

COMMONWEALTH OF AUSTRALIA

628881

Patents Act 1952

CONVENTION APPLICATION FOR A STANDARD PATENT

We, COLGATE-PALMOLIVE COMPANY, a Delaware corporation of 300 Park Avenue, New York, N.Y. 10022, United States of America, hereby apply for the grant of a Standard Patent for an invention entitled

"CLOSURE ASSEMBLY WITH POURING SPOUT AND MEASURING CUP"

which is described in the accompanying complete specification.

Details of basic application:-

Number of basic application:- 272,154

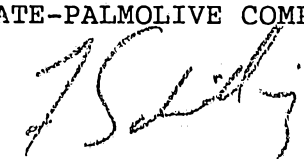
Name of Convention country in which basic application was filed:- United States of America

Date of basic application:- 16 November 1988

Our address for service is: F.B. RICE & CO.,
28A Montague St,
Balmain N.S.W. 2041

Dated this 9 day of November 1989

COLGATE-PALMOLIVE COMPANY

By: 

Registered Patent Attorney

TO: The Commissioner of Patents,
COMMONWEALTH OF AUSTRALIA

SO11274 09/11/89

272,134

Commonwealth of Australia
The Patents Act 1952
DECLARATION IN SUPPORT

In support of the (Convention) Application made by:

COLGATE-PALMOLIVE COMPANY, of

300 Park Avenue

New York, New York 10022

for a patent for an invention entitled:

CLOSURE ASSEMBLY WITH POURING SPOUT
AND MEASURING CUP

I ~~(We)~~ Robert C. Sullivan, Chief Patent Counsel
of and care of the applicant company do solemnly and sincerely declare as follows:

a) I am ~~(We are)~~ the applicant ~~(s)~~ for the patent

~~and~~

b) I am ~~(We are)~~ authorised by the applicant ~~(s)~~ for the patent to make this declaration on its behalf.

Delete the following if not a Convention Application.

The basic application ~~(s)~~ as defined by section 141 ~~(142)~~ of the Act was ~~(were)~~ made

on 16 November 1988 in United States of America

~~XX~~

~~XX~~

~~XX~~

~~XX~~

by Salvatore Nicholas Del'Re

The basic application ~~(s)~~ referred to in this paragraph is ~~(are)~~ the first application ~~(s)~~ made in
a Convention country in respect of the invention the subject of the application.

~~XX~~ ~~I am (We are) the actual inventor(s) of the invention~~ ~~XXXX~~

~~XX~~

b) Salvatore Nicholas Del'Re, of 11 Julian Way, Marlboro,
New Jersey, United States of America

is ~~(are)~~ the actual inventor ~~(s)~~ of the invention and the facts upon which
the applicant company

is ~~(are)~~ entitled to make the application are as follows:

the applicant is the assignee of the invention from the
said actual inventor ~~(s)~~.

Declared at New Jersey U.S.A. this 14th day of January 1990

Signed

Robert C. Sullivan Status Chief Patent Counsel

Declarant's Name Robert C. Sullivan

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CLOSURE ASSEMBLY WITH POURING SPOUT AND MEASURING CUP

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(56) Prior Art Documents
US 4773560
US 4706829
US 4696416

(57) Claim

1. A closure assembly for a container having a neck comprising a pouring spout having a tapered body receivable within said neck, first means on said tapered body for resiliently engaging said neck and forming a seal therewith when press-fitted into said neck, the upper edge of said neck being beveled, said tapered body having an outwardly extending peripheral lip having a continuous protrusion thereon and closure means for engaging the peripheral lip of said pouring spout and urging said peripheral lip and continuous protrusion into sealing engagement with said closure means, said peripheral lip being resilient whereby it can move downwardly upon contact by said closure means into the beveled region of said neck to assure said sealing engagement.

