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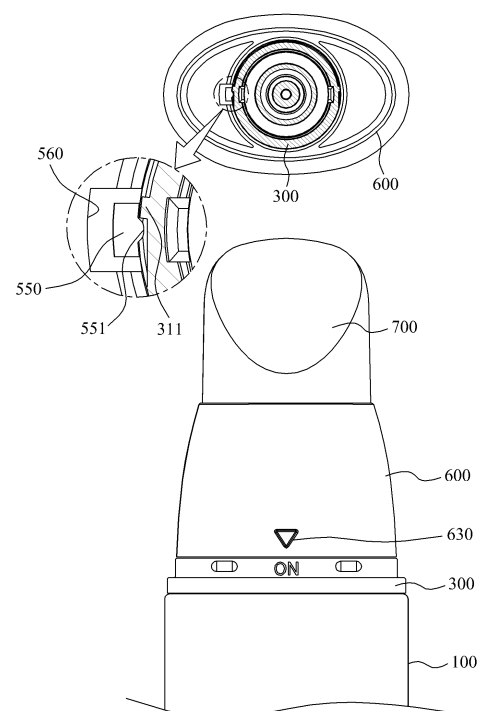
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(54) **ROTATING OPEN-AND-CLOSED TYPE COSMETIC CONTAINER**

(57) The present invention relates to a rotating open-and-closed type cosmetic container, wherein in a process of rotating a rotating body, through a sound generated by using a support projection formed on a fixed body and an elastic part formed on a ascending and descending guide member with right and left portions cutout and with a locking protrusion equipped, in a process of rotating a rotating body, a user can recognize an open or closed state of a discharge hole, thereby user convenience provided.

Fig. 5



**EP 3 542 666 A1**

## Description

### BACKGROUND OF THE INVENTION

**[0001]** The present invention relates to a rotating open-and-closed type cosmetic container, wherein in a process of rotating a rotating body, through a sound generated by using a support projection formed on a fixed body and an elastic part formed on an ascending and descending guide member with right and left portions cutout and with a locking protrusion equipped, in a process of rotating a rotating body, a user can recognize an open or closed state of a discharge hole, thereby user convenience is provided.

**[0002]** Generally, cosmetic containers contain cosmetics such as skin lotion, lotion, and eye cream. Particularly, inexpensive tube-type cosmetic containers are widely used because they are simple and convenient for gel-type cosmetics like lotion and eye cream. Among those, there exist a lot of conventional cosmetic containers equipped with an applicator such as a brush made of porous elastic material like sponge so that it is possible to easily apply gel-type cosmetics.

**[0003]** However, these tube-type cosmetic containers equipped with an applicator has a problem that a container body, when the container doesn't have an opening and closing means, is accidentally pressed while not in use, such that cosmetics are discharged unintentionally.

**[0004]** To solve the problem in the above, "A Turning type Cosmetics Tube with Brush" was prior applied by the applicant on September 17<sup>th</sup>, 2010 and registered as Korean registered patent No. 10-192211 (hereafter called 'the patent document I').

**[0005]** The above patent document I discloses constitutions wherein a seal cap ascends and descends by 90-degree rotation of a rotation cap, and thereby a discharge outlet opens and closes. It is possible to prevent an unintended discharge of cosmetics in a state of the discharge outlet being closed by a closure protrusion part even if the tube container is accidentally pressed while not in use. However, when a tube neck, a fixation body, and a rotation part have an oval shape, an applicator cannot be given a direction, thereby causing user inconvenience.

**[0006]** To solve the problem in the above, "A Turning type Tube Vessel" was prior applied by the applicant on October 24<sup>th</sup>, 2013 and registered as Korean registered patent No. 10-1530580 (hereafter called 'the patent document II').

**[0007]** The patent document II is characterized in constitution wherein a seal cap ascends and descends by 180-degree rotation of a rotation part to one direction or the other direction, such that a container body having a tube neck, a fixation body, and a rotation body composed in an oval shape give an applicator the directional nature, thereby providing user convenience.

**[0008]** The patent document II discloses constitution, wherein the rotation cap displays "open" and "close" re-

spectively on the front surface and on the rear surface thereof, and a display part is equipped to show an open or close state of the discharge hole on the front surface of the rotation part, to recognize an open or close state of the discharge hole through the display part according to rotation of the rotation cap. However, there arises a structural problem that a user only can check an open or close state of the discharge hole visually.

**[0009]** Furthermore, since there is no structure that supports rotation of the rotation part, the rotation part is shaken when the rotation part rotates, causing a problem that the rotation part can be detached.

### SUMMARY OF THE INVENTION

**[0010]** The present invention is disclosed to solve the problems described in the above, the present invention is to provide a rotating open-and-closed type cosmetic container, wherein in a process of rotating a rotating body, through a sound generated by using a support projection formed on a fixed body and an elastic part formed on an ascending and descending guide member with right and left portions cutout and with a locking protrusion equipped, a user can recognize an open or closed state of a discharge hole, which thereby provides user convenience.

**[0011]** Furthermore, the present invention is to provide a rotating open-and-closed type cosmetic container that can prevent the ascending and descending guide member from being shaken when the rotating body and the ascending and descending guide member rotate because the ascending and descending guide member can be stably supported through a shake-preventing protrusion that is protrusively formed as encasing a part of the outer circumferential surface of the fixing tube and is contacted tightly to the inner circumferential surface of the ascending and descending guide member.

**[0012]** To solve the problems as the above, a rotating open-and-closed type cosmetic container according to the present invention includes a container body where contents are stored; a container neck, of an oval shape, coupled to the upper portion of the container body and equipped with a discharge part that discharges the contents stored in the container body; a fixed body having an oval shape coupled to the upper portion of the container neck, further comprising a fixation tube that can be disposed to be able to encase the discharge part and is equipped with a support projection at both sides of the outer circumferential surface thereof, a closure protrusion part that extends to the inner side of the fixation tube and is formed with a content movement hole, and an extension part that extends to the upper portion of the fixed body and is formed with a spiral guide groove respectively at both sides of the outer circumferential to the downward direction from the upper end thereof; a seal cap encasing the closure protrusion part and inserted to the spiral guide groove to ascend and descend, further formed with a discharge hole that is opened and closed

by the closure protrusion part according to the ascent and descent thereof and equipped with the guide protrusion which is inserted to the spiral guide groove at the outer circumferential surface and moves along the spiral guide groove thereof; an ascending and descending guide member, of an oval shape, rotatably coupled to the fixed body and guiding the seal cap to ascend and descend according to rotational movement thereof, further connected with a horizontal guide groove and a vertical guide groove forming a space where the guide protrusion is inserted and moves at the inner side thereof, a nozzle moving contents discharged through the discharge hole to the applicator at the upper portion thereof, and an elastic part that is formed with a locking protrusion to going over the support projection by rotation at the inner lower portion thereof; a rotating body of an oval shape encasing the ascending and descending guide member, and coupled in a way of rotating 180-degrees to the fixed body and thereby rotating the ascending and descending guide member by rotation of one-side direction or the other-side direction; and an applicator coupled to the nozzle of the ascending and descending guide member and applying contents to user's skin,

**[0013]** characterized in that a user can recognize an open or close state of the discharge hole by the sound which is generated by the elastic part with the support projection and the locking protrusion formed in a process of rotation of the rotating body.

