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(54) **COSMETIC PACKAGE**

(57) The present application relates to a cosmetic package, comprising a base as well as a cup, a guide sleeve and a drive sleeve made of the same metal material. The cup is configured to accommodate and support cosmetics. The guide sleeve is arranged around the cup which is movable in the guide sleeve along an axial direction of the guide sleeve. The guide sleeve comprises at least one guide groove located on a sidewall of the guide sleeve, the cup comprises at least one transmission protrusion slidable along the guide groove and protruding from an outer wall of the guide sleeve. The drive sleeve is mounted around the guide sleeve. The inner wall of the drive sleeve comprises a spiral groove cooperating with the transmission protrusion of the cup. The transmission protrusion is located in the spiral groove. The driving sleeve drives the cup to move along the axial direction through the cooperation of the spiral groove and the transmission protrusion. A bottom of the guide sleeve is detachably installed on the base. The cosmetic package can make the recycling of waste packages more convenient.

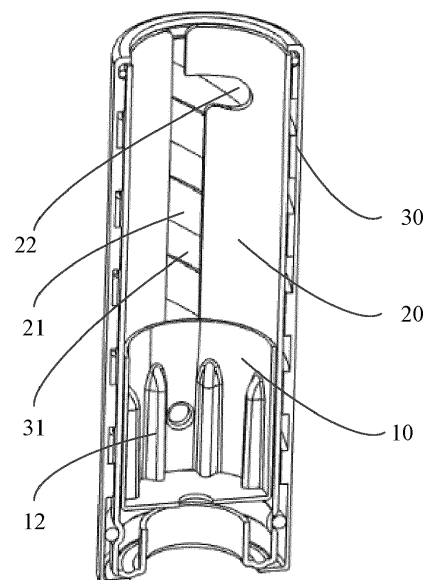


FIG. 3

Description

TECHNICAL FIELD

[0001] The present application relates to a package container, and in particular to a cosmetic package.

BACKGROUND

[0002] Lipstick is a commonly used cosmetic, and is generally equipped with a convenient lipstick package, that is, a lipstick tube. The lipstick package is generally composed of multiple elements, and the installation between some elements is non-detachable. Therefore, the existing lipstick package has the problem that it is difficult to recycle after use.

[0003] However, with the increasingly strict requirements of environmental protection, the recovery of waste package is also a design requirement. Therefore, there is a strong need to provide a package that facilitates the recycling.

SUMMARY

[0004] In view of this, embodiments of the present application desire to provide a cosmetic package, which can make the recycling of waste packages more convenient.

[0005] To this end, the technical solutions of embodiments of the present application are implemented as follows.

[0006] The embodiment of the present application provide a cosmetic package, comprising a base as well as a cup, a guide sleeve and a drive sleeve made of the same metal material.

[0007] The cup is configured to accommodate and support cosmetics.

[0008] The guide sleeve is arranged around the cup which is movable in the guide sleeve along an axial direction of the guide sleeve. The guide sleeve comprises at least one guide groove located on a sidewall of the guide sleeve, the cup comprises at least one transmission protrusion slidable along the guide groove and protruding from an outer wall of the guide sleeve.

[0009] The drive sleeve is mounted around the guide sleeve. The inner wall of the drive sleeve comprises a spiral groove cooperating with the transmission protrusion of the cup. The transmission protrusion is located in the spiral groove. The driving sleeve drives the cup to move along the axial direction through the cooperation of the spiral groove and the transmission protrusion.

[0010] A bottom of the guide sleeve is detachably mounted on the base.

[0011] In one embodiment, the cosmetic package comprises a plurality of guide grooves arranged in the circumferential direction of the guide sleeve, and the number of transmission protrusions is the same as that of the guide grooves.

[0012] In one embodiment, an upper end of one of the plurality of guide grooves extends through a top end of the guide sleeve.

[0013] In one embodiment, at least one end of each guide groove is provided with a locking groove in communication with the guide groove, and an extending direction of the locking groove is perpendicular to an extending direction of the guide groove.

[0014] In one embodiment, the cosmetic package further comprises at least one damping ring arranged around an end of the guide sleeve, an inner wall of the damping ring abuts against the guide sleeve, an outer wall of the damping ring abuts against the drive sleeve.

[0015] In one embodiment, the cosmetic package comprises two damping rings each arranged at a respective end of the guide sleeve.

[0016] In one embodiment, the damping ring is a rubber ring, the outer wall of the guide sleeve is provided with a groove extending in the circumferential direction, the rubber ring is accommodated in the groove.