(11) AU-B-44525/89

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9. A closure assembly for a container having a neck comprising a first member adapted to be seated in sealing engagement with the inner peripheral wall of said neck, said first member including a downwardly tapered truncated conical outer body having a pouring spout integral therewith, said body seating in said neck, said neck being beveled on its upper edge and having external threads, a measuring cup forming a cap for said container, threaded means on said measuring cup for engagement with said neck, and sealing means on said body, said sealing means including an outwardly extending resilient peripheral lip on the upper edge of said body, said resilient peripheral lip movable into the region of the bevel of said neck by said measuring cup and an upwardly extending bead on said lip, said bead engaging said measuring cup to form a seal when said measuring cup engages said neck.

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COMPLETE SPECIFICATION
(ORIGINAL)

Class Int. Class

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Related Art :

Name of Applicant : COLGATE-PALMOLIVE COMPANY

Address of Applicant : 300 Park Avenue, New York, N.Y.
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Actual Inventor : Salvatore Nicholas Del'Re

Address for Service : F.B. RICE & CO.,
Patent Attorneys,
28A Montague Street,
BALMAIN. 2041.

Complete Specification for the invention entitled:

"CLOSURE ASSEMBLY WITH POURING SPOUT AND MEASURING CUP"

The following statement is a full description of this invention including the best method of performing it known to us:-

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

This invention relates to a closure assembly for a container and, more particularly, to a three-piece assembly including a pouring spout and a measuring cup, as well as a container.

DESCRIPTION OF THE PRIOR ART

Various types of pouring spouts for containers have been developed in the past. These pouring spouts usually are separate and apart from the cap provided for the container. During use of the pouring spout, because there is no tight seal provided for the pouring spout, there is likely to be leakage between the pouring spout and the container, as well as leakage between the cap and pouring spout. When not in use, because there is no positive seal between the pouring spout and the cap, leakage may cause the assembly to become coated with the solution dispensed from the container. Further, evaporation of the contents may occur.

One step in the development of this closure assembly was the development of the closure assembly described in German Utility Model Patent No. G 84 31 343.9, which is incorporated herein by reference. The present invention is an improvement thereover by provision of a flange with an upwardly extending bead, which engages the under surface of a radial wall on the measuring cup. This forms a circular line seal with the flange providing suitable flexibility to insure a sufficiently good seal so that the container with the closure assembly can pass the fluid immersion test.

Another development from the closure assembly shown in German Utility Model Patent No. G 84 31 343.9 is the closure assembly described in United States Patent No. 4,706,829 issued November 17, 1987 to Ernest L. Li. This invention utilizes various other types of seals, but is not believed to have been able, on a mass produced scale, to pass the fluid immersion test, thus, being likely to exude a surfactant or the like contained therein.

The present invention overcomes these difficulties by providing for a forced seal caused by the combination measuring cup and cap when secured over the pouring spout. Furthermore, because of the configuration and location of the half-round bead, a better seal is formed between the pouring spout and the cap. Accordingly, a first seal is achieved between the cap and the pouring spout, and a second seal is achieved between the pouring spout and the container, thus preventing leakage or evaporation.

SUMMARY OF THE INVENTION

The present invention contemplates a three-piece assembly, including a container. The assembly includes a first member, which has a tapered body having an integral pouring spout. The tapered body is in the form of a truncated cone and has at its upper peripheral edge an outwardly-extending peripheral lip provided with an upwardly extending half-round bead. The neck of the container is externally threaded for receiving thereabout an internally threaded skirt on the second member, which is in the form of a measuring cup. When the skirt is threaded about the neck of the container,



SUMMARY OF THE INVENTION

The present invention provides a closure assembly for a container having a neck comprising a pouring spout having a tapered body receivable within said neck, first
5 means on said tapered body for resiliently engaging said neck and forming a seal therewith when press-fitted into said neck, the upper edge of said neck being beveled, said tapered body having an outwardly extending peripheral lip having a continuous protrusion thereon and closure means
10 for engaging the peripheral lip of said pouring spout and urging said peripheral lip and continuous protrusion into sealing engagement with said closure means, said peripheral lip being resilient whereby it can move downwardly upon contact by said closure means into the
15 beveled region of said neck to assure said sealing engagement.

