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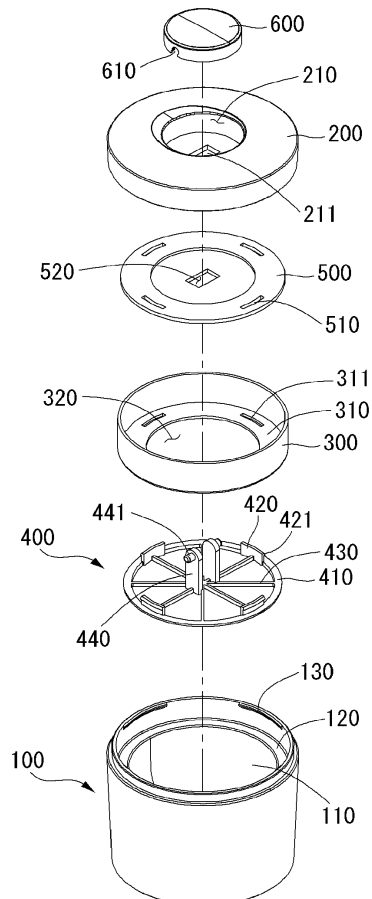
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(54) **COSMETICS CONTAINER HAVING A SEALED STRUCTURE**

(57) The present invention is a cosmetics container having a sealed structure. In the cosmetics container having a sealed structure according to the present invention, an airtight state can be maintained inside the container by means of a simple structure, by using a configuration wherein the airtight state inside the container can be maintained by causing a sealing member to compress and spread out and to thereby attach hermetically to the inside of the body of the container and seal of the upper part of the body of the container as a result of downwards movement of a cap when one side of a lever member provided on the cap is pressed, and wherein the cap can be separated from the container by releasing the sealing member from the compression as a result of upwards movement of the cap when the other side of the lever member is pressed.

[Fig. 1]



Description

Technical Field

[0001] The present invention relates to a cosmetics container having a sealed structure, and in particular to a cosmetics container having a sealed structure wherein a sealing member is compressed and widened as a cap moves downward when pressing a portion of a lever member in a cap and comes into close contact with an inner portion of a container body for thereby closing the top of the container body and maintaining a sealed state of a container. When the other portion of the lever member is pressed, the cap moves upward, and the compressed state of the sealing member is decompressed, thus separating the cap from the container, whereby a sealed state of the container can be obtained by a simple structure.

Background Art

[0002] A cosmetics container generally designed to contain cream, etc. is configured to be opened and closed as a lid is thread-engaged. The contents contained in the container can be used after the lid is removed from the cosmetics container. The lid can seal the cosmetics container since the lid is thread-engaged to the cosmetics container.

[0003] In the cosmetics container that is sealed since the lid is thread-engaged, a user needs to engage the lid to the container body by rotating the lid. In this case, the lid may not be well thread-engaged to the container body due to a user's mistake. If the lid is not tightly sealed, the contents contained in the container may leak out, so the contents may be spoiled.

[0004] It is urgent to develop a cosmetics container that can enhance a sealing ability on the basis of a simple structure.

Disclosure of Invention

[0005] Accordingly, the present invention is made so as to improve the above mentioned problems. It is an object of the present invention to provide a cosmetics container having a sealed structure wherein a sealing member is compressed and widened as a cap moves downward when pressing a portion of a lever member in a cap and comes into close contact with an inner portion of a container body for thereby closing the top of the container body and maintaining a sealed state of a container. When the other portion of the lever member is pressed, the cap moves upward, and the compressed state of the sealing member is released, this separating the cap from the container, whereby a sealed state of the container can be obtained by a simple structure.

