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(54) **LID CONSTRUCTION FOR CONTAINER**

(57) A lid assembly **100** for preventing leakage and spillage from a container **118** during change in orientation of the container **118** and breathing of bubbles is disclosed. The lid assembly **100** is made of silicone material which allows to adapt over any bubble container. The lid assembly **100** comprises a top flat circular base **102**, a slit portion **108** set on a center of the circular base **102**, a spherical protrusion structure **104** integral with and ex-

tending downward from a peripheral edge **110** of said base **102** and a cylindrical member **106** with one end formed integral with a lower end of the protrusion structure **104** and other end forms a rim structure **116** to adapt over a rim flange of the container **118**. The slit **108** enables a user to insert a wand **120** directly into the container **118**, preventing leakage during breathing.

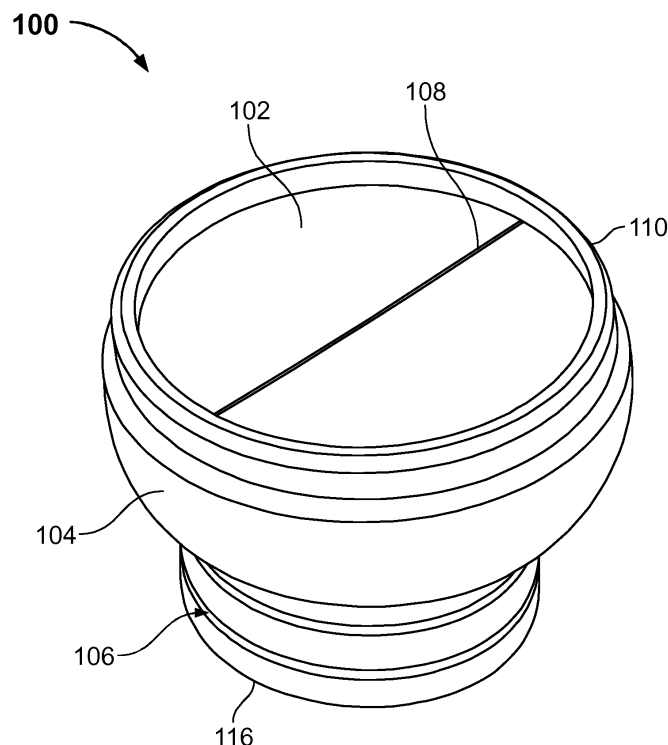


FIG. 3

Description

TECHNICAL FIELD OF THE INVENTION

[0001] The invention disclosed herein generally relates to a lid construction or lid assembly. More particularly, the invention relates to a lid construction for outfitting a container, such as bubble container or any other container, to prevent spillage or leakage from such an outfitted container during breathing bubbles by a user.

BACKGROUND

[0002] Bubble container may be described as a container with bubble generating fluid to generate bubbles. The common principle employed with this type of toy is wetting an end of a wand or dipstick that generates bubbles and the user need to blow at the end or wave the wand to form bubbles. During breathing of bubble, excess bubble fluid in the breathing pole is prone to drip on tiles, clothes, persons etc. Further, if the bubble container is tilted, turned or the like, the bubble generating fluid may be liable to spillage or leakage causing discomfort to the user and stains the surrounding of the user.

[0003] To prevent spillage and leakage the bubble containers are provided with lid. However, the lids need to be removed each time the user breaths the bubble and need to hold the container in a vertical position to prevent spillage. Also, this type of lid prevents spillage but restricts access to the fluid and is not able address dripping of excess bubble fluid from the wand. Further, if the container is dropped, the entire fluid content is rapidly spilled.

[0004] A prior art, WO 2008/078310 A2 of Sharber discloses a spill resistant container assembly having a container adapted to contain a fluid, such as a bubble solution. A generally elastic concave seal member extends across an opening of the container so as to aid in preventing the fluid from spilling out of the container, if the container is knocked over or held in an inverted position. The seal member has a slit capable of receiving the first end of a fluid carrier member such as a bubble wand. The elasticity of the seal member holds the slit in a normally closed position to prevent spilling. However, this patent application fails to disclose a novel and alternative design of lid construction, as disclosed in the present invention.

