Feb. 19, 1963 C. A. GALLOWAY 3,078,018

DISPENSING CONTAINER

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Fig. 1.

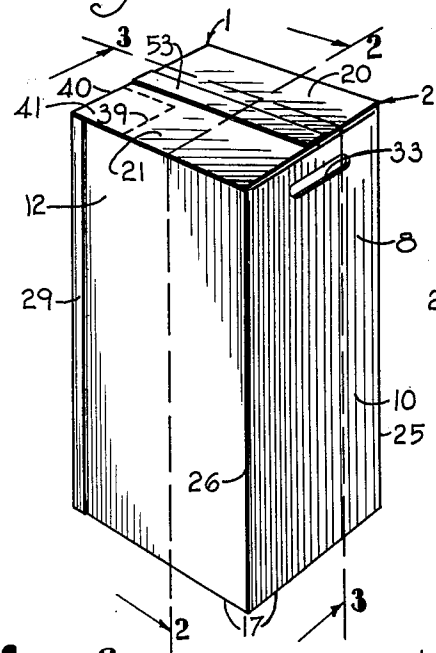


Fig. 2.

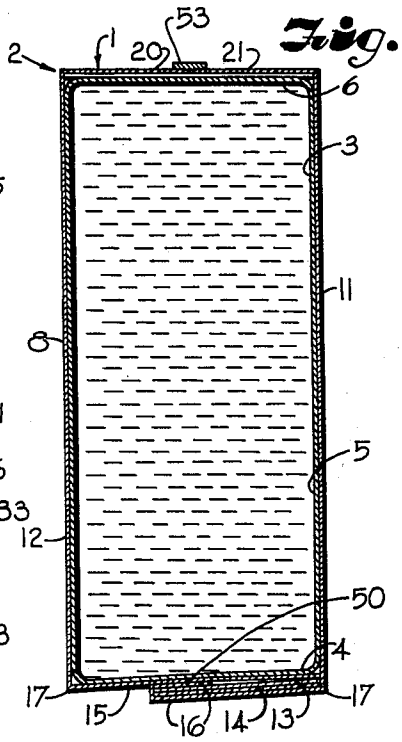
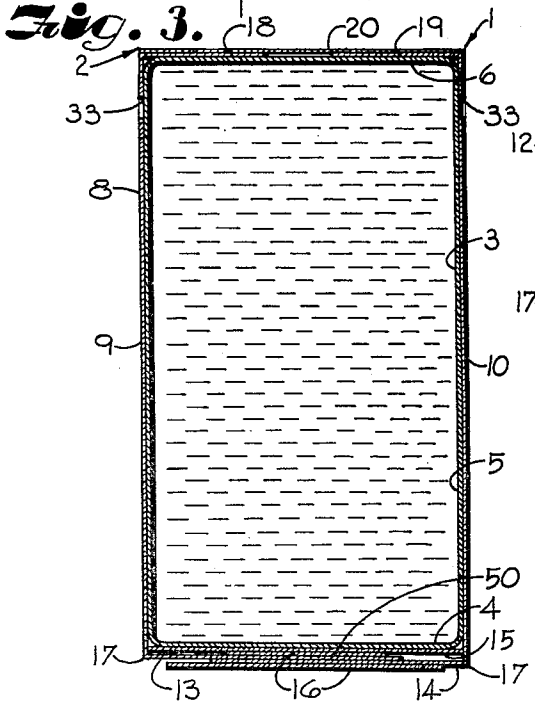


Fig. 3.



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Fig. 4.