[0017] In one embodiment, the cosmetic package further comprises at least one leg arranged at a bottom end of the drive sleeve to limit an axial downward movement of the guide sleeve, the bottom end of the guide sleeve is provided with a preset structure cooperating with the leg.

[0018] In one embodiment, the preset structure is a circular ring protruding from the bottom end of the guide sleeve, and the axial cross-sectional shape of any part of the circular ring is an arc shape protruding towards the leg, a bottom end of the circular ring abuts against the leg.

[0019] In one embodiment, two said legs in continuity with a material of the driving sleeve are arranged at the bottom end of the drive sleeve, each of the legs is bent with respect to the bottom end of the drive sleeve.

[0020] In one embodiment, the shape of the transmission protrusion of the cup is cylindrical.

[0021] In one embodiment, an inner wall of the cup is provided with at least two retaining ribs for retaining cosmetics in a longitudinal direction.

[0022] By making the cup, the guide sleeve and the drive sleeve from the same metal material, the cosmetic package according to the embodiment of the present application can be conveniently recycled. For example, individual cup, guide sleeve or drive sleeve can be conveniently recycled, or an accommodating assembly composed of the cup, guide sleeve and drive sleeve can also be conveniently recycled. In addition, the base of the cosmetic package is detachably mounted on the guide sleeve, so that the base can be conveniently disassembled from the accommodating assembly for recycling, or the exhausted accommodating assembly can be directly replaced with a new accommodating assembly to continue to use the cosmetics.

[0023] Other beneficial effects of the embodiments of the present application will be further explained with reference to the embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

[0024] In order to more clearly explain the embodiment of the present application, the drawings needed to be used in the description of the embodiment will be briefly explained below. It should be understood that the drawings described below are only a part of the drawings of the embodiments of the present application, and other drawings may be obtained from these drawings without creative effort for those of ordinary skill in the art.

FIG. 1 is a schematic view of a cosmetic package according to an embodiment of the present application;

FIG. 2 is a schematic exploded view of the cosmetic package according to the embodiment of the present application;

FIG. 3 is a schematic view in longitudinal section of FIG. 1;

FIG. 4 is a schematic view of an assembly of the guide sleeve and the cup in the cosmetic package according to an embodiment of the present application;

FIG. 5 is a schematic view in longitudinal section of the drive sleeve of the cosmetic package according to an embodiment of the present application;

FIG. 6 is a schematic view of the guide sleeve of the cosmetic package according to an embodiment of the present application; and

FIG. 7 is a schematic view of the cup of the cosmetic package according to an embodiment of the present application.

List of Reference Symbols

[0025] 10 cup; 11 transmission protrusion; 12 retaining rib; 20 guide sleeve; 21 guide groove; 22 locking groove; 23 circular ring; 30 drive sleeve; 31 spiral groove; 32 leg; 41 damping ring.

DETAILED DESCRIPTION

[0026] In order to solve the problems in the prior art, the embodiments of the present application provide a cosmetic package, comprising a base as well as a cup, a guide sleeve and a drive sleeve made of the same metal material.

[0027] The cup is configured to accommodate and support cosmetics.

[0028] The guide sleeve is arranged around the cup which is movable in the guide sleeve along an axial direction of the guide sleeve. The guide sleeve comprises

at least one guide groove located on a sidewall of the guide sleeve, the cup comprises at least one transmission protrusion slidable along the guide groove and protruding from an outer wall of the guide sleeve.

[0029] The drive sleeve is mounted around the guide sleeve. The inner wall of the drive sleeve comprises a spiral groove cooperating with the transmission protrusion of the cup. The transmission protrusion is located in the spiral groove. The driving sleeve drives the cup to move along the axial direction through the cooperation of the spiral groove and the transmission protrusion.

[0030] A bottom of the guide sleeve is detachably mounted on the base.

[0031] By making the cup, the guide sleeve and the drive sleeve from the same metal material, the cosmetic package according to the embodiment of the present application can be conveniently recycled. For example, individual cup, guide sleeve or drive sleeve can be conveniently recycled, or an accommodating assembly composed of the cup, guide sleeve and drive sleeve can also be conveniently recycled. In addition, the base of the cosmetic package is detachably mounted on the guide sleeve, so that the base can be conveniently disassembled from the accommodating assembly for recycling, or the exhausted accommodating assembly can be directly replaced with a new accommodating assembly to continue to use the cosmetics.

[0032] In one example, the cosmetic package may comprise but is not limited to a cosmetic container such as a lipstick cartridge. For convenience of the description, the following specific embodiments are illustrated by taking a lipstick cartridge as an example.

