9, 1927.

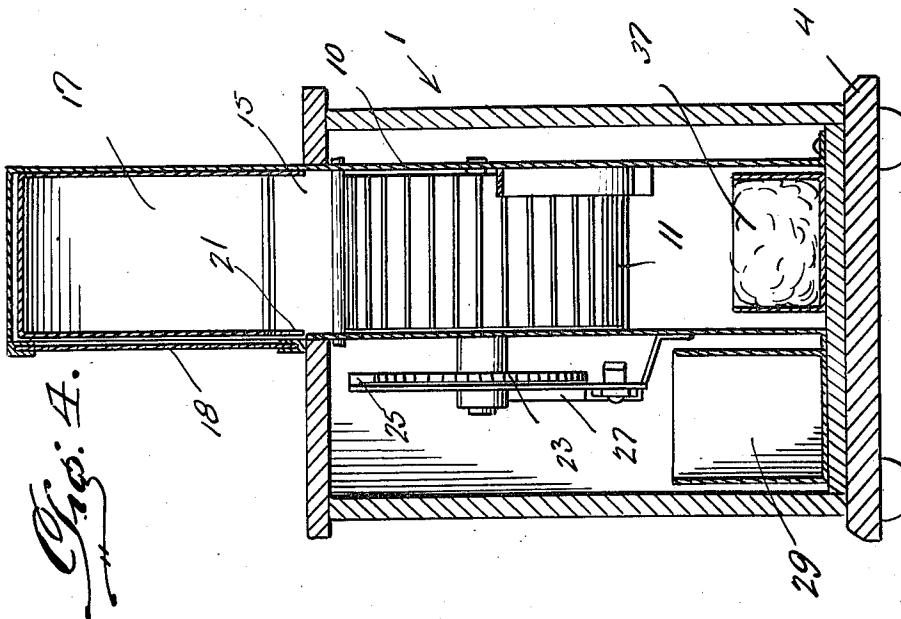
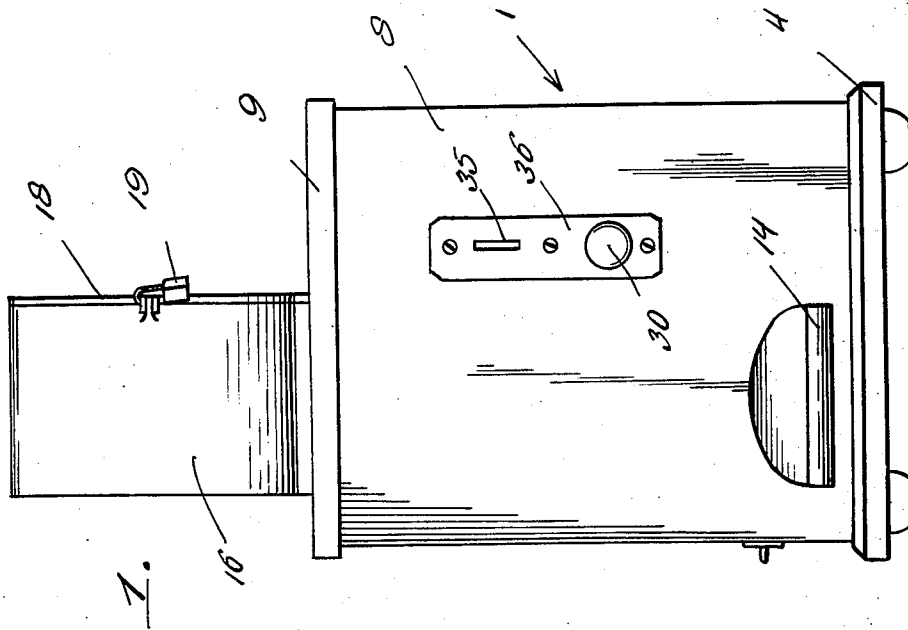
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CIGARETTE DISPENSING MACHINE

