

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
11 September 2009 (11.09.2009)

PCT

(10) International Publication Number  
**WO 2009/109480 A2**

(51) International Patent Classification: Not classified  
(21) International Application Number:  
PCT/EP2009/052143

(22) International Filing Date:  
24 February 2009 (24.02.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0803882.0 3 March 2008 (03.03.2008) GB

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report (Rule 48.2(g))

(54) Title: STACKABLE COSMETIC JAR

(57) Abstract: A jar (2) for a cosmetic product is provided which includes a non-circular container body (4) and a cap closure (14). The container body (4) features a closed end (6) defined by a bottom panel (8) and an open end defined by a mouth (12). The bottom panel (8) on an exterior surface is formed with projecting crescent shaped symmetrically disposed feet (66). The cap closure (14) includes a fitment (16) engageable around the mouth (12) and supported on the container body (4). A lid (18) is hingedly connected to the fitment (16) and defined by a roof panel (20) having a domed upper surface. The upper surface includes a pair of crescent shaped indents (24, 26) formed symmetrical to each other along opposite edges of the roof panel (20). The crescent shaped indents (24, 26) allow stacking of one jar upon another with good stability. The domed (curved) roof panel (20) distributes force (from stacked jars) more evenly along the cap closure (14). This permits a decrease in jar wall thickness which leads to a reduction in plastic weight.



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## STACKABLE COSMETIC JAR

### BACKGROUND OF THE INVENTION

The invention concerns jars which have domed lids and are structured to be stackable  
5 one upon another.

Ordinarily the term "jar" refers to a squat large-mouthed container. In the cosmetics art,  
jars are the packaging of choice for cold creams and for petrolatum. Indeed, petrolatum  
jars sold under the trademark of VASELINE or VASELINOS are the premier jar cosmetic  
10 products. Since these packages are proportionately squat, retailers need to stack one jar  
upon another to efficiently utilize store shelf space. Stackability is also a desirable feature  
in transport of these packages from manufacture to the retail store.

Environmental concerns and economics provide an incentive to light weight packages.  
15 Excess plastic desirably should be removed from packaging. Ordinarily jars need to be  
stackable to conserve space. A certain amount of plastic is needed to render walls of the  
jar sufficiently sturdy for stacking.

We have found that curved (dome) caps distribute force more evenly. Less downward  
20 force is generated. Consequently the jars can be constructed with thinner walls than  
ordinarily required for flat capped jars. Of course the problem with curved surfaces is  
that objects are not readily stably perched thereon. Curvature presents stackability  
problems.

25 US 6 412 634 (Telesca et al.) discloses a domed flip-top dispenser for towelettes. Around  
the inner towelette dispensing aperture is a domed platform congruent with the domed  
lid. A special plug seal is described to ensure tight fit between lid and dispensing  
aperture. A focus of the present invention is to provide a jar with a lid having a  
curvilinear top surface permitting a second similar jar to be stably positioned atop the  
30 first. A secondary objective of certain embodiments according to the present invention is  
to provide a sealing system suitable for a jar with curvature.

## SUMMARY OF THE INVENTION

A jar for cosmetic products is provided which includes:

- 5 (i) a non-circular container body having a closed end defined by a bottom panel and an open end defined by a mouth, the bottom panel on an exterior surface formed with projecting crescent shaped symmetrically disposed feet;
- (ii) a cap closure including:
- (a) a fitment engageable around the mouth and supported on the container body;
- (b) a lid hingedly connected to the fitment and defined by a roof panel having a domed upper surface, the upper surface including a pair of crescent shaped
- 10 indents symmetrical to each other formed along opposite edges of the roof panel.

## BRIEF DESCRIPTION OF THE DRAWING

Further features and advantages of the present invention will become more evident upon consideration of the drawings in which:

15

Figure 1 is a plan perspective view of a jar according to one embodiment of the present invention;

Figure 2 is a top plan view thereof;

20

Figure 3 is an illustration of stacked jars;

Figure 4 is a plan elevational view similar to that of Figure 1 except that the lid has been moved into an open position;

25

Figure 5A is a cross-sectional partial view along line 5A-5A of Figure 2 showing the depth variation and configuration of the crescent shaped indent on the roof panel;

Figure 5B is a cross-sectional partial view along line 5B-5B of Figure 5A showing depth near terminal section of the indent;

30

Figure 5C is a cross-sectional partial view along line 5C-5C of Figure 5A showing depth around a middle section of the indent;

Figure 6 is a cross-section along line 6-6 of Figure 1;

Figure 7 is a cross-sectional view of the partial area in dashed outline shown in Figure 6;  
and

5

Figure 8 is an elevational tilted view of the jar showing a bottom panel.

