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(54) **SEALED LIPSTICK TUBE**

(57) The present application relates to a sealed lipstick tube. The sealed lipstick tube includes a housing base, a housing inner tube, a cartridge, a sealing sleeve, and a housing outer tube. An outer wall of the housing base is formed with an annular engaging groove, an inner wall of the housing inner tube is formed with an annular engaging protrusion, wherein the engaging protrusion is fitted into the engaging groove. The cartridge is mounted on the housing base and is received in an installation space, which is defined by the housing base and the housing inner tube. An inner wall of the sealing sleeve abuts against the outer wall of the housing base. The housing outer tube is sleeved on outer walls of the housing inner tube and the sealing sleeve. The sealed lipstick tube has simple design and good sealing performance.

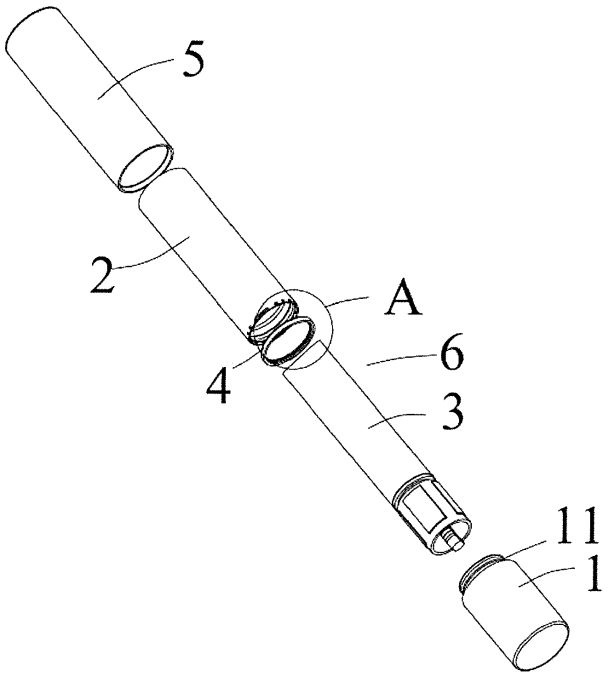

FIG. 1

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Description

FIELD OF THE DISCLOSURE

[0001] The disclosure relates to the field of lipstick technologies, and more particularly to a sealed lipstick tube.

BACKGROUND

[0002] Lipsticks have the advantages of high color saturation and strong hiding power, thereby becoming the most commonly used cosmetics for modern women. It is commonly used by users to modify the lip shape and lip color. The lipstick is generally tubular shaped, and a lipstick tube generally includes a cartridge sleeve for accommodating the lipstick, and a cover body covering the cartridge sleeve. The cartridge sleeve and the cover body are snapped and connected together. However, the above-designed lipstick tube has poor sealing effect, especially used for a long period of time. The above-designed lipstick tube has a poor sealing effect, especially after long time usage. Because there is a gap in the snap connection between the cartridge sleeve and the cover body, it is easy to cause the outside air to enter the inside of the tube, so that the lipstick is contaminated and the volatilization is accelerated.

SUMMARY

[0003] On such basis, the present disclosure provides a sealed lipstick tube with simple design and good sealing effect.

[0004] In one embodiment, the sealed lipstick tube includes a housing base, a housing inner tube, a cartridge, a sealing sleeve, and a housing outer tube. An outer wall of the housing base is formed with an annular engaging groove around an axis of the housing base. An inner wall of the housing inner tube is formed with an annular engaging protrusion around the axis of the housing base, the annular engaging protrusion is fitted into the annular engaging groove. The housing base and the housing inner tube are cooperatively define an installation space. The cartridge is configured for accommodating a lipstick, and is mounted on the housing base and is received in the installation space. The sealing sleeve is fixed at an end of the housing inner tube adjacent to the annular engaging protrusion, an inner wall of the sealing sleeve abuts against the outer wall of the housing base. The housing outer tube is sleeved on outer walls of the housing inner tube and the sealing sleeve.

