Sept. 12, 1939. J. H. RUTH 2,172,547

DISPENSING CONTAINER

Filed April 30, 1937

FIG.1.

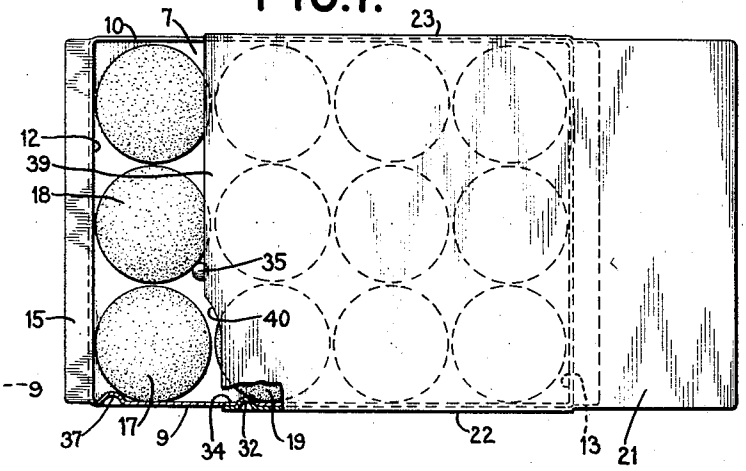


FIG.2.

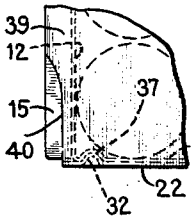


FIG.3.

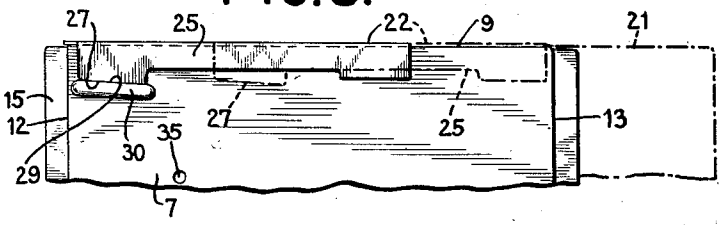


FIG.4.

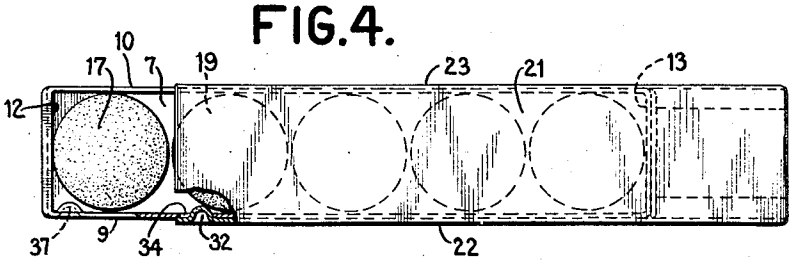
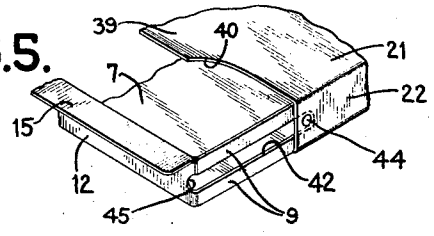


FIG.5.



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DISPENSING CONTAINER

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3 Claims. (Cl. 206—42)

This invention relates to a dispensing container and more particularly to a box capable of being carried in the pocket and adapted to expose, for extraction or delivery, one or more pills or other articles contained therein.

The primary object of the invention is a container which may be conveniently and expeditiously manipulated.

Another object of the invention is a dispensing device wherein all the contained pills or other articles are prevented from being extracted except that pill or pills constituting, say, a dose, to be taken at one time.

It is also an object of the invention to provide controlling means by which the extractable pill or other article is liberated for extraction while the remaining pills or other articles are restrained.

The invention also seeks means for utilizing the cover of the container as the pill limiting and/or feeding instrumentality.

Yet another object of the invention is to provide simple and expeditious means for securing the cover of the dispensing container in closed position.

In carrying the invention into effect, in one of its aspects, means associated with the cover restrain the contained articles when the cover is moved to delivery position and permits an article to feed forward to extracting position as the cover is closed.

These and other objects of the invention and the means for their attainment will be more apparent from the following detailed description, taken in connection with the accompanying drawing illustrating various embodiments by which the invention may be realized and in which:

Figure 1 is a plan view showing a dispensing container of this invention with the parts arranged in pill delivering position;

Figure 2 is a fragmentary view showing the cover in closed position;

Figure 3 is a fragmentary view showing one side of the bottom of the container;

Figure 4 shows a modification of the invention; and

Figure 5 is a view illustrating still another modification of the invention.

Referring first to Figures 1 and 2, the container there shown has the bottom 7, parallel side walls 9 and 10 and parallel front and end walls 12 and 13, respectively, to provide a relatively shallow substantially rectangular dishlike container. For convenience, at least, the front end wall 12 at its free upper edge, as viewed, is formed with a flange or lip 15 extending outwardly in a plane preferably substantially parallel to the bottom 7.

As shown, the container is adapted to receive, conveniently, a single layer of pills or other articles 17, 18, 19, etc., arranged in rows both longitudinally and transversely thereof, although a container may be provided having a capacity for a single longitudinally extending row 17, 19, etc., as shown in Figure 4.

Slidable over the open top of the box is a cover member comprising an upper surface 21, downwardly extending side edges 22, 23 adjacent to and in parallel relationship to the sides 9, 10 and formed with inwardly directed flanges 25 underlying the edge of the container bottom. At least one such flange 25 may be formed or otherwise provided with a cam or wedge surface 27 adapted, when the cover is in closed position to engage with a wedging action a complementary wedging surface 29 on a lug or outwardly pressed portion 30 on the bottom 7, as shown in Figure 3. In the position shown in that figure in full lines, the opposite side edge 23 is drawn relatively tightly against the side wall 10 to frictionally retain the cover in closed position. The parts assume the dotted line position in open position of the cover.