#### DETAILED DESCRIPTION OF THE INVENTION

We have found that use of a pair of crescent shaped indents (curved grooves) prevent  
10 slippage. The indents prevent not only a stacked jar from sliding off the roof panel of  
another jar but they also prevent a sideways fall. The crescent geometry of the present  
invention ensures that both directions of instability on a cap closure can be minimized.

Figure 1 illustrates the jar 2 of the present invention. This package includes a non-circular  
15 container body 4 having a closed end 6 defined by a bottom panel 8 and an open end  
defined by a mouth 12.

A cap closure 14 is placed over the open end 10 of the container body.

20 Figure 1 illustrates a fully closed position of the cap closure. Figure 4 illustrates an open  
position. The cap closure includes a fitment 16 engageable around the mouth 12 and  
supported on the container body. A lid 18 is hingedly connected to the fitment. The lid  
is defined by a roof panel 20 having a domed upper surface.

25 Figure 2 illustrates the upper surface as including a pair of crescent shaped indents 24, 26  
symmetrical to each other and formed along opposite edges of the roof panel. Figure 3  
illustrates jar 2 serving as a base for jar 3 (shown without a cap closure) in a stacking  
arrangement.

30 Figure 5A illustrates a cross-sectional partial view of the lid with focus upon the crescent  
shaped indent 24. The indent includes a middle section 28 flanked on either side by  
terminal sections 30, 32. The middle section 28 has a rounded and at midpoint almost  
flat floor; it is grooved deeper into the roof panel than the terminal sections 30, 32.  
Figure 5C best illustrates the middle section. There is also a geometric difference

between the sections. Terminal sections 30, 32 have a V-shaped floor. Figure 5B best illustrates the terminal sections.

Figure 4 best illustrates an interior surface 48 of the roof panel 20. The roof panel is bordered by a downward projecting skirt 34. This skirt is defined by a front portion 36, a rear portion 38 and two side portions 40, 42 opposite one another. The side portions bridge the front and rear portions. The front and rear portions have lower concavely formed edges 44.

10 A seal plug 46 projects downwardly from the interior surface 48 of the roof panel. The seal plug is interior to and uninterruptedly juxtaposed along front, rear and side portions of the skirt. Further, the seal plug has a front section 50, a rear section 52 and two side sections 54, 56. The front and rear sections have lower convexly formed edges 58.

15 A lid seal 60 surrounds the mouth 12 and projects upwardly toward the lid 18. Along a perimeter of the lid seal 60 is an outwardly projecting seal bead 62, best shown in Figure 7. The seal bead is seated matingly against an interior of the front portion 36 of the skirt along the lower concavely formed edge 44. In a closed lid position, the jar features the seal plug seated interior to and matingly with the lid seal.

20

A support ridge 64 is found on the fitment 16 below the seal bead. The support ridge has a convex curvature to matingly engage the concavely formed lower edges of the front and rear portions of the skirt.

25 Figure 8 illustrates the bottom panel 8 of the container body being formed concavely outward and downward. This structure creates along an outer perimeter of the bottom panel a set of juxtaposed feet 66 shaped to engage the crescent shaped indent 24 of jar 2 when stacked atop this jar 2.

**CLAIMS**

1. A jar (12) for cosmetic products comprising:
  - (i) a non-circular container body (4) having a closed end (6) defined by a bottom panel (8) and an open end defined by a mouth (12), the bottom panel (8) on an exterior surface formed with projecting crescent shaped symmetrically disposed feet; and
  - (ii) a cap closure (14) comprising:
    - (a) a fitment (16) engageable around the mouth (12) and supported on the container body (4); and
    - (b) a lid (18) hingedly connected to the fitment (16) and defined by a roof panel (20) having a domed upper surface, the upper surface comprising a pair of crescent shaped indents (24, 26) symmetrical to each other formed along opposite edges of the roof panel (20).
2. A jar according to claim 1 wherein the crescent shaped indents (24, 26) comprise a middle section (28) flanked on either side by terminal sections (30, 32), the middle section (28) being grooved deeper into the roof panel (20) than the terminal sections (30, 32).
3. A jar according to claim 2 wherein the terminal sections (30, 32) have a V-shaped floor.
4. The jar according to any one of the preceding claims wherein the roof panel (20) is bordered by a downward projecting skirt (34), the skirt (34) having a front portion (36), a rear portion (38) and two side portions (40, 42) opposite one another bridging the front and rear portions (36, 38).
5. A jar according to claim 4 wherein the front and rear portions (36, 38) have lower concavely formed edges (44).