[0005] In light of the foregoing, there is need of a lid assembly that eliminates spillage and leakage during change in orientation of the container and at the same time provides easy access to the bubble wand during breathing of bubbles by a user.

SUMMARY OF THE INVENTION

[0006] This summary is provided to introduce a selection of concepts in a simplified form that are further disclosed in the detailed description of the invention. This summary is not intended to identify key or essential in-

ventive concepts of the claimed subject matter, nor is it intended for determining the scope of the claimed subject matter.

[0007] The present invention relates to a lid assembly for container, such as bubble or other container, to resist spillage or leakage from such an outfitted container during change in orientation of the bubble container, and breathing of bubbles by a user.

[0008] The lid assembly is made of silicone material which allows to adapt over the bubble containers manufactured by different manufactures. Also, the lid assembly retains its original shape once the lid is removed from the container. The lid assembly comprises a top flat circular base, a slit portion set on a center of the circular base, a spherical protrusion structure integral with and extending downward from a peripheral edge of said base and a cylindrical member with one end formed integral with a lower end of the protrusion structure and other end forms a rim structure to adapt over a rim flange of the bubble container. The slit enables a user to insert the wand directly into the bubble container by pushing the wand through the slit, without removing the lid assembly, thereby avoids spillage and leakage of bubble solution without restricting their access to the solution to blow bubbles. Also, the thin slit retains excess bubble fluid on the breathing pole thus preventing leakage during breathing.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] The foregoing summary, as well as the following detailed description of the invention, is better understood when read in conjunction with the appended drawings. For the purpose of illustrating the invention, exemplary constructions of the invention are shown in the drawings. However, the invention is not limited to the specific methods and structures disclosed herein. The description of a method step or a structure referenced by a numeral in a drawing is applicable to the description of that method step or structure shown by that same numeral in any subsequent drawing herein.

FIG. 1 exemplarily illustrates a perspective view of lid construction assembled over a container of one embodiment of the present invention.

FIG. 2 exemplarily illustrates a side perspective view of lid construction of one embodiment of the present invention.

FIG. 3 exemplarily illustrates a top perspective view of lid construction of one embodiment of the present invention.

FIG. 4 exemplarily illustrates a rear perspective view showing the inner space of lid construction of one embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0010] Disclosed herein, a container lid construction for preventing leakage. Referring to FIG. 1 exemplarily illustrates a perspective view of a lid assembly **100** assembled over a container, such as bubble container **118**. The lid assembly **100** avoids spillage of soap bubbles during breathing of soap bubbles and change in orientation of the bubble container **118**.

[0011] FIG. 2 exemplarily illustrates a side perspective view of lid construction **100** of one embodiment of the present invention, the lid assembly **100** has a top flat circular base **102**. The flat circular base **102** includes a slit **108** for insertion of the bubble wand **120** into the bubble container **118**. The flat circular base **102** has a protruded edge **110** which extends vertically downward as a spherical protrusion structure **104**. The lower portion of the protrusion structure **104** extends vertically downward to form a cylindrical structure **106**. The exterior surface of the protrusion structure **104** and the cylindrical structure **106** has smooth surface. A lower portion of the cylindrical structure **106** forms a rim **116** of the lid assembly **100**. In an embodiment, the exterior surface of the cylindrical structure **106** may have a threaded configuration. In an embodiment, the cylindrical member **106** may have a snap fit structure.

[0012] FIG. 3 exemplarily illustrates a top perspective view of lid construction **100** where the slit **108** is horizontally extended to the opposite edge **110** of the circular base **102**. The slit **108** enables a user to insert the wand **120** directly into the bubble container **118** by pushing the wand **120** through the slit **108**, without removing the lid assembly **100**. Further FIG. 3 shows the spherical protrusion structure **104** integral with and extending downward from the peripheral edge **110** of said base **102** and the cylindrical member **106** formed integral with the lower end of the protrusion structure **104**. The lower portion of the cylindrical structure **106** forms the rim **116** of the lid assembly **100**.

