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(54) COSMETIC PACKAGING

(57) Disclosed herein is a packaging (1) for a cream cosmetic product (5) defining a main axis (1a) and comprising a case (2) defining a first cavity (20), a protruding element (3) arranged inside the first cavity (20), a tip (4) defining a first portion (40) and a second portion (41), and connecting means (6) suitable to transiently connect the tip (4) to at least one of the case (2) and the protruding element (3), wherein the first portion (40) comprises a second through cavity (40a) suitable to internally include part of the cosmetic product (5), the second portion (41) comprises a third through cavity (41 a) suitable to internally include part of the cosmetic product (5), the cavities (40a, 41a) are in reciprocal fluidic through connection and the protruding element (3) at least partially fills the second cavity (40a) when the tip (4) and the case (2) reciprocally translate by means of the connecting means (6), and wherein the second cavity (40a) has a normal section with an area that is bigger than the area of the normal section of the third cavity (41a) and the cosmetic product (5) comes out of the tip (4) when the tip (4) and the case (2) reciprocally translate.

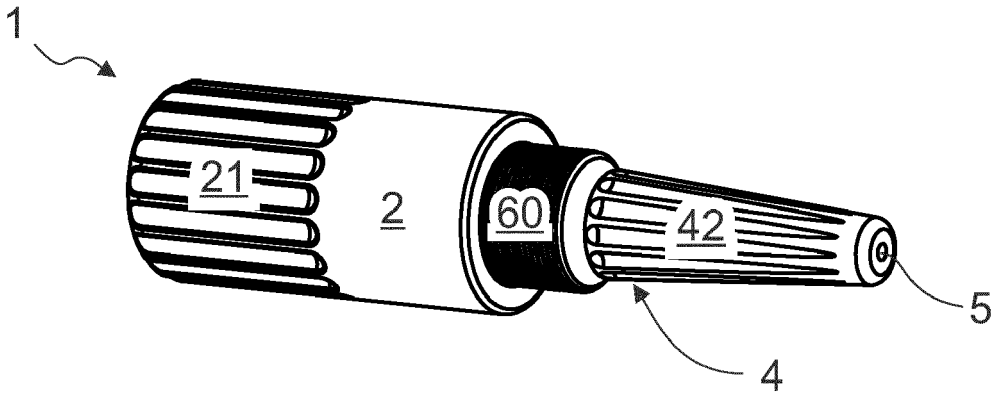

Fig. 1

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Description

[0001] The present invention relates to a cosmetic packaging of the type as recited in the preamble of Claim 1.

[0002] In particular, the present invention relates to a cosmetic packaging comprising a cream or solid or semi-solid cosmetic product such as a lipstick, an eye liner, a kajal, an eye shadow, a lip gloss, a concealer, a cream, a skin-care product or a product for use in the eye area.

[0003] As is known, packaging and applicators for cosmetics may vary in type according to the cosmetic product they contain. In particular, the receptacles used for liquid cosmetics are generally of the type into which applicators with bristles, such as brushes or other similar applicators, can be inserted and impregnated with the cosmetic product.

[0004] The cases used for cosmetics in powder form are of the kind that can be accessed using a brush or similar instrument suitable to collect the cosmetic product in order to distribute it, for example, on an area of a user's skin.

[0005] For solid cosmetics, including for example, compact powders, piston or rotary mechanisms can be used to advance the cosmetic product, as in the case of lipsticks, or ordinary pencils. In particular, pencils are used to distribute cosmetic, generally of the extruded or compact type, in an elongated form that constitutes the core.

[0006] For cosmetics in the form of a cream or paste the advancement means usually used are partially arranged inside the cosmetic-holder tips. Such advancement means generally comprise a piston mechanism suitable to propel the cosmetic product inside the receptacle and push it out of the latter so that it can be distributed, for example, on the skin.

[0007] Other kinds of mechanisms may be even more complex and envisage the use of a plurality of interlocking elements that cooperate in order to advance the cosmetic product in a controlled manner.

[0008] The prior art described above has some notable drawbacks.

[0009] In particular, all of the advancement mechanisms currently available on the market comprise a plurality of elements and structures that are often complex and involve high processing costs.