[0033] The present application will be further elaborated below in combination with accompanying drawings and specific embodiments. It should be understood that the specific embodiments described herein are only used to interpret the present application instead of limiting the present application. The embodiments described herein are part of the embodiments of the present application but not all of the embodiments. All embodiments, that can be obtained by those of ordinary skill in the art according to these embodiments without affording creative effort, fall within the scope of protection of the present application.

[0034] In the present application, the orientation or positional relationship indicated by the terms "up", "down", "inside", "outside" are based on the orientation or positional relationship shown in FIG. 1.

Embodiment

[0035] The embodiment of the present application provides a cosmetic package. As shown in FIG. 1 and FIG. 2, the cosmetic package comprises a base (not shown) as well as a cup 10, a guide sleeve 20 and a drive sleeve 30 made of the same metal material.

[0036] The cup 10 is configured to accommodate and support cosmetics.

[0037] The guide sleeve 20 is arranged around the cup 10 which is movable in the guide sleeve 20 along an axial direction of the guide sleeve 20. The guide sleeve 20 comprises at least one guide groove 21 located on a side-wall of the guide sleeve 20, the cup 10 comprises at least one transmission protrusion 11 slidable along the guide groove 21 and protruding from an outer wall of the guide sleeve 20.

[0038] The drive sleeve 30 is mounted around the guide sleeve 20. The inner wall of the drive sleeve 30 comprises a spiral groove 31 cooperating with the transmission protrusion 11 of the cup 10. The transmission protrusion is located in the spiral groove 31. The driving sleeve drives the cup to move along the axial direction through the cooperation of the spiral groove 31 and the transmission protrusion.

[0039] A bottom of the guide sleeve 20 is detachably mounted on the base.

[0040] Here, for example, the cosmetic package is a lipstick cartridge and the cosmetic is lipstick.

[0041] Here, the cup 10, the guide sleeve 20, the drive sleeve 30 and the base in the lipstick cartridge of the present embodiment are all nested in the axial direction, so that an axial direction of the guide sleeve 20 is also an axial direction of the cup 10, an axial direction of the drive sleeve 30, an axial direction of the base and an axial direction of the lipstick cartridge. Therefore, the axial direction mentioned in the following description is the axial direction of the lipstick cartridge, unless otherwise indicated.

[0042] Here, by way of example, all of the three elements, i.e. the cup 10, the guide sleeve 20 and the drive sleeve 30, are made of one same metal material. Because metal is easier to recast, it is more environmentally friendly than plastic, and the three elements are made of the same metal material, which facilitate the recovery and is more in line with the environmental protection requirements. It should be noted that the metal here refers to the existing materials in the prior art, such as the existing aluminum alloy and the like.

[0043] Here, since the cup 10, the guide sleeve 20, and the drive sleeve 30 are all made of the same metal material, it is unnecessary to disassemble at the time of recycling, and therefore, the three elements can in a non-detachable structure which is simpler. Thus, the cup 10, the guide sleeve 20, and the drive sleeve 30 together can be referred to as an accommodating assembly.

[0044] Here, for example, the base is an exterior piece that generally requires some aesthetic design and is relatively more costly. The bottom of the guide sleeve 20 is detachably mounted on the base so that the base can be easily separated from the guide sleeve. In other words, after the cosmetic is used up, in addition to discarding the cosmetic package directly, the accommodating assembly composed of the cup 10, the guide sleeve 20 and the drive sleeve 30 can be replaced, and the base can be reused. For example, the guide sleeve and the base may be mounted together by a detachable structure and

can be quickly separated from one another to facilitate recycling or replacement of the accommodating assembly. The detachable structure for the base and the guide sleeve may be a conventional detachable structure, but the present application is not limited thereto. For example, the detachable structure may be a structure that can be detached manually without using a tool. For example, embodiments of the present application may also comprise an upper cover adapted to the base (not shown).

[0045] Here, because the cooperation of the transmission protrusion 11 of the cup 10 and the spiral groove 31 on the inner wall of the drive sleeve 30, and because the transmission protrusion 11 is restricted by the guide groove 21, the cup 10 moves axially along the inner wall of the guide sleeve 20 when the drive sleeve 30 is rotated.

[0046] By making the cup 10, the guide sleeve 20 and the drive sleeve 30 from the same metal material, the cosmetic package according to the embodiment of the present application can be conveniently recycled. For example, individual cup 10, guide sleeve 20 or drive sleeve 30 can be conveniently recycled, or an accommodating assembly composed of the cup 10, guide sleeve 20 and drive sleeve 30 can also be conveniently recycled. In addition, the base of the cosmetic package is detachably mounted on the guide sleeve 20, so that the base can be conveniently disassembled from the accommodating assembly for recycling, or the exhausted accommodating assembly can be directly replaced with a new accommodating assembly to continue to use the cosmetics.

