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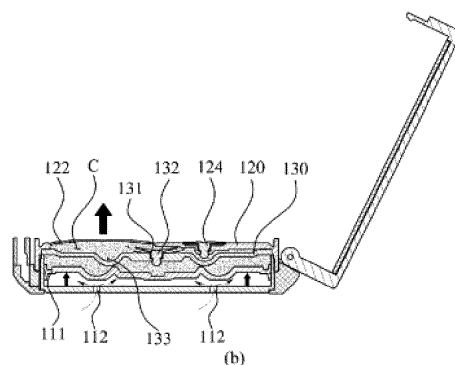
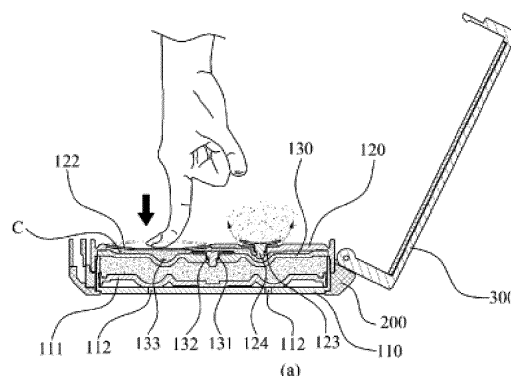
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(54) **PUMP-TYPE COMPACT CONTAINER**

(57) The present invention relates to a pump-type compact container characterized by being configured such that, when the user pressurizes a button portion, the button portion is moved downwards, and then restored by the elastic force of the button portion itself, thereby changing the pressure inside the container body and discharging the contents. Therefore, since contents having a high viscosity can be discharged easily through a simple structure, even if no separate pumping member exists, the present invention can shorten the assembly time and reduce manufacturing costs.

[Fig. 5]



Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a pump-type compact container, more specifically, to a pump-type compact container including a refill container (100) characterized by comprising a container body receiving contents with volume thereof decreasing according to contents usage, a pumping guide cap (120) coupled to an upper portion of the container body (110), elastic deformed according to the presence/absence of a user's pressurization, and discharging contents received in the container body (110) by a pumping operation, and a contents suction part (130) coupled at a lower portion of the pumping guide cap (120) at an inner side of the container body (110), forming a space where contents are stored; a lower compact case (200) replaceably received at an inner side of the refill container (100); and a compact cover (300) coupled at the lower compact case (200) to be able to be opened/closed.

[0002] Generally, cream-type cosmetics containers storing high-viscosity cosmetics are configured to prevent contents stored in the container from being exposed to the air. This vacuum-type cosmetics container was disclosed in the registered patent no. 20-0311503, which was filed by the applicant of the present invention and was registered.

[0003] The registered utility model comprises a container part (10) where contents are stored and a dispenser (100) coupled at an upper end of the container part, wherein the dispenser includes a cylinder (20) coupled to an upper end of the container part (10) with a suction hole (22) formed a lower end thereof, a valve body (30) provided at the suction hole (22) of the cylinder (20), a button (40) provided at an upper end, provided with a cylinder (20) such that a plate part (42) extended to cover an upper portion of the container part (10) can have a repeated pumping operation, and a piston (50) provided between an inner wall of the cylinder (20) and a lower end of the button (40), wherein a slide hole (44) is formed at a center part of the button (30), an upper end of the valve body extends upward and is inserted slidably to the slide hole (44) of the button (40), a cover member (60) covering the slide hole (44) of the button (40) is coupled at an upper end of the valve body (30), the button (40) descends along an outer circumferential surface of the valve body (30) when the button (40) is pressed, and thereby makes a gap between the cover member (60) and the button (40), and through this gap, contents are discharged and are pooled in a plate part (42) of the button (40).

[0004] However, the registered utility model comprises, at an upper portion of the container part (10), a dispenser (100) including a cylinder (20) with a suction outlet (22) formed at a lower end of an upper portion of the container part (10) for discharging contents stored in the container part (10). Since it is configured that pumping

operation is performed through the dispenser with a complicated structure, the registered utility model has a problem of a high manufacturing cost as well as an increase of assembly time to install the dispenser (100).

