

June 10, 1958

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2,838,211

CLOSURE CAP FOR AN INSULATED CONTAINER

Filed Oct. 18, 1954

2 Sheets-Sheet 1

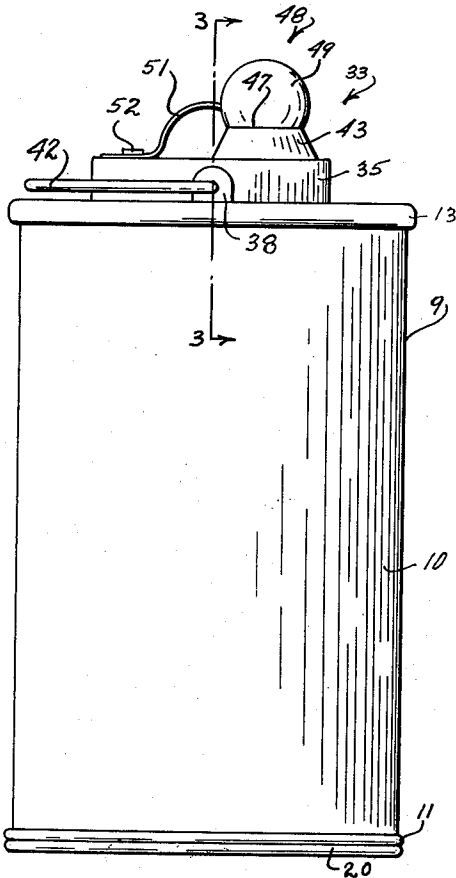


Fig. 1.

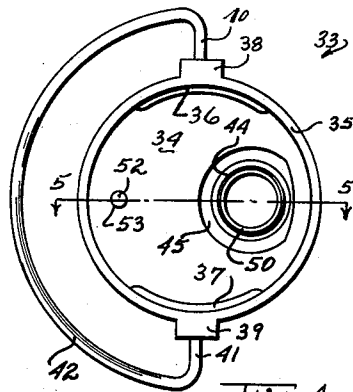


Fig. 4.

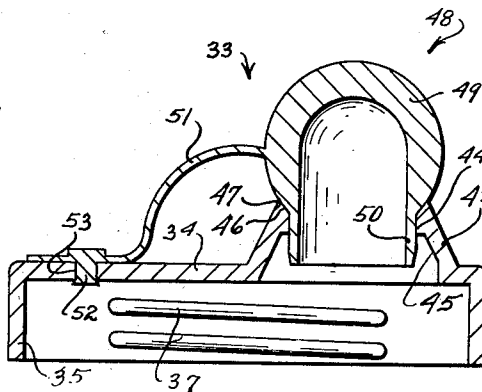


Fig. 5.

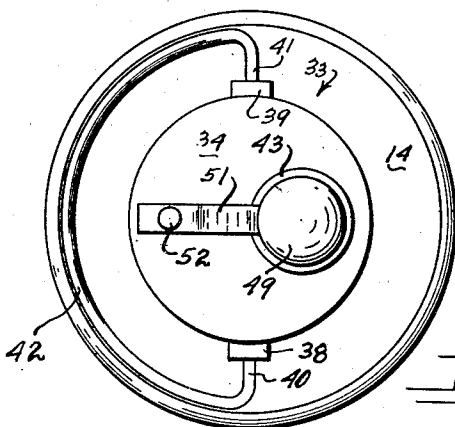


Fig. 2.