6. A jar according to any one of the preceding claims further comprising a seal plug (46) downwardly projecting from an interior surface of the roof panel (48), the seal plug (46) being interior to and uninterruptedly juxtaposed to the front, rear and side portions of the skirt (36, 38, 40, 42).
- 5
7. A jar according to claim 6 wherein the seal plug (46) has a front section (50), a rear section (52) and two side sections (54, 56) opposite one another bridging the front and rear sections (50, 52), the front and rear sections (50, 52) having lower convexly formed edges (58).
- 10
8. A jar according to claim 6 or claim 7 wherein a lid seal (60) surrounds the mouth (12) and projects upwardly toward the lid (18).
9. A jar according to claim 8 wherein the seal plug (46) in a closed position is seated interior to and matingly with the lid seal (60).
- 15
10. A jar according to claim 8 or claim 9 wherein the lid seal (60) along a perimeter thereof has an outwardly projecting seal bead (62), the seal bead (62) seated matingly with an interior of the front portion of the skirt (36) along a lower concavely formed edge thereof (44).
- 20
11. A jar according to claim 10 further comprising a support ridge (64) on the fitment (16) below the seal bead (62), the support ridge (64) having a convex curvature to matingly engage the concavely formed lower edges of the front and rear portions of the skirt (36, 38).
- 25
12. A jar according to any one of the preceding claims wherein the bottom panel (8) of the container is formed concavely outward and downward thereby creating along an outer perimeter a set of juxtaposed feet (66) shaped to engage the crescent shaped indents (24, 26) of another jar and stacked one above the other.
- 30

Fig. 1.

