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(71) Applicant: **Yonwoo Co., Ltd.**
Incheon 22824 (KR)

(72) Inventor: **JUNG, Seo-Hui**
Incheon 22824 (KR)

(74) Representative: **Nordic Patent Service A/S**
Bredgade 30
1260 Copenhagen K (DK)

(54) DISPENSER CONTAINER HAVING RETRACTABLE BUTTON

(57) The present invention disclosed herein relates to a dispenser container having a retractable button, more particularly, the dispenser container having a retractable button wherein a button part is configured to ascend/descend in a state of a container body being fixed when the button part moves up and down by the rotation of a rotating body, such that it is possible to enhance the stability of the products, and also to reduce the production cost by composing the container body of a single container.

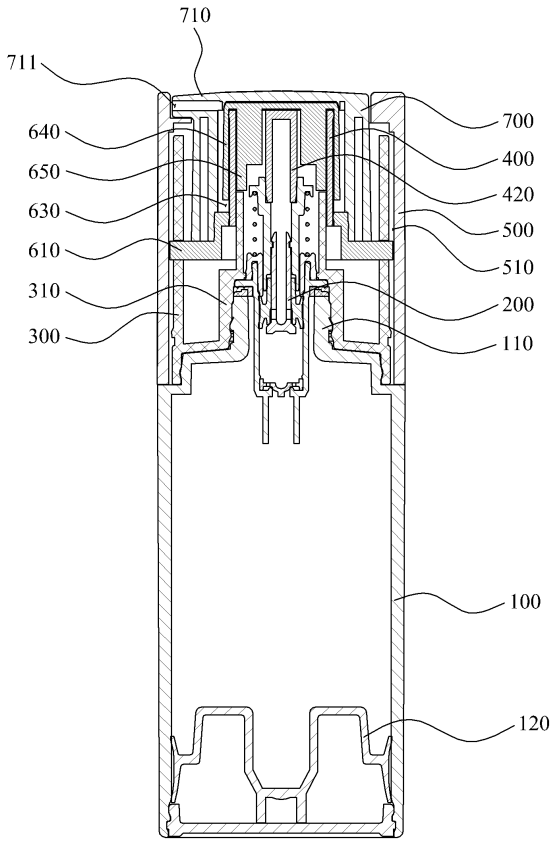

Fig. 3

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Description

BACKGROUND OF THE INVENTION

[0001] The present invention disclosed herein relates to a dispenser container having a retractable button, more particularly, the dispenser container having a retractable button wherein a button part is configured to ascend/descend in a state of a container body being fixed when the button part moves up and down by the rotation of a rotating body, such that it is possible to enhance the stability of the products, and also to reduce the production cost by composing the container body of a single container.

[0002] Generally, a dispenser container is a device which is coupled to the upper side of a sealing container filled with gas, liquid or other types of contents, and discharges a predetermined amount of contents stored in the interior thereof by pressurization, and now is widely utilized in a variety of sealing containers for packing cosmetics, perfume, medicine, food, etc.

[0003] This dispenser container, configured to include a container body receiving contents, a pumping member coupled to the upper portion of the container body and drawing contents through pumping operation by making the interior of the container body vacuous, and a button member disposed at the upper portion of the pumping member and moving up and down according to user's pressurization, is configured to cause the pumping member to perform a pumping operation and to cause contents to be discharged when the button member is pressurized. When a user carries around the container in a bag, it is likely that the button member of the container can be unintentionally pressurized, which may cause an unnecessary discharge of the contents.

[0004] To solve the problems described in the above, "a cosmetic discharge equipment", configured to have a button exposed only when the contents are being used, is disclosed in the registered utility model No. 20-0347811. (Hereafter, called as 'the registered utility model')

The registered utility model is related to a cosmetic container, wherein, according to pressing operation, a container which discharges contents stored in the container, and a guide protrusion of a pump body, placed at a guide hole of an outer container which is disposed at the exterior of the container, are guided along a spiral groove of a rotation tube body, such that the button can be retracted from the rotation tube body,

characterized in that a guide tube body (100) having a spiral groove (101) at both sides at the upper portion of the outer container (30) is equipped; a guide tube body (100) formed at a pump body (10) is penetrated and coupled at the spiral groove (101) of the guide tube (100); a rotation tube body (200), forming at both inner surfaces a vertical guide groove (201) where the dead end of the guide protrusion (11) of the pump body (10) is penetrated towards the spiral groove (101) of the guide tube body (100), is equipped with a undercut as being covered to the exterior of the guide tube body (100); and the button (20) is equipped at the stem (24) of the pump body (10).

[0005] The registered utility model, configured in a way that the button (20) ascends/descends according to rotation of the rotation tube body (200) and is retracted from the rotation tube body (200), is able to move up the button only while being used, such that the problem that contents are discharged by user's unintended pressurization of the button (20) can be prevented. However, since the container (20) is configured to ascends and descends along together in a process of the button (20) ascending/descending, the production cost will be increased due to the structure of double containers. In addition, in case the container is dropped due to user's carelessness in a state of the button (20) ascending, there arise problems, such as the defects of the product, and the separation of the container due to the weight of the product.

SUMMARY OF THE INVENTION

[0006] The present invention is devised to solve such problems described in the above, and the objective of the present invention is to provide a dispenser container having a retractable button wherein only the button part ascends and descends in a state that a container body is fixed when a button part ascends and descends by rotation of a rotation body. Therefore, it is possible to enhance the stability of the product and also to provide a dispenser container having a retractable button which can lower the production cost by composing the container into a single container.

[0007] Furthermore, the present invention is configured in a way that the contents remaining at a discharge outlet fore-end of the button part as the space formed by the outer circumferential surface of the pumping guide member and the inner circumferential surface of the ascending/descending member gets expanded in a process of the button part descending by rotation of the rotation body, such that it is possible to provide a dispenser container having a retractable button which can prevent the leakage of contents.

[0008] To solve such problems in the above, a dispenser container having a retractable button according to the present invention is characterized to include: a container body storing contents and provided with a discharge part at the upper portion thereof; a pumping member disposed at the upper portion of the container body and discharging the contents to the outside by means of pumping operation; a fixation body coupled to the discharge part and formed with a pair of spiral grooves which correspond to each other towards both sides of the outer circumferential surface; a pumping guide member coupled to the upper portion of the pumping member, delivering pressure through user's pressurization to the pumping member and guiding pumping operation of the pumping member, and provided with a contents movement hole such that contents can be moved to the upper portion thereof by

means of pumping operation of the pumping member; a rotation body rotatably coupled as encasing the fixation body at the upper portion of the container body, provided with a hollow, and equipped with a vertical guide groove longitudinally at the inner circumferential surface; an ascending/descending member encasing the pumping guide member, provided with a guide protrusion inserted to the spiral groove and the vertical guide groove at both sides of the outer circumferential surface capable of ascending and descending by rotation of the rotation body, and provided with a communication hole connected with the contents movement hole; and a button part coupled as encasing the ascending/descending member and moving along with the ascending/descending member, and provided with a contents discharge outlet at the side thereof such that contents can be discharged to the outside.