Filed Dec. 28, 1925

3 Sheets-Sheet 1



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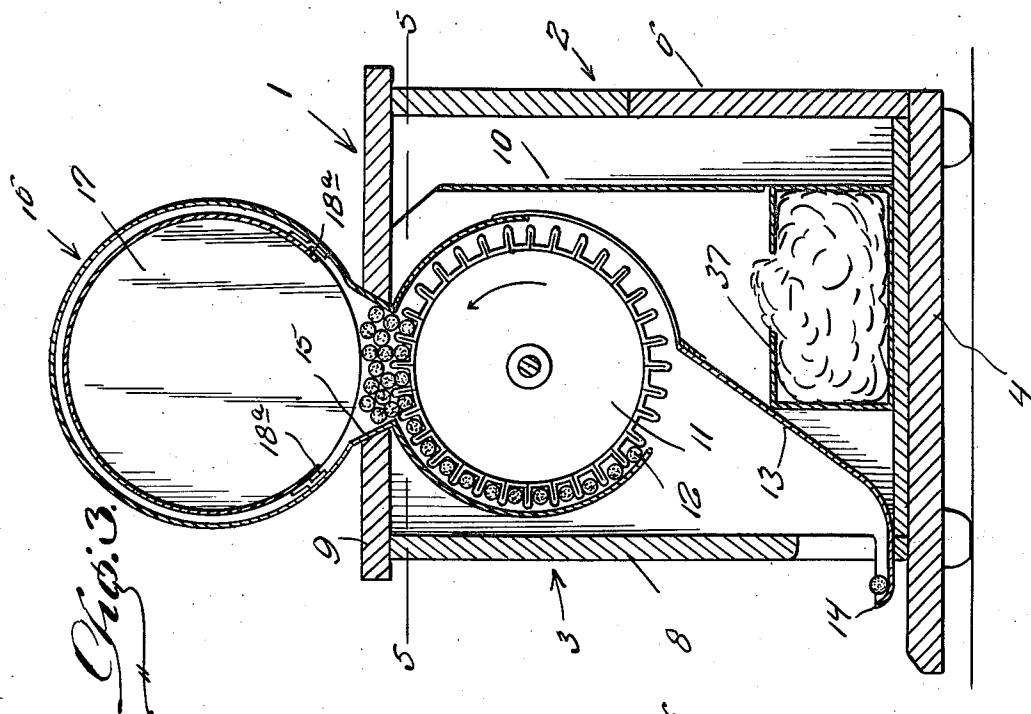
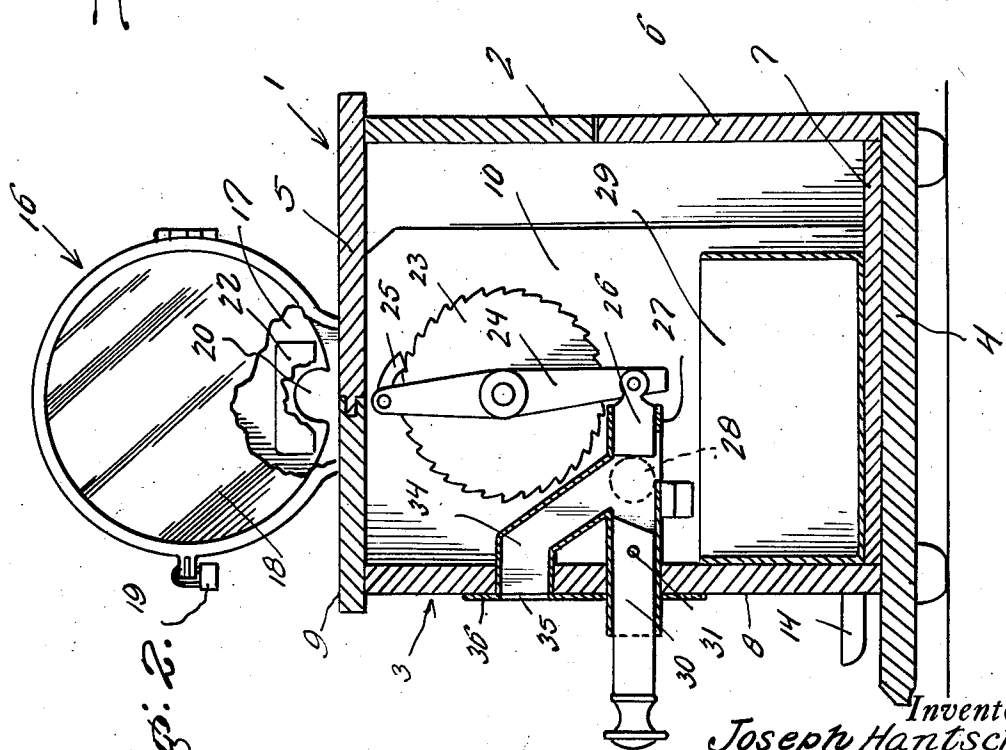
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CIGARETTE DISPENSING MACHINE

