April 23, 1940. H. A. BARNBY 2,198,570

DISPENSING CONTAINER

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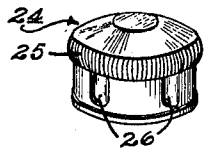


Fig. 2.

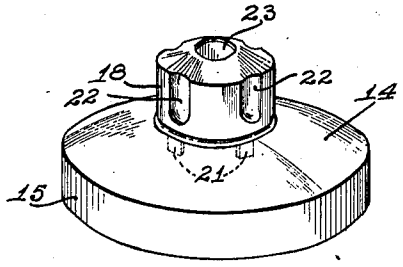


Fig. 3.

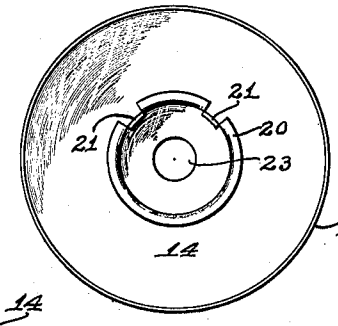


Fig. 4.

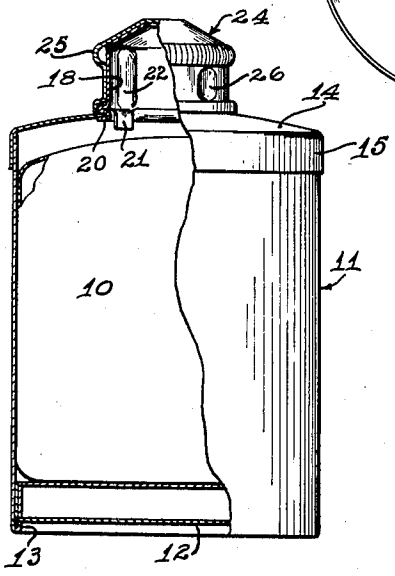


Fig. 1.

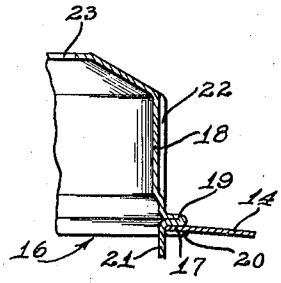


Fig. 5.

INVENTOR
H. A. BARNBY.

BY Rule & Hoge
ATTORNEYS

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DISPENSING CONTAINER

Herbert A. Barnby, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

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5 Claims. (Cl. 221—78)

The present invention relates to improvements in dispensing containers and more particularly to that type wherein a flexible bag which contains the material to be dispensed, is enclosed in a rigid housing or shell.

My invention is specifically directed to novel means for initially rupturing the bag, preparatory to dispensing the contents thereof and to this end, includes a cutter positioned in proximity to a discharge opening or neck and into engagement with which the bag is brought by manual inward movement of a follower which constitutes the closure for the bottom end of the housing or shell.

Another object of the invention is the provision of novel means whereby the cutter may be manually rotated while in engagement with the bag or container.

Other objects will be in part apparent and in part pointed out hereinafter.

In the drawing:

Fig. 1 is a side elevational view of the complete container with parts broken away and in section to disclose the structural details thereof.

Fig. 2 is a detail perspective view of a friction cap.

Fig. 3 is a detail perspective view of the upper end of the housing or shell including a rotatable discharge neck which carries the cutters.

Fig. 4 is a bottom plan view of the unit illustrated in Fig. 3.

Fig. 5 is a fragmentary vertical sectional view of the rotatable neck in a plane through one of the cutters.

Briefly, the container includes an inner flexible bag 10 which may well be formed of "pliofilm", said bag containing the product or material to be shipped and dispensed. A rigid housing or shell 11 completely encases the bag and in the illustrated embodiment thereof, is of substantially tubular form. The bottom end of the housing is closed by means of a longitudinally movable bottom 12 or follower which is held assembled with the housing proper by an internal hem 13 or bead. The upper end of the tubular body is closed by an end wall 14 which includes an annular flange 15, the latter being telescoped over and frictionally engaged with the body.

