June 27, 1967 G. M. DAVIS 3,327,752

JAR CLOSURE

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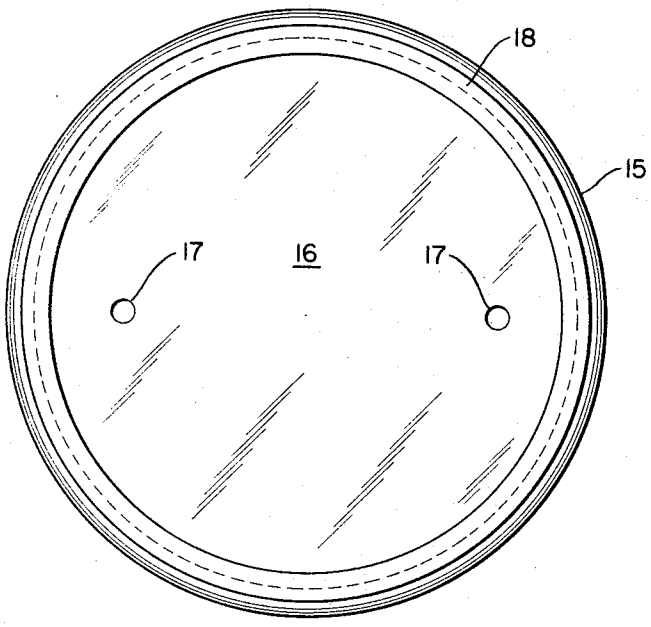


FIG. 1

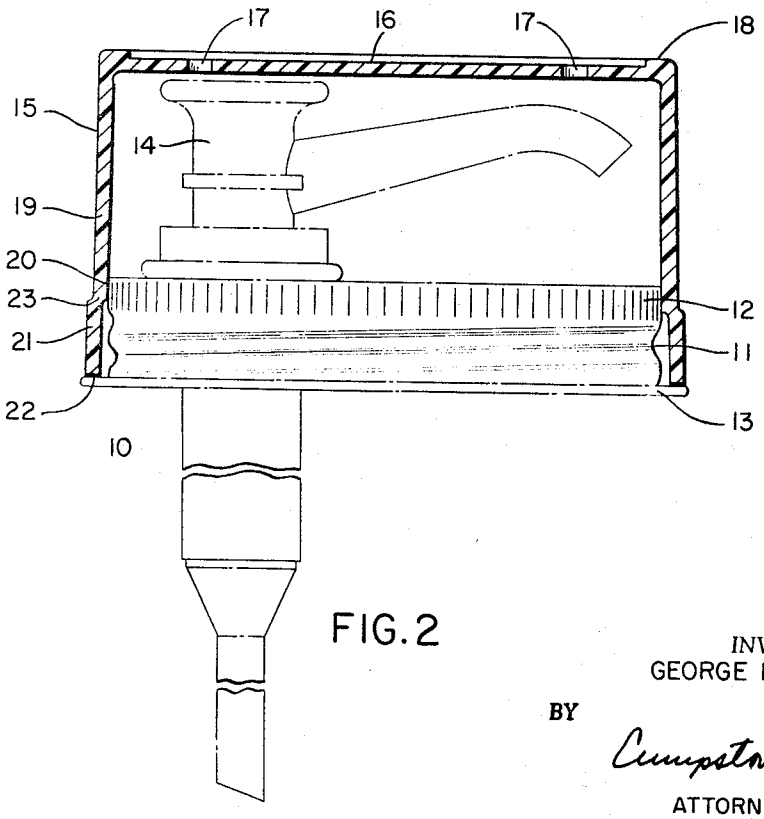


FIG. 2

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JAR CLOSURE

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This invention relates to a jar closure improvement, and more particularly to a jar cover and overcap cooperatively arranged for closing a jar and enclosing a space above the cover.

For some jars adapted to contain fluid contents, it is expedient to incorporate a pump mechanism extending through the cover and into the jar and by means of which the contents can be pumped out of the jar. Such pump devices are carried in an associated package or else they extend above the jar cover where they interfere with packing, shipping, stacking, and general handling of jars, and where they are apt to be broken or damaged.

It is an object of this invention to protectively enclose a space over a jar cover by means of a snap-fit overcap which can house and protect a pump or other device extending through or positioned above a jar cover.

Another object of the invention is to eliminate separate or associated packaging of a pump and cover combination for jars.