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3 Sheets-Sheet 2



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Fig. 6.

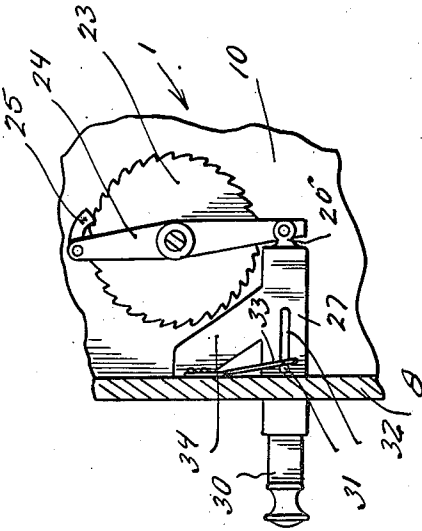


Fig. 7.

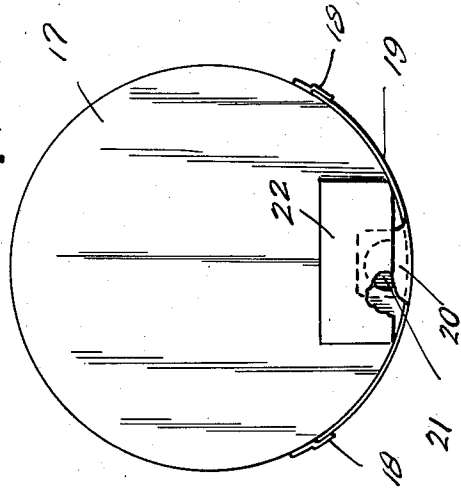


Fig. 5.

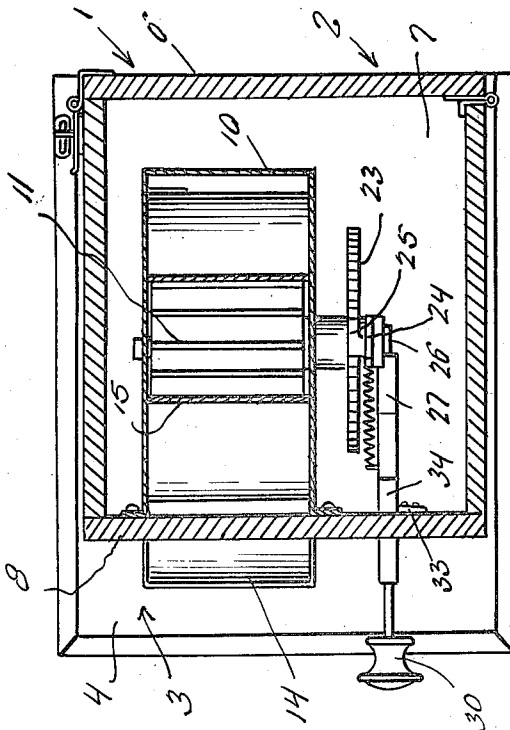
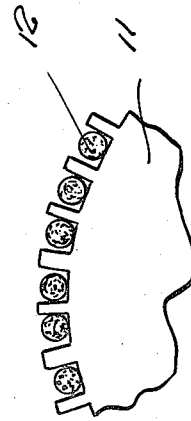


Fig. 8.