[0005] In one embodiment, an inner wall of the sealing sleeve is formed with an annular sealing protrusion, and the annular sealing protrusion abuts against the outer wall of the housing based.

[0006] In one embodiment, the sealing sleeve defines an annular fixing groove, the end of the housing inner tube is engaged in the annular fixing groove; the housing inner tube defines a plurality of fixing holes distributed around the axis of the housing base, a plurality of fixing posts corresponding to the plurality of fixing holes are disposed in the annular fixing groove, and each of the plurality of fixing posts penetrates through a corresponding one of the plurality of fixing holes.

[0007] In one embodiment, the cartridge comprises a cartridge base, a cartridge sleeve, a screwing tray, and a screwing rod. The cartridge base is mounted on the housing base. One end of the cartridge sleeve is movably connected to one end of the cartridge base. The screwing tray is disposed in the cartridge sleeve. The screwing rod is threaded with and penetrates through a central portion of the housing base, an end of the screwing rod is connected to the screwing tray.

[0008] In one embodiment, a columnar lipstick is disposed on the screwing tray, and the screwing tray comprises a plurality of fixing elements inserting into the lipstick.

[0009] In one embodiment, the cartridge base and the housing base are coaxial.

[0010] In one embodiment, the housing base, the housing inner tube, the cartridge, the sealing sleeve, and the housing outer tube are coaxial.

[0011] The beneficial effects of the disclosure are described as follows. The design of the sealed lipstick tube of the present disclosure is simple. The engagement between the housing base and the sealing sleeve fixed on one end of the housing inner tube is used for sealing, so that the sealing performance of the sealed lipstick tube of the present disclosure is good. In addition, the sealing sleeve, the housing outer tube is capable of protecting the housing inner tube housing outer tube is sleeved at the outer walls of the housing inner tube and the and the sealing sleeve, thereby increasing the service life of the sealing sleeve. Final, the housing base, the housing inner tube, and the housing outer tube form an integral structure, so that the appearance of the product is neat and beautiful.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Accompanying drawings are for providing further understanding of embodiments of the disclosure. The drawings form a part of the disclosure and are for illustrating the principle of the embodiments of the disclosure along with the literal description. Apparently, the drawings in the description below are merely some embodiments of the disclosure, a person skilled in the art can obtain other drawings according to these drawings without creative efforts. In the figures:

FIG. 1 is an exploded structure view of a sealed lipstick tube according to one embodiment of the disclosure.

FIG. 2 is an enlarged view of part A of FIG. 1.

FIG. 3 is a cross-sectional view of the sealed lipstick tube according to one embodiment of the disclosure.

FIG. 4 is an exploded structure view of another perspective of the sealed lipstick tube according to one embodiment of the disclosure.

FIG. 5 is an enlarged view of part B of FIG. 4.

[0013] Description of reference numerals: 1. housing base; 2. housing inner tube; 3. cartridge; 4. sealing sleeve; 5. housing outer tube; 11. annular engaging groove; 21. annular engaging protrusion; 6. installation space; 41. annular sealing protrusion; 42. annular fixing groove; 43. fixing post; 22. fixing hole; 31. cartridge base; 32. cartridge sleeve; 33. screwing tray; 34. screwing rod; 311. fixing protrusion; 321. rotation fixing groove.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0014] The specific structural and functional details disclosed herein are only representative and are intended for describing exemplary embodiments of the disclosure. However, the disclosure can be embodied in many forms of substitution, and should not be interpreted as merely limited to the embodiments described herein.

