Oct. 6, 1931. C. J. MARKSON 1,825,805

DISPENSING CASE

Filed April 4, 1930

Fig. 1.

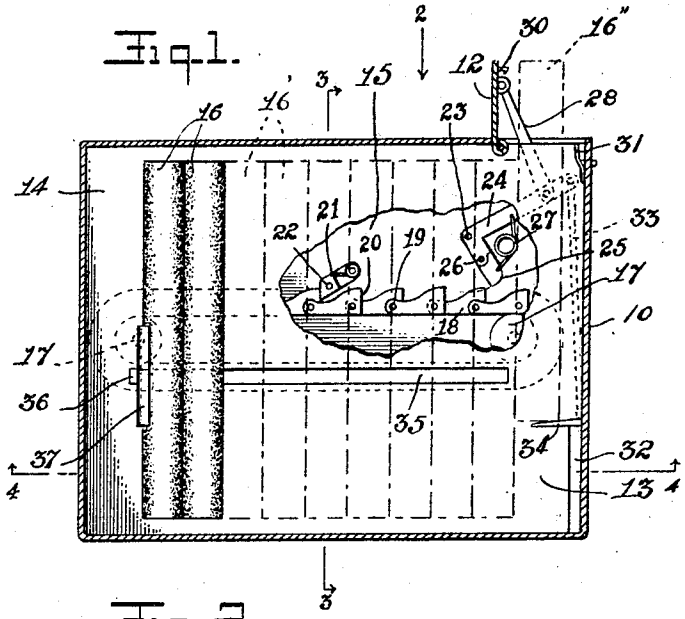


Fig. 2.

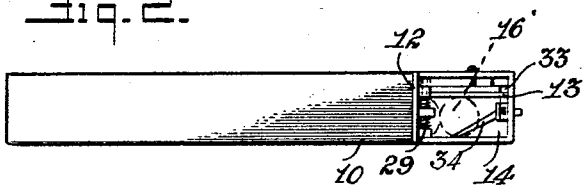


Fig. 3.

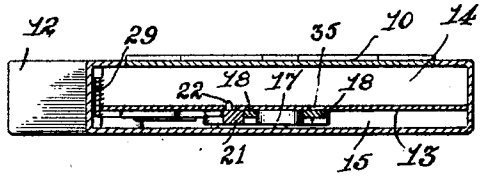
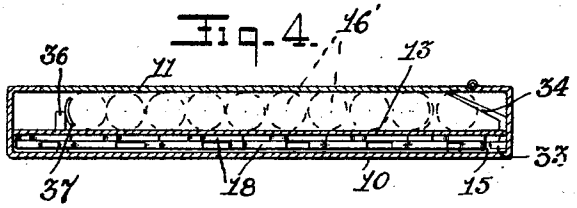


Fig. 4.



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UNITED STATES PATENT OFFICE

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DISPENSING CASE

Application filed April 4, 1930. Serial No. 441,680.

This invention relates to dispensing cases and has for an object to provide a case embodying new and improved mechanism for delivering a single article, such for instance as a cigarette at each opening of the case.

A further object of the invention is to provide, in combination with a housing forming the body of the case, improved means within the body, for moving a contained article to a position for ejection.

A further object of the invention is to provide, in a dispensing case, an improved ejector mechanism operable to eject a single article when the closure is permitted to open.

A further object of the invention is to provide, in combination with a housing forming the body of a case, an endless carrier having a pusher carried thereby working longitudinally of the case and with improved means operable from the closure for moving the carrier, with a step by step motion, to advance the pusher, which in its turn advances the articles within the case, to move one of said articles into position to be ejected, by the mechanism also operable from the opening of the closure.

According to the present invention, the dispensing case is provided with an endless carrier having teeth thereon which are engaged by an oscillating feeding mechanism, said endless carrier being connected with a pusher and an elevator mechanism operable in conjunction with the feeding mechanism and both operable from the closure of the opening through which articles are ejected by the elevator mechanism.

My invention is directed to other objects and possesses other features of novelty and advantage, some of which, together with the foregoing, will be hereinafter set forth.

In the drawings:—

Figure 1 is a view of the improved dispensing case with one side removed and with parts broken away to show the internal construction,

Figure 2 is a top plan view of the case with the ejector closure open as indicated by arrow 2 of Figure 1,

Figure 3 is a longitudinal sectional view taken on line 3—3 of Figure 1, and

Figure 4 is a longitudinal sectional view taken on line 4—4 of Figure 1.

Like characters of reference indicate corresponding parts throughout the several views.

The improved dispensing case, which forms the subject matter of this application, is adapted to dispense any article in rolled cartridge or like form. It is herein, for convenience, shown as a device for dispensing cigarettes, but that is only illustrative and not in any manner a limitation. It comprises a casing 10 having an opening for reloading, closed by a closure 11 and a second closure 12 for the opening through which the articles are ejected singly and which will be hereinafter more fully described.

