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J. K. MURPHY
DISPENSING CONTAINERS
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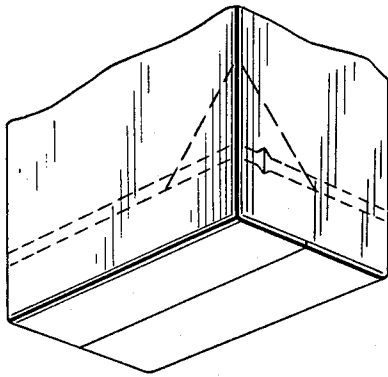


FIG. 1

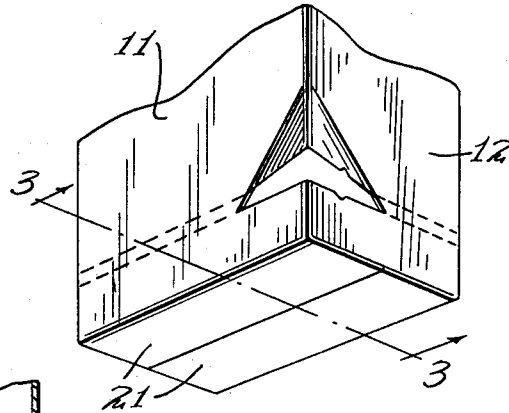


FIG. 2

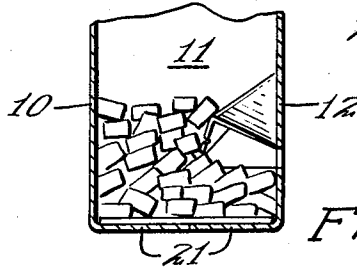


FIG. 3

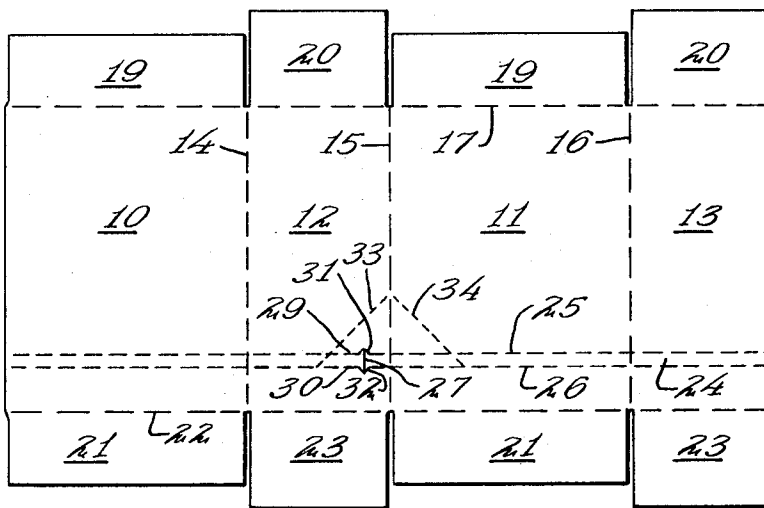


FIG. 4

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DISPENSING CONTAINERS

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5 Claims. (Cl. 229—17)

This invention relates to an improvement in dispensing containers and comprises in general a regular rectangular container which may be quickly and easily opened to dispense the contents as they are used.

Various products when manufactured are placed loosely in bulk shipping containers and shipped to the users. In many instances, while the contents of such containers comprise parts which are used in the assembly of finished devices, the containers are open and removed one at a time or a few at a time during the assembly process. As one example, plastic molded battery caps are usually shipped in bulk shipping containers of considerable size and are removed from the container, often one at a time, and threaded on the filling sleeves of the battery. An object of the present invention resides in the provision of a container for products of this general type from which the parts shipped may be more readily and quickly removed.

Pouring spouts have been sometimes produced in cartons by forcing inwardly triangular portions of two adjoining carton panels so that contents may be poured from the opening thus formed. In the present structure, a somewhat similar opening is provided near the bottom of the container which is of sufficient size to accommodate at least some of the fingers of the hand. The generally triangular inwardly forced connected flaps formed, in effect, an inwardly extending canopy which prevents the container contents from falling freely through the opening, but permit the contents to drop beneath this canopy where they may be easily grasped and removed.

A feature of the present invention resides in a simple and effective means of providing a dispensing opening which is produced at no cost other than the added cost of the die used to form the container. It has been found that a cutting, creasing or perforating die may be added to a conventional printing and slotting apparatus to define the flaps and to provide a means of gaining access to the interior of the container. By then providing a tear strip in the container, preferably of the type illustrated in Patent 2,706,076 issued to Reynolds Guyer, a dispensing opening may be provided at no cost other than that of the die and the original set up cost.

A further feature of the present invention resides in the provision of a tear strip, which usually encircles the entire body of the container, and in creasing or perforating the container walls to define two adjoining triangular panels on opposite sides of a fold line connecting two adjoining vertical panels of the container. A cut line extends across the tear strip so arranged that a portion of the tear strip on one side of the cut line may be pressed inwardly to engage the opposite side so that the tear strip may be grasped and removed. The weakened lines which define the triangular panels intersect this tear strip so that the tear strip breaks off along these weakened lines. By pressing the triangular panels adjoining the tear strip inwardly into angular relation to the panels from which they are formed, a canopylike structure is formed extending into the container for the purpose described.