[0006] To achieve the above objects, there is provided a cosmetics container having a sealed structure, comprising a container body that contains contents, the top

of which container body is open; and a cap that comprises a cover part that is detachably engaged to the container body and covers top of the container body; an elastic sealing member that is engaged to the cover part and of which lateral surface is widened in an outward direction by means of an operation of the lever member and comes into airtight contact with an inner circumferential surface of the container body thus providing a sealing function; a lever member support body that is inserted in a bottom of the sealing member and of which central portion protrudes in an upward direction and that supports the lever member; a fixing plate that is engaged to the lever member support body, at an inner portion of the sealing member, and that fixes the sealing member; and a lever member that is engaged to the cover part and is connected to the lever member support body and rotates by a user's pressing and seals the interior of the container body using the sealing member.

[0007] In addition, in an inner portion of the container body is provided a mounting part that extends in an inward direction, covering an inner circumferential surface of the container body for the lever member support part to be mounted, and in an end portion of the mounting part is provided a content accommodation part that extends in a downward direction and contains contents.

[0008] In addition, in the top of an inner portion of the container body are provided a plurality of protrusions that are spaced apart at regular intervals, covering an inner circumferential surface, for thereby preventing developments of pressure in the container body.

[0009] In addition, the lever member support body comprises a circular support plate that is mounted in the mounting part; a plurality of protrusion pieces that extend in an upward direction from the support plate and are inserted in the sealing member and the fixing plate; a plurality of connection pins that extend in a central direction from an inner circumferential surface of the support plate; and a rotational guide piece that is connected to a pair of facing connection pins among the plurality of the connection pins and that protrudes in an upward direction and supports the lever member and guides the operations of the lever member.

[0010] In addition, in the sealing member and the fixing plate is formed an engaging hole through which the protrusion piece passes, and in the protrusion piece is provided an engaging shoulder that prevents the lever member support body from disengaging from the engaging hole.

[0011] In addition, in the top of the rotational guide piece is provided a rotational guide protrusion to which the lever member is engaged, and in both sides of the bottom of the lever member is provided a protrusion engaging groove that is engaged to the rotational guide protrusion.

[0012] In addition, in a central portion of the top of the cover part is provided a lever member engaging groove to which the lever member is engaged, and in the lever member engaging groove the lever member engaging

groove includes a rotation limiting shoulder that limits the rotations of the lever member.

[0013] In addition, the lever member comprises a pressing part that is engaged to the pair of the rotational guide protrusions so that it can rotate in a direction or in the other direction by a user's pressing; a semicircular sealing guide part that is engaged to the bottom of the pressing part and that is positioned between the pair of the rotational guide pieces and that rotates as either one end portion or the other end portion of the pressing part rotates; and a sealing guide protrusion that covers part of the sealing guide part and comes into contact with the bottom of the lever member engaging groove when the pressing part is in a horizontal state and that ascends the rotational guide piece and guides the pressing of the sealing member.

Advantageous Effects

[0014] In the present invention, a sealing member is compressed and widened as a cap moves downward when pressing a portion of a lever member in a cap and comes into close contact with an inner portion of a container body for thereby closing the top of the container body and maintaining a sealed state of a container. When the other portion of the lever member is pressed, the cap moves upward, and the compressed state of the sealing member is released, this separating the cap from the container, whereby a sealed state of the container can be obtained by a simple structure.

Brief Description of Drawings

[0015]

Figure 1 is a disassembled perspective view illustrating a construction of a cosmetics container having a sealed structure according to a preferred embodiment of the present invention.

Figure 2 is a perspective view illustrating a construction of a cosmetics container having a sealed structure according to a preferred embodiment of the present invention.

Figure 3 is a cross sectional view illustrating a construction of a cosmetics container having a sealed structure according to a preferred embodiment of the present invention.

Figure 4 is a view for describing a sealing procedure of a cosmetics container having a sealed structure according to a preferred embodiment of the present invention.

Best modes for carrying out the invention

[0016] The preferred embodiment of the present invention will be described. It is noted that the same reference numerals represent the same components.