A centrally positioned discharge opening 16 (Fig. 5) is formed in the upper end wall 14, the marginal wall 17 of the opening having rotary frictional engagement with the lower end of a dispensing nozzle 18 or neck. The lower end of this nozzle is folded upon itself to provide an annular external rib 19 of double wall thickness which rests upon the exterior surface of the end wall 14. The extreme lower end 20 of the nozzle is folded radially outward and in vertical spaced relation to said rib 19 into relatively firm engagement with the aforementioned marginal portion 17 of the end wall 14. At intervals the outwardly directed portion 20 is slitted to permit the formation of depending cutters 21. Obviously, any number of these cutters may be employed.

In order to facilitate manual rotation of the nozzle relative to the upper end wall 14, which is provided for by the connection just described, the vertical side wall is formed with an annular series of depressions 22 which provide for effective gripping of said nozzle. The upper end of the nozzle is tapered inwardly and centrally thereof is provided with a discharge port 23. Normally this discharge port is closed by a friction cap 24 (Fig. 2) which includes an annular corrugated rib 25 at its upper end and an annular series of internal ribs which may well have interlocking engagement with the depressions 22 referred to heretofore.

A package of the character described is opened for the purpose of dispensing the contents of the bag 10 by removing the cap 24, then pushing the follower 12 upwardly to bring the bag into firm engagement with the cutters 21 and finally while said bag is firmly engaged with the cutter or cutters, rotating the nozzle so that said cutters rupture or sever the bag at a point in proximity to the inner end of the nozzle. Thereafter, the contents may be dispensed partially or completely at will by the user who simply continues the application of pressure to the follower 12.

Modifications may be resorted to within the spirit and scope of the appended claims.

I claim:

1. In combination, a flexible rupturable bag, a relatively rigid housing therefor comprising a body having a closed upper end provided with a discharge opening, a nozzle rotatively mounted in said opening, a cutter at the inner end of the nozzle projecting into the housing, a cap removably fitting over the nozzle and a follower at the opposite end of the housing and movable therein to press the bag into engagement with said cutter.

2. In combination, a flexible rupturable bag, a relatively rigid housing therefor comprising a body having a closed upper end provided with a discharge opening, a tubular nozzle having its lower end folded and by such folding, rotatively connected to the marginal wall of said opening, a cutter carried by the nozzle and projecting into

the housing proper, a cap removably fitted over the nozzle and a follower at the opposite end of the housing and movable therein to press the bag into engagement with said cutter.

3. In combination, a flexible rupturable bag, a relatively rigid housing therefor comprising a body having a closed upper end provided with a discharge opening, a tubular nozzle having its lower end folded and by such folding, rotatively connected to the marginal wall of said opening, a cutter formed by omitting a part of the fold and projecting into the housing proper, a cap removably fitted over the nozzle and a follower at the opposite end of the housing movable therein to press the bag into engagement with said cutter.

4. In combination, a flexible rupturable bag, a relatively rigid housing therefor comprising a body having a closed upper end provided with a discharge opening, a tubular nozzle having its lower end folded and by such folding, rotatively connected to the marginal wall of said opening, a cutter carried by the nozzle and projecting into the housing proper, a cap removably fitted over the nozzle, and a follower at the opposite end of the housing movable therein to press the bag into engagement with said cutter, said nozzle being provided with an annular series of external depressions to facilitate manual rotation thereof and having a discharge port in its outer extremity.

5. In combination, a flexible rupturable bag, a relatively rigid housing therefor comprising a body having a closed upper end provided with a discharge opening, a tubular nozzle having its lower end folded and by such folding, rotatively connected to the marginal wall of said opening, a cutter carried by the nozzle and projecting into the housing proper, a cap removably fitted over the nozzle and a follower at the opposite end of the housing movable therein to press the bag into engagement with said cutter, said discharge nozzle being of uniform diameter throughout a portion of its length, tapered throughout the remaining portion thereof and provided with a discharge port at its outer end.

HERBERT A. BARNBY.