

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 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 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.

[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 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, 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 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 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] In addition, the advancement mechanisms are suitable to cooperate with a tip, or a portion of a tip, through which the cosmetic is dispensed and which is not separate from said mechanism.

[0011] Therefore, with the packagings known in the prior art, the entire packaging is discarded when the cosmetic inside it been used up, resulting in a large amount of waste, especially considering the advancement mechanisms and the complexity of these.

[0012] Furthermore, also owing to their complexity, such mechanisms can easily become worn and break and, also in that case, the entire packaging is discarded.

[0013] 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.

[0014] Within the sphere of said technical purpose one important aim of the invention is to obtain a cosmetic packaging in which a cosmetic can be advanced in a controlled manner by means of a simplified structure.

[0015] Consequently, another important aim of the invention is to produce a cosmetic packaging that is economical and easily reproducible.

[0016] In addition, a further purpose of the invention is to produce a cosmetic packaging that considerably reduces the amount of waste material.

[0017] The technical purpose and specified aims are achieved with a cosmetic packaging as claimed in the appended claim 1.

[0018] Preferred technical solutions are set forth in the dependent claims.

[0019] 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 illustrates a longitudinal section, with an enlarged view, of a cosmetic packaging according to the invention in which the internal piston is in the initial position;

Fig. 2 illustrates a longitudinal section, with an enlarged view, of a cosmetic packaging according to the invention in which the internal piston is at the end of travel;

Fig. 3 is a perspective view of the case of a packaging according to the invention;

Fig. 4 shows a perspective view of the tip of a cosmetic packaging according to the invention; and

Fig. 5 is a detail of the one-way friction mechanism comprised in a cosmetic packaging according to the invention.

[0020] 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.

[0021] 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).

[0022] With reference to the Figures, reference numeral **1** globally denotes the cosmetic packaging according

to the invention.

[0023] The packaging 1 is preferably suitable to contain a cosmetic 5.

[0024] The cosmetic 5 is preferably a cream cosmetic; in general it is a non-liquid and non-gaseous cosmetic which may, therefore, also be solid or semi-solid.

[0025] 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.

[0026] 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.

[0027] Preferably, the packaging 1 defines a main axis 1a.

[0028] The main axis 1a is substantially the prevalent axis of extension of the structure of the packaging 1.

[0029] Furthermore it comprises a case 2, a protruding element 3 and a tip 4.

[0030] 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.

[0031] However, they may also be configured differently depending on the desired shape of the packaging 1.

[0032] The case 2 is preferably an open receptacle thus comprising a perimeter wall and a base.

[0033] It thus defines a first cavity 20.

[0034] The first cavity 20 preferably consists of the volume enclosed by the case 2.

[0035] More in detail, the case 2 is substantially cylindrical in shape and, therefore, the cavity 20 is also preferably cylindrical in shape.

[0036] Nonetheless, different solutions such as a parallelepiped with a square base or other geometries known in the prior art are not to be excluded.

[0037] In addition, the case 2 preferably comprises a grip area 21.

[0038] 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.

[0039] For example the grip area may be rubberised or have a rough or more pointed surface so that it is easy to hold.

[0040] The grip area 21 is preferably arranged on the outside surface of the case 2.

[0041] 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.

[0042] 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.

[0043] 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.

bled, or they may be formed as a single piece.

[0044] The protruding element 3 preferably comprises at least one stem 30.

[0045] The stem 30 is preferably an elongated body extending along the main axis 1a inside the first cavity 20.

[0046] The tip 4 comprises a main portion 4a defining a main cavity 4b, preferably a through cavity, suitable to house the cosmetic 5.

[0047] The main portion 4a preferably defines a first portion 40 and a second portion 41. The first portion 40 and the second portion 41 may be two separate components that can be assembled.

[0048] They are preferably formed as a single piece and are therefore part of the same component that forms the tip 4.

[0049] 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.

[0050] The first portion 40 preferably defines a second cavity 40a, which is part of the main cavity 4b.

[0051] The second cavity 40a is preferably a through cavity and suitable to internally include, and appropriately includes, in use, the cosmetic 5.

