



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 277 417 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
22.01.2003 Bulletin 2003/04

(51) Int Cl.7: **A45D 33/00**

(21) Application number: **02022539.7**

(22) Date of filing: **22.11.1999**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

(71) Applicant: **Coty SA**
75008 Paris (FR)

(72) Inventor: **Mathiez, Jean-Louis**
91470 Limours (FR)

(30) Priority: **24.11.1998 FR 9814759**
24.11.1998 FR 9814760
24.11.1998 FR 9814761

(74) Representative: **Doireau, Marc et al**
Cabinet Orès
6, avenue de Messine
75008 Paris (FR)

(62) Document number(s) of the earlier application(s) in
accordance with Art. 76 EPC:
99972504.7 / 1 143 824

Remarks:

This application was filed on 07 - 10 - 2002 as a
divisional application to the application mentioned
under INID code 62.

(54) **Packaging and cover for packaging for cosmetic or pharmaceutical compositions**

(57) One embodiment of the present invention in-
cludes a cover (6) for a packaging for a cosmetic and/
or a pharmaceutical composition.

The cover (6) comprises means of attachment on a

container of the packaging and a sealing wall for sealing
an opening of the container (1). The sealing wall is a
flexible wall that is elastically deformable by a difference
in pressure exerted on its two main sides.

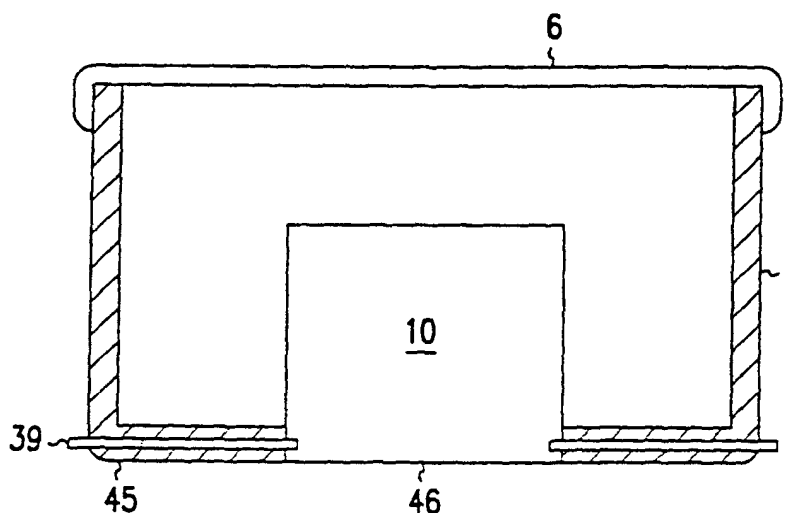


FIG. 1

EP 1 277 417 A1

Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a cover for packaging of cosmetic compositions and/or pharmaceutical compositions, to a packaging such as refillable packaging and sealed packaging for cosmetic and/or pharmaceutical compositions, and to cosmetic and/or pharmaceutical compositions packaged in the packaging.

[0002] Packagings for cosmetic compositions are typically provided with a rigid cover which prevents variation of the internal volume of the packaging. In the case of sealed packaging, a variation of the internal pressure, for example, an increase of the internal pressure induced by closing of the cover, or a variation of the external pressure, induces a difference of pressure between the interior and the exterior of the packaging.

[0003] This pressure variation has numerous disadvantages. On one hand, hermetic sealing of the packaging can be compromised leading to a risk of leakage of the cosmetic composition due to excessive internal pressure, or of contamination of the cosmetic composition due to internal low pressure. Furthermore, low pressure created by movement of the wall of the cover during opening of the packaging risks detaching the cosmetic composition and carrying it outside of its housing. Moreover, compression of the air tends to work against closing of the packaging, while external pressure not balanced by an equivalent internal pressure tends to work against opening of the packaging. This pressure variation occurs for containers with a sealed compartment.