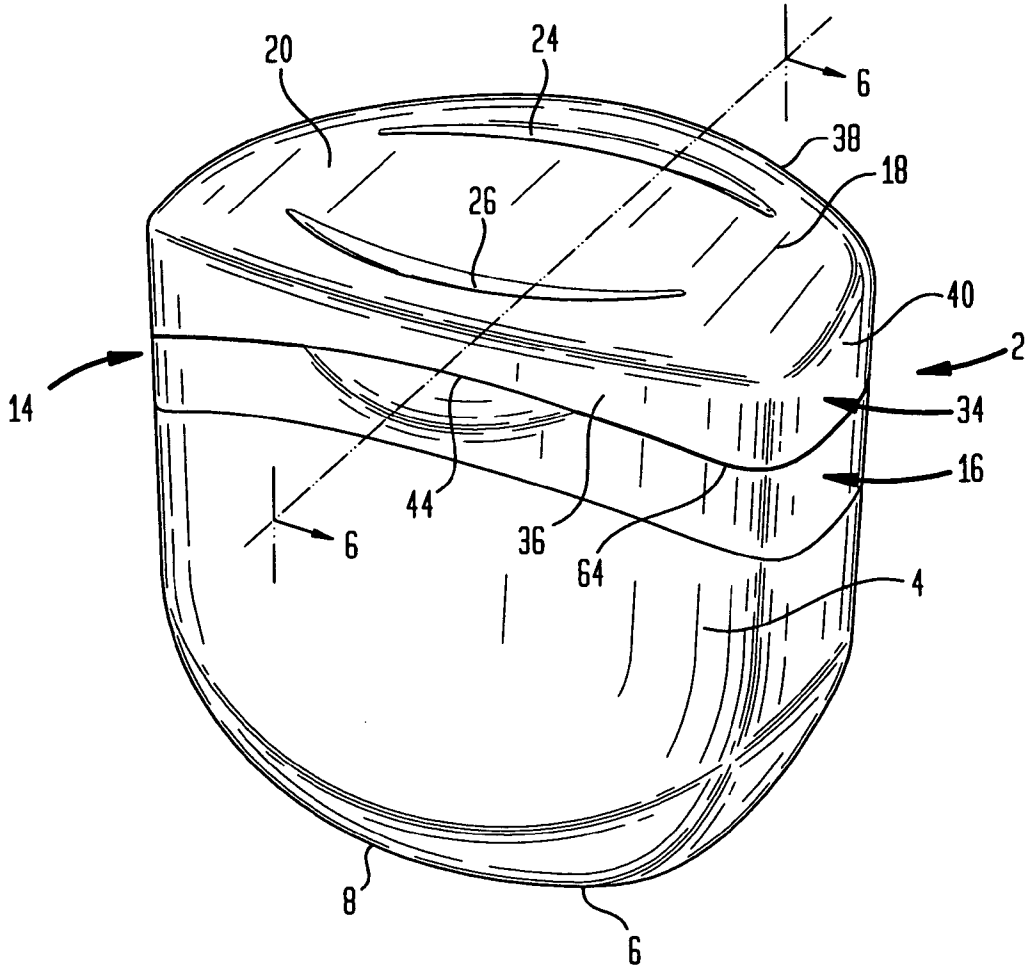


Fig. 2.

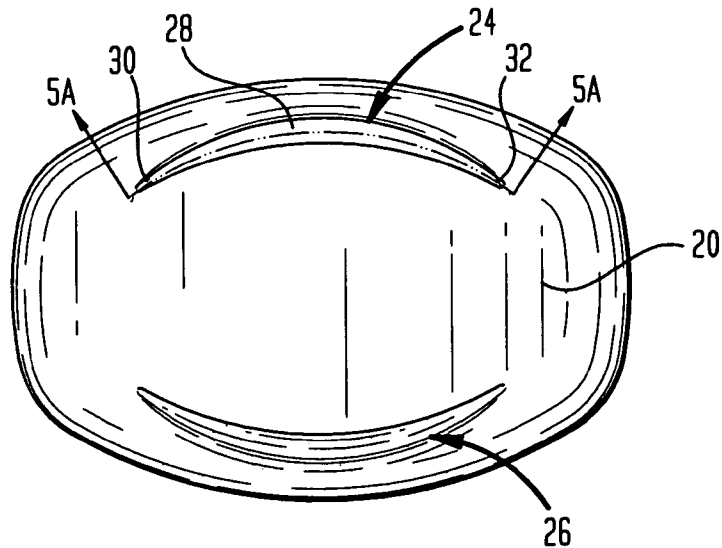


Fig.3.

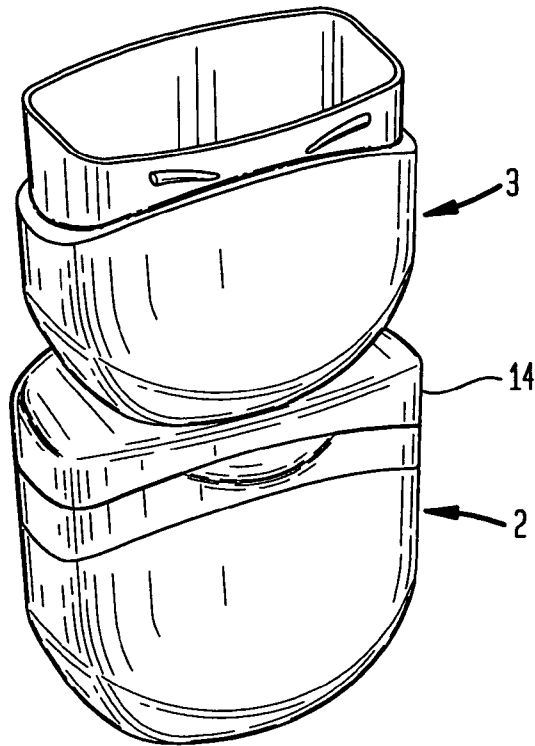
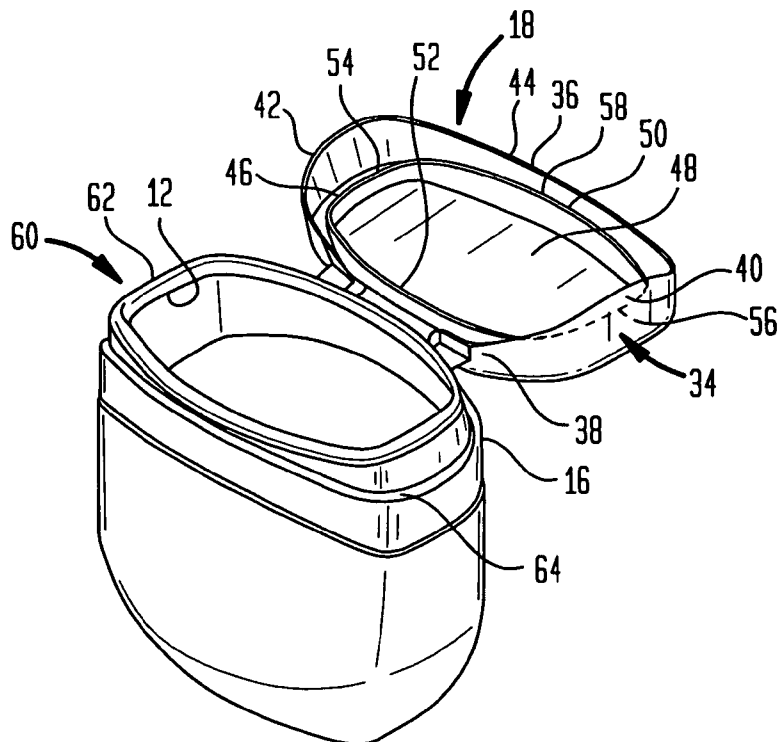