[0052] The second cavity 40a preferably has a cylindrical shape and defines a first characteristic section. More in detail, the second cavity 40a is preferably aligned with the main axis 1a and the first characteristic section is a circular section of the cylinder considered on a plane perpendicular to the main axis 1a.

[0053] The second portion 41 preferably defines a third cavity 41a, which is part of the main cavity 4b.

[0054] The third cavity 41a is also preferably a through cavity and suitable to internally include the cosmetic product 5.

[0055] The third cavity 41a also preferably has a cylindrical shape and defines a second characteristic section. More in detail, the third cavity 41a is preferably aligned with the main axis 1a and the first characteristic section is a circular section of the cylinder considered on a plane perpendicular to the main axis 1a.

[0056] The second and third cavity 40a, 41a are preferably in reciprocal fluidic through connection.

[0057] In this way, for example, the cosmetic 5 can flow through the cavities 40a, 41a from one part of the tip 4 to the other.

[0058] The tip 4 preferably further comprises an auxiliary portion 42.

[0059] The auxiliary portion 42 is preferably a body that is transiently, and preferably also removably, connected to the main portion 4a.

[0060] In particular, the auxiliary portion 42 is preferably connected to the first portion 40 and housed inside the second cavity 40a.

[0061] The auxiliary portion 42 is transiently connected to the first portion 40 so as to be able to at least translate, and preferably also rotate, with respect to the first portion 40 along at least one predetermined direction.

[0062] In detail, the auxiliary portion 42 is, in addition, as already mentioned, transiently connected to the inside of the second cavity 40a so as to only permit the reciprocal rotation about the main axis 1a of the first portion 40 and of the auxiliary portion 42, and the reciprocal translation of the first and third portions 40, 42 along said axis. This type of connection is, for example, guaranteed by a coupling achieved through threaded guides which allow the auxiliary portion 42 to be screwed to the inside of the main cavity 4a and preferably of the second cavity 40a.

[0063] Therefore, the auxiliary portion 42 is preferably a slider housed inside the first cavity 40a and which acts as a piston when the auxiliary portion 42 advances with respect to the first portion 40 following the reciprocal rotation of the two portions 40, 42. The auxiliary portion 42 is preferably counter-shaped with respect to the portion of main cavity 4a into which it is inserted and fills it completely.

[0064] The auxiliary portion 42 preferably comprises a hole 42a.

[0065] The hole 42a is a through hole and preferably compatible with the dimensions of the protruding element. In particular, the hole 42a is preferably suitable to receive at least part of the stem 30.

[0066] The packaging 1 further comprises connecting means 6.

[0067] The connecting means 6 are preferably suitable to connect the protruding element 3 and the tip 4.

[0068] Preferably, in particular, the connecting means 6 are suitable to connect the protruding element 3, in particular the stem 30, and the auxiliary portion 42 substantially in a non-transient manner. Clearly, the term non-transient refers to the non-transience along the directions in question and not the general absolute non-transience of the elements.

[0069] Furthermore, the connecting means 6 are preferably suitable to connect the protruding element 3 and the auxiliary portion 42 by interlocking, that is to say by means of a quick connection for example through the elastic deformation of portions made of polymeric or similar material.

[0070] Consequently, the main portion 4a and the protruding element 3 are reciprocally movable along the main axis 1a.

[0071] The connecting means 6, in particular, are arranged partially on the protruding element 3 and partially on the tip 4.

[0072] They comprise at least an abutment element 60 and a counter-shaped portion 61. The abutment element 60 is preferably arranged on the outside surface of the protruding element 3.

[0073] In particular, the abutment element 60 is preferably arranged in the tip portion of the stem 30, that is to say close to the opening of the case 2.

[0074] The counter-shaped portion 61 is preferably counter-shaped and compatible with respect to the abutment element 60.

[0075] It is preferably arranged inside the auxiliary portion 42.

[0076] In detail, the counter-shaped portion 61 is arranged on the inside surface of the hole 42a.

[0077] The connecting means 6 preferably define an interlocking connection between the auxiliary portion 42 and the protruding element 3 sufficient to only permit the reciprocal rotation and translation of the auxiliary portion 42 and the first portion 40, and thus also of the tip 4 and the protruding element 3 or the case 2.