The present invention contemplates a three-piece assembly, including a container. The assembly includes a first member, which has a tapered body having an integral
20 pouring spout. The tapered body may be in the form of a truncated cone having at its upper peripheral edge an outwardly-extending peripheral lip provided with an upwardly extending half-round bead. The neck of the container may be externally threaded for receiving
25 thereabout an internally threaded skirt on the second member, which is in the form of a measuring cup. When the skirt is threaded about the neck of the container,



the bead engages the measuring cup to form a first seal and a second seal is provided between the neck of the container and the tapered body.

BRIEF DESCRIPTION OF THE INVENTION

Figure 1 is a vertical sectional view of the closure assembly including
5 a container;

Figure 2 is a vertical sectional view of the closure assembly and a portion of the container with the combination measuring cup and cap removed;

Figure 3 is an enlarged sectional detail view illustrating the closure assembly in its sealed position; and

Figure 4 is an exploded sectional detail view of the closure assembly.

DETAILED DESCRIPTION OF THE INVENTION

With continuing reference to the accompanying drawings, wherein like reference numerals designate similar parts throughout the various views, and with initial attention directed to Fig. 4, there is shown, for use with a
15 container 10 and further including a first member 12 and a second member 14.

The container 10 is preferably molded of a synthetic plastic material compatible with the contents for which it is to be used, such as laundry detergents, bleach, fabric softeners, potable beverages or any other useful material. The container 10 includes a main portion 20, which terminates in
20 a neck 22. The neck 22 is externally threaded, as illustrated at 24. The neck 22 has an upper peripheral edge 26.

Referring now to the first member 12, there is provided a tapered body 30, which is of a truncated conical configuration extending downwardly and inwardly. Integral with the body 30 is a pouring spout 32 of any selected
25 and desired shape. On the upper outside surface of the body 30 there are provided prongs 34 in the form of unbroken circumferential beads or ribs having a half-round cross sectional configuration and preferably two or three in number for facilitating the sealing of the member 12 in the neck 22.

The upper peripheral edge 38 of the body 30 is provided with a peripherally and outwardly extending lip 40, which has a bead 42 of a half-round cross sectional configuration upwardly extending therefrom. The entire first member 12 is suitably molded from a synthetic plastic material and is press fitted into the neck.

One of the additional features of the invention is that the upper edge 26 of the neck 22 is bevelled and engages the undersurface 44 of the lip 40 to form a continuous circular line seal.

The second member 14 includes a measuring cup 50 which has a top portion 52 and cylindrical side walls 54, which terminate in a lower peripheral edge 56. Integral with the side walls 54 is an outwardly extending peripheral flange 58 which has integrally molded therewith a downwardly extending skirt 60, which is internally threaded at 62.

As can be seen in Figures 1 and 2, the closure assembly is especially adapted for large containers, such as are commonly used for laundry detergents, and which may have an integrally molded handle 70. The first member is press fitted into the neck 22 of the container 10 with the prongs 34 assuring proper seating of the body 30 in the neck 22 and sealing against passage of fluid between the neck 22 and the ribs 34. Then, the second member is threaded in place over the neck to form the seal as seen best in Figure 3.

Upon observation of Figure 3, it will be seen that a seal is formed between the bead 42 and the lower surface 59 of the flange 58. This will assure against unwanted leakage and evaporation of the contents of the container.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A closure assembly for a container having a neck comprising a pouring spout having a tapered body receivable within said neck, first means on said tapered
5 body for resiliently engaging said neck and forming a seal therewith when press-fitted into said neck, the upper edge of said neck being beveled, said tapered body having an outwardly extending peripheral lip having a continuous protrusion thereon and closure means for engaging the
10 peripheral lip of said pouring spout and urging said peripheral lip and continuous protrusion into sealing engagement with said closure means, said peripheral lip being resilient whereby it can move downwardly upon contact by said closure means into the beveled region of
15 said neck to assure said sealing engagement.
2. A closure assembly according to claim 1, wherein said protrusion is a half-round protrusion on said lip.
3. A closure assembly for a container having a neck comprising a first member adapted to be seated in the
20 neck, said first member including a downwardly tapered truncated conical outer body having a pouring spout integral therewith, said first member seating in said neck, said neck being beveled on its upper edge and having external threads, a measuring cup forming a cap for said
25 container, threaded means on said measuring cup for engagement with said external threads on said neck, sealing means on said body, said sealing means including a plurality of circumferential ribs on said body engaging said neck and further sealing means including a peripheral
30 lip and an upwardly extending bead on said peripheral lip to contact said cap, said peripheral lip being resilient whereby upon engagement by said cap said peripheral lip can move downwardly into the bevel of said neck to assure sealing.



