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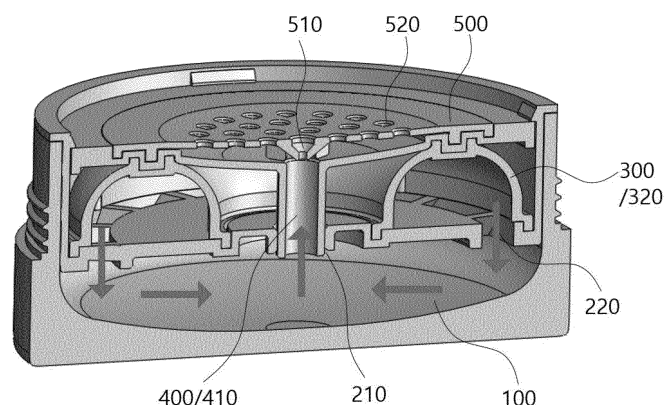
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(54) **COSMETIC POWDER CONTAINER PROVIDED WITH PUMPING STRUCTURE**

(57) The present invention provides a cosmetic container for powder having a pumping structure, the cosmetic container including: an accommodation portion (100) configured to accommodate a powder material; a lower support portion (200) disposed over the accommodation portion (100), and configured to allow air to be introduced such that the powder material accommodated in the accommodation portion (100) is discharged together with the introduced air; an air pumping portion (300) disposed over the lower support portion (200), and con-

figured to pump air so that the air is introduced into the lower support portion (200); an intermediate support portion (400) disposed over the air pumping portion (300), and configured to discharge a powder material together with air and to collect the remaining powder material; and a powder discharge portion (500) spaced apart upward from the intermediate support portion (400), and configured to allow the discharged powder material to be collected.

FIG. 3



Description

Technical Field

[0001] The present invention relates to a cosmetic container for powder. More particularly, the present invention relates to a cosmetic container for powder having a pumping structure.

Background Art

[0002] In a conventional cosmetic container in which a powder material is accommodated, the powder is applied to a touch member by coming into contact with and rubbing an accommodation portion containing the powder with the touch member made of a sponge or puff, as disclosed in Korean Patent Application Publication No. 10-2017-0138836.

[0003] A user's skin is touched with the touch member to which powder is applied, and then the touch member is brought into contact with the accommodation portion in order to additionally apply powder to the touch member.

[0004] In this process, a problem arises in that sweat, water, other cosmetics, etc. on the skin contaminate the touch member and the contaminated touch member, in turn, contaminates the powder material accommodated in the accommodation portion.

[0005] Furthermore, especially in the case of a fine powder, a user applies force to the touch member, so that a problem arises in that the powder is not evenly applied to the touch member and is thus unevenly applied to the touch member.

Disclosure

Technical Problem

[0006] A cosmetic container for powder having a pumping structure according to the present invention has the following objects:

First, the cosmetic container is intended to minimize the contamination of an accommodated powder material by a touch member contaminated by sweat, etc. on the skin.

Second, the cosmetic container is intended to allow a powder material to be uniformly applied to a touch member.

[0007] The objects of the present invention are not limited to those mentioned above, and other objects that are not mentioned will be clearly understood by those skilled in the art from the following description.

Technical Solution

[0008] The present invention provides a cosmetic con-

tainer for powder having a pumping structure, the cosmetic container including: an accommodation portion configured to accommodate a powder material; a lower support portion disposed over the accommodation portion, and configured to allow air to be introduced such that the powder material accommodated in the accommodation portion is discharged together with the introduced air; an air pumping portion disposed over the lower support portion, and configured to pump air so that the air is introduced into the lower support portion; an intermediate support portion disposed over the air pumping portion, and configured to discharge a powder material together with air and to collect a remaining powder material; and a powder discharge portion spaced apart upward from the intermediate support portion, and configured to allow the discharged powder material to be collected.

[0009] In the present invention, the lower support portion may be configured such that a powder discharge hole is formed on one side thereof and a plurality of air inlet portions is formed on the other side thereof.

[0010] In the present invention, the lower support portion may be configured such that a powder discharge hole is formed at the center thereof and arc-shaped air inlet portions are formed along the edge thereof.

[0011] In the present invention, the arc-shaped air inlet portions may be provided with inclined portions so that air is introduced while being rotated in an inclined direction.

[0012] In the present invention, the air pumping portion may be configured such that a through hole communicating with the powder discharge hole is provided therein, an arch space portion communicating with the inlet portion is provided in a ring shape therein and the air pumping portion is made of a contractible flexible material so that as the arch space portion is contracted by pressure, the air pumping portion pumps air into the inlet portions.

[0013] In the present invention, the intermediate support portion may be configured such that a passage column portion communicating with the through hole is provided therein and a plane-shaped powder collection portion is formed to extend laterally over the passage column portion.

[0014] In the present invention, the powder collection portion may be provided to be inclined downward so that a powder material placed on the powder collection portion is moved to the passage column portion.

[0015] In the present invention, the powder discharge portion may have a flat plate shape, and may be provided with a powder discharge passage portion communicating with a passage column portion and also provided with a plurality of powder collection holes in the flat plate thereof.

[0016] In the present invention, the powder discharge passage portion may be provided in an upward-widening passage structure under the flat plate.

[0017] In the present invention, a plurality of protruding supports may be provided outside the powder discharge passage portion, and may allow the intermediate support

portion and the powder discharge portion to be spaced apart from each other.

[0018] In the present invention, the plurality of supports may be spaced apart from each other so that a powder material in the passage column portion is discharged or introduced again between the supports.

[0019] In the present invention, a touch member may be provided over the powder discharge portion so that when the touch member is pressed, the air pumping portion performs pumping.

[0020] In the present invention, a cover may be further provided over the touch member.

Advantageous Effects

[0021] The cosmetic container for powder having a pumping structure according to the present invention has the following effects:

First, the pumping structure is provided, so that a powder material is discharged together with air, thereby providing the effect of preventing the touch member from coming into direct contact with the accommodation portion.

Second, the touch member does come into direct contact with the accommodation portion, thereby providing the effect of preventing a powder material from being contaminated with the touch member.

Third, a powder material is discharged together with air by the pumping structure, thereby providing the effect of allowing the powder material to be evenly applied to the touch member.

[0022] The effects of the present invention are not limited to those mentioned above, and other effects that are not mentioned will be clearly understood by those skilled in the art from the following description.

