

Makarevitz

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**[54] PILL DISPENSER WITH RESILIENT,
INTEGRAL, EXTENDED WALL PORTION
FORMING A SLIDING GATE**

3,554,366 1/1971 Corll..... 206/42

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[52] **U.S. Cl.**..... **221/64, 221/289**

[51] **Int. Cl.**..... **B65d 83/04**

[58] **Field of Search**..... 221/64, 243, 246,
221/289; 206/42

[57] **ABSTRACT**

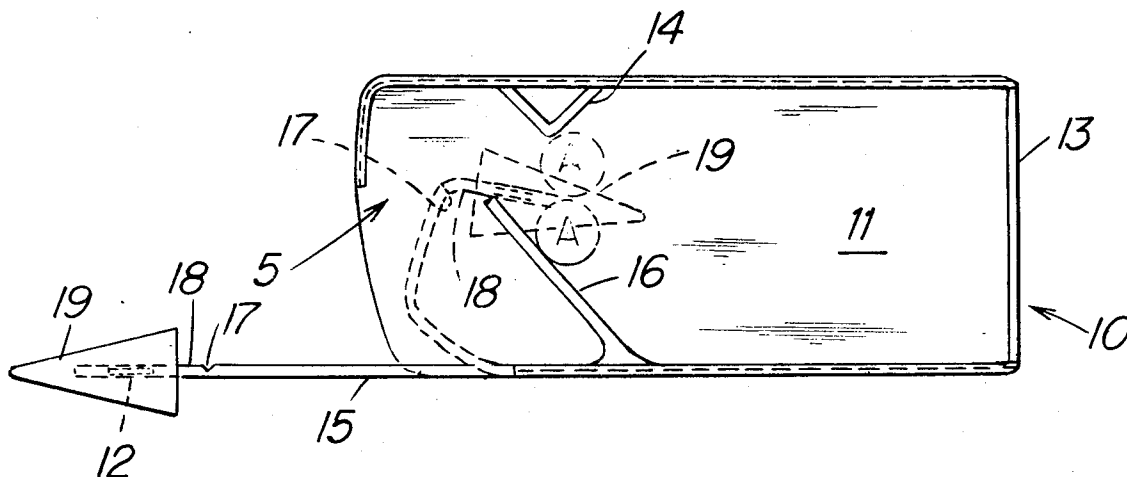
A dispenser for tablets or like items in the form of a covered box, a portion of the wall of the box being resilient and deflectable inwardly to open a dispensing passage for one or more items while restraining the remainder of the contents.