Another object of the invention is to facilitate handling, shipping, packing, and stacking of jars, and particularly jars having pump devices extending through their covers.

Another object of the invention is to provide a simple, attractive, marketable, and serviceable overcap for a jar cover.

Other objects of the invention will be apparent hereinafter from the specification and from the recital of the appended claims. To these and other ends, the invention resides in certain improvements, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of this specification.

In the drawings:

FIG. 1 shows a plan view of an overcap according to the invention; and

FIG. 2 shows a side elevation of a cover and a cross section view of an overcap snap-fitted in place on the cover according to the invention.

Generally, the invention comprises an overcap adapted to be snap-fitted onto a cover having a knurled outer surface adjacent its upper edge. A relatively small diameter portion of the inside wall of the overcap located above the lower or bottom edge of the overcap is adapted to closely engage the knurled surface, and the bottom edge of the overcap is preferably adapted to abut against a radially extending rim of the lower edge of the cover. Thus, the overcap is strong vertically from its position of engagement with the lower rim of the cover, and since the portion of the overcap which engages the cover is spaced from its bottom edge, the overcap is not readily torn or cracked from being snap-fitted onto the cover.

The inventive jar closure is preferably used in association with the well-known, knurled, threaded cover **10** shown in FIG. 2. This cover has a threaded portion **11** and a knurled outer surface **12** adjacent its upper edge and adapted for hand gripping of the cover to thread it on and off a jar. A lower rim **13** extends radially outward at the bottom edge of cover **10** and preferably provides the greatest diameter of cover **10**. Pump mechanism **14** is shown extending through and above cover **10** for pumping fluid contents from a jar to which cover **10** is threaded, but pump **14** can be varied, eliminated, or replaced by some other known device.

Overcap **15** is shown in FIG. 2 as snap-fitted in place

on cover **10**. Overcap **15** is preferably molded in one piece of synthetic plastic material, and is preferably formed of transparent material so that pump mechanism **14**, or some other object or device, is visible through overcap **15**. Overcap **15** extends above the upper surface of cover **10** to enclose and protect a space above cover **10** into which pump mechanism **14** or other device extends.

The upper surface **16** of overcap **15** is preferably circular as best shown in FIG. 1 and can be provided with one or more apertures **17** for venting the enclosed space above cover **10**. Upper surface **16** is preferably provided with a peripheral raised rib **18** to facilitate stacking of a superposed jar, the circular area inside rib **18** being adapted to receive the base of such a superposed jar.

A generally cylindrical upper wall portion **19** of overcap **15** is connected to upper surface **16** and extends downward therefrom. The lower inside surface **20** of upper wall portion **19** is dimensioned to engage closely against knurled surface **12** of cover **10** in an interference snap fit.

Such close engagement of the wall of overcap **15** with knurled surface **12** tends to force wall **19** outward, and tends to split wall **19**. In part to prevent any such splitting, a generally cylindrical lower wall portion **21** connects with the lower extremity of upper wall portion **19** and extends downwardly therefrom. Lower wall portion **21** has a larger diameter than upper wall portion **19** so as to fit loosely over the upper portion of cover **10** and so that the inside surface of wall **21** does not engage any portion of the outer wall of cover **10**.

The lower or bottom edge **22** of lower wall **21** is preferably approximately the diameter of rim **13** so as to abut against the upper surface of rim **13** and support overcap **15** vertically from a position of engagement with rim **13**. The engagement of lower edge **22** of lower wall **21** with rim **13** not only prevents any forcing of overcap **15** too far down onto cover **10** so as to split the wall of overcap **15**, but also supports overcap **15** vertically to protect the enclosed space above cover **10**, and to support superposed stacked jars. Also, lower wall **21** extending downward from upper wall portion **20** strengthens upper wall portion against the radial interference between its inside surface **20** and knurled surface **12** so as to prevent any splitting of overcap **15** from snap-fitting onto cover **10**.

The juncture between lower wall **21** and upper wall **19** is preferably formed as the illustrated step line **23** disposed adjacent the lower edge of knurled surface **12**. However, a curved joint or joint of other configuration can be used to connect lower wall **21** and upper wall **19**. It is only important that the inner surface **20** of the lower extremity of upper wall **19** be dimensioned for an interference snap fit with knurled surface **12**, and that lower wall be of sufficient diameter to clear knurled surface **12**, and threaded portion **11** of cover **10**. Of course, the diameter of bottom edge **22** of lower wall **21** is preferably not greater than the outside diameter of rim **13**, so that bottom edge **22** can abut against rim **13** as described above.