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2 Sheets-Sheet 2

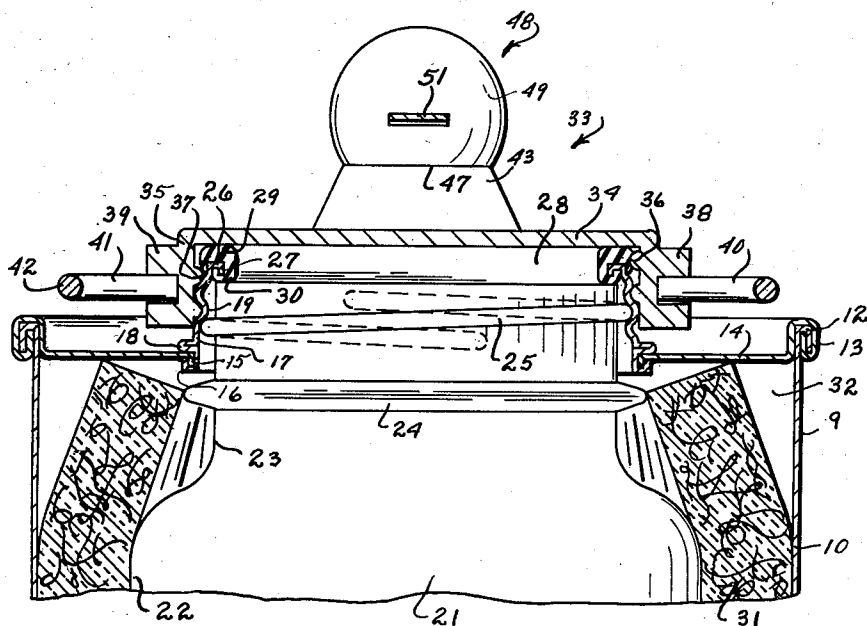


Fig. 5.

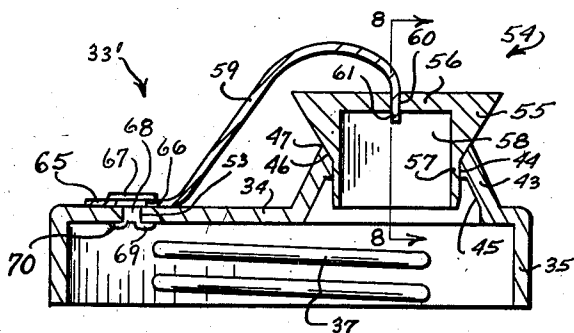


Fig. 7.

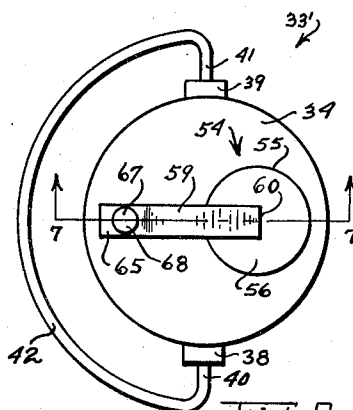


Fig. 6.

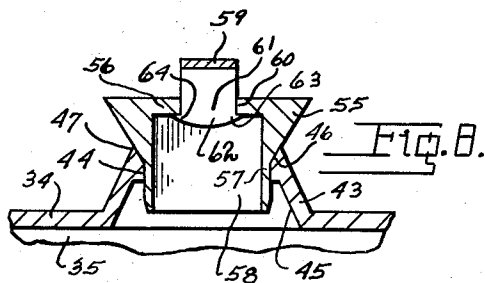


Fig. 8.

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CLOSURE CAP FOR AN INSULATED CONTAINER

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Application October 18, 1954, Serial No. 462,925

4 Claims. (Cl. 222—460)

This invention relates to improvements in a closure cap for an insulated container and particularly to such a container for use as a "jug" for transporting and maintaining liquids in hot or cold condition for a reasonable period of time.

The container of the present invention is popularly known and generally referred to as a "picnic jug" and is generally employed for hot or cold drinks.

The principal object of the present invention is the provision of a closure cap for an insulated container and wherein the container has a filling opening that is closed by a closure cap and which closure cap is provided with a stoppered discharge opening.

Another object of this invention is the provision of a closure cap for accomplishing the foregoing object that may be economically produced and therefore economically used in producing the insulated container.

Another object of this invention is the provision of a closure cap for an insulated container that may be readily disassembled by the user for the purpose of cleaning it and maintaining the same in a sanitary condition and which closure cap can be readily reassembled by the average person without the use of tools or implements of any sort.

A further and specific object of this invention is the provision of a closure cap for an insulated container, in which a discharge opening is formed so that the contents of the container may be discharged without removing the said closure cap and which closure cap has tied or leashed thereto a stopper for the discharge opening with said leash or tie in no wise interfering with the removal or placement of the stopper relative to the discharge opening.

Other objects and advantages of the present invention will be readily apparent by reference to the following specification considered in conjunction with the accompanying drawings forming a part thereof, and it is to be understood that any modifications may be made in the exact structural details there shown and described, within the scope of the appended claims, without departing from or exceeding the spirit of the invention.