[0005] Meanwhile, when using cosmetics container called as "compacts", a user usually solidifies powder-type cosmetics, which are a base of make-up, using a puff and applies cosmetics onto a face. Recently, there has been increase in liquid-type base cosmetics having a certain amount of viscosity. However, when using this liquid-type base cosmetics, a user should use contents after squeezing out some contents stored in a container such as a tube and transferring them onto a puff. Therefore, a liquid-type base cosmetics are more inconvenient to use than a powder type compact.

[0006] The present invention is devised to solve the problems described in the above, and the goal of the present invention is to provide a pump-type compact container which is possible to conveniently use liquid-type base cosmetics after moving onto a puff in a similar manner with an existing compact.

[0007] Furthermore, the present invention is to provide a pump type compact container wherein a button part is configured to move to a downward direction by elastic force and be restored when a user pressurizes a button part, thus changing an inner pressure of the container body and then discharging contents, such that it is possible to discharge high viscosity contents through a simple structure even without a pumping member separately, and to shorten assembling time as well as to reduce manufacturing costs.

[0008] Furthermore, the present invention is to provide a pump-type compact container which is possible to constantly pump a fixed amount of contents every time of pumping operation by storing a fixed amount of contents to a space where a pumping guide cap and a contents suction part form through the contents suction part.

[0009] Furthermore, it is to provide a pump-type compact container which can refill contents simply.

[0010] To solve the problems as the above, a pump-type compact container according to the present invention is characterized to include a refill container 100 which comprises a container body 110 receiving contents, with a volume thereof decreasing according to contents usage, a pumping guide cap 120 coupled to an upper portion of the container body 110, elastically deformed according to the presence/absence of a user's pressurization, and thereby discharging contents received in the container body 110 by a pumping operation, and a contents suction part 130 coupled at a lower portion of the pumping guide cap 120 at an inner side of the container body 110, forming a space where contents are stored; a lower compact case 200 replaceably received at an inner side of the refill container 100; and a compact cover 300 coupled at the lower compact case 200 to be able to be opened/closed.

[0011] Furthermore, the pumping guide cap (120) is disposed at an one side of an upper end of the pumping

guide cap (120), moving to a downward direction and restoring according to a presence/absence of pressurization, further including a button part (122), made of elastic material, which guides a pumping operation by changing a pressure of a space where the pumping guide cap and the contents suction part form.

[0012] Furthermore, the pumping guide cap 120 is characterized to further include a contents discharging hole 123 which is disposed at the other side of an upper end of the pumping guide cap 120 and discharges contents according to manipulation of the button part 122.

[0013] Furthermore, it is characterized that at the contents discharging hole 123 is provided a first valve member 124 which opens/closes the contents discharging hole 123 according to the presence/absence of pressurization of the button part 122.

[0014] Furthermore, it is characterized that at the contents suction part 130 is provided a contents inflow hole 131 such that contents stored in the container body 110 may flow in, and at the contents inflow hole 131 is provided a second valve member 132 which opens/closes the contents inflow hole 131 according to the presence/absence of pressurization of the button part 122.

[0015] Furthermore, it is characterized that the refill container 100 is coupled to one side of the pumping guide cap 120 so as to be opened/closed, further including a refill container cover 140 where a puff securing part 141 receiving a puff (P) is formed.

[0016] As described in the above, a pump type cosmetics container of the present invention is capable of conveniently using liquid-type base cosmetics after moving onto a puff in a similar manner with existing compacts.

[0017] Furthermore, the present invention is configured in a manner that, when a user pressurizes a button part, a button part moves to a downward direction by elastic force and is restored, thus changing an inner pressure of the container body and thereby discharging contents, such that it is possible to discharge high viscosity contents through a simple structure even without a pumping member separately, and to shorten assembling time as well as to reduce manufacturing costs.

[0018] Furthermore, it is possible that a pump type compact container can discharge a fixed amount of contents every time of pumping operation by storing a fixed amount of contents to a space where a pumping guide cap and a contents suction part form through the contents suction part, and also can easily refill contents.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019]

FIG. 1 is an exploded perspective view illustrating a configuration of a pump-type compact container according to an exemplary embodiment of the present invention.

FIG. 2 is an assembled perspective view illustrating a configuration of a pump-type compact container

according to an exemplary embodiment of the present invention.

FIG. 3 is an assembled perspective view illustrating a configuration of a pump-type compact container according to an exemplary embodiment of the present invention.

