

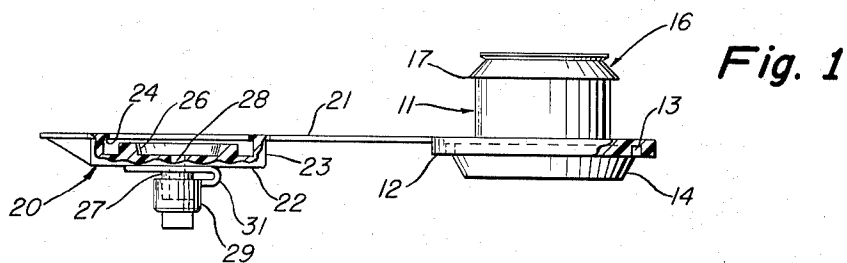
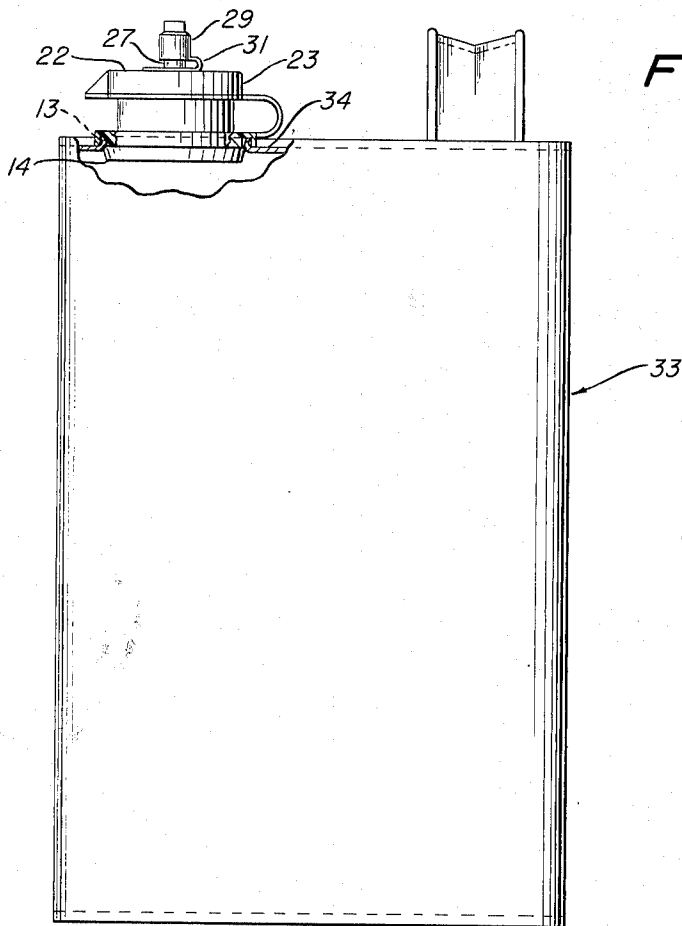
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DUAL-OUTLET CONTAINER CLOSURE

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DUAL-OUTLET CONTAINER CLOSURE

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This invention relates to dual-outlet container closures and particularly to dual-outlet container closures made of compressible materials.

My invention will be better understood by references to the following description and accompanying drawings of a preferred embodiment thereof, wherein:

FIGURE 1 illustrates an elevational view, in partial section, of one embodiment of the present invention; and

FIGURE 2 shows, in cut-away view, a closure of the present invention positioned in a container.

Broadly speaking the closure of the present invention is of the type adapted to be received in a container having a circular aperture therein surrounded by an annular outwardly extending lip. The novel closure has a spout of compressible material with a laterally extending annular grooved seat having a frusto-conical section with a diameter at its base slightly greater than the diameter of the groove. The frusto-conical section depends radially inwardly from the seat in such a way that the spout can become integral with a container of the type mentioned above when the lip of the container is forced over the frusto-conical section of the seat into the groove. At its other end the spout also has a frusto-conical section extending radially inwardly. This latter mouth section has a base slightly greater in diameter than the external diameter of the spout, which base forms a lip opposite and spaced apart from the seat. The mouth section is adapted to receive a cover lid flexibly attached to the spout. The cover lid has depending therefrom an annular outer wall and an annular inner wall of diameter smaller than the outer wall; thus, between the inner and outer walls an annulus is formed. An annular flange extends inwardly on the inner side of the outer wall. Accordingly, the cover lid is adapted to snap tightly over the mouth of the spout when the lip on the mouth section of the spout is forced over the flange on the cover lid. In this position the mouth of the spout is received in the annulus between the inner and outer wall of the cover lid to form a leak-proof seal. The cover lid also contains a nozzle, the diameter of which is small in comparison with the diameter of the mouth section of the spout. The nozzle has a fluid passageway therethrough so that fluid can flow through both the spout and the cover lid when the cover lid is snapped over the spout. The nozzle is sealed by suitable means such as a removable cap flexibly attached thereto which can be snapped into place over the nozzle opening.