Description of Drawings

[0023]

FIG. 1a shows the appearance of an assembled cosmetic container (10) according to the present invention, and FIG. 1b shows a state in which a touch member (600) is disposed with a cover (700) opened;

FIG. 2 is a longitudinal sectional view of the portion of FIG. 1b exclusive of a cover;

FIG. 3 is a longitudinal sectional view of the portion of FIG. 2 exclusive of a touch member;

FIG. 4a is a perspective view of an accommodation portion (100) according to the present invention, and FIG. 4b is a longitudinal sectional view of FIG. 4a;

FIG. 5a is a perspective view of a lower support portion (200) according to the present invention, and FIG. 5b is a longitudinal sectional view of FIG. 5a; FIG. 6 is a longitudinal cross-sectional view of a state

in which the accommodation portion (100) and the lower support portion (200) according to the present invention are coupled to each other;

FIG. 7a is a perspective view of an air pumping portion (300) according to the present invention, and FIGS. 7b and 7c are longitudinal sectional views of FIG. 7a;

FIGS. 8a and 8b are longitudinal sectional views of a state in which the lower support portion (200) and the air pumping portion (300) according to the present invention are coupled to each other.

FIG. 9a is a perspective view of an intermediate support portion (400) according to the present invention, and FIGS. 9b and 9c are longitudinal sectional views of FIG. 9a;

FIG. 10a is a perspective view of a state in which the air pumping portion (300) and the intermediate support portion (400) according to the present invention are coupled to each other, and FIGS. 10b and 10c are longitudinal sectional views of FIG. 10a;

FIG. 11a is a perspective view of a powder discharge portion (500) according to the present invention, and FIGS. 11b and 11c are longitudinal sectional views of FIG. 11a;

FIG. 12a is a longitudinal sectional view of a state in which the intermediate support portion (400) and the powder discharge portion (500) according to the present invention are coupled to each other, FIG. 12b shows a state in which a powder material is discharged in FIG. 12a, and FIG. 12c is a state in which a powder material is introduced again in FIG. 12a; and

FIGS. 13a and 13b show a powder discharge passage portion (510), powder collection holes (520), and supports (530) according to the present invention.

10: cosmetic container

100: accommodation portion

200: lower support portion 210: powder discharge hole

220: air inlet portion 221: inclined portion

300: air pumping portion 310: through hole

320: arch space portion

400: intermediate support portion 410: passage column portion

420: powder collection portion

500: powder discharge portion 510: powder discharge passage portion

520: powder collection hole 530: support

600: touch member

700: cover

Best Mode

[0024] The present invention provides a cosmetic container for powder having a pumping structure, the cosmetic container including: an accommodation portion

configured to accommodate a powder material; a lower support portion disposed over the accommodation portion, and configured to allow air to be introduced such that the powder material accommodated in the accommodation portion is discharged together with the introduced air; an air pumping portion disposed over the lower support portion, and configured to pump air so that the air is introduced into the lower support portion; an intermediate support portion disposed over the air pumping portion, and configured to discharge a powder material together with air and to collect a remaining powder material; and a powder discharge portion spaced apart upward from the intermediate support portion, and configured to allow the discharged powder material to be collected.

Mode for Invention

[0025] Embodiments of the present invention will be described with reference to the accompanying drawings below so that those having ordinary skill in the art to which the present invention pertains can easily practice the present invention. As those having ordinary skill in the art to which the present invention pertains can readily understand, the embodiments described below may be modified in various forms without departing from the concept and scope of the present invention. The same or similar parts are denoted by the same reference symbols throughout the drawings as much as possible.

[0026] The technical terms used herein are used merely to illustrate specific embodiments and are not intended to limit the invention. The singular forms used herein include plural forms unless the phrases clearly indicate the opposite.

[0027] The term "include" used herein is intended to specify specific features, regions, integers, steps, operations, elements and/or components, but is not intended to exclude the presence or addition of one or more other features, regions, integers, steps, operations, elements, components and/or groups thereof.

[0028] All the terms including the technical terms and the scientific terms used herein have the same meanings as generally understood by those having ordinary skill in the art to which the present invention pertains. The terms defined in dictionaries are additionally interpreted as having meanings consistent with the related technical literature and the presently disclosed content, and are not interpreted as having ideal or very formal meanings unless defined.

[0029] The present invention will be described with reference to the drawings below. For reference, the drawings may be partially exaggerated to describe the features of the present invention. In this case, it is preferable to be interpreted in light of the overall purport of the present specification.

[0030] FIG. 2 is a longitudinal sectional view of the portion of FIG. 1b exclusive of a cover. FIG. 3 is a longitudinal sectional view of the portion of FIG. 2 exclusive of a touch

member.

[0031] As shown in FIGS. 2 and 3, a cosmetic container for powder having a pumping structure according to the present invention includes an accommodation portion 100, a lower support portion 200, an air pumping portion 300, an intermediate support portion 400, and a powder discharge portion 500.

[0032] The accommodation portion 100 according to the present invention may have a general structure with a hollow, and may accommodate a powder material.

[0033] The lower support portion 200 according to the present invention may be disposed over the accommodation portion 100, and may allow air to be introduced such that the powder material accommodated in the accommodation portion 100 is discharged together with the introduced air.

[0034] The air pumping portion 300 according to the present invention may be disposed over the lower support portion 200, and may pump air so that the air is introduced into the lower support portion 200.

[0035] The intermediate support portion 400 according to the present invention may be disposed over the air pumping portion 300, and may discharge a powder material together with air and collect the powder material remaining after the discharge.

[0036] The powder discharge portion 500 according to the present invention may be spaced apart upward from the intermediate support portion 400, and may allow the discharged powder material to be collected.

[0037] In the cosmetic container for powder having a pumping structure according to the present invention, as shown in FIG. 3, air is lowered and introduced into the accommodation portion 100 by the pumping of the air pumping portion 300, and the air inside the accommodation portion 100 is discharged through the intermediate support portion 400 when air is continuously introduced by pumping. Since the accommodated powder is a fine powder, it is discharged together with air.

[0038] FIG. 5a is a perspective view of the lower support portion 200 according to the present invention, and FIG. 5b is a longitudinal sectional view of FIG. 5a. FIG. 6 is a longitudinal cross-sectional view of a state in which the accommodation portion 100 and the lower support portion 200 according to the present invention are coupled to each other.

[0039] The lower support portion 200 according to the present invention may be configured such that a powder discharge hole 210 is formed on one side thereof and a plurality of air inlet portions 220 is formed on the other side thereof.

[0040] The air inlet portions 220 according to the present invention may be provided in various structures and shapes (not shown) such as through holes (holes), elongated grooves, and grating pattern grooves.

[0041] Furthermore, as shown in FIG. 5, the lower support portion 200 may be configured such that a powder discharge hole 210 is formed at the center thereof and arc-shaped air inlet portions 220 are formed along the

edge thereof.

[0042] In the present invention, the arc-shaped air inlet portions 220 may be provided with inclined portions 221 (see FIG. 5b), and thus air may be introduced while being rotated in an inclined direction by the inclined portions 221 (see FIG. 6). When the fine powder is slightly agglomerated, it may be crushed by the air pressure of the rotationally introduced air, and the discharged air flow may be formed more powerfully.