**[0014]** Furthermore, it is characterized in that the elastic part is disposed in a state of the right and the left cut-open at the lower part of the side surface of the ascending and descending guide member, and rotates the rotating body and moves the rotating body backward at the point where the support projection and the locking protrusion meet and then restores the rotating body.

**[0015]** Furthermore, it is characterized in that a movement groove is formed at the bottom surface of the ascending and descending guide member to prevent interference when the elastic part moves backward.

**[0016]** Furthermore, it is characterized in that at the outer side surface of the fixed body is equipped a shake-preventing protrusion that is protrusively formed as encasing a part of the outer circumferential surface of the fixed body to be contacted tightly to the inner circumferential surface of the ascending and descending guide member, and thereby prevents the rotating body and the ascending and descending guide member from shaking when rotating.

**[0017]** Furthermore, it is characterized in that rotation-preventing protrusions are equipped at both sides of the outer circumferential surface of the container neck to prevent the fixed body from rotating in a state of being coupled, and at the inner side is formed an insertion groove where the rotation-preventing protrusion is inserted.

**[0018]** As described in the above, according to the present invention, it is possible for a user can recognize an open or closed state of a discharge hole, through a sound generated by using a support projection formed

on a fixed body and an elastic part formed on a ascending and descending guide member with right and left portions cutout and with a locking protrusion equipped, in a process of rotating a rotating body, which thereby provides user convenience.

**[0019]** Furthermore, it is possible to stably support the ascending and descending guide member through the shake-preventing protrusion which is protrusively formed as encasing a part of the outer circumferential surface of the fixed body and is tightly contacted to the inner circumferential surface of the ascending and descending guide member at the outer side surface of the fixed body, and thereby, it is possible to prevent the rotating body and the ascending and descending guide member from shaking while rotating.

## BRIEF DESCRIPTION OF THE DRAWINGS

### **[0020]**

FIG. 1 is an exploded perspective view illustrating a configuration of a rotating open-and-closed type cosmetic container according to an exemplary embodiment of the present invention.

FIG. 2 is an assembled perspective view illustrating a configuration of a rotating open-and-closed type cosmetic container according to an exemplary embodiment of the present invention.

FIG. 3 is an assembled sectional view illustrating a configuration of a rotating open-and-closed type cosmetic container according to an exemplary embodiment of the present invention.

FIG. 4 is an internal diagram illustrating a configuration of a ascending and descending guide member of a rotating open-and-closed type cosmetic container according to an exemplary embodiment of the present invention.

FIGS. 5 to 7 are state views illustrating an operational state of a rotating open-and-closed type cosmetic container according to an exemplary embodiment of the present invention.

FIGS. 8 to 9 are explanatory diagrams illustrating a refill state of a rotating open-and-closed type cosmetic container according to an exemplary embodiment of the present invention.

## DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

**[0021]** 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.

**[0022]** FIG. 1 is an exploded perspective view illustrating a configuration of a rotating open-and-closed type cosmetic container according to an exemplary embodiment of the present invention. FIG. 2 is an assembled perspective view illustrating a configuration of a rotating

open-and-closed type cosmetic container according to an exemplary embodiment of the present invention.

**[0023]** FIG. 3 is an assembled sectional view illustrating a configuration of a rotating open-and-closed type cosmetic container according to an exemplary embodiment of the present invention. FIG. 4 is an internal diagram illustrating a configuration of a ascending and descending guide member of a rotating open-and-closed type cosmetic container according to an exemplary embodiment of the present invention.

**[0024]** Referring to FIGS. 1 to 4, a rotating open-and-closed type cosmetic container according to embodiments of the present invention includes a container body 100, a container neck 200, a fixed body 300, a seal cap 400, a ascending and descending guide member 500, a rotating body 600, and an applicator 700.

**[0025]** The container body 100, where contents such as cosmetics are stored inside, can be made of various material, can be transformed according to pressurization by a user.

**[0026]** The container neck 200, coupled to the upper portion of the container body 100 and supporting the container body 100, is composed of an oval shape, further equipped with a discharge part 210 that discharges the contents stored in the container body 100. At both sides of the outer circumferential surface of the discharge part 210 is equipped a rotation-preventing protrusion 211 such that the fixed body 300 can be prevented from being rotated in a state of being coupled to the container neck 200.

**[0027]** The fixed body 300, formed in an oval shape coupled to the upper portion of the container neck 200, is equipped with a fixation tube 310 which protrudes upwards to encase the discharge part 210 and fixes the fixed body 300 to the discharge part 210.

**[0028]** The present invention is characterized in that support projections 311, which guide for a user to recognize an opening or closing state of a discharge hole 410 through a sound, are equipped at both sides of the outer circumferential surface of the fixation tube 310. The support projection 311 is configured to be tightly contacted to a locking protrusion 551 and to generate sound when an ascending and descending guide member 500, to be described later, rotates. At the point when the ascending and descending guide member 500 rotates by 180-degrees and the rotation is complete, the support projection 311 gets to contact with the locking protrusion 551 and generates sound. At the same time, a use can realize the completion of rotation through the sense delivered to his or her hand in a process of the locking protrusion 551 going over the support projection 311.

**[0029]** Furthermore, the present invention is characterized in that a shake-preventing protrusion 312 is equipped at the outer side of the fixation tube 310 to prevent the rotating body 600 and the ascending and descending guide member 500 from being shaken when the rotating body 600 and the ascending and descending guide member 500 are rotating. The shake-preventing

protrusion 312 is configured to be protrusively formed as encasing the outer circumferential surface of the fixated body 310 between a pair of support projections 311, thereby making it possible to stably support the ascending and descending guide member 500. Hence, it is possible not only to prevent the shaking generated by the space separated between the fixation tube 310 and the ascending and descending guide member 500, but to prevent the ascending and descending guide member 500 from being separated therefrom.