[0004] Cosmetic compositions based on wax and emulsions of fatty material can advantageously be refilled within a container, particularly in the case of foundations, lipsticks, rouges or creams, by-products based on solvents, such as water, volatile silicones, alcohols or mixtures of them. These types of products require for their storage a packaging with a sealed compartment.

[0005] The sealed packagings for cosmetic compositions of known type have an elastomer seal with compression having an axial component. These packagings have numerous disadvantages. The sealed quality is only ensured if the elastomer seal is compressed with a relatively high force, making the closing of the packaging difficult or not very reliable. Furthermore, the packaging has a high price, due not only to the use of an expensive seal, but also due to difficulties of automation of the positioning of a non-rigid part, such as an elastomer seal.

[0006] One other problem with sealed cosmetic packaging concerns refills. Production of a packaging of a cosmetic composition by placing a refill inside a housing is known. The positioning and holding of the refill is not always easy. Moreover, the volume of the container receiving the refill increases the space requirement of the packaging. Furthermore, it is not always easy to ensure

the temporary hermetic sealing of a sealed compartment of a refillable packaging for a cosmetic and/or pharmaceutical composition produced based on a volatile solvent.

SUMMARY OF THE INVENTION

[0007] One embodiment of the present invention includes a cover for a packaging for a cosmetic and/or pharmaceutical composition. The cover comprises means of attachment on a container of the packaging and a sealing wall for sealing an opening of the container. The sealing wall is a flexible wall that is elastically deformable by a difference in pressure exerted on its two main sides.

[0008] Another embodiment of the present invention includes a packaging for a cosmetic and/or pharmaceutical composition. The packaging comprises a container for receiving the cosmetic and/or pharmaceutical composition and a cover with an elastic deformation. The elastic deformation occurs as a result of a difference between internal pressure predominating in the container and an external pressure that at least partially balances the pressure differences on the sides of the flexible wall.

[0009] One other embodiment of the present invention includes a cosmetic and/or pharmaceutical composition disposed in packaging that has a ventilated compartment and some means of application of cosmetic and/or pharmaceutical composition of the sponge or Japanese foam type.

[0010] Another embodiment of the present invention includes a sealed packaging for cosmetic or pharmaceutical compositions. The sealed packaging includes a sealed compartment defined by a container and a fitted cover characterized by radial walls that are arranged a distance d apart from one another. One of the walls is provided with an annular rib having a radial extent in a direction of the other wall which is greater than d , in such a way as to exert on the opposite wall a radial force ensuring temporary hermetic sealing of the sealed compartment of the packaging.

[0011] Another embodiment of the present invention includes a refillable packaging for a cosmetic and/or pharmaceutical composition which has an external envelope wherein the external envelope is provided with an opening for receiving a container of a refill of cosmetic and/or pharmaceutical composition. The packaging further comprises an opening of the container that opens inside external envelope and means of locking the container of the refill in position in the packaging.

[0012] One additional embodiment of the present invention includes a process for packaging a cosmetic and/or pharmaceutical composition. The process includes filling a container of a refill with cosmetic and/or pharmaceutical composition. The process also includes assembling the container of the refill containing cosmetic and/or pharmaceutical composition with a packaging.

DESCRIPTION OF THE DRAWINGS

[0013]

Figure 1 is a cross-sectional view of one embodiment of packaging of the present invention.

Figure 2 is a cross-sectional view of another embodiment of packaging of the present invention.

Figure 3 is a cross-sectional view of another embodiment of packaging of the present invention.

Figure 4 is a cross-sectional view of another embodiment of packaging of the present invention.

Figure 5 is a cross-sectional view of one embodiment of a refill through of the packaging of the present invention.

Figure 6 is a cross-sectional view of another embodiment of a refill trough of the packaging of the present invention.

Figure 7 is a top view of the refill trough of the packaging of Figure 6.

DETAILED DESCRIPTION

[0014] One embodiment of the present invention includes a packaging with a sealed compartment with substantially no leakage of a cosmetic and/or a pharmaceutical composition due to excessive internal pressure, or of contamination due to excessive internal pressure. Furthermore, with the packaging of the present invention, there is no risk of flow of the composition during opening, closing or operation of refilling of the packaging. The packaging is easy to open and close. The packaging has a sealed compartment closed by a cover which is provided with a wall which can be deformed, preferably elastically, by a difference between the internal pressure predominating in the sealed compartment and the external pressure.

