



(51) International Patent Classification:
A45D 40/26 (2006.01)

(21) International Application Number:
PCT/EP2011/062352

(22) International Filing Date:
19 July 2011 (19.07.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
1056211 28 July 2010 (28.07.2010) FR
61/371,003 5 August 2010 (05.08.2010) US

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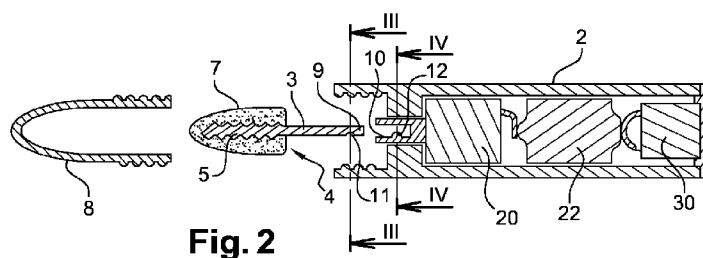
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: DEVICE FOR PACKAGING AND APPLYING AT LEAST ONE SOLID COSMETIC COMPOSITION



(57) Abstract: The invention relates to a device (1) for packaging and applying at least one cosmetic composition, designed for an application on the lips, the eyelashes, the eyebrows or hair, comprising: -a holding member (2), -an application member (4) connected to the holding member, comprising: -a connection means (3) for connection to the holding member, -a core (5) secured to the connection means, -retention elements (6) secured to the core, -a solid block (7) of the said composition. According to the invention, the block has an outer casing extending around the core, at least to some of the retention elements being enveloped by the block of the composition.

DEVICE FOR PACKAGING AND APPLYING AT LEAST ONE SOLID COSMETIC COMPOSITION

The present invention relates to a device for packaging and applying at least one cosmetic composition, notably designed
5 to be applied to the lips, the eyelashes or the eyebrows.

"Cosmetic composition" means a composition as defined in Council Directive 93/35/EEC of 14 June 1993.

10 The cosmetic composition may be for example a mascara, a make-up base for the eyelashes or a composition to be applied to a mascara. The composition may also be a lipstick.

Many devices for packaging and applying a mascara to the
15 eyelashes are known in the prior art. These devices mainly take two forms depending on the texture of the mascara.

In the case in which the mascara is liquid, it is contained in a receptacle furnished with a wiper and an applicator
20 comprising an application member and is applied by taking some product from the receptacle with the aid of the applicator, passing the application member through the wiper in order to remove the surplus product, then placing the application member impregnated with mascara in contact with the eyelashes.
25 The quantity of product to be applied is defined by the wiper and can therefore not be adapted by the user.

A heating device may be associated with the device for packaging and applying liquid mascara as is described in
30 application WO 2008/068337. Heating the mascara makes it possible to obtain for example different physical properties of the product.

If the mascara is solid, a solvent or heat are most frequently
35 used in order to make the mascara applicable.

Also known from publications US 2 007 245 or
FR 2 833 163 are mascaras in solid form requiring,
prior to their application to the eyelashes, being
placed in contact with an aqueous phase in order to
5 make the mascara partially soluble. This type of device
is not very effective and not very practical to use.

Application FR 2 733 398 describes a device for
applying mascara in the form of an elongate block that
10 can be degraded in water. This block can be overmoulded
on a brush.

Application WO 2006/057439 describes mascara
compositions that are solid at ambient temperature that
15 are softened with the aid of a heating device so as to
be able to be applied to the eyelashes. Once the
softened mascara composition has been applied to the
eyelashes, the latter is rapidly cooled and therefore
solidifies, allowing the formation of a film covering
20 the eyelashes.

Application FR 2 914 161 describes a packaging and
application device in which the mascara is contained in
the form of a stick in a stem and is elastically moved
25 towards a heating device inside an application member.

Another formulation method for a mascara consists in
producing it in the form of a block of composition that
allows an application by direct dry transfer to the
30 eyelashes.

