Feb. 16, 1932. D. F. MANSBACH ET AL 1,845,673

DISPENSING DEVICE

Filed April 20, 1928

Fig. 1.

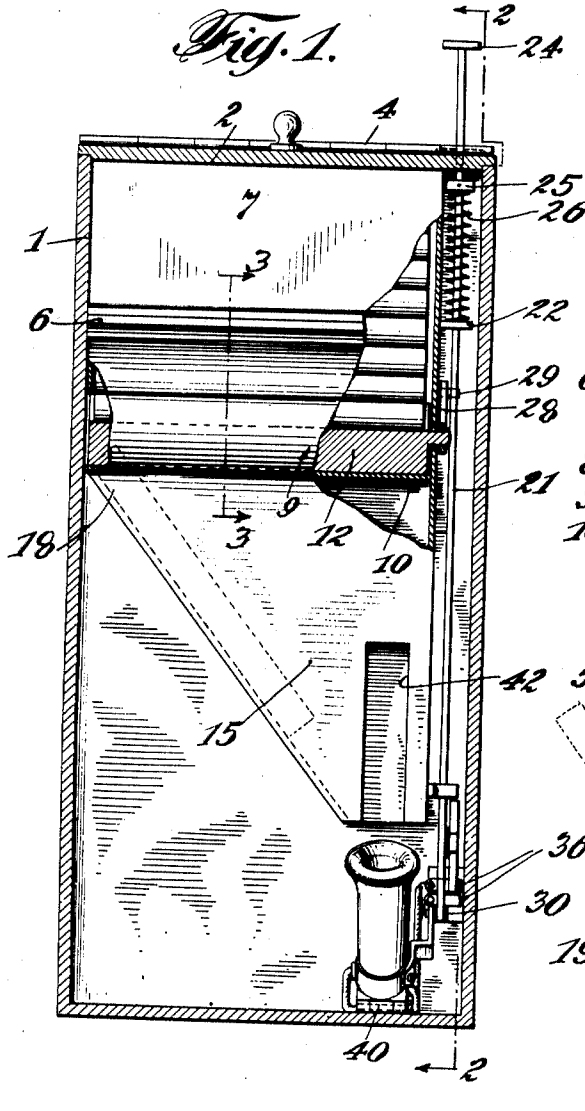


Fig. 2.

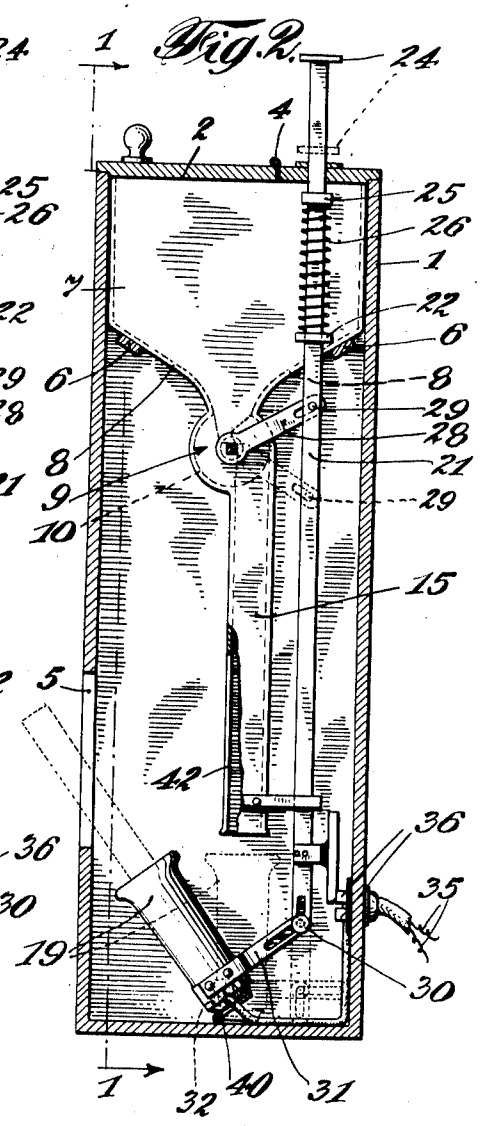
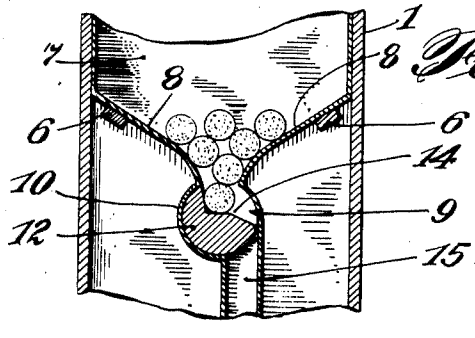


Fig. 3.



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UNITED STATES PATENT OFFICE

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DISPENSING DEVICE

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The present invention relates to dispensing devices and more particularly to a device for dispensing lighted cigarettes.