[0015] Other embodiments of the present invention include packaging which allows for automated assembly and automatic filling, particularly at high temperatures, greater than 50 degrees Centigrade, typically between 75 and 100 degrees Centigrade. Incomplete or incorrect closing of the packaging is virtually impossible. The packaging is therefore reusable.

[0016] One embodiment of the present invention includes a cover for a packaging for a cosmetic and/or pharmaceutical composition such as foundation, cream, rouge or lipstick, which has a mechanism for attachment onto a container of the packaging and a wall for sealing an opening of the container, characterized by a flexible sealing wall which is deformed elastically by a difference in pressure exerted on its two main sides. The cover displays an elastic deformation caused by a difference between the internal pressure predominating in the container and the external pressure that at least partially balances this pressure difference.

[0017] Another embodiment of the present invention includes a packaging wherein the cover has a wall ex-

tending at least locally facing a wall of the container and wherein the side of the wall of the cover facing the wall of the container is provided with a radial rib whose radial extent is greater than the distance between the two walls facing one another so as to ensure, by radial contact, temporary hermetic sealing of the sealed compartment of the packaging.

[0018] One sealing wall embodiment comprises a wavy wall that includes concentric patterns in wave form increasing the flexibility of the wall in a direction normal to the opening to be sealed.

[0019] One other packaging embodiment comprises a box with a small thickness when it is provided with a middle platform, delimiting an upper ventilated compartment and a sealed compartment for receiving a cosmetic and/or pharmaceutical composition, and wherein the platform forms a cover for the latter compartment.

[0020] Another packaging embodiment includes a mechanism for receiving a removable container forming a refill of cosmetic and/or pharmaceutical composition. The packaging has a receiving opening and some mechanism of locking in position, particularly by clipping, of a removable container in the form of a trough or cup, whose opening opens inside the packaging. Some packaging embodiments further include a ventilated compartment, some mechanism of application of the cosmetic and/or pharmaceutical composition of a sponge or Japanese foam type.

[0021] One other packaging embodiment for cosmetic compositions according to the present invention includes a sealed compartment defined by a container and a cover which are associated, having radial walls arranged at least locally a distance d apart from one another. One of these walls is provided with an annular rib having a radial extent in the direction of the other wall which is greater than d , which is capable of exerting on the opposite wall a radial force ensuring temporary hermetic sealing of the sealed compartment of the packaging. It is well understood that the distance d at rest can be zero. The diameter of the external side of the wall of the cover can be greater than the diameter of the internal side of the container. In this case, during assembly, the external side of the wall of the cover and the rib separate the walls from one another. This packaging is capable of receiving refills.

[0022] For some embodiments, the cover of the packaging constitutes the cover of the sealed compartment. The sealed compartment is for cosmetic compositions based on volatile solvents and a ventilated housing for storage of a mechanism of application, such as a Japanese foam or a sponge, which are better maintained in a dry atmosphere. In this case, the packaging according to the present invention comprises an intermediate platform between the cover of the packaging and the sealed compartment. In both cases, the cover of the compartment is advantageously flexible and/or deformable so as to ensure, by the deformation of the cover of the sealed compartment with respect to the external

pressure.

[0023] The platform delimits a chamber for receiving the cosmetic and/or pharmaceutical composition and a ventilated compartment for receiving the mechanism of application of the cosmetic and/or pharmaceutical composition. The platform ensures hermetic sealing of the container of the refill. The platform can be deformed so as to allow compensation for the difference in pressure between the interior and the exterior of the container of the refill.

[0024] A wall of application of the annular rib or the wall bearing the annular rib corresponds to a wall of the container of the sealed compartment filled with the cosmetic composition. The compartment is provided with a first wall delimiting a container for receiving the cosmetic composition and a second wall, radially external with respect to the first wall, bearing the annular rib or serving as support surface for this rib. Thus, the support of the rib is prevented from separating the wall of the container for receiving the cosmetic composition from this composition, which would promote its detachment.