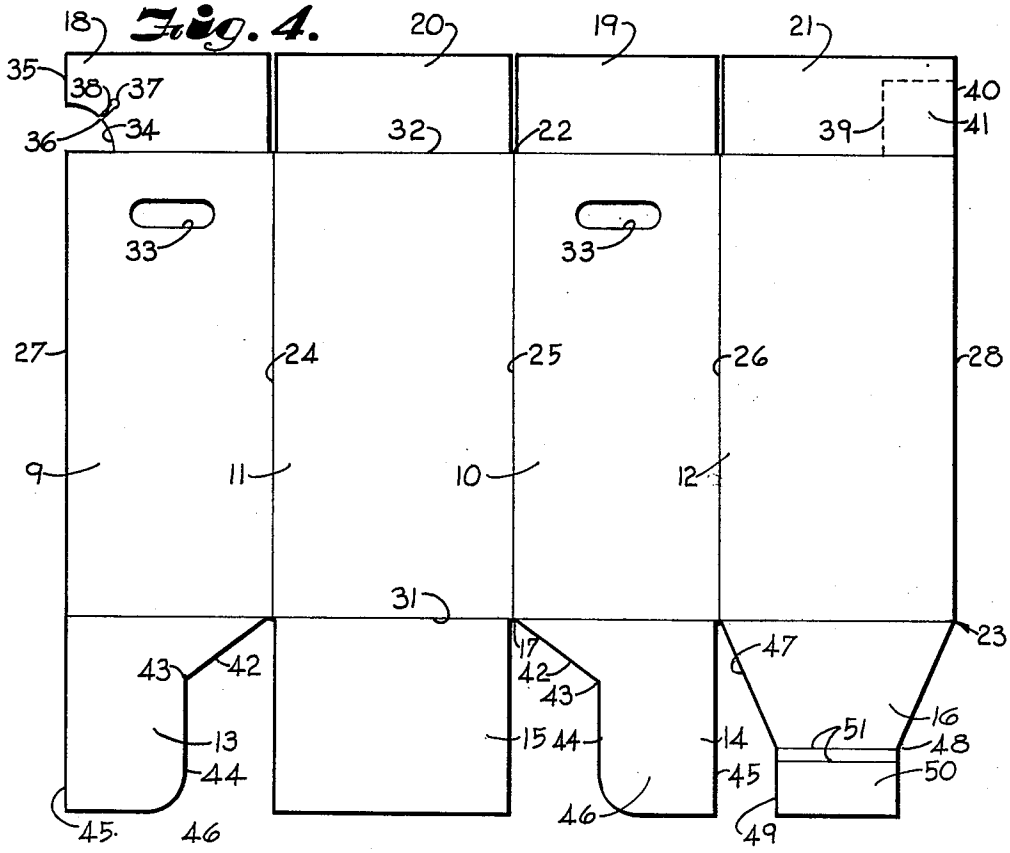


Fig. 5.

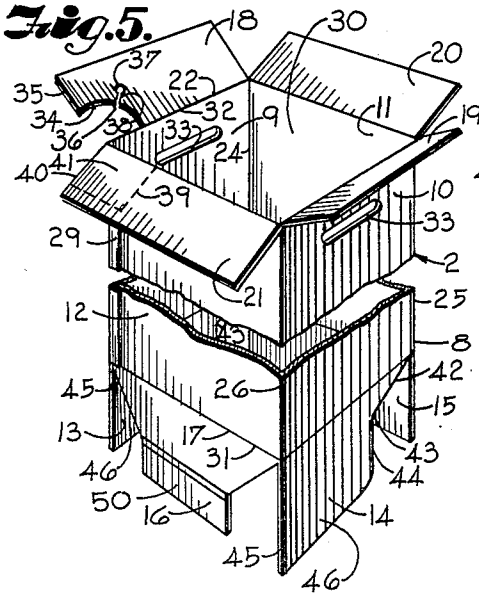
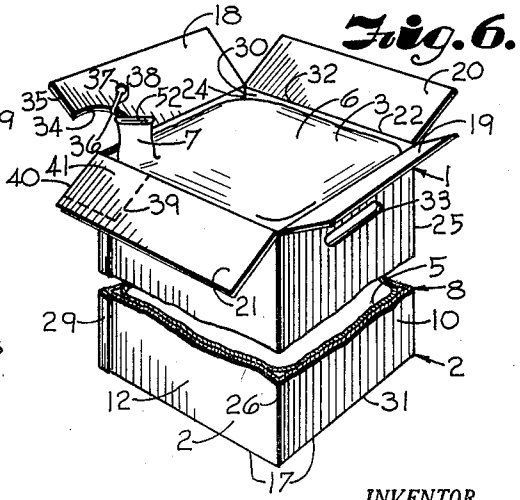


Fig. 6.



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Fig. 7.