**[0030]** Furthermore, at both sides of the fixation tube 310 is an insertion groove 313 which the rotation-preventing protrusion 211 that prevents the fixed body 300 from being rotated in a state of being coupled with the container neck 200 is inserted in.

**[0031]** Meanwhile, at the inner side of the fixation tube 310 is connected a closure protrusion part 320 to open and close the discharge hole 410 of a seal cap 400 to be described later. At the lower portion of the closure protrusion part 320 is formed a content movement hole 321 to make the contents discharged through the discharge part 210 move to the upper portion thereof.

**[0032]** Furthermore, the present invention is characterized in that at the upper portion of the fixation tube 310 is formed an extension part 330 which comprises spiral guide grooves 331 downward respectively from the upper ends at both sides of the outer circumferential surface of the fixation tube 310. The spiral guide grooves 331 forms a space where a guide protrusion 420 of the seal cap 400 is inserted and moved; however, detailed configuration and operation of the spiral guide grooves 331 is a prior art that belongs to the field of art of the present invention, and therefore, detailed description thereof is omitted.

**[0033]** Meanwhile, it is preferred that the front and the back of the fixed body 300 should have the displays of "ON" and "OFF" such that a user can recognize the open and closed state of the discharge hole 410 with the naked eyes through a display part 630 according to the rotation of the rotating body 600.

**[0034]** Furthermore, the fixed body 300 is detachably coupled with an over cap 800 which encases an applicator 700 to prevent the applicator 700 from being broken.

**[0035]** The seal cap 400 is configured to be inserted to the extension part 330 as encasing the closure protrusion part 320 and to ascend and descend by the rotation of the rotating body 600. At the inner side of the seal cap 400 is formed a discharge hole 410 which is opened and closed by the closure protrusion part 320 according to the ascent and descent of the seal cap 400, wherein the discharge hole 410, when descending, as illustrated in FIG. 8, has the closed state kept by the closure protrusion part 320 and thereby prevent contents from being discharged. Meanwhile, the discharge hole 410, when ascending, as illustrated in FIG. 9, is separated from the closure protrusion part 320 and thereby makes the contents discharged.

**[0036]** Furthermore, at the outer circumferential surface of the seal cap 400 is equipped a guide protrusion 420 which is inserted to the spiral guide groove 331 and moves along the spiral guide groove 331 for the seal cap 400 to ascend and descend according to the rotation of the rotating body 600.

**[0037]** Furthermore, the ascending and descending guide member 500 is made in an oval shape to be rotatably coupled to the fixed body 300 and to guide the seal cap 400 to ascend and descend according to rational movement thereof, wherein at the inner upper portion is formed an access tube 510 which forms a space where the contents discharged from the seal cap 400 move.

**[0038]** The present invention is characterized in that a horizontal guide groove 520 and a vertical guide groove 530, which form a space where the guide protrusion 420 is inserted and moved, are connected each other at the inner side of the ascending and descending guide member 500. The container body 100 comprises a container neck 200, a fixed body 300 and the ascending and descending guide member 500 which have an oval shape and are configured to be rotated through the horizontal guide groove 520 and the vertical guide groove 530, thereby making it possible to give an applicator 700 a directional nature.

**[0039]** The ascending and descending guide member 500, which is rotatably coupled to the fixed body 300, makes the seal cap 400 ascend and descend as the guide protrusion 420 inserted to the vertical guide groove 530 move along the spiral guide groove 331 according to the rotational movement thereof and also makes the seal cap 400 ascend and descend.

**[0040]** Furthermore, at the upper portion of the ascending and descending guide member 500 is equipped a nozzle 540 that moves the contents discharged through the discharge hole 410 to the applicator 700.

**[0041]** Meanwhile, the present invention is characterized in that at the inner lower portion of the ascending and descending guide member 500 is equipped an elastic part 550 which has a locking protrusion 551 formed to go over the support projection 311 at the point when the rotation of the ascending and descending guide member 500 is completed. The elastic part 550, as illustrated in FIG. 4, is configured to be disposed at the lower side portion of the ascending and descending guide member 500 in a state of the right side and the left side being cutout. Hence, when the ascending and descending guide member 500 rotates together by the rotation of the rotating body 600, the locking protrusion 551 formed at the inner side thereof is moved backward at the point when meeting the support projection 311 of the fixation tube 310, and then is restored by the elastic force.

**[0042]** Since the elastic part 550 with the right and the left cutout is configured to move backward and then restore by the elastic force, it is possible to make friction between the locking protrusion 551 and the support projection 311 minimize. Due to this, it is possible to minimize wearing of the locking protrusion 551 and the support

projection 311 despite the continuing use

**[0043]** Meanwhile, at the bottom surface of the ascending and descending guide member 500 is provided a movement groove 560 forming a moving space of the elastic part 550 to prevent interference when the elastic part 550 moves backward.

**[0044]** The rotating body 600, composed in an oval shape which is coupled as encasing the ascending and descending guide member 500, is rotatably coupled in a 180-degree to one side or to the other side against the fixed body 300, and thereby, rotates the ascending and descending guide member 500 together by the rotation to one side or the other side. At the upper portion of the rotating body 600 is provided a securing part 610 where the applicator 700 is secured, and at the center portion of the securing part 610 is provided a penetration hole 620 such that the nozzle 540 can be penetrated.

**[0045]** Meanwhile, at the front of the rotating body 600 is equipped a display part 630 for a user to recognize the open or closed state of the discharge hole 410. The display part 630 is disposed directly above either "ON" or "OFF", which are placed on the front or on the back of the rotating body 600, and thereby makes it possible for a user to recognize the open or closed state of the discharge hole 410 with the naked eyes.

**[0046]** The applicator 700 is secured on the securing part 610 in a state of being coupled to the nozzle 540 of the ascending and descending guide member 500 and applies contents onto user's skin. At the inner side of the applicator 700 is provided a connection hole 710 that are connected to the nozzle 540 to transfer the contents moving through the nozzle 540 to the applicator 700.

**[0047]** The applicator 700 can be made of various materials such as for absorbing and applying contents or for applying contents discharged through a discharge hole 410 onto skin.

**[0048]** Hereafter, referring to FIGS. 5 to 7, an operational state of a rotating open-and-closed type cosmetic container according to an exemplary embodiment of the present invention will be described. FIGS. 5 to 7 are state views illustrating a usage state of a rotating open-and-closed type cosmetic container according to an exemplary embodiment of the present invention.