[0025] One other embodiment of the present invention includes sealed packaging having a locking mechanism that locks the packaging in a closed state in which the compartment is hermetically sealed. The annular rib is arranged on a radially external side of the wall of the cover arranged opposite a radially internal side of a wall of the container. In one embodiment, the container has two parallel or roughly parallel walls. The rib is applied on or by the radially external wall of the container to ensure hermetic sealing. The first wall delimits a chamber for receiving the cosmetic and/or pharmaceutical composition and the second wall for application of the mechanism of hermetic sealing of the container of the refill.

[0026] Another embodiment includes a refillable packaging for a cosmetic and/or pharmaceutical composition, which has an external envelope, characterized by an opening for receiving a container of a refill of the cosmetic and/or pharmaceutical composition and an opening of the container opens inside the external envelope, and by a mechanism of locking the container of the refill in position in the packaging. One mechanism for locking comprises projecting elements ensuring the locking and holding by clipping of the container of the refill in the packaging.

[0027] The container of the refill has a wall with an undercut shape delimiting a chamber for receiving the cosmetic and/or pharmaceutical composition. For some embodiments, the packaging comprises a flat box and the container of the refill is a trough or a well.

[0028] For one packaging embodiment, the opening is made in a base of the external envelope of the packaging and the external wall of the bottom of the container of the refill is in the extension of the external side of the base of the envelope of the packaging.

[0029] The present invention also includes a process for packaging a cosmetic and/or pharmaceutical composition. The process includes filling a container of a re-

fill with a cosmetic and /or pharmaceutical composition and assembling the container of the refill containing the cosmetic and /or pharmaceutical composition with the packaging. Filling may occur while the cosmetic and/or pharmaceutical is hot. The filling may occur by pressing the cosmetic and/or pharmaceutical

[0030] In Figure 1 is a packaging according to the present invention, which has external envelope 1, for example, cylindrical, elliptical-based, oval, polygonal or other shape, which is closed by cover 6. Base 45 of envelope 1 is provided with opening 46 for receiving refill 29, in particular, within a trough or a well 10 which is capable of receiving a cosmetic and /or pharmaceutical composition. Some mechanism for locking 39, for example, with a screw thread, a set of pins or pegs allowing locking by catching, ensuring that trough or well 10 is assembled with the packaging according to the present invention.

[0031] The packaging of Figure 1 does not ensure hermetic sealing of refill 29. In particular, this packaging offers the risk of passage of fluid at the edges of opening 14 between the edge of base 45 and the wall facing trough or well 10.

[0032] Use of packaging of Figure 2 requires several operations that include removing cover 6, removing cover 47, taking the desired quantity of the cosmetic and/or pharmaceutical composition, putting cover 47 back on well 10 and putting cover 6 back on the packaging.

[0033] In Figure 3 is an example of a packaging which has cover 6 provided, for example, in its center with cap 47 which ensures the temporary hermetic sealing of trough or well. Furthermore, an execution example of the packaging illustrated in Figures 4, 5 and 6 has a mechanism of locking that comprises pegs 50 and 51, that catch envelope 1 of the packaging which has corresponding grooves.

[0034] In Figure 4 is an execution variant of the packaging according to the present invention, whose trough or well 10 moreover has radially internal chamber 49 for receiving the cosmetic composition, which is delimited by walls 50 and radially external walls 51 for application of cap 13' of cover 6. Cap 13' is applied on the radially internal side of radially external wall 51 and thus ensures temporary hermetic sealing of chamber 29. The radially external force exerted by cap 13' on walls 51 is only very partially transmitted to walls 50, which considerably limits the risk of detachment of the cosmetic composition from wall 50. One preferred embodiment of refill 29, for example, in the form of a trough or well according to the present invention, is illustrated in Figures 5 to 7. Trough or well 10 advantageously has an undercut shape, that is to say that its opening 52 has a width smaller than that of its bottom facing it.

