April 29, 1947. L. FRANK 2,419,769

DISPENSING CONTAINER HAVING A GRAVITY OPERATED CLOSURE

Filed June 12, 1943

Fig. 1.

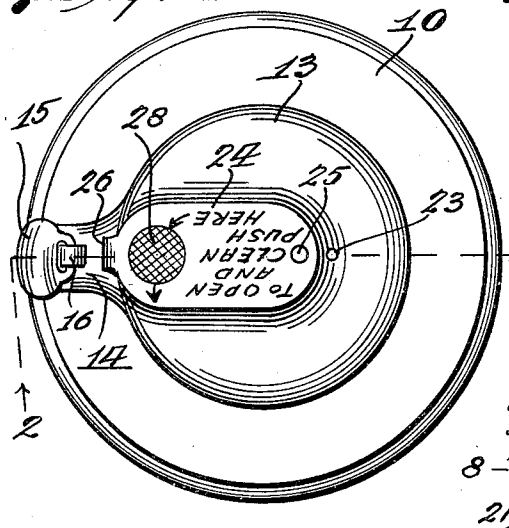


Fig. 3.

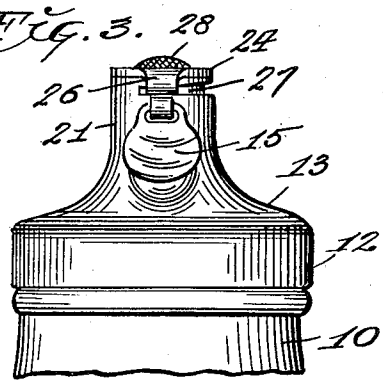


Fig. 7



Fig. 4.

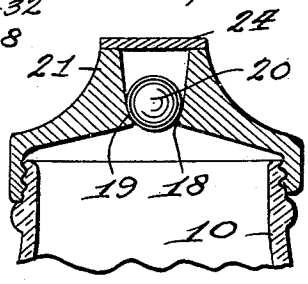


Fig. 2.

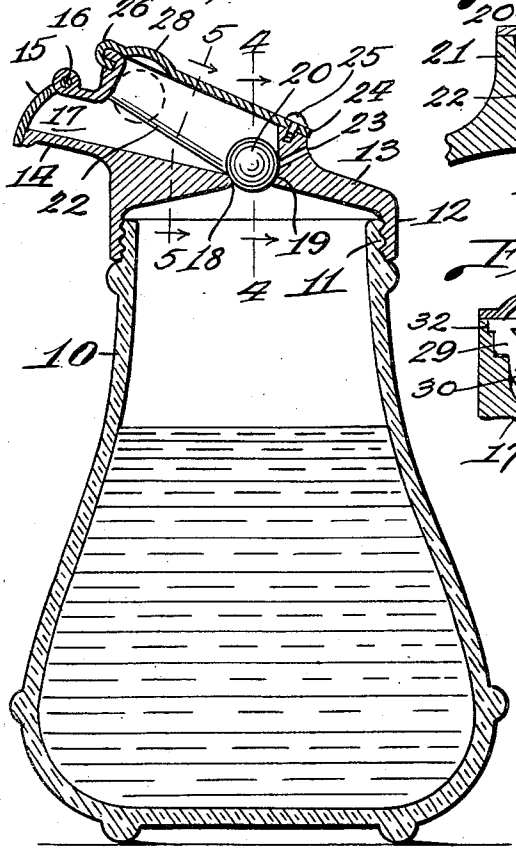


Fig. 5.

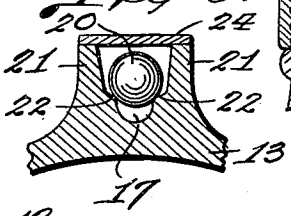


Fig. 6.

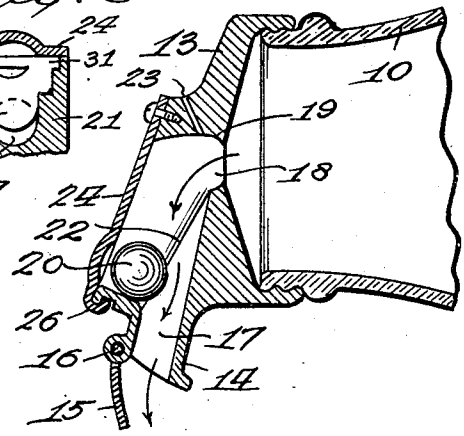


Fig. 8.

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DISPENSING CONTAINER HAVING A GRAVITY OPERATED CLOSURE

Louis Frank, Fellows, Calif.

Application June 12, 1943, Serial No. 490,596

1 Claim. (Cl. 222—500)

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My invention relates to a dispensing container and has for its principal object, to provide a simple, practical and inexpensive container having a removable cap or cover provided with a discharge opening normally closed by a gravity member such as a small spherical member which, when the container is moved into position to permit the contents to discharge, rolls away from said opening, so as to not interfere with the free flow of material or product from the container.

Further objects of my invention are, to provide a dispensing container referred to which is especially advantageous in dispensing relatively light or thin liquids such as milk and cream, vinegar, olive and vegetable oils, liquid soap and the like, also for finely pulverized substances such as sugar, salt, soap and cleansing powders and further, to provide a dispensing device wherein the container and cap or head may be easily and quickly cleansed.