[0047] According to an alternative embodiment of the present application, there are a plurality of the guide grooves 21 arranged in the circumferential direction of the guide sleeve 20, and the number of the transmission protrusions 11 is the same as that of the guide grooves 21. In this way, the axial movement of the cup 10 is not deflected, but is more balanced and smoother. By way of example, two guide grooves 21 are provided, to facilitate the manufacturing process, such as the process of manufacturing a die-casting mold.

[0048] According to an alternative embodiment of the present application, an upper end of one of the plurality of guide grooves 21 extends through a top end of the guide sleeve 20. For example, an assembly notch is formed at the top end of the guide sleeve 20 to facilitate the assembly of the cup 10 to the guide sleeve 20, so that the cup 10 may be conveniently mounted into the guide sleeve 20.

[0049] According to an alternative embodiment of the present application, at least one end of each guide groove 21 is provided with a locking groove 22 in communication with the guide groove 21, and an extending direction of the locking groove 22 is perpendicular to an extending direction of the guide groove 21. Therefore, after the cup 10 is moved to the top end or the bottom end of the guide groove 21, the cup 10 can be locked to prevent misoperation in use or to prevent a movement of the cup 10 due to vibration when not in use. If there are a plurality of guide grooves 21 and a plurality of corresponding

transmission protrusions 11, the arrangement of the locking grooves 22 needs to be adapted to the arrangement of the guide grooves. For example, if the locking groove 22 for one guide groove 21 is located at the lower end, the locking grooves 22 for the other guide grooves 21 also need to be located at the lower end. In one example, each end of each guide groove 21 is provided with a locking groove 22, so that misoperation is reliably prevented.

[0050] According to an alternative embodiment of the present application, the cosmetic package further comprises at least one damping ring 41 arranged around an end of the guide sleeve. An inner wall of the damping ring 41 abuts against the guide sleeve 20, an outer wall of the damping ring abuts against the drive sleeve 30. Here, the damping ring has two functions, one of the two functions is separation function. The damping ring 41 arranged between the guide sleeve 20 and the drive sleeve 30 separates the guide sleeve 20 and the drive sleeve 30 from each other, so that the contact area between the guide sleeve 20 and the drive sleeve 30 can be reduced, thus the sliding friction resistance between the guide sleeve 20 and the drive sleeve 30 can be reduced during rotation. Therefore, it is possible to prevent the relative rotation of the guide sleeve 20 and the drive sleeve 30 from being stuck due to excessive resistance. Another function is to generate a certain rotational resistance. The material of damping ring is a material with large friction coefficient. In operation, the user will feel certain resistance and thus a pleasant haptic feedback, which is different from coarse items, such as coarse lipstick.

[0051] According to an alternative embodiment of the present application, the cosmetic package comprises two damping rings each arranged at a respective end of the guide sleeve. Thus, a better separation of the guide sleeve and the drive sleeve can be achieved, and the generated rotational resistance is more balanced and the haptic feedback is better.

[0052] According to an alternative embodiment of the present application, the damping ring 41 is a rubber ring, the outer wall of the guide sleeve 20 is provided with a groove extending in the circumferential direction, the rubber ring is accommodated in the groove. Thus, the rubber ring is wear-resistant and has a long service life. The groove can fix the rubber ring in the axial direction to avoid axial displacement.

[0053] According to an alternative embodiment of the present application, the cosmetic package further comprises at least one leg 32 arranged at a bottom end of the drive sleeve 30 to limit an axial downward movement of the guide sleeve 20. Since the drive sleeve 30 is arranged around the guide sleeve 20 (i.e., the guide sleeve 20 is located inside the drive sleeve 30), it is necessary to provide the leg 32 in order to prevent the guide sleeve 20 from moving down in the drive sleeve 30 or even prevent the guide sleeve 20 from moving out of the drive sleeve 30.

[0054] In one example, the bottom end of the guide

sleeve 20 is provided with a preset structure cooperating with the leg 32. Since it is necessary to rotate the drive sleeve 30 during use, the leg 32 abuts against the bottom of the guide sleeve 20 in the axial direction in order to block the axial movement of the guide sleeve 20. Therefore, the rotation of the drive sleeve 30 causes wear of the leg 32. The purpose of the preset structure is to reduce the wear of the leg 32, that is, the bottom end of the guide sleeve 20 is provided with a preset structure cooperating with the leg 32 to reduce the wear of the leg.