FIG. 4 is an assembled sectional view illustrating a configuration of a pump-type compact container according to an exemplary embodiment of the present invention.

FIG. 4 is a state view illustrating an operational state of a pump-type compact container according to an exemplary embodiment of the present invention.

FIG. 6 is a perspective view illustrating a refill state of a pump-type compact container according to an exemplary embodiment of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] Hereinafter, the present invention will be described in detail with reference to accompanying drawings. The same reference numerals provided in the drawings indicate the same members.

[0021] Referring to FIGS. 1 to 3, a pump type compact container according to embodiments of the present invention includes a refill container 100, a lower compact case 200, and a compact cover 300.

[0022] Firstly, a refill container 100 will be explained. The refill container 100, as illustrated in FIGS. 1 and 6, is configured to comprise a container body 110, a pumping guide cap 120, and a contents suction part 130.

[0023] The container body 110, storing contents, is configured to have a volume decreasing according to contents usage. In this way, a variety of exemplary embodiments wherein the container body 110 is configured to have a volume decreasing according to contents usage are possible in such embodiments as an elastic tube and a bellow tube. As one exemplary embodiment, it is possible that the container body 110 is provided at an interior thereof with a piston 111 which ascends according to contents usage. In this case, an air inflow hole 112 is preferably provided at a lower end of the container body 110 such that air can flow into an interior of the container body 110 by pumping operation through manipulation of a pumping guide cap 120 to be described later.

[0024] The pumping guide cap 120, coupled to an upper portion of the container body 110, closes an upper end opening of the container body 110.

[0025] Meanwhile, it is characterized that at the pumping guide cap 120 is provided a button part 122 which is elastically deformed by the presence/absence of a user's pressurization, and discharges contents sucked in a contents suction part 130 by changing the pressure of a space (C) formed by the contents suction part 130 and the pumping guide cap 120 to be described later. The button part 122 moves to a downward direction when a user pressurizes an upper end thereof and then is re-

stored when a user releases the pressurized upper end, thereby guiding a pumping operation by changing pressure of the space (C) formed by the contents suction part 130 and the pumping guide cap 120. The button part 122 is made of elastic material such that it is possible to be elastically deformed by the presence/absence of pressurization.

[0026] Meanwhile, a contents discharging hole 123 is provided at the other side of the pumping guide cap 120 such that contents can be discharged by pumping operation according to manipulation of the button part 122, wherein at the contents discharging hole 123 is installed a first valve member 124 which opens/closes the contents discharging hole 123 according to the presence/absence of pressurization of the button part 122.

[0027] The contents suction part, which is coupled to a lower portion of the pumping guide cap 120 at an inner side of the container body 110 and sucks in a fixed amount of the contents stored in the container body 110 by an elastic deformation of the button part 122 of the pumping guide cap 120, is coupled at a lower portion of the pumping guide cap 120 forming the space (C) where contents are stored with a fixed distance separated from the pumping guide cap 120.

[0028] Furthermore, a contents inflow hole 131 is provided at the contents suction part 130 such that contents stored in the container body 110 may flow in, wherein the contents inflow hole 131 is installed with a second valve member 132 which opens/closes the contents inflow hole according to the presence/absence of pressurization of the button part 122.

[0029] The contents suction part 130, sucking and storing a fixed amount of contents received in the container body 110, guides to discharge a fixed amount of contents when there is a pumping operation according to manipulation of the button part 122. In this case, it is preferable to provide a circular invagination groove 133 at the contents suction part 130, as illustrated in FIGS. 1 and 3, such that the contents can move smoothly in the space (C) between the pumping guide cap 120 and the contents suction part 130.

[0030] Meanwhile, the refill container 100, as illustrated in FIGS. 1 and 2, is configured to be coupled at one side of the pumping guide cap 120 so as to be opened/closed, further including a refill container cover 140 which is formed with a puff securing part 141 receiving a puff (P) at an upper surface thereof. Therefore, it is possible to easily receive the puff (P) and at the same time to seal an upper side of the pumping guide cap 120. In addition, the refill container cover 140 prevents the button part 122 from malfunctioning and a first valve member 124 from being broken by impact from the outside. In this case, there are a variety of embodiments possible, wherein the refill container cover 140 is coupled at an one side of the pumping guide cap 120 so as to be opened/closed, and in one of those embodiment, as illustrated in FIGS. 1 and 2, it is possible to configure a type of hinge combination using a refill container hinge

part 125 and a refill container cover hinge part 142.