[0010] For example, in the case of packaging for cosmetics in the form of a cream or paste, the pistons that are used are exactly counter-shaped with respect to the cavity comprising the cosmetic product and aligning these is often problematic in the construction stage.

[0011] Furthermore, also owing to their complexity, such mechanisms can easily become worn and break.

[0012] In this context, the technical purpose underlying the present invention is to devise a cosmetic packaging capable of substantially obviating at least some of the above-mentioned drawbacks.

[0013] Within the sphere of said technical purpose one important aim of the invention is to obtain a cosmetic packaging in which a cosmetic product can be advanced in a controlled manner by means of a simplified structure.

[0014] Consequently, another important aim of the invention is to produce a cosmetic packaging that is economical and easily reproducible.

[0015] The technical purpose and specified aims are achieved with a cosmetic packaging as claimed in the appended claim 1.

[0016] Preferred technical solutions are set forth in the dependent claims.

[0017] The features and advantages of the invention will be apparent from the following detailed description of preferred embodiments thereof, with reference to the accompanying drawings, in which:

Fig. 1 shows a perspective view of a cosmetic packaging according to the invention;

Fig. 2 illustrates an exploded view of a packaging according to the invention;

Fig. 3 is a cross-sectional view of a packaging according to the invention;

Fig. 4 shows a longitudinal section of a cosmetic packaging according to the invention in an alternative configuration and with the protruding element at the end of travel;

Fig. 5 illustrates a longitudinal section of a packaging according to the invention in an alternative configuration with the protruding element retracted; and

Fig. 6 is a detail of the one-way friction mechanism comprised in a cosmetic packaging according to the invention in an alternative configuration.

[0018] In this document, measurements, values, forms and geometric references (such as perpendicularity and parallelism), when used with words like "about" or other similar terms such as "more or less" or "substantially", are to be understood as smaller than measurement errors or inaccuracies due to production and/or manufacturing defects and, especially, as less than a slight divergence from the value, measurement, form or geometric reference with which they are associated. For example, such terms, if associated with a value, preferably indicate a divergence of not more than 10% from said value.

[0019] Moreover, terms such as "first", "second", "upper", "lower", "main" and "secondary" do not necessarily indicate an order, priority or respective position, but may simply be used in order to make a clear distinction between the different components. Unless otherwise indicated, the measurements and data provided in this document are to be considered using International Standard Atmosphere ICAO (ISO 2533:1975).

[0020] With reference to the Figures, reference numeral **1** globally denotes the cosmetic packaging according to the invention.

[0021] The packaging 1 is preferably suitable to contain a cosmetic product **5**.

[0022] The packaging 1 and the cosmetic product 5

define a cosmetic.

[0023] The cosmetic product 5 is preferably a cream cosmetic product; in general it is a non-liquid and non-gaseous cosmetic product which may, therefore, also be solid or semi-solid.

[0024] The cosmetic 5 preferably has a viscosity value such as to permit the controlled dispensing thereof through piston-type means and with a force applied manually by a person without tiring or marking the hands.

[0025] The viscosity associated with the cosmetic 5 is therefore, preferably, that typical of viscoelastic materials and, for example, of cosmetic products such as kajal, kohl and products usually used in pencils for the lips, eyes and eyebrows.

[0026] Preferably, the packaging 1 defines a main axis **1a**.

[0027] The main axis 1a is substantially the prevalent axis of extension of the structure of the packaging 1.

[0028] Furthermore it comprises a case **2**, a protruding element **3** and a tip **4**.

[0029] The case 2, the protruding element 3 and the tip 4 are preferably aligned with one another and, in particular, aligned along the main axis 1a.

[0030] However, they may also be configured differently depending on the desired shape of the packaging 1.

[0031] The case 2 is preferably an open receptacle thus comprising a perimeter wall and a base.

[0032] It thus defines a first cavity **20**.

[0033] The first cavity 20 preferably consists of the volume enclosed by the case 2.

[0034] More in detail, the case 2 is substantially cylindrical in shape and, therefore, the cavity 20 is also preferably cylindrical in shape.

[0035] Nonetheless, different solutions such as a parallelepiped with a square base or other geometries known in the prior art are not to be excluded.

[0036] In addition, the case 2 preferably comprises a grip area **21**.

[0037] The grip area 21 is suitable to be held by a user and is therefore a portion of the case with a higher friction coefficient.