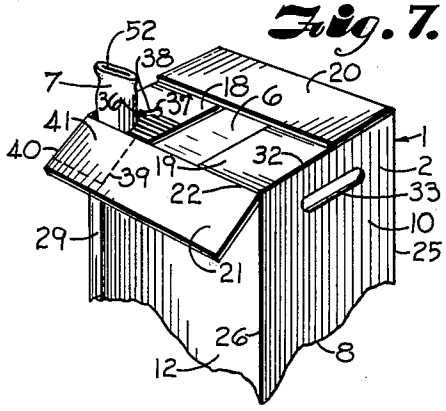


Fig. 8.

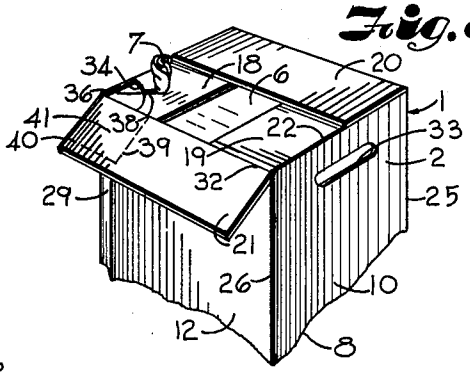


Fig. 9.

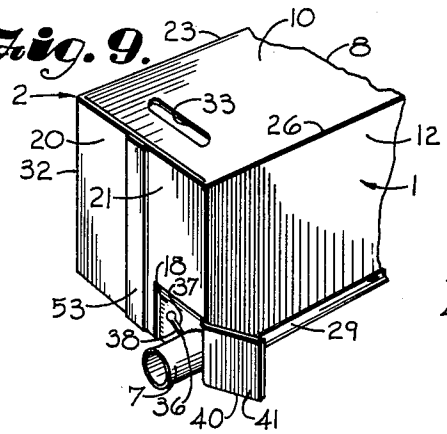
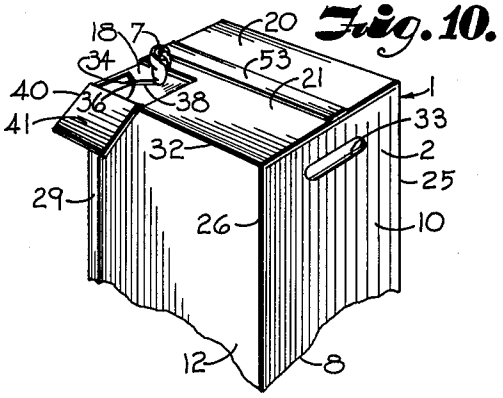


Fig. 10.



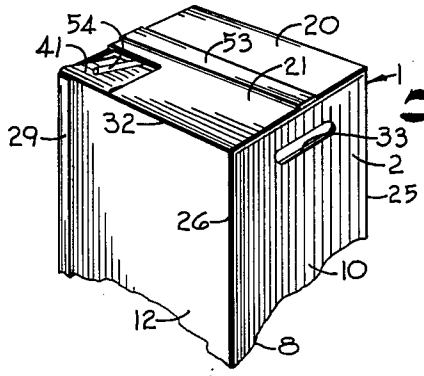


Fig. 11.

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DISPENSING CONTAINER

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Filed Aug. 18, 1960, Ser. No. 50,370
3 Claims. (Cl. 222—183)

This invention relates to dispensing containers and more particularly to dispensing containers for fluent materials such as liquids and the like having a rigid outer container or carton and a flexible inner container or bag adapted to contain liquids without leakage.

