July 31, 1951 J. F. GUSTAFSON ET AL 2,562,666

CIGARETTE DISPENSER

Filed Nov. 13, 1948 2 Sheets-Sheet 1

Fig. 1

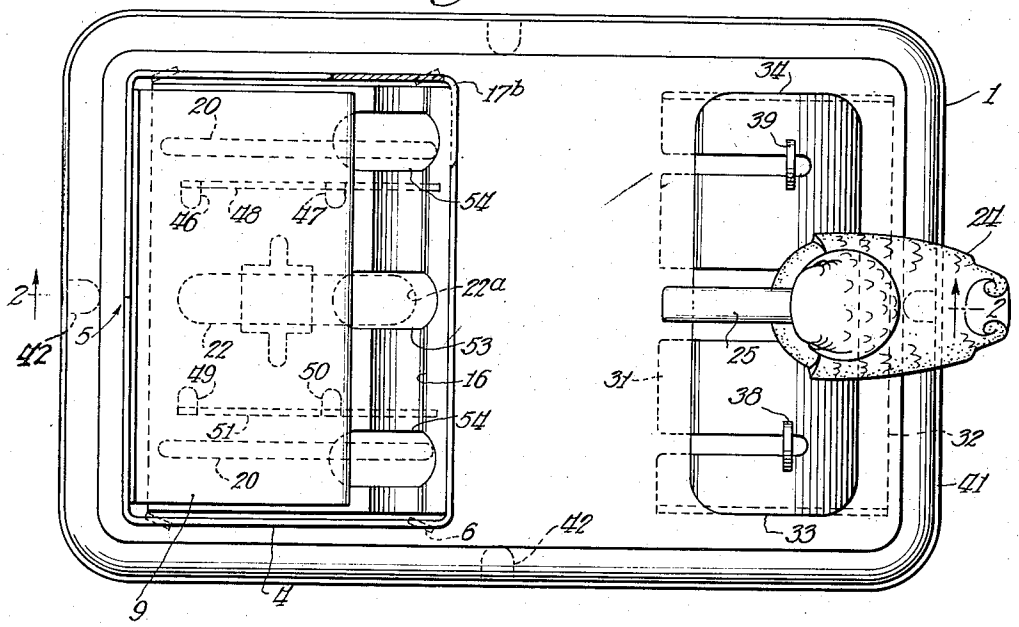
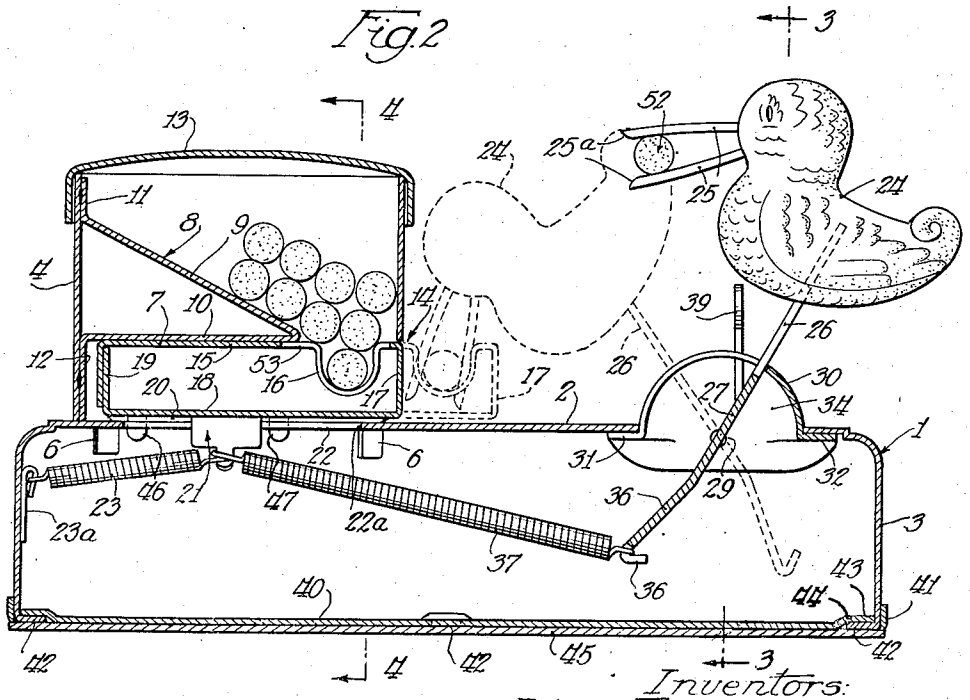


Fig. 2



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Filed Nov. 13, 1948 2 Sheets-Sheet 2

Fig. 3.

