

May 25, 1954

A. C. STONEMAN ET AL

2,679,331

DISPENSING CONTAINER

Filed April 5, 1952

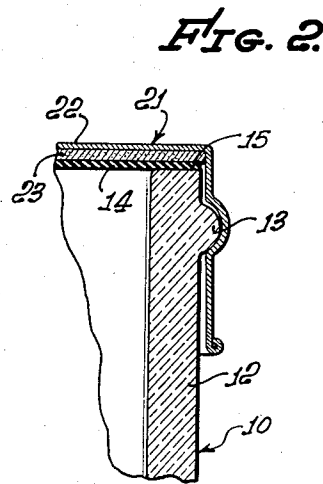
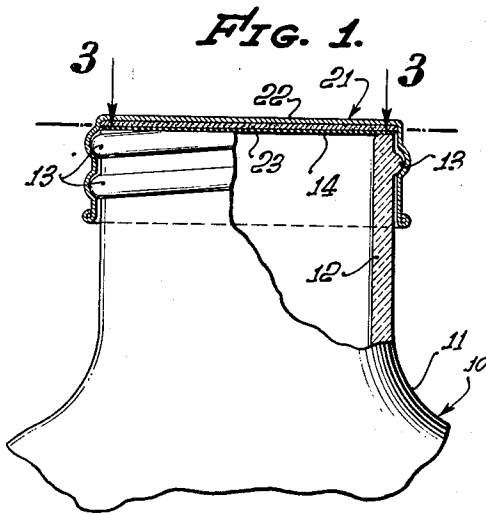


FIG. 3.

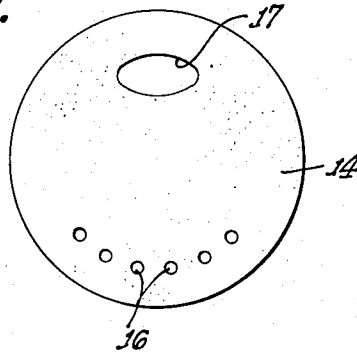
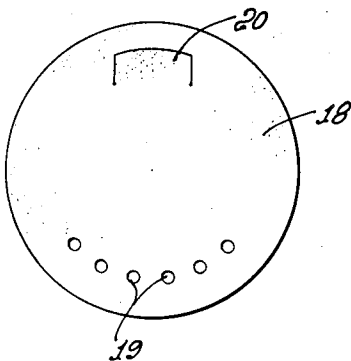


FIG. 4.



ALAN C. STONEMAN,
CRAIG DAVIDSON,
INVENTORS.

BY *Herbain White*

ATTORNEY

UNITED STATES PATENT OFFICE

2,679,331

DISPENSING CONTAINER

Alan C. Stoneman, San Marino, and Craig Davidson, San Gabriel, Calif., assignors to Purex Corporation, Ltd., South Gate, Calif., a corporation of California

Application April 5, 1952, Serial No. 280,762

1 Claim. (Cl. 215-73)

1

This invention has to do with a novel dispensing container adaptable to particular advantage for the packaging of granular or pulverulent materials which require protection against constant exposure to moisture or atmospheric air, and which require controllable dispensing in their normal uses. Such materials may include, for example, substances of an hygroscopic nature which may lose stability or effectiveness as a result of excessive exposure to air, as well as materials which are best packaged in non-metallic or corrosion proof containers. As a particular purpose, the invention contemplates improved containers especially adaptable for packaging and dispensing pulverulent or granular solid household bleaching compositions such as the perborate type or phosphates containing a hypochlorite in their water of crystallization. The hypochlorite bleaching compounds are corrosive to ordinary metals.

The invention has for its general object to provide a dispensing container having a mouth closure containing preformed dispensing openings which preferably permit selective removal of the contents either by sprinkling or in measurable amounts, and a cap applicable to the container in sealing relation about the openings so that air is excluded from the contents between successive dispensings. More specifically, the invention is directed to the use of a glass container having a non-metallic mouth membrane, not subject to attack by corrosive contents, having sealed application to the neck or rim of the container about the mouth opening, and containing the dispensing openings. These openings, as will appear, preferably include in one side of the membrane a plurality of relatively small sprinkling openings, and at the opposite side, for selective use, an opening of such larger size as will pass correspondingly greater quantities of the contents or permit insertion of a spoon for removal of measured quantities.

The container carries a cap, preferably threaded to the neck of the container, which has a non-metallic liner adapted to be brought into air tight engagement with a sealing surface on the membrane about the dispensing openings. Upon removal of the cap, the membrane is openly exposed as the dispensing medium, and upon replacement of the cap, the seal is restored to protect the contents.