Cigarette cases of various descriptions are commercial articles at the present time and some are provided with crude forms of mechanisms for dispensing individual cigarettes. The difficulty with such devices is that it is necessary to carry in addition, a supply of matches or a lighter of some kind for lighting the cigarettes. If any attempt is made to utilize either a lighter or matches when exposed to wind, considerable difficulty is encountered. This is particularly embarrassing when driving automobiles where it is frequently necessary to stop the car every time a passenger desires to smoke. Then, too, the waste matches are usually thrown on the floor.

The present invention aims to overcome these difficulties by providing a device which is adapted to dispense lighted cigarettes. The entire mechanism is enclosed in an attractive box and its operation is independent of external conditions such as wind and the like. This makes the dispenser particularly advantageous for use in automobiles, although it is equally useful in dwellings and elsewhere. A suitable quantity of cigarettes comprising one or more packages are stored and dispensed one at a time. In operating the dispensing mechanism, the lighter is automatically operated to light the cigarette and automatically put out when the cigarette is dispensed.

An object of the invention is to provide a device simple and inexpensive in construction which is adapted to dispense lighted cigarettes.

Another object of the invention is to provide a device of the above character which may be readily attached to the interior of automobiles and which is neat and attractive in appearance and reliable in operation to dispense lighted cigarettes.

Another object of the invention is to provide a device of the above character in which the lighting mechanism is automatically operative by means of the dispensing mechanism.

Another object of the invention is to provide a lighting mechanism independent of external atmospheric conditions such as wind and the like.

Other and further objects of the invention will be obvious upon an understanding of the illustrated embodiment about to be described or indicated in the appended claims, and various advantages not referred to herein will occur to one skilled in the art upon employment of the invention in practice.

A preferred embodiment of the invention has been chosen for purposes of illustration and description and is shown in the accompanying drawings, wherein

Fig. 1 is a sectional view showing the inner parts in elevation with portions broken away to illustrate details of the dispensing mechanism;

Fig. 2 is a sectional view with the inner parts shown in elevation; and

Fig. 3 is a sectional view along the line 3—3 of Fig. 1.

Referring to the drawings, there is shown an outer casing 1 which may be of sheet metal, nickel plated or otherwise ornamented. This may be constructed in any suitable manner, the cover portion or lid 2 being hinged in place at 4 to permit the insertion of cigarettes. In one side of the box adjacent the lower end is a slot 5 the function of which will be described hereinafter.

Extending across the box is a pair of supporting members 6, adapted to support a suitable magazine 7 for cigarettes and the like. This magazine may also be of sheet metal and is adapted to fit within the outer box and to be held securely in place by means of the supports and the cover 2, although other means may also be used, if desirable. The lower part of the magazine is composed of a pair of inclined side portions 8 leading to a distributor 9. The cigarettes roll down these inclines and are presented one at a time adjacent the distributor. The latter comprises a cylindrical part 10 of sheet metal and the like and an inner cylindrical rotary member 12 having a longitudinal recess 14. The recess 14 is normally in position to receive a cigarette as shown in Fig. 2 and is of such size that only a single cigarette can enter at one time.

When the cylinder 12 is rotated to its dotted

position as shown in Fig. 2, a cigarette is delivered to the chute 15. One end of the cigarette engages the upper end of the incline 18 causing the cigarette to fall to the position shown in dotted lines in Fig. 1. Thereafter the cigarette slides to the holder 19 at the end of the chute. The chute 15 is preferably closed on all sides with a small outlet at the bottom so that in the event that the device is utilized in a car, the vibrations thereof will not in any way affect its operation, since the cigarette must necessarily fall into the holder 19.

While any suitable mechanism may be utilized for operating the distributor, there is shown in the illustrated embodiment, a lever 21 mounted on one end of the magazine 7. The latter is so constructed that there is sufficient space between the end thereof and the side of the box 1 to permit the mounting of the operating mechanism. The lever 21 extends through the upper end of the box 1 and through a suitable guide 22 mounted upon the magazine 7. Other guides, if desirable, may be provided and attached to the box 1. There is provided at the upper end of the lever an enlargement 24 to facilitate the application of downward pressure thereto. An enlargement 25 is also mounted upon the lever and a spring 26 coiled between it and the support 22 to maintain the lever in its upper position.

There is attached to the distributor 12, an arm 28 which extends over and engages the lever 21 through a pivoted sliding connection as shown at 29. The lower end of the lever is also attached through a pivoted sliding connection 30 to an arm 31 which is rigidly secured to the holder 19. The holder 19 may comprise a suitable cylindrical or conical member adapted to receive a cigarette. At the bottom of this member is a heating or lighting element 32, indicated more or less diagrammatically, for lighting the cigarette. This element may be electrically operated and may be controlled through the leads 35 and contact points 36. The latter are adapted to be closed by the lever 21 immediately that it starts its downward movement.

The connection 30 has a slot extending longitudinally of the lever 21. This is to permit the heating element to remain lighted as long as possible so that full effect may be secured. The holder 19 is hinged to the bottom of the box 1 as shown at 40.

In the operation of the device, cigarettes are placed in the magazine 7 through the lid 2 in the outer box 1. The upper end of the magazine 7, while shown open, may also be provided with a lid if desired.