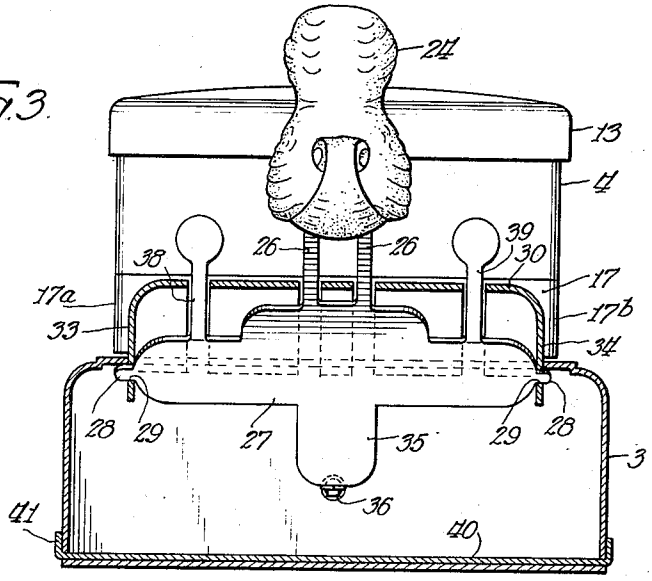
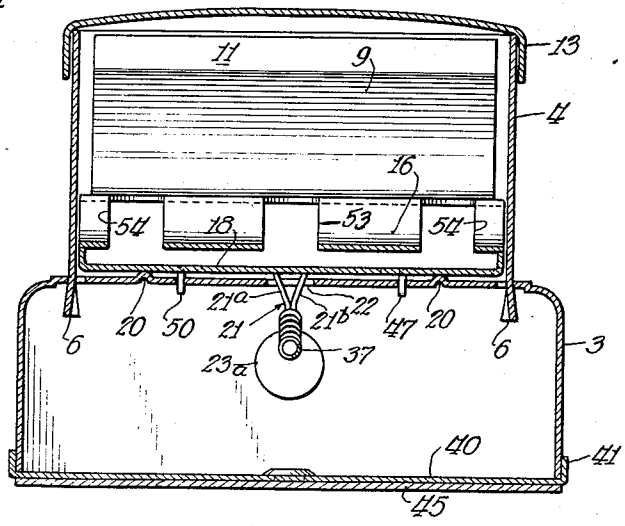


Fig. 4.



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CIGARETTE DISPENSER

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2 Claims. (Cl. 312—76)

1

This invention relates to a cigarette dispenser of what might be called a novelty type.

The device embodies relatively movable, cooperating parts, the movements of which, must be properly timed relative to each other for proper operation. The main object of the present invention is to provide a device of the character indicated, which, notwithstanding the requirement of timed, movable, cooperating parts, is of relatively simple and inexpensive construction but which will operate smoothly and efficiently.

Other objects and advantages of the invention will be understood by reference to the following specification and accompanying drawings (two sheets) in which there is illustrated a cigarette dispenser embodying a selected form of the invention.

In the drawings,

Fig. 1 is a top plan;

Fig. 2 is a longitudinal cross section on the line 2—2 of Fig. 1, and

Figs. 3 and 4 are transverse sections on the lines 3—3 and 4—4 respectively of Fig. 2.

The cigarette dispenser illustrated in the drawings comprises a hol'ow sheet metal base 1, which has a top plate or platform 2 and depending side walls 3. This base may be in the form of a one piece stamping with rounded side corners and a more or less ornamentally formed top corner as shown.

