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(54) **CONTAINER HAVING ENVIRONMENTALLY-FRIENDLY FUNCTION AND ALLOWING FOR LIPSTICK REPLACEMENT**

(57) A container having an environmentally-friendly function and allowing for lipstick replacement comprising a cap (10), a lipstick carrier (20), a coupling member (30) and a base (40). A snap-fit hole (22) is provided at an end of the lipstick carrier (20) and extends through in an axial direction; two notches (24) at symmetrical positions extend from the periphery of the snap-fit hole (22) in opposite directions; a protrusion (26) extends from an inner surface of the lipstick carrier (20), a shaft (42) is provided on the base (40) in a protruding manner; and two flanges (44) extend from an open end of the shaft (42) in opposite directions in a radial direction. The flanges (44) are snap fitted with the protrusion (26) of the lipstick carrier (20). By rotating the base (40), the shaft (42) can be separated from the lipstick carrier (20) and the coupling member (30), thereby quickly replacing the lipstick carrier (20) with a new one.

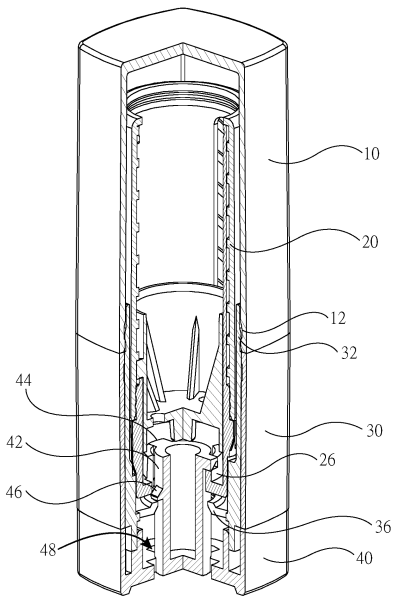

FIG. 1

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Description

FIELD OF THE INVENTION

[0001] The invention relates to containers and more particularly to a container having an environmental protection function and being capable of replacing a consumed lipstick with a new one.

BACKGROUND OF THE INVENTION

[0002] A lipstick is a paste for applying lip moisturizing or coloring, and is a common makeup article. A use method comprises the steps of opening a cap, rotating a carrier containing a lipstick, exposing the lipstick to the lip, returning the lipstick in situ after use, and covering with the cap.

[0003] However, the current commercially available lipstick is disposable, and the whole container is discarded after the lipstick has been consumed. Thus, environmental pollution is caused and environmental protection is not carried out.

SUMMARY OF THE INVENTION

[0004] An object of the invention is to provide a container having an environmental protection function and a replaceable lipstick. The container has a simple structure and is convenient in use. The container can realize the replacement of a consumed lipstick and is environmentally-friendly.

[0005] In order to achieve the above object, the invention discloses a container comprising a cap including a plurality of recesses in an inner surface; a lipstick carrier including an axial snap-fit hole, two opposite notches disposed in an opening of the snap-fit hole, and a protrusion disposed on an inner surface of the lipstick carrier adjacent to the notches; a coupling member disposed on an end of the lipstick carrier with the snap-fit hole disposed through the end of the lipstick carrier, a plurality of protuberances disposed on an end of an outer surface of the coupling member, the protuberances being complementarily disposed in the recesses, a through hole axially disposed through the coupling member, an annular member disposed at an edge of the through hole, and a plurality of radial, flexible troughs disposed in the annular member; and a base including an axial shaft extending outwardly and passing through the through hole and the snap-fit hole, and two opposite flanges disposed at an end of the shaft and secured to the protrusion wherein a distance of the flanges is less than that of the notches, and the distance of the flanges is greater than a diameter of the snap-fit hole.

[0006] Preferably, the lipstick carrier further comprises a plurality of ribs on an outer surface, wherein the coupling member further comprises a plurality of grooves on an inner surface, and wherein the ribs are complementarily disposed in the grooves.

[0007] Preferably, the shaft further comprises at least one projecting member on an intermediate portion of an outer surface, the at least one projecting member being secured to the annular member.

[0008] Preferably, the base further comprises a plurality of through vent holes.

[0009] Preferably, each of the flexible troughs is tapered toward the through hole.