Consequently, on the one hand, well 10 tends to retain the cosmetic composition if the box according to the present invention is overturned, opening 52 downward, and on the other hand, the narrow walls of the well at the site of opening 52 provide optical masking of the

possible detachments of the cosmetic composition with respect to the walls at the bottom due to evaporation of the solvent in case of prolonged opening of the box, corresponding to a common error of users. The undercut shape of trough or well 10 for receiving the cosmetic makes it possible to mask the shrinkage of this composition which is poured hot into the trough or well, during its shrinkage due to a cooling phase.

[0035] The undercut well is produced by blowing or advantageously by injection, with a mold which is opened in two steps: first of all, the exterior of the mold is released; then a piston ensures the release of the trough or well with passage of narrow opening 52 through a zone of greater width of the mold by elastic deformation of the plastic material constituting the trough. The attachment of well 10 on lower part 25 of the box according to the present invention is done by any known mechanism such as, for example, by screwing over a quarter turn, pinning, or advantageously, by catching. For example, trough or well 10 has, exterior to walls, radially external wall 51 provided with securing element, for example, in the form of hooks or on the contrary, securing grooves distributed preferably regularly on the periphery of wall 51. In the example illustrated, the well is roughly elliptical, and it has four securing hooks 39 arranged at the intersection of the large and the small axis of the ellipse with the external side of wall 51.

[0036] The securing of refill 29 by opening 10 made in base 45 of the box according to the present invention allows one to produce a packaging with a limited space requirement. Moreover, the bottom of well or trough 10 extending advantageously in the extension of the bottom of lower part 25 of the box according to the present invention gives the latter a particularly aesthetic appearance.

[0037] Furthermore, well or trough 10 is particularly easy to fill on an automatic filling line, particularly hot. In such a case, the well is made out of a material which is resistant to the filling temperature. The rest of the box can be made of materials with a lower price.

Claims

1. A refillable packaging for a cosmetic and/or pharmaceutical composition, which has external envelope (1), wherein the external envelope (1) is provided with opening (46) for receiving container (29) of a refill of cosmetic and/or pharmaceutical composition (5), the packaging further comprising an opening (41) of container (29) that opens inside external envelope (1), and means of locking (39) of container (29) of the refill in position in the packaging.
2. The packaging according to claim 1, wherein the opening (14) is made in base (45) of external envelope (1) of the packaging and the external wall of the bottom of container (29) of the refill is in the extension of the external side of base (45) of envelope (1) of the packaging.

3. The packaging according to claim 1 or 2, further comprising means of locking that has projecting elements (50, 51) ensuring the locking and holding by clipping of container (29) of the refill in the packaging.
4. The packaging according to any one of the preceding claims, further comprising means (11,41) of hermetic sealing of container (9) of the refill, the means provided with rib (23) which is applied radially on wall arranged facing it in order to ensure said hermetic sealing
5. The packaging according to any one of the preceding claims, comprising the container (29) of the refill that has first radially internal wall (50) which delimits a chamber (17) for receiving the cosmetic and/or pharmaceutical composition (5) and a second radially external wall (21) for application of means (11, 41) of hermetic sealing of container (29) of the refill.
6. The packaging according to any one of the preceding claims, wherein the container (29) of the refill has an undercut wall (50), which delimits a chamber (17) for receiving the cosmetic and/or pharmaceutical composition (5).
7. The packaging according to any one of the preceding claims, wherein said packaging is a flat box and in that the container (29) of the refill is a trough or a well.
8. The packaging according to any one of the preceding claims, further comprising a platform (29) delimiting a chamber (17) for receiving the cosmetic and/or pharmaceutical composition (5) and a ventilated compartment (33) for receiving means of application of the cosmetic and/or pharmaceutical composition (5).
9. The packaging according to claim 8, wherein the platform (30) ensures the hermetic sealing of container (29) of the refill and wherein said platform (30) can be deformed so as to allow compensation for the difference pressure between the interior and the exterior of container (29) of the refill.
10. The packaging according to any one of the preceding claims, further containing a cosmetic and/or pharmaceutical composition.
11. A process for packaging a cosmetic and/or pharmaceutical composition, comprising:

- a) filling container (29) of a refill with cosmetic and/or pharmaceutical composition (5);
- b) assembling container (29) of the refill containing cosmetic and/or pharmaceutical composition with a packaging according to claim 1.