[0043] FIG. 7a is a perspective view of the air pumping portion 300 according to the present invention, and FIGS. 7b and 7c are longitudinal sectional views of FIG. 7a. FIGS. 8a and 8b are longitudinal sectional views of a state in which the lower support portion 200 and the air pumping portion 300 according to the present invention are coupled to each other.

[0044] The air pumping portion 300 according to the present invention may be configured such that a through hole 310 communicating with the powder discharge hole 210 is provided therein, an arch space portion 320 communicating with the inlet portion 220 is provided in a ring shape therein, and the air pumping portion is made of a contractible flexible material. As the arch space portion 320 is contracted by pressure, the air pumping portion 300 may pump air into the inlet portions 220.

[0045] For example, when the arch space portion 320 made of a rubber or silicone material is pressed, an arch space is pressed downward and thus the space is reduced. In this case, the air in the arch space portion 320 is moved downward, and will be moved to the accommodation portion 100 through the communicating air inlet portions 220 of the lower support portion 200.

[0046] When the pressure on the arch space portion 320 is released, the arch space portion returns to its original state, and air will fill the arch space portion again. Thereafter, when pressure pumping is performed again, the air in the arch space portion will be moved to the accommodation portion 100 through the air inlet portions 220 again.

[0047] Through this pumping process, the particles of the discharged powder collide with each other, and thus there may be achieved the effect in which the size of the discharged particles is made uniform.

[0048] FIG. 9a is a perspective view of the intermediate support portion 400 according to the present invention, and FIGS. 9b and 9c are longitudinal sectional views of FIG. 9a. FIG. 10a is a perspective view of a state in which the air pumping portion 300 and the intermediate support portion 400 according to the present invention are coupled to each other, and FIGS. 10b and 10c are longitudinal sectional views of FIG. 10a.

[0049] The intermediate support portion 400 according to the present invention may be configured such that a passage column portion 410 communicating with the through hole 310 is provided therein and a plane-shaped collection portion 420 is formed to extend laterally over the passage column portion 410. The passage column portion 410 functions to move the powder of the accom-

modation portion 100 to the powder discharge portion 500.

[0050] In the present invention, the collection portion 420 is provided to be inclined downward, and thus the powder material placed on the collection portion 420 is moved to the passage column portion 410.

[0051] FIG. 11a is a perspective view of the powder discharge portion 500 according to the present invention, and FIGS. 11b and 11c are longitudinal sectional views of FIG. 11a. FIG. 12a is a longitudinal sectional view of a state in which the intermediate support portion 400 and the powder discharge portion 500 according to the present invention are coupled to each other, FIG. 12b shows a state in which the powder material is discharged in FIG. 12a, and FIG. 12c is a state in which the powder material is introduced again in FIG. 12a. FIGS. 13a and 13b show a powder discharge passage portion 510, powder collection holes 520, and supports 530 according to the present invention.

[0052] The powder discharge portion 500 according to the present invention has a flat plate shape, and may be provided with the powder discharge passage portion 510 communicating with the passage column portion 410 and also provided with the plurality of powder collection holes 520 in the flat plate thereof.

[0053] In the process of performing pumping, air and powder may be discharged upward through the plurality of powder collection holes 520 (see FIG. 12b). It is obvious that some of the powder may be discharged and introduced during the pumping process by the discharge and inlet pressure of air.

[0054] In a state in which pumping is stopped, the air and powder already discharged through the plurality of powder collection holes 520 may fall downward (see FIG. 12c).

[0055] In the present invention, the powder discharge passage portion 510 may be provided in an upward-widening passage structure under the flat plate (see FIG. 13).

[0056] The discharged air and powder may be distributed more widely while passing through a passage from a narrow passage to an upper wide passage via this structure.

[0057] In the present invention, the plurality of protruding supports 530 may be provided outside the powder discharge passage portion 510, and may allow the intermediate support portion 400 and the powder discharge portion 500 to be spaced apart from each other.

[0058] The plurality of supports 530 may be spaced apart from each other, and thus the powder material in the passage column portion 410 may be discharged or introduced again between the supports 530 (see FIG. 13).

[0059] Meanwhile, in the present invention, a touch member 600 is provided over the powder discharge portion 500. When the touch member 600 is pressed, the air pumping portion 300 may perform pumping.

[0060] Furthermore, a cover 700 may be further provided over the touch member 600.

[0061] The embodiments described herein and the accompanying drawings are merely illustrative of some of the technical spirit included in the present invention. Therefore, the embodiments disclosed herein are not intended to limit the technical spirit of the present invention, but are intended to describe the technical spirit of the present invention. Accordingly, it will be apparent that the scope of the technical spirit of the present invention is not limited by these embodiments. All modifications and specific embodiments that may be easily inferred within the scope of the technical spirit included in the specification and accompanying drawings of the present invention by those skilled in the art should be interpreted as being included in the scope of the present invention.

Claims

1. A cosmetic container for powder having a pumping structure, the cosmetic container comprising:
 - an accommodation portion configured to accommodate a powder material;
 - a lower support portion disposed over the accommodation portion, and configured to allow air to be introduced such that the powder material accommodated in the accommodation portion is discharged together with the introduced air;
 - an air pumping portion disposed over the lower support portion, and configured to pump air so that the air is introduced into the lower support portion;
 - an intermediate support portion disposed over the air pumping portion, and configured to discharge a powder material together with air and to collect a remaining powder material; and
 - a powder discharge portion spaced apart upward from the intermediate support portion, and configured to allow the discharged powder material to be collected.
2. The cosmetic container of claim 1, wherein the lower support portion is configured such that a powder discharge hole is formed on one side thereof and a plurality of air inlet portions is formed on a remaining side thereof.
3. The cosmetic container of claim 2, wherein the lower support portion is configured such that a powder discharge hole is formed at a center thereof and arc-shaped air inlet portions are formed along an edge thereof.
4. The cosmetic container of claim 3, wherein the arc-shaped air inlet portions are provided with inclined portions so that air is introduced while being rotated in an inclined direction.
5. The cosmetic container of claim 1, wherein the air pumping portion is configured such that a through hole communicating with the powder discharge hole is provided therein, an arch space portion communicating with the inlet portion is provided in a ring shape therein and the air pumping portion is made of a contractible flexible material so that as the arch space portion is contracted by pressure, the air pumping portion pumps air into the inlet portions.
6. The cosmetic container of claim 1, wherein the intermediate support portion is configured such that a passage column portion communicating with the through hole is provided therein and a plane-shaped powder collection portion is formed to extend laterally over the passage column portion.
7. The cosmetic container of claim 6, wherein the powder collection portion is provided to be inclined downward so that a powder material placed on the powder collection portion is moved to the passage column portion.
8. The cosmetic container of claim 1, wherein the powder discharge portion has a flat plate shape, and is provided with a powder discharge passage portion communicating with a passage column portion and also provided with a plurality of powder collection holes in a flat plate thereof.
9. The cosmetic container of claim 8, wherein the powder discharge passage portion is provided in an upward-widening passage structure under the flat plate.
10. The cosmetic container of claim 9, wherein a plurality of protruding supports is provided outside the powder discharge passage portion, and allows the intermediate support portion and the powder discharge portion to be spaced apart from each other.
11. The cosmetic container of claim 10, wherein the plurality of supports is spaced apart from each other so that a powder material in the passage column portion is discharged or introduced again between the supports.
12. The cosmetic container of claim 1, wherein a touch member is provided over the powder discharge portion so that when the touch member is pressed, the air pumping portion performs pumping.
13. The cosmetic container of claim 12, wherein a cover is further provided over the touch member.