[0010] The invention has the following advantages: The lipstick replacement is easy and the container is environmentally friendly. By rotating the base, the flanges of the shaft are complementarily disposed in the notches. Thus, the base can be separated from the lipstick carrier and the coupling member, thereby achieving the purpose of quickly replacing a consumed lipstick carrier with a new one. Only the consumed lipstick carrier is replaced rather than the whole container being replaced. Thus, the container can be reused. It is not only environmentally friendly but also reduces the creation of garbage.

[0011] Stability is increased. After the shaft has passed through the through hole and the snap-fit hole, the shaft fastens the coupling member and the lipstick carrier, thereby increasing the assembly stability of the base, the coupling member and the lipstick carrier.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012]

FIG. 1 is a perspective view in part section of the invention.

FIG. 2 is a side elevation of the invention.

FIG. 3 is a sectional view taken along line 3-3 of FIG. 2.

FIG. 4 is an exploded view of the invention.

FIG. 5 is another perspective view of the base of the invention.

FIG. 6 schematically depicts opening the cap and rotating the base of the invention.

FIG. 7 schematically depicts separating the base from both the lipstick carrier and the coupling member according to the invention.

FIG. 8 schematically depicts separating the lipstick carrier from the coupling member according to the invention.

FIG. 9 schematically depicts a new lipstick carrier as a replacement which is to be fitted together with the coupling member, the base, and the cap according to the invention.

FIG. 10 is a perspective view of the invention after the assembly has been completed.

DETAILED DESCRIPTION OF THE INVENTION

[0013] Referring to FIGS. 1 to 5, a container having an environmental protection function and a replaceable lipstick is disclosed. The container comprises a cap 10, a lipstick carrier 20, a coupling member 30 and a base 40. A plurality of recesses 12 are provided in an inner surface of the cap 10. A snap-fit hole 22 is axially provided through the lipstick carrier 20. Two opposite notches 24 are provided in an opening of the snap-fit hole 22. A protrusion 26 is provided on an inner surface of the lipstick carrier 20 adjacent to the notches 24. The coupling member 30 is put on an end of the lipstick carrier 20 with the snap-fit hole 22 disposed through the end of the lipstick carrier 20. A plurality of protuberances 32 are provided on an end of an outer surface of the coupling member 30. The protuberances 32 are complementarily disposed in the recesses 12. The coupling member 30 is provided with an axial through hole 34. An edge of the through hole 34 is provided with an annular member 36. The annular member 36 is provided with a plurality of radial, flexible troughs 361. A plurality of vent holes 48 are provided through the base 40 for ventilation. Thus, the coupling member 30 and the base 40 can be easily assembled. An axial shaft 42 extends out of the base 40. Two opposite flanges 44 are provided at an end of the shaft 42. The shaft 42 passes through the through hole 34 and the snap-fit hole 22. The flanges 44 are secured to the protrusion 26 of the lipstick carrier 20. A distance of the flanges 44 is less than that of the notches 24. The distance of the flanges 44 is greater than a diameter of the snap-fit hole 22. The shaft 42 is provided with at least one projecting member 46 on an intermediate portion of an outer surface thereof. The projecting member 46 is secured to the annular member 36. Thus, after the shaft 42 has passed through the through hole 34 and the snap-fit hole 22, the shaft 42 fastens the coupling member 30 and the lipstick carrier 20, thereby increasing the assembly stability of the base 40, the coupling member 30 and the lipstick carrier 20.

[0014] Wherein each of the flexible troughs 361 is tapered toward the through hole 34. Each flexible trough 361 assists the shaft 42 to pass through the through hole 34 so that the base 40 can be easily secured to the coupling member 30.

[0015] As shown in FIGS. 1, 2 and 3 specifically, an outer surface of the lipstick carrier 20 is annularly provided with a plurality of ribs 27. An inner surface of the coupling member 30 is provided with a plurality of grooves 38. The ribs 27 are complementarily disposed in the grooves 38. The above structure can further increase the assembly stability of the lipstick carrier 20 and the coupling member 30.

[0016] Referring to FIGS. 6 to 10, steps of replacing a lipstick of the container according to the invention are illustrated.

[0017] As shown in FIG. 6 specifically in conjunction with FIG. 4, the cap 10 is separated from the coupling member 30. A consumed lipstick 51 is mounted in the lipstick carrier 20. The base 40 is rotated by 90 degrees so that the flanges 44 at the end of the shaft 42 also rotate by 90 degrees. Thus, the flanges 44 are disposed complementarily in the notches 24 of the lipstick carrier 20.

