

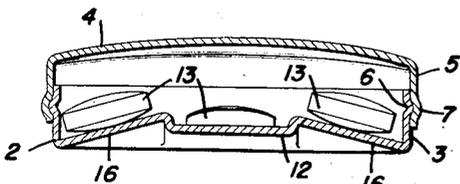
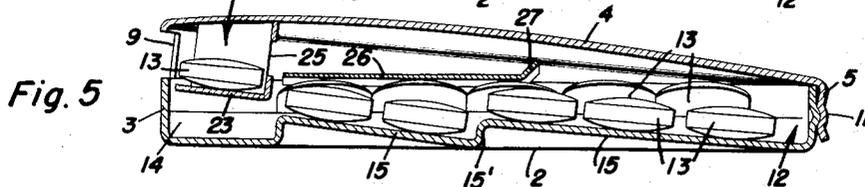
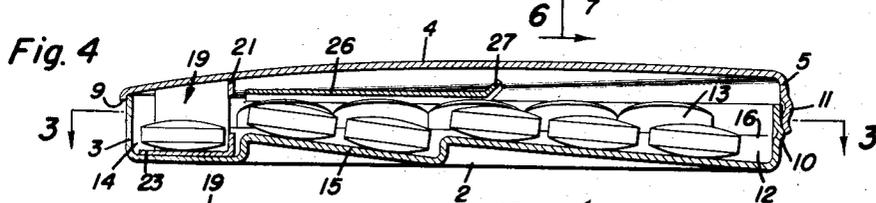
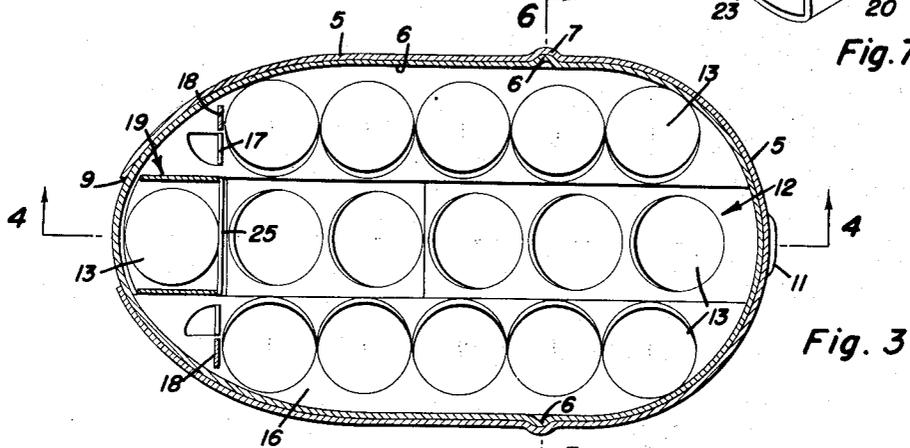
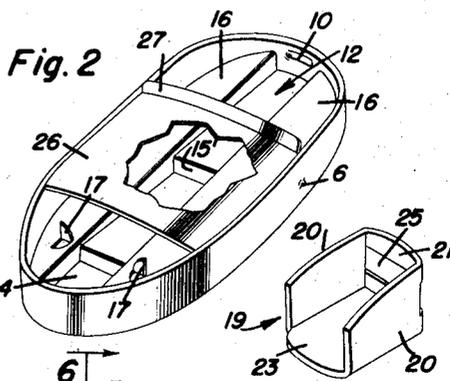
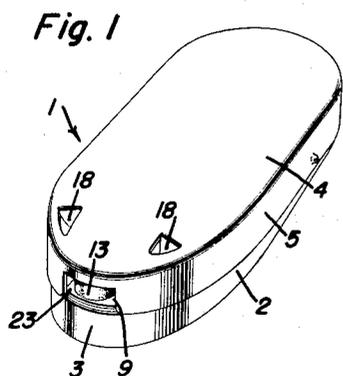
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2,653,706

DISPENSING CONTAINER FOR TABLETS AND THE LIKE

Filed May 24, 1950



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# UNITED STATES PATENT OFFICE

2,653,706

## DISPENSING CONTAINER FOR TABLETS AND THE LIKE

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6 Claims. (Cl. 206—42)

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My invention relates to improvements in dispensing containers of the cover controlled type for dispensing especially, although not necessarily, medicinal tablets, one at a time.