[0009] Furthermore, it is characterized in that a pumping guide groove extending downwards from the top end point of the spiral groove is provided such that the guide protrusion can ascend and descend by the pressurization and release of the button part in a state of the button part ascending.

[0010] Furthermore, it is characterized in that a contents movement hole is provided longitudinally on the side of the ascending/descending member such that the contents discharged through the communication hole can move to the contents discharge hole.

[0011] Furthermore, it is characterized in that a pressurization protrusion which pressurizes the pumping guide member is provided at the upper inner side of the ascending/descending member, and a pressurization plate which is pressurized by the pressurization protrusion is provided at the pumping guide member, wherein the pressurization protrusion is configured to be secured at the upper end of the pressurization plate in a state that the ascending/descending member ascends to the dead end, and to deliver the pressure to the pumping guide member by user's pressurization of the button part.

[0012] Furthermore, it is characterized in that at the pumping guide member is provided a contents movement tube which is coupled to the upper portion of the pumping member and moves contents, and at the inner side of the pressurization plate of the pumping guide member is provided a contents movement passage for connecting the contents movement tube and the contents movement hole.

[0013] Furthermore, it is characterized in that in a process that the button part moves down by rotation of the rotation body, as the space formed by the outer circumferential surface of the pumping guide member and the inner circumferential surface of the ascending/descending member gets expanded, the contents remaining at the top end portion of the contents discharge outlet can be absorbed.

[0014] Furthermore, it is characterized in that a coupling protrusion coupled to the ascending/descending member is provided at both lower sides of the button part, and a coupling groove coupled to the coupling protrusion is provided at the ascending/descending member.

[0015] As described in the above, the present invention is configured in a way that only the button part moves up and down in a state of the container body being fixed when the button part moves up and down by rotation of the rotation body. Therefore, it is possible not only to enhance the stability of the product but also to decrease the production cost by composing the container body to a single container.

[0016] Furthermore, it is possible that, as the space formed by the outer circumferential surface of the pumping guide member and the inner circumferential surface of the ascending/descending member gets expanded in a process that the button part moves down by rotation of the rotation body, in a process that the button part moves down by rotation of the rotation body, the contents remaining at the top end portion of the contents discharge outlet is absorbed, such that it is possible to prevent the contents from being leaked.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017]

FIG. 1 is an exploded perspective view illustrating a configuration of a dispenser container having a retractable button according to an exemplary embodiment of the present invention.

FIG. 2 is an assemble perspective view illustrating a configuration of a dispenser container having a retractable button according to an exemplary embodiment of the present invention.

FIGS. 3 is an assembled cross-sectional view illustrating an operational state of a dispenser container having a retractable button according to an exemplary embodiment of the present invention.

FIGS. 4 and 7 is explanatory views illustrating an operational state of a dispenser container having a retractable button according to an exemplary embodiment of the present invention.

FIG. 8 is an explanatory view illustrating the process wherein contents in the top end portion of the discharge outlet is absorbed while the button part is moving downwards by rotation of the rotation body of a dispenser container having a retractable button according to an exemplary embodiment of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0018] Hereinafter, exemplary embodiments of the present invention will be described in detail with reference to the accompanying drawings. The same reference numerals provided in the drawings indicate the same members.

[0019] FIG. 1 is an exploded perspective view illustrat-

ing a configuration of a dispenser container having a retractable button according to an exemplary embodiment of the present invention. FIG. 2 is an assemble perspective view illustrating a configuration of a dispenser container having a retractable button according to an exemplary embodiment of the present invention. FIGS. 3 is an assembled cross-sectional view illustrating an operational state of a dispenser container having a retractable button according to an exemplary embodiment of the present invention.

[0020] Referring to FIGS. 1 to 3, a dispenser container having a retractable button according to an exemplary embodiment of the present invention includes a container body 100, a pumping member 200, and a fixation body 300, a pumping guide member 400, a rotation body 500, an ascending/descending member 600, and a button part 700.

[0021] The container body 100, where contents are stored, is provided with a discharge part 110 coupled with a fixation body 300 and discharge contents at the upper portion thereof, and is provided with a piston 120 moving up according to the contents use at the inner side thereof.

[0022] The pumping member 200 is fixed by the fixation body 300 at the upper portion of the container body 100, and discharges the contents stored in the container body 100 by means of pumping operation according to the pressurization of the button part 700. Since the pumping member 200 to which the present invention pertains belongs to the well-known art, detailed description thereof will be omitted.

[0023] The fixation body 300, coupled to the discharge part 110 of the container body 100 and guiding the ascending/descending member 600 to ascend and descend, is provided with a coupling part 310 which has a hollow at the inner center portion thereof for being coupled to the discharge part 110.

[0024] The present invention is characterized in that at the outer circumferential surface of the fixation body 300 is formed a spiral groove 320 which moves an ascending/descending member 600 up and down. A guide protrusion 610 of the ascending/descending member 600 is coupled at the spiral groove 320 and moves. it is preferable that the spiral groove 320 should be formed with a pair which correspond to each other at both sides for a guide protrusion 610 for being capable of moving stably.

[0025] In addition, a protrusion 321 is provided at the top end point of the spiral groove 320 such that a user can recognize this when the guide protrusion 610 enters the direct part of the pumping guide groove 330 in a state of the guide protrusion 610 moving up along the spiral groove 320.

[0026] Meanwhile, the present invention is characterized in that at the dead end of the spiral groove 320 is formed a pumping guide groove 330 which extends downwards from the top end point of the spiral groove 320. As the pumping guide groove 330 is formed, a space formed by a guide protrusion 610 moves up and down by the pressure and release of the button part 700 in a state of the button part 700 ascending, thereby making the pumping operation of the pumping member 200 possible.

[0027] The pumping guide member 400 is coupled to the upper portion of the pumping member 200 and delivers the pressure by user's pressurization to the pumping member 200, thereby guiding the pumping operation of the pumping member 200. The pumping member 200 is provided with a contents movement tube 420 which is coupled to the upper portion of the pumping member 200 and moves the contents such that the contents can be moved to a contents discharge out 710 by the pumping operation of the pumping member 200, and at the side surface thereof is provided a contents movement hole 410 which is connected to the contents movement tube 420.