When a person presses upon the enlargement of the upper end of the lever 21, the lever, in its downward movement, rotates, through the arm 28, the distributor 12, from its full line position in Fig. 2 to its dotted position, at which time a cigarette is delivered to the chute 15. The downward movement of the lever 21 also moves the holder 19, which is normally in the position shown in Fig. 2, to its dotted position for reception of a cigarette. At the same time, the lever 21 closes the contacts 36 to light the lighting element at the bottom of the holder. Hence, the cigarette falls into the holder 19 and its lower end is in contact with the lighting element 32 which has already been energized. The lever 21 may be held down as long as desired although the device is adapted to light the cigarette merely upon the downward movement and release of the lever. If necessary, a suitable dash pot can be added to the device for holding the lever in its downward position for a certain period of time. Upon release of the lever, the distributor 12 is returned to its original position and the holder 19 is canted as shown at Fig. 2 removing the cigarette from the chute through the slot 42 so that its upper end protrudes through the slot 5 in the outer box and may be readily removed.

It will be noted that the invention provides a very effective device for dispensing cigarettes one at a time which might of course, be used in some instances without the lighter but in the preferred embodiment, the lighter and holder receive the cigarette, light and deliver it. The device is independent of external conditions and may be readily attached to the interior of an automobile or may serve as a club or household convenience. The device is attractive in appearance, positive in operation and readily manufactured from commercial material.

As various changes may be made in the above embodiment without departing from the spirit of the invention, it is to be understood that all matter herein is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:

1. In a dispensing device of the class described, the combination of a magazine for cigarettes and the like, a dispensing cylinder having a recess adapted to receive a cigarette, means for rotatably supporting said cylinder, a chute adapted to receive a cigarette from said cylinder upon rotation thereof, a holder for receiving a cigarette from said chute, a lighting element in said holder, means for pivotally mounting said holder, and means for rotating said cylinder and simultaneously positioning the holder with respect to the chute.

2. In a dispensing device of the class described, the combination of means for delivering individual cigarettes, members for rotatably supporting said means, a lighting element, a holder for engaging one end of the cigarette and positioning it with respect to

said lighting element, means for pivotally mounting said holder, said holder being normally in ineffective position with reference to the reception of a cigarette, and means for operating said dispensing means and for simultaneously positioning said holder to receive the cigarette.

3. In a dispensing device of the class described, the combination of a magazine for cigarettes and the like, means for dispensing individual cigarettes from said magazine, members for rotatably supporting said means, a cylindrical holder for receiving a cigarette, means for pivotally mounting said holder, a lighting device in the base of said holder, means for actuating said dispensing means and for positioning said holder, and resilient means for returning said holder to ineffective position so that the cigarette may be removed from the dispensing device.

4. In a device for delivering lighted cigarettes, the combination of a holder comprising a cylindrical receptacle for positioning a cigarette with respect to a lighting element, means for pivotally mounting said holder, a lighting element in the base of said holder, said holder being normally in position to deliver a cigarette, and means for positioning said holder and for automatically lighting said lighting element.

5. In a device for delivering lighted cigarettes, the combination of a lighting element, a chute leading to said lighting element adapted to position one end of a cigarette upon said lighting element, and means for oscillating said lighting element to deliver the cigarette from said dispensing device, said chute being slotted to permit a cigarette to be removed in a sidewise direction upon oscillation of said lighting element.

6. In a device of the class described, a holder adapted to engage a cigarette at one end thereof, a lighting element in said holder, said holder being normally in position to deliver the cigarette from a dispensing device, means for positioning said holder to receive a cigarette, and means whereby said first means is operative to light said lighter.

7. In a dispensing device for cigarettes and the like, the combination of a cylindrical dispensing means, a holder for engaging cigarettes at one end thereof, a chute leading from said dispensing means to the holder, and means for tilting said holder to permit removal of a dispensed cigarette.

8. In a device of the class described, the combination of a magazine for cigarettes and the like, a holder adapted to receive one end of a cigarette, means for delivering individual cigarettes to said holder in upright position, and a lighting element in the base of said holder adapted to ignite the cigarette, and means whereby said lighting means is effective when said delivering means are operated.

9. In a device of the class described, the combination of a holder adapted to receive individual cigarettes and support them in upright position, lighting means in the base of said holder whereby one end of the cigarette is adapted to press against said means due to the weight thereof, means for energizing said lighting means when a cigarette is delivered to said holder, and means for tilting said holder to deliver the free end of the cigarette from the device.

10. In a device of the class described, the combination of a holder adapted to receive individual cigarettes and support them in substantially upright position, lighting means in the base of said holder adapted to ignite one end of the cigarette, and means for tilting said holder to project the free end of the cigarette from the device.

11. In a device of the class described, the combination of a magazine for cigarettes and the like, means for separating individual cigarettes from said magazine, holding means adapted to receive said cigarettes, lighting means in said holding means adapted to ignite one end of the cigarettes, actuating means operatively connected to said separating means, and holding means for feeding a cigarette and positioning said holding means with respect to the delivery of the cigarette from the magazine, and spring means for returning said actuating means to normal position whereby said holder is tilted to project the free end of the cigarette from said device.

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