**[0049]** Referring FIGS. 5 to 7, in a state that the display part 630 is disposed directly above "ON", the locking protrusion 551 of the elastic part 550 is disposed in a state of being supported by a support projection 311 of one side among a pair of support projections 311. At this point, when a user rotates the rotating body 600 to one side, the locking protrusion 551 will go over the one side of support projections 311 and then moves to the direction of the support projection 311.

**[0050]** When the rotating body 600 rotates in a 180-degrees in a process of rotation of the rotating body 600 as in the above, a sound is generated as the locking protrusion 551 of the elastic part 550 goes over the other of a pair of support projections 311 and at the same time, feeling is transferred to the user's hand in a process of

the locking protrusion 551 going over the support projection 311, thereby making the user realize the completion of rotation. At this time, the display part 630, as illustrated in the magnified view of FIG. 7, is configured to be disposed directly above of "OFF". At this state, it is not possible to discharge contents.

**[0051]** The present invention is characterized in that in a process of rotating the rotating body 600 to one side or to the other side, through a sound generated by using the support projection 311 formed on the fixed body 300 and the elastic part 550 formed on the ascending and descending guide member 500 with right and left portions cutout and with a locking protrusion 551 equipped, in a process of rotating a rotating body 600, a user can recognize an open or closed state of a discharge hole 410, thereby user convenience provided.

**[0052]** 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, the scope of the present invention should be defined by the technical spirit of the accompanying claims.

## Claims

1. A rotating open-and-closed type cosmetic container comprises:

a container body where contents are stored;  
 a container neck, of an oval shape, coupled to the upper portion of the container body and equipped with a discharge part that discharges the contents stored in the container body;  
 a fixed body having an oval shape coupled to the upper portion of the container neck, further comprising a fixation tube that can be disposed to be able to encase the discharge part and is equipped with a support projection at both sides of the outer circumferential surface thereof, a closure protrusion part that extends to the inner side of the fixation tube and is formed with a content movement hole, and an extension part that extends to the upper portion of the fixed body and is formed with a spiral guide groove respectively at both sides of the outer circumferential surface to the downward direction from the upper end thereof;  
 a seal cap encasing the closure protrusion part and inserted to the spiral guide groove to ascend and descend, further formed with a discharge hole that is opened and closed by the closure

protrusion part according to the ascent and descent and equipped with the guide protrusion which is inserted to the spiral guide groove at the outer circumferential surface and moves along the spiral guide groove thereof;

an ascending and descending guide member, of an oval shape, rotatably coupled to the fixed body and guiding the seal cap to ascend and descend according to rotational movement thereof, further connected with a horizontal guide groove and a vertical guide groove forming a space where the guide protrusion is inserted and moves at the inner side thereof, a nozzle moving contents discharged through the discharge hole to an applicator at the upper portion thereof, and an elastic part that is formed with a locking protrusion to going over the support projection by rotation at the inner lower portion thereof;

a rotating body, of an oval shape, encasing the ascending and descending guide member, and coupled in a way of rotating 180-degree to the fixed body and thereby rotating the ascending and descending guide member by rotation of one-side direction or the other-side direction; and

an applicator coupled to the nozzle of the ascending and descending guide member and applying contents to user's skin, wherein a user can recognize an open or close state of the discharge hole by the sound generated by the elastic part with the support projection and the locking protrusion formed in a process of rotation of the rotating body.

2. The rotating open-and-closed type cosmetic container of claim 1, wherein the elastic part is disposed in a state of the right and the left cut-open at the lower part of the side surface of the ascending and descending guide member, and rotates the rotating body and moves the rotating body backward at the point where the support projection and the locking protrusion meet and then restores the rotating body.
3. The rotating open-and-closed type cosmetic container of claim 2, wherein a movement groove is formed at the bottom surface of the ascending and descending guide member to prevent interference when the elastic part moves backward.
4. The rotating open-and-closed type cosmetic container of claim 1, wherein at the outer side surface of the fixed body is equipped a shake-preventing protrusion protrusively formed as encasing a part of the outer circumferential surface of the fixed body to be contacted tightly to the inner circumferential surface

of the ascending and descending guide member, and thereby prevents the rotating body and the ascending and descending guide member from shaking when rotating.

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5. The rotating open-and-closed type cosmetic container of claim 1, wherein rotation-preventing protrusions are equipped at both sides of the outer circumferential surface of the container neck to prevent the fixed body from rotating in a state of being coupled, and at the inner side is formed an insertion groove where the rotation-preventing protrusion is inserted.