[0078] Therefore, the main portion 4a of 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. In other words, the main portion 4a of the tip 4 can be screwed to the inside of the cavity 20.

[0079] The connecting means 6 could, however, be different and comprise snap-fit mechanisms such as those in pens or pencils or other mechanisms.

[0080] For example, the connecting means 6 could also comprise a one-way friction mechanism, illustrated in Fig. 5, and suitable to permit the reciprocal rotation of the case 2 and the tip 4 in a single direction about the main axis 1a.

[0081] In particular, the one-way friction mechanism could be arranged between the tip 4 and the case 2.

[0082] The second cavity 40a is, more in detail, counter-shaped with respect to the auxiliary portion 42 and, furthermore, the auxiliary portion 42 is counter-shaped with respect to the protruding element 3 so as to allow the auxiliary portion 42 connected to the protruding element 3 to at least partially fill the second cavity 40a when the tip approaches the first case 2 by means of the connecting means 6.

[0083] In detail, when the stem 30 is inserted into the hole 42a, the auxiliary portion 42 and the protruding element 3 achieve the interlocking connection and together constitute a piston.

[0084] Preferably, in fact, the second cavity 40a and the auxiliary portion 42 are counter-shaped, as are the hole 42a and the stem 30 so as to achieve the aforesaid piston and prevent percolation of the cosmetic 5 at least in the portion aligned with the main axis 1a, that is, at the hole 42a.

[0085] Therefore, the auxiliary portion 42 and the protruding element 3, defining the piston, at least partially fill the second cavity 40a when the tip 4 and the case 2 are moved towards one another.

[0086] More appropriately, the protruding element 3 and the auxiliary portion 42 are suitable to entirely fill the second cavity 40a when the reciprocal translation of the auxiliary portion 42 and the first portion 40 has reached the end of travel, for example in a configuration in which the first portion 40 of the tip 4 entirely fills the first cavity 20.

[0087] As already mentioned, 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.

[0088] The second cavity 40a preferably defines a vol-

ume at least equal to the volume of the third cavity 41a.

[0089] This characteristic is preferably implemented in such a way that the protruding element 3 supplies the third cavity 41a with an amount of cosmetic 5 at least equal to that delivered during the travel of the tip 4.

[0090] In fact, the cosmetic 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.

[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 packaging 1 may, preferably, comprise a set of tips 4. Such tips 4 preferably comprise identical holes 42a, but may contain third cavities 41a having at least one mutually different volume.

[0096] Or the tips 4 may contain different kinds of cosmetics 5.

[0097] 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 5 or different cosmetics 5.

[0098] The functioning of the cosmetic packaging 1 described above in a structural sense, is as follows.

[0099] Substantially, when the tip 4 is inserted into the case 2 and connected by interlocking to the protruding element 3 thanks to the grip areas 21, 42, the cosmetic 5 is dispensed through the second portion 41 of the tip 4 in proportion to the push exerted by the protruding element 3 and by the auxiliary portion 42 on the cosmetic 5 inside the second cavity 40a.

[0100] The invention comprises a new method for assembling a packaging 1, preferably of the type described above.

[0101] Said method consists in transiently connecting the auxiliary portion 42 to the main portion 4a. Said step is preferably performed at the production facility.

[0102] The method further comprises the step of connecting the auxiliary portion 42 and the protruding portion 3 in a non-transient manner, by means of interlocking. The connection with the element 3 thus also results in the connection with the case 2. Said step is preferably performed by the end user and may thus involve the use of a single case and a plurality of tips 4 that are used one at a time.

[0103] The invention thus also comprises a packaging 1 comprising a set of tips 4 and the same connecting means 6 compatible with a same case 2 and a plurality of tips 4. The cosmetic packaging 1 according to the invention achieves some important advantages.

[0104] The packaging in fact makes it possible to ob-

tain a device for applying a cosmetic with a simplified, but efficient structure.

[0105] In particular, the connection between the tip 4 and the case 2 is achieved easily and quickly by means of interlocking, and can also be achieved by the end user, who can interchange or replace several tips 4 on a single case.