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CIGARETTE-DISPENSING MACHINE.

Application filed December 28, 1925. Serial No. 77,987.

This invention relates to an improved machine which is especially, but not necessarily, designed for dispensing cigarettes in a predetermined manner.

5 Briefly, the invention comprises a casing in which a drum is mounted for rotation. This drum has its periphery fashioned to provide pockets for receiving cigarettes. Cooperative with the drum is a delivery
10 chute terminating in a receiving pan. The chute is located beneath the drum and when the drum assumes predetermined positions, the cigarettes are dispensed one by one to
15 roll down the chute and into the pocket before they may be removed.

At the top of the drum is a cigarette receiving hopper and this is in communication with an opening in an especially designed cigarette carton. When the carton
20 is open the cigarettes drop therefrom into the hopper and then fall into the pockets of the drum as the latter is rotated.

One feature of construction of the improved machine is the main casing. This is
25 novel in that it is composed of separable sections, one of which includes a false bottom carrying the internal mechanism. Thus, access to the interior is facilitated.

Another important feature of construction
30 is the especially designed holder provided on the exterior and top of the casing and adapted to accommodate a statutory package or carton of cigarettes.

A still further feature of the construction
35 is to the pawl and ratchet mechanism employed for rotating the drum in a step by step manner, this being operated through the medium of coin controlled mechanism, thereby making it necessary to insert a coin
40 in order to dispense a cigarette.

Other objects, features of construction, and advantages will become apparent from the following description and drawings.

In the accompanying drawings forming
45 a part of this application and in which like numerals are employed to designate like parts throughout the same:—

Figure 1 is a front elevation of a cigarette vending machine constructed in accordance with the present invention.

Fig. 2 is a sectional and elevational view of the same showing the coin actuated mechanism, casing structure and other details more plainly.

55 Fig. 3 is a vertical section showing the

drum construction and holder for the cigarette package.

Fig. 4 is also a vertical section, the view being taken at an approximate right angle to Fig. 3 and showing certain of the details
60 in elevation.

Fig. 5 is a horizontal section taken approximately upon the plane of the line 5—5 of Fig. 3.

Fig. 6 is a fragmentary detail view showing the pawl and ratchet mechanism and coin actuated means in detail.

Fig. 7 is an enlarged elevational view of the special cigarette containing package or
70 carton used.

Fig. 8 is a fragmentary view of a portion of the drum showing a slightly different mode of construction.

Referring to the drawings in detail, the reference character 1 designates generally
75 the casing. In the present showing, this casing is constructed of wood, but in practice it may be of any appropriate material. In accordance with my idea, this casing will be composed of two sections 2 and 3 respectively. The section 2 embodies the base
80 plate 4, the top wall 5, opposite side walls, and an intervening back wall. The back includes an upper stationary section and a hingedly mounted door 6. Appropriate
85 locking means is provided for the swingable end of the door. The section 3 is built in the form of a removable unit. This section comprises a false bottom 7, a front wall 8
90 and a top portion 9. The false bottom 7 rests upon the main base plate 4 as shown plainly in Figs. 2 and 3. Also as shown
95 in Fig. 2, there is a tongue and groove connection between the meeting edges of the top sections 5 and 9.

Mounted upon the false bottom 7 and secured thereto in any suitable manner is a sheet metal box or container 10. As is evident from Fig. 3, the rotary drum 11 is housed in this box and this drum has its
100 periphery constructed to provide a plurality of separate pockets for receiving the cigarettes 12. Disposed within the box and beneath the lower portion of the drum is a
105 downwardly and forwardly inclined chute 13 which terminates in a receiver 14 for the dispensed cigarettes. It is obvious that as the cigarettes are discharged, one by one, from the pockets of the drum they gravitate
110 down this chute 13 and roll into the receiver

ing pan 14. It will be noted, in this connection that the front wall of the casing is provided with an opening through which the receiver extends, and this facilitates removal of the cigarette by the purchaser.