[0015] In the description of the disclosure, terms such as "center", "transverse", "above", "below", "left", "right", "vertical", "horizontal", "top", "bottom", "inside", "outside", etc. for indicating orientations or positional relationships refer to orientations or positional relationships as shown in the drawings; the terms are for the purpose of illustrating the disclosure and simplifying the description rather than indicating or implying the device or element must have a certain orientation and be structured or operated by the certain orientation, and therefore cannot be regarded as limitation with respect to the disclosure. Moreover, terms such as "first" and "second" are merely for the purpose of illustration and cannot be understood as indicating or implying the relative importance or implicitly indicating the number of the technical feature. Therefore, features defined by "first" and "second" can explicitly or implicitly include one or more the features. In the description of the disclosure, unless otherwise indicated, the meaning of "plural" is two or more than two. In addition, the term "comprise" and any variations thereof are meant to cover a non-exclusive inclusion.

[0016] In the description of the disclosure, is should be noted that, unless otherwise clearly stated and limited, terms "mounted", "connected with" and "connected to" should be understood broadly, for instance, can be a fixed connection, a detachable connection or an integral connection; can be a mechanical connection, can also be an electrical connection; can be a direct connection, can also be an indirect connection by an intermediary, can be an internal communication of two elements. A person skilled in the art can understand concrete meanings of the terms in the disclosure as per specific circumstances.

[0017] The terms used herein are only for illustrating concrete embodiments rather than limiting the exemplary embodiments. Unless otherwise indicated in the content, singular forms "a" and "an" also include plural. Moreover, the terms "comprise" and/or "include" define the existence of described features, integers, steps, operations, units and/or components, but do not exclude the existence or addition of one or more other features, integers, steps, operations, units, components and/or combinations thereof.

[0018] The disclosure will be further described in detail with reference to accompanying drawings and preferred embodiments as follows.

[0019] Please referring to FIGS. 1 to 3, FIG. 1 is an exploded structure view of a sealed lipstick tube in the embodiment, FIG. 2 is an enlarged view of part A of FIG. 1, and FIG. 3 is a cross-sectional view of the sealed lipstick tube.

[0020] This embodiment provides a sealed lipstick tube, including a housing base 1, a housing inner tube 2, a cartridge 3 for disposing a lipstick, a sealing sleeve 4, and a housing outer tube 5. The housing base 1, the housing inner tube 2, the cartridge 3, and the housing outer tube 5 each are tubular-shaped structures. An outer wall of the housing base 1 is provided with an annular engaging groove 11 around an axis of the housing base 1, and an inner wall of the housing inner tube 2 is provided with an annular engaging protrusion 21 around the axis of the housing base 1. The housing base 1 and the housing inner tube 2 are engaged together, by enabling the annular engaging protrusion 21 to be fitted and clamped in the annular engaging groove 11. The housing base 1 and the housing inner tube 2 are made of hard plastic material, and when the annular engaging protrusion 21 is fitted in the annular engaging groove 11, a buzzing sound is generated to remind the user to snap in place. The housing base 1 and the housing inner tube 2 cooperatively define an installation space 6, and the installation space 6 is larger than a volume of the cartridge 3. The cartridge 3 is mounted on the housing base 1 and is located in the installation space 6. The sealing sleeve 4 is fixed at the end of the housing inner tube 2 that adjacent to the annular engaging protrusion 21, and an inner wall of the sealing sleeve 4 abuts against the outer wall of the housing base 1. The sealing sleeve 4 can be fixed on the housing inner tube 2 by means of injection molding to strengthen the firmness thereof. The housing outer tube 5 is sleeved on the outer wall of housing inner tube 2 and an outer wall of the sealing sleeve 4 at the same time, that is, the housing outer tube 5 simultaneously encapsulates the housing inner tube 2 and the sealing sleeve 4, thereby protecting the housing inner tube 2 and the sealing sleeve 4. In addition, the housing inner tube 2 and the sealing sleeve 4 can be designed as the same color, so that the appearance of the product is more neat and beautiful. In the present application, the sealing sleeve 4 is made of a TPE (Thermoplastic Elastomer) material with high strength and high elasticity, or a silicone material, or a mixed material of TPE and silicone. These materials can effectively improve the sealing performance of the sealing sleeve 4. Of course, the sealing

sleeve 4 can also use other materials as long as it can have a proper sealing effect.