5

12. A process according to claim 11, **characterized in that** the filling occurs when the cosmetic and/or pharmaceutical is hot.

10

15

20

25

30

35

40

45

50

55

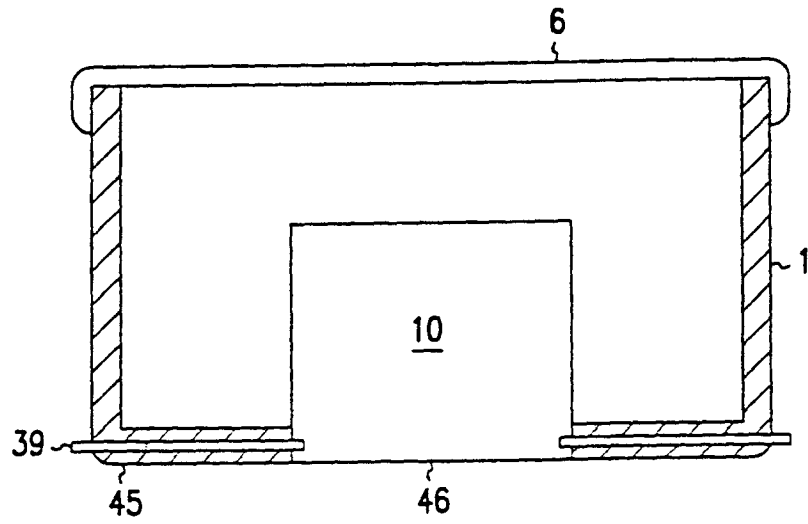


FIG. 1

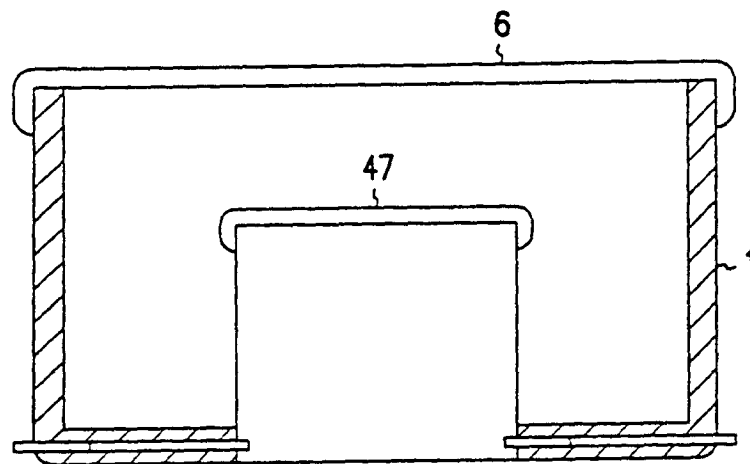


FIG. 2

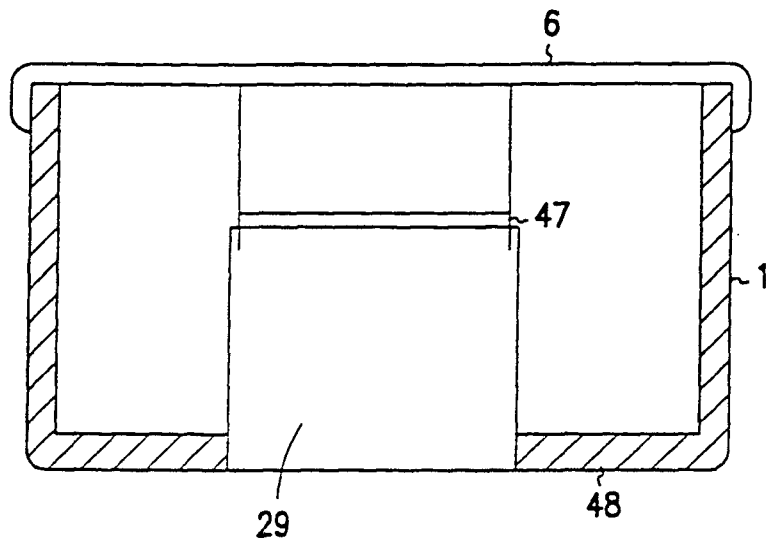


FIG. 3

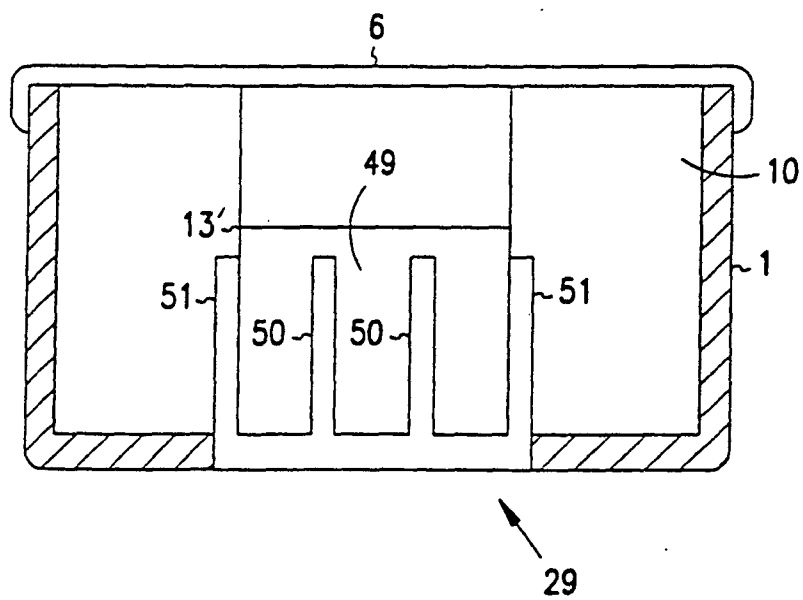


FIG. 4

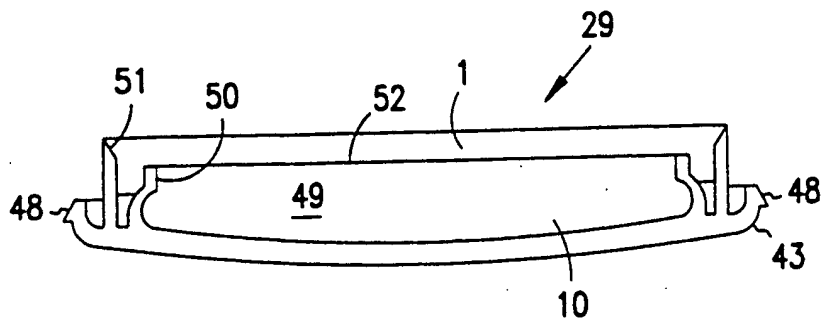


FIG. 5

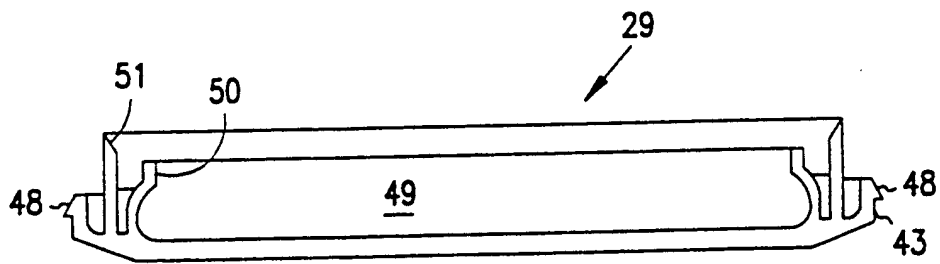


FIG. 6

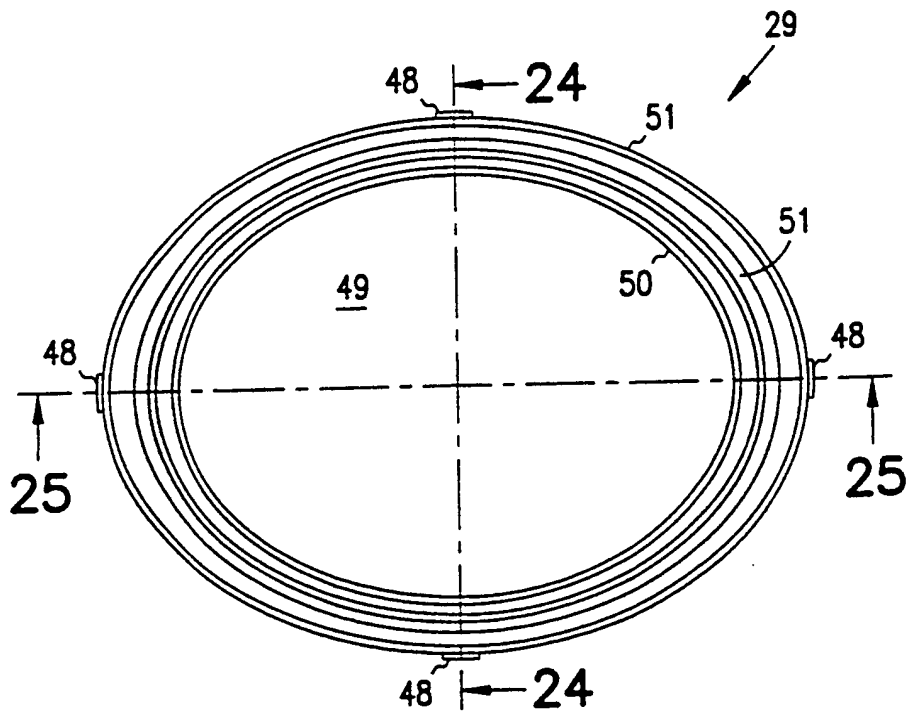


FIG. 7



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 02 02 2539

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 0 845 230 A (OREAL) 3 June 1998 (1998-06-03) * claims 1-3,8; figures 1-3,6,7 *	1-3,6,7, 10,11	A45D33/00