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Fig. 1

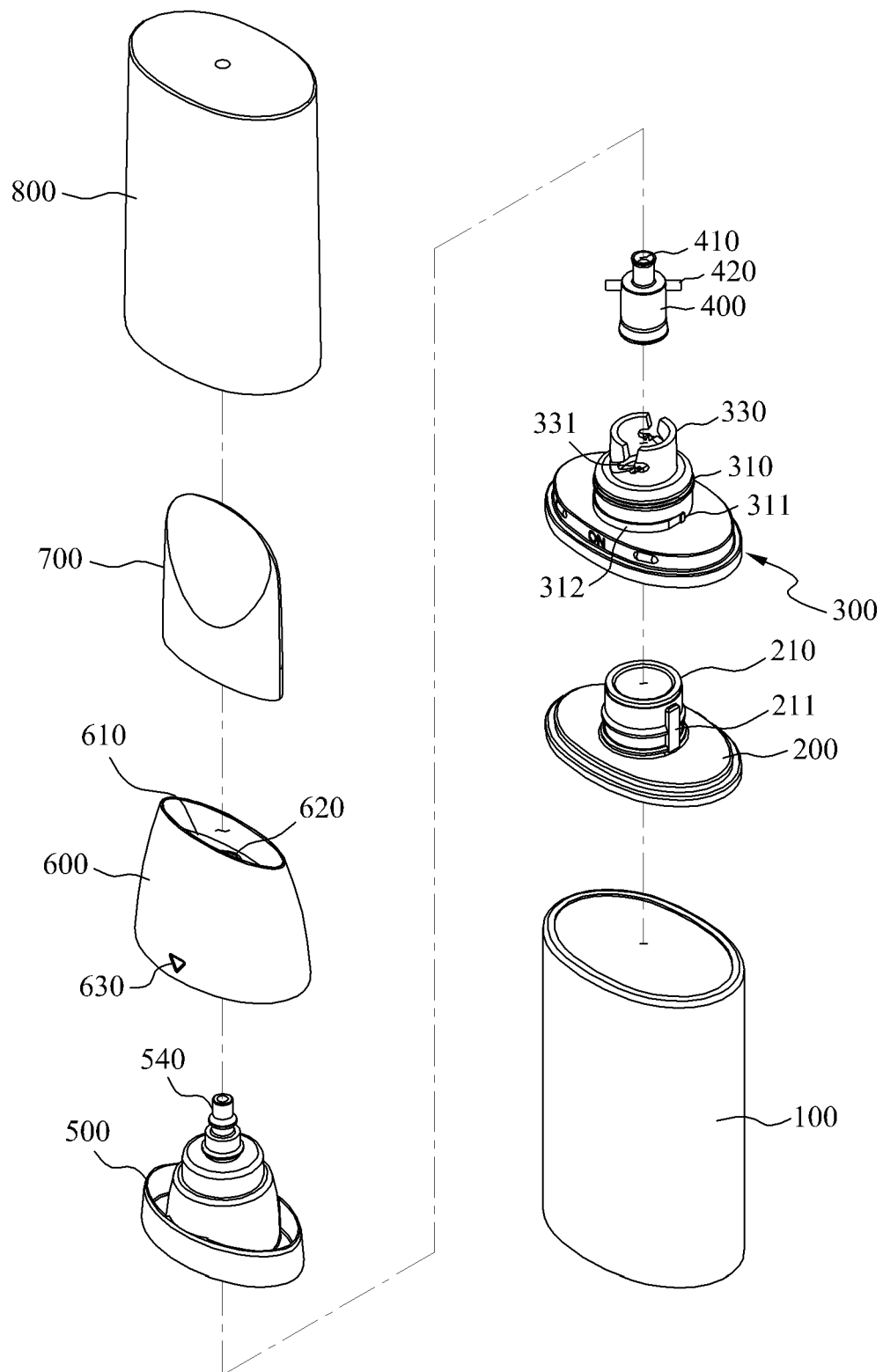




Fig. 2

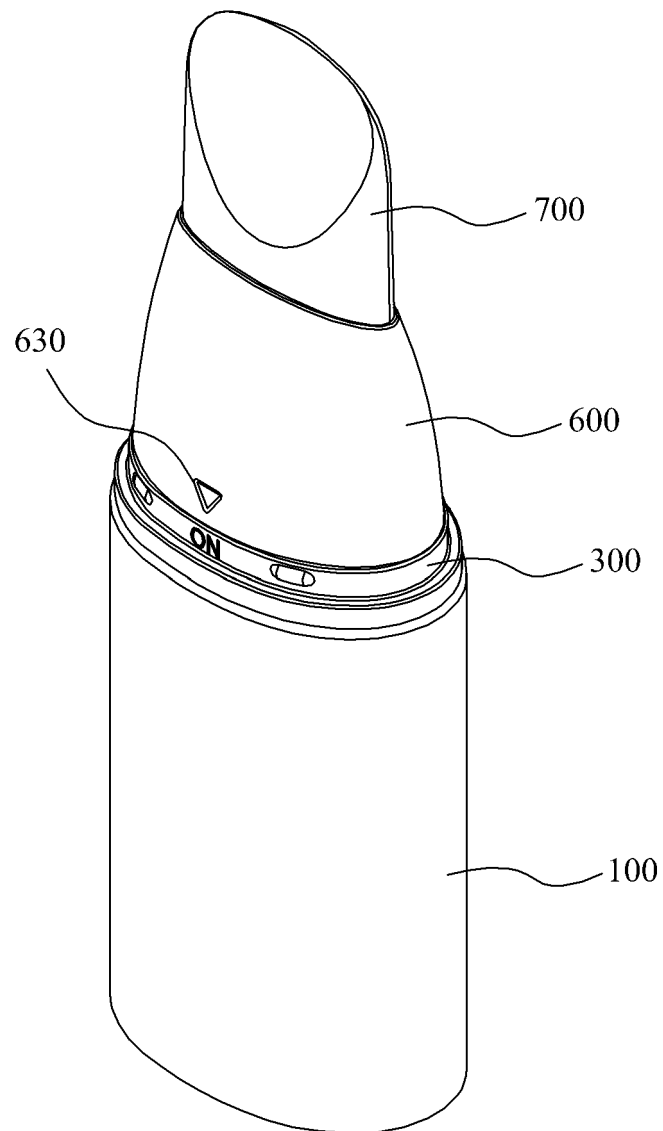


Fig. 3

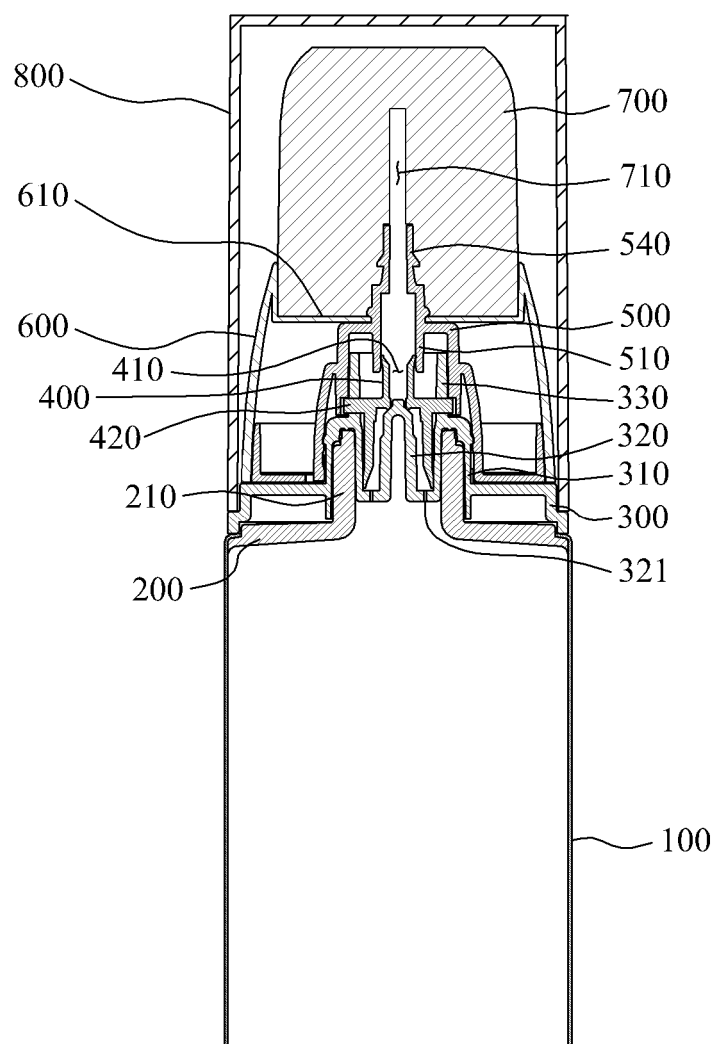


Fig. 4

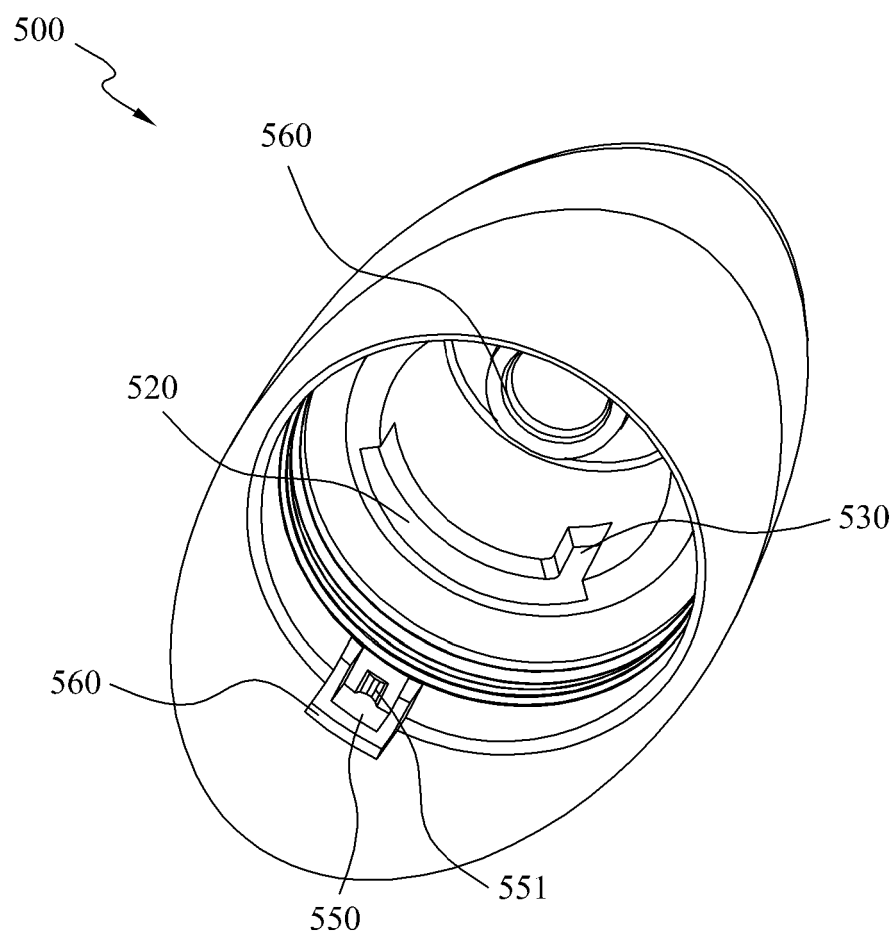


Fig. 5

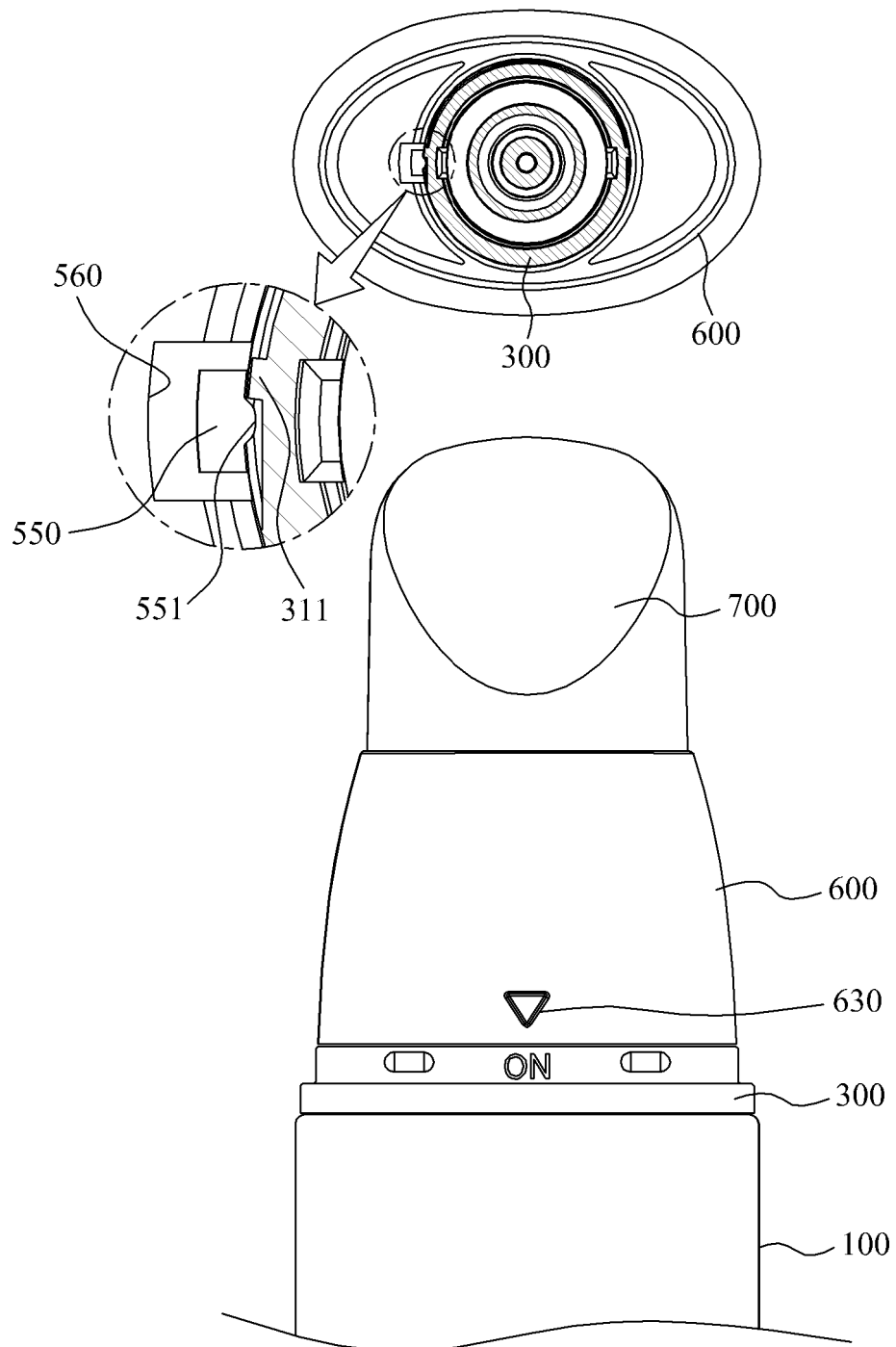


Fig. 6

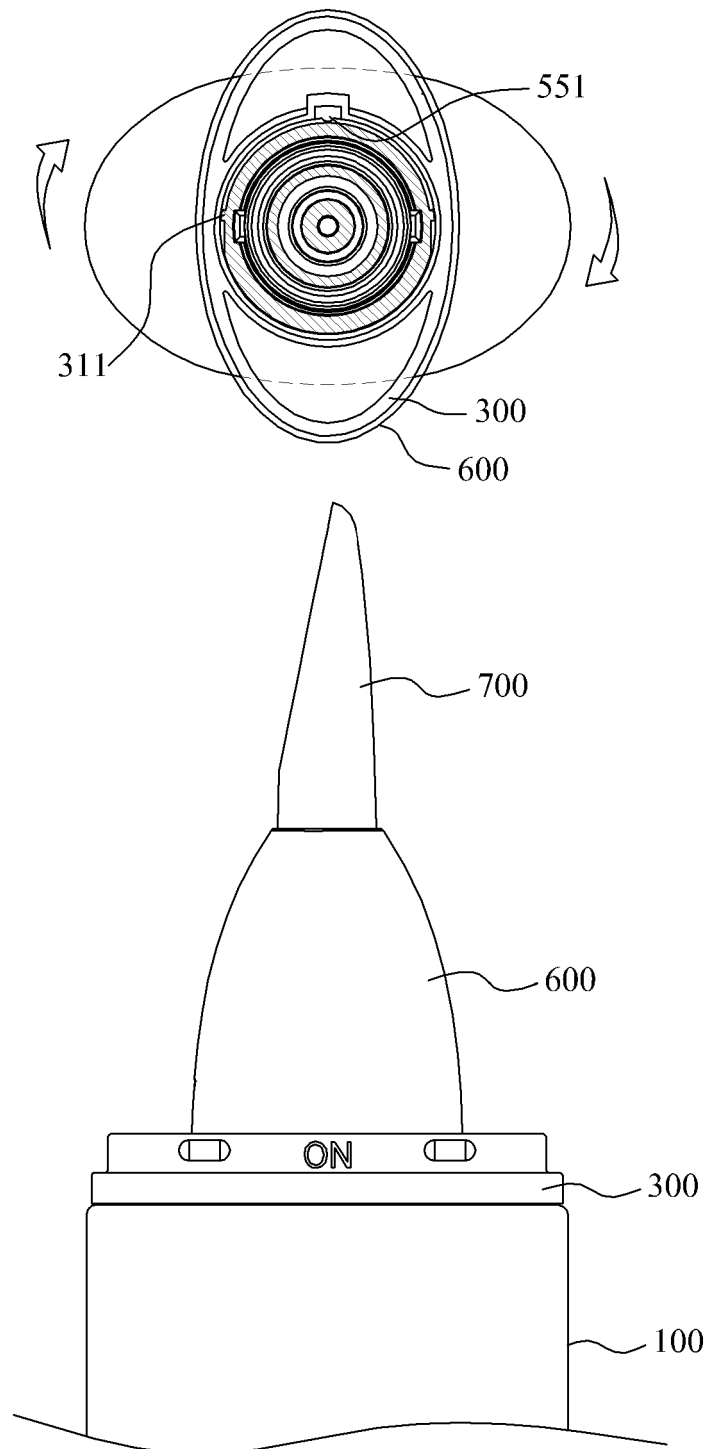


Fig. 7

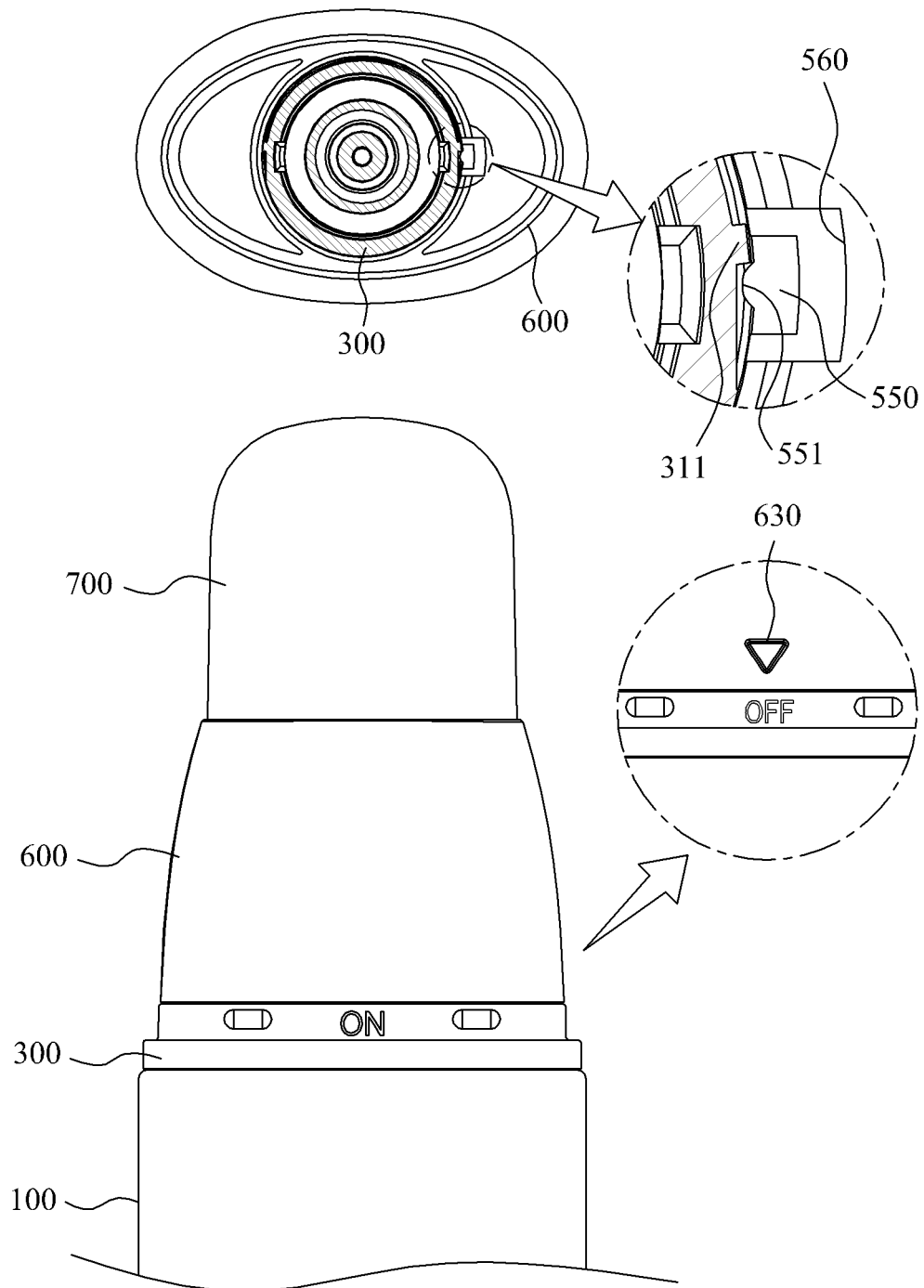


Fig. 8