These and other objects and novel features of the invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of the specification;

FIGURE 1 is a perspective view of the lower end of the container including the potential dispenser.

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FIGURE 2 is a view similar to FIGURE 1 after the dispenser opening has been opened.

FIGURE 3 is a sectional view through a portion of the container, the position of the section being indicated by the line 3—3 of FIGURE 2.

FIGURE 4 is a diagrammatic view of the lower portion of the container blank from which the dispenser is formed.

As indicated in FIGURE 4 of the drawings, the dispensing container A includes side panels 10 and 11 connected to end panels 12 and 13 along fold lines 14, 15, and 16 which are normally parallel. As indicated in the drawings, the side panels 11 are hingedly connected along a fold line 17 to top closure flaps 19, and the end walls 12 and 13 are similarly connected along the fold line 17 to end flaps 20. The end wall flaps 20 fold down into a single plane, and the flaps 19 normally fold over the flaps 20 to terminate in end abutting relation.

The bottom of the container is also formed in a conventional manner, bottom closing flaps 21 being hinged to the lower edges of the side walls 10 and 11 along a line of fold 22, and end wall closing flaps 23 are hinged to the lower edges of the end walls 12 and 13 along the fold line 22. Normally, the end wall flaps 23 fold inwardly into a common plane, and the flaps 21 fold into end abutting relation as illustrated.

A removable tear strip is normally provided extending across the side and end walls in parallel relation to the fold lines 17 and 22, and in relatively closely spaced arrangement to the bottom fold line 22. It is not essential that the tear strip 24 extends across all of the side and end walls, but as the tear strip is normally formed by slitting the inner liner of the container in the manner described in the Guyer Patent 2,706,076, it is more convenient to form the tear strip continuously than partially. The only portion of the tear strip which is normally used is the part thereof extending into the panels 11 and 12 on opposite sides of the fold line 15 connecting these panels.

A generally H-shaped cut is provided intersecting the slits 25 and 26 which define the tear strip 24. This cut includes a vertical cut line 27 which intersects both of the slits 25 and 26, and generally horizontally extending cuts 29 and 30 which are designed to register with the slits 25 and 26 in the inner liner of the corrugated paperboard. Usually the central portions 31 and 32 are somewhat wider than the tear strip 24 so as to provide an operative construction in the event the cut lines do not exactly coincide with the slits 25 and 26. This generally H-shaped cut permits the portion of the tear strip on one side of the vertical cut 27 to be pressed inwardly to permit the fingers to engage the portion of the tear strip on the other side of the cut 27.

Lines of perforation 33 and 34 diverge from a junction point on the fold line 15 spaced above the tear strip 24 and extend across the tear strip. The ends of these perforated lines 33 and 34 thus limit the length of the tear strip when removed. In other words, the portions of the tear strip on each side of the vertical cut line 27, when pulled out, will break off along the perforated lines 33 and 34 so that a generally trapezoidal area of the container is removed. This trapezoidal area is defined by the slits 25 and 26, and the diverging perforated lines 33 and 34.

To complete the dispensing opening, the triangular areas of the panels 11 and 12 above the slit 25 and between the fold line 15 and the perforated lines 33 and 34 may be forced inwardly to form a canopy overlying the trapezoidal area which has been removed. This canopy thus overlies a corner of the bottom of the container and permits the contents of the container to be readily removed. The canopy tends to guide the container contents toward the center of the container so that

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the product will not usually fall through the dispensing opening, but the product will drop forwardly along the bottom edge of the canopy into position where it may be readily picked up. Thus the product may be readily removed by inserting a hand into the opening formed, and the product automatically falls into dispensing position until the container is virtually empty.

In accordance with the patent statutes, I have described the principles of construction and operation of my improvement in dispensing containers, and while I have endeavored to set forth the best embodiment thereof, I desire to have it understood that changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

- 1. A dispensing container including, a series of tubularly arranged walls connected along generally parallel lines of fold, a bottom closure connecting said walls, an elongated tear strip intersecting one of said lines of fold and extending at substantially right angles thereto, and a pair of fold lines in the walls connected by said one fold line converging upwardly from the ends of said tear strip to a common point on said one line of fold which is at a greater distance from said bottom closure than said tear strip, said converging fold lines, with said tear strip and said one fold line, defining generally triangular flaps foldable inwardly of the walls to which they are connected, whereby when said flaps are folded inwardly they form a canopy overlying the corner opening formed by the inward folding of the flaps.
- 2. The structure of claim 1 and in which said converging

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ing fold lines comprise lines of perforation intersecting said tear strip.

3. The structure of claim 1 and in which said tear strip extends across all of said walls, and including weakened lines of separation intersecting said tear strip to define the ends of the removable portion.

4. The structure of claim 3 and in which said weakened lines comprise extensions of said converging fold lines.

5. A dispensing container including, a series of tubularly arranged walls connected along generally parallel lines of fold, a bottom closure connecting said walls, an elongated tear strip intersecting one of said lines of fold and extending at substantially right angles thereto, and

a pair of fold lines in the walls connected by said one fold line converging upwardly from the ends of said tear strip to a common point on said one line of fold which is at a greater distance from said bottom closure than said tear strip,

the triangular areas defined by said converging fold lines, said one fold line and said tear strip extending inwardly from the walls in which they are formed to form a canopy-like formation over said tear strip, whereby when said flaps are folded inwardly they form a canopy overlying the corner opening formed by the inward folding of the flaps.

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