The primary object of my invention is to provide a dispensing container of the flat box, pocket-size type for dispensing when tilted by hand single tablets without exposing the other tablets and in which the dispensing is controlled by merely pressing together a cover and bottom section of the container.

Another object is to provide a container of the type and for the purpose above set forth in which each tablet, prior to dispensing, is lifted above and separated from the other tablets to prevent interference with the same by the other tablets during dispensing.

Still another object is to provide a container for accomplishing the above which is simple in construction, easy to operate, and comparatively inexpensive to manufacture.

Still another object is to provide an automatic dispensing container for tablets, pills, capsules, and the like by means of which such contents are kept in absolutely sanitary condition and may be dispensed directly into the mouth, one at a time, without being touched by the hands.

Other and subordinate objects, within the purview of my invention, together with the precise nature of my improvements, will be readily understood when the succeeding description and claims are read with reference to the drawing accompanying and forming part of this specification.

In said drawing:

Figure 1 is a view in perspective of my improved container in the preferred embodiment thereof, with the cover tilted to uncover the dispensing opening for dispensing of a tablet out of the elevator;

Figure 2 is a view in perspective of the bottom section partly broken away;

Figure 3 is a view in horizontal section taken on the line 3—3 of Figure 4 and drawn to a larger scale;

Figure 4 is a view in longitudinal vertical section taken on the line 4—4 of Figure 3 with the cover in normal position;

Figure 5 is a similar view with the cover tilted to uncover the dispensing opening and a tablet elevated by the elevator member for dispensing;

Figure 6 is a view in transverse section taken on the line 6—6 of Figure 4; and

Figure 7 is a view in perspective of the elevator member detached.

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Referring to the drawing by numerals, my improved dispensing container, as illustrated, has the form of a substantially oval, shallow, flat box 1 including a bottom section 2, with a circumscribing perpendicular wall 3, and a cover 4 with a depending circumscribing flange 5.

The cover 4 is pivotally connected to the bottom section 2 for vertical swinging thereon about an axis transverse thereto adjacent to what constitutes the rear end of the box 1. For this purpose, the wall 3 at the sides of the bottom section 2 is formed with a pair of opposite punched out nubs 6 fitting in a pair of similarly formed nubs 7 in the flange 5 of the cover 4. The nubs 7 fit over the nubs 6 with a snap action for forming the pivotal connection and may be pulled off the nubs 6 for detaching the cover 4 when desired. At the opposite end of the box 1, constituting the front discharge end, the flange 5 is notched from its edge to provide a rectangular shaped dispensing opening 9 in the longitudinal center of said cover 4. The dispensing opening 9 is of the proper size to pass therethrough the kind of tablet to be dispensed.

As will be seen, and upon reference to Figures 3 and 4, when the cover 4 is in normal closed position, the dispensing opening 9 is covered and closed by the wall 3 at the front end of the bottom section 2. However, and as best shown in Figures 1 and 5, by pressing the cover 4 and the bottom section 2 together at the rear end of the box 1, in the rear of the described pivotal connection, the cover 4 may be swung downwardly at its rear end relative to the bottom section 2 to swing the same into upwardly and forwardly tilted position relative to the bottom section 2 and thus raise the dispensing opening 9 above the wall 3 of said bottom section into uncovered, open dispensing position while the box 1 is otherwise closed.

To yieldingly hold the cover 4 in normal closed position, or, in upwardly tilted position, an external bead 10 is formed in the wall 3 at the rear end of the bottom section 2 on which the flange 5 rests to yieldingly maintain the cover 4 in normal position, and the flange 5 at the rear end of the cover 4 is formed with an external concaved bead 11 adapted to snap over the bead 10 and yieldingly maintain the cover 4 in tilted position.

The bottom section 2 is formed with a longitudinal, central magazine groove 12 for containing a row of tablets 13 and which terminates at the front end of said section 2 in a rectangular pocket 14 for a purpose presently seen. Rearwardly of

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the pocket 14, the magazine groove 12 is provided with forwardly and upwardly slanting bottom sections 15 for checking forward sliding of the row of tablets 13 in said groove when the box 1 is tilted forwardly and downwardly for a purpose presently seen. The bottom of the bottom section 2 is formed at opposite sides of the magazine groove 12 with a pair of longitudinal ledges 16 for containing tablets 13 in a row to replenish the magazine groove 12, and which slant laterally downwardly from said groove 12 to check sliding of the tablets 13 on said ledges off the same and into the magazine groove 12 during the dispensing operation presently described. Stop lugs 17 bent up from the ledges 16 prevent the tablets 13 on said ledges 16 from sliding into the pocket 14. Similar stop lugs 18 depending from the cover 4 over the ledges 16 prevent the tablets 13 on said ledges from jumping over the lugs 17 into the pocket 14 when the cover 4 is tilted and the box 1 shaken in the dispensing operation.