[0038] For example the grip area may be rubberised or have a rough or more pointed surface so that it is easy to hold.

[0039] The grip area 21 is preferably arranged on the outside surface of the case 2.

[0040] The grip area 21 could also be guaranteed by a material with a high enough friction coefficient and be incorporated into the entire outside surface of the case 2. This is the case, for example, in which the outside surface of the case 2 is rubberised. The protruding element 3 is preferably arranged inside the first cavity 20.

[0041] In particular, it is preferably arranged at the base of the case 20 and extends inside the first cavity 20 so as to at least partially fill it.

[0042] Furthermore, the protruding element 3 and the case may be separate components that can be assembled, or they may be formed as a single piece.

[0043] In addition, the protruding element 3 may also be formed as a single piece and may comprise two components that can be assembled and removably connected, as shown in Figs. 7-9.

[0044] For example, the protruding element 3, in this second alternative configuration, may comprise a stem **30** and a slider **31**.

[0045] The stem 30 is preferably aligned with the main axis 1a and can be assembled with the case 2 or formed as a single piece therewith.

[0046] The slider 31 may be an element that can be removably connected to the stem 30 so as to be integral with the stem 30.

[0047] The tip 4 preferably defines a first portion **40** and a second portion **41**.

[0048] The first portion 40 and the second portion 41 may be two separate components that can be assembled.

[0049] They are preferably formed as a single piece and are therefore part of the same component that forms the tip 4.

[0050] The tip 4 is preferably suitable to be at least partially inserted into the first cavity 20. In particular, the first portion 40 is preferably the portion suitable to interface with the case 2.

[0051] The first portion 40 preferably defines a second cavity **40a**.

[0052] The second cavity 40a is preferably a through cavity and suitable to internally include, and appropriately includes, in use, the cosmetic product 5.

[0053] The second cavity 40a preferably has a cylindrical shape and defines a first normal section. More in detail, the second cavity 40a is preferably aligned with the main axis 1a and the first normal section is the section perpendicular to the main axis 1a. Said normal section is preferably circular.

[0054] The first portion 41 preferably defines a third cavity **41a**.

[0055] The third cavity 41a is also preferably a through cavity and suitable to internally include the cosmetic product 5.

[0056] The third cavity 41a also preferably has a cylindrical shape and defines a second normal section. More in detail, the third cavity 41a is preferably aligned with the main axis 1a and the second normal section is the section perpendicular to the main axis 1a. Also said normal section is preferably circular.

[0057] The second and the third cavity 40a, 41a are preferably in reciprocal fluidic through connection.

[0058] In this way, for example, the cosmetic product 5 can flow through the cavities 40a, 41a from one part of the tip 4 to the other.

[0059] The packaging 1 further comprises connecting means **6**.

[0060] The connecting means 6 are preferably suitable to transiently connect the case 2 and the tip 4.

[0061] Therefore, the tip 4 is able to move with respect to the case 2. In detail, the tip 4 is preferably able to move

along the main axis 1a.

[0062] Therefore, it can substantially move towards and away from the case 2.

[0063] The connecting means 6, in particular, are arranged partially in the case 2 and partially in the tip 4.

[0064] Alternatively, the connecting means 6 may be arranged partially between the protruding element 3 and the tip 4 and, possibly, at the same time between the case 2 and the tip 4.

[0065] They comprise a threaded portion **60** and a counter-shaped portion **61**.

[0066] The threaded portion 60 is preferably arranged on the outside surface of the first portion 40. In particular, the threaded portion 60 is preferably a cylindrical portion that comprises a thread such as that present on ordinary screws.

[0067] Alternatively, the threaded portion 60 is arranged inside the second cavity 40a. The counter-shaped portion 61 is counter-shaped and compatible with respect to the threaded portion 60.

[0068] It is preferably arranged inside the first cavity 20 and also substantially describes a cylindrical shape.

[0069] Alternatively, the counter-shaped portion 61 is arranged along at least part of the protruding element 3, for example on the outside surface, so as to be compatible with the threaded portion 60 inside the second cavity 40a.

[0070] Therefore, the tip 4 can translate along the main axis 1a when it is made to rotate about the main axis 1a with respect to the case 2.

[0071] In other words, the tip 4 can be screwed to the inside of the cavity 20.