A further object of my invention is to provide simple means which may be removably positioned in the discharge duct in the head or cap, for restricting the flow of material or product from the container.

With the foregoing and other objects in view, my invention consists in certain novel features of construction and arrangement of parts that will be hereinafter more fully described and claimed and illustrated in the accompanying drawings in which:

Fig. 1 is a top plan view of my improved dispensing container.

Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1.

Fig. 3 is a front elevational view of the upper portion of the container.

Fig. 4 is a vertical section taken on the line 4—4 of Fig. 2.

Fig. 5 is a cross section taken on the line 5—5 of Fig. 2.

Fig. 6 is a sectional view of the upper portion of the container and showing same in a contents dispensing position.

Fig. 7 is a plan view of a modified construction.

Fig. 8 is a cross section taken on the line 8—8 of Fig. 7.

Referring by numerals to the accompanying drawings which illustrate a preferred embodiment of my invention, 10 designates a container of any desired size, and shape and preferably formed of glass, plastics or the like. Formed on the upper end of this container around its mouth is an external thread 11.

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Engaging thread 11 is the internally threaded flange 12 of a cap or closure 13, preferably formed in a single piece, from plastic material and projecting upwardly and outwardly from the top of said cap is a spout 14.

The outer end of spout 14 is normally closed by a gravity disc 15, hinged to the upper outer end of the spout as designated by 16. The bottom of the duct 17 through the spout communicates with an aperture 18 formed in the center of cap 13 and formed around said aperture is a seat 19 for a ball 20 which may be formed of stainless steel, glass, porcelain, plastic or other composition.

Formed integral with the top or cap 13 is an upwardly projecting wall 21 which surrounds aperture 18 and the rear portion of duct 17 and formed on the lower portions of the inner faces of the sides of this wall, are longitudinally disposed inclined shoulders 22 which extend from seat 19 to the front portion of the chamber within wall 21 above duct 17. Thus, when the container is tilted forward, ball 20 will roll forwardly on the shoulders 22, to a position in the front end of the chamber within wall 21, with the greater portion of said ball positioned above duct 17.

Formed through the lower rear portion of wall 21 is a small air vent 23 which is closed by ball 20, while same is on its seat.

A plate 24 of metal, plastic or the like, closes the chamber within wall 21, the rear end of said plate being pivoted on a pin or screw 25, seated on the top of the rear portion of said wall and a depending hook 26, on the forward end of said plate, engages in a transversely disposed slot 27 formed in the front face of said wall to maintain said plate in closed position.

A circular portion near the forward end of plate 24 is pressed upwardly and its upper face milled or corrugated to form a lug or projection 28 adapted to be engaged by the thumb or finger when opening and closing said plate.

Under normal conditions with the container standing in an upright position, ball 20 rests on its seat 19, thus closing outlet opening 18 and air inlet duct 23 and thus the contents of the container are protected against air, moisture, dust and the like.

To dispense a portion of the contents of the container the receptacle is tilted forward until ball 20 leaves its seat 19 and travels forwardly and downwardly on the shoulders 20 thus permitting all or a portion of the contents to flow through opening 18 and then forwardly through duct 17

beneath the elevated ball, and as the container is tilted forward, plate **15**, by gravity swings outwardly away from the end of spout **14** thus permitting the material or product to discharge from said spout as illustrated in Fig. 6.

As the container is tilted back to an upright position, ball **20** will roll back onto its seat **23** and plate **15** will swing back onto the end of the spout to close duct **17**. When the ball is off its seat, air is free to flow through duct **23**.

The modification illustrated in Figs. 7 and 8 includes a block **29** which is removably positioned in the forward end of the chamber surrounded by wall **21**, and said block having a depending lug **30** which extends into and partially closed duct **17**, thus restricting the flow of product therethrough. Such construction is more particularly intended for use in controlling the flow of vinegar and other waterlike liquids.

To maintain the plug in position for use, ears **31** project outwardly from the upper portions of the sides of said plug into notches **32** formed in wall **21**.

Thus it will be seen that I have provided a dispensing container which is simple in structure, inexpensive of manufacture and very effective in performing the functions for which it is intended.

It will be understood that minor changes in the size, form and construction of the various parts of my improved dispensing container may be made and substituted for those herein shown and described without departing from the spirit of the invention, the scope of which is set forth in the appended claim.

I claim as my invention:

In a dispensing container, a receptacle, a removable cover therefor, said cover having a centrally arranged outlet opening surrounded by a seat for a ball valve, there being an air vent formed through said cover outwardly from said valve seat, an upwardly inclined spout leading radially outward from said opening, there being a chamber formed in said cover above and communicating with said spout, there being longitudinally disposed shoulders formed between said spout and said chamber, which shoulders are inclined with respect to the bottom of said spout with their inner ends located on the valve seat surrounding said opening, and their outer ends disposed above the outer portion of said spout and a ball valve normally resting on said valve seat for simultaneously closing said outlet opening and air vent and which ball is adapted to traverse said inclined shoulders as the receptacle is tilted forwardly and backwardly.

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