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(54) **A closure**

(57) A dispensing closure (10) is provided and comprises a dispensing part (30) and a base (40). The dispensing part (30) has a lid (90) movable between an open position and a closed position. The dispensing part (30)

is moveable relative to the base (40) between a locked position in which the lid (90) is held in the closed position and an unlocked position in which the lid can be moved to the open position.

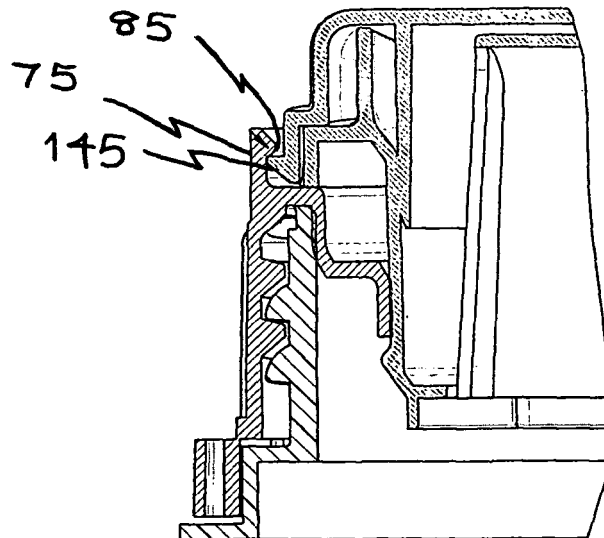


Figure 12

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Description

[0001] The present invention relates generally to a dispensing closure and particularly to a dispensing closure with a lid moveable between an open position and a closed position.

[0002] It is known to provide dispensing closures with a lid that can be removed or flipped open to allow product to be dispensed from an associated container. However, it is possible for the lids of such closures to be opened accidentally. This could result in spillage of the product which, dependent upon the product, could cause damage.

[0003] The present invention seeks to address the problems with known dispensing closures.

[0004] According to the present invention there is provided a dispensing closure comprising: a dispensing part; and a base, the dispensing part has a lid movable between an open position and a closed position, the dispensing part is moveable relative to the base between a locked position in which the lid is held in the closed position and an unlocked position in which the lid can be moved to the open position.

[0005] The dispensing part may be rotatable relative to the base to move it between the locked and unlocked positions.

The dispensing part and base may include co-operating formations for holding the lid in the closed position.

[0006] The dispensing closure may include a spout to facilitate product flow therefrom.

[0007] The dispensing part may include a flow regulation member to improve and/or restrict the flow of product therethrough.

[0008] The dispensing part may comprise a main body to which the lid is hingedly connected.

[0009] The base may include tamper-evident means. The means may comprise a band which presents removal of the base from a container in use.

[0010] The dispensing part may include tamper-evident means. The means may comprise a band. The band may prevent the lid from moving to the open position.

[0011] The present invention also provides a container having a closure as described herein.

[0012] The present invention will now be more particularly described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a closure formed according to the present invention shown attached to a container;

Figure 2 is a perspective view of a closure base;

Figure 3 is a side view of the base of Figure 2;

Figure 4 is a perspective view of a closure dispensing part;

Figure 5 is a side view of the dispensing part of Figure 4;

Figure 6 is a section of the dispensing part of Figures 4 and 5;

Figure 7 is a perspective view of the closure of Figure 1 prior to first opening;

Figure 8 is a perspective view of the closure of Figure 7 shown with a dispensing part tamper evident band removed;

Figure 9 is a section of the closure of Figure 8;

Figure 10 is a perspective view of the closure of Figures 8 and 9 shown with the lid in an open position;

Figure 11 is a perspective view of the closure of Figure 10 shown with the lid in a closed position and with the dispensing part in a locked position; and

Figure 12 is a section of the closure of Figure 11.

[0013] Referring first to Figure 1 there is shown a dispensing closure generally indicated 10 attached to a container generally indicated 20, which in this embodiment is a container for motor vehicle oil.

[0014] The closure 10 comprises a dispensing part 30 and a base 40.

[0015] Referring now to Figures 2 and 3 the base 40 is described in more detail.

[0016] The base 40 comprises a generally cylindrical side skirt 45. From one end of the skirt 45 an annular tamper-evident band 50 is frangibly connected. The band 50 is of a known construction and operation and will not be described in detail.

[0017] At the other end of the skirt 45 a radially inwardly extending flange 55 projects towards the end of the skirt with the band 50. The flange 55 comprises a generally upturned L-shape first step 60 which extends from the side wall 45 and a generally upturned L-shape second step 65 which extends from the first step 60.