[0072] The connecting means 6 could, however, be different and comprise snap-fit mechanisms such as those in pens or pencils or other mechanisms.

[0073] For example, the connecting means 6 could also comprise a one-way friction mechanism, illustrated in Fig. 9, and suitable to permit the reciprocal rotation of the case 2 and the tip 4 in a single direction about the main axis 1a.

[0074] In particular, if the portions 60, 61 are arranged between the protruding element 3 and the tip 4, the one-way friction mechanism can be arranged between the tip 4 and the case 2.

[0075] If, instead, as in the preferred configuration, the portions 60, 61 are arranged between the tip 4 and the case 2, the one-way friction mechanism may be arranged between the protruding element 3 and the tip 4.

[0076] The tip 4 also preferably comprises a second grip area **42**.

[0077] The second grip area 42 is preferably of the same type as the first grip area 21.

[0078] It is preferably arranged in the second portion 41, and is also suitable to be held by a user.

[0079] More in detail, the second grip area 42 is arranged on the outside surface of the second portion 41.

[0080] The grip areas 21, 42 thus allow the user to rotate the tip 4 with respect to the case 2 about the main axis 1a to make it translate along the main axis 1a.

[0081] The second cavity 40a is, more in detail, counter-shaped with respect to the protruding element 3 so as to allow it to at least partially fill the second cavity 40a when the tip comes close to the first case 2 by means of the connecting means 6. Preferably, appropriately, the protruding element 3 is suitable to at least partially fill the second cavity 40a. It therefore has a normal section with an area that is smaller than or equal to, and preferably substantially equal to, the area of the first normal section and a travel shorter than or equal to, and preferably substantially equal to, the length of the second cavity 40a. The protruding element 3 thus defines and fills, at the end of travel, an advancement volume inside the second cavity 40a.

[0082] More appropriately, the protruding element 3 completely fills the second cavity 40a when the first portion 40 of the tip 4 completely fills the first cavity 20.

[0083] The latter situation refers, in practice, to when the tip 4 reaches the end of travel of the connecting means 6 and therefore the tip 4 has completed its maximum translation.

[0084] Appropriately, the advancement volume, defined by the protruding element 3, is smaller than or equal to the volume of the third cavity 41a. Consequently, the cosmetic product 5 present in the second cavity 40a never comes out, even at the end of travel of the protruding element 3 of the tip 4.

[0085] The second cavity 40a preferably defines a volume at least equal to the volume of the third cavity 41a.

[0086] This characteristic is preferably implemented in such a way that the protruding element 3 supplies the third cavity 41a with an amount of cosmetic product 5 at least equal to that delivered during the travel of the tip 4.

[0087] In fact, the cosmetic product 5 comes out of the tip 4 when the tip 4 approaches the case 2 in proportion to the volume of the second cavity 40a filled by the protruding element 3.

[0088] More in detail, the second cavity 40a preferably has a normal section with an area that is bigger than the area of the normal section of the third cavity 41a.

[0089] In particular, the second cavity 40a has a bigger opening than the third cavity 41a on a plane perpendicular to the main axis 1a.

[0090] Therefore, the portions 40, 41 preferably define a section in which the size of the opening changes.

[0091] Furthermore, the second and the third cavity 40a, 41a may define a single cylindrical cavity with a constant section.

[0092] More preferably, however, they define different characteristic sections. For example with different diameters.

[0093] Preferably, the second characteristic section is smaller than the first characteristic section.

[0094] However, the second characteristic section could be bigger than the first characteristic section.

[0095] The invention thus defines a cosmetic comprising the packaging 1 described herein and the cosmetic

product 5 described herein. In said cosmetic, in the initial condition, when said cosmetic has not been used, the cosmetic product 5 fills the second cavity 40a and the third cavity 41a.

[0096] Furthermore, in the end condition, when said tip 4 needs replacing, only at least part, and preferably all of the cosmetic product 5 present in the third cavity 41a has come out through the tip 4.

[0097] The invention also defines a kit for a plurality of packagings 1.

[0098] The kit comprises a plurality of tips 4. Said tips 4 preferably comprise second cavities 40a with mutually identical normal sections and preferably also with identical lengths along the main axis 1a. The tips 4 preferably comprise third cavities 41a having preferably different normal sections, that is to say, with different areas and/or shapes of said normal section.