A storage chest or cigarette receptacle is mounted on top of the base and consists of a side wall structure 4 in the form of a rectangular tube-like member, preferably formed of a strip of sheet metal bent to the required shape, the strip having its opposite ends brought together in abutting relation as indicated at 5 in Fig. 1. This side wall structure is fixedly secured to the platform 2 of the base by means of a suitab'e number of ears, such as represented at 6, which depend from opposite side wall portions and project downwardly through suitably formed holes in the platform. The ears 6 may be slightly twisted or bent to permanently anchor the side wall structure 4 to the base.

Within the receptacle 4 there is provided a drawer 7 and a false bottom structure 8, the latter embodying a downwardly and forwardly inclined panel 9 and a rearwardly extending horizontal panel 10 which overlies the rearward portion of the drawer 7. This false bottom structure may be rigidly secured in place by means of an upwardly extending lip part 11 spot welded or otherwise secured to the back of the side wall structure 4, and by means of another lip 12

2

which depends from the rear edge of the horizontal part 10 and is spot welded or otherwise secured to the rear of said wall structure 4. A removable cover or cap 13 is fitted to the top of the storage receptacle.

The drawer 7 is also preferably of sheet metal construction and it is slidable forwardly and rearwardly through an opening 14 in the front wall of the cigarette supply chamber. Said drawer has a top wall 15 which is provided near its forward portion with a recessed portion 16 of more or less U-shape and of such size as to be adapted to receive a single cigarette to be dispensed. The drawer also has a front wall 17 which, in the closed position of the drawer, is substantially co-planar with the front wall part of the cigarette supply chamber, a bottom wall 18 and a rear wall 19 formed of overlapping end portions of the metal strip from which the drawer is formed. Said overlapping end portions may be spot welded or otherwise secured together to prevent the upper and lower wall portions of the drawer from tending to spread apart.

The vertical dimension of the drawer is preferably somewhat less than the vertical dimension between the horizontal part 10 of the false bottom structure and the p'atform 2 of the base so that the drawer is freely slidable under said false bottom part 10. To further insure free sliding movement, the platform 2 may be provided with a pair of upwardly pressed narrow ridges or ribs 20 (Fig. 4) on which the bottom 18 of the drawer slides with a relatively small amount of friction. This rib or ridge support for the drawer also prevents the drawer from rubbing against the main surface of the platform 2 when the drawer is projected from the supply chamber so that the finish of the platform is thereby protected against injury.

When the drawer 7 is moved forwardly by means presently to be described, a single cigarette carried in the pocket 16 will, of course, be carried forwardly to an exposed position as represented in dotted lines in Fig. 2. During the forward movement of the drawer, the horizontal top part 15 of the drawer supports the cigarettes remaining in the supply chamber.

The drawer is provided with a depending ear 21 which, in this instance, consists of a pair of ears 21A and 21B which are punched downwardly out of the bottom wall 18 of the drawer and brought together as best shown in Fig. 4 approximately centrally of the width of the drawer. Said ear 21 extends downwardly through a slot 22 provided in the platform 2 of the base so that

the ear may slide forwardly and rearwardly as required by the indicated movement of the drawer.

A spring 23 stretched between a portion of the ear 21 and an anchorage on the rear of the base serves to yieldingly hold the drawer in its retracted position as shown in full lines in Fig. 2. The rear anchorage for the spring 23 is preferably in the form of a hook member 23A which may be welded or otherwise secured to the back wall of the base. This form of anchorage avoids any cutting of the exposed wall portions of the base so as to avoid impairment of the appearance of the device.

Rearward movement of the drawer may be limited by means of end extensions 17A and 17B of the front wall 17 of the drawer (Figs. 1 and 3) which are adapted to engage the front edges of the sides of the supply chamber 4. This provides a very simple but effective means for insuring accurate alignment of the front wall 17 of the drawer with the front wall of the supply chamber when the drawer is in retracted or closed position.

For effecting forward or dispensing movement of the drawer and for presenting the dispensed cigarette in a readily accessible position, there is provided a movable pick-up device which, in this instance, is represented by a more or less fantastic or novelty bird body form 24 equipped with a cigarette pick-up bill consisting of a pair of resilient members 25. The body 24 is mounted on a pair of strip-like extensions 26, 26 of a metal plate 27, which is pivotally mounted in the base. Said strip-like extensions 26, 26 constitute a more or less fanciful representation of the legs of the bird body.