In the drawings:

Fig. 1 is a side elevational view of an insulated container having applied thereto the closure cap of the present invention.

Fig. 2 is a top plan view of the container of Fig. 1.

Fig. 3 is an enlarged, fragmentary, sectional view through the upper end of the container and its cap as seen from line 3—3 on Fig. 1.

Fig. 4 is a bottom plan view of the insulated container cap forming the subject matter of this invention.

Fig. 5 is an enlarged transverse sectional view through the insulated closure cap as seen from line 5—5 on Fig. 4.

Fig. 6 is a top plan view of a modified form of the closure cap, particularly the stopper, of the present invention.

Fig. 7 is an enlarged transverse sectional view through the modified closure cap as seen from line 7—7 on Fig. 6.

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Fig. 8 is a fragmentary sectional view through the modified closure cap as seen from line 8—8 on Fig. 7.

Throughout the several views of the drawings similar reference characters are employed to denote the same or similar parts.

The insulated container, to which the closure cap of the present invention may be applied, may comprise an outer container 9 having an outer body member or shell 10 in the form of a hollow cylinder with its lower end rolled on itself to form a finished bead 11. The upper end of the body 10 is outwardly turned to form a hook 12, see Fig. 3, adapted to interfit with a complementary hook 13 formed at the outer periphery of the outer body member top 14. The outer body member top 14 is in the form of a ring and has a central aperture provided by a down turned flange 15, in effect, defining said aperture. The flange 15 is adapted to be received in an upwardly turned portion, or hook 16, at the lower end of a neck-like member, indicated in general by the reference numeral 17.

The neck-like member 17 is cylindrical in cross section and is provided upwardly of its hook 16 with an outwardly projecting flange 18. In assembling the ring-cover 14 with the said neck-like member 17, the said ring-cover 14 just outwardly of the down turned flange 15 is clamped between the flange 18 and hook 16 as clearly illustrated in Fig. 3. The neck-like member 17, upwardly of the flange 18, is corrugated or rolled, spirally upwardly, to provide screw threads 19. The material of the neck-like member 17, as clearly illustrated in Fig. 3, is of uniform thickness and the forming or rolling of the threads 19 therein provides, simultaneously, internal and external threads for said member and each of which is used for a definite purpose as will presently be made clear.

The lower end of the outer body member or shell 10 is closed by a bottom 20 which may be conveniently in the form of a metallic lid having at its free end a rolled bead. The exterior diameter of the bottom 20, particularly its bead, is such as to be substantially equal to that of the outer body member or shell bead 11, when the said bottom is in operative position.

Disposed within the outer body member or shell 10 is a container 21 conveniently in the form of a glass jar, such as is commonly sold and used for home canning purposes and is generally referred to as a "Mason fruit jar." Such a jar is provided with a bottom from the periphery of which upstands the wall 22 and the said bottom may be circular in plan, but is, preferably, of the well known form that is rectangular in plan and has a wall 22 upstanding from each side or edge thereof.

The said inner container or jar 21 terminates at its upper end in a neck 23, together with a base radial flange 24; for the purpose of the present invention, the radial flange 24 may be omitted. Upwardly of the radial flange 24 the neck 23 is provided with an outwardly projecting spiral rib which forms in effect a screw thread 25. The screw thread 25 is formed to an external dimension to screw or thread into the internal threads of the outer body neck-like member 17.

The upper or free end of the outer body neck-like member is outwardly turned as at 26, having its inner periphery downwardly turned as at 27, and thereby provides the said upper end of the body neck-like member with a relatively flat circumferential surface 26. Disposed on said upper end on the body neck-like member 17, and particularly embracing the flat surface and down turn flanges 26 and 27, is a gasket 28 formed of relatively soft and compressible material, such as rubber. The said gasket is provided with an L-shaped groove to enable it to completely enclose the radial flange, flat upper surface 26 and the depending flange 27 for thereby providing

a soft upper surface 29 and a similar soft lower surface 30.