[0031] The refill container 100 having a configuration described in the above, as illustrated in FIG. 7, is exchangeably coupled to the lower compact case 200, and thus it is possible to easily refill with new contents after using all contents.

[0032] Next, a lower compact case 200 will be described. The lower compact case 200, as illustrated in FIGS. 1 and 6, is received with the refill container 100 to be exchanged at an inner side therein, and functions as an outer container of the present invention. In this case, it is also possible that the lower compact case 200 is manufactured in a configuration wherein an inner lower case 210 is coupled at an inner side therein for convenience in a manufacturing process which is typically used in an injection molding.

[0033] Next, a compact cover 300 will be described. The compact cover 300, as illustrated in FIG. 1, is coupled to the lower compact case 200 to be able to open/close, and thereby can cover an upper portion of the refill container 100. In this case, there are a variety of embodiments possible, wherein the compact cover 300 is coupled to a lower compact case 200 to be able to open/close, and in one of those embodiment, as illustrated in FIGS. 1 and 2, it is possible to configure a type of hinge combination using a case hinge part 201 and a cover hinge part 310. Meanwhile, in this case, for the compact cover 300 to securely close the lower compact case 200, it is preferable that the compact cover 300 further includes a cover fixing part 320, and that the lower compact case 200 further includes a fixed coupling part 211, such that the cover fixing part 320 can be fastened to the fixed coupling part 211, as illustrated in FIG. 3.

[0034] Furthermore, for user convenience, it is preferable to additionally install a mirror 330 at an inner side of the compact cover 300, as illustrated in FIG. 2.

[0035] Meanwhile, in case the compact cover 300 is coupled to the lower compact case 200 to be able to open/close by means of hinge combination, and the refill container cover 140 is coupled to one side of the pumping guide cap 120 by means of hinge combination to be able to open/close, the hinge combinations is preferable to be formed respectively with an angle of about 90 degrees apart as illustrated in FIG. 2, such that it is possible to be used without interference with each other.

[0036] Hereafter, referring to FIG. 5, an operational state of a pump-type compact container according to an exemplary embodiment of the present invention will be described. FIG. 5 is a state view illustrating an operational state of a pump-type compact container according to an exemplary embodiment of the present invention.

[0037] Referring FIG. 5, a pump-type compact container according to an exemplary embodiment of the present invention has a configuration wherein, when a user pressurizes a button part 122 formed at one side of the pumping guide cap 120, the button part 122 made of elastic material moves in a downward direction. Due to this, contents stored in a space (C) which the pumping guide cap

120 and a contents suction part 130 form are discharged onto an upper surface of the pumping guide cap 120 through a contents discharging hole 123 formed at the other side of the pumping guide cap 120. At this time, a first valve member 124 closing the content discharging hole 123 by pressure of contents, opens the contents discharging hole 123, and a second valve member 132 closes a contents inflow hole 131, such that the contents sucked into the contents suction part 130 are discharged through the contents discharging hole 123.

[0038] Meanwhile, when a user releases pressurizing the button part 122, the button part 122 is restored by its own elastic force and then moves in an upward direction. Due to this, contents received in the container body 110 flow into the contents suction part 130 by the pressure generated in the space (C) which the pumping guide cap 120 and the contents inflow part 130 form. At this time, a first valve member 124 closes the contents discharging hole 123, and a second valve member 132 opens the contents inflow hole 131, such that a fixed amount of contents which will be discharged on a next pumping operation flow into the contents suction part 130 through the contents inflow hole 131.

[0039] As the above, the present invention has configuration wherein a fixed amount of contents can be stored in the space formed by the pumping guide cap 120 and the contents suction part 130, such that it is possible that a fixed amount of contents is discharged all the times when there is a pumping operation by manipulation of the button part 122.