[0018] On one side of the flange step 60 a locking projection 70 is upstanding. The projection 70 comprises an upstanding wall 75 which is co-linear with the skirt 45, and a radially inwardly projecting bead 80.

[0019] Referring now to Figures 4 to 6 the dispensing part 30 is shown in more detail.

[0020] The part 30 comprises a generally cylindrical main body part 85 and a lid 90.

[0021] The lid 90 is connected to the body 85 by a hinge 95 so as to be moveable from the closed position shown in Figures 4 to 6 to an open position (best shown in Figures 10). The lid 90 comprises a generally circular top plate 100 from which depends a sealing cylinder 105.

[0022] Depending from the periphery of the top plate 100 is an arcuate side wall 110. The side wall 110 extends around the majority of the periphery of the top plate 100, except for the region opposite the hinge 95; this unwallled region produces an overhang 115 at the front of the lid 90. The overhang 115 comprises a truncated side wall 116. At the junction between the top plate 100 and the side wall 116 radially inwardly inclined clip 117 depends.

[0023] In between the hinge 95 and the overhang 115 are two diametrically opposed lugs 145, 146.

[0024] An annular tamper-evident band 150 extends around the periphery of the base side wall 140 and terminates either side of the hinge 95. One end of the band

150 comprises a pull tab 151. The band 150 is connected to the base 85 via a plurality of mutually spaced frangible bridges 155 which connect at the intersection between the flange 135 and the side wall 140. The band 155 has two diametrically opposed cut-outs 160 which are shaped and positioned to extend over the lid lugs 145, 146 with the lid in a closed position as shown best in Figures 4, 6 and 7. Accordingly, the band 150 prevents the lid from being moved away from the closed position.

[0025] The body 85 comprises a feed cylinder 120 having a retaining bead 125 towards one end thereof. The other end of the feed cylinder 120 is flared to form a spout 130 and includes an annular flange 135. The hinge 95 is connected between the lid side wall 110 and the base flange 135.

[0026] Around the periphery of the base flange 135 is a depending annular skirt 130.

[0027] Extending within the feed cylinder 120 is a generally frusto conical flow regulator 121. The regulator 121 terminates at its end opposite the bead 125 with a top plate 122 from which depend a plurality of spokes 123 defining openings.

[0028] The dispensing part 30 is assembled onto the base 40 from above so that the bead 125 engages below the second step 65 and the side wall 140 rests on the first step 60. The part 30 is axially restrained but freely rotatable.

[0029] The base 40 can then be screwed on to a container neck 165 by virtue of internal screw threads 170 which engage co-operating external screw threads 175 on the container neck 165. The tamper-evident band 50 on the base 40 engages the container neck 165 so that the base 40 cannot be unscrewed from the container without breaking frangible bridges so that the band 50 remains connected to the container.

[0030] In order to use the closure 10, the tamper-evident band 150 must first be removed. Thereafter, the lid 100 can be lifted from the position shown in Figure 8 to the position shown in Figure 10.

[0031] Product can now be dispensed through the dispensing part 30. Product passes through the flow regulator 121 and over the spout 130. This configuration has been found to provide a smooth product pour and reduce "glugging".

[0032] Once product has been dispensed the lid can be returned to the closed position. The clip 117 again engages the spout 130 to hold the lid firmly in position. In this configuration the lid could now be returned to the open position.

[0033] If a user wishes to secure the lid in the closed position to prevent accidental opening, the dispensing part 30 can be rotated relative to the base 40 to the position shown in Figures 11 and 12. In this position, one of the lugs (in this case 145) has been moved to lie beneath the projection 80 on the base 40. This means that the lid can no longer be lifted to the open position.

[0034] When dispensing is again required, the dispensing part can be rotated relative to the base to a po-

sition in which neither of the lugs 145, 146 is beneath the projection 80.

5 Claims

1. A dispensing closure (10) comprising:

a dispensing part (30); and
a base (40),

the dispensing part (30) has a lid (90) movable between an open position and a closed position, the dispensing part (30) is moveable relative to the base (40) between a locked position in which the lid (90) is held in the closed position and an unlocked position in which the lid can be moved to the open position.

2. A closure as claimed in Claim 1, in which the dispensing part (30) is rotatable relative to the base (40) to move it between the locked and unlocked positions.