The principal objects of the present invention are to provide a dispensing container or package with a flexible fluid-tight container for liquids positioned in and supported by a rigid outer container or carton wherein the inner container has a pouring spout and the outer container has portions providing for ready access to the pouring spout; to provide such a dispensing container wherein the inner container is a disposable fluid-tight flexible bag formed of thin, plastic material such as polyethylene whereby fluids such as milk may be kept in sanitary, substantially air free condition and be readily dispensed from the pouring spout; to provide such a package comprising a rigid outer container and a flexible inner container with said outer container having closure means with portions which may be moved to expose the dispensing means or spout whereby the fluid may be readily dispensed from the container; to provide such a container wherein the outer container or carton is formed of corrugated paperboard with closure flaps hinged to top edges of side walls and folded to closed position with certain of said flaps overlying others and one of the innermost flaps having a re-entrant portion through which the inner container spout extends, said spout being compressed between closure flaps when in container closing position; to provide such a structure wherein an outermost flap has a portion adapted to be severed and hinged to expose and provide access to the spout for dispensing of liquids from the inner container with the remaining closure flaps retaining the inner container bodily in the outer container upon inversion thereof; to provide such a structure wherein the innermost flap having the re-entrant portion has edges thereon to receive the spout therebetween and pinch same to retain the spout in closed condition whereby the spout is sealed after a portion of the fluid contents is dispensed from the container; to provide such a structure with a self-locking bottom on the outer container to facilitate the erection thereof; and to provide a dispensing container which may be fabricated easily and inexpensively in a strong rigid structure from which the contents may be conveniently dispensed when desired and the pouring spout closed in a substantially air-tight seal to protect the remaining contents when liquid is not being dispensed therefrom.

Other objects and advantages of this invention will become apparent from the following description taken in connection with the accompanying drawings wherein are set forth by way of illustration and example certain embodiments of this invention.

FIG. 1 is a perspective view of a dispensing container in closed condition as for shipping.

FIG. 2 is a vertical sectional view through the container on the line 2—2, FIG. 1.

FIG. 3 is a vertical sectional view through the container on the line 3—3, FIG. 1.

FIG. 4 is a plan view of the blank from which the outer container is formed.

FIG. 5 is a fragmentary perspective view with the outer container partially erected.

FIG. 6 is a fragmentary perspective view with the inner container positioned in the outer container.

FIG. 7 is a fragmentary perspective view showing the outer container partially closed and the spout extending through the re-entrant portion of one of the flaps.

FIG. 8 is a fragmentary perspective view similar to FIG. 7 with the spout moved into pinched engagement with a closure flap.

FIG. 9 is a fragmentary perspective view with a portion of the closure severed and hinged back and the spout and container in position for pouring contents from the inner container.

FIG. 10 is a fragmentary perspective view with a spout re-engaged in pinched relation after pouring a portion of the contents from the container.

FIG. 11 is a fragmentary perspective view with the access flap closed and secured in place.

Referring more in detail to the drawings:

The numeral 1 generally designates a package composed of an outer container 2 preferably made of relatively rigid material such as double face corrugated paperboard and an inner container 3 preferably made of thin, flexible, fluid-tight plastic such as polyethylene and the like which is relatively inert with respect to fluent materials packaged therein. The inner container 3 is suitably formed from sheet material or film of suitable thickness, as for example five mils, suitably sealed to provide a bag-like formation having closed bottom 4, side walls 5 and a closed top 6 except for a pouring spout 7 made integral with the inner container and extending substantially beyond the upper closed end 6 thereof, said inner container being of a suitable size to substantially fill the outer container.

The outer container or carton 2 includes a body portion 8 having opposed sides 9 and 10 and 11 and 12 with bottom flaps hinged on the lower edges of the side walls to form the bottom of the outer container or carton. In the illustrated structure the bottom flaps 13, 14, 15 and 16 are hinged on the lower edges 17 of the side walls 9, 10, 11 and 12 respectively. The upper end or top closure of the outer container or carton is formed by opposed flaps 18, 19, 20 and 21 hinged on the top edges 22 of the side walls 9, 10, 11 and 12 respectively. The outer carton is usually formed from a flat blank 23 appropriately scored and cut to provide the side walls and top and bottom flaps with score lines defining fold lines 24, 25 and 26 between side walls 9 and 11, 10 and 11 and 10 and 12 respectively. The side walls 9 and 12 have outer edges 27 and 28 respectively which when the outer carton is set up or erected are secured in engaged relation as by a tape 29 or other suitable conventional manner to retain the side walls in position to define a tubular interior 30, preferably of rectangular cross section. The blank also preferably has score lines 31 and 32 along the bottom edges 17 and top edges 22 of the side walls whereby the bottom and top flaps are extensions of the side walls and hinged thereto.