[0028] In the present invention, at the pumping guide member 400 is provided a pressurization plate 430 pressurized by a pressurization protrusion 650 of the ascending/descending member 600, wherein the pressurization plate 430 extends to both sides, with the contents movement tube 420 as the center, for being able to be pressurized by a pair of the pressurization protrusion 650. A contents movement passage 431 is provided at the inner side of the pressurization plate 430 extending to the direction, where the contents movement hole 410 is formed, so as to connect the contents movement tube 420 and the contents movement hole 410.

[0029] The rotation body 500, encasing the fixation body 300 and rotably coupled at the upper portion of the container body 100, is provided with a hollow 520 such that the button part 700 can be inserted and moved up and down.

[0030] The present invention is characterized in that a vertical guide groove 510, formed longitudinally from the upper portion to the lower portion thereof at the inner circumferential surface of the rotation body 500, can guide a guide protrusion 610 of the ascending/descending member 600 to move vertically by means of the vertical guide groove 510, thereby performing a vertical movement of the ascending/descending member 600.

[0031] The ascending/descending member 600 is configured to be disposed as encasing the pumping guide member 400 at the inner side of the rotation body 500 and to move up and down by rotation of the rotation body 500. In the present invention, at both sides of the outer circumferential surface of the ascending/ descending member 600 is formed a guide protrusion 610 which is inserted into the spiral groove 320 and the vertical guide groove 510 for guiding the ascent and descent of the ascending/descending member 600.

[0032] The guide protrusion 610 is configured to move up the ascending/descending member 600 as ascending along the spiral groove 320 and the vertical guide groove 510 when the rotation body 500 rotates to the one side, and to move down the ascending/descending member 600 as descending along the spiral groove 320 and the

vertical guide groove 510 when the rotation body 500 rotates to the other side.

[0033] Meanwhile, it is characterized in that at the side of the ascending/descending member 600 is formed a communication hole 630 which is connected with the contents movement hole 410 of the pumping guide member 400. The communication hole 630 is comerwise disposed to the contents movement hole 410 in a state of the ascending/descending member 600 descending, and is connected with the contents movement hole 410 in a state of the ascending/descending member 600 ascending. Due to this, it is possible that contents discharged through the contents movement hole 410 can move to the contents discharge outlet 710 only when the ascending/descending member 600 ascends, therefore capable of basically preventing the contents, while being stored, from being discharged.

[0034] Furthermore, it is characterized in that a contents movement groove 640 which guides for the contents to move to the contents movement outlet 710 is formed at the ascending/descending member 600, wherein the contents movement groove 640 is configured to form a space where contents move longitudinally along the side surface of the ascending/descending member 600 from the upper portion of the communication hole 630.

[0035] Furthermore, at the inner upper side of the ascending/descending member 600 is provided a pressurization protrusion 650 pressurizing the pumping guide member 400. The present invention is characterized in that the pressurization protrusion 650, as illustrated in FIG. 4, is disposed at the lower portion of the pressurization plate 430 in a state of the ascending/descending member 600 descending, and is secured to the upper end of the pressurization plate 430 in a state of the ascending/descending member 600 ascending to the top end by rotation thereof. When a user pressurizes the button part 700 in a state of the ascending/descending member 600 ascending, the pressurization protrusion 650 pressurizes the pressurization plate 430 and then, the pumping guide member 400 descends, thereby causing the pumping member 200 to perform a pumping operation.

[0036] A reinforcement piece 660 is provided at the inner side of the ascending/descending member 600 for preventing deformation caused by the persistent pressurization of the pressurization plate 430 by the pressurization protrusion 650.

[0037] Meanwhile, a coupling groove 620 which is coupled with a coupling protrusion 720 of the button part 700 is formed at the ascending/descending member 600.

[0038] The button part 700, coupled as encasing the ascending/descending member 600 and moving along with the ascent and descent of the ascending/descending member 600, is provided with a coupling protrusion 720 coupled to the coupling groove 620 of the ascending/descending member 600.

[0039] The button part 700 is provided with a contents discharge outlet 710 formed with a contents discharge hole 711 at the side surface thereof for the contents to be discharged to the outside.

[0040] Hereinafter, an operational process of a dispenser container having a retractable button according to an exemplary embodiment of the present invention will be described with reference to FIGS. 4 to 7.

[0041] Referring to FIGS. 4 to 7, when the rotation body 500 is rotated to one side in a state of the button part 700 descending, the guide protrusion 610 of the ascending/descending member 600 moves along the spiral groove 320 and the vertical guide groove 510, and makes the ascending/descending member 600 ascend. Due to this, the button part 700 coupled with the ascending/descending member 600 moves up together and is withdrawn to the upper end of the rotation body 500, thereby making the contents discharge outlet 710 exposed to the outside.

[0042] As described in the above, in a state of the ascending/descending member 600 and the button part 700 ascending, the contents movement hole 410 of the pumping guide member 400 and the communication hole 630 of the ascending/descending member 600 are connected to each other, and the pressurization protrusion 650 is disposed in a state of being secured at the upper end of the pressurization plate 430. In this state, if a user pressurizes the button part 700, the pressurization protrusion 650 pressurizes the pressurization plate 430, and then, the pumping guide member 400 descends, thereby making the pumping member 200 perform the pumping operation.

[0043] As described in the above, when the pumping member 200 performs the pumping operation, contents pass through, in order, the contents movement tube 420, the content movement passage 431, the contents movement hole 410, the communication hole 630, the contents movement groove 640, and the contents discharge outlet 710, and finally, then, are discharged through the contents discharge hole 711 to the outside.

[0044] Hereafter, the process of absorbing contents that remain in the top end portion of a discharge outlet of the dispenser container having a retractable button according to an exemplary embodiment of the present invention will be described with a reference of FIG. 8.

[0045] Referring FIG. 8, when ontents are completely used up, the button part 700 descends by rotating the rotation body 500 to the other side. The present invention is characterized in that, when the button part 700 descends by rotation of the rotation body 500, a space formed by the outer circumferential surface of the pumping guide member 400 and the inner circumferential surface of the ascending/descending member 600 gets expanded from S1 to S2, such that thhe contents remaining in the top end portion of the contents discharge outlet 710 are absorbed as much as the space expanded.

[0046] The present invention, as described in the above, is characterized in that, by configuring to absorb the contents remaining in the top end portion of the con-

tents discharge outlet 710 when the button part 700 descends, the contents remaining in the top end portion of the contents discharge outlet 710 can be discharged to the outside, thereby preventing the contents from being discharged to the outside and keeping the container from being contaminated.