[0021] Further, referring to FIG. 2, the inner wall of the sealing sleeve 4 is provided with an annular sealing protrusion 41, and a cross-sectional of the annular sealing protrusion 41 is tapered. The annular sealing protrusion 41 utilizes a protruding portion to abut against the outer wall of the housing base 1, thereby further improving the sealing effect of the sealed lipstick tube of the disclosure.

[0022] Further, referring to FIG. 4 and FIG. 5, FIG. 4 is an exploded structure view of another perspective of the sealed lipstick tube in the embodiment, and FIG. 5 is an enlarged view of part B of FIG. 4. An annular fixing groove 42 is defined in the sealing sleeve 4. The annular fixing groove 42 matches the nozzle of the housing inner tube 2 in shape and size. The annular fixing groove 42 engages with one end of the housing inner tube 2, that is, it is stuck at the nozzle of the housing inner tube 2. A plurality of fixing holes 22 are defined in the tube wall of the housing inner tube 2, uniformly distributed around the axis of the housing base 1. A plurality of fixing posts 43 corresponding to the plurality of fixing holes 22 are disposed in the annular fixing groove 42, and each fixing post 43 passes through a corresponding fixing hole 22. The annular fixing groove 42, the fixing holes 22, and the fixing posts 43 constitute a fixing mechanism, which can further strengthen the fixing of the sealing sleeve 4 on the housing inner tube 2 and prevent the sealing sleeve 4 from falling off. So, the sealing and the waterproof performance of the sealed lipstick tube of the disclosure are ensured to be stable and effective.

[0023] Further, referring to FIG. 3, the cartridge 3 includes a cartridge base 31, a cartridge sleeve 32, a screwing tray 33, and a screwing rod 34. The cartridge base 31 is mounted on the housing base 1 by means of glue. An outer wall of the cartridge base 31 is provided with a plurality of fixing protrusions 311, and these fixing protrusions 311 can prevent the cartridge base 31 from rotating in the housing base 1. An end of the cartridge sleeve 32 is movably connected with an end of the cartridge base 31. In detail, a rotation fixing groove 321 is defined in the cartridge sleeve 32, the end of the cartridge base 31 is fittingly engaged in the rotation fixing groove 321 and forms a clearance fit with the cartridge sleeve 32, so that the cartridge sleeve 32 can be rotated about its axis relative to the cartridge base 31. The screwing tray 33 is disposed in the cartridge sleeve 32. The screwing rod 34 is threaded with and penetrates through a central portion of the cartridge base 31. The screwing rod 34 and the cartridge base 31 are engaged together by threads. One end of the screwing rod 34 is connected to the screwing tray 33. When in use, the user holds the cartridge sleeve 32, and then rotates the cartridge base 31 to control the extension and retraction of the screwing tray 33. A columnar lipstick may be positioned at the screwing tray 33 and received in the cartridge sleeve 32, as the rotation of the cartridge base 31, the lipstick can be correspondingly extended out from or retracted into the cartridge sleeve 32. The screwing tray 33 includes a number of rod-shaped fixing elements 331 fixed therein, the fixing elements 331 are configured for inserting into the lipstick and thereby increasing the bond between the lipstick and the screwing tray 33. The fixing elements 331 are adjacent to the cartridge base 31, and are uniformly distributed around the axis of the cartridge base 31. The cartridge base 31 is coaxial with the housing base 1. Actually, the housing base 1, the housing inner tube 2, the cartridge 3, the sealing sleeve 4, and the housing outer tube 5 are coaxial. When the lipstick is not in use, the lipstick can be hidden in the cartridge sleeve 32. In this way, the effect of preventing the lipstick from being contaminated when not in use is achieved.