[0055] According to an alternative embodiment of the present application, the preset structure is a circular ring 23 protruding from the bottom end of the guide sleeve 20, and the axial cross-sectional shape of any part of the circular ring 23 is an arc shape protruding towards the leg 32. A bottom end of the circular ring 23 abuts against the leg 32. As such, the contact area between the leg 32 and the bottom end of the guide sleeve 20 is small and is a line in theory, which greatly reduces friction compared with the situation where the contact area is whole end face, thus reducing the wear of the leg 32.

[0056] According to an alternative embodiment of the present application, two said legs in continuity with a material of the driving sleeve are arranged at the bottom end of the drive sleeve, each of the legs is bent with respect to the bottom end of the drive sleeve. That is, the bottom end of the drive sleeve 30 may be provided with two sheets which extend in the axial direction before the drive sleeve 30 is inserted into the guide sleeve 20, and the sheets are bent to form the leg 32 after drive sleeve is inserted into the guide sleeve 20. In this way, the manufacturing cost is lower, and the connection between the leg and the drive sleeve is firmer.

[0057] According to an alternative embodiment of the present application, the shape of the transmission protrusion 11 of the cup 10 is cylindrical. Thus, it is possible to facilitate the cooperation of the transmission protrusion and the spiral groove 31, and the machining of the spiral groove 31 can be simplified.

[0058] According to an alternative embodiment of the present application, an inner wall of the cup 10 is provided with at least two retaining ribs 12 for retaining cosmetics in a longitudinal direction. In this way, it is easy to maintain the shape of the lipstick, and the lipstick may also be directionally guided when the lipstick is inserted into the lipstick cup. In one example, at least two retaining ribs 12 are uniformly distributed in the circumferential direction on the inner wall of the cup 10.

[0059] It should be noted that, the terms "include" and "comprise" or any other variation thereof are intended to encompass non-exclusive inclusion, so that a process, method, article or device that includes a series of elements includes not only those elements but also includes other elements that are not explicitly listed, or includes elements inherent to such a process, method, article or device. In the absence of further limitations, an element defined by the phrase "includes a ..." does not preclude the existence of another identical element in the process,

method, article or device in which it is included.

[0060] It should be noted that, in the descriptions of the present application, unless otherwise specified and limited, terms "connection" should be generally understood. For example, the term may be mechanical or electrical connection, and the term may be direct connection or indirect connection through an intermediate or communication inside two elements. Those of ordinary skill in the art can understand specific implications of the above terms in the present application in specific situations.

[0061] In the context of the present document, the terms "first", "second" and "third" serve only to differentiate the various elements and do not imply any order between these elements. It can be understood that the "first", "second" and "third" may be interchanged in a particular order or sequence where permissible.

[0062] All of the features disclosed in this description may be combined in any combination, except combinations where at least some of such features are mutually exclusive. In order to avoid unnecessary duplication, the various possible combinations of the specific technical features of the present application are not described in detail.

[0063] What described are merely preferable embodiments of the present application, and are not intended to limit the present application. All modifications, replacements and improvements made within the spirit and principles of the present application should be included within the scope of protection of the present application.

Claims

1. A cosmetic package, **characterized in that** the cosmetic package comprises a base as well as a cup, guide sleeve and a drive sleeve made of the same metal material, wherein

the cup is configured to accommodate and support cosmetics,
the guide sleeve is arranged around the cup which is movable in the guide sleeve along an axial direction of the guide sleeve, the guide sleeve comprising at least one guide groove located on a sidewall of the guide sleeve, the cup comprising at least one transmission protrusion slidable along the guide groove and protruding from an outer wall of the guide sleeve,
the drive sleeve is mounted around the guide sleeve, the inner wall of the drive sleeve comprising a spiral groove cooperating with a transmission protrusion of the cup, the transmission protrusion being located in the spiral groove, the driving sleeve driving the cup to move along the axial direction through the cooperation of the spiral groove and the transmission protrusion,
a bottom of the guide sleeve is detachably

mounted on the base.