That portion of the metal surrounding the drum is formulated at its top to provide a hopper indicated generally by the reference character 15 (see Fig. 3). In addition, the metal merges into a substantially circular holder indicated as a whole by the reference, 16, this holder being located on the exterior of the casing as shown. As before intimated, the holder is adapted to accommodate the cigarette package 17 which is of a substantially corresponding shape.

It will be noted from Fig. 2 that the holder is open on one side and that this open side is closed by a hingedly mounted closure 18 made in the form of a glass panel. Suitable locking means 19 is provided for maintaining the panel normally closed.

At this time it is advisable to consider the construction of the statutory cigarette package represented more plainly in Fig. 7. Referring to this figure, it will be seen that the package, which may be of cardboard, light weight metal, or the like, is of circular configuration in order to fit snugly into the correspondingly shaped holder 16. At its bottom, it is provided with an opening which is better shown in Fig. 3. At the opposite ends of this opening are small brackets 18 receiving the ends of a slidable closing lid 19. This lid is formed at the center of one longitudinal edge with a bendable tab 20 which facilitates removal of the slide, thus serving as a finger grip.

It will be noted that this tab, when bent as shown in Fig. 7, serves to cover a sight opening 21. In addition, it will be noted from this figure that the cancelled stamp 22 is attached to the front side of the passage and extends over the tab 20. Hence, in order to open the package, it is necessary to tear and destroy the cancelled stamp, after which the tap may be bent down and the slide pulled open.

At this time, I would state that the cigarette package is provided on this same side with the required caution notice, marks and brands. It is therefore evident that when the package is inserted into the holder the torn stamp, caution notice, and other matter will be clearly visible through the transparent panels 18. This is done so that the statutory package of cigarettes when placed in the holder may be inspected to ascertain whether it complies in every respect to the internal revenue laws without necessitating unlocking of the means 19 for removal of the package from the holder.

It is also plain that as after the tab 20 has been bent down and the slide 19 pulled out, this will uncover the sight hole 21 in

order to permit the cigarettes in the carton to be inspected through the panel. In this way it may be readily ascertained when the package has become emptied in order that it may be replaced with a new one. It is desired to state here, that in order to comply with the law, this package will be of a size to contain no more than one hundred cigarettes.

Considering now the construction of the operating means for the drum, it will be observed that this is better shown in Figs. 2 and 6. The drum is of course mounted upon a rotary shaft which is journaled in accordance with appropriate bearings in the metal boxing 10. One side of the boxing, as shown in Fig. 2, has a ratchet wheel 23 mounted. Also rockably mounted on the shaft and movable independent of the same is an arm 24 carrying a pawl 25 at its upper end which is adapted to engage the ratchet teeth. At its lower end the arm is provided with a pivoted actuator 26 which is slidable in the inner end of the guide tube 27. It should be noted that this guide tube is formed in its bottom with a slot to permit passage of the coin 28 therethrough. The coin, of course, drops into an appropriate removal receptacle 29.

The guide tube extends through the front wall 8 and a plunger 30 is slidably mounted therein. From Fig. 6 it is plain that the plunger carries a cross pin 31 which is slidable in elongated slots 32 formed in side walls of the guide tube 27. This limits the movement of the plunger. Also, a suitably anchored and constructed spring 33 bears against the pin and serves to normally maintain the plunger in position for operation. Extending up from the top of the guide tube is an inclined passage 34 for the coins. This passage is aligned with coin slots 35 as shown in Fig. 2. The slot is formed in an appropriate face plate 36 as indicated in Fig. 1. Suitable spring means such as is shown in Fig. 5 serves to maintain the parts 24, 25 and 26 in a normal position such as indicated in Fig. 2. Under such conditions, the part 26 partially covers the coin discharge slot and maintains the coin in the dotted line position here shown.