[0024] In summary, the design of the sealed lipstick tube of the present disclosure is simple. The engagement between the housing base 1 and the sealing sleeve 4 fixed on one end of the housing inner tube 2 is used for sealing, so that the sealing performance of the sealed lipstick tube of the present disclosure is good. In addition, the housing outer tube 5 is sleeved at the outer walls of the housing inner tube 2 and the sealing sleeve 4, the housing outer tube 5 is capable of protecting the housing inner tube 2 and the sealing sleeve 4, thereby increasing the service life of the sealing sleeve 4. Final, the housing base 1, the housing inner tube 2, and the housing outer tube 5 form an integral structure, so that the appearance of the product is neat and beautiful.

[0025] The foregoing contents are detailed description of the disclosure in conjunction with specific preferred embodiments and concrete embodiments of the disclosure are not limited to these description. For the person skilled in the art of the disclosure, without departing from the concept of the disclosure, simple deductions or substitutions can be made and should be included in the protection scope of the application.

Claims

1. A sealed lipstick tube comprising:

a housing base (1), wherein an outer wall of the housing base (1) is formed with an annular engaging groove (11) around an axial line direction of the housing base (1);

a housing inner tube (2), wherein an inner wall of the housing inner tube (2) is formed with an annular engaging protrusion (21) around the axial line direction of the housing base (1), the annular engaging protrusion (21) is fitted into the annular engaging groove (11), and the housing base (1) and the housing inner tube (2) cooperatively define an installation space (6);

a cartridge (3), wherein the cartridge (3) is configured for accommodating a lipstick, and further is mounted on the housing base (1) and received in the installation space (6);

a sealing sleeve (4), wherein the sealing sleeve (4) is fixed at an end of the housing inner tube (2) adjacent to the annular engaging protrusion (21), and an inner wall of the sealing sleeve (4) abuts against the outer wall of the housing base (1); and

a housing outer tube (5), sleeved on outer walls of the housing inner tube (2) and the sealing sleeve (4).

2. The sealed lipstick tube according to claim 1, wherein the inner wall of the sealing sleeve (4) is formed with an annular sealing protrusion (41), and the annular sealing protrusion (41) abuts against the outer wall of the housing base (1).

3. The sealed lipstick tube according to claim 1 or 2, wherein the sealing sleeve (4) is formed with an annular fixing groove (42), and the annular fixing groove (42) is engaged with the end of the housing inner tube (2); the housing inner tube (2) is formed with a plurality of fixing holes (22) distributed around the axial line direction of the housing base (1), a plurality of fixing posts (43) corresponding to the plurality of fixing holes (22) are disposed in the annular fixing groove (42), and each of the plurality of fixing posts (43) penetrates through a corresponding one of the plurality of fixing holes (22).

4. The sealed lipstick tube according to one of claims 1-3, wherein the cartridge comprises:

a cartridge base (31), mounted on the housing base (1);

a cartridge sleeve (32), wherein an end of the cartridge sleeve (32) is movably connected to an end of the cartridge base (31);

a screwing tray (33), disposed in the cartridge sleeve (32); and

a screwing rod (34), penetrating through a central portion of the housing base (1) and an end of the screwing rod (34) being connected to the screwing tray (33).

5. The sealed lipstick tube according to one of the claims 2-4, wherein the sealing sleeve (4) is formed with an annular fixing groove (42), and the annular fixing groove (42) is engaged with the end of the housing inner tube (2).

6. The sealed lipstick tube according to claim 5, wherein the housing inner tube (2) defines a plurality of fixing holes (22) distributed around the axis of the housing base (1), a plurality of fixing posts (43) corresponding to the plurality of fixing holes (22) are formed in the annular fixing groove (42), and each of the plurality of fixing posts (43) penetrates through a corresponding one of the plurality of fixing holes (22).

7. The sealed lipstick tube according to claim 6, wherein the cartridge comprises:

a cartridge base (31), mounted on the housing base (1);

a cartridge sleeve (32), wherein an end of the cartridge sleeve (32) is movably connected to an end of the cartridge base (31);

a screwing tray (33), disposed in the cartridge sleeve (32); and

a screwing rod (34), threaded with and penetrating through a central portion of the housing base (1), an end of the screwing rod (34) being connected to the screwing tray (33).