[0047] 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 dispenser container having a retractable button, comprising:

   a container body (100) storing contents and provided with a discharge part (110) at the upper portion thereof;
   a pumping member (200) disposed at the upper portion of the container body (100) and discharging the contents to the outside by means of pumping operation;
   a fixation body (300) coupled to the discharge part (110) and formed with a pair of spiral grooves (320) which correspond to each other towards both sides of the outer circumferential surface thereof;
   a pumping guide member (400) coupled to the upper portion of the pumping member (200), delivering pressure through user's pressurization to the pumping member (200) and guiding a pumping operation of the pumping member (200), and provided with a contents movement hole (410) such that contents can be moved to the upper portion thereof by means of pumping operation of the pumping member (200);
   a rotation body (500) rotatably coupled as encasing the fixation body (300) at the upper portion of the container body (100), provided with a hollow (520), and equipped with a vertical guide groove (510) longitudinally at the inner circumferential surface thereof;
   an ascending/descending member (600) encasing the pumping guide member (400), provided with a guide protrusion (610) inserted to the spiral groove (320) and the vertical guide groove (510) at both sides of the outer circumferential surface capable of ascending and descending by rotation of the rotation body (500), and provided with a communication hole (630) connected with the contents movement hole (410); and
   a button part (700) coupled as encasing the ascending/descending member (600) and moving along with the ascending/descending member (600), and provided with a contents discharge outlet (710) at the side thereof such that contents can be discharged to the outside.

2. The dispenser container having a retractable button of claim 1, **characterized in that** a pumping guide groove (330) extending downwards from the top end point of the spiral groove (320) is provided such that the guide protrusion (610) can ascend and descend by the pressurization and release of the button part (700) in a state of the button part (700) ascending.

3. The dispenser container having a retractable button of claim 1, **characterized in that** a contents movement hole (410) is provided longitudinally on the side of the ascending/descending member (600) such that the contents discharged through the communication hole (630) can move to the contents discharge hole (410).

4. The dispenser container having a retractable button of claim 3, **characterized in that** a pressurization protrusion (650) pressurizing the pumping guide member (400) is provided at the upper inner side of the ascending/descending member (600), and a pressurization plate (430) pressurized by the pressurization protrusion (650) is provided at the pumping guide member (400), wherein the pressurization protrusion (650) is configured to be secured at the upper end of the pressurization plate (430) in a state that the ascending/descending member (600) ascends to the dead end, and to deliver the pressure to the pumping guide member (400) by user's pressurization of the button part (700).

5. The dispenser container having a retractable button of claim 4, **characterized in that** at the pumping guide member (400) is provided a contents movement tube (420) coupled to the upper portion of the pumping member (400) and moves contents, and at the inner side of the pressurization plate (430) of the pumping guide member (400) is provided a contents movement passage (431) for connecting the contents movement tube (430) and the contents movement hole (410).

6. The dispenser container having a retractable button of claim 1, **characterized in that** in a process that the button part (700) moves down by rotation of the rotation body (500), as the space formed by the outer circumferential surface of the pumping guide member (400) and the inner circumferential surface of the

ascending/descending member (600) gets expanded, the contents remaining at the top end portion of the contents discharge outlet can be absorbed.

7. The dispenser container having a retractable button of claim 1, **characterized in that** a coupling protrusion (720) coupled to the ascending/descending member (600) is provided at both lower sides of the button part (700), and a coupling groove (620) coupled to the coupling protrusion (720) is provided at the ascending/descending member (600).

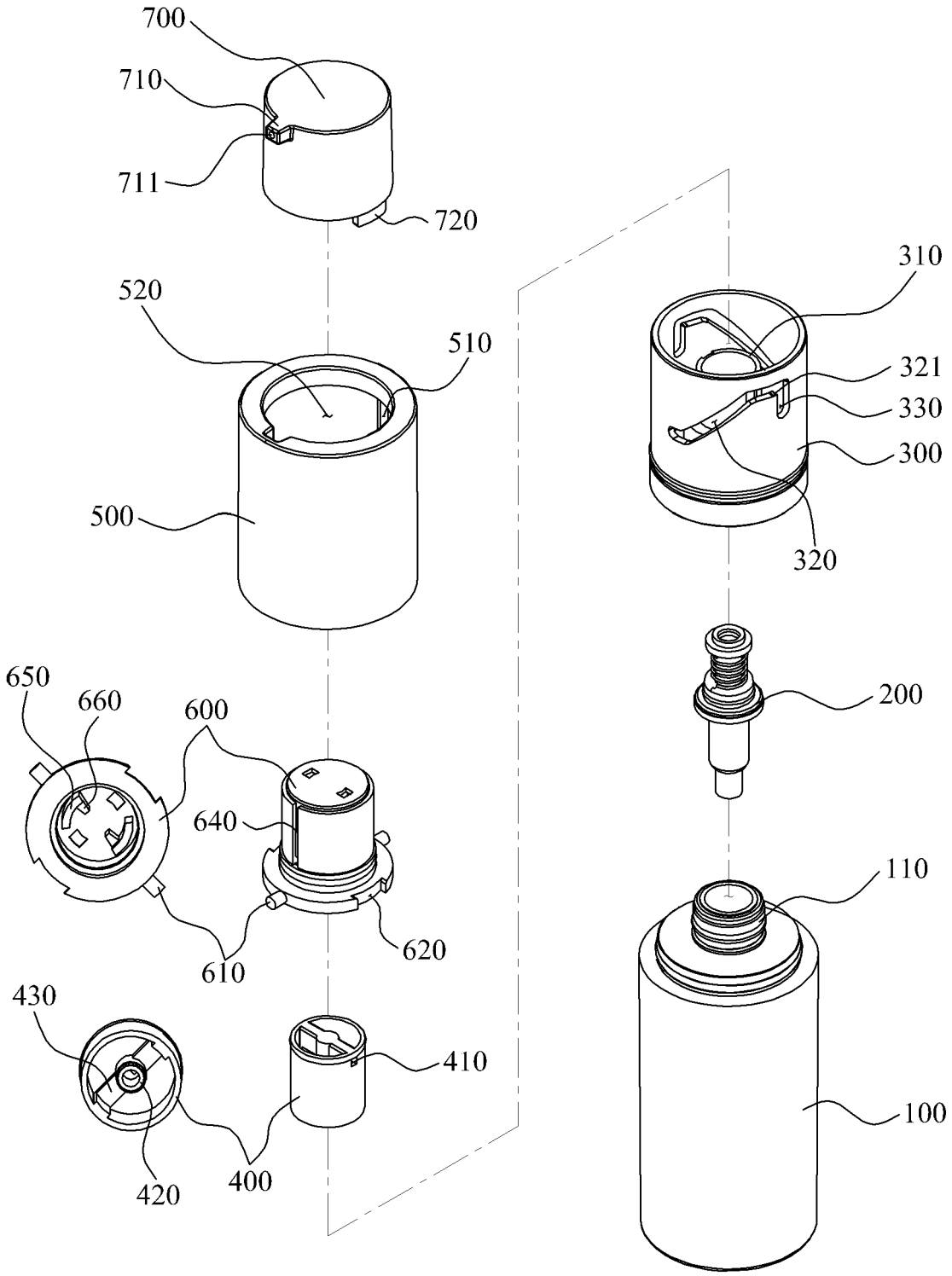
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Fig. 1