A tablet elevator member 19 is provided on the cover 4 in vertical alignment with the pocket 14 and opposite the dispensing opening 9. The tablet elevator member 19 is rectangular, with sides 20 and a rear end wall 21 suitably fixed to said cover 4, an open front end opposite the dispensing opening 9 for passage of tablets out of said member 19 through said opening 9, a flat bottom 23 seating on the bottom of the pocket 14 when the cover 4 is in normal position, as shown in Figure 4, and a slot 25 in the rear end wall 21 opposite the leading tablet 13 in the magazine groove 12, when the cover 4 is in normal position, and providing for passage of said leading tablet out of the magazine groove 12 into the elevator member 19 for seating on the bottom 23 of said member below said slot.

A guard plate 26 in the bottom section 2 suitably fixed to the wall 3 to extend across said section above the magazine groove 12 and ledges 16 provides for maintaining the tablets 13 flatwise in said groove 12 and on said ledges 16 for a suitable distance in the rear of the elevator member 19. The primary function of the guard plate 26 is to prevent the tablets 13 immediately in the rear of the pocket 14 from standing on edge and jamming in the box 1. The guard plate 26 is spaced forwardly of the rear end of the bottom section 2 sufficiently to permit tablets 13 on the ledges 16 to be jarred off said ledges into the magazine groove 12 to replenish said groove. An upturned rear edge flange 27 on the guard plate 26 prevents tablets 13 from finding their way on top of said plate when the box 1 is shaken, or when the box is being carried in the pocket.

Referring now to the operation of the described invention, with a row of tablets 13 in the magazine groove 12, a row of tablets 13 on each ledge 16, and a tablet disposed in the elevator member 19, the box 1 is loaded to capacity. As long as the cover 4 is maintained in normal position, the tablets 13 are enclosed and protected. To dispense the tablet 13 in the elevator member 19, the cover 4 is tilted, in the manner described, to uncover the dispensing opening 9 and elevate the tablet for dispensing out of said opening. By tilting the box 1, front end downwardly, the tablet 13 in the elevator member 19 will be caused to slide, under the influence of gravity, out of said dispensing opening 9. The elevator member 19 may then be reloaded by swinging the cover 4 downwardly into normal position, as shown in Figure 4, tilting the box downwardly

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and forwardly and shaking the same slightly to cause the leading tablet 13 in the magazine groove 12 to slide through the slot 25 into the elevator member 19. The reloading tablet 13 may then be dispensed like the first tablet, and the elevator member 19 reloaded and the reloading tablet dispensed, as desired, until the supply of tablets 13 in the magazine groove 12 is exhausted. The magazine groove 12 may be replenished from the ledges 16 by tilting the box 1 rear end lowermost and shaking the box sideways to displace tablets off said ledges into said groove.

The elevator member 19, it will be noted, when the same is lowered into the pocket 14, blocks, by means of its rear end wall 21, escape of tablets 13 out of said member back into the magazine groove 12. Also, when the elevator member is elevated, the rear end wall 21 thereof blocks escape of tablets 13 out of the magazine groove 12 into the pocket 14. The forwardly and upwardly inclined sections 15 tend to check forward sliding of the tablets 13 in the magazine groove 12 during elevation of the elevator member 19 and during the dispensing operation and hence reduce abrasive action of the tablets 19 against each other tending to form powder in the box 1 and reduce the efficiency of the tablets. As will be noted, the elevator member 19 forms a front trap for the foremost tablet 13 and the inclined sections 15 are joined by a stop wall 15' perpendicular thereto which, together with the inclined section 15 next to the pocket 14, forms another trap blocking backward movement of tablets 13. The rearmost inclined section together with the replenishing ledges 16 form a rear tablet trap so as to prevent backward movement of tablets 13 onto said ledges. Thus, almost any movement of the dispensing container, shaking, tipping forwardly, turning when carried in the pocket, or done by hand, tends to cause tablets in the magazine groove 12 to move forwardly so that a tablet 13 is substantially always disposed in the elevator member 19 ready for dispensing. The cover 4 being pivoted off center adjacent its rear end provides, by slight movement of its rear end, for quick, easy opening at its forward end with a snap action. The nubs 6, 7 snap apart easily, making it easy to detach the cover for reloading of the container 1. As will be manifest, the container 1 is substantially a two-piece structure, inexpensive to manufacture and adapted to sell in the low-priced field. The cover 4 may be removed, in a manner which will be clear, for refilling the box 1 when empty.