[0017] Figure 1 is a disassembled perspective view il-

lustrating a construction of a cosmetics container having a sealed structure according to a preferred embodiment of the present invention. Figure 2 is a perspective view illustrating a construction of a cosmetics container having a sealed structure according to a preferred embodiment of the present invention. Figure 3 is a cross sectional view illustrating a construction of a cosmetics container having a sealed structure according to a preferred embodiment of the present invention.

[0018] As shown in Figures 1 to 3, the cosmetics container having a sealed structure according to a preferred embodiment of the present invention comprises a container body 100 and a cap 200.

[0019] The top of the container body 100 is open to contain contents through. The cap 200 is engaged to the open top for thereby sealing the top of the container body 100.

[0020] In the inner portion of the top of the container body 100 is provided a mounting part 120 that extends in an inward direction, covering the inner circumferential surface of the container body 100, so that a lever member support body 230. At an end portion of the mounting part 120 is provided a content accommodation part 110 that extends in a downward direction for thereby containing contents.

[0021] In the present invention, a plurality of protrusions 130 are spaced apart at regular intervals, surrounding the inner circumferential surface, and are provided in top of the inner portion of the container body 100. Since a plurality of the protrusions 130 are spaced apart at regular intervals, pressure can be discharged via a space between the protrusions 130 in the course of the sealing work during which the cap 200 is engaged to the container body 100, so it is possible to prevent the developments of the pressure inside the container body 100.

[0022] The cap 200 is detachably engaged to the container body 100 and comprises a cover part 210, a sealing member 220, a lever member support body 230, a fixing plate 240 and a lever member 250.

[0023] The cover part 210 is configured to cover top of the container body 100. In the center of the top of the cover part 210 is provided a lever member engaging groove 211 for the sake of engagement of a lever member 250. In the bottom of the lever member engaging groove 211 is provided a through hole 212 for the sake of engagement with the lever member 250 as a rotational guide piece 235 passes through the through hole 212.

[0024] It is preferred that a rotation limiting shoulder 213 is provided in a portion of an inner circumferential surface of the lever member engaging groove 211 so as to limit the rotation of the lever member 250 when the lever member 250 rotates in a direction for the sake of sealing the container body 100.

[0025] The top of the sealing member 220 is engaged to the cover part 210, and the bottom of the same is fixedly supported by the lever member support body 230 and the fixing plate 240. The sealing member 220 is a cylindrical shape. In the bottom of the sealing member 220 is

provided an extension part 221 that defines a hollow part 223 and extends in an inward direction. A fixing plate 240 is mounted in the extension part 221 so that it can be fixedly supported by means of the lever member support body 230 and the fixing plate 240.

[0026] In the extension part 221 are provided a plurality of engaging grooves 222 that are spaced apart at regular intervals in order for a protrusion piece 232, that will be described later, to pass through the same.

[0027] In the present invention, a lateral portion of the sealing member 220 is widened in an outward direction by means of an operation of the lever member 250 and is compressed against an inner circumferential surface of top of the container body 100 for thereby providing a sealing function. When the rotation guide piece 235 ascends, the lateral portion is widened in an outward direction and is compressed against an inner circumferential surface of the container body 100 for thereby providing a sealing function. When the rotation guide piece 235 descends, it returns to its initial state, and the sealing member 220 becomes spaced apart from an inner circumferential surface of the container body 100, and the compressed state is decompressed. It is preferred that the sealing member 220 is made from an elastic material so that it can be widened in an outward direction and then it returns to its initial state.

[0028] From the bottom of the sealing member 220, the lever member support body 230 is inserted in an engaging hole 222 and is configured to prevent any deformation of the sealing member 220 on the basis of an engagement with the fixing plate 240. The lever member support body 230 comprises a circular support plate 231 that mounts on the mounting part 120 of the container body 100, a plurality of protrusion pieces 232 that extend in an upward direction from the support plate 231 and that are inserted in the sealing member 220 and the fixing plate 240, a plurality of connection pins 234 that extend from an inner circumferential surface of the support plate 231 to a central portion, and a rotational guide piece 235 that is engaged to a pair of facing connection pieces 234 among the plurality of the connection pins 234 and that protrudes in an upward direction and supports the lever member 250 and guides the operations of the lever member 250.