FIG. 1

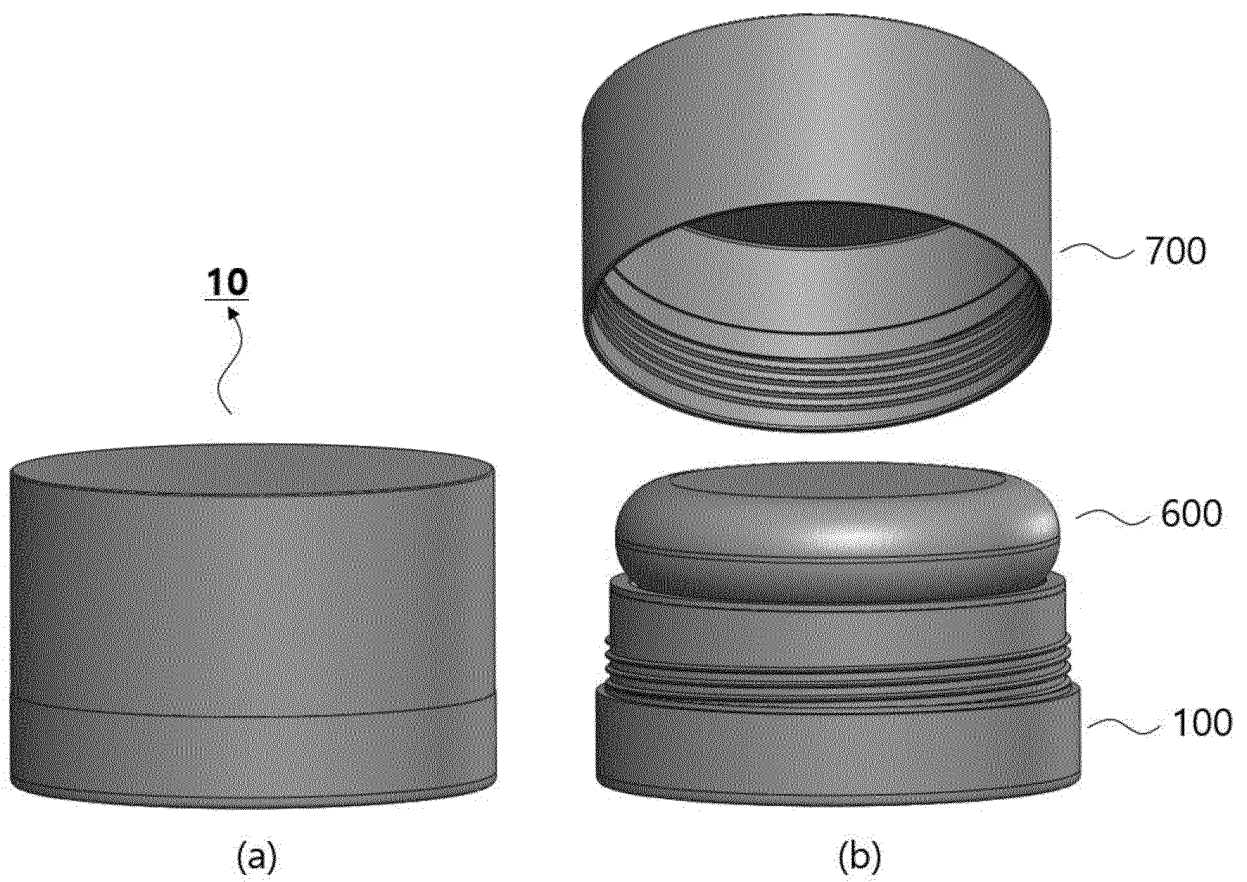


FIG. 2

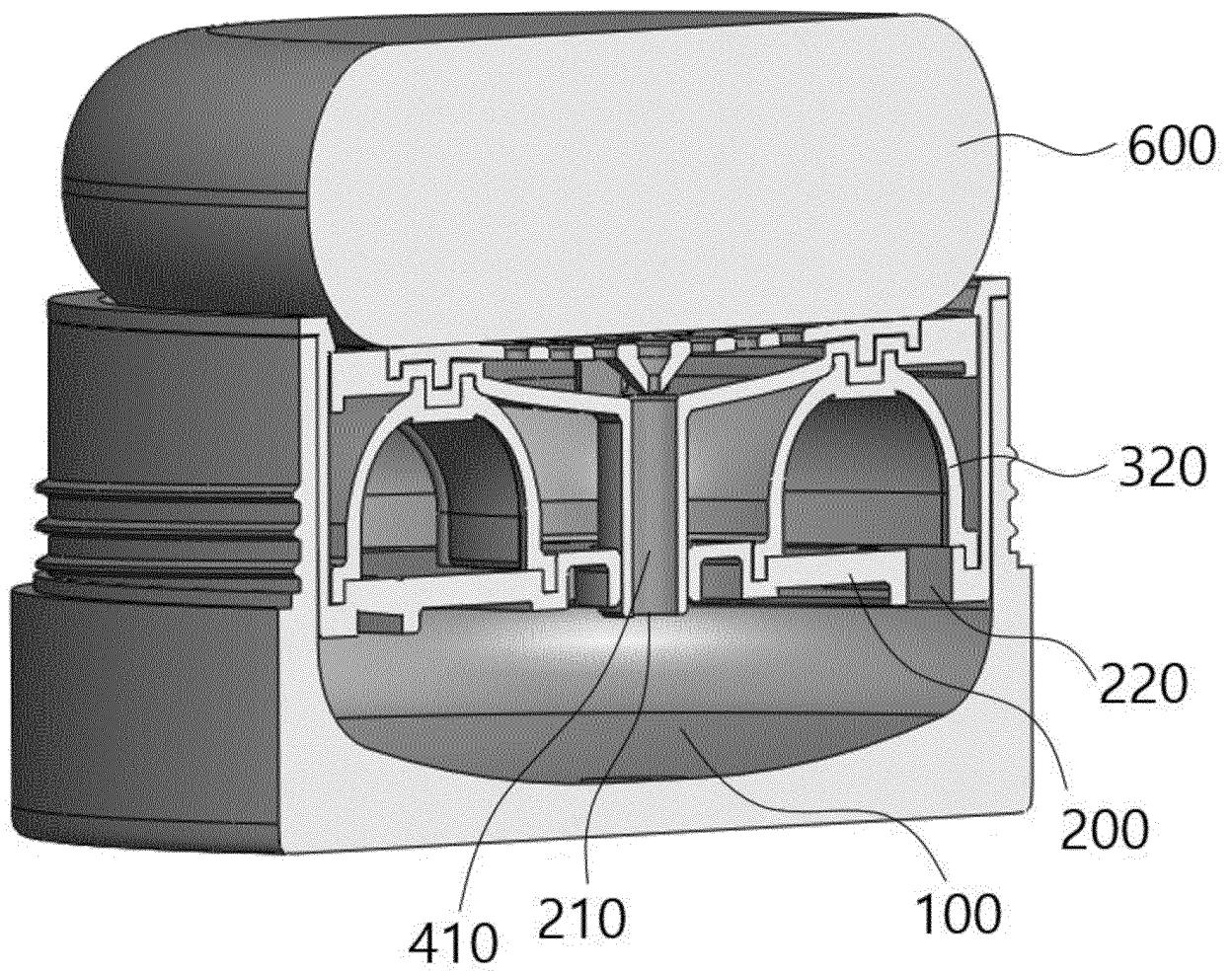


FIG. 3

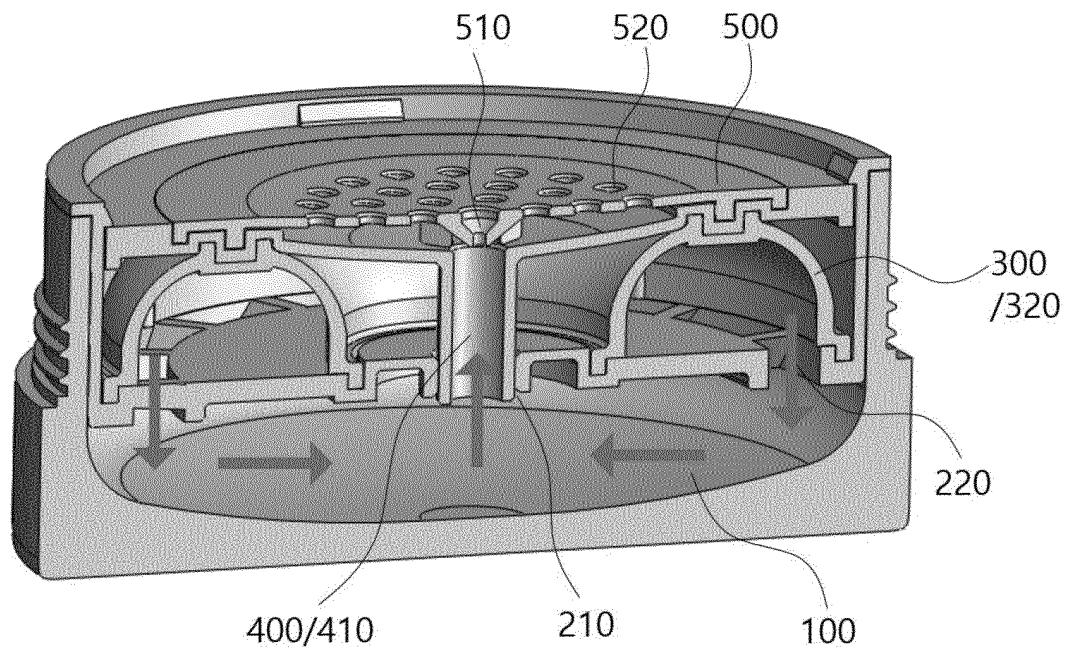


FIG. 4

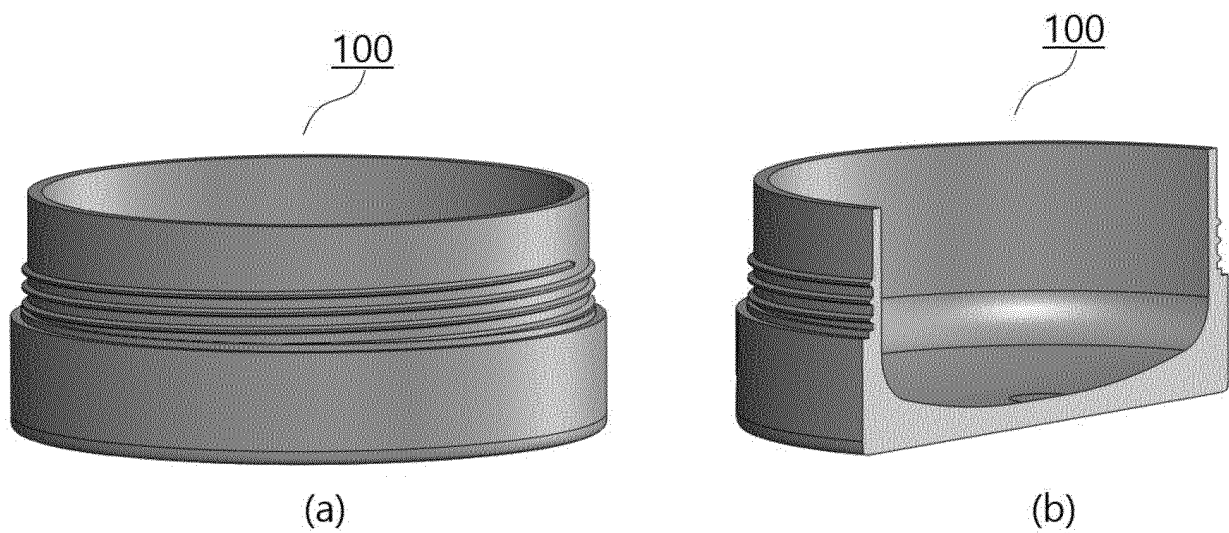


FIG. 5

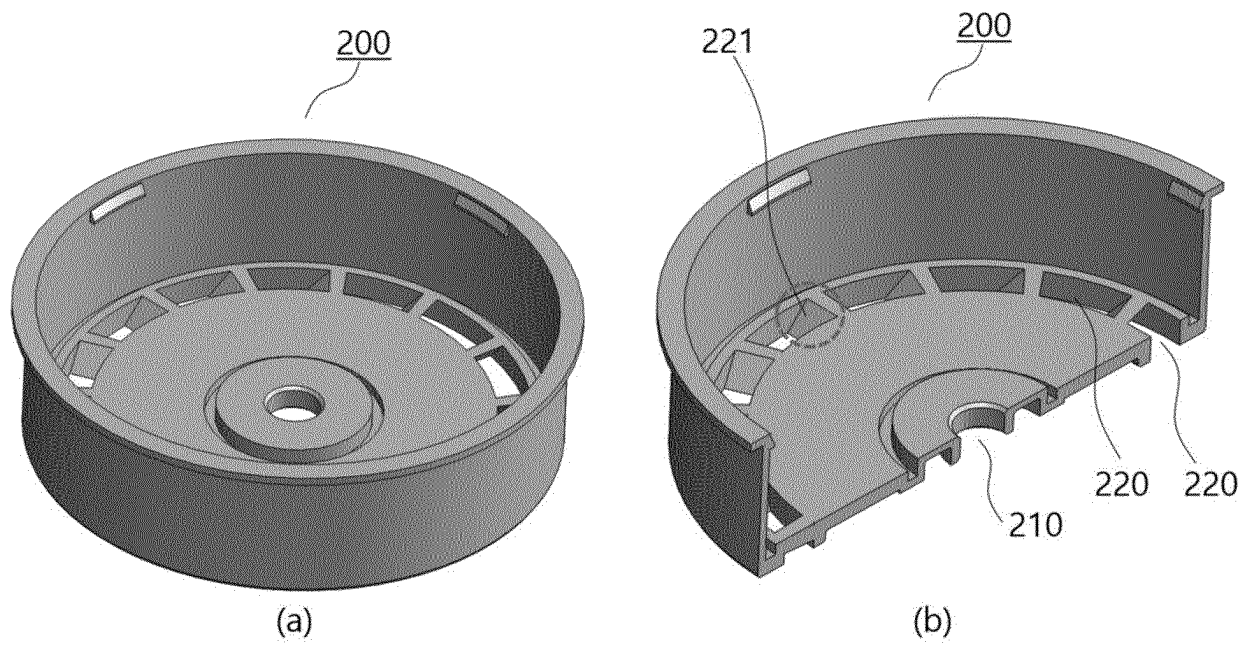


FIG. 6

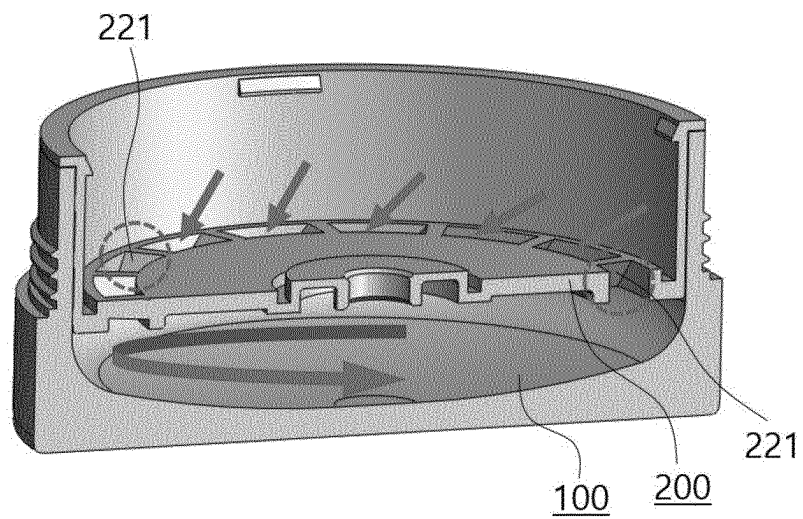


FIG. 7

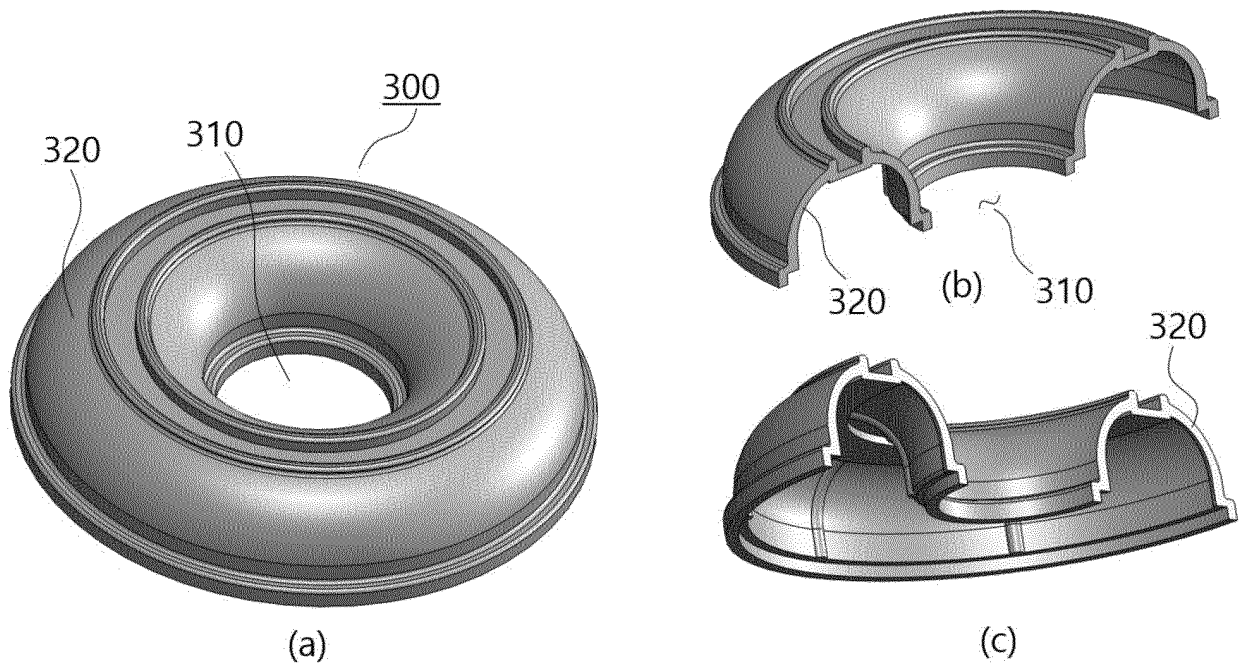


FIG. 8

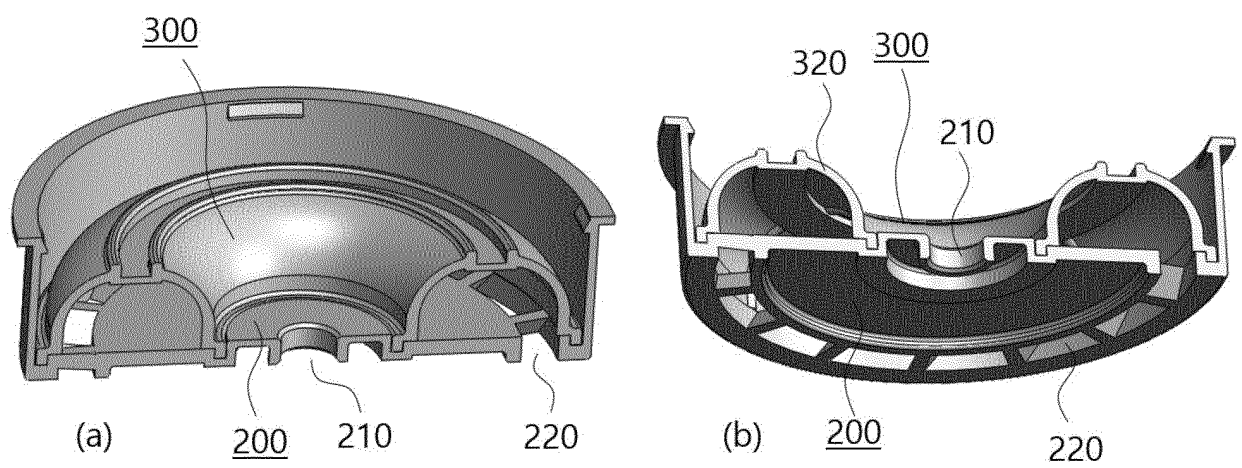


FIG. 9

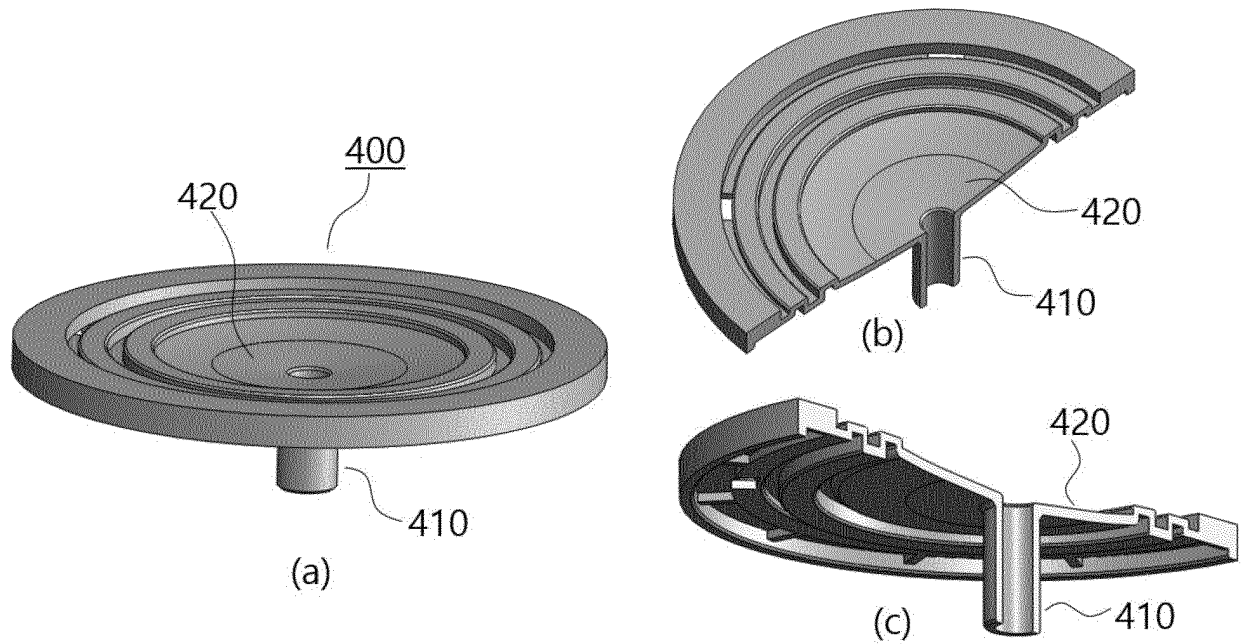


FIG. 10