[0099] Consequently, a same case 2 can be used for different tips 4 including of different shapes.

[0100] They can thus have characteristic sections with different diameters and other different characteristics in order to permit greater variety in the method of dispensing the cosmetic product 5.

[0101] The functioning of the cosmetic packaging 1 described above in a structural sense, is as follows. It also defines a novel method for dispensing a cosmetic according to the invention.

[0102] The cavities 40a, 41a are substantially completely filled with cosmetic product 5 and then the tip 4 is joined to the case 2.

[0103] When the tip 4 is screwed to the case 2 by acting on the grip areas 21, 42, the cosmetic product 5 is dispensed through the second portion 41 of the tip 4 in proportion to the push exerted by the protruding element 3 on the cosmetic product 5 inside the second cavity 40a.

[0104] The cosmetic product 5 that is initially present in the second cavity 40a preferably never comes out of the tip 4, even when the protruding element 3 has reached the end of travel.

[0105] In fact, when the cosmetic product 5 crosses the section in which the size of the opening changes, it could become unstructured and no longer be suitable for use. The cosmetic product 5 present in the second cavity 40a is thus sacrificial and its only purpose is to push the cosmetic product present inside the third cavity 41a out of said cavity.

[0106] The invention comprises a new method for producing a packaging 1.

[0107] In particular, the method comprises a packaging 1 which in turn comprises a set of tips 4.

[0108] Furthermore, the method comprises pouring tools of the type known in the prior art and suitable to enable a cosmetic product 5 to be poured into a cavity.

[0109] Such tools are preferably provided with a pouring lip which, in the pouring processes known in the prior art, must be changed for each item being processed, for example whenever the end tip is changed.

[0110] Advantageously, the method preferably comprises at least a step in which the second and the third cavity 40a, 41a of each tip 4 are filled starting from the second cavity 40a using the same tool.

[0111] This is possible because, as already mentioned, the second cavity 40a is identical in each tip 4.

[0112] In conclusion, the method comprises the steps of inserting the protruding element 3 into the cavity 20 and the step of connecting a tip 4 to the case 2 by means of the connecting means 6.

[0113] However, since the packaging comprises a set of tips 4, these are interchangeable and can each be connected to the case 2.

[0114] The cosmetic packaging 1 according to the invention achieves some important advantages.

[0115] The packaging in fact makes it possible to obtain a device for applying a cosmetic product with a simplified, but efficient structure.

[0116] Therefore, the costs of producing such packaging are reduced.

[0117] Furthermore, the possibility of producing a set of tips 4 which comprise an identical cavity 40a for pouring the cosmetic product 5, permits greater variety in the dispensing of the cosmetic product, and simplifies production.

[0118] Depending on the cosmetic product, the tools used to pour the cosmetic product often have to be modified or replaced; on the contrary, with the method for producing a packaging according to the invention, the same tool, and pouring lip, can always be used, even for different dispensing tips 4.

[0119] The invention is subject to variations without departing from the scope of the inventive concept as defined in the claims.

[0120] All details may be replaced with equivalent elements and the scope of the invention includes all other materials, shapes and dimensions.

Claims

1. A packaging (1) for a cream cosmetic product (5) defining a main axis (1a) and comprising:

   - a case (2) defining a first cavity (20),
   - a protruding element (3) arranged inside said first cavity (20),
   - a tip (4) defining a first portion (40) and a second portion (41),
   - connecting means (6) suitable to transiently connect said tip (4) to at least one of said case (2) and said protruding element (3),
   - said first portion (40) comprising a second through cavity (40a) suitable to internally include part of said cosmetic product (5),
   - said second portion (41) comprising a third through cavity (41a) suitable to internally include part of said cosmetic product (5),
   - said second and third cavity (40a, 41a) being

in reciprocal fluidic through connection,
- said protruding element (3) at least partially filling said second cavity (40a) when said tip (4) and said case (2) reciprocally translate by means of said connecting means (6),
and said packaging (1) being **characterised in that**
- said second cavity (40a) has a normal section with an area that is bigger than the area of the normal section of said third cavity (41a),
- said cosmetic product (5) comes out of said tip (4) when said tip (4) and said case (2) reciprocally translate.