[0029] In the present invention, in the lever member support body 230, the protrusion piece 232 is inserted in the engaging hole 241 of the fixing plate 240. When pressure is applied to the sealing member 220, any deformation of the sealing member 220 can be prevented. It is preferred that an engaging shoulder 233 is provided in the protrusion piece 232 so as to prevent the lever member support body 230 from disengaging from the engaging hole 222, 241.

[0030] In the top of the rotational guide piece 235 is provided a rotational guide protrusion 236 to which a lever member 250 is operatively engaged.

[0031] Inside the sealing member 220, the fixing plate 240 is engaged to the lever member support body

230 for thereby fixing the sealing member 220. In the central portion of the fixing plate 240 is provided a through hole 242 through which the rotational guide piece 235 passes. A plurality of engaging holes 241 that are spaced apart at regular intervals are provided in a portion coming into contact with the engaging hole 222 of the sealing member 220, wherein the protrusion piece 232 passes through the engaging hole 241.

[0032] The lever member 250 is engaged to the lever member engaging groove 211 of the cover part 210, the bottom of which lever member 250 is connected to the lever member support body 230, so it rotates when a user presses, whereby the interior of the container body 100 can be sealed with the aid of the sealing member 220. The lever member 250 comprises a pressing part 251, a sealing guide part 253 and a sealing guide protrusion 254.

[0033] The pressing part 251 is configured to rotate in a direction or in the other direction when the user presses it. The pressing part 251 comprises a protrusion engaging groove 252 for engagement to the rotational guide protrusion 236.

[0034] The sealing guide part 253 is engaged to the bottom of an inner portion of the pressing part 251 and is disposed between a pair of the rotational guide pieces 235 and is configured to rotate on the basis of the rotation of the pressing part 251 that rotates in one direction or in the other direction. It is preferred that the sealing guide part 253 has a semicircular cross section that prevents any interference with other components in the course of rotations.

[0035] The sealing guide protrusion 254 covers part of the sealing guide part 253 and comes into contact with or becomes spaced apart from the bottom of the lever member engaging groove 211 on the basis of the rotation of the sealing guide part 253 for thereby allowing the rotation guide piece 235 to ascend or descend. In the present invention, the sealing guide protrusion 254 is configured to contact with the bottom of the lever member engaging groove 211 when the pressing part 251 is in a horizontal state, so the rotational guide piece 235 can ascend as much as its thickness for thereby guiding the pressing of the sealing member 220.

[0036] When the sealing guide protrusion 254 comes into contact with the bottom of the lever member engaging groove 211, the rotational guide piece 235 ascends as much as its thickness, so the sealing member 220 is widened in an outward direction as it applies pressure to the sealing member 220. For this operation, the sealing member 220 comes into airtight close contact with the inner circumferential surface of the container body 100 on the basis of its sealing function. When it becomes spaced apart from the bottom of the lever member engaging groove 211, the rotational guide piece 235 descends as much as its thickness, and the pressure that has been applied to the sealing member 220 is removed, and the sealing member 220 returns to its initial state, so the container body 100 can be disengaged from the cap

200.

[0037] The sealing procedure of the cosmetics container having a sealed structure according to a preferred embodiment of the present invention will be described with reference to Figure 4. Figure 4 is a view for describing a sealing procedure of a cosmetics container having a sealed structure according to a preferred embodiment of the present invention.

[0038] As shown in Figure 4, in the sealing procedure of the cosmetics container having a sealed structure according to a preferred embodiment of the present invention, in an initial stage, in a state that the cap 200 is discharged from the container body 100, the cap 200 is engaged to the container body 100. At this time, the pressing part 251 of the lever member 250 remains oblique at a slanted angle, and the sealing member 220 is positioned spaced apart by a certain interval from the inner circumferential surface of the container body 100.