Fig.4.



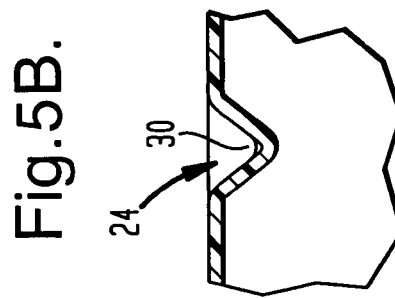
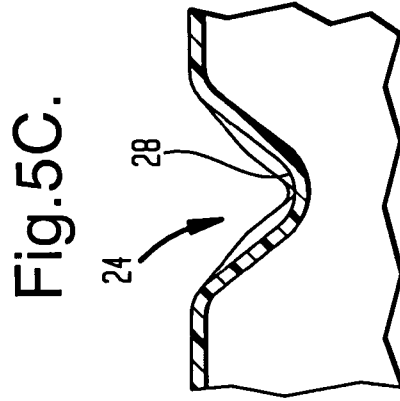
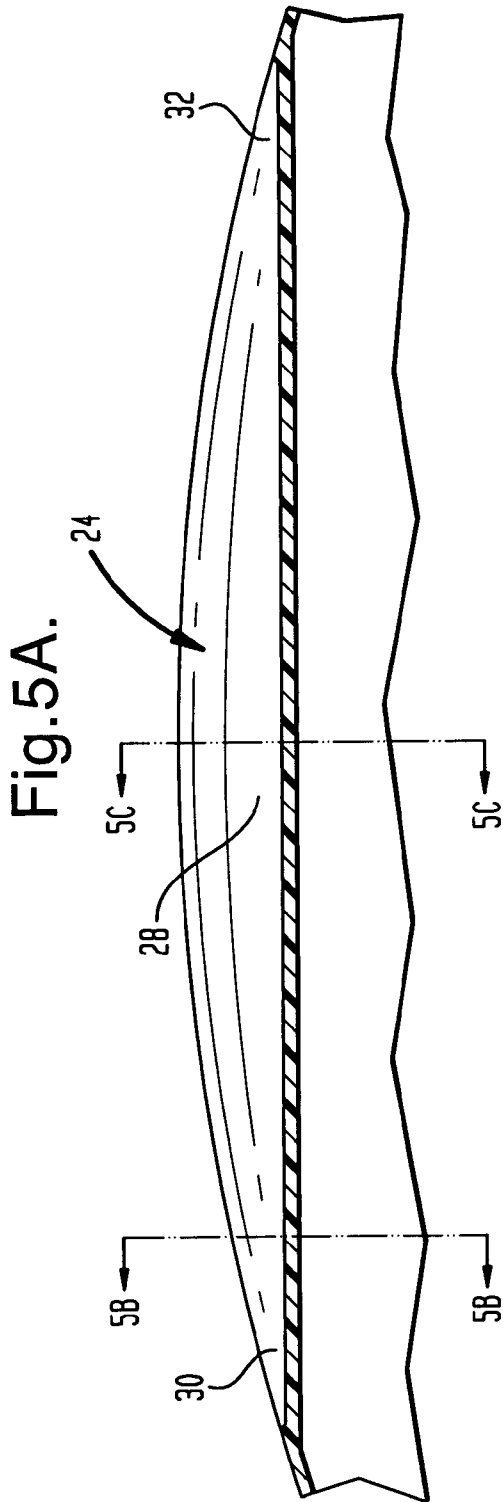


Fig.6.