Further objects and features of the invention as well as the details of a typical and preferred embodiment thereof, will be understood more fully from the following description of the ac-

2

companying drawing, in which:

Fig. 1 is a view showing the container in cross-section;

Fig. 2 is a fragmentary enlarged view illustrative of the sealing interengagement between the dispensing membrane and cap liner;

Fig. 3 is a view taken on line 3-3 of Fig. 1 showing the dispensing opening arrangement in the membrane; and

Fig. 4 is a view similar to Fig. 3 illustrating a variational feature.

Where particularly used for the packaging and dispensing of materials which may tend to corrode metals, the container generally indicated at 10 may comprise a glass bottle or jar having a dispensing mouth defined by the neck portion 12 which is externally threaded at 13 to receive the cap. Except for the dispensing openings, the mouth of the container is closed by a non-metallic circular membrane 14 which may be formed of any suitable organic plastic, cellulosic or reenforced cellulosic materials capable of strongly bonded adherence to the container and having sufficient strength to withstand such pressure as may be applied to it by the contents of the bottle as they are dispensed. The membrane is shown to have at 15 an air-tight bond against the end face of the container neck, as by cementing the undersurface of the membrane thereto.

Referring to Fig. 3, the membrane contains at one side a series of relatively small sprinkling openings 16, and within its opposite side a relatively large opening 17. By selective turning of the container, in an end position with one side or the other below the large opening 17 may be used for pouring substantial quantities of the container contents or for measuring definite quantities of the product, or the small perforations 16 may be used as for sprinkling the product as upon tile surfaces, toilet bowls, garbage cans and so forth.

Fig. 4 illustrates a variational feature with respect to the large pouring opening. Here the membrane 18 is shown to contain the sprinkling openings 19 and an oppositely positioned pouring opening defined by the flap 20 formed by the three-sided slit in the membrane and hinged at the uncut inner side. When the cap is applied to the container, the flap of course lays flatly in the plane of the membrane, and when the cap is removed, the flexibility of the flap will permit easy opening or ready passage of the product through the flap opening.

Referring again to Fig. 1, the body of the cap generally indicated at 21, may be made of metal

3

22 or other suitable material deformed within the rim to provide a thread for engagement with the container thread 13. The cap contains a circular non-metallic liner 23 of suitable plastic or cellulose composition which flatly overlies and engages the membrane in the tightly closed condition of the cap. As the cap is tightened down on the bottle, the liner engages the annular sealing surface on the membrane at the outside of the openings 16 and 17, with sufficient tightness to form an air-tight seal. Thus except when the container is in use, its contents may be kept fully sealed from exposure to atmospheric air, notwithstanding the perforated condition of the membrane.

We claim:

In combination with a dispensing container for dry pulverulent hypochlorite bleach material, said container having an externally threaded neck terminating in an annular mouth, a flat sheet of paper-like material constituting a dispensing disc extending across said mouth, means for securing the dispensing disc to the upper edge of the container in a face-contacting relation therewith to close the mouth, said disc having a single enlarged discharge opening in one side thereof and a single row of relatively small sprinkler openings adjacent the opposite edge, said disc being otherwise imperforate throughout the face thereof, a removable screw cap engaging said threaded neck for normally closing said openings, and a non-metallic liner in the cap fric-

4

tionally engaging the outer surface of said disc when the parts are assembled so as to form an annular sealing surface on the disc at the outside of said mouth to seal the interior of the container between repeated cap removals and dischargings of the container contents, said container when the cap is removed therefrom being selectively rotatable and tiltable to discharge the contents therefrom through either the single pouring opening or through the row of sprinkler openings.

References Cited in the file of this patent

UNITED STATES PATENTS

	Number	Name	Date
15	865,406	Linker	Sept. 10, 1907
	1,427,694	Montgomery	Aug. 29, 1922
	2,026,937	Eisen	Jan. 7, 1936
20	2,077,992	Eisen	Apr. 20, 1937
	2,173,542	Simington	Sept. 19, 1939
	2,342,932	Fram et al.	Feb. 29, 1944
	2,372,281	Jordan	Mar. 27, 1945
	2,507,248	De Swart	May 9, 1950
25	2,547,590	McGinnis	Apr. 3, 1951
	2,551,203	Wheaton	May 1, 1951
	2,576,416	Randlett	Nov. 27, 1951
	2,661,870	Huenergardt	Dec. 8, 1953

FOREIGN PATENTS

	Number	Country	Date
30	607,139	Great Britain	Aug. 27, 1948