The metal plate 27 comprises a main body portion of sufficient thickness and width to have sufficient stiffness and strength to support the pick-up device and it is pivotally mounted in the base by means of a pair of small endwise extending ears 28, 28 which extend from the opposite ends of the plate and project through suitable bearing openings 29 provided in end portions of a mounting dome 30. The mounting dome 30 is of elongated approximately semi-cylindrical shape having approximately diametrically extended front and rear edge flanges 31 and 32 respectively, which underlie the platform 2 of the base and are spot welded or otherwise secured to said platform. The platform is, of course, provided with a suitable opening to permit the dome portion 30 to be projected upwardly through the platform to the extent permitted by the flanges 31 and 32.

The dome 30 is provided with integrally formed end walls 33 and 34 which extend downwardly below the platform 2 as shown in Figs. 2 and 3, to provide portions having said bearing openings 29 to pivotally receive the pivot ears of the plate 27. The plate 27 is also provided with a depending central ear 35 provided at its lower end with a hook 36 whereby a coil spring 37 may have an end loop connected to said ear 35. The other end of the spring 37 is suitably connected to the ear 21 of the drawer.

The domed member 30 is of approximately semicylindrical conformation about the axis of the pivot mounting 29 of the plate 27. This detail results in a good appearance in respect of the visible length of the leg elements 26 while permitting the employment of leg lengths which provide a path of travel for the pick-up member which path is of such length as to facilitate attainment of desired relationships between the movements of the drawer 7 and the pick-up device as will presently appear.

The operating plate 27 is also provided with a pair of upwardly extending operating arms 38 and 39, these arms being preferably disposed at an upwardly upstanding angle somewhat offset from the plane of the leg portions 27 as shown in Fig. 2. The upper ends of the arms 38 and 39 are preferably provided with suitable enlargements as illustrated, to provide adequate areas for engagement with the end of a finger for operating the device.

The mounting dome 30 is, of course, suitably slotted as indicated, to permit the passage of the legs 26 and the operating arms 38 and 39 upwardly through the dome. These slots preferably continue through the forward lip or flange 31 so as to facilitate assembling of the mounting dome 30 with the operating plate 27.

The base 1 has its bottom closed by means of a bottom plate 40 which has an upwardly extending peripheral flange 41 which fits snugly around the lower marginal portion of the base side walls. For attaching the bottom closure to the base, the base is provided with a plurality of depending ears such as indicated at 42, which project downwardly from the side walls of the base through slots 43 provided in the bottom 40, the said ears or tongues 42 being bent inwardly and seated in suitable recesses 44 formed in the bottom plate for the purpose of receiving said ears. A suitable felt or other non-scratching bottom sheet 45 is adhered to the bottom plate to cover the fastening ears 42 and to provide a desirable pad for protecting the finish of a table or desk top or the like against injury by the device.

The drawer 7 may be guided in its movement by the slot 22 and the ear 21. However, additional guiding means may be provided. Such additional guiding means may comprise a pair of spaced ears 46 and 47 depending from the bottom 18 of the drawer adjacent one side thereof and extending through an elongated slot 48 in the platform 2, and a similar pair of ears 49 and 50 and a slot 51 adjacent the other side of the drawer. The slots are of a width to permit free but controlled or guided movement of the ears relative to the base as an incident to the movement of the drawer. These guiding ears and slots will serve to prevent cramping of the drawer which, in the absence of some such guide means, might occasionally occur and interfere with normal operation of the dispenser.