[0018] As shown in FIG. 7 specifically in conjunction with FIG. 4, after the flanges 44 have been complementarily disposed in the notches 24 of the lipstick carrier 20, the base 40 can be disengaged from both the snap-fit hole 22 of the lipstick carrier 20 and the through hole 34 of the coupling member 30.

[0019] As shown in FIG. 8 specifically, the lipstick carrier 20 is pulled to disengage from the coupling member 30.

[0020] As shown in FIGS. 9 and 10 specifically in conjunction with FIG. 4, another lipstick carrier 20 having a new lipstick 52 is mounted through the coupling member 30. The shaft 42 of the base 40 then passes through both the through hole 34 of the coupling member 30 and the snap-fit hole 22 of the lipstick carrier 20. Next, the base 40 is rotated by 90 degrees. Thus, the flanges 44 of the shaft 42 can be secured to the protrusion 26 of the lipstick carrier 20. Then the cap 10 is put on and this completes a replacement of a consumed lipstick with the new lipstick 52. By replacing the consumed lipstick carrier 20 with a new one without discarding the container, it is not only environmentally friendly but also reduces the creation of garbage. In addition, the cap 10, the lipstick carrier 20, the coupling member 30, and the base 40 are made of polyethylene terephthalate (PET). The material is environmentally friendly, recyclable. Thus the cap 10, the lipstick carrier 20, the coupling member 30, and the base 40 can be recycled and reused, thereby reducing pollution to the environment.

Claims

1. A container having an environmental protection function and being capable of replacing a consumed lipstick with a new one, comprising:

   a cap including a plurality of recesses in an inner surface;
   a lipstick carrier including an axial snap-fit hole, two opposite notches disposed in an opening of the snap-fit hole, and a protrusion disposed on an inner surface of the lipstick carrier adjacent to the notches;
   a coupling member disposed on an end of the lipstick carrier with the snap-fit hole disposed through the end of the lipstick carrier, a plurality of protuberances disposed on an end of an outer surface of the coupling member, the protuberances being complementarily disposed in the re-

cesses, a through hole axially disposed through the coupling member, an annular member disposed at an edge of the through hole, and a plurality of radial, flexible troughs disposed in the annular member; and

a base including an axial shaft extending outwardly and passing through the through hole and the snap-fit hole, and two opposite flanges disposed at an end of the shaft and secured to the protrusion wherein a distance of the flanges is less than that of the notches, and the distance of the flanges is greater than a diameter of the snap-fit hole.

2. The container having an environmental protection function and being capable of replacing a consumed lipstick with a new one of claim 1, wherein the lipstick carrier further comprises a plurality of ribs on an outer surface, wherein the coupling member further comprises a plurality of grooves on an inner surface, and wherein the ribs are complementarily disposed in the grooves.

3. The container having an environmental protection function and being capable of replacing a consumed lipstick with a new one of claim 1, wherein the shaft further comprises at least one projecting member on an intermediate portion of an outer surface, the at least one projecting member being secured to the annular member.

4. The container having an environmental protection function and being capable of replacing a consumed lipstick with a new one of claim 1, wherein the base further comprises a plurality of through vent holes.

5. The container having an environmental protection function and being capable of replacing a consumed lipstick with a new one of claim 1, wherein each of the flexible troughs is tapered toward the through hole.