It can thus be seen that the closure of the present invention provides a unitary structure of simple design which is readily adaptable for use in conjunction with conventional rigid containers to provide a means whereby the contents of the container may alternatively be dispensed rapidly in large volumes, i.e., by removing the cover lid and pouring from the spout, or by spraying smaller volumes through the nozzle opening when the cover lid is snapped over the mouth section of the spout and the nozzle cap is removed. An apparatus such as just described above employing the elements set forth in inter-related combination is particularly suitable for use with multi-purpose liquids. One application for such a closure exists for example where the contents of a particular container are useful both as paint thinner and charcoal fire starter. By opening the cover lid the contents may be dispensed in "full-pour" fashion as a paint thinner; however, when the cover lid is pressed over the mouth of the spout a seal is

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formed so that by opening the nozzle cap the contents may be sprayed as a small stream for the purpose of igniting a charcoal burner.

Referring now to the drawings for purposes of illustration, the embodiment of FIGURE 1 has spout 11 which is fabricated from compressible material such as common plastics, i.e., natural polyethylene or the like. Spout 11 is circular in cross section and has an internal diameter of $\frac{3}{4}$ inch. The internal diameter of spout 11 may be larger or smaller as the particular situation requires. Spout 11 has a laterally extending annular seat 12 with groove 13 cut therein. The diameter of groove 13 is approximately that of the diameter of the annular lip on containers with which the closure is to be used. Frusto-conical section 14, having a diameter at its base slightly greater than that of groove 13, depends radially inwardly from the underside of seat 12. When seat 12 is pressed over the lip of a container as shown in FIGURE 2 frusto-conical section 14 is compressed slightly as it passes over the lip of the container after which section 14 expands back to its original position and the container lip is forced into groove 13 and the spout becomes integral with the container.

Opposite seat 13 and spaced apart therefrom by approximately one-half inch, spout 11 has mouth section 16. Mouth section 16 is frusto-conical and its base is slightly larger than the external diameter of spout 11 so that an overhanging lip 17 is formed. Frusto-conical mouth section 16 is opposite to section 14 and extends radially inwardly.

The closure also has cover lid 20 flexibly attached to spout 11 by means of flexible strip 21. Lid 20 has a top surface 22 adapted to cover the mouth section 16 of spout 11. Outer annular wall 23 having an annular flange 24 thereon depends from surface 22. Annular inner wall 26 also depends from surface 22 and the space between inner wall 26 and outer wall 23 forms an annulus adapted to receive mouth section 16 of spout 11 when lid 20 is pressed over lip 17 of mouth section 16. Thus, mouth section 16 is adapted to mate with cover lid 20 to form a leak-proof seal.

Cover lid 20 is further provided with nozzle 27 having therethrough fluid passageway 28. Passageway 28 is of small diameter in comparison with the internal diameter of spout 11 and in the illustrated embodiment is one-eighth inch in diameter. Nozzle 27 is covered with nozzle cap 29 made of compressible material flexibly adapted to cover lid 20 by means of flexible strip 31. The internal diameter of cap 29 is made so as to approximate the diameter of nozzle 27. Accordingly, when cap 29 is forced over nozzle 27, both materials being flexible, nozzle 27 is slightly compressed and cover 29 is slightly expanded so that cover 29 becomes tightly, but removably, affixed to nozzle 27. Nozzle 27 may also be fabricated with its fluid passageway 28 closed by a seal which may be conveniently broken as by inserting a pin or snipping off the end of nozzle 27. Such an embodiment would have particular utility in applications where it would not be necessary to maintain a seal on passageway 28 when reclosure is not being used in contrast to the illustrated embodiment.

The closure illustrated in detail in FIGURE 1 is designed to be positioned in a container 34 as shown in FIGURE 2. Container 33 has an annular lip 34 which fits into groove 13 as illustrated in the cutaway section. This particular construction is particularly advantageous because it permits fabrication of a container and closure independently of each other. Yet, when the two components are joined the compressibility of the closure permits it to be forced over the lip of the container so that it becomes integral with the container and forms a leak-proof seal.

Thus, having described my invention, what is claimed is:

1. A dual-outlet dispensing closure of the type adapted to be received in a container having a circular aperture therein surrounded by an annular outwardly extending lip, said closure consisting essentially of:

(a) a closure spout formed of a compressible material and having a first fluid passage therethrough, a shoulder member extending radially outwardly from said spout, a vertical annular groove on the under-
neath side of said shoulder encircling said spout, a
frustro-conical section depending from said shoulder
member, the diameter of said frustro-conical section
as its base being slightly greater than the
inside diameter of said groove, said section ex-
tending radially inwardly from said base, said spout
being adapted to become integral with said con-
tainer when the lip of said container is forced over
the frustro-conical section into said groove, said
spout further having a mouth section adjacent its
upper end above said shoulder member, said mouth
section having a frustro-conical form with a base
slightly greater than the external diameter of said
spout and extending radially inwardly toward the up-
per end of said spout, said mouth section encircling
the upper end of said spout; and,

(b) a cover lid flexibly attached to said spout said lid having an annular inner and outer wall depending

therefrom said outer wall having an inwardly extending annular flange thereon, said annular inner wall being of smaller diameter than said outer wall and spaced apart from said outer wall to form an annulus adapted to receive the mouth section of said spout to form a seal when the outer wall of said lid is snapped over the frustro-conical mouth section of said spout, said lid further having a nozzle of small diameter in comparison with said spout, said nozzle extending from said lid and said nozzle having a fluid passage therethrough to permit fluid flow through said aperture.

2. The closure of claim 1 having a nozzle cap flexibly attached to said cover lid.

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