The inner container or jar 21 is inserted through the open lower end or bottom of the outer container and its neck threads 25 interengaged with the inner threads of the outer container neck 17. The screwing of the inner container into the outer container neck is continued until the upper end of the inner container neck engages the lower flat surface 30 of the gasket 28. At this time a sheet of insulating material, indicated in the drawings by the reference character 31, is disposed in the space 32 between the outer surface of wall 22 of the inner container 21 and the inner surface of the wall of the outer container body 10.

It should be noted that the bottom of the inner container is upwardly spaced from the outer container bottom 20, not shown in the drawings, and that heat insulation is disposed between said bottoms. It should further be noted that the construction of the insulated container is disclosed in applicant's pending application, Serial No. 463,373, filed October 20, 1954.

From the foregoing, it will be readily noted that the inner container has an external dimension materially less in diameter, or width, and height than the internal dimensions of the outer container and with its walls and bottom in positions for providing a space between said inner and outer containers which is substantially filled by the insulating material.

The insulated container has its upper end closed by a readily removable closure cap indicated in its entirety by the reference numeral 33. The closure cap 33 comprises a body portion 34 with a depending flange 35 from its periphery. Inwardly projecting from diametrically opposite points are ribs 36 and 37 which, as seen in Fig. 5 incline to the horizontal, and in fact, incline to the same degree as the external threads of the outer container neck 17. The said ribs 36 and 37 are in fact interrupted threads for threaded engagement with the, as noted above, exterior threads of the outer container neck.

The closure cap has a lug 38 and 39, respectively, projecting from two diametrically opposite points on the exterior of its flange 35, each of which is provided with a socket for respectively receiving the inwardly projecting ends 40 and 41 of a bail handle 42.

In practice the closure cap 33 is removed from the container to permit a filling of the inner container through its neck 23 and, since the said contents are to be discharged in relatively small quantities as compared to its capacity, the said closure cap is provided with a discharge opening. The discharge opening may be formed as part of a funnel-like upstanding lug 43 which is centrally apertured as at 44 with a funnel-like passageway 45 leading to the discharge aperture 44 from the interior of the container.

The discharge opening through the lug 43, on the outer side of the central aperture 44, is inclined outwardly as at 46 wherefore the discharge opening terminates in a sharp edge 47.

The formation of the said discharge opening has a funnel-like passage 45, a central aperture 44 and a tapered lip 46 terminating in a sharp edge 47, resulting in a discharge opening that is substantially anti-drip since the return of the container to its normal position, after tilting to cause a discharge or flow through said discharge opening, will, through the lip edge 47, cut off any flow therethrough.

The discharge opening through the closure cap is normally closed by a removable stopper indicated in its entirety by the reference numeral 48. The stopper 48 comprises a body portion illustrated in the drawings as substantially spherical, or ball-like, in shape, with a reduced stopper portion 50 extending from said spherical body portion 49. The body portion 49 has formed integral therewith a flexible tie or leash 51 having, in turn,

at its other end a plug 52 adapted to be inserted through a suitable anchoring aperture 53 in the cap body portion 44 at a point near its perimeter.

In practice the container outer body 10, top 14, and bottom 20, are formed of sheet metal, although they may be formed of other material whether moldable or formable by other means. The inner container 21 is preferably formed of glass, as noted above, a well known "Mason fruit jar," or the like and can thereby be readily cleaned and kept clean and sanitary. The closure cap 33 may be made of a moldable synthetic resin compound commonly known as "plastic" and preferably of the type that is hard and rigid after molding, while the stopper 49, its tie or leash 51, and the securing lug 52 are likewise formed of moldable synthetic resin, but preferably of the type that remains flexible and slightly compressible after formation, so that said stopper may have its reduced end 50 readily pressed into the discharge opening 44. The flexible tie or leash 51 permits the ready withdrawal of the stopper from the discharge opening and permits the ready insertion of said stopper into said opening while the flexible lug 52 affords pressing of the same through its attaching aperture 53 in the closure cap body.

The modified stopper disclosed in Figs. 6, 8, and 9 comprises a member indicated in its entirety by the reference numeral 54 which has a body portion 55 substantially cylindrical in plan and provided with a top 56. The stopper member 55 is provided with a depending reduced portion 57 which is of substantially the same dimensions as the reduced portion 50 of the stopper 48 and the said stopper body 55 is provided with a hollow interior 58.