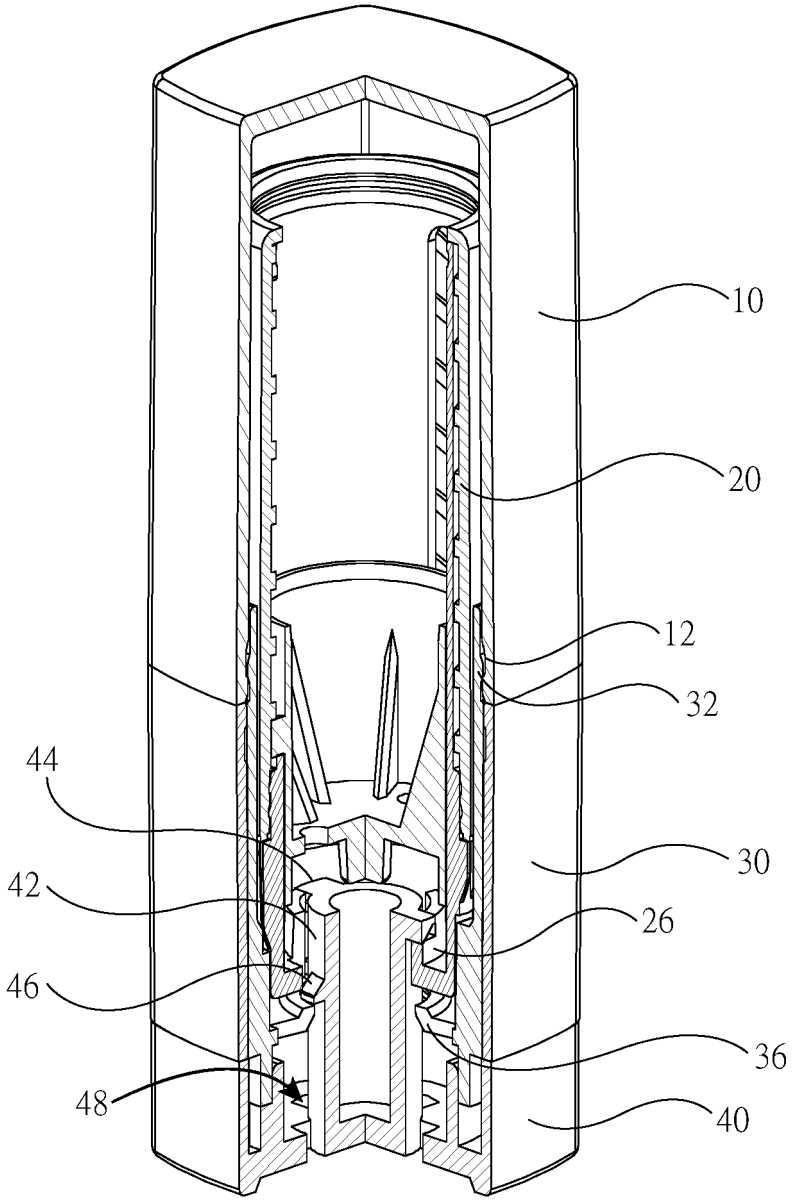

FIG. 1

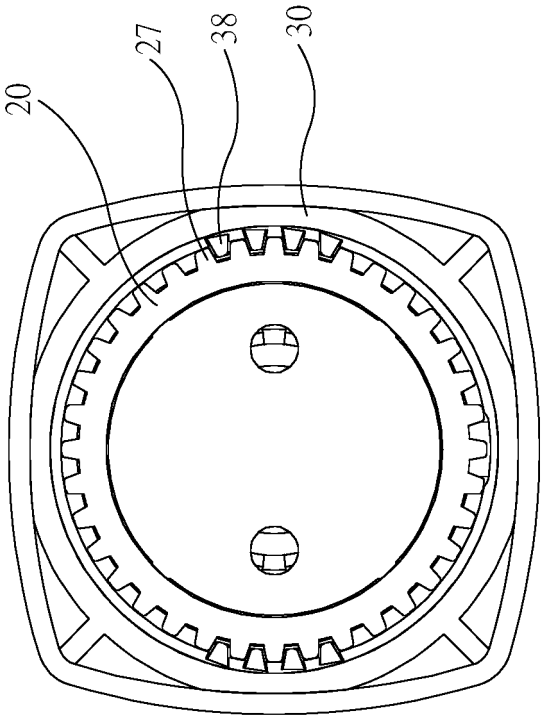

FIG. 3

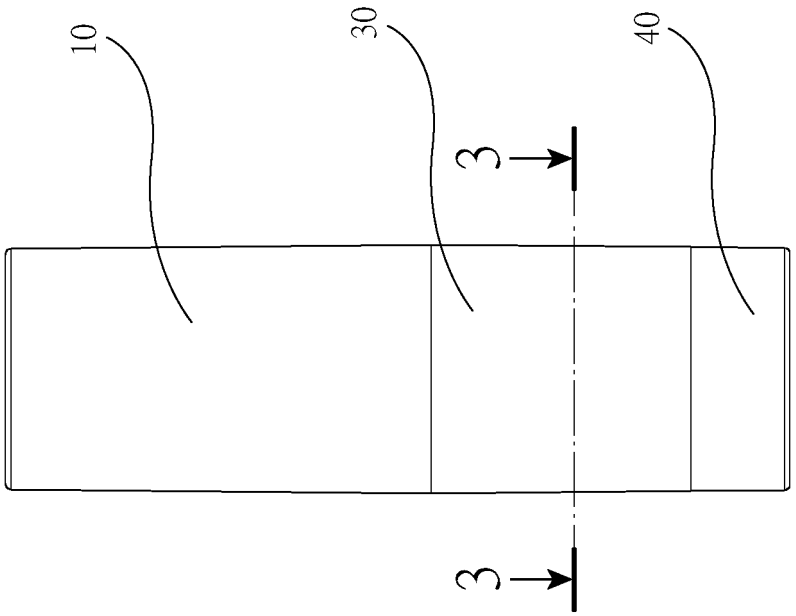

FIG. 2

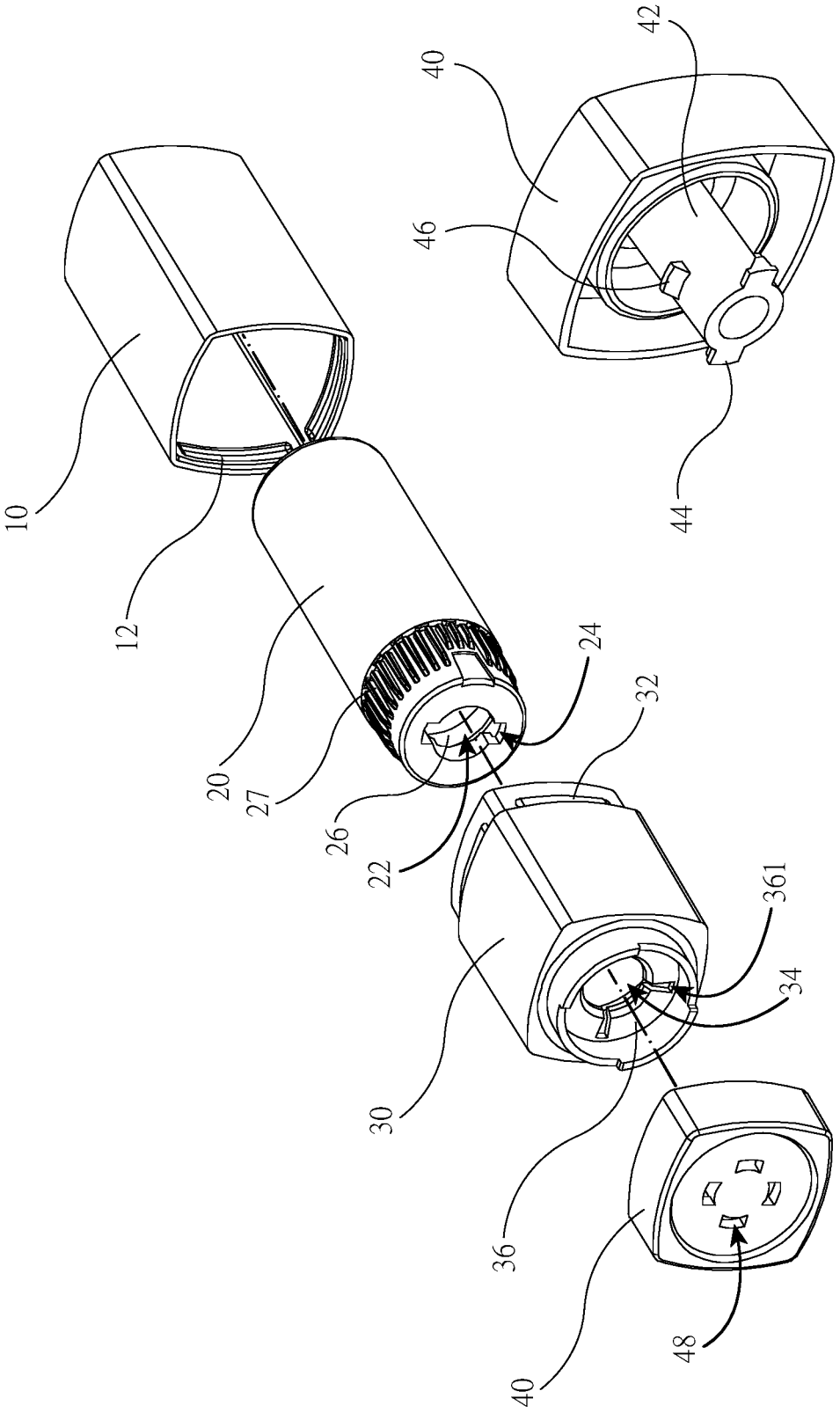

FIG. 4

FIG. 5

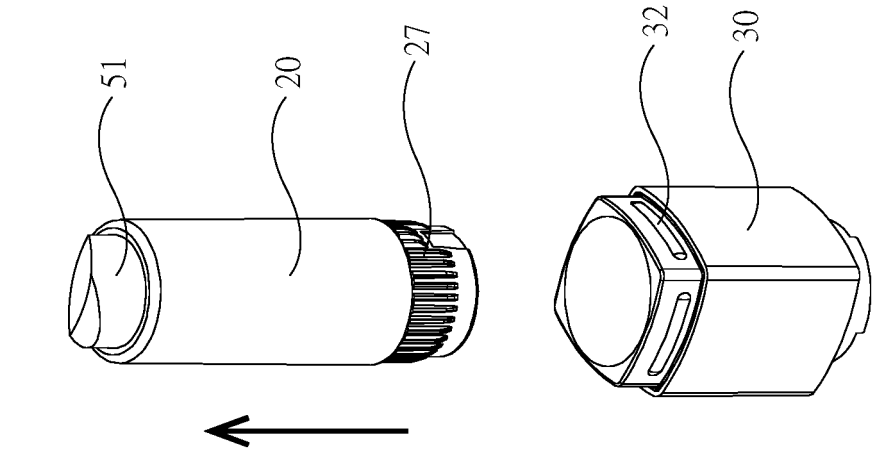

FIG. 8

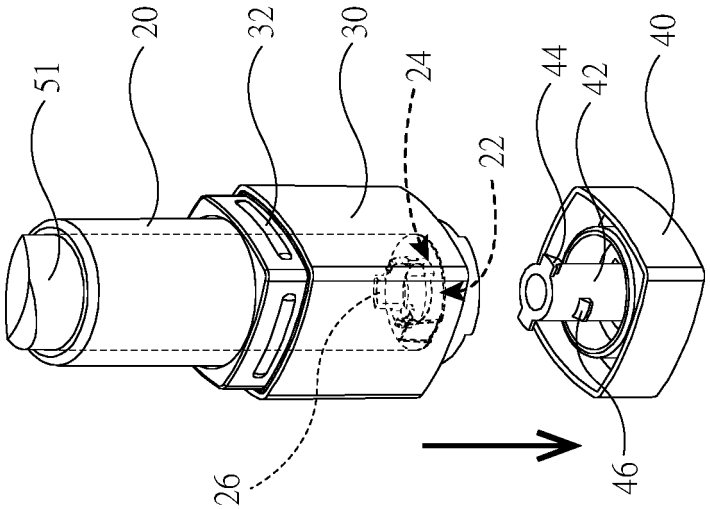

FIG. 7

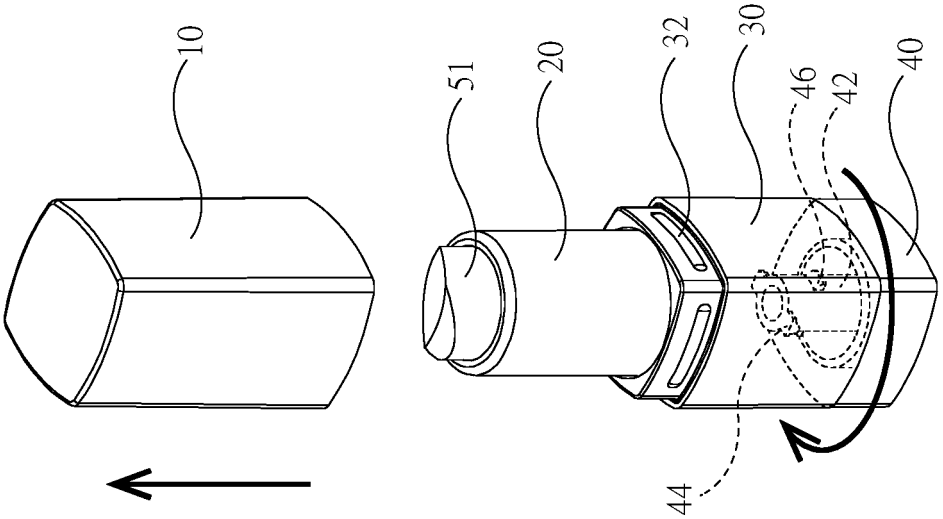

FIG. 6

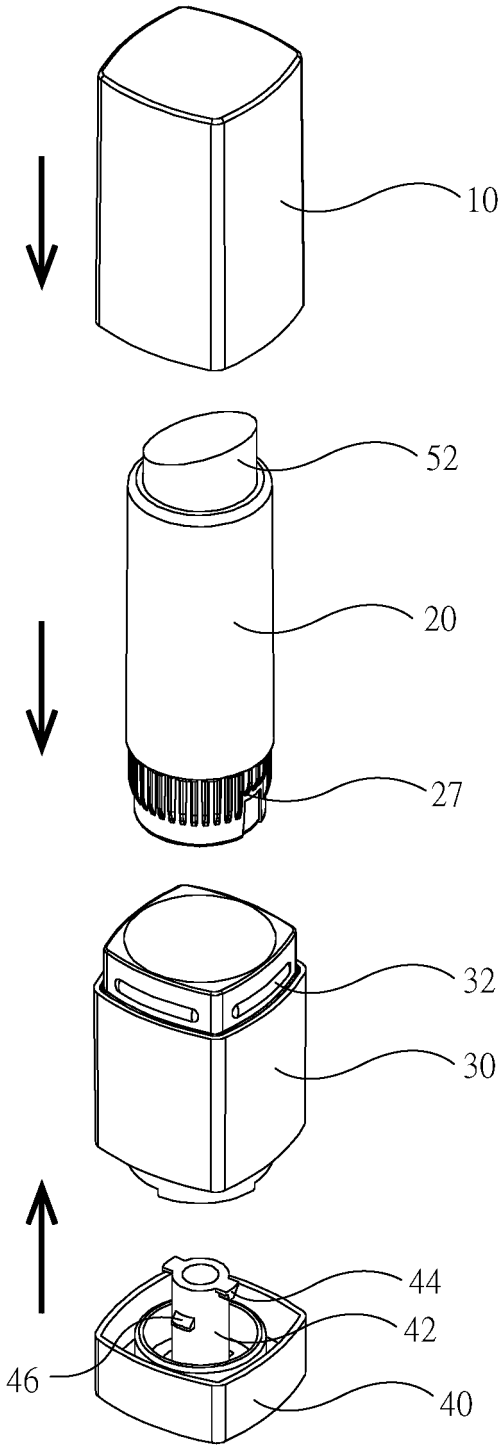

FIG. 9

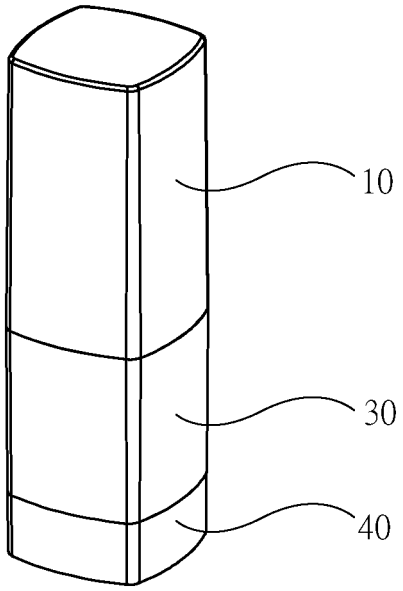

FIG. 10

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2021/077534

A. CLASSIFICATION OF SUBJECT MATTER

A45D 40/14(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 40

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CNABS, CNTXT, VEN: 拆, 更换, 替换, 分离, 脱离, 离开, 轴, 柱, 杆, 孔, 口, 旋转, 转动, 凸, 突, 缺口, 开口, 槽, detach+, demount+, dismount+, disassembl+, dismantl+, remov+, replac+, rod, pole, post, bar, hole, aperture, opening, slot, rotat+, rotary, revolv+, project+, protrud+, gap?, notch+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	JP H0246813 Y2 (TAKEUCHI INDUSTRY CO., LTD.) 10 December 1990 (1990-12-10) entire document	1-5
A	US 3913595 A (GRISEL YVAN VICTOR) 21 October 1975 (1975-10-21) entire document	1-5

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
19 October 2021	**27 October 2021**
Name and mailing address of the ISA/CN **China National Intellectual Property Administration (ISA/CN)** **No. 6, Xitucheng Road, Jimenqiao, Haidian District, Beijing 100088, China** Facsimile No. **(86-10)62019451**	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT
Information on patent family members

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Information on patent family members

International application No.
PCT/CN2021/077534

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