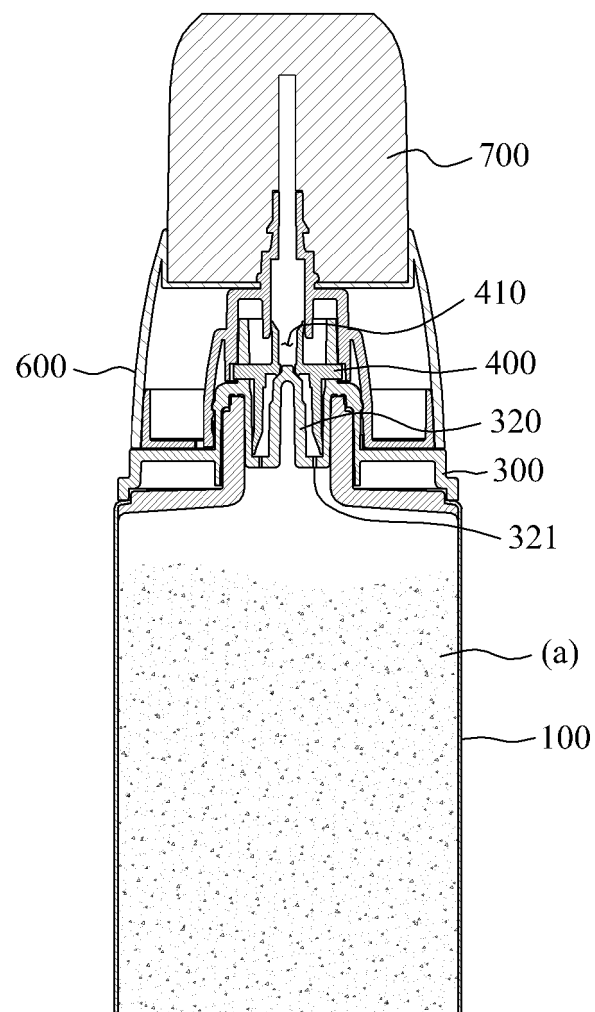
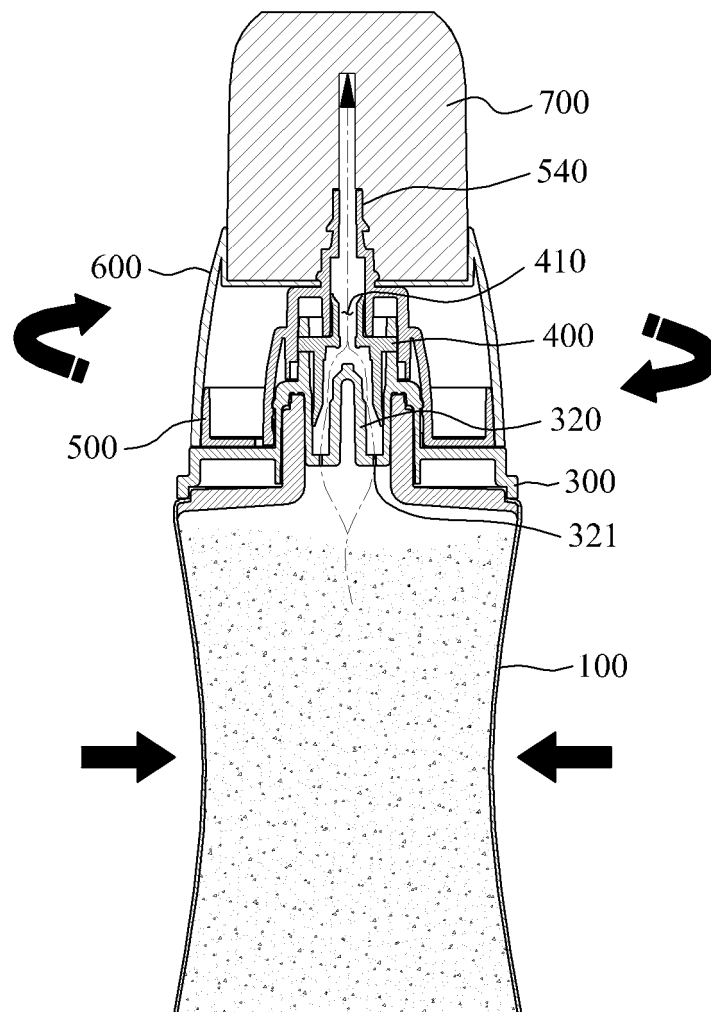


Fig. 9





## INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2017/010575

## A. CLASSIFICATION OF SUBJECT MATTER

*A45D 40/26(2006.01)i, B65D 51/24(2006.01)i, A45D 40/00(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 40/26; A45D 34/00; A45D 40/00; A61H 7/00; A45D 40/08; B65D 51/24

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) &amp; Keywords: rotation, lifting and descending, opening and closing, ellipse, cosmetics, container, protrusion, elasticity, sound

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-2015-0047200 A (YONWOO CO., LTD.) 04 May 2015 See paragraphs [0012], [0019]-[0032]; claims 1-6; figures 1-8.	1-5
A	KR 10-2014-0022616 A (S&P WORLD LTD.) 25 February 2014 See the entire document.	1-5
A	KR 10-2012-0029728 A (YONWOO CO., LTD.) 27 March 2012 See the entire document.	1-5
A	WO 2015-137708 A1 (YONWOO CO., LTD.) 17 September 2015 See the entire document.	1-5
A	WO 2006-098595 A1 (YOJIN COSMEPLAST CO., LTD.) 21 September 2006 See the entire document.	1-5
A	WO 2010-047486 A2 (BYEON, Jae-Sam) 29 April 2010 See the entire document.	1-5

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

\* Special categories of cited documents:

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