[0039] Next, when a user presses one end of the pressing part 251, the obliquely standing pressing part 251 starts rotating and becomes horizontal with the bottom of the lever member engaging groove 211. At this time, the sealing guide part 253 and the sealing guide protrusion 254 rotate together by the rotations of the pressing part 251. For this, the sealing guide protrusion 254 that remains spaced apart from the bottom of the lever member engaging groove 211 comes into contact with the bottom of the lever member engaging groove 211, so the rotational guide piece 235 can ascend as much as its thickness for thereby applying pressure to the sealing member 220.

[0040] When the pressure is applied to the sealing member in the above way, the sealing member 220 becomes widened in an outward direction, so the sealing member 220 comes into airtight contact with the inner circumferential surface of the container body 100 for thereby obtaining sealing functions.

[0041] As the present invention may be embodied in several forms without departing from the spirit or essential characteristics thereof, it should also be understood that the above-described examples are not limited by any of the details of the foregoing description, unless otherwise specified, but rather should be construed broadly within its spirit and scope as defined in the appended claims, and therefore all changes and modifications that fall within the meets and bounds of the claims, or equivalences of such meets and bounds are therefore intended to be embraced by the appended claims.

Claims

1. A cosmetics container having a sealed structure, comprising:

a container body that contains contents, the top of which container body is open; and
a cap that comprises:

a cover part that is detachably engaged to the container body and covers top of the container body;

an elastic sealing member that is engaged to the cover part and of which lateral surface is widened in an outward direction by means of an operation of a lever member and comes into airtight contact with an inner circumferential surface of the container body thus providing a sealing function;

a lever member support body that is inserted in a bottom of the sealing member and of which central portion protrudes in an upward direction and that supports the lever member;

a fixing plate that is engaged to the lever member support body, at an inner portion of the sealing member, and that fixes the sealing member; and

a lever member that is engaged to the cover part and is connected to the lever member support body and rotates by a user's pressing and seals the interior of the container body using the sealing member.

2. The container of claim 1, wherein in an inner portion of the container body is provided a mounting part that extends in an inward direction, covering an inner circumferential surface of the container body for the lever member support part to be mounted, and in an end portion of the mounting part is provided a content accommodation part that extends in a downward direction and contains contents.
3. The container of claim 1, wherein in the top of an inner portion of the container body are provided a plurality of protrusions that are spaced apart at regular intervals, covering an inner circumferential surface, for thereby preventing developments of pressure in the container body.
4. The container of claim 1, wherein in a central portion of the top of the cover part is provided a lever member engaging groove to which the lever member is engaged, and in the lever member engaging groove the lever member engaging groove includes a rotation limiting shoulder that limits the rotations of the lever member.
5. The container of claim 2, wherein the lever member support body comprises:

a circular support plate that is mounted in the mounting part;

a plurality of protrusion pieces that extend in an upward direction from the support plate and are inserted in the sealing member and the fixing plate;

a plurality of connection pins that extend in a central direction from an inner circumferential surface of the support plate; and
 a rotational guide piece that is connected to a pair of facing connection pins among the plurality of the connection pins and that protrudes in an upward direction and supports the lever member and guides the operations of the lever member.

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6. The container of claim 5, wherein in the sealing member and the fixing plate is formed an engaging hole through which the protrusion piece passes, and in the protrusion piece is provided an engaging shoulder that prevents the lever member support body from disengaging from the engaging hole.

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7. The container of claim 4, wherein in the top of the rotational guide piece is provided a rotational guide protrusion to which the lever member is engaged, and in both sides of the bottom of the lever member is provided a protrusion engaging groove that is engaged to the rotational guide protrusion.