The foregoing will, it is believed, suffice to impart a clear understanding of my invention, without further explanation.

Manifestly, the invention, as described, is susceptible of modification, without departing from the inventive concept, and right is herein reserved to such modifications as fall within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A tablet dispensing container having a dispensing end for discharging tablets by gravity when the container is tilted by hand to lower said end, said container comprising a bottom section having a surrounding wall, a cover section having a surrounding flange fitting over said wall, means pivotally connecting said flange to said wall for tilting of said cover section on said wall in opposite directions, respectively, into open and closed positions, said flange having a tablet dis-

charge opening therein at said dispensing end of the container closed by said wall upon tilting of said cover section into closed position and opened by tilting of the cover section into open position, and a tablet elevating platform spaced from and secured to said cover section adjacent said opening for movement inwardly and outwardly of the bottom section by tilting of said cover section into closed and open positions to pick up and lift a tablet out of said bottom section for discharge through said opening, said platform having a rear opening spaced above its bottom for passing a tablet in said bottom section on to the platform and to prevent rearward movement of the tablets off said platform and also having a front opening in line with the discharge opening for passing the tablet off the platform to the discharge opening, said bottom section having a pocket in its bottom seating the platform when the cover section is closed to position said rear opening for passing the tablets therethrough onto the platform.

2. A tablet dispensing container according to claim 1 including a longitudinal magazine groove in the bottom of the bottom section for containing a row of tablets for gravity feed in succession to said rear opening when said container is tilted and the cover is closed, said groove terminating at the pocket above the bottom of said pocket to facilitate gravity feed of the tablets through said rear opening.

3. A tablet dispensing container according to claim 1 including a longitudinal magazine groove in the bottom of said bottom section extending to said pocket for containing a row of tablets for gravity feed in succession to said rear opening when the container is tilted, and a pair of longitudinal ledges in said bottom section on opposite sides of said groove for containing tablets for displacement off said ledges into said groove by shaking of said container, said ledges inclining laterally downwardly from said groove to check sliding of the tablets off the ledges into the groove during the dispensing operation.

4. A tablet dispensing container according to claim 1 including a longitudinal magazine groove in the bottom of said bottom section extending to said pocket for containing a row of tablets for gravity feed in succession to said rear opening when the container is tilted, and a guard plate in said bottom section overlying a part of said groove to retain the tablets in said part and provide for tablets entering the other part of the groove.

5. A tablet dispensing container according to claim 1 wherein said elevator is provided with a

rear wall below said rear opening preventing passing of tablets in said bottom section through said rear opening when said platform is moved outwardly of said bottom section.

6. A tablet dispensing container having a dispensing end for discharging tablets by gravity when the container is tilted by hand to lower said end, said container comprising a bottom section having a surrounding wall, a cover section having a surrounding flange fitting over said wall for tilting of said cover section on said wall in opposite directions, respectively, said flange having a tablet discharge opening therein at said dispensing end of the container closed by said wall upon tilting of said cover section in one direction and opened by tilting of the cover section in the opposite direction, and a tablet elevating platform spaced from and secured to said cover section adjacent said opening for movement inwardly and outwardly of the bottom section by tilting of said cover section in opposite directions to pick up and lift a tablet out of said bottom section for discharge through said opening, said platform having a rear opening for passing a tablet in said bottom section onto the platform and also having a front opening in line with the discharge opening for passing the tablet off the platform to the discharge opening, said bottom section including a longitudinal magazine groove in the bottom thereof extending to said rear opening for containing a row of tablets for gravity feed in succession to said rear opening when the container is tilted, said groove being provided with slanting bottom sections for retarding gravity feed of the tablets therein to reduce abrasive action against the tablets, said slanting sections being joined by an angular stop wall preventing reverse feed of the tablets in said groove.

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