Devices allowing the application of compositions by dry
transfer are disclosed notably by publications
FR 2 888 735, EP 1 785 055 and EP 1 913 835.

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The development of such devices with compositions that
can be applied dry presents difficulties lying notably
in the obtaining of a block on an applicator, and the
speed and ease of making up for the user.

In the aforementioned applications, the block takes the form of a stick and the application is carried out by its distal end.

5

The body movements are different from those to which the users are accustomed with the most widely used brushes, which may cause certain users accustomed to conventional brushes to be put off these devices.

10

There is therefore a need to remedy all or part of the abovementioned drawbacks and take advantage of a packaging and application device that is easy to use and that leads to satisfactory make-up results.

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The subject of the invention is a device for packaging and applying at least one cosmetic composition, designed for an application on the lips, the eyelashes, the eyebrows or hair, comprising:

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- a holding member,
- an application member connected to the holding member, comprising:

- a connection means for connection to the holding member,

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- a core secured to the connection means,
 - retention elements secured to the core,
 - a solid block of the said composition, the said block having an outer casing extending around the core, at least to some of the retention elements being enveloped by the block of the composition.

30

The invention therefore has the advantage of retaining the ease of use and actions of the conventional applicators most widely available on the market, comprising a brush or a comb to be immersed in a receptacle containing a liquid composition in order to be loaded with composition, while providing the

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advantages associated with the solid form of the composition.

5 The invention also has the advantage of having no wiper making it possible to adjust the quantity of product to be applied, this adjustment being made at the wish of the user.

10 According to other features of the invention, the totality of the retention elements may be enveloped in the block. This feature advantageously makes it possible to more easily produce the application member by moulding of the block onto the retention elements.

15 The retention elements may be a screw thread, bristles, teeth and/or flocking, the retention elements being able to be moulded with the core and the bristles being able to be supported by a twisted core.

20 The connection means for connecting the application member to the holding member may be a stem connecting the core to the holding member.

25 The application member of the device may be removable from the holding member. This feature advantageously makes it possible to reload the device when the block of product is used up.

30 The connection means for connecting the application member to the holding member may comprise a seat and a means for the removable mounting of a cap so that, in the closed position, the cap and the seat form a closed housing containing the block of product for its packaging. This feature advantageously makes it possible to retain the block of product in good condition in order to prevent spoiling it.

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The holding member may comprise a rotary motor in order to rotate the application member so as to improve the degrading of the composition.

- 5 The composition may be able to be fluidized by an application of heat and the device may then comprise a heating system incorporated into the application member.
- 10 The holding member may comprise a vibrating member also making it possible to better separate the eyelashes in order to distribute the load of product evenly over all the eyelashes.
- 15 A further subject of the invention is a kit for such a device, the kit being able to contain several application members supporting compositions of different formulations.
- 20 A further subject of the invention is a method for manufacturing an application member for such a device, the method comprising the steps consisting in:
- pouring the composition having been brought to the fluid state into a cap of the device,
 - 25 - inserting the core of the application member into the composition,
 - solidifying the composition in order to form a block of product around the core, for example by lowering the temperature to the ambient temperature of
 - 30 approximately 20°C or to a lower temperature.

The invention can be better understood on reading the following description of non-limiting examples of application of the latter, with reference to the

35 appended drawings in which:

- figure 1 represents an example of a packaging and application device according to the invention,
- figure 2 is a longitudinal section along the axis X of the device of figure 1,

- 6 -

- figures 3 and 3bis represent variants of cross sections of the stem along the axis III-III,
- figures 4 and 4bis represent variants of cross sections of the device along the axis IV-IV,
- 5 - figures 5 to 12 represent cross sections and longitudinal sections of variants of application members,
- figure 13 represents a variant of the device,
- figures 14 and 14bis represent longitudinal
- 10 sections and cross sections of a variant of the application member,
- figure 15 represents a variant of the