4. A closure assembly according to claim 3, wherein said bead is of a half-round cross sectional configuration.

5. A closure assembly according to claim 3, wherein said threaded means on said cup includes an outwardly extending flange and a skirt downwardly depending from said flange, said skirt being internally threaded.

6. A closure assembly according to claim 3, wherein said sealing means further includes a peripherally and upwardly extending bead on the upper edge of said body, said thread means including a flange integral with said cup, and an internally threaded skirt depending from said flange, said bead engaging said flange.

7. A closure assembly according to claim 6, wherein said bead is of a half-round cross sectional configuration.

8. A closure assembly according to claim 3, wherein said first member is integrally molded of a synthetic plastic material.

9. A closure assembly for a container having a neck comprising a first member adapted to be seated in sealing engagement with the inner peripheral wall of said neck, said first member including a downwardly tapered truncated conical outer body having a pouring spout integral therewith, said body seating in said neck, said neck being beveled on its upper edge and having external threads, a measuring cup forming a cap for said container, threaded means on said measuring cup for engagement with said neck, and sealing means on said body, said sealing means including an outwardly extending resilient peripheral lip on the upper edge of said body, said resilient peripheral lip movable into the region of the bevel of said neck by said measuring cup and an upwardly extending bead on said lip, said bead engaging said measuring cup to form a seal when said measuring cup engages said neck.



10. A closure assembly according to claim 9, wherein said threaded means on said cup includes an outwardly extending flange and a skirt downwardly depending from said flange, said skirt being internally threaded, said bead engaging
5 said flange.
11. A closure assembly according to claim 9, including a plurality of circumferential ribs for sealing said body in said neck.

DATED this 10 day of July 1992

COLGATE-PALMOLIVE COMPANY
Patent Attorneys for the
Applicant:

F.B. RICE & CO.