X	EP 0 861 613 A (LAFFON S P A) 2 September 1998 (1998-09-02) * claims 1-3; figures 1,3 *	1,4,10, 11	
A	PATENT ABSTRACTS OF JAPAN vol. 097, no. 002, 28 February 1997 (1997-02-28) & JP 08 256828 A (KAMAYA KAGAKU KOGYO CO LTD), 8 October 1996 (1996-10-08) * abstract; figures *	1,11	
A	PATENT ABSTRACTS OF JAPAN vol. 096, no. 006, 28 June 1996 (1996-06-28) & JP 08 052027 A (KANEBO LTD; OTHERS: 01), 27 February 1996 (1996-02-27) * abstract; figures *	1,11	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7) A45D A45C
Place of search THE HAGUE		Date of completion of the search 4 November 2002	Examiner Acerbis, G
CATEGORY OF CITED DOCUMENTS 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 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			

EPO FORM 1503 03/02 (P04/C01)

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

EP 02 02 2539

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-11-2002

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0845230	A	03-06-1998	FR 2755837 A1	22-05-1998
			DE 69709613 D1	21-02-2002
			DE 69709613 T2	31-10-2002
			EP 0845230 A1	03-06-1998
			ES 2171863 T3	16-09-2002
			JP 2968242 B2	25-10-1999
			JP 10248632 A	22-09-1998
			US 5931169 A	03-08-1999
EP 0861613	A	02-09-1998	IT MI970388 A1	24-08-1998
			EP 0861613 A2	02-09-1998
JP 08256828	A	08-10-1996	NONE	
JP 08052027	A	27-02-1996	NONE	