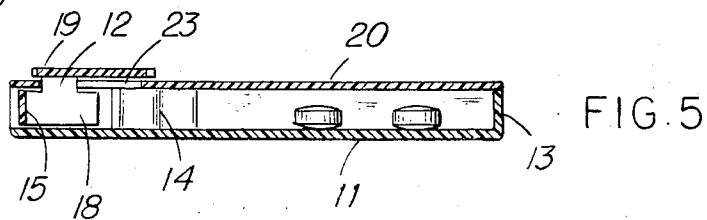
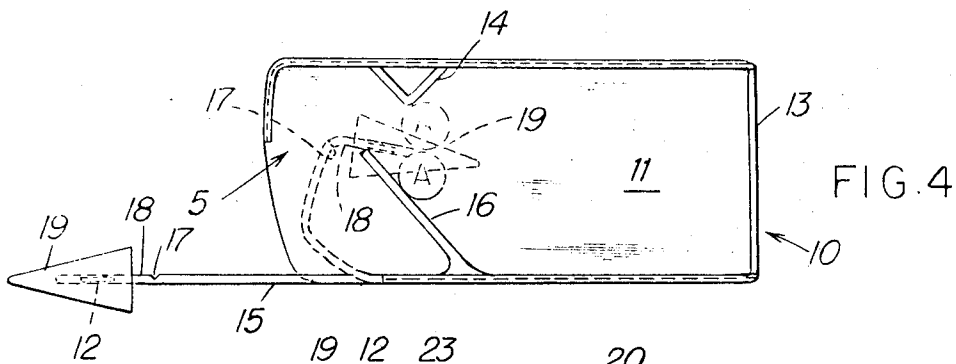
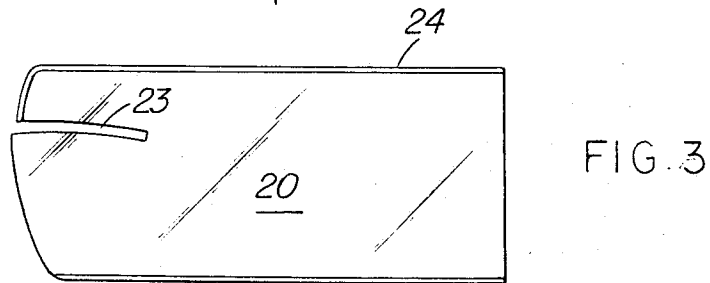
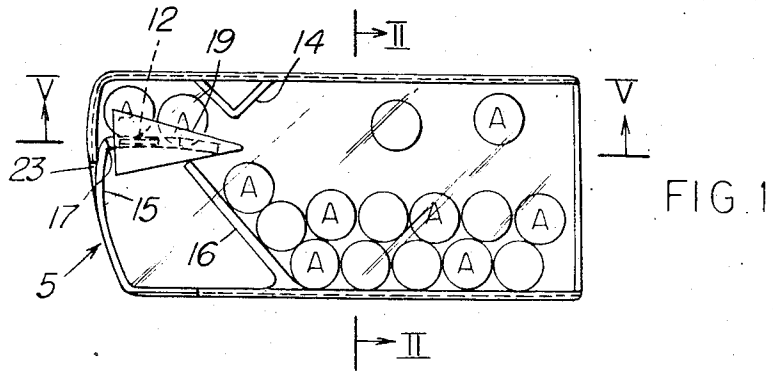
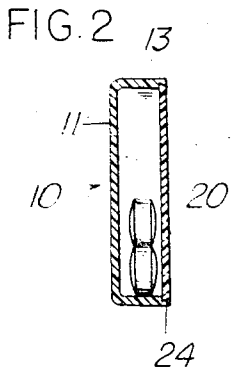
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7 Claims, 5 Drawing Figures

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PILL DISPENSER WITH RESILIENT, INTEGRAL, EXTENDED WALL PORTION FORMING A SLIDING GATE

The present invention relates to a dispenser package for dispensing pills, tablets, capsules, lozenges, candies, chewing gum pieces, coins, tokens, small parts and similar items which are desired to be dispensed singly or in small groups. The dispenser is a simple plastic molding in one or two pieces and has no separate moving parts. It can be manufactured at a cost low enough to compete with nondispensing tablet packages or the like and is particularly suited to pocket or purse size analgesic or alkalizer tablet packaging. The dispenser can be operated with one hand with no risk of spillage of the remainder of the contents while providing excellent protection of the contents from contamination. It requires no assembly during manufacture other than closing the cover.

The dispenser of the present invention comprises a box portion and a cover portion, the box portion including a member in the form of a strip which, in the closed or nondispensing condition, is a continuation of the wall with which it is integral, and in the dispensing position is resiliently deflected to open an exit passage for one or a few tablets while restraining the remainder.

In the drawings:

FIG. 1 is a plan view of the dispenser of the present invention shown with a transparent cover for clarity,

FIG. 2 is an elevational view in section taken along line 2—2 of FIG. 1,

FIG. 3 is a plan view of the cover,

FIG. 4 is a plan view of the dispenser as molded, and

FIG. 5 is an elevational view in section taken along line 5—5 of FIG. 1.

The pill dispenser as illustrated is in the form of an integrally molded box 10 and a separate cover 20. The cover is shown in transparent plastic to better reveal the interior details. The box is preferably molded of a plastic such as polypropylene having great resistance to flexure fatigue. The cover 10 may be molded of any of several plastic materials but is preferably molded of styrene if transparency is desired.

An upstanding peripheral wall 13 is molded integral with a generally flat floor 11 to form the box 10. In FIG. 1, the wall extends clockwise from the dispensing opening region 5 around the periphery of the box to a point near the opposite side of the dispensing zone. The wall there merges with a strip 15 which is not affixed to the box floor 11. Strip 15 is an integral extension of wall 13 and is free to be deflected inwardly of the box. A fixed interior wall segment 16 extends inwardly of the box from the region where the strip 15 and wall 13 merge. A further interior wall or baffle 14 is molded integral with the floor and wall generally opposite to the wall segment 16. The strip 15 includes a groove 17 to constitute a hinge joint of the variety often called a "living hinge." The portion 18 of the strip beyond the hinge 17 is surmounted by a finger tab or button shown as being in the shape of an arrow 19 and connected to the strip by a neck 12. The resilient properties of the plastic of the box are used to cause the strip 15 to tend to lie in the position shown in FIG. 1 when unstressed to assume the appearance of a continuous wall.