It is yet to be mentioned that a convenient form of moistener 37 may be utilized, and may be contained in the boxing 10 in order to moisten the tobacco in the cigarettes. The operation of the machine is as follows:—

As before stated the cigarettes are dispensed one by one and it is intended that they be sold at the rate on one cent each. Accordingly, when a purchaser places a cent through the coin intake slot, 35. (see Fig. 2), it gravitates down through the passage 34 and lodges in the guide 27. It is prevented from dropping through the dis-

charge opening by the presence of the part 26. However, by forcing the plunger 30 inwardly against the tension of its spring, it engages the coin which is interposed between itself and the part 26. In so doing, the part 26 is forced inwardly in the guide and serves to impart a slight movement to the rockable arm 24. The result is that the coacting pawl and ratchet teeth move the drum around one step and release the lowermost cigarette from its position shown in Fig. 3. The cigarette rolls down the chute 13 and into the receiving hopper or pan 14, from where it is removed in the customary manner.

It is believed to be plain from the foregoing that the statutory package of cigarettes is placed in the holder 16 after opening the door or panel 18. It is preferably placed in the holder in an intact condition, and while resting in the holder, the cancelled stamp is torn to render the tab accessible. Then the tab is bent down into a horizontal position so that it constitutes a finger piece. It is then pulled and in so doing the slidable cover 19 is drawn to uncover the opening in the bottom of the package. This allows the cigarettes to fall down in an orderly fashion into the hopper 16 as shown plainly in Fig. 3. Hence, as the drum comes around, the pockets are filled and the cigarettes dispensed in the step by step manner described.

All necessary data on the front of the package is clearly visible through the transparent panel to permit it being separated and inspected from time to time. The mechanism for delivery of the cigarettes is a practically direct feed from the original stamped package, which always remains in the machine until it is emptied. When it is emptied, it is immediately removed and the revenue stamp is utterly destroyed so that there may be no possibility of re-use of the empty package. As before stated the package contains no more than one hundred cigarettes.

It is believed that by considering the description in connection with the drawings persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the same. Therefore, a more lengthy description is thought unnecessary.

While the preferred embodiment of the invention has been shown and described, it is to be understood that minor changes com-

ing within the field of invention claimed may be resorted to if desired.

Having thus described my invention, what I claim as new is:—

1. In a vending machine, a casing, vending means in said casing, and means for supplying cigarettes to said vending means, said supply means comprising a holder mounted on top of said casing, said holder being open on its side and provided with a closure permitting access to be had to the interior of the holder, to adapt the holder for reception of a cigarette containing package, said closure being transparent to permit the passage to be inspected from the exterior without opening said closure.

2. In a vending machine of the class described, a casing, a box in said casing, a shaft journaled for rotation in said box, a drum fixedly mounted upon said shaft and located in said box, said drum having its periphery formed with a plurality of cigarette receiving pockets, a downwardly inclined delivery chute arranged in said box, and beneath said drum, a holder on top of said casing, and a hopper associated with said holder and drum, whereby the cigarettes placed in the holder may be permitted to gravitate therefrom into said hopper and to further gravitate at the proper time into the pockets in said drum.

3. In a vending machine of the class described, a casing, a box in said casing, a shaft journaled for rotation in said box, a drum fixedly mounted upon said shaft and located in said box, said drum having its periphery formed with a plurality of cigarette receiving pockets, a downwardly inclined delivery chute arranged in said box, and beneath said drum, a holder on top of said casing, and a hopper associated with said holder and drum, whereby the cigarettes placed in the holder may be permitted to gravitate therefrom into said hopper and to further gravitate at the proper time into the pockets in said drum, said box being of a width considerably less than the width of the interior of the casing to provide a space between the casing and box, said shaft extending into said space, a pawl and ratchet mechanism associated with said shaft for rotating it in a step by step manner.

In testimony whereof I affix my signature.

JOSEPH HANTSCHER.