[0013] In an embodiment, the slit **108** is very thin to generate leak-proof closure even when the bubble container **118** is oriented with bubble wand **120** in inserted position. In an embodiment, the slit **108**, avoids spillage and leakage of bubble solution without restricting their access to the solution to blow bubbles. In addition, the lid assembly **100** provides a bi-effect that excess soap bubble fluid on the bubble wand **120** is retained by the silicone slit crack **108**, thereby avoiding dripping of fluid on tiles, clothes, person etc., during bubble breathing.

[0014] FIG. 4 exemplarily illustrates a rear perspective view showing the inner space of lid construction **100** of one embodiment of the present invention. The inner portion of the cylindrical structure **106** has screw threads **112** to provide better grip to fit onto to a rim flange of the bubble container **118**. The lower portion of the cylindrical structure **106** forms the rim **116** of the lid assembly **100**.

[0015] The lid assembly **100** is formed from flexible materials. In a preferred embodiment, the lid assembly

100 is made from silicone material to enable strong seal and reduce slipping at the interface between the lid assembly **100** and the bubble container **118**. In an embodiment, the lid assembly **100** formed of flexible silicone material allows to combine with bubble containers manufactured by different manufactures, as the silicone can be stretched and easily fitted onto the opening of the bubble container **118**. In an embodiment, the silicone lid assembly **100** retains its original shape once the lid **100** is removed from the container **118**, nevertheless the times it is stretched and used.

[0016] The foregoing examples have been provided merely for the purpose of explanation and are in no way to be construed as limiting of the present concept disclosed herein. While the concept has been described with reference to various embodiments, it is understood that the words, which have been used herein, are words of description and illustration, rather than words of limitation. Further, although the concept has been described herein with reference to particular means, materials, and embodiments, the concept is not intended to be limited to the particulars disclosed herein; rather, the concept extends to all functionally equivalent structures, methods and uses, such as are within the scope of the appended claims.

Claims

1. A lid construction (**100**) for a container (**118**) to prevent leakage and spillage, comprising a top circular base (**102**); a slit portion (**108**) set on a center of the circular base (**102**); a protrusion structure (**104**) integral with and extending downward from a peripheral edge (**110**) of said base (**102**); and a cylindrical member (**106**) with one end is integrated to a lower end of the protrusion structure (**104**) and other end forms a rim structure (**116**) to adapt over a rim flange of the container (**118**), said lid construction (**100**) is made of elastic material, **characterized by**: said top circular base (**102**) being flat, and the protrusion structure (**104**) being spherical.
2. The lid construction (**100**) of claim 1, **characterized by** the cylindrical member (**106**) including a threaded configuration at inner region of the cylindrical member (**106**).
3. The lid construction (**100**) of claim 1, **characterized by** the slit portion (**108**) being configured to insert a wand (**120**) into the container (**118**).
4. The lid construction (**100**) of claim 1, **characterized by** the lid construction (**100**) being adapted over at least one type of container.
5. The lid construction (**100**) of claim 1, **characterized by** the elastic material being a silicone material.

6. The lid construction **(100)** of claim 1, **characterized by** the cylindrical member **(106)** including a threaded configuration at outer region of the cylindrical member **(106)**.

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7. The lid construction **(100)** of claim 1, **characterized by** the cylindrical member **(106)** being a snap fit structure.