[0040] As described above, optimal embodiments have been disclosed in the drawings and the specification. Although specific terms have been used herein, these are only intended to describe the present invention and are not intended to limit the meanings of the terms or to restrict the scope of the present invention as disclosed in the accompanying claims. Therefore, those skilled in the art will appreciate that various modifications and other equivalent embodiments are possible from the above embodiments. Accordingly, those skilled in the art will appreciate that various modifications and other equivalent embodiments are possible from the above embodiments

Claims

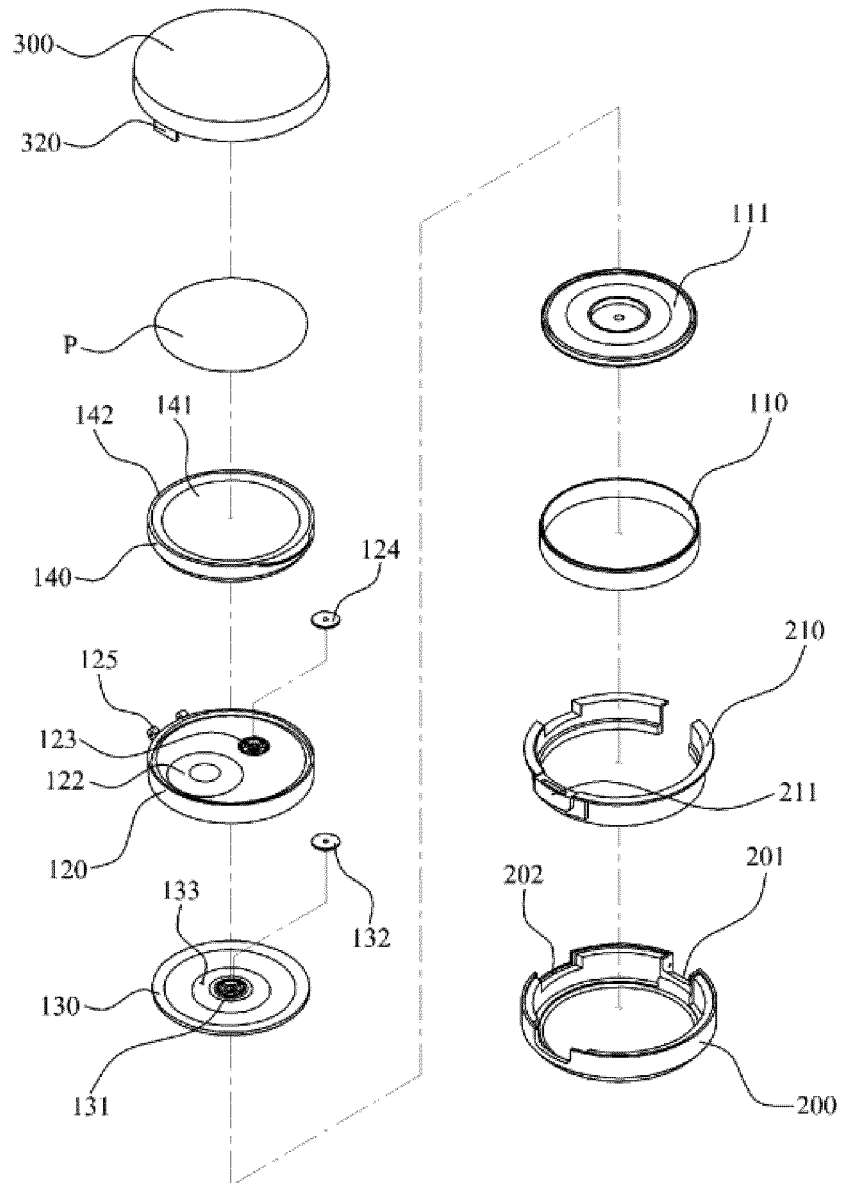
1. a pump-type compact container comprising:

a refill container (100) having a container body (110) wherein contents are received, with a volume thereof decreasing according to a contents usage, a pumping guide cap (120) coupled to an upper portion of the container body (110), elastically deformed according to the presence/absence of a user's pressurization and thereby discharging contents received in the container body (110) by a pumping operation,