2. The cosmetic package according to claim 1, wherein the cosmetic package comprises a plurality of guide grooves arranged in the circumferential direction of the guide sleeve, and the number of transmission protrusions is the same as that of the guide grooves.
3. The cosmetic package according to claim 2, wherein an upper end of one of the plurality of guide grooves extends through a top end of the guide sleeve.
4. The cosmetic package according to claim 1 or 2, wherein at least one end of each guide groove is provided with a locking groove in communication with the guide groove, and an extending direction of the locking groove is perpendicular to an extending direction of the guide groove.
5. The cosmetic package according to claim 1 or 2, wherein the cosmetic package further comprises at least one damping ring arranged around an end of the guide sleeve, an inner wall of the damping ring abutting against the guide sleeve, an outer wall of the damping ring abutting against the drive sleeve.
6. The cosmetic package according to claim 5, wherein the cosmetic package comprises two damping rings each arranged at a respective end of the guide sleeve.
7. The cosmetic package according to claim 6, wherein the damping ring is a rubber ring, the outer wall of the guide sleeve being provided with a groove extending in the circumferential direction, the rubber ring being accommodated in the groove.
8. The cosmetic package according to claim 1 or 2, wherein the cosmetic package further comprises at least one leg arranged at a bottom end of the drive sleeve to limit an axial downward movement of the guide sleeve, a bottom end of the guide sleeve being provided with a preset structure cooperating with the leg.
9. The cosmetic package according to claim 8, wherein the preset structure is a circular ring protruding from the bottom end of the guide sleeve, and the axial cross-sectional shape of any part of the circular ring is an arc shape protruding towards the leg, a bottom end of the circular ring abutting against the leg.
10. The cosmetic package according to claim 8, wherein two said legs in continuity with a material of the driving sleeve are arranged at the bottom end of the drive sleeve, each of the legs being bent with respect to the bottom end of the drive sleeve.

11. The cosmetic package according to claim 1 or 2, wherein the shape of the transmission protrusion of the cup is cylindrical.

12. The cosmetic package according to claim 1 or 2, wherein an inner wall of the cup is provided with at least two retaining ribs for retaining cosmetics in a longitudinal direction.

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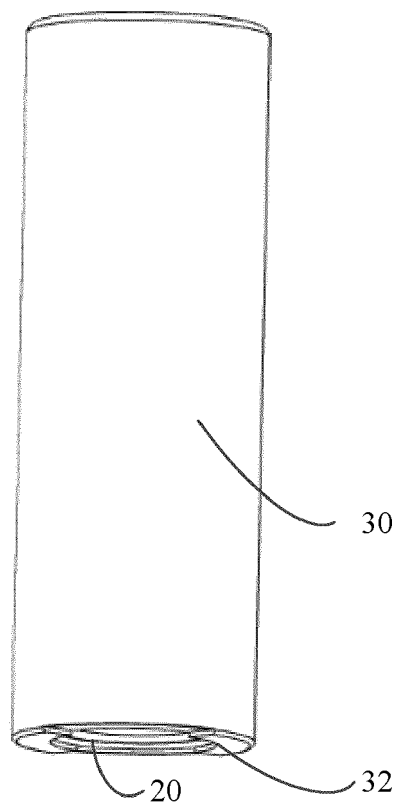