Within the housing 10, a partition 13 is provided extending over substantially the entire area and dividing the case into two unequal compartments 14 and 15 and functioning as a slideway in the compartment 14. In the larger compartment 14, space is provided for accommodating upon said slideway a plurality of articles illustrated by the cigarettes shown at 16 in Figure 1, and in dotted lines at 16′ in Figures 1, 2 and 4. The size of the housing 10, here shown as accommodating a represented number of cigarettes, is not to be considered as any limitation upon the invention as the case may be larger or smaller and therefore accommodate a greater or lesser number of cigarettes or for accommodating any number of other articles which fall within the wide limit of its utility.

The chamber 15 is the chamber accommodating the working mechanism of the device which consists of a pair of spaced pulleys 17 journaled to the partition 13 and occupying positions adjacent the opposite ends of the case. Over these pulleys 17, a chain is mounted, made up of a plurality of links 18 which are pivoted together as at 19 and having upstanding corners or shoulder 20 so that the outer edge of the said chain presents a ratchet like formation. Pivoted also upon the partition 13 is a detent 21 having a pin 22 extending upwardly through a slot in the partition for manual engagement, as will be hereinafter more fully described, in the operation of the device.

Pivoted at 23 is a bell crank lever 24 to one leg of which is pivoted a finger 25 by a stiff joint 26, controlled by the spring 27. The other leg of the bell crank lever is connected by a link 28, with the closure 12. This closure 12 is provided with a spring 29, tending to open the closure when the latch consisting of the parts 30 and 31 have been manually released, said opening under the spring tension operating the device as will be hereinafter more fully described.

The partition 13, is provided at one end with a slot 32 and within the chamber 15, a bar 33 is pivotally connected with the bell crank lever 24 and making a bend is inserted through the slot 32 and terminates in the compartment 15 as the lifting finger 34 of the elevator.

The partition 13 is also provided with a longitudinal slot 35 through which is inserted a pin 36 attached to one of the links 18, and within the chamber 14 a pusher member 37 is connected with the pin 36, so positioned and proportioned as to slide along the slideway and engage back of the series of articles generically represented by the cigarettes 16.

In operation with the parts arranged as at Figure 1, the closure 11 will be opened and the space filled along on the partition 13, with articles arranged as indicated more particularly at Figure 4. The closure 10, being closed, the closure 12 will be opened by manipulating the latch, whereupon the spring 29 will throw the closure to open position, as shown in the drawings, moving the bell crank to the position shown at Figure 1 and lifting the elevator finger 34, shown at the same figure. This will lift an article to the position shown at 16'' which may be manually removed therefrom. The closure 12, being returned to closed position will depress the bell crank lever so that the finger 25 will move along the dotted line, as shown at Figure 1, engaging one of the links 18 of the chain, and moving it a single step, which position will be maintained by the detent 21. This movement of the chain, in the direction indicated, will cause the pusher 37 to move in the opposite direction, that is to say, in the direction to move the contained articles so that the article most remote from said pusher will be moved to the position over and upon the elevator lifting finger 34 and in position for a repetition of the operation.

Of course, the dispensing case may be modified in various ways without departing from the invention herein set forth and hereinafter claimed.

The invention is hereby claimed as follows:

1. A dispensing case comprising a housing having a partition therein forming a slideway and dividing the chamber into major and minor compartments, said partition having a slot therethrough forming communication between the compartments, an endless carrier mounted wholly within the minor compartment upon pulleys, the axes of which are perpendicular to the partition, a pusher carried by the endless carrier operating through the slot and along the slideway, a closure common to both compartments, means tending to open the closure when released, means connected with the closure to operate the endless carrier with a step by step motion, and an elevator connected with the closure.

2. A dispensing case comprising a housing having a partition therein forming a slideway and dividing the chamber into major and minor compartments, said partition having a slot forming communication between the compartments, an endless carrier mounted wholly within the minor compartment upon pulleys, the axes of which are perpendicular to the partition and having one lap moving in longitudinal juxta-position to the slot, a pusher carried by said endless carrier and projected through the slot into the major compartment, said partition having a second slot perpendicular to the first mentioned slot, a closure common to both compartments, means tending to open the closure when released, means connected with the closure for moving the carrier with a step by step motion, an elevator having one part located within the minor compartment extending through the second mentioned slot into the major compartment and operating means connecting the elevator with the closure.

3. A dispensing case comprising a housing having an endless carrier therein composed of pivoted links which in combination constitute a ratchet, a pawl pivoted adjacent the carrier and having means for engaging the teeth, a closure for the housing, means connecting the closure with the pawl and means carried by the pawl facilitating the idle return of the pawl.

4. A dispensing case comprising a housing, an endless carrier mounted within the housing and composed of pivoted links, each link presenting a shoulder constituting a tooth of a moving ratchet, a pawl pivoted adjacent the moving ratchet having a joint therein adapting the said pawl to propellingly engage the ratchet in one direction and to pass idly thereover in the opposite direction, a closure for the housing, means tending to open the closure when released and means connecting the closure with the pawl tending when opening to move said pawl in its idle direction.