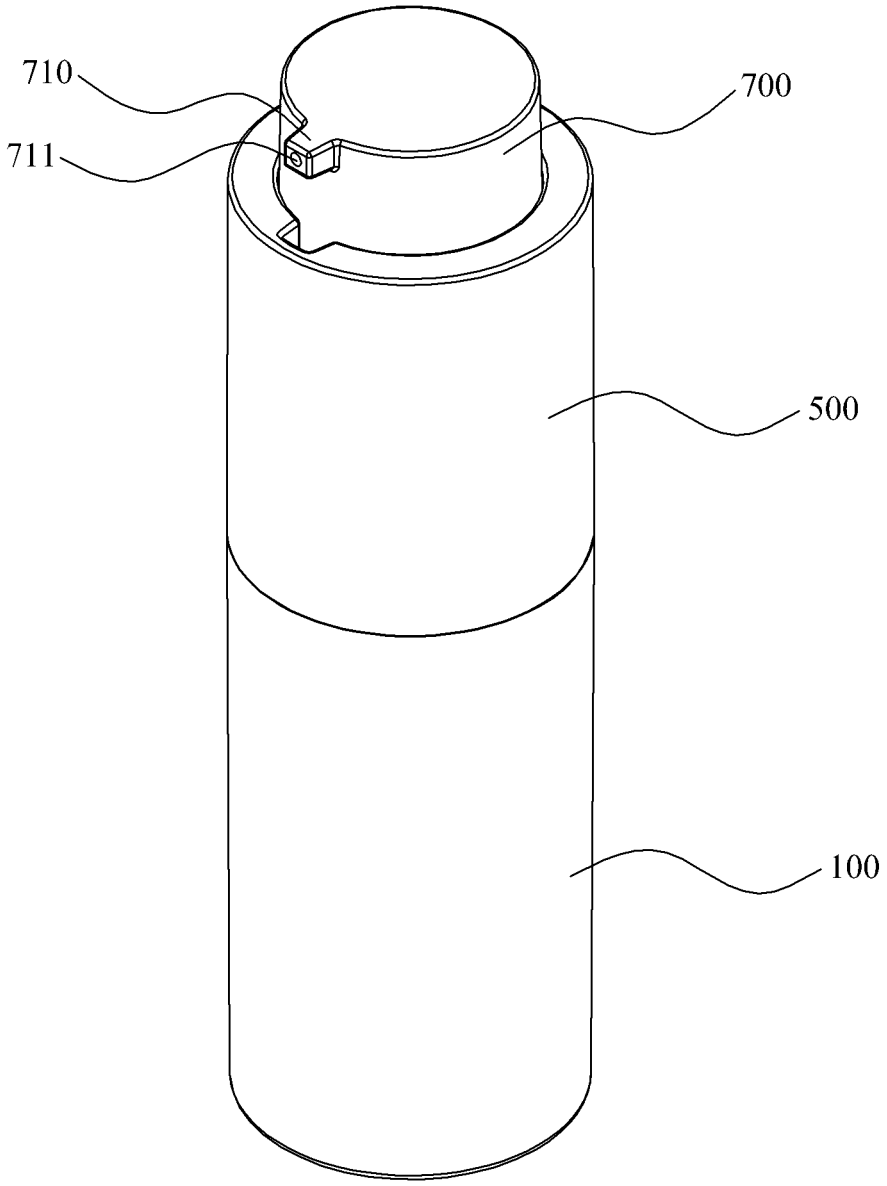

Fig. 2

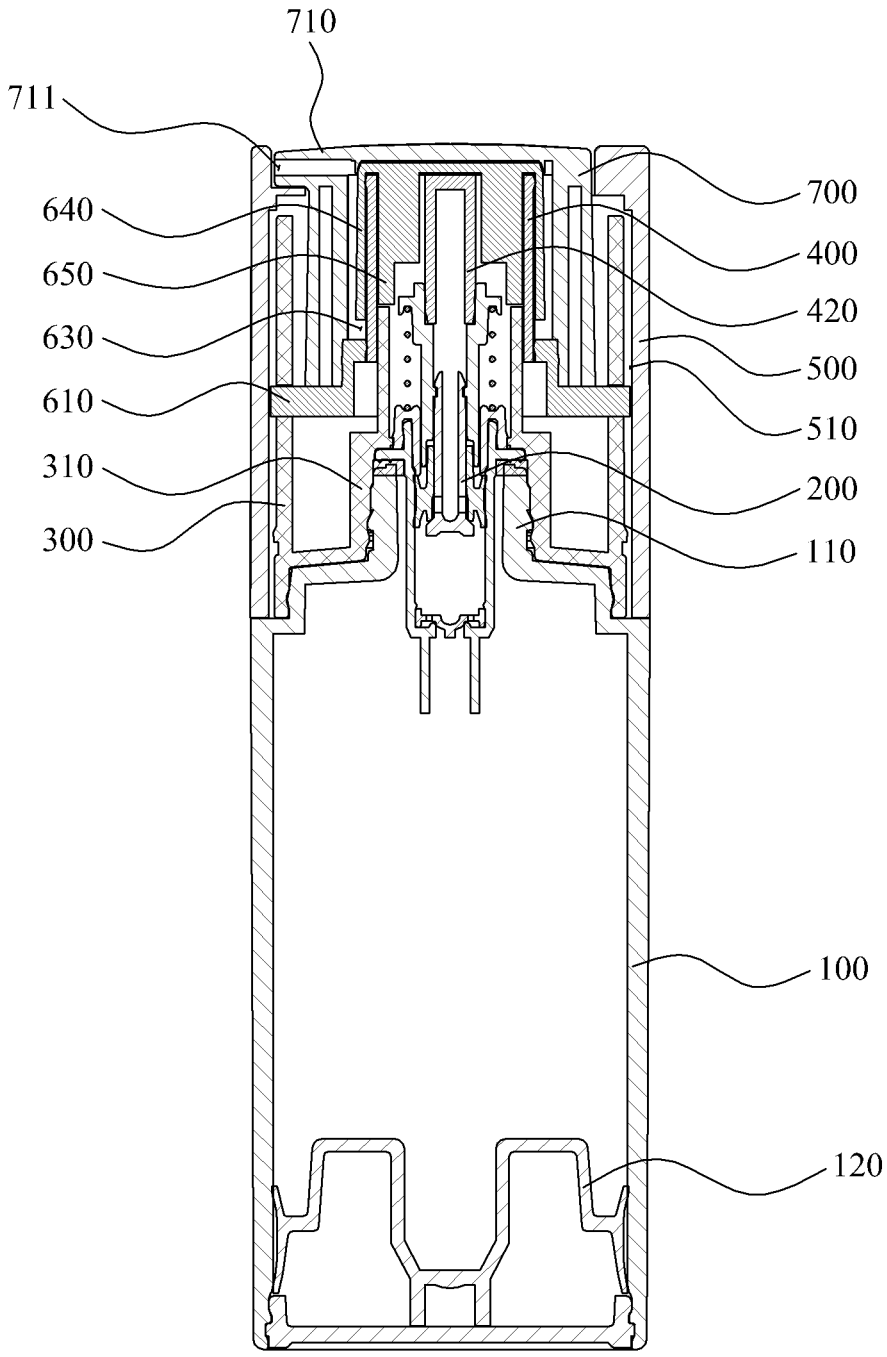
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Fig. 3