A supply of cigarettes is introduced into the supply chamber 4 which is preferably of sufficient size to hold the entire content of conventional cigarette packages. The cigarettes being supplied to the supply chamber are dispensed one by one by pressing either of the operating arms 38 or 39 toward the supply chamber and downwardly to thereby rock the mounting plate 27 in a counter-clockwise direction as viewed in Fig. 2. Such rocking movement of the plate 27 carries the pick-up device toward the supply chamber and downwardly and it also acts through the spring 27 to effect forward movement of the drawer 7. The spring 37 is selected of greater strength than the spring 23 so that the spring 37 will initially act as a link to effect the indicated forward movement of the drawer 7. Forward movement of the drawer 7 is limited by engagement of the ear 21 with the forward end 22A of the slot 22 so that the drawer can only be projected to about the position illustrated in dotted lines in Fig. 2. When the drawer reaches

this projected position, the pick-up device is in an intermediate position where the ends 25A of the bill-like members 25 are at an elevation above the top wall of the drawer. However, continued counter-clockwise rocking of the pick-up device is permitted notwithstanding the fact that the drawer has reached its forward limit of movement.

Such additional movement of the pick-up device is permitted because the spring 37 is capable of yielding as required to permit the pick-up bill structure to be moved downwardly to the position approximately as represented in dotted lines in Fig. 2 wherein the elements 25 of the bill embrace the cigarette and more or less pinch the cigarette so that upon reverse movement of the pick-up device the cigarette will be carried upwardly and finally held in the position illustrated at 52 in Fig. 2. In this position, the cigarette is readily accessible since only a narrow central portion of the cigarette is enclosed by the pick-up bill and the opposite end portions are wholly exposed and readily accessible.

During the retractive or clock-wise movement of the pick-up device, the pick-up structure will move upwardly to withdraw the bill and cigarette from the drawer before retraction of the drawer starts. This movement occurs while the spring 37 is contracting and is under sufficient tension to maintain the drawer in its projected position. After the pick-up device has cleared the drawer 7, the spring 37 reaches its normal contracted condition whereupon the spring 23 is permitted to act to effect retraction of the drawer 7 as permitted by the final portion of the reverse movement of the pick-up device.

To enable the pick-up bill elements 25 to embrace the cigarette in the manner set forth, the drawer 7 is provided with a slot 53 which traverses the cigarette receiving seat 16. Said slot is of sufficient length and breadth as indicated, to permit the pick-up bill to avoid any contact with the drawer structure. If desired, additional slots 54 may be provided to avoid entrapment of particles of tobacco in the seat so that the said seat is in effect self-cleaning. Such particles will, in the course of movement of the drawer back and forth, find their way through one or other of the slots 53 or 54 and fall into the interior of the drawer from which they may be removed when desired.

The described structure embodies relatively simple sheet metal stampings which can be made by well known mass production methods so that the cost of production can be maintained very low for an item embodying the indicated movements and timing problems. The bird body or other member 24 may be made by molding to obtain various novel and attractive effects although, if desired, the pick-up bills 25 could be carried by a simple flat plate extension of the leg elements 26.

Various changes in the described structure may be made without departing from the invention.

We claim:

1. In a dispenser having a hollow base, a receptacle on said base for a supply of cigarettes, a drawer movable over said base into and out of said receptacle and provided with means for receiving a cigarette from said supply and for carrying such cigarette to a position outside of said receptacle, a pick-up member mounted on said base for rocking movement to and from said drawer when the latter is projected from said receptacle, said pick-up member having means for gripping the cigarette in said projected drawer so as to remove the cigarette from the drawer upon movement of the pick-up member from said drawer, and means interconnecting said drawer and pick-up member so as to effect synchronized movement thereof upon actuation of said pick-up member, said interconnecting means comprising a pick-up carrying member pivoted on said base, an ear depending from said drawer into said base, and resilient, extensible means connecting said ear and a portion of said pick-up carrying member below its pivot axis, said extensible means serving to effect concurrent rocking movement of said pick-up member toward said drawer and movement of said drawer to projected position as an incident to manual rocking of said pick-up member toward said drawer and to permit continuation of the rocking movement of said pick-up member into engagement with a cigarette in said drawer and withdrawal of the cigarette from said drawer while the latter remains stationary.

2. A device according to claim 1, wherein there is also a resilient extensible means connected to said ear and a portion of said base for effecting retraction of said drawer and rocking of said pick-up member from said drawer, said last mentioned extensible means being less resistant to extension than the extensible member which connects the pivot plate to said drawer, thereby to effect predetermined timing of the drawer movements relative to the movements of said pick-up member.

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