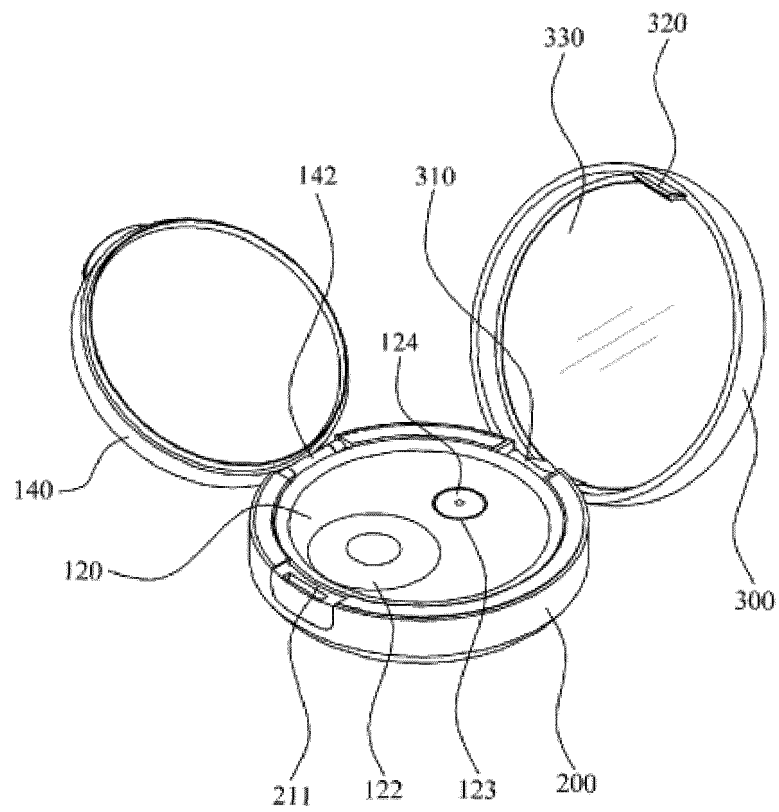
and a contents suction part (130) coupled at an inner side of the container body (110) as forming a space where contents are stored at a lower portion of the pumping guide cap (120) and thereby absorbing a fixed amount of contents received in the container body (110) by an elastic deformation of the pumping guide cap (120); a lower compact case (200) replaceably received at an inner side of the refill container (100); and a compact cover (300) coupled at a lower compact case (200) so as to be able to be opened/closed.

2. The pump-type compact container of claim 1, wherein the pumping guide cap (120) is disposed at one side of an upper end of the pumping guide cap (120), moving to a downward direction and then restored according to a presence/absence of pressurization, further comprising a button part (122), made of elastic material and guiding a pumping operation by changing a pressure of a space formed by the pumping guide cap (120) and the contents suction part (130).
3. The pump-type compact container of claim 2, wherein the pumping guide cap (120) further comprises a contents discharging hole (123) disposed at the other side of an upper end of the pumping guide cap (120) and discharging contents according to manipulation of the button part (122).
4. The pump-type compact container of claim 3, wherein at the contents discharging hole (123) is provided a first valve member (124) opening/closing the contents discharging hole (123) according to the presence/absence of pressurization of the button part (122).
5. The pump-type compact container of claim 2, wherein a contents inflow hole (131) is provided at the contents suction part (130) such that the contents stored in the container body (110) may flow in, wherein at the contents inflow hole (131) is provided a second valve member (132) opening/closing the contents inflow hole (131) according to the presence/absence of pressurization of the button part (122).
6. The pump-type compact container of claim 1, wherein the refill container (100) further comprises a refill container cover (140) coupled to one side of the pumping guide cap (120) so as to be opened/closed, further comprising a puff securing part (141) at an upper surface thereof for receiving a puff (P).

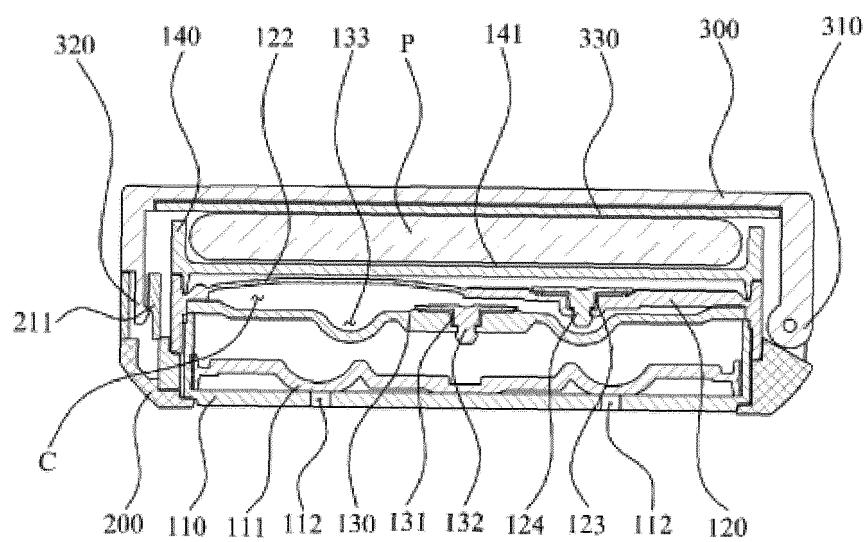
[Fig. 1]