2. The packaging (1) as claimed in claim 1, wherein said protruding element (3) defines, at the end of travel, an advancement volume inside said second cavity (40a) that is, at most, equal to the volume of said third cavity (41a).

3. The packaging (1) as claimed in at least one of the preceding claims, defining a main axis (1a) wherein said case (2) comprises a first grip area (21) suitable to be held by a user and said tip (4) comprises a second grip area (42) arranged on said second portion (41) suitable to be held by said user, said grip areas (21, 42) consenting said user to rotate said tip (4) with respect to said case (2) about said main axis (1a).

4. The packaging (1) as claimed in at least one of the preceding claims, wherein said protruding element (3) is suitable to completely fill said second cavity (40a) when said first portion (40) of said tip (4) completely fills said first cavity (20).

5. The packaging (1) as claimed in at least one of the preceding claims, wherein said second cavity (40a) has a cylindrical shape and defines a first characteristic section and said third cavity (41a) also has a cylindrical shape and defines a second characteristic section, said second characteristic section being smaller in size than said first characteristic section.

6. The packaging (1) as claimed in at least one of the preceding claims, wherein said second characteristic section is bigger in size than said first characteristic section.

7. The packaging (1) as claimed in at least one of the preceding claims, wherein said connecting means (6) comprise a one-way friction mechanism arranged either between said tip (4) and said case (2) or between said tip (4) and said protruding element (3).

8. A cosmetic comprising a packaging (1) as claimed in at least one of the preceding claims and a cosmetic product (5), wherein, in the initial condition when said cosmetic has not yet been used, said cosmetic product (5) fills said second cavity (40a) and said third cavity (41a).

9. A kit for the packaging (1) as claimed in at least one of the preceding claims, comprising a set of said tips (4), said set of tips (4) comprising at least two tips (4) wherein each of said tips (4) comprises second cavities (40a) with mutually identical normal sections and third cavities (41a) with reciprocally different normal sections.

10. A method for dispensing a cosmetic comprising a packaging (1) as claimed in at least one of the preceding claims and a cosmetic product (5), said method consisting in:

- substantially completely filling said second cavity (40a) and said third cavity (41a),
- advancing said protruding element (3) in said second cavity (40a) to push only said cosmetic product (5) present in said third cavity (41a) out of said tip (4).