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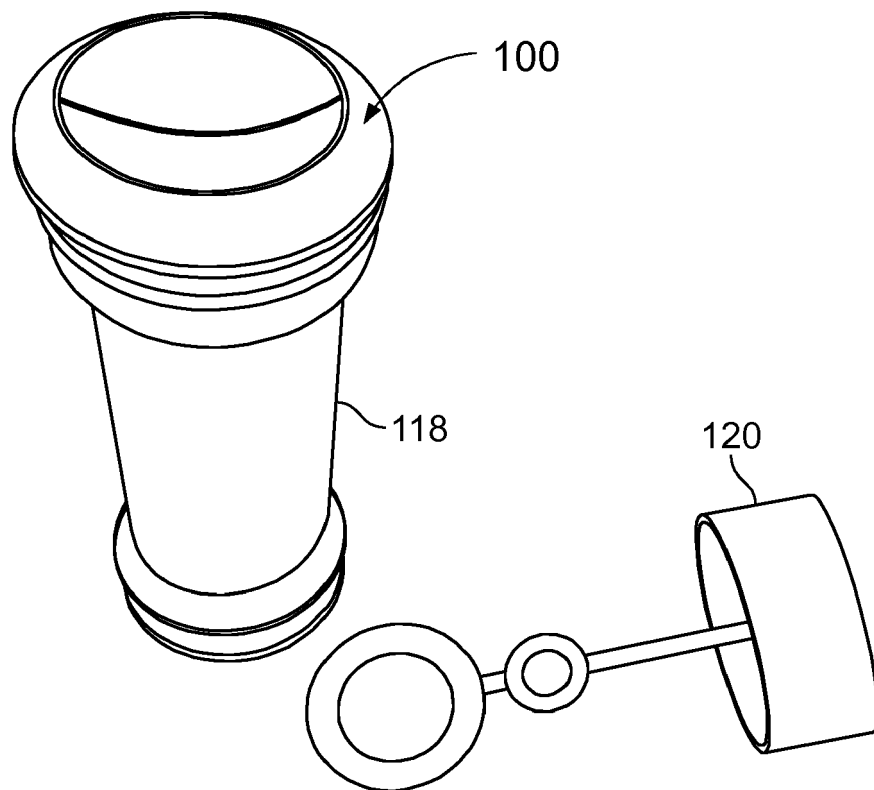