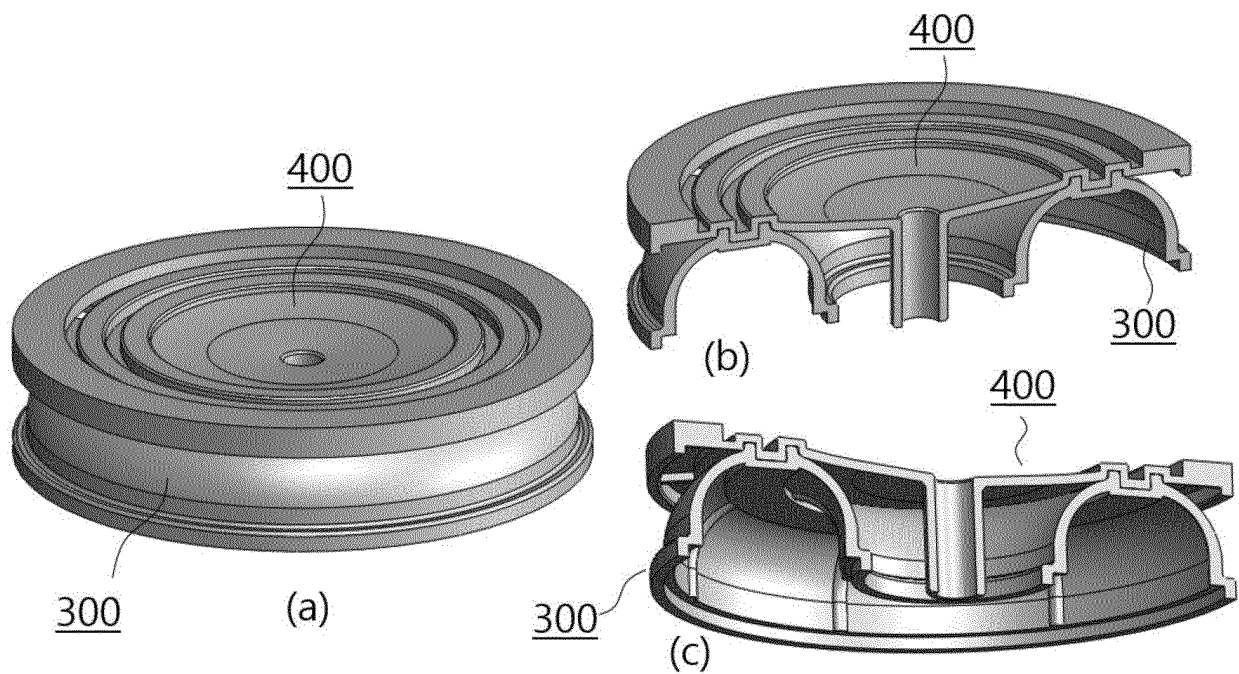


FIG. 11

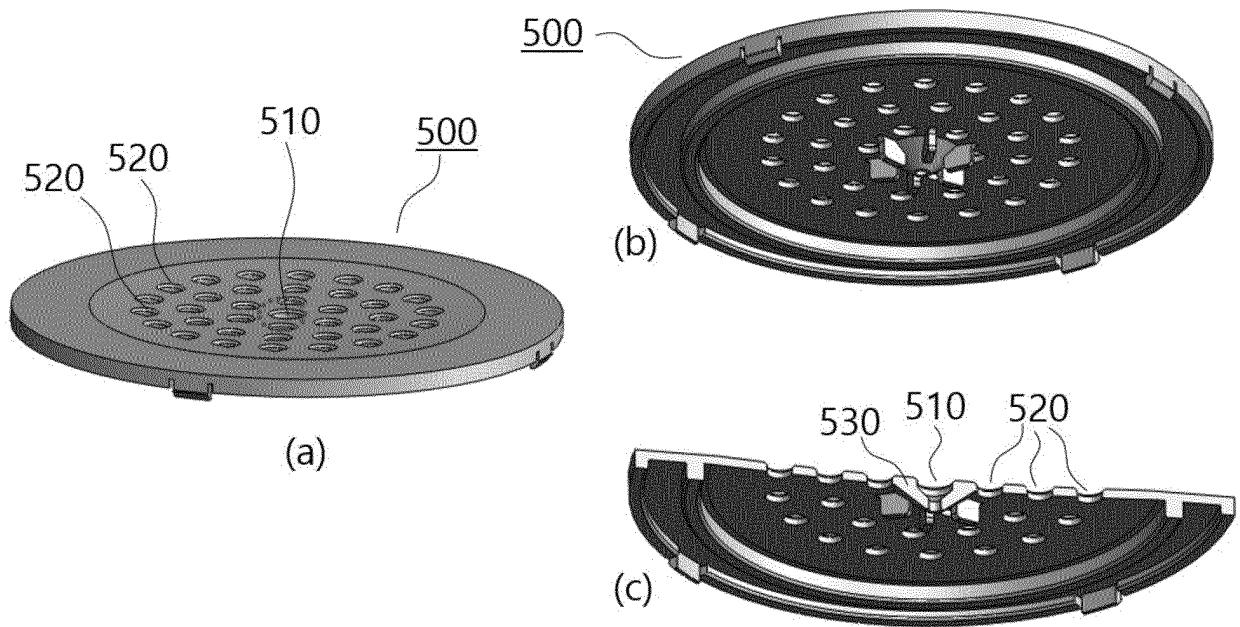


FIG. 12

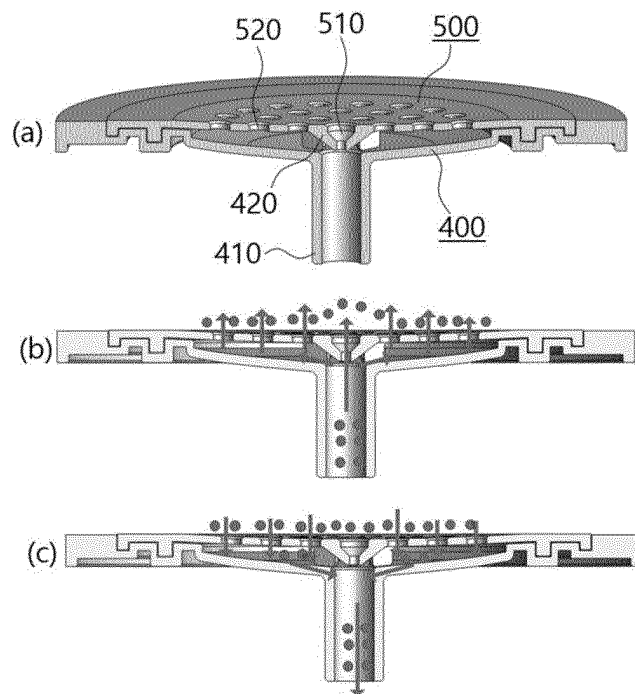
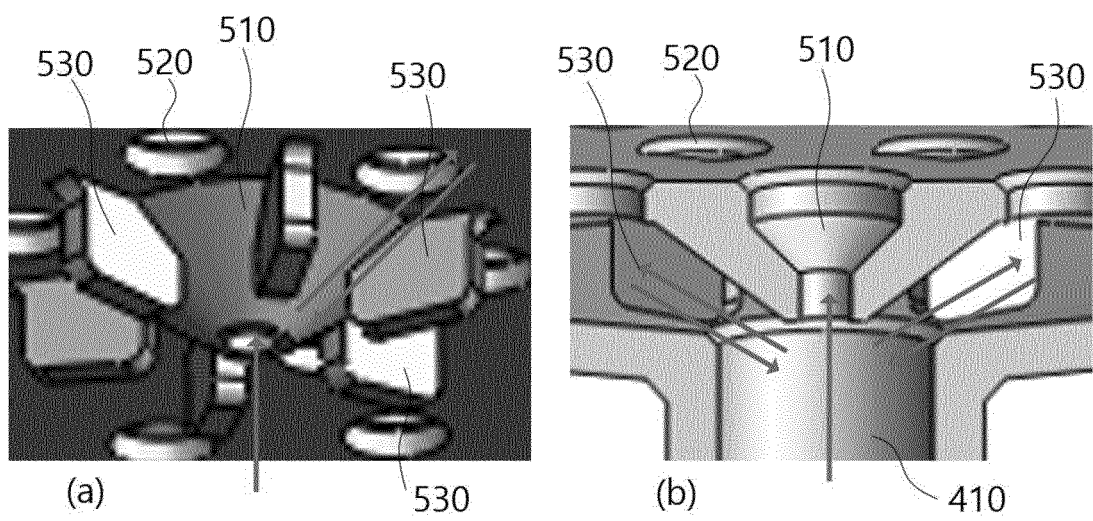


FIG. 13



INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2020/004720

A. CLASSIFICATION OF SUBJECT MATTER

A45D 33/02(2006.01)i, A45D 33/00(2006.01)i, B05B 7/14(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 33/02; A45D 33/00; A45D 33/06; A45D 33/16; A45D 33/34; B65D 47/34; B05B 7/14

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, powder, pump, discharge

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 10-1529424 B1 (JEONG, Kyu Sun) 16 June 2015 See claim 1; paragraphs [0016]-[0019], [0037] and [0040]; and figures 3 and 4.	1-13
Y	KR 10-2011-0033857 A (ELC MANAGEMENT LLC) 31 March 2011 See paragraph [0016]; and figure 1.	1-13
Y	JP 5229989 B2 (KATSUSHIKA KK et al.) 03 July 2013 See paragraph [0034]; and figure 5.	4
A	KR 10-1171305 B1 (JUNG, Man Taek) 20 August 2012 See entire document.	1-13
A	KR 10-0602426 B1 (JO, Ji Won) 20 July 2006 See entire document.	1-13

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

* Special categories of cited documents:

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"P" document published prior to the international filing date but later than the priority date claimed

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Date of the actual completion of the international search

28 AUGUST 2020 (28.08.2020)

Date of mailing of the international search report

28 AUGUST 2020 (28.08.2020)

Name and mailing address of the ISA/KR


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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2020/004720

Patent document cited in search report	Publication date	Patent family member	Publication date
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