The cover 20 is flat with a rabbeted edge 24 which slides in a groove on the interior of box wall 13 in a manner well known for covers. The cover 20 may be permanently affixed to the box 10 by solvent or thermal

welding or the like if refilling of the dispenser is to be prevented. Alternatively, the cover and box can be molded integrally with a "living hinge." The cover includes a slot 23 which forms a track for guiding sliding movement of the neck 12 which connects the tab 19 and strip 15.

Until dispensing of tablets A is desired, the strip 15 and finger tab 19 occupy the closed position shown in FIG. 1 thereby closing the dispensing opening 5. The strip 15 assumes a shape which is a continuation of the wall of the dispenser to present a neat appearance and to exclude foreign matter from the dispensing opening region 5. The portion 18 of the strip beyond hinge 17, in the relaxed or closed position, forms a barrier across the tablet passage leading to the dispensing opening region. The tablets are retained behind barrier 18 a substantial distance from the dispensing opening. Thus, two barriers are presented to the ingress of foreign matter and the tablets are kept remote from the entrance as a further precaution against contamination.

To operate the dispenser, the tab 19 is moved along the track defined by cover slot 23 toward the center of the dispenser in the direction suggested by the arrow shape of the tab 19. Barrier portion 18 and the remainder of strip 15 move with the tab 19 to unblock the discharge opening 5. The strip is deflected to the position shown in FIG. 4 in dotted lines. Any tablets which are resident in the exit passage are thus freed to slide out of the opening. In the dispensing position just described and shown in dotted lines in FIG. 4, barrier portion 18 of strip 15 is moved to block the entrance to the exit passage by obstructing the region between baffle 14 and the wall segment 16 thereby preventing the remaining tablets from escaping. The spacing and position of baffle 14 and wall segment 16 in relation to the size of the tablets assures that they move in single file toward the exit. The number of tablets simultaneously dispensed is determined by the room available in the exit passage behind barrier portion 18. As illustrated, two tablets are dispensed simultaneously.

I claim:

1. A dispenser for tablets or like items comprising a box having a floor and an integral peripheral wall, an end portion of the wall being free of attachment to the floor and adapted for inward deflection to form a dispensing opening, a passage interior of the box to lead the items toward the opening, the end portion of the wall when deflected extending across said passage at a distance remote from said opening at least equal to the width of one item to bar the remaining items from the passage.

2. The dispenser of claim 1 wherein at least the said end portion of the wall is a resilient plastic.

3. The dispenser of claim 2 wherein the end portion of the wall includes a further portion hingedly attached to the remainder of said end wall portion and said further portion extends across said interior passage when the wall is deflected.

4. The dispenser of claim 1 wherein the cover includes a slot for guiding the motion of the end portion.

5. The dispenser of claim 4 wherein an exterior finger tab is connected to the end portion.

6. A dispenser for tablets or like items comprising a resilient plastic box and a cover, the box having a flat floor and an integral peripheral wall, a portion of said wall being free of attachment to said floor to constitute a resilient strip, said strip terminating in a free end por-

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tion, the free end portion being integrally hingedly attached to the remainder of the strip, said free end portion including a finger tab and intervening neck portion, the cover including a slot in which said neck portion can slide with the finger tab external of the cover, the strip being deflected inwardly of the box as the finger tab and neck slide inwardly of the cover slot to provide a dispensing opening in the peripheral wall, said box including an integral interior wall extending from the peripheral wall adjacent the attached end of the strip toward the dispensing opening to guide items

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toward the dispensing opening.

7. The dispenser of claim 6 wherein the box includes a further integral interior wall portion extending from the peripheral wall generally opposite to the other interior wall to define therebetween a passage, the cover slot extending to guide the free end portion of the strip to a position obstructing the passage between the interior wall portions when the strip is deflected to open the dispensing opening.

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