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8. The container of claim 4, wherein the lever member comprises:

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a pressing part that is engaged to the pair of the rotational guide protrusions so that it can rotate in a direction or in the other direction by a user's pressing;
 a semicircular sealing guide part that is engaged to the bottom of the pressing part and that is positioned between the pair of the rotational guide pieces and that rotates as either one end portion or the other end portion of the pressing part rotates; and
 a sealing guide protrusion that covers part of the sealing guide part and comes into contact with the bottom of the lever member engaging groove when the pressing part is in a horizontal state and that ascends the rotational guide piece and guides the pressing of the sealing member.

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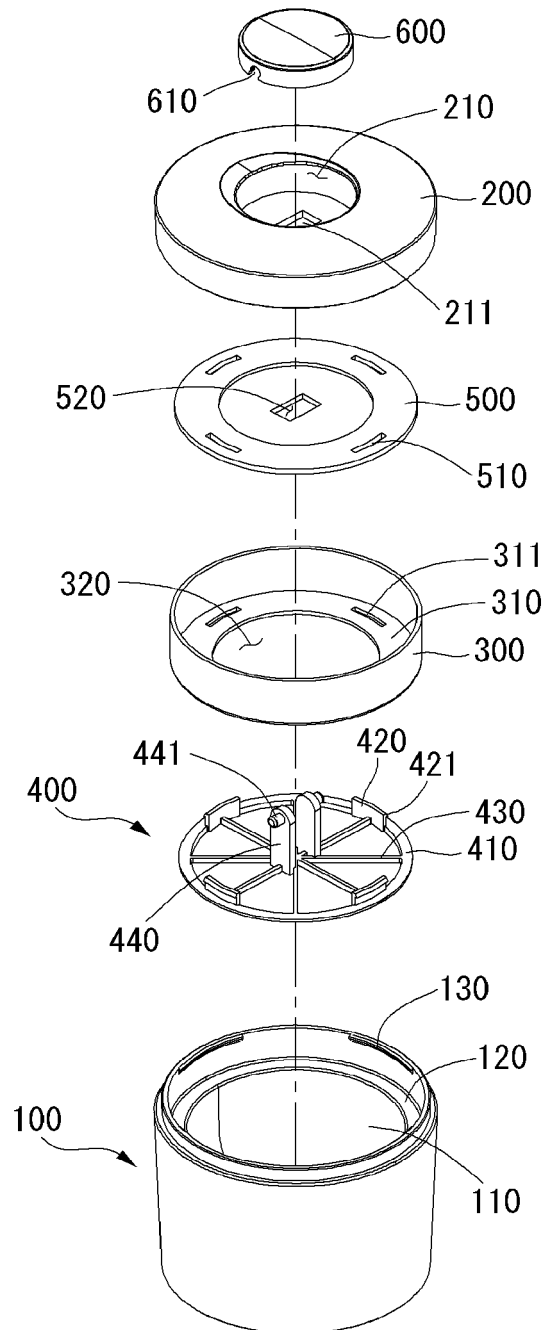
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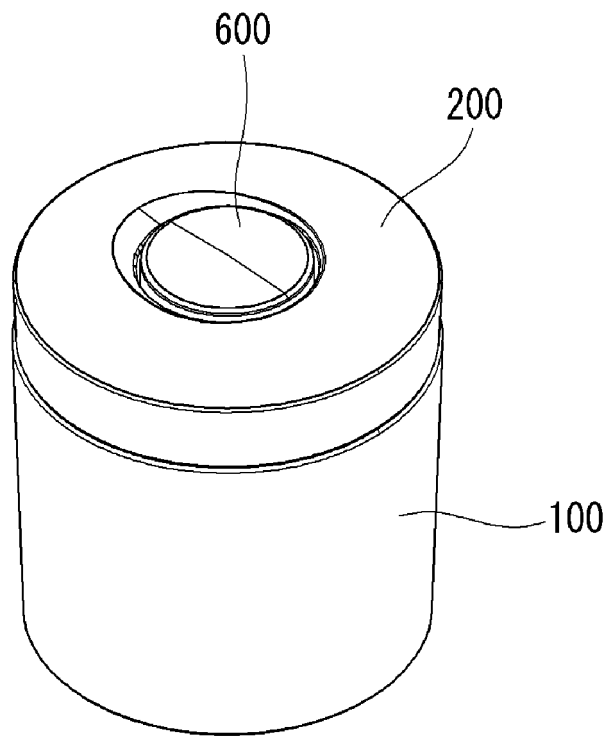
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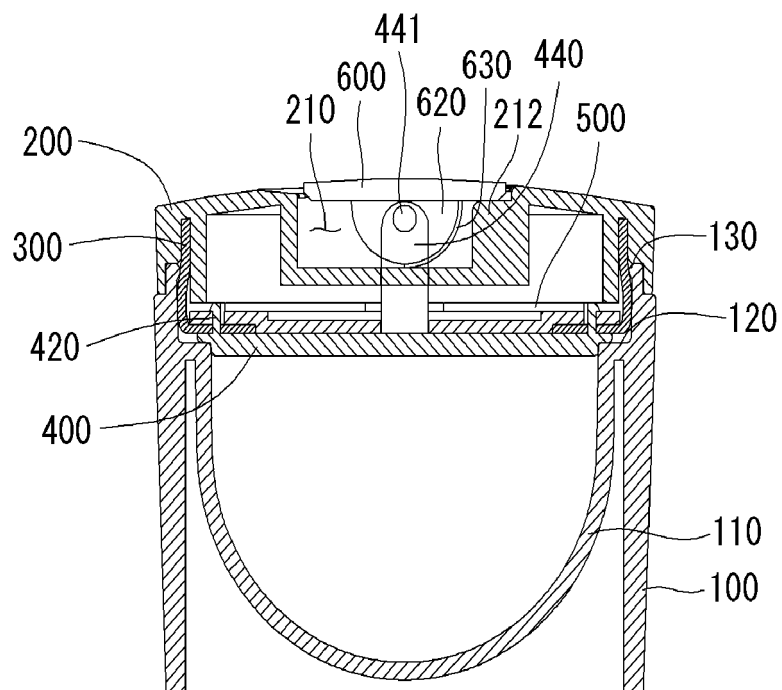
[Fig. 1]