8. The sealed lipstick tube according to claim 7, wherein a columnar lipstick is disposed on the screwing tray (33), and the screwing tray (33) comprises a number of fixing elements (331) inserting into the lipstick.

9. The sealed lipstick tube according to claim 7 or 8 , wherein the cartridge base (31) and the housing base (1) are coaxial.

10. The sealed lipstick tube according to claim 1, wherein the housing base (1), the housing inner tube (2), the cartridge (3), the sealing sleeve (4), and the housing outer tube (5) are coaxial.

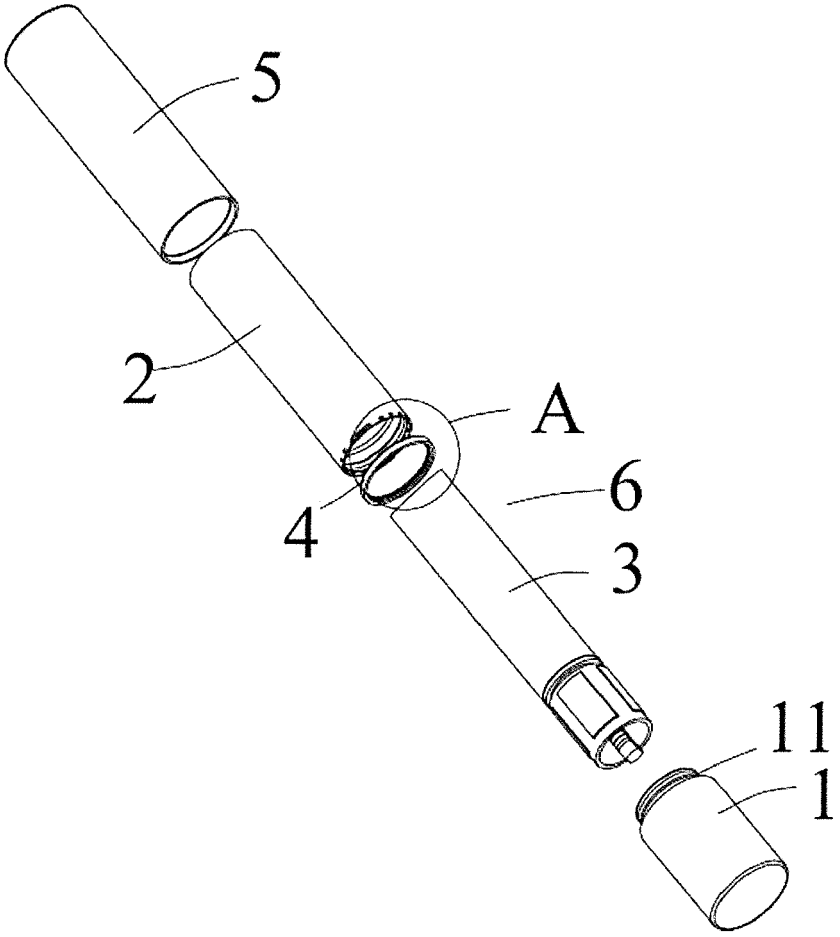

FIG. 1

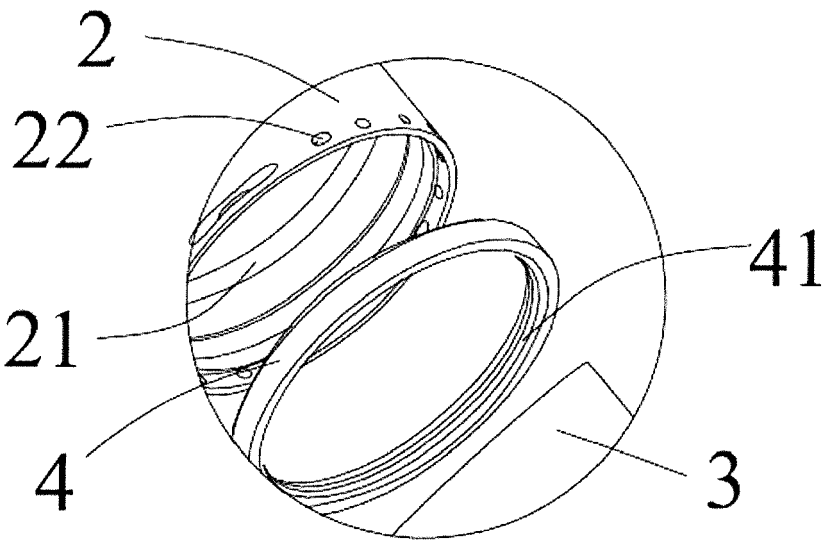

FIG. 2

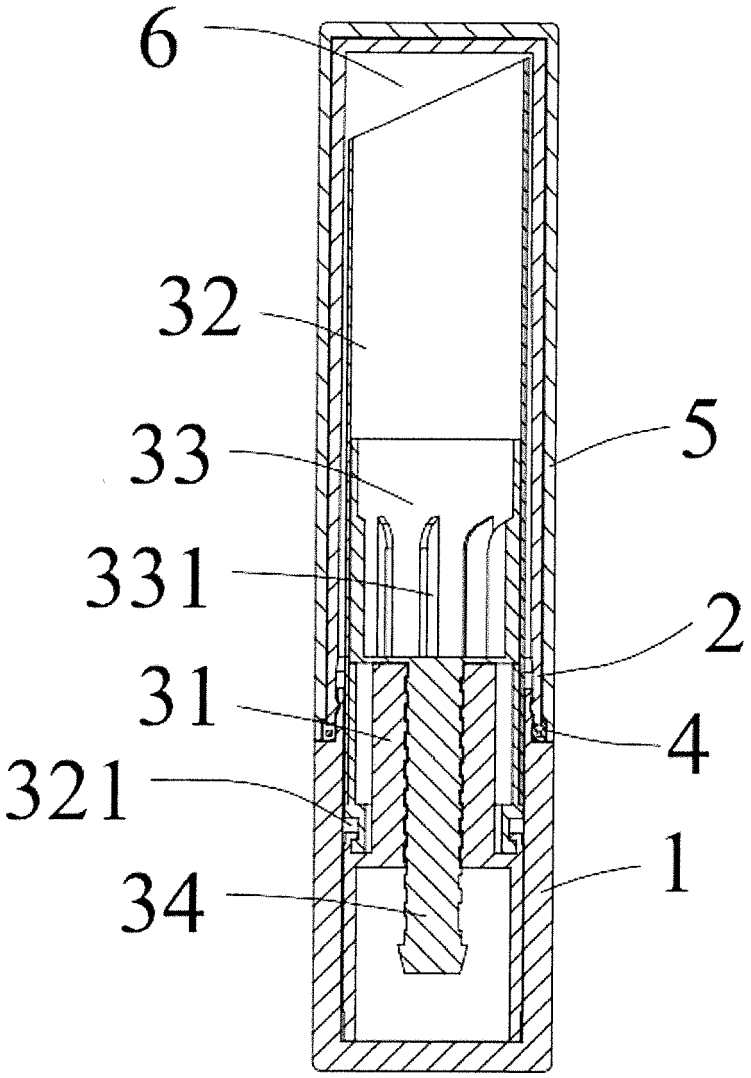

FIG. 3

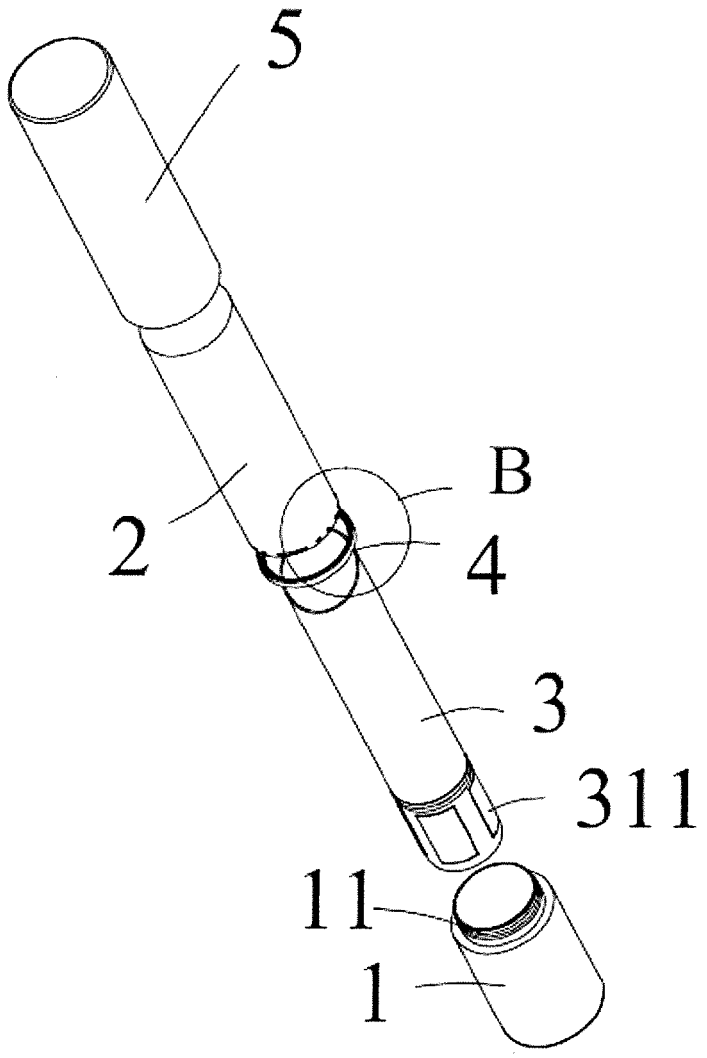

FIG. 4

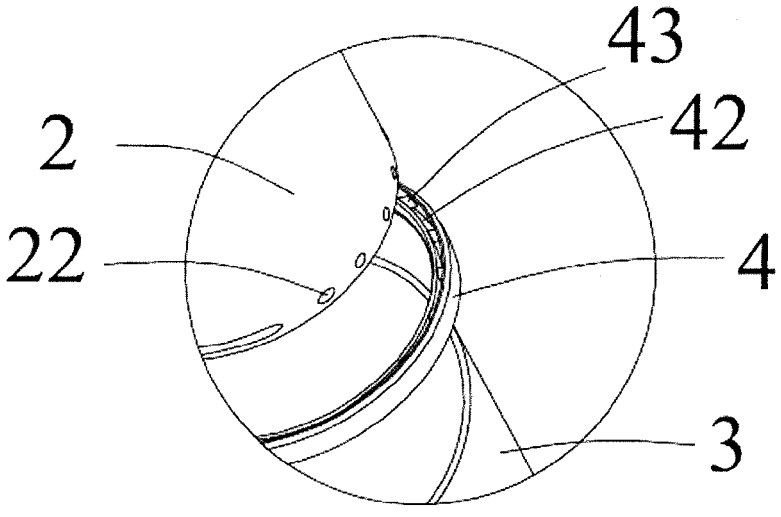

FIG. 5

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EUROPEAN SEARCH REPORT

Application Number
EP 18 18 9789

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	KR 2017 0083218 A (RICH COS CO LTD [KR]) 18 July 2017 (2017-07-18) * the whole document *	1-10	INV. A45D40/04
X	EP 1 088 494 A2 (OEKAMETALL OEHLHORN GMBH & CO [DE]) 4 April 2001 (2001-04-04) * paragraphs [0010] - [0012]; figures *	1,2,4,10	

TECHNICAL FIELDS SEARCHED (IPC)

A45D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	11 March 2019	Dinescu, Daniela

CATEGORY OF CITED DOCUMENTS

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11-03-2019

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