FIG. 1

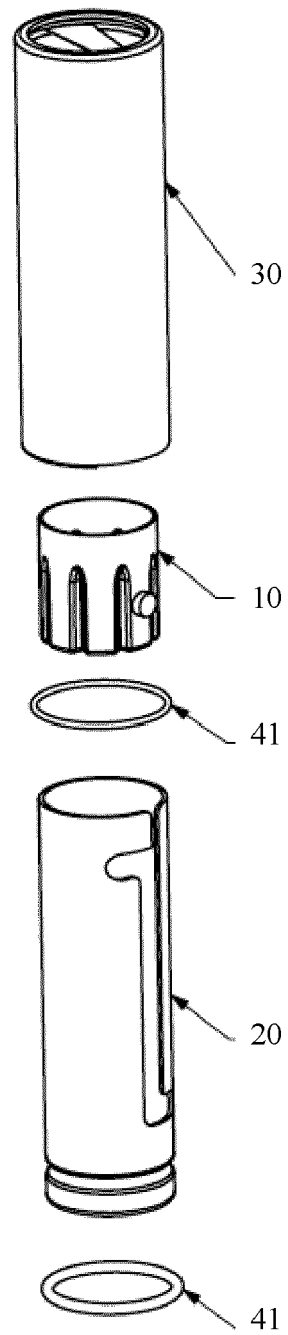


FIG. 2

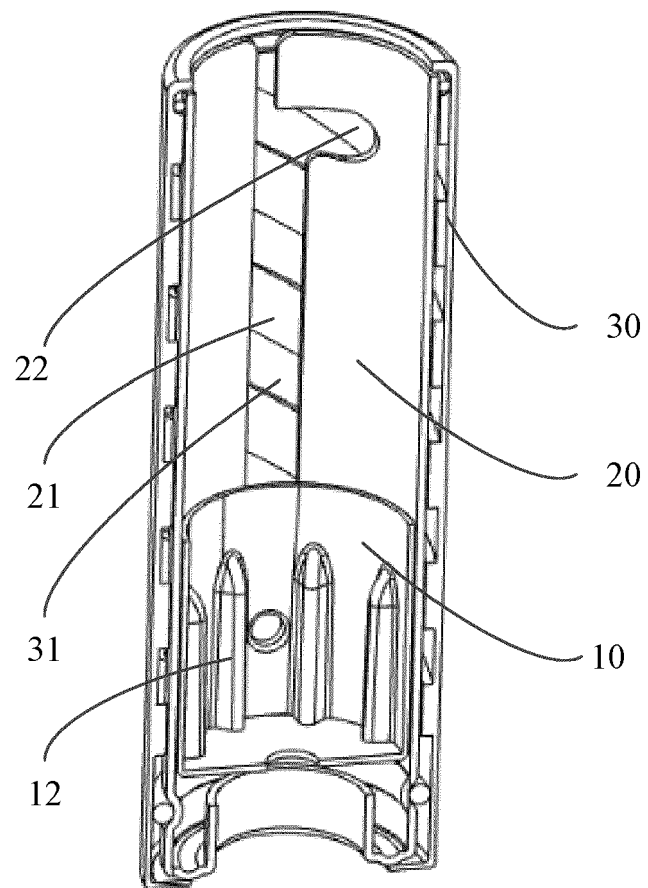


FIG. 3

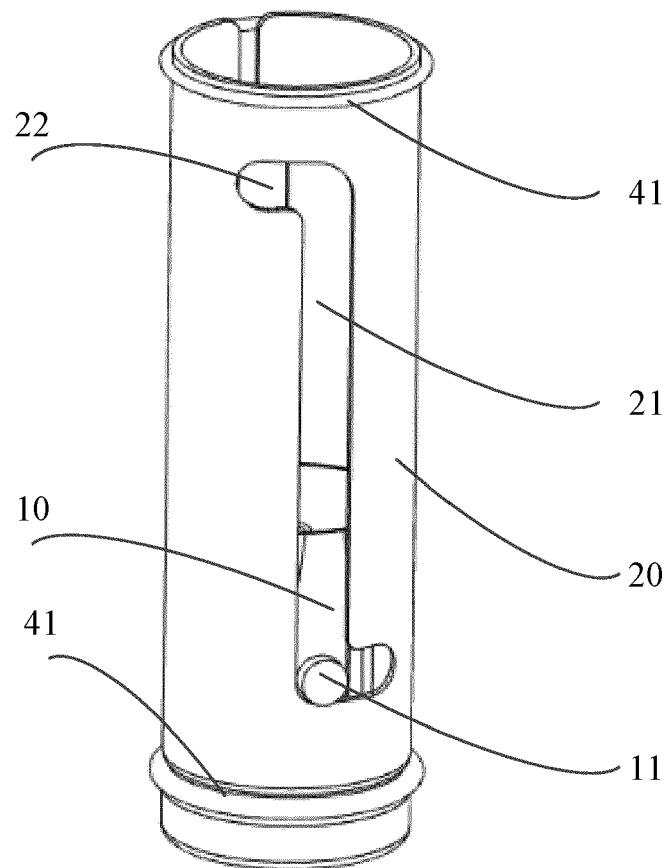


FIG. 4

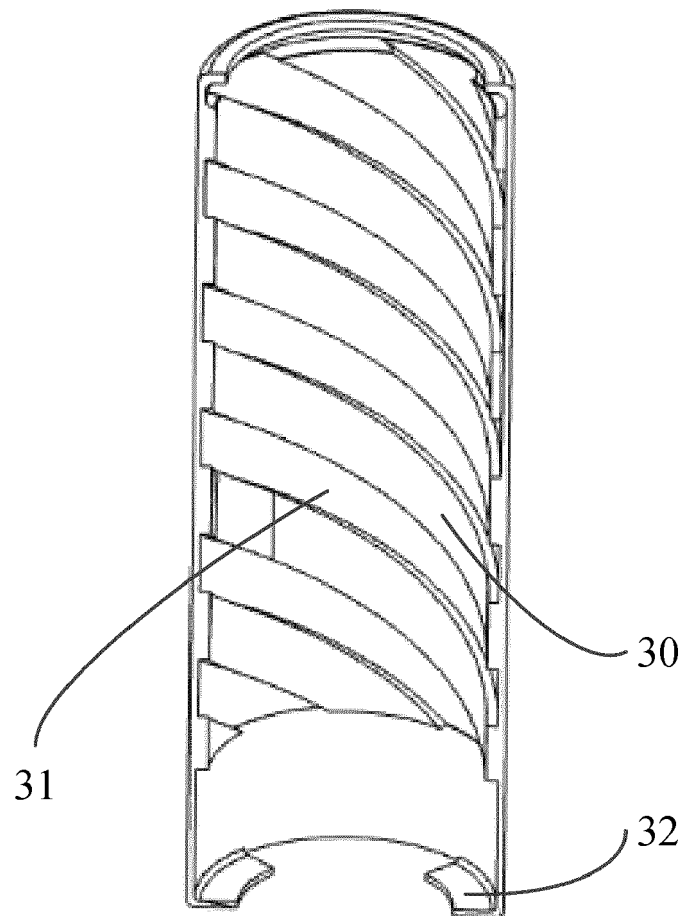


FIG. 5

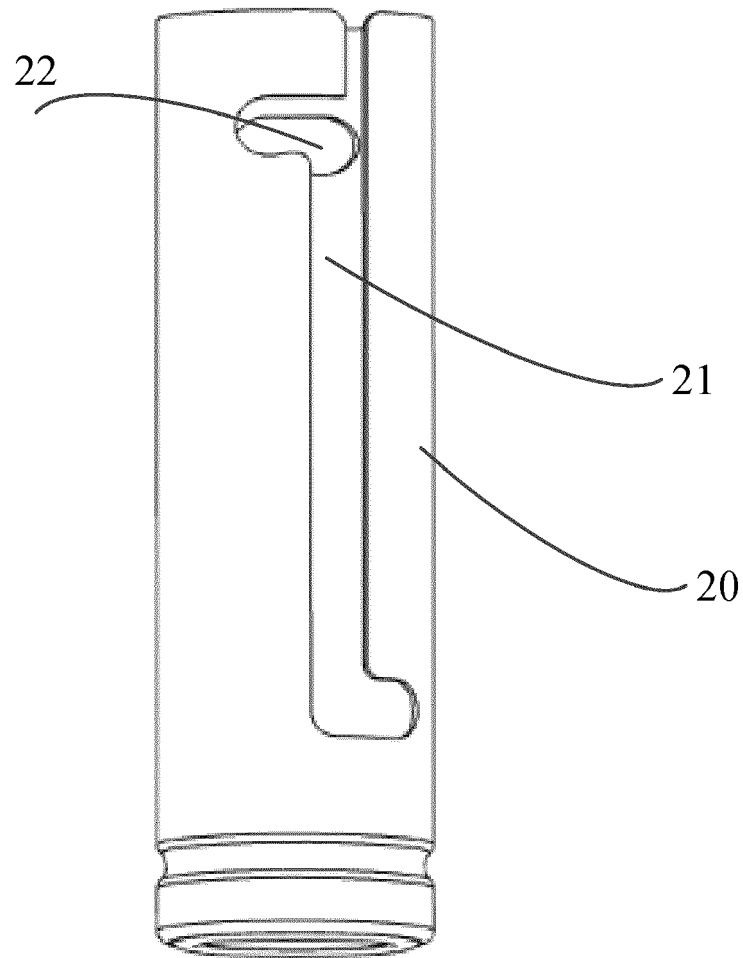


FIG. 6

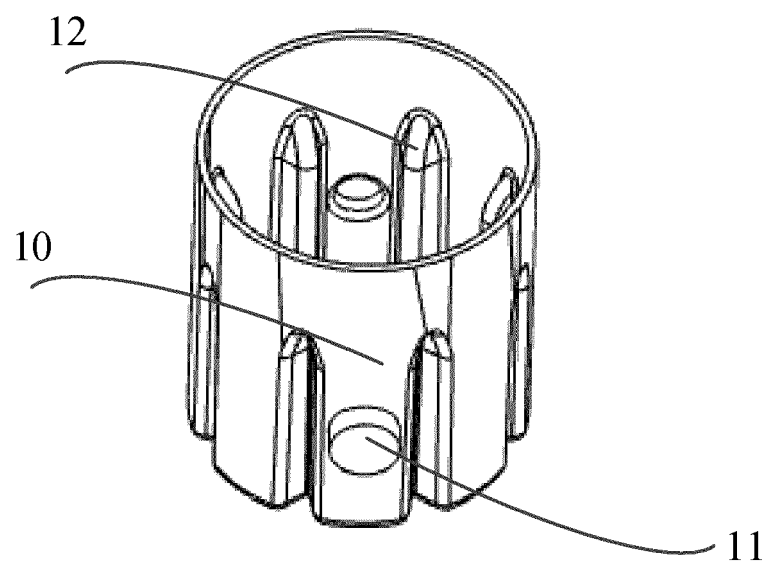


FIG. 7



EUROPEAN SEARCH REPORT

Application Number

EP 22 18 7638

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EPO FORM 1503 03.82 (P04C01)

DOCUMENTS CONSIDERED TO BE RELEVANT			
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			A45D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 8 December 2022	Examiner Nicolás, Carlos
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 22 18 7638

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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