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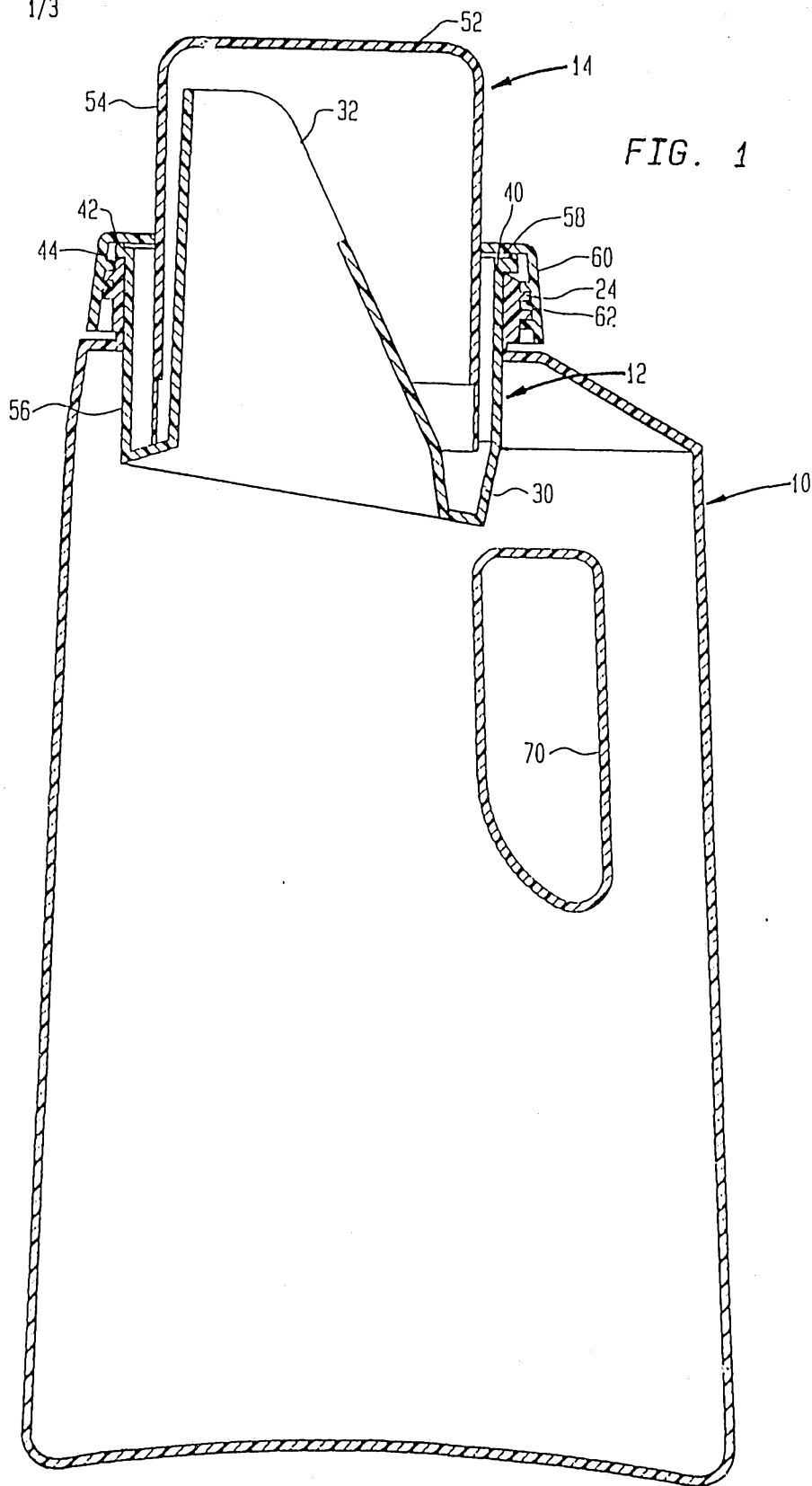
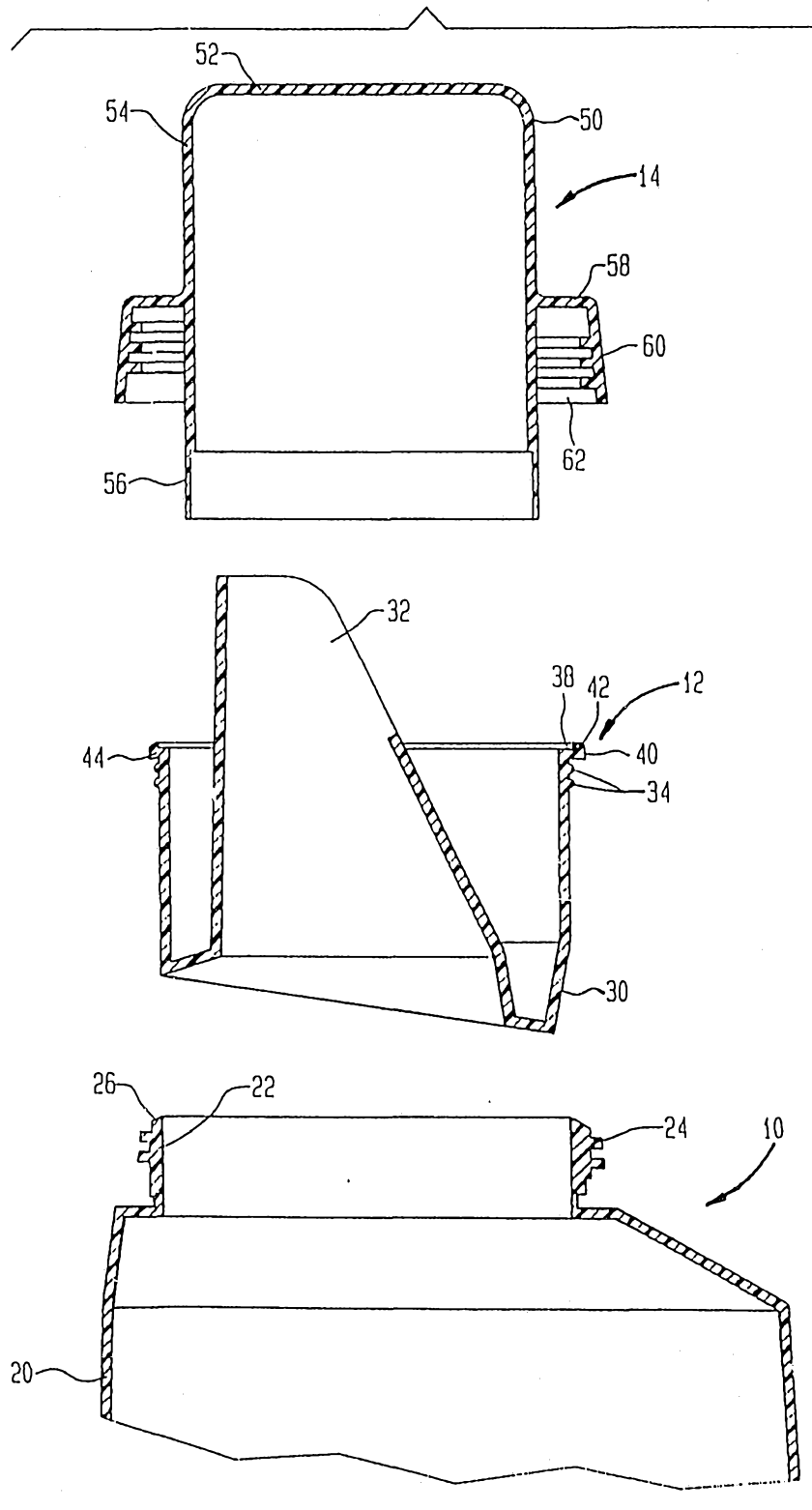