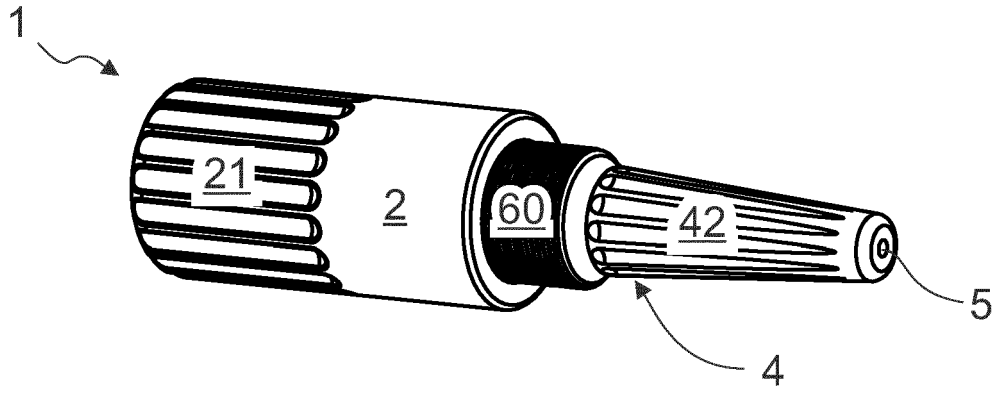

Fig. 1

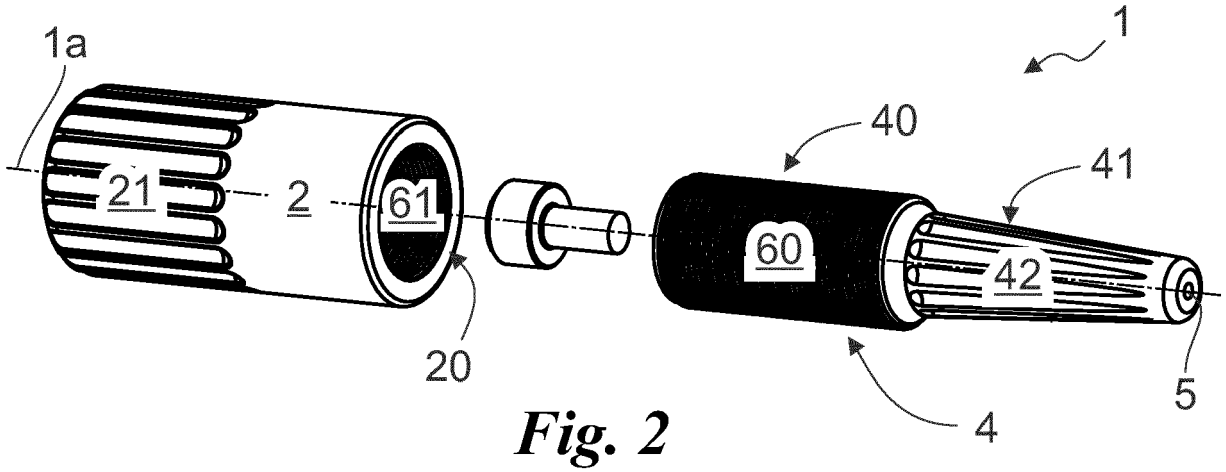

Fig. 2

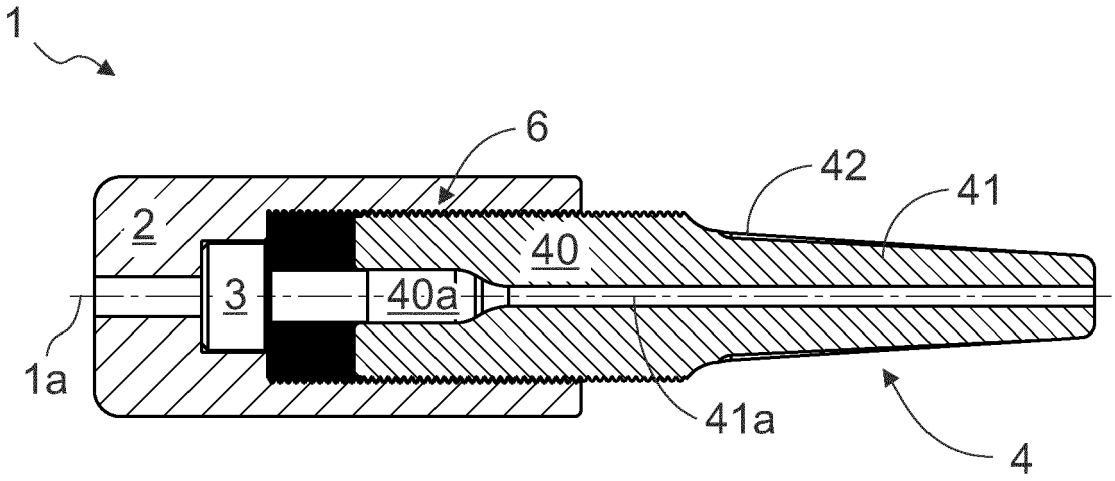

Fig. 3

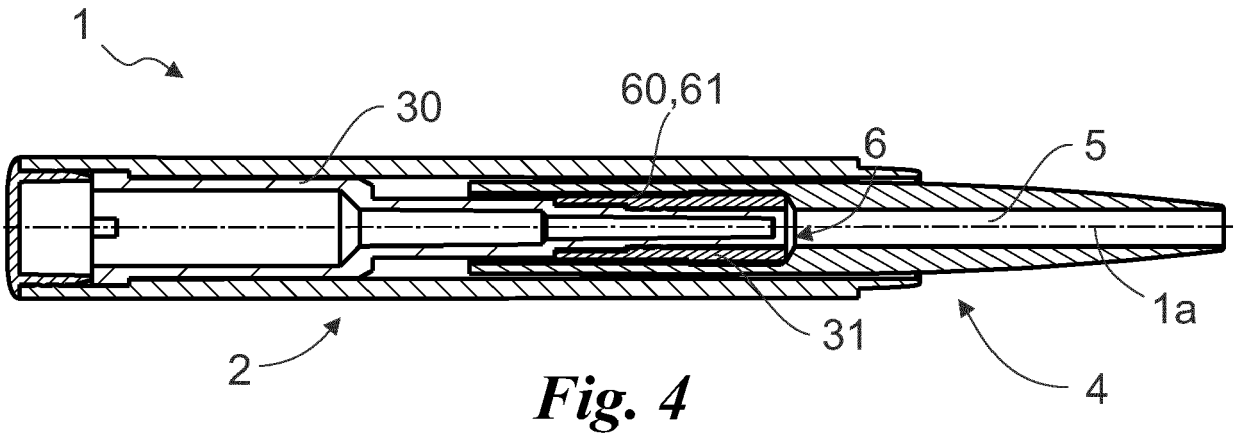

Fig. 4

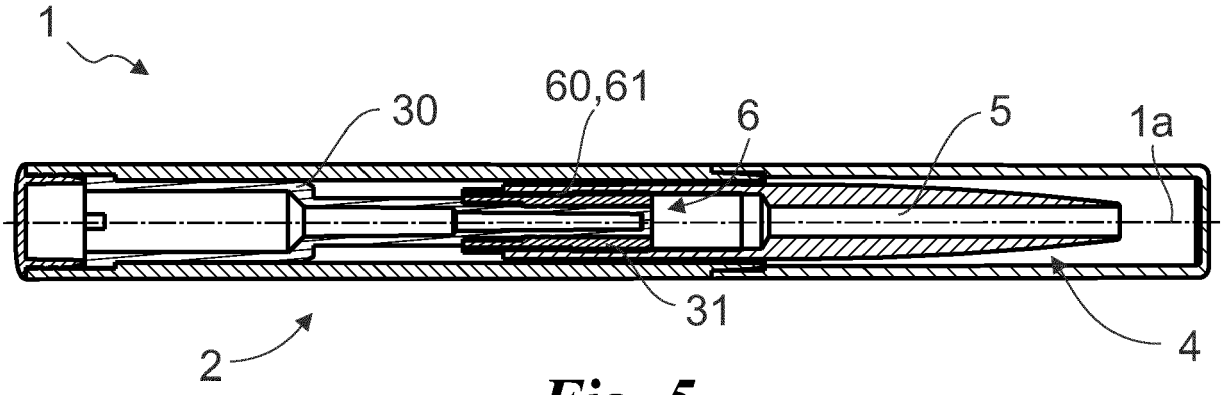

Fig. 5

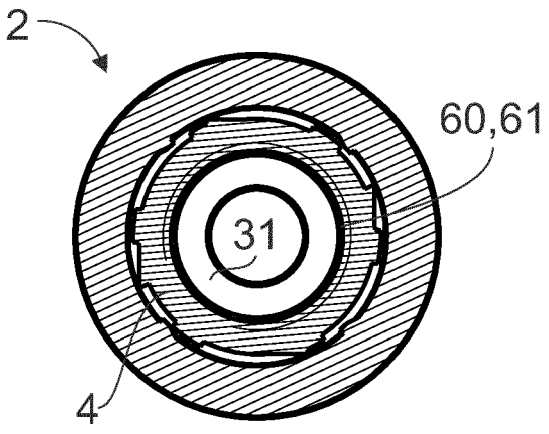

Fig. 6

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EUROPEAN SEARCH REPORT

Application Number
EP 19 16 2504

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X A	US 2006/124670 A1 (BOUGAMONT JEAN-LOUIS [FR]) 15 June 2006 (2006-06-15) * paragraphs [0017], [0035], [0044]; figures * -----	1-8,10 9	INV. A45D34/04 A45D40/04 B65D83/00
X A	WO 03/057581 A1 (JUNG CHOONG-HYUN [KR]) 17 July 2003 (2003-07-17) * page 8, line 12 - line 26; figure 3 * -----	1-8 9,10	
A	WO 2016/094756 A1 (JOHNSON & JOHNSON CONSUMER INC [US]) 16 June 2016 (2016-06-16) * paragraph [0005]; figures * -----	1-10	

TECHNICAL FIELDS SEARCHED (IPC)
A45D B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	30 April 2019	van de Beek-Duijker

CATEGORY OF CITED DOCUMENTS

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 19 16 2504

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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