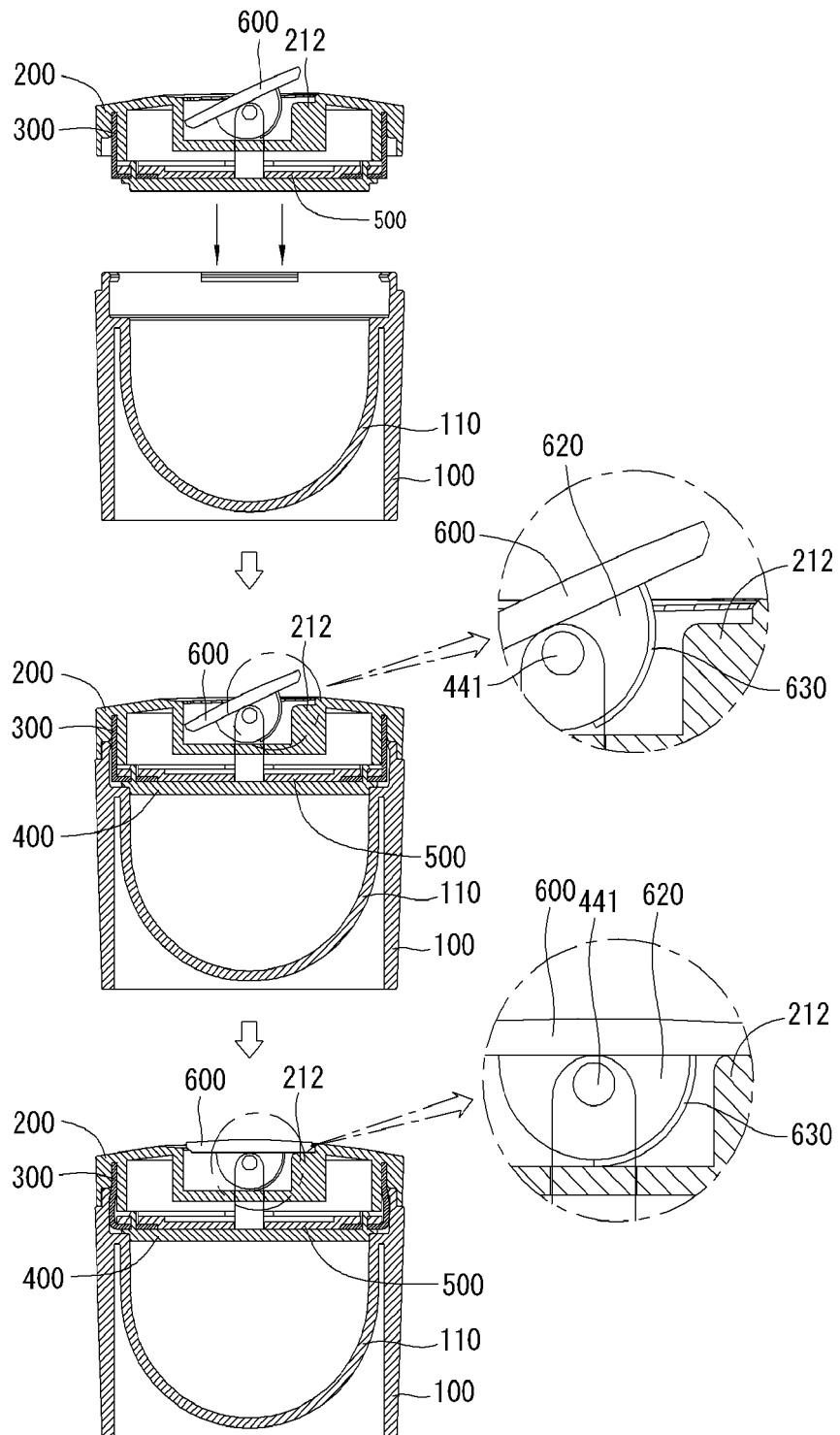
[Fig. 2]