It will thus be seen that cover **10** and overcap **15** cooperate with each other to provide a simple and economical jar closure allowing a device such as pump mechanism **14** to extend above the jar cover and yet attractively enclosing and protecting such a mechanism with a convenient and reliable device that is easily removed, and allows normal packing, shipping, handling, and stacking of jars. While the invention has been disclosed herein by reference to the details of a preferred embodiment, it is to be understood that such disclosure is intended in an illustrative, rather than a limiting, sense, and it is contemplated that various modifications of the construction

and arrangement of the parts will readily occur to those skilled in the art, within the spirit of the invention and the scope of the appended claims.

I claim:

1. In a jar closure, the combination comprising:
(a) a generally circular cover for fitting over the opening in a jar;
(b) said cover being formed with a knurled outer surface adjacent its upper edge;
(c) an overcap adapted to snap fit over said cover to enclosure a space above said cover, said overcap comprising:
(1) a generally planar, circular upper surface;
(2) a generally cylindrical wall connected with said upper surface and extending downward therefrom, a lower portion of said wall having a larger diameter than an upper portion of said wall; and
(3) the diameter of said wall being increased to form an outward step along a line adjacent the bottom edge of said knurled surface when said overcap is snap-fitted on said cover, said lower portion of said wall below said outward step being adapted to move freely over said knurled surface, and the smaller diameter portion of said wall adjacent said step being adapted to engage said knurled surface.

2. The jar closure of claim 1 wherein said cover has a radially extending rim adjacent the lower edge thereof, and said lower edge of said overcap is adapted to abut against the upper surface of said rim when said wall closely engages said knurled surface.

3. The jar closure of claim 1 wherein said overcap is molded in one piece of plastic material.

4. In a jar closure, the combination comprising:
(a) a generally circular cover adapted for threaded engagement with a jar to close the opening therein, said cover comprising:
(1) a knurled outer surface adjacent the upper edge of said cover; and
(2) a radially extending rim adjacent the lower edge of said cover; and
(b) an overcap adapted to snap fit over said cover to enclose a space above said cover, said overcap comprising:
(3) a generally planar, circular upper surface;
(4) a generally cylindrical upper wall portion connected with said upper surface and extending downward therefrom, the inside surface of said upper wall portion adjacent the lower edge thereof being adapted to engage closely said knurled surface of said cover; and
(5) a lower wall portion extending from said lower edge of said upper wall portion and having a diameter greater than said upper wall portion, the bottom edge of said lower wall portion being adapted to abut against the upper surface of said rim of said cover when said overcap is snap-fitted in place.

5. The jar closure of claim 4 wherein said upper surface of said overcap is provided with an aperture for venting said enclosed space.

6. The jar closure of claim 4 wherein said upper surface of said overcap is formed to define a raised peripheral rim to facilitate stacking of a superposed jar on said overcap.

7. The jar closure of claim 4 wherein a pump mechanism extends through said cover and into said enclosed space.

8. The jar closure of claim 4 wherein said overcap is molded in one piece of plastic material.

9. In a jar closure, the combination comprising:
(a) a generally circular threaded cover for closing the opening in a jar;
(b) said cover being formed with a knurled outer surface adjacent its upper edge;
(c) said cover being formed with a radially extending rim adjacent its lower edge;
(d) an overcap adapted to snap fit over said cover to enclose a space above said cover;
(e) said overcap having a generally planar, circular upper surface;
(f) said upper surface being provided with an aperture for venting said enclosed space;
(g) said upper surface being provided with a raised peripheral rim to facilitate stacking of a superposed jar on said overcap;
(h) a first generally cylindrical wall connected with said upper surface and extending downward therefrom, the lower inside surface of said first wall being adapted to closely engage said knurled surface of said cover; and
(i) a second generally cylindrical wall of slightly larger diameter than the diameter of the lower extremity of said first wall, said second wall being connected to said first wall along a step line adjacent the lower edge of said knurled surface when said overcap is snap-fitted in place, and said second wall extending downward from said first wall, the bottom edge of said second wall being adapted to abut against the upper surface of said radially extending rim of said cover when said overcap is snap-fitted onto said cover.

10. The jar closure of claim 9 wherein a pump device extends through said cover and into said enclosed space.

11. The jar closure of claim 9 wherein said overcap is molded in one piece of plastic material.

12. The jar closure of claim 11 wherein said material is transparent.

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