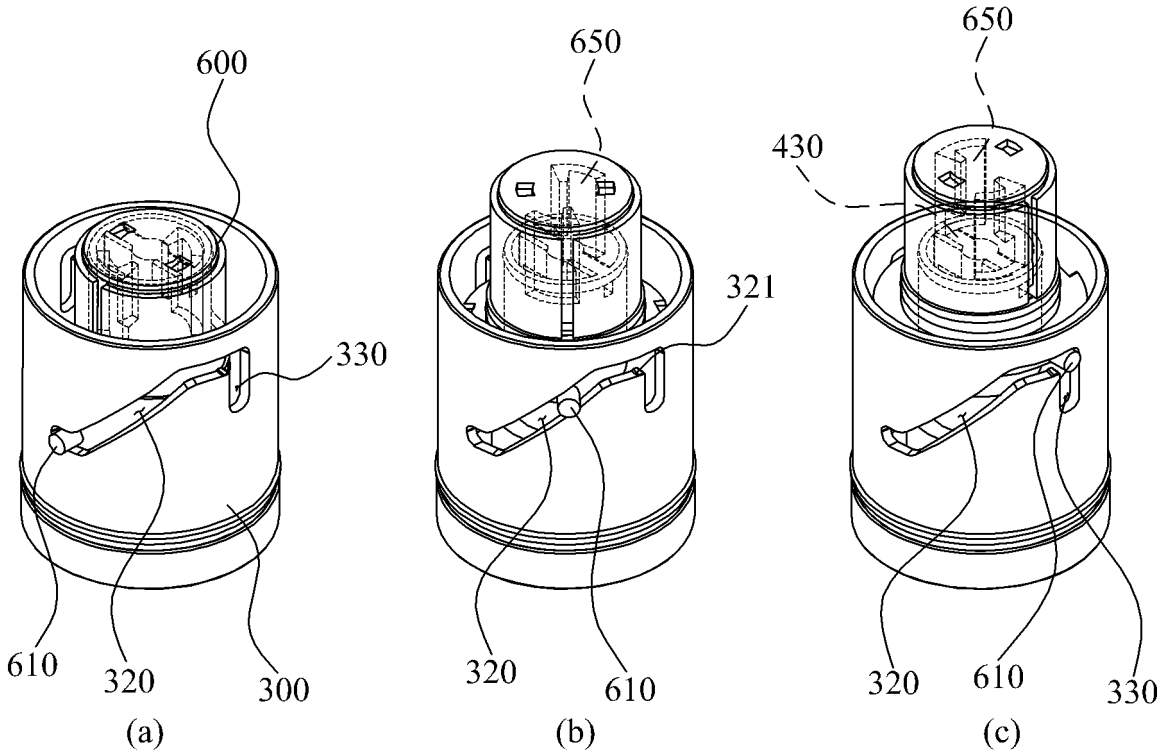

Fig. 4

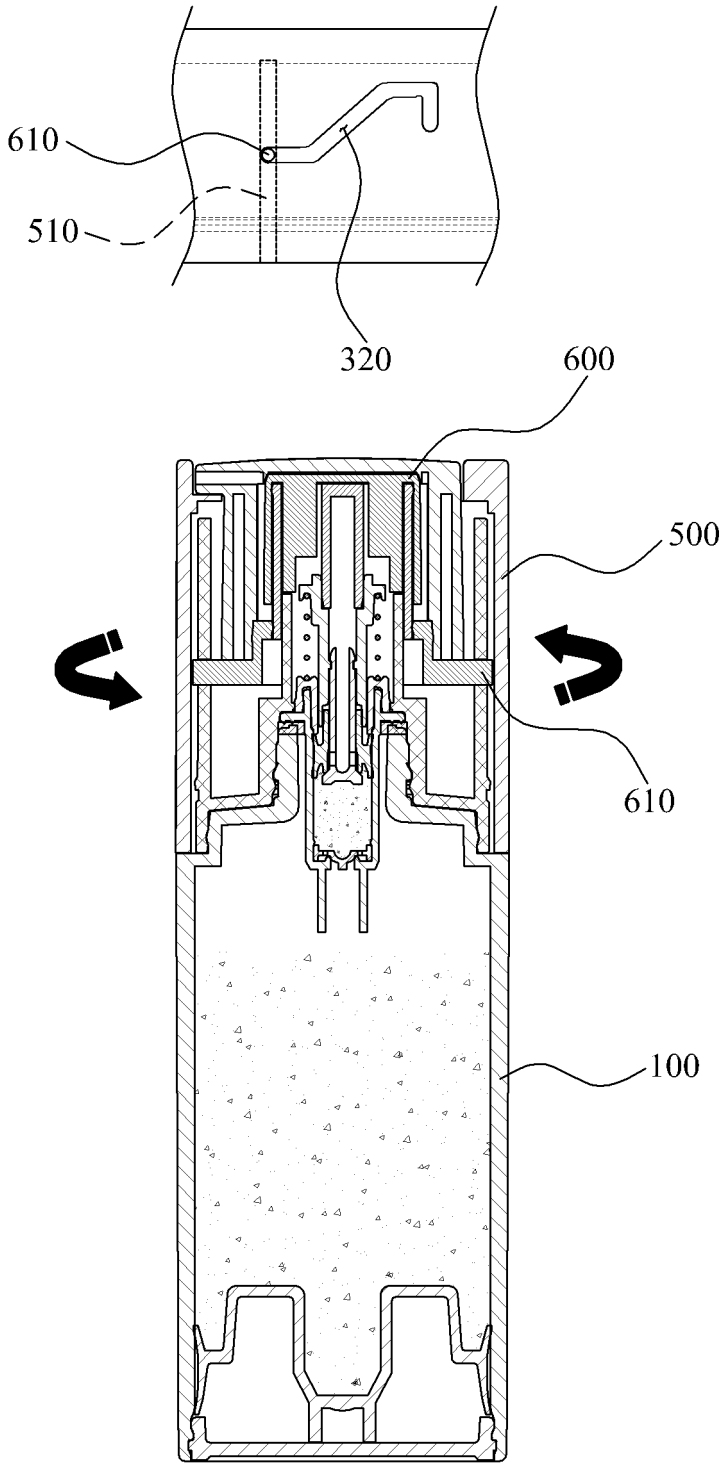

Fig. 5

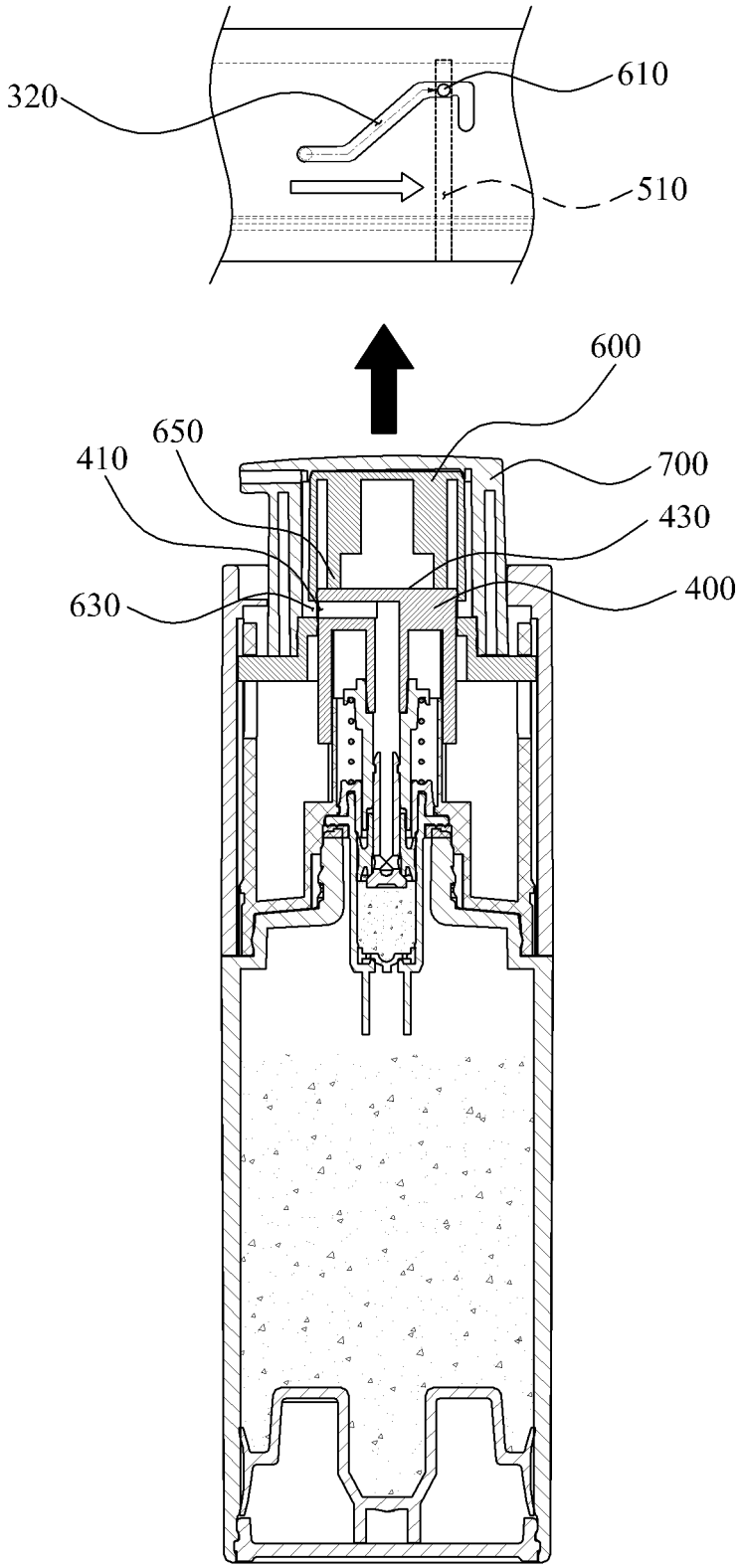

Fig. 6

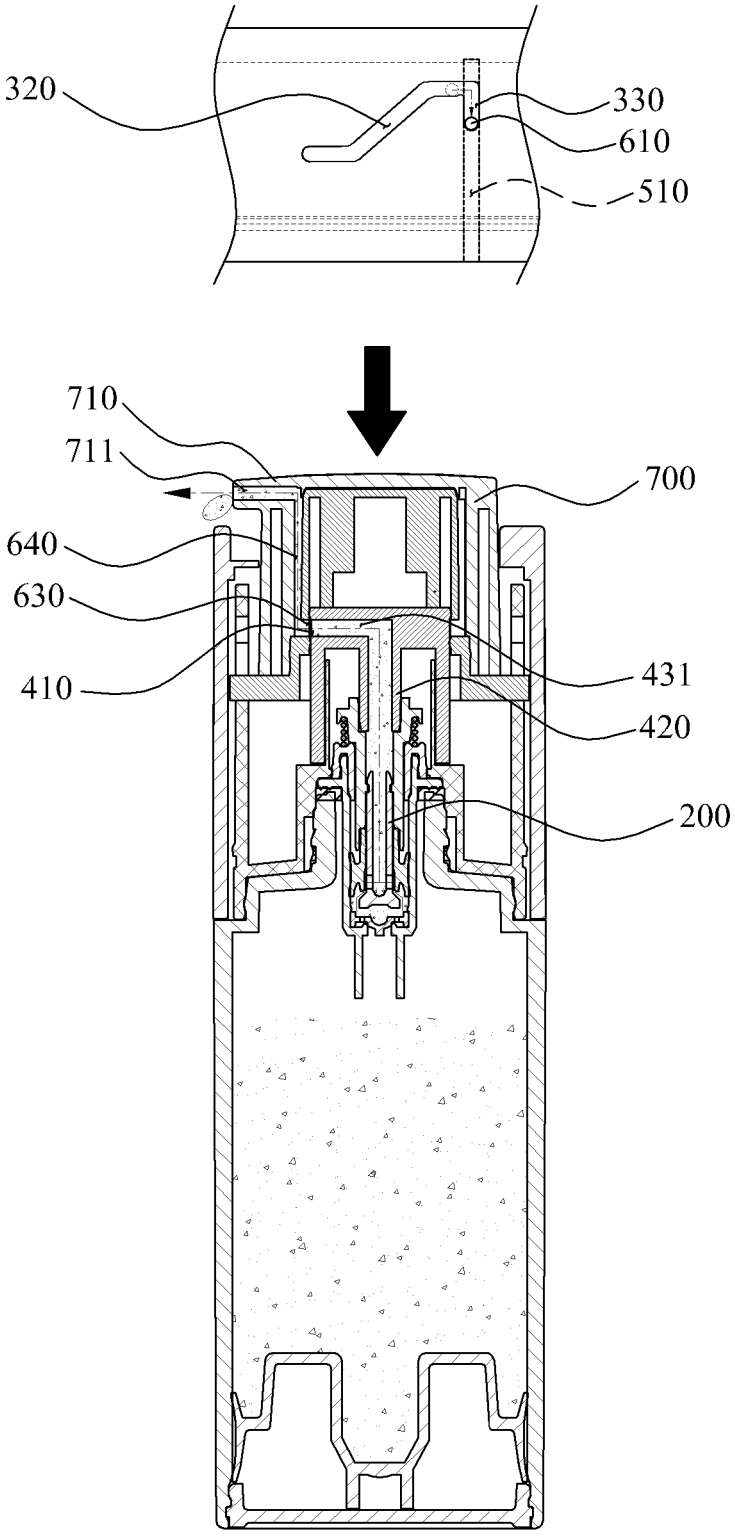

Fig. 7

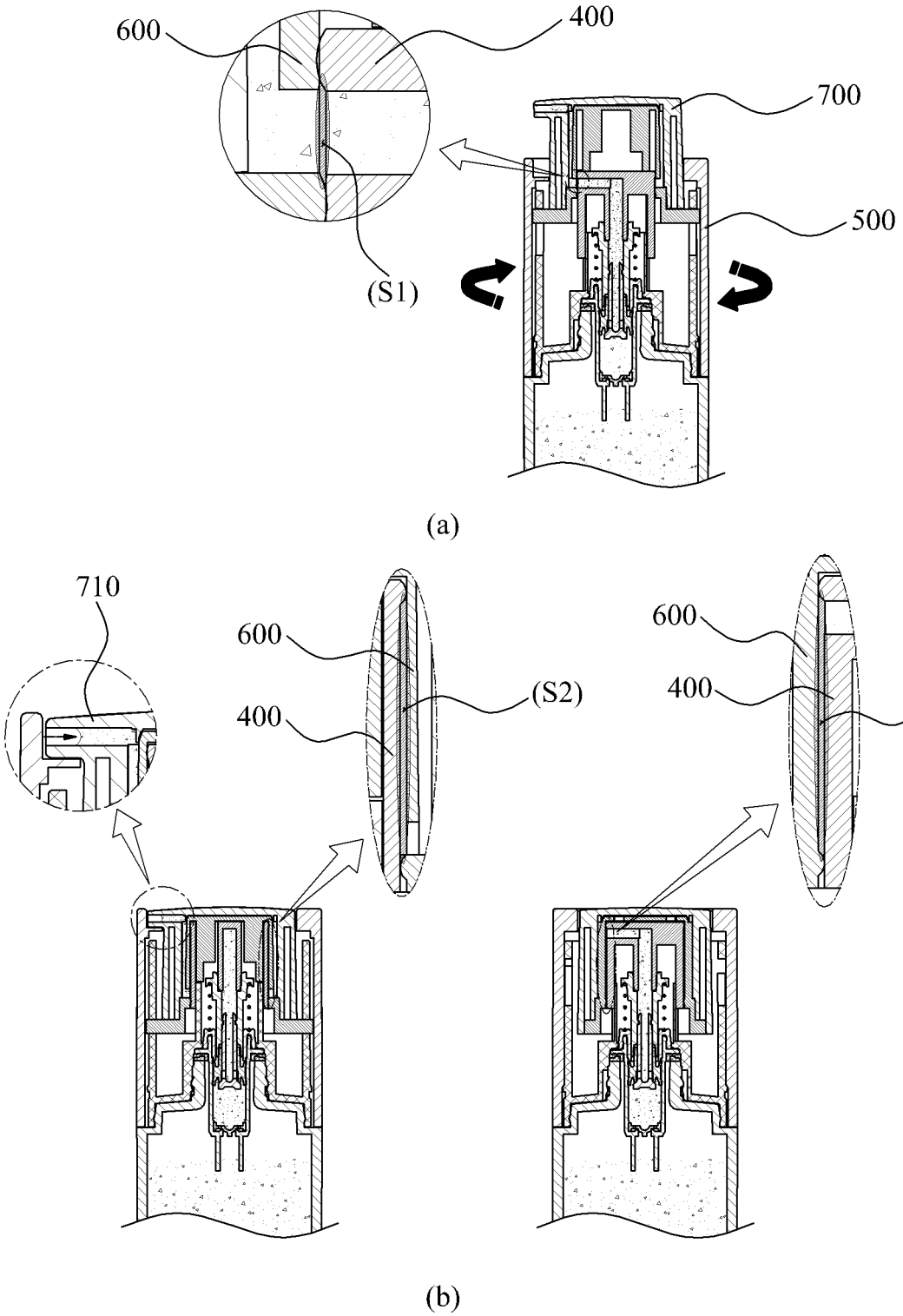

Fig. 8

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2016/007380

A. CLASSIFICATION OF SUBJECT MATTER

B65D 47/00(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)
B65D 47/00; A45D 34/00; A45D 40/00; 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: button, release, dispenser, pumping member, fixture, pumping guide member, rotation body, lifting member, button part

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-2012-0130884 A (TAP KOREA.CO., LTD. et al.) 04 December 2012 See paragraphs [0039]-[0085] and figures 5-20.	1-7
A	KR 10-1388094 B1 (YONWOO CO., LTD.) 23 April 2014 See paragraphs [0026]-[0043], claim 1 and figures 1-7.	1-7
A	KR 20-0347811 Y1 (TAEPYEONGYANG CORPORATION) 17 April 2004 See claim 1 and figures 3-5.	1-7
A	KR 20-0455000 Y1 (AMOREPACIFIC CORPORATION) 10 August 2011 See claim 1 and figures 1-5.	1-7
A	KR 20-0451863 Y1 (AMOREPACIFIC CORPORATION) 17 January 2011 See abstract, claim 1 and figures 1-5.	1-7

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

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/KR2016/007380

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