[Fig. 3]



[Fig. 4]



INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2012/009332

A. CLASSIFICATION OF SUBJECT MATTER

A45D 40/00(2006.01)i, B65D 53/02(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A45D 40/00; B65D 83/76; A45D 33/00; A45D 34/00; A45D 33/16; B65D 47/34

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models: IPC as above

Japanese Utility models and applications for Utility models: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS (KIPO internal) & Keywords: cosmetics, container, lever, pressurizing, sealing

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 20-2010-0008588 U (KIM, JIN WOO et al.) 30 August 2010 See abstract, the claims, the drawings	1-8
A	KR 20-0429553 Y1 (JUNG MIN CO., LTD.) 24 October 2006 See abstract, the claims, the drawings	1-8
A	KR 10-2010-0079234 A (KIM, KIL SOO) 08 July 2010 See abstract, the claims, the drawings	1-8
A	JP 11-192123 A (L'OREAL SA) 21 July 1999 See abstract, the claims, the drawings	1-8

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

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"&" document member of the same patent family

Date of the actual completion of the international search

25 MARCH 2013 (25.03.2013)

Date of mailing of the international search report

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Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 189 Seonsa-ro, Daejeon 302-701,
Republic of Korea

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Authorized officer

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2012/009332

Patent document cited in search report	Publication date	Patent family member	Publication date
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KR 20-0429553 Y1	24.10.2006	EP 2043482 A1 WO 2008-010628 A1	08.04.2009 24.01.2008
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