The modified stopper member 55 is secured to the closure cap through a flexible tie or leash 59 which, however, is separately formed from the stopper member 55. In order to secure the said leash or tie 59 with the stopper 55 the said stopper 55 is provided through its top 56 with a slit 60 and the leash or tie 59 is adapted to have its one end 61 inserted through the said slit. Inwardly of the stopper 55 and downwardly of its top 56 the leash end 61 is formed with a flaring head or shouldered portion 62 thereby providing projections 63 and 64 to underlie the stopper top 56 outwardly of the said stopper slit 60.

The modified leash 59 may be provided with an integral anchoring lug, such as 52 on the tie or leash 51, but preferably the other end 65 of the tie or leash 59 is provided with an aperture 66 to underlie an enlarged head 67 of a fastening member 68. Any suitable or desirable means may be employed for securing the leash fastening member 68 in position, that illustrated in the drawings providing said fastening member 68 with outwardly bendable arms 69 and 70 to underlie the closure cap body portion 34 at diametrically opposite points of the anchoring aperture 53.

It should be noted that the flexible tie or leash 51, instead of having formed integral therewith the anchoring lug 52 may be provided with an aperture similar to aperture 66 in the flexible tie or leash 59 and cooperate with or encircle an anchoring member such as 68.

The modified stopper 54 and its detachable leash or tie 59, similar to the stopper 49 and its tie or leash 51 are formed from moldable synthetic resin, plastic, of the type that remains flexible and slightly compressible after formation so that no interference is given to the insertion and removal of the reduced portion 57 relative to the discharge opening of the container closure cap.

In view of the foregoing, it will be noted that the objects initially set forth have been accomplished and that there has been provided a closure cap for containers which is removable to permit the filling of the container and which closure cap has a stoppered discharge opening to permit the discharge of liquids from the container, with said stopper tied or leashed to the container closure

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cap to prevent displacement and loss and yet not interfere with its intended use.

What is claimed is:

1. A closure cap of the class described comprising a body portion having a peripheral, depending, internally threaded, attaching flange for removable attachment to a container, a boss upstanding from said body portion having a funnel-like passageway therethrough terminating in a discharge opening with an outwardly and upwardly tapered lip terminating in a sharp edge, a stopper for said discharge opening comprising a body portion and a reduced portion projectable through the discharge opening and with said stopper body portion on said lip, and a leash carried by the stopper and closure cap body portion tying the stopper to the body portion to prevent misplacement relative to the closure cap.

2. A closure cap of the class described comprising a body portion having a peripheral, depending, internally threaded, attaching flange for removable attachment to a container, a boss upstanding from said body portion having a funnel-like passageway therethrough terminating in a discharge opening with an outwardly and upwardly tapered lip terminating in a sharp edge, a stopper for said discharge opening comprising a body portion and a reduced portion projectable through the discharge opening and with said stopper body portion on said lip, a leash integral with the stopper body portion and laterally extending therefrom, and separable means carried by the leash and closure cap body portion for connecting the leash to said closure cap body portion.

3. A closure cap of the class described comprising a body portion having a peripheral, depending, internally threaded, attaching flange for removable attachment to a container, a boss upstanding from said body portion

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having a funnel-like passageway therethrough terminating in a discharge opening with an outwardly and upwardly tapered lip terminating in a sharp edge, a stopper for said discharge opening comprising a body portion and a reduced portion projectable through the discharge opening and with said stopper body portion on said lip, a leash, cooperating means for connecting one end of the leash with the stopper body portion, and cooperating means on the leash and closure cap body portion for connecting the other end of the leash and closure cap to one another.

4. A closure cap of the class described comprising a body portion having a peripheral, depending, internally threaded, attaching flange for removable attachment to a container, a boss upstanding from said body portion having a funnel-like passageway therethrough terminating in a discharge opening with an outwardly and upwardly tapered lip terminating in a sharp edge, a stopper for said discharge opening comprising a body portion and a reduced portion projectable through the discharge opening and with said stopper body portion on said lip, a leash carried by the stopper and extending laterally thereof, and leash anchoring means carried by the closure cap body portion for securing the leash to the said closure cap body portion to prevent misplacement of the stopper relative to the closure cap.

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