Means are provided for limiting the opening movement of the cover. Broadly, a protruding portion on the cover is adapted to abut an opposing portion on the container to limit the opening thereof. Means illustrated in Figure 1 may be availed of. There an inwardly pressed portion 32 on the side edge 22 of the cover slips within an aperture 34 in the side wall of the container. In any event an edge or surface, on the container, opposes further opening movement of the cover.

Referring again to Figure 1, it is contemplated that a pill or other article occupying the position of the pill 17, that is, a pill in one corner shall be available for extraction. A stop or lug 35 on the bottom 7 of the container formed, for instance, by pressing upwardly a portion thereof, is so positioned as to limit lateral movement of all pills in the first row, except pill 17, by limiting lateral movement of the next adjacent pill 18. This lug 35 is so positioned with respect to the side wall 9 as to permit the next adjacent pill 19 to enter the space illustrated as occupied by pill 17 after that pill is extracted. The boss 32, when the cover is closed (Figure 2), is received in an aperture or depression 37, but when the cover is opened, rides, permitted in part by the in-

herent resiliency of the material of which the cover is made, over the surface of the side wall 9 to the opening 34 through which it protrudes not only to position the cover but also retain the pill 19 so that it cannot be discharged even though the box is tipped or inverted to permit the pill 17 to drop out. When, of course, the cover is again closed, the pill 19 is permitted to occupy, by sliding thereto, the position vacated by the pill 17. The pills 18, etc., in the front transverse row adjacent to the pill 17 are prevented from falling out by the front edge portion 39 of the closure which, in open position, overlies sufficient of the pill 18 and the remaining pills in that row to retain them against displacement as the pill 17 is extracted. That portion of the front edge of the cover which would otherwise overlie the pill 17, is cut away, as at 40, so that the complete pill 17 is exposed for ready removal. In closed position, the edge portion 39 overlies the lip 15 so that the cut away portion is wholly without the pill receptacle, as shown in Figure 2, so that the container is completely closed by the cover and sealed against the admission of dirt, dust, etc.

Obviously, only a single longitudinal row of pills or other articles may be contained within a dispensing receptacle of this invention, as shown in Figure 4. Where appropriate in this figure, like reference characters are affixed to like parts. In this instance, of course, no protruding cover portion 39 is necessary and, therefore, no extended lip, the normal front edge of the cover being relied upon to position, with the aid of the boss 32, the pill 19 and those behind it.

Any sheet material, as thin metal, for instance, may be used for the container and cover of this invention. In some situations it may not be found practical to rely on the inherent resiliency of the material to cause a lug or boss 32 to enter an opening 34 as a pin positioning element. In Figure 5, the wall 9 of the container is shown as formed with an elongated slot 42 extending parallel to the longer edges of the box for a distance rearwardly from the front end 12 to properly position a lug or boss 44 on the side flange 22 to restrain the pill 19. Corresponding parts in this modification again have corresponding reference characters affixed thereto. To facilitate assembly of the cover 21 on the container, the front wall 12 may be cut away in register with the slot 42, as shown at 45, to permit the lug 44 to enter the slot 42 as the parts are telescoped together.

Obviously, the features of the several modifications are interchangeable.

The apparatus described is peculiarly adapted, among other things, for the dispensing of pills. Travellers and those who are ill, as well as those in crowds, may quickly and easily dispense only that number of pills required. The danger of losing or contaminating the rest is eliminated. There is no cover to be opened with a snap or jerk, which might throw out the entire contents. Such a device for rapid quiet dispensing, has many other uses and applications.

The scope of the invention is not limited by the size of the articles to be dispensed. Pills, for example, may be quite minute and the predetermined number to be dispensed upon any one opening of the cover may in such instances be thought of as a predetermined quantity. It is contemplated that devices embodying the invention may be attached to or incorporated in relatively large containers such as coffee cans or sugar bowls whereby a certain amount is exposed whenever a member is slid back.

Various modifications will occur to those skilled in the art in the composition, configuration and disposition of the various component elements going to make up the invention as a whole as well as in the selection, elimination and/or combination of features herein disclosed, and no limitation is intended by the phraseology of the foregoing description or illustrations in the accompanying drawing, except as indicated in the appended claims.

What is claimed is:

1. In a dispensing container, in combination, a receptacle portion having a corner, an edge proximate said corner having a lip, positioning means disposed in said receptacle to admit an article to said corner by movement along one side and to prevent movement along the other side, an aperture in one side, a cover, a lug carried with the cover and entering the aperture to oppose, in one position, movement of an article into the corner and limit opening movement of the cover.

2. In a dispensing container, in combination, a receptacle portion having a corner, an edge proximate said corner having a lip, positioning means disposed in said receptacle to admit an article to said corner by movement along one side and to prevent movement along the other side, an aperture in one side, a cover, a lug carried with the cover and entering the aperture to limit opening movement of said cover and to oppose, in one position, movement of an article into the corner and cooperating wedge means on the cover and container, respectively.

3. In a dispensing container, a receptacle, a cover therefor slidable thereon having sides engaging the receptacle, a projection extending inwardly from the side of the cover, a recess in the side of the receptacle to receive said projection when the cover is in closed position, the side of the receptacle having an aperture in the path of the projection on the side of the slidable cover which the projection enters to limit opening movement when the cover has been moved to expose a unit of the contents and restrains other units from entering the portion of the receptacle where the first unit is exposed.

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