In the illustrated structure, the side walls 9 and 10 have hand holes 33 cut therefrom to facilitate handling of the package. Also, the top flap 18 has a re-entrant portion 34 through which the spout 7 is adapted to extend. The re-entrant portion in the illustrated structure is substantially a quarter circle cutout extending from an end 35 of the flap 18 to the top edge 22 of the wall 9. The re-entrant portion also includes a slot 36 extending from the cut-out on re-entrant portion 34, remote from the end 35, and terminating in a small opening 37. The slot 36 and opening 37 being of such size in width and diameter respectively that when the spout 7 is positioned therein, the edges 38 defining the slot 36 and opening 37 squeeze or pinch the spout 7 to form a substantially

air-tight seal. The flap 21 has severance lines or perforations 39 extending from an end 40 of said flap and then inwardly to the top edge 22 of the side wall 12 whereby, when the line of perforations is cut an access member or flap 41 is defined that is hinged to the side wall 12. The access flap 41 is positioned over the re-entrant opening in the flap 18 when the outer carton is erected and closed.

The bottom closure of the illustrated structure has an inner flap 15 formed as an extension of the side wall 11 and extending from the lower edge 17 thereof a distance corresponding to the width of the side walls 9 and 10 whereby the flap 15 substantially corresponds to the cross sectional area of the interior 30 of the outer carton. The flaps 13 and 14 have portions adjacent the flap 15 cut away, the edges 42 of said flaps being in angular relation to the lower edges 17 of the respective side walls and then terminating as at 43 in outwardly extending edges 44 which cooperate with the opposite edges 45 to define extensions 46 of reduced width. The flap 16 has side edges 47 converging from the lower edge 17 of a respective wall and terminating as at 48 in parallel side edges 49 that define an extension 50. Score lines 51 extend across the extension 50 and are spaced from the lower edge 17 of the wall 12 a distance substantially corresponding to the width of the extensions 46.

In assembling the outer container from a blank such as illustrated in FIG. 4 the container body is folded on the lines 24, 25 and 26 to bring the edges 27 and 28 together and said edges are secured by suitable fastening devices such as tape 29. In this position, the outer carton or container may be further folded on the line 25 to a flat condition for shipping to a point of use. When the outer container or carton is to be set up and the inner container inserted therein and filled, the outer container is opened whereby the sides define a rectangular cross section and then the lower flap 15 hinged upwardly inside of the inner space 30. The bottom flaps 13 and 14 are then folded where one overlies the other and the bottom flap 16 folded under the outermost of the flaps 13 and 14 and the extension 50 turned upwardly on the score line 51 and then reversely to overlie the uppermost of the extension portion of the flaps 13 and 14. The bottom flap 15 is then moved downwardly to overlie the extension 50 to retain same in place forming a self-locking bottom for the outer container. The inner container or bag 3 is then positioned in the outer container 2 with the spout 7 at the corner adjacent the re-entrant portion 34 of the flap 18. The inner container or bag is then filled with suitable fluent material such as milk or the like, and if desired, the adjacent edges of the free end of the spout 7 may be heat sealed as at 52. The flaps 18 and 19 are then folded inwardly to overlie the top portion of the flexible inner container whereby the spout 7 extends through the re-entrant portion 34. The flap 20 is then folded inwardly to overlie the adjacent portions of the flaps 18 and 19 and the spout is preferably twisted and moved into the slot 36 or opening 37 and then folded to overlie the adjacent portion of the flap 18. The flap 21 is then folded to overlie and compress the spout against the flap 18 and is secured in place as by tape 53 securing adjacent edges of the flaps 20 and 21 as illustrated in FIGS. 1 and 10.