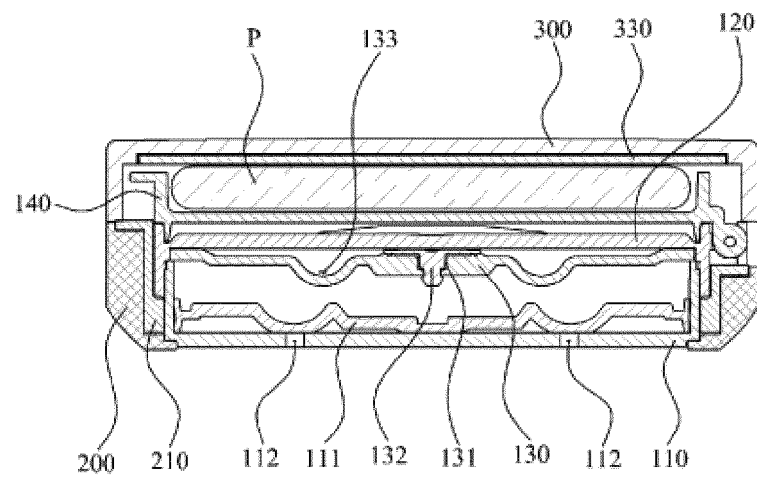
[Fig. 2]



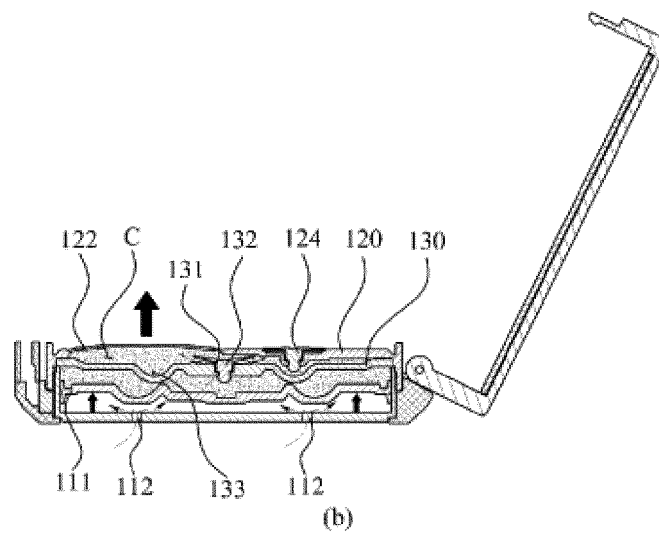
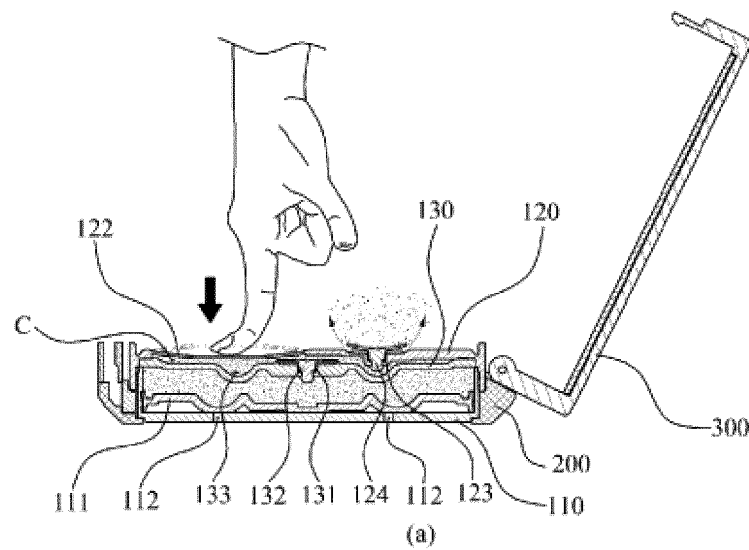
[Fig. 3]