3. A closure as claimed in Claim 1 or Claim 2, in which the dispensing part (30) and base (40) include co-operating formations (70, 145, 146) for holding the lid (90) in the closed position.

4. A closure as claimed in any of Claims 1 to 3, in which the dispensing closure (10) includes a spout (130).

5. A closure as claimed in any preceding claim, in which the dispensing part includes a flow regulation member (121).

6. A closure as claimed in any preceding claim, in which the dispensing part comprises a main body (85) to which the lid (90) is hingedly connected.

7. A closure as claimed in any preceding claim, in which the base (40) includes tamper-evident means (50).

8. A closure as claimed in any preceding claim, in which the dispensing part includes tamper-evident means (150).

9. A container (20) having a closure (10) as claimed in any preceding claim.

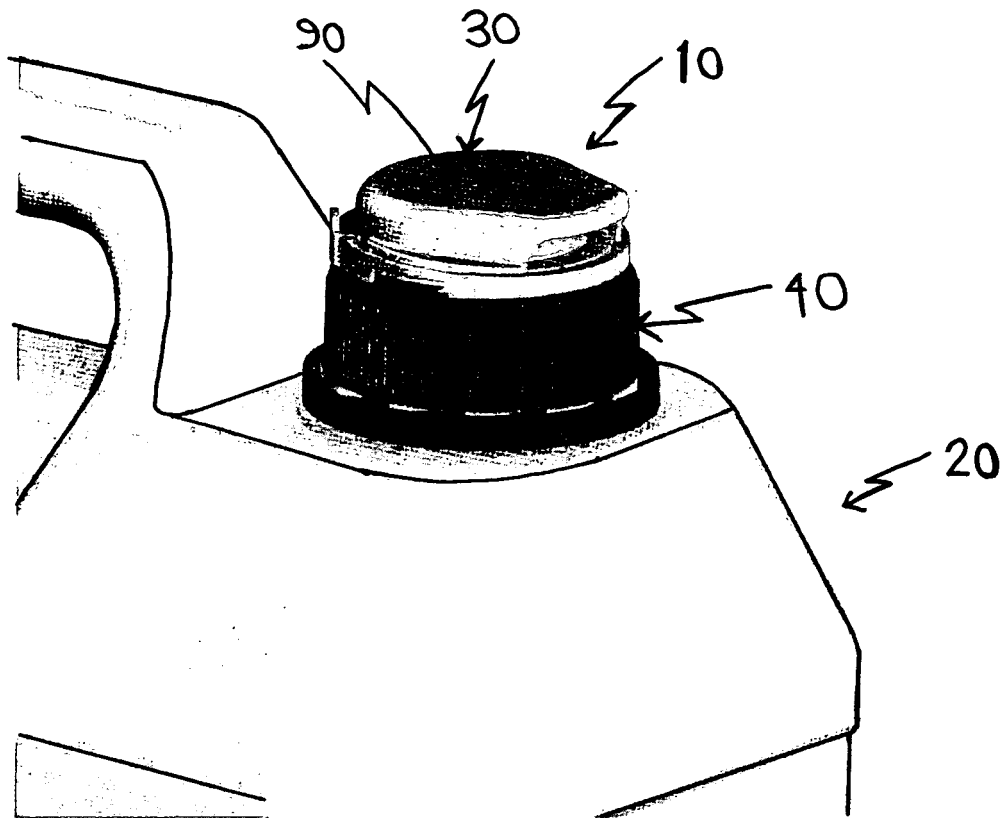


Figure 1

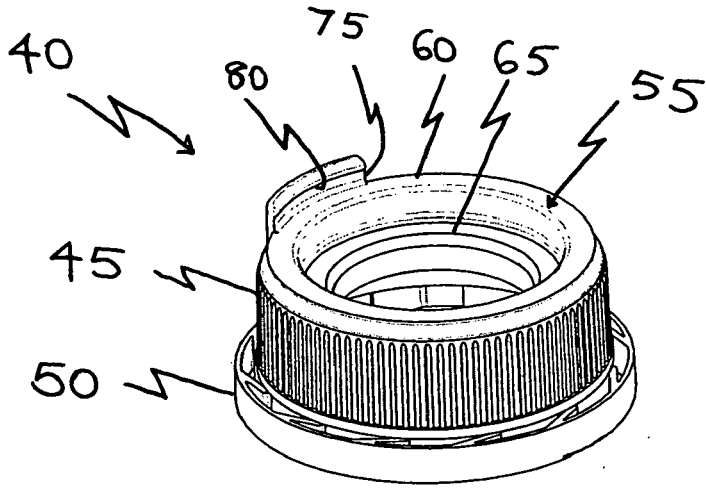


Figure 2

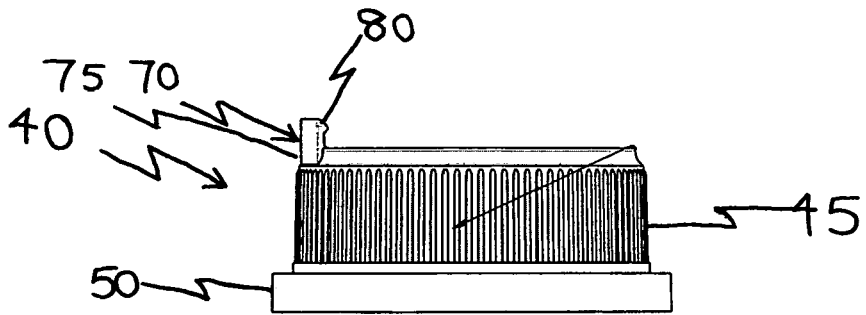


Figure 3

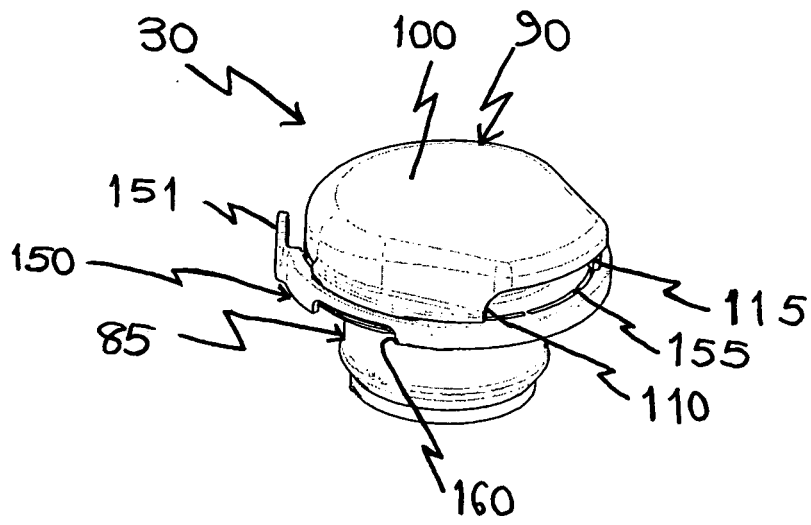


Figure 4

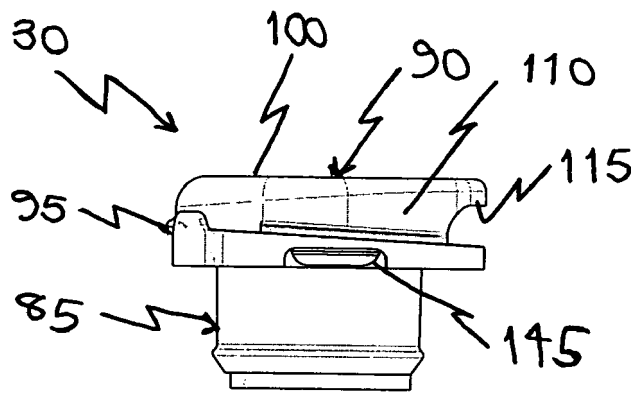


Figure 5

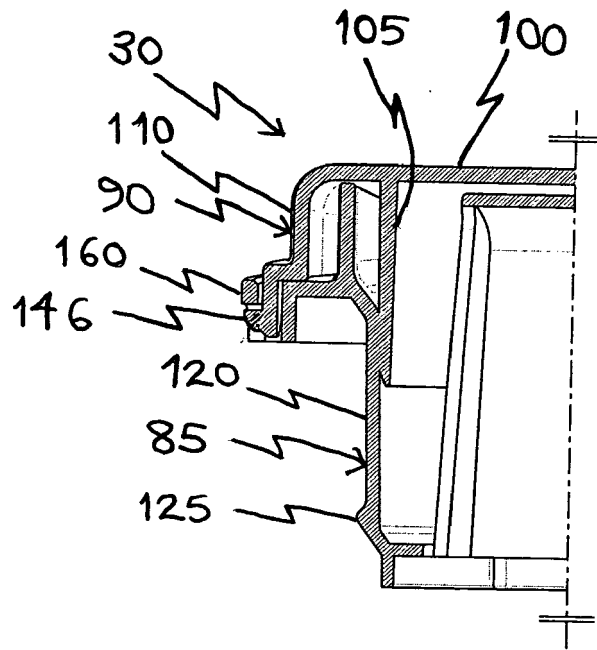


Figure 6

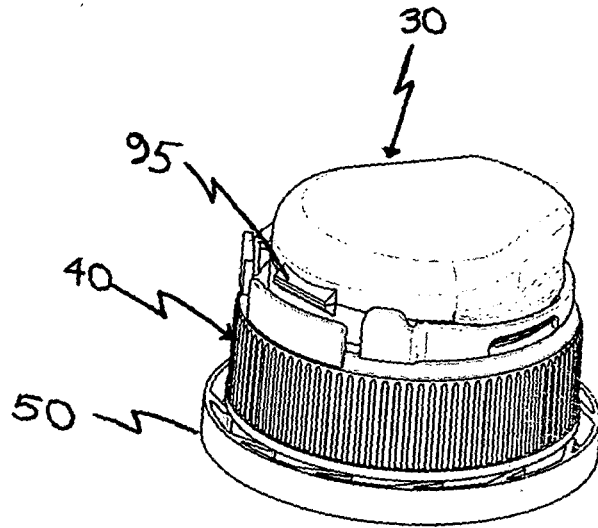


Figure 7

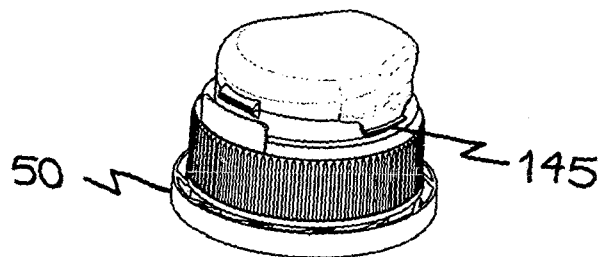