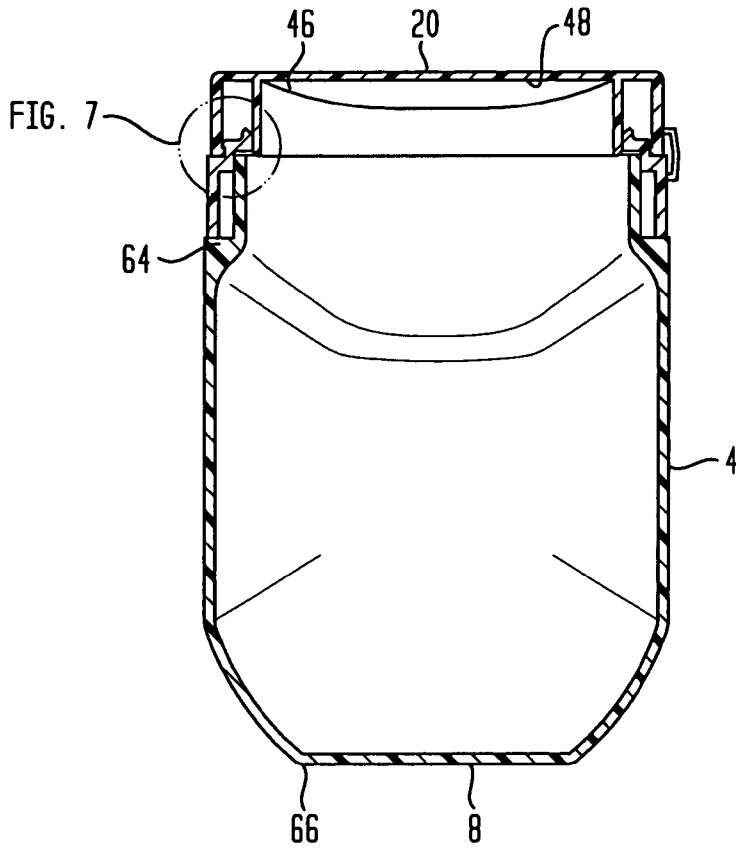


Fig.7.

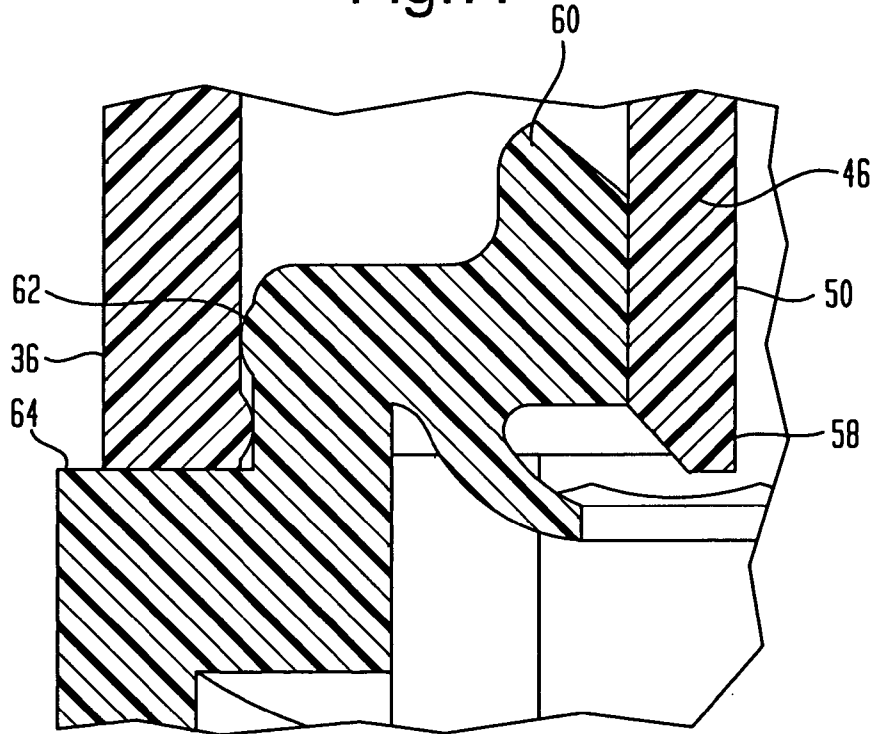


Fig.8.