FIG. 1

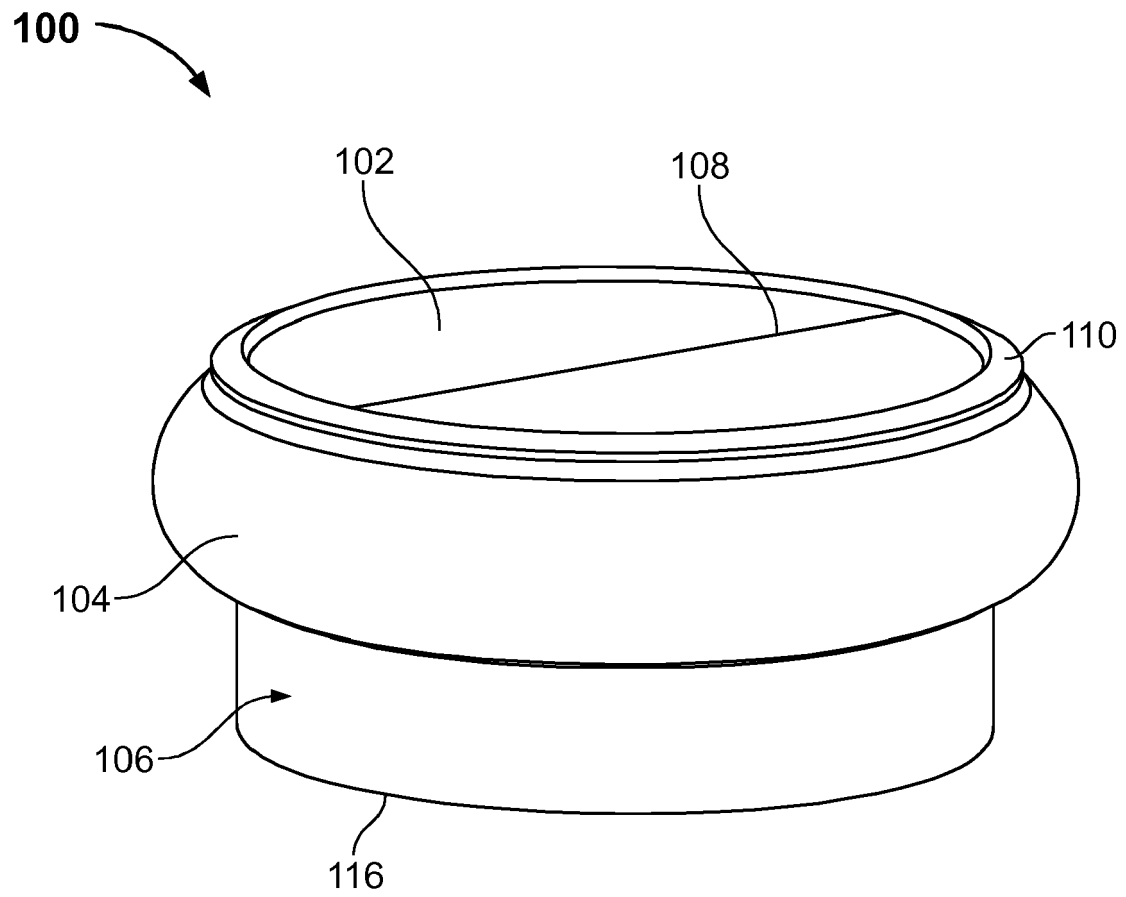


FIG. 2

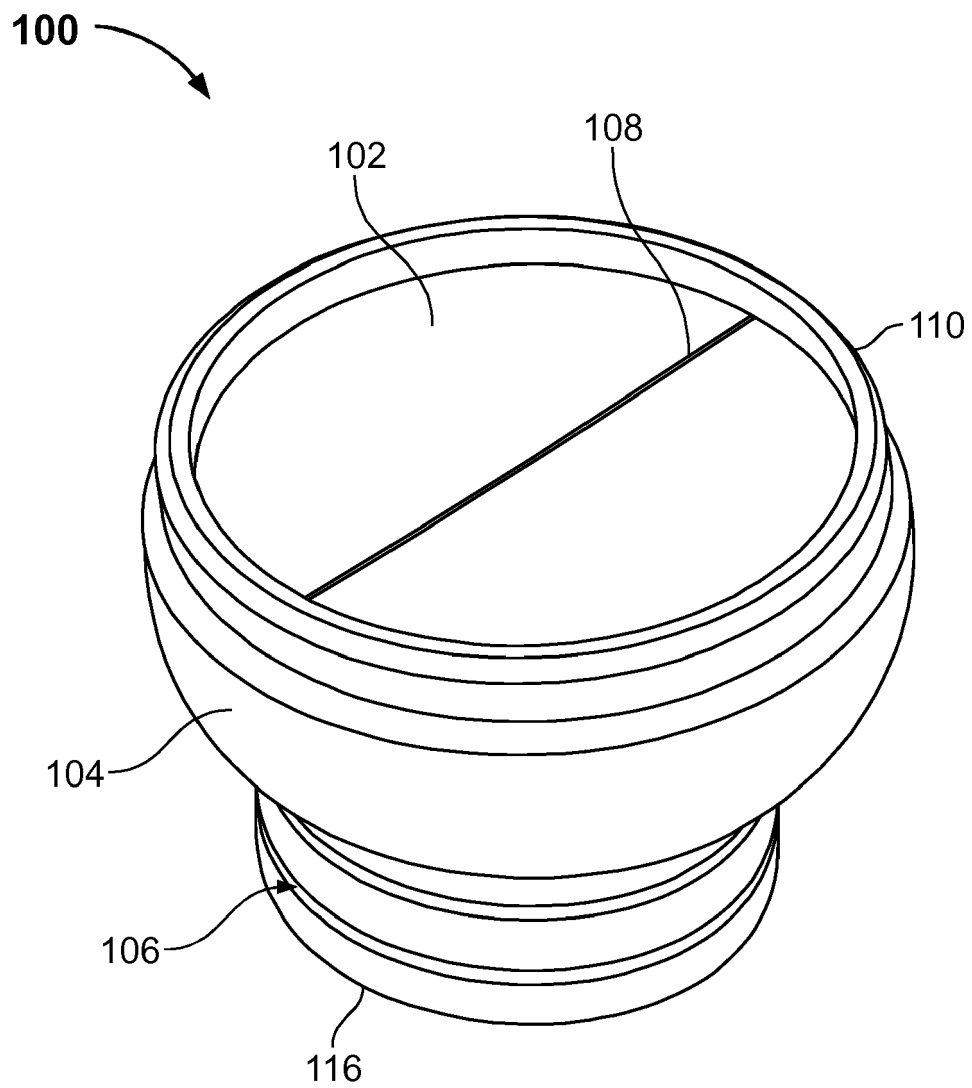


FIG. 3

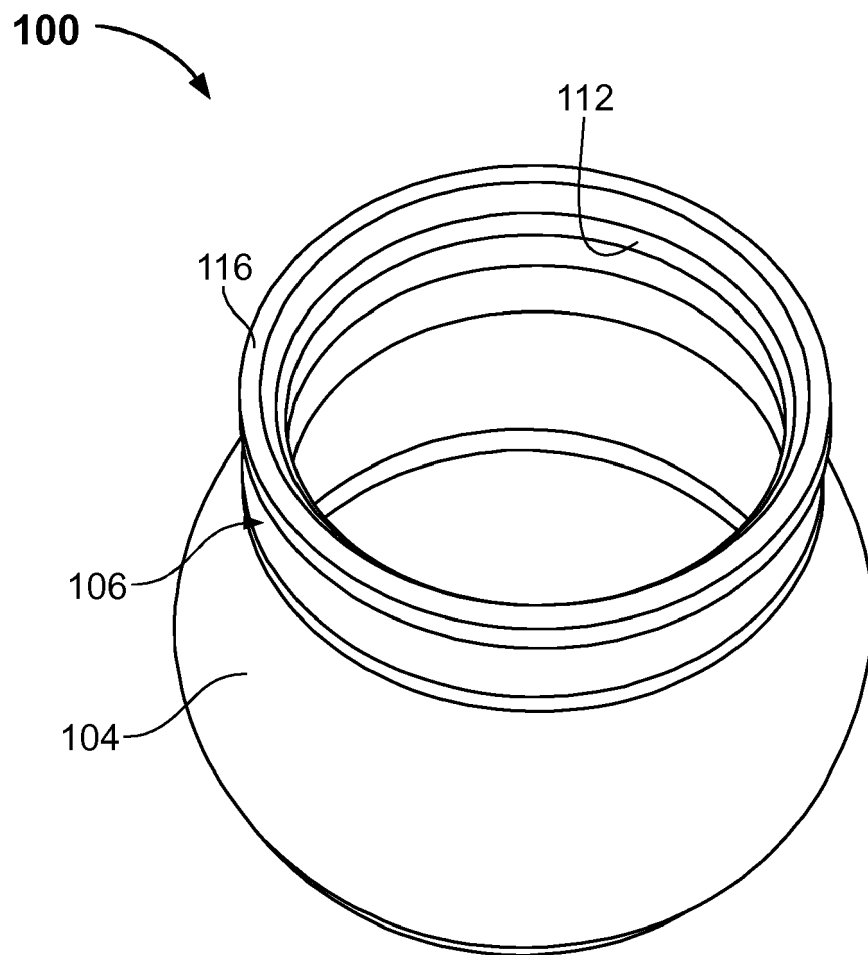


FIG. 4



EUROPEAN SEARCH REPORT

Application Number
EP 18 17 8060

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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	US 6 135 842 A (LAFATA JOHN E [US] ET AL) 24 October 2000 (2000-10-24) * figures 2A,2B *	1-7	INV. A63H33/28 B65D47/20 B65D51/24
A	GB 2 457 021 A (JEYES GROUP LTD [GB]) 5 August 2009 (2009-08-05) * figure 3 *	5	
A	US 2012/091143 A1 (HAKIM NOURI E [US]) 19 April 2012 (2012-04-19) * paragraphs [0057], [0075]; figure 15 *	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			A63H B65D
Place of search		Date of completion of the search	Examiner
The Hague		7 December 2018	Sundell, 011i
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 03/82 (P04C01)

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

EP 18 17 8060

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

REFERENCES CITED IN THE DESCRIPTION

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