[0106] At the same time, since the auxiliary portion 42 is substantially already joined to the main portion 4a of the tip 4, and since said portion acts as a piston, the piston can be perfectly counter-shaped with respect to the main cavity 4b.

[0107] Therefore, the costs of producing such packaging are reduced.

[0108] Furthermore, the connecting means 6 are standardised, making it possible to produce a packaging that is suitable for a plurality of uses with different tips 4.

[0109] In particular, the case 2 need not be discarded after use. Instead, the tip 4 can simply be replaced with another tip, or the tip 4 can be refilled with a new cosmetic 5. Therefore, a further advantage of the cosmetic packaging according to the invention is that it considerably reduces waste.

[0110] The invention is subject to variations without departing from the scope of the inventive concept as defined in the claims.

[0111] With reference to that described above, for example, the method for assembling the packaging may comprise a further step of releasing the tip 4 with respect to the protruding element 3 and a subsequent step of inserting a new tip 4, for example after a step of filling said tip 4 with a new cosmetic 5.

[0112] Furthermore, since the auxiliary portion 42 is removable, there could also be a step of cleaning the tip 4.

[0113] After a new refilling or replacing step, the assembly process could be repeated starting from the step of inserting the tip 4 into the case 2.

[0114] In this context, all details are replaceable by equivalent elements, and the materials, shapes and dimensions may be any materials, shapes and dimensions.

Claims

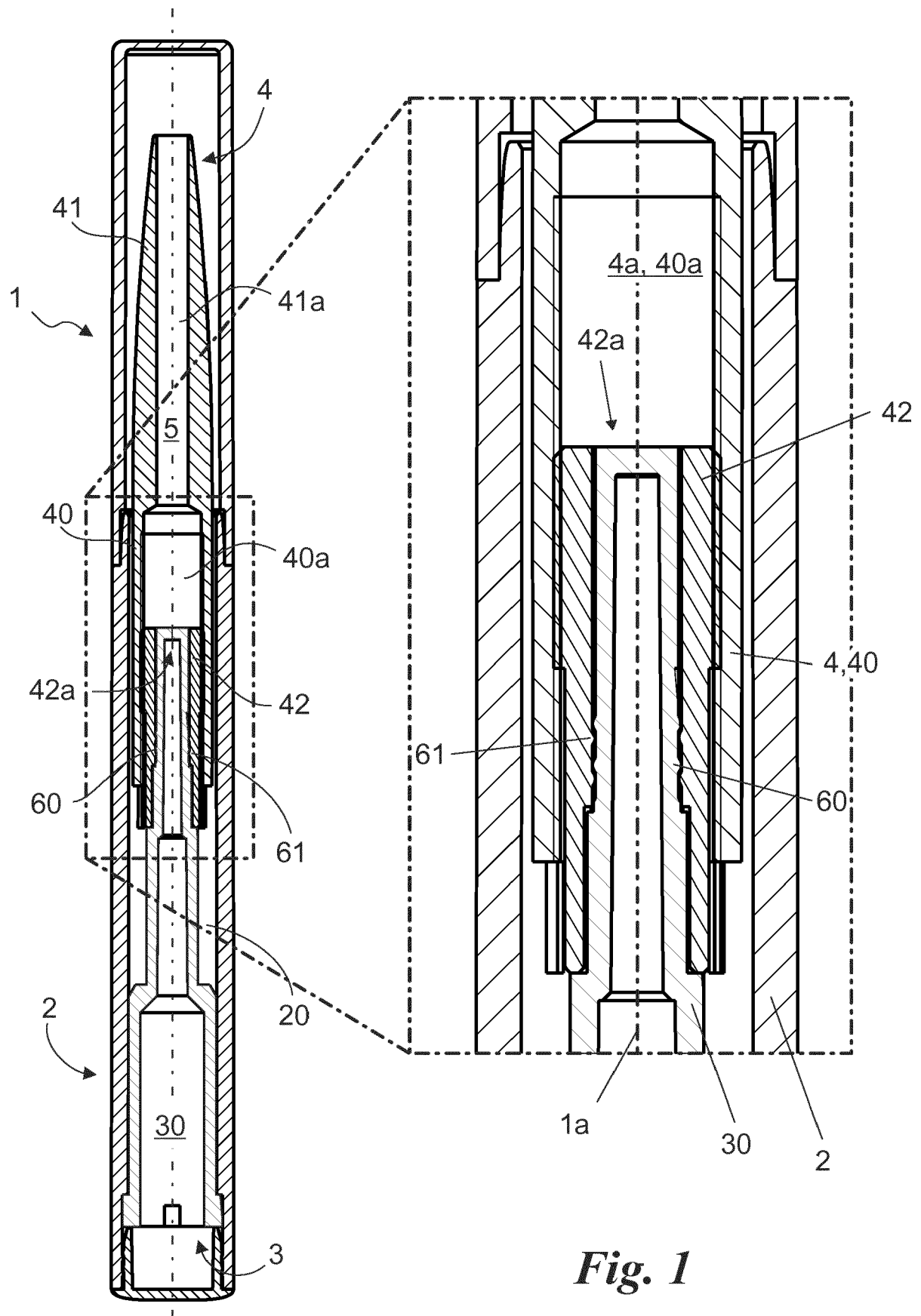
1. A packaging (1) for a cosmetic (5) comprising:

- a case (2) defining a first cavity (20),
- a protruding element (3) arranged inside said first cavity (20),
- a tip (4) comprising a main portion (4a) defining a main cavity (4b), suitable to house said cosmetic (5),

characterised in that

- said tip (4) comprises an auxiliary portion (42) transiently connected to said main portion (4a) so as to be able to at least translate with respect to said main portion (4a) at least in a predetermined direction so as to enable, as it advances,

- the extraction of said cosmetic (5) from said main cavity (4b),
 - and **in that** it comprises connecting means (6) suitable to connect said auxiliary portion (42) and said protruding element (3) by means of a non-transient interlocking connection. 5
2. The packaging (1) as claimed in the preceding claim, wherein said auxiliary portion (42) is connected to said first portion (40) by means of threaded guides which allow said auxiliary portion (42) to be screwed to the inside of said main cavity (4a). 10
3. The packaging (1) as claimed in at least one of the preceding claims, wherein said main portion (4a) defines a first portion (40) and a second portion (41), and wherein 15
- said first portion (40) comprises a second through cavity (40a), which is part of said main cavity (4b), suitable to internally include part of said cosmetic (5), 20
 - said second portion (41) comprising a third through cavity (41a), which is part of said main cavity (4b), suitable to internally include part of said cosmetic (5), 25
 - said second and third cavities (40a, 41a) being in reciprocal fluidic connection and comprising said cosmetic (5).
4. The packaging (1) as claimed in the preceding claim, defining a main axis (1a) wherein said auxiliary portion (42) is housed inside said second cavity (40a) and comprises a hole (42a) aligned with said main axis (1a) and said protruding element (3) comprises at least a stem (30) extending along said main axis (1a) and suitable to be at least partially housed in said hole (42a), said auxiliary portion (42) and said stem (30) forming a piston for said cosmetic (5) inside said cavities (40a, 41a). 30 35 40
5. The packaging (1) as claimed in at least one of the preceding claims, wherein said auxiliary portion (42) and said first portion (40) are reciprocally transiently removably connected by means of a threaded guide which allows said auxiliary portion (42) to be screwed into said second cavity (40a), said threaded guide comprising abutment elements on the inside surface of said second cavity (40a) and a counter-shaped portion along the outside surface of said auxiliary portion (42). 45 50
6. The packaging (1) as claimed in claim 4 or 5, wherein said case (2), said protruding element (3) and said tip (4) are aligned with said main axis (1a) and said connecting means (6) comprise at least an abutment element (60) arranged on the outside surface of said protruding element (3) and a counter-shaped portion (61) with respect to said threaded portion (60) on the inside surface of said hole (42a) so as to reciprocally connect said auxiliary portion (42) and said protruding element (3) and allow said tip (4) to translate along said main axis (1a) when made to rotate about said main axis (1a) with respect to said protruding element (3) and said case (2). 55
7. The packaging (1) as claimed in at least one of the preceding claims, wherein said second cavity (40a) is counter-shaped in relation to said auxiliary portion (42) and said hole (42a) is counter-shaped in relation to said protruding element (3) so as to allow said auxiliary portion (42) and said protruding element (3) to at least partially fill said second cavity (40a) when said tip (4) comes close to said case (2) by means of said connecting means (6), said cosmetic (5) coming out of said tip (4) when said tip (4) approaches said case (2) in proportion to said volume of said second cavity (40a) filled by said auxiliary portion (42) and at least part of said protruding element (3).
8. 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 between said tip (4) and said case (2) so as to allow the reciprocal rotation of said tip (4) and said protruding element (3) in a single direction.
9. 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 identical holes and said tips (4) comprise elements that can be chosen from among said third cavities (41a) at least with a mutually different volume or different types of said cosmetic product (5).
10. A method for assembling a packaging (1) as claimed in at least one of the preceding claims, **characterised in that** it consists in:
- transiently connecting said auxiliary portion (42) to said main portion (4a),
 - subsequently connecting said auxiliary portion (42) and said protruding element (3) by means of a non-transient interlocking connection.