Figure 8

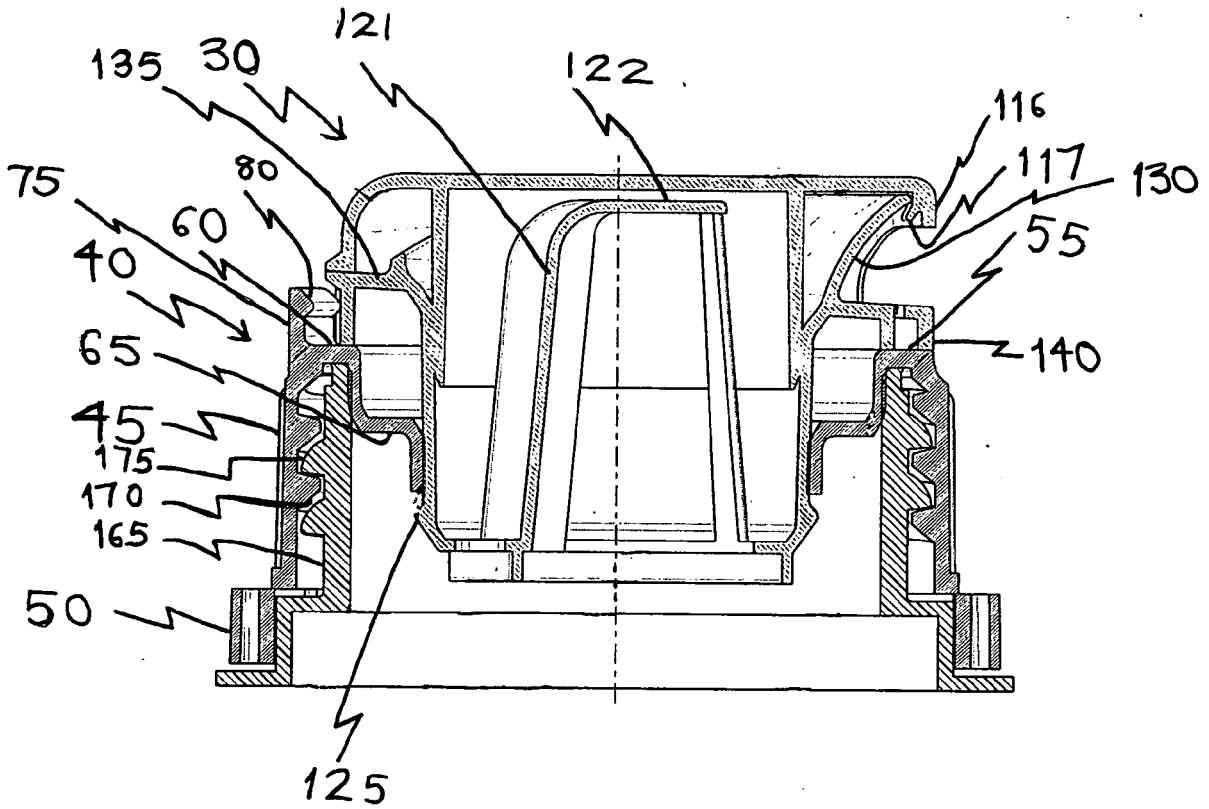


Figure 9

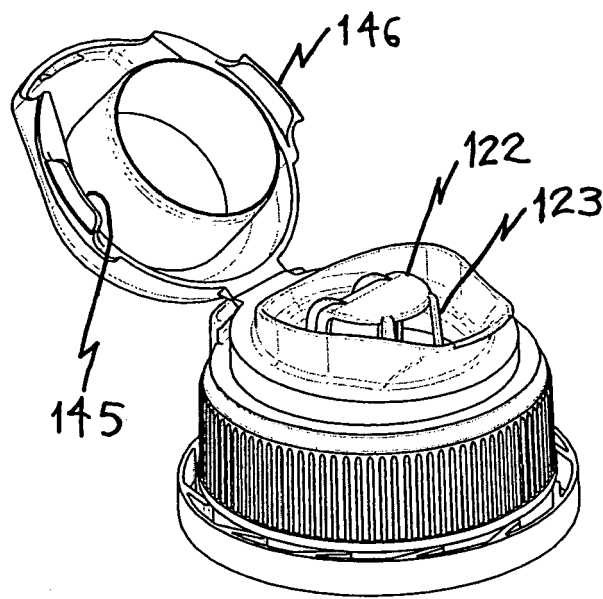


Figure 10

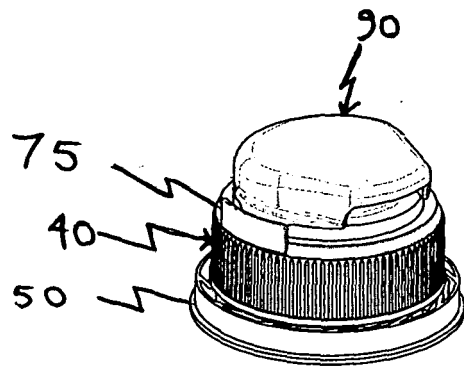


Figure 11

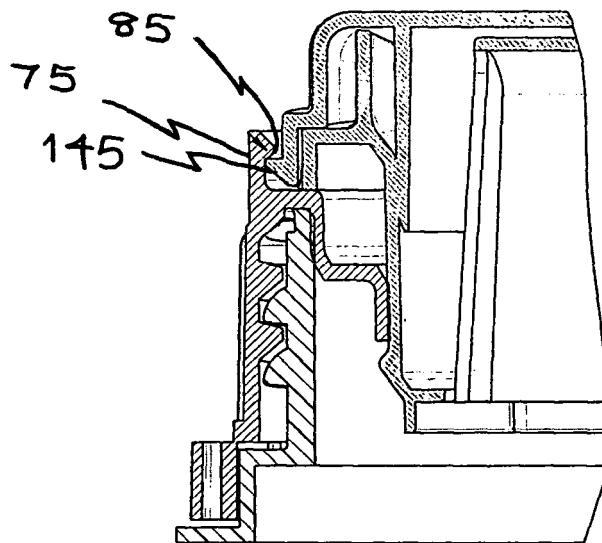


Figure 12



EUROPEAN SEARCH REPORT

Application Number
EP 08 25 1796

| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (IPC) |
| X | EP 1 780 141 A (PROCTER & GAMBLE [US]) 2 May 2007 (2007-05-02) * column 12, line 44 - line 50; figures 4,7 * ----- | 1-9 | INV. B65D47/08 |
| | | | TECHNICAL FIELDS SEARCHED (IPC) |
| | | | B65D |
| The present search report has been drawn up for all claims | | | |
| Place of search The Hague | | Date of completion of the search 3 November 2008 | Examiner Sundell, 011i |
| <p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p> | | | |

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 08 25 1796

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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03-11-2008

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
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| EP 1780141 A | 02-05-2007 | US 2007095864 A1 | 03-05-2007 |
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EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82