FIG. 1

FIG. 4



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FIG. 2

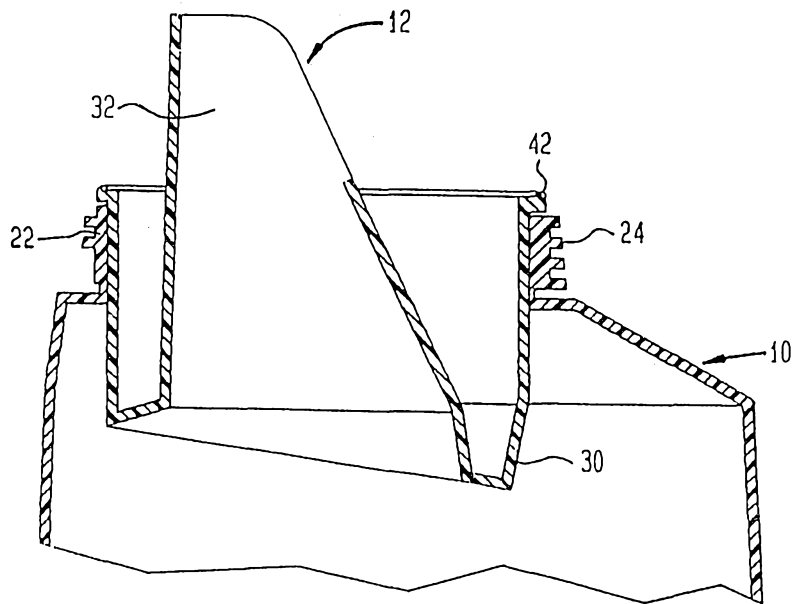


FIG. 3