5. In a dispensing case, a supporting wall, pulleys journaled in spaced relation to and their planes parallel with the wall, an endless carrier passing about the pulleys, said wall having a slot therein in longitudinal juxta-position to one lap of the endless carrier, a pusher carried by the endless carrier and extending through the slot, a closure for the housing, means tending to open the closure when released, means connected with the clo-

sure for moving the endless carrier a single step when the closure is manually closed, said means facilitating the idle return of the impelling means when the closure is opening and means to restrain the closure in closed position.

6. In a dispensing case, a housing, an endless carrier mounted within the housing, said endless carrier comprising pivotally connected links, each of said links being provided with an upstanding shoulder in combination forming a ratchet, a pusher carried by the endless carrier and a manually operable pawl mounted for co-operation with the movable ratchet.

7. A dispensing case comprising a housing a partition dividing the housing into compartments, an endless impelling unit in one compartment traveling upon journals perpendicular to the partition, and a pusher actuated by the impelling unit and extending into the other compartment.

8. A dispensing case comprising a housing having an opening, a closure for the opening, a partition dividing the housing into compartments, an endless impelling unit in one compartment traveling upon journals perpendicular to the partition, and a pusher actuated by the impelling unit and extending into the other compartment.

9. A dispensing case comprising a housing having an opening, a closure for the opening, a partition dividing the housing into compartments, an endless impelling unit in one compartment traveling upon journals perpendicular to the partition, means employing the closing movement of the closure to advance the impelling unit with a step-by step motion, and a pusher actuated by the impelling unit and extending into the other compartment.

10. A dispensing case comprising a housing having an opening, a closure for the opening, a partition dividing the housing into compartments, an endless impelling unit in one compartment traveling upon journals perpendicular to the partition, means employing the closing movement of the closure to advance the impelling unit with a step-by-step motion, a pawl, means employing the closing movement of the closure to propel the pawl into operative engagement with one tooth of the ratchet, and a pusher actuated by the impelling unit and extending into the other compartment.

11. A dispensing case comprising a housing, a slotted partition dividing the housing into compartments, an endless impelling unit in one compartment traveling upon journals perpendicular to the partition, and a pusher actuated by the impelling unit extending into the other compartment.

12. A dispensing case comprising a housing, a slotted partition dividing the housing into compartments, an endless impelling unit in one compartment traveling upon journals perpendicular to the partition, and a pusher actuated by the impelling unit and extending through the slot into the other compartment.

13. A dispensing case comprising a housing, a partition dividing the housing into major and minor compartments, an endless impelling unit in the minor compartment traveling upon journals perpendicular to the partition, and a pusher actuated by the impelling unit and extending into the other compartment.

14. A dispensing case comprising a housing, a partition dividing the housing into compartments, an endless impelling unit in one compartment composed of pivoted links, each link presenting a tooth unitedly forming a ratchet and traveling upon journals perpendicular to the partition, and a pusher actuated by the impelling unit and extending into the other compartment.

15. A dispensing case comprising a housing, a partition dividing the housing into compartments, an endless impelling unit in one compartment traveling upon journals perpendicular to the partition, an elevator, means employing the opening movement of the closure to actuate the elevator, and a pusher actuated by the impelling unit and extending into the other compartment.

16. A dispensing case comprising a housing having an opening, a closure for the opening, a partition dividing the housing into compartments, an endless impelling unit in one compartment composed of pivoted links, each link presenting a tooth unitedly forming a ratchet and traveling upon journals perpendicular to the partition, means employing the closing movement of the closure to advance the impelling unit with a step-by-step motion, an elevator, means employing the opening movement of the closure to actuate the elevator, and a pusher actuated by the impelling unit and extending into the other compartment.

17. A dispensing case comprising a housing having an opening, a closure for the opening, a partition dividing the housing into compartments, an endless impelling unit in one compartment composed of pivoted links, each link presenting a tooth unitedly forming a ratchet and traveling upon journals perpendicular to the partition, a pawl, means employing the closing movement of the closure to propel the pawl into operative engagement with one tooth of the ratchet, an elevator, means employing the opening movement of the closure to actuate the elevator, and a pusher actuated by the impelling unit and extending into the other compartment.

18. A dispensing case comprising a housing having an opening, a closure for the opening, a slotted partition dividing the housing into compartments, an endless impelling unit

in one compartment traveling upon journals perpendicular to the partition, a pawl, means employing the closing movement of the closure to propel the pawl into operative engagement with one tooth of the ratchet, an elevator, means employing the opening movement of the closure to actuate the elevator, and a pusher actuated by the impelling unit and extending through the slot into the other compartment.

19. A dispensing case comprising a housing having an opening, a closure for the opening, a slotted partition dividing the housing into major and minor compartments, an endless impelling unit in the minor compartment composed of pivoted links, each link presenting a tooth unitedly forming a ratchet and traveling upon journals perpendicular to the partition, an elevator, means employing the opening movement of the closure to actuate the elevator, a pawl, means employing the closing movement of the closure to propel the pawl into operative engagement with one tooth of the ratchet, and a pusher actuated by the impelling unit and extending through the slot into the other compartment.

In testimony whereof I have signed my name to this specification.

CLEMENS J. MARKSON.