When it is desired to dispense some of the fluid in the container, the flap 21 is severed on the severance line or perforations 39 to provide the access flap 41 which is hinged upwardly providing access to the spout 7. The spout is pulled from the slot 36 whereby said spout extends through the re-entrant portion 34. The end of the spout is opened and the container tilted or inverted to pour material from the inner container as illustrated in FIG. 9. After a desired quantity of the material is poured from the container, the container is placed upright and the spout twisted and the twisted portion moved into the slot 36 or opening 37 whereby said spout is pinched to form a seal preventing entry of air or the like into the interior of the inner container. The portion of the spout extending above the flap 18 is then bent over to overlie said flap and the access flap 41 moved to closed position to compress the spout against the flap 18. A suitable elongate rod or strip 54 is inserted to underlie a portion of the closure flaps and overlie the access flap 41 as illustrated in FIG. 11 to retain the access flap 41 in closed position. When it is desired to dispense more the contents from the inner container, the locking member or rod 54 is removed and the access flap 41 elevated and the spout again moved to extend through the re-entrant portion 34 whereby further dispensing of the contents may be accomplished with the remaining portions of the closure flaps retaining the inner container bodily in the outer container as illustrated in FIG. 9. The process of periodic dispensing of portions of the contents of the container may be repeated and the spout closed to seal the inner container as often as desired until the container is empty.

The package as illustrated and described has the advantage of being capable of being shipped in knocked down condition and erected at the point of use. It occupies a minimum of space in proportion to its cubic capacity and it is easily disposable, but may be reused if desired particularly by replacement of the inner container.

It is to be understood that while I have illustrated and described one form of my invention, it is not to be limited to the specific form or arrangement of parts herein described and shown except insofar as such limitations are included in the claims.

What I claim and desire to secure by Letters Patent is:

1. A container comprising in combination, a flexible inner container having an elongate dispensing spout thereon, an outer carton within which said flexible inner container is positioned, said outer carton having a bottom and a plurality of sides extending from said bottom, a closure for said outer carton comprising a plurality of flaps hinged to top edges of adjacent sides of said carbon, one of said flaps having a reentrant portion therein through which said spout is adapted to extend, said one flap having a slot extending from said re-entrant portion and adapted to have said spout manually twisted and moved into said slot in spaced relation to said re-entrant portion to extend only through said slot in compressed condition therein to seal said inner container, and another flap secured in overlying relation to said one flap in carton closing position, said other flap being severable to provide a hinged portion for swinging movement to expose and provide access to said spout.

2. A container comprising in combination, a flexible inner container having an elongate dispensing spout thereon, an outer carton within which said flexible inner container is positioned, said outer carton having a bottom and a plurality of sides extending from said bottom, a closure for said outer carton comprising a plurality of flaps hinged to top edges of adjacent sides of said carton, each of said flaps being extensions of respective sides of said carton, one of said flaps having a re-entrant portion therein through which said spout is adapted to extend, said one flap having a slot extending from said re-entrant portion and terminating in a relatively small opening adapted to have said spout manually twisted and moved from said re-entrant portion through said slot to said small opening to extend therethrough in compressed condition therein to seal said inner container, said spout folded into overlying relation to said one flap, and another flap secured in overlying relation to said one flap and compressing said spout therebetween in carton closing position, said other flap being severable to provide a tab hinged to the respective carton side for swinging movement to expose and provide access to said spout while the remaining closure flaps retain the inner container bodily in the carton upon inversion thereof.

3. A container comprising in combination, a flexible inner container having an elongate dispensing spout thereon, an outer carton within which said flexible inner container is positioned, said outer carton having a bottom

and a plurality of sides extending from said bottom, a closure for said outer carton comprising a plurality of flaps hinged to top edges of adjacent sides of said carton, each of said flaps being extensions of respective sides of said carton, certain opposed closure flaps being folded to overlie said inner container and other opposed closure flaps being folded to overlie said first named opposed closure flaps, one of said first named opposed closure flaps having an opening in one end adjacent the hinge of said flap to the respective side wall with said spout adapted to extend through said opening, said closure flap having a slot extending from said opening remote from said hinge and terminating in a relatively small opening adapted to have the spout manually twisted and moved from said opening through said slot to said small opening to extend therethrough in compressed condition therein to seal the adjacent area of the spout, said spout having a portion extending above said closure flap having the opening therein in overlying relation to said flap, one of said other opposed flaps overlying and compressing said spout against said one closure flap, means securing said other opposed flaps in container closing position, and a portion of said other opposed flap overlying the spout being perforated for severance and hinged elevation to expose and provide access to said spout while the remaining closure flaps retain the inner container bodily in the outer container upon inversion thereof.

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