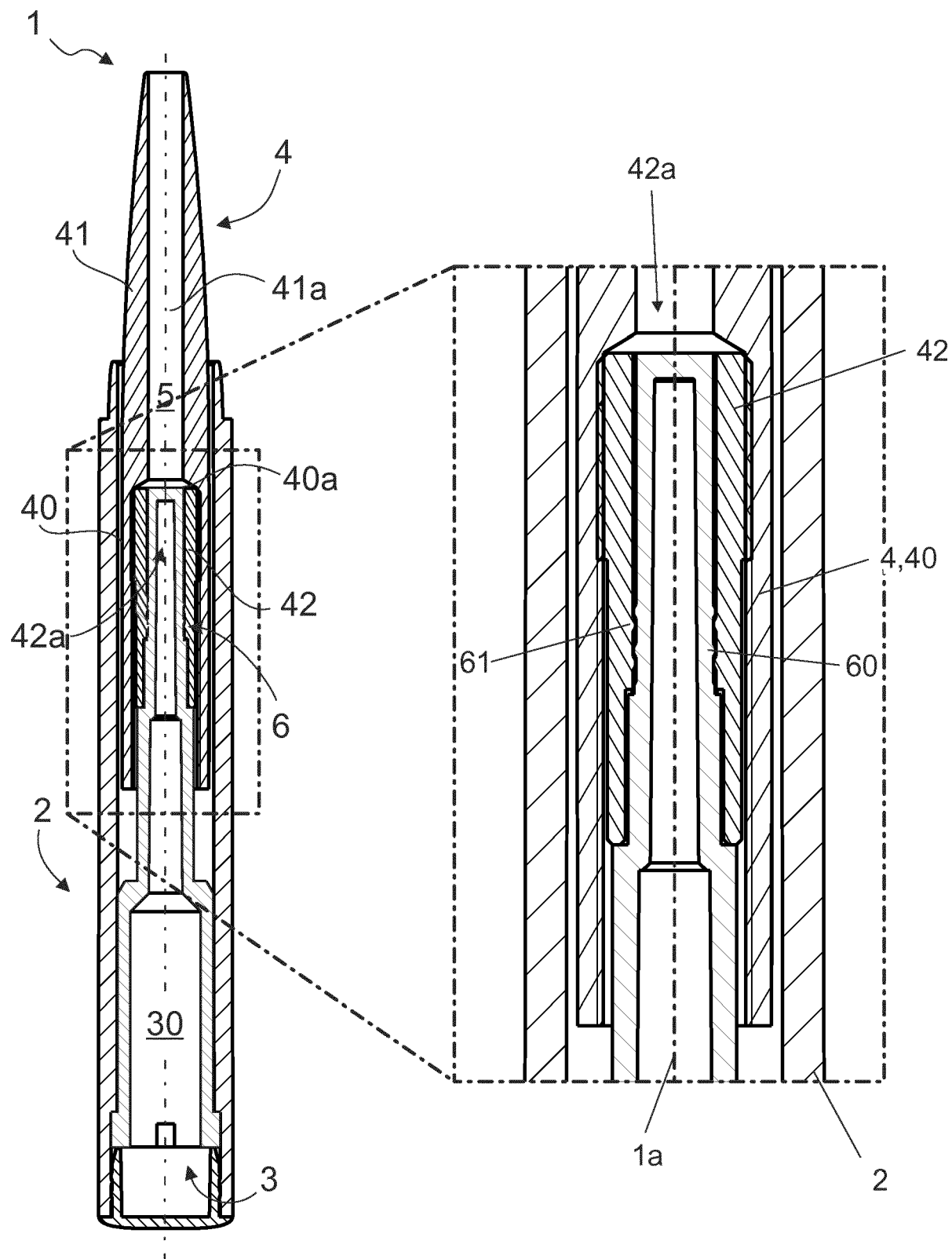


Fig. 2

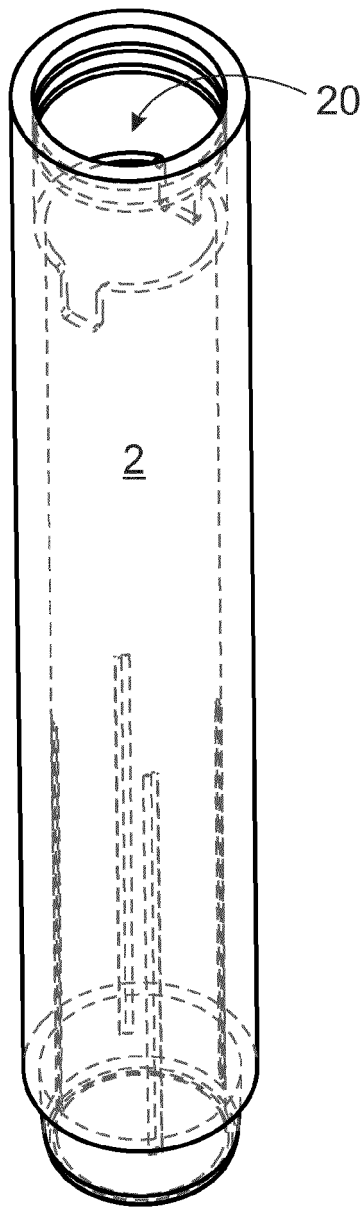


Fig. 3

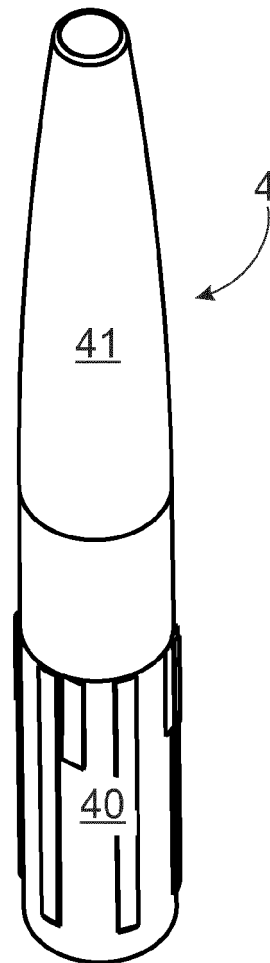


Fig. 4

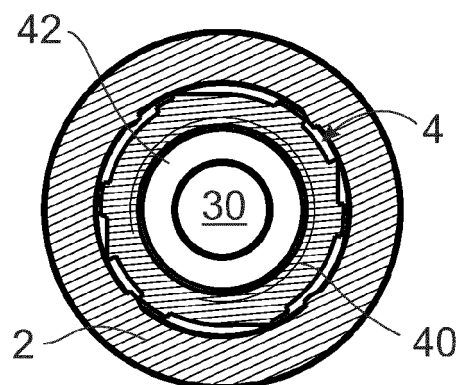


Fig. 5



EUROPEAN SEARCH REPORT

 Application Number
 EP 19 16 2500

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 18 April 2019	Examiner Ionescu, C
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 19 16 2500

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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