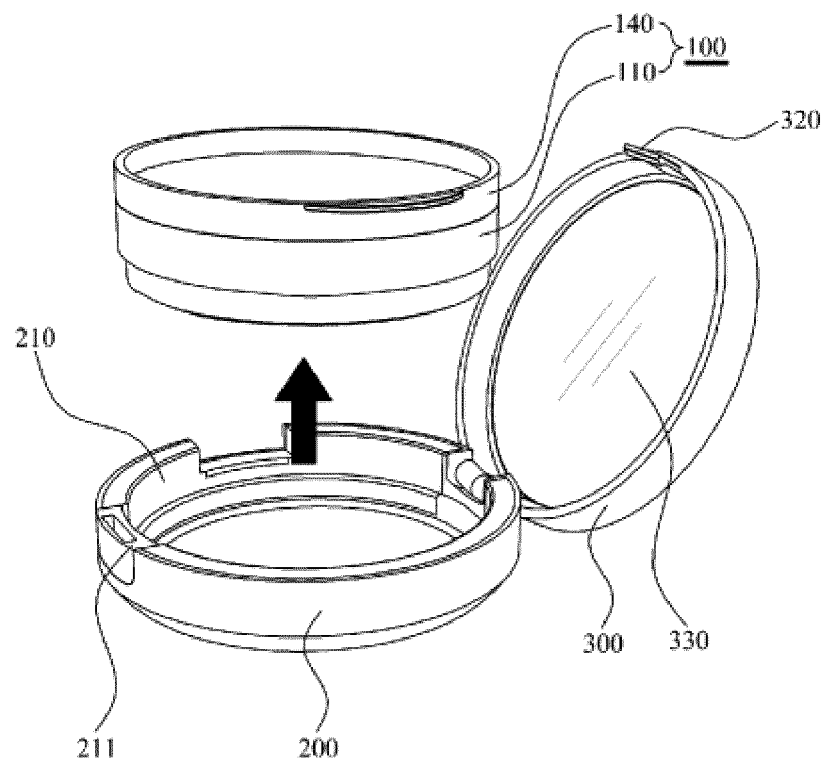
[Fig. 4]



[Fig. 5]



[Fig. 6]



INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2014/009834

A. CLASSIFICATION OF SUBJECT MATTER

A45D 34/04(2006.01)i, A45D 34/00(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 34/04; A45D 34/00; B65D 47/34; B29C 51/10; B29C 51/14; A45D 34/00; B65D 47/34; A45D 33/00; A45D 33/24; A45D 34/00; B65D 53/00

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: cosmetic container, compact, elasticity, pressurization, pressure, push, refill, exchange, change

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-2012-0113347 A (YONWOO CO., LTD.) 15 October 2012 See abstract; claims 1-4; paragraphs [0017]-[0030]; figures 1-3.	1-6
A	KR 10-2013-0048082 A (KANG, Sung - Il) 09 May 2013 See abstract; claims 1-12; figures 3 and 4.	1-6
A	KR 10-2013-0013135 A (MINJIN CO., LTD.) 06 February 2013 See abstract; claims 1-4; paragraphs [0020]-[0038]; figures 1-3.	1-6
A	KR 10-0933621 B1 (KIM, Young - Sun) 24 December 2009 See abstract; claim 1; figure 2.	1-6
A	KR 10-1355364 B1 (KIM, Jin Woo) 23 January 2014 See abstract; claims 1-6.	1-6

☐ Further documents are listed in the continuation of Box C.
 ☒ See patent family annex.

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Date of the actual completion of the international search

19 MAY 2015 (19.05.2015)

Date of mailing of the international search report

20 MAY 2015 (20.05.2015)

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2014/009834

Patent document cited in search report	Publication date	Patent family member	Publication date
KR 10-2012-0113347 A	15/10/2012	NONE	
KR 10-2013-0048082 A	09/05/2013	US 2014-0291351 A1 WO 2013-065928 A1	02/10/2014 10/05/2013
KR 10-2013-0013135 A	06/02/2013	KR 10-1261813 B1	14/05/2013
KR 10-0933621 B1	24/12/2009	NONE	
KR 10-1355364 B1	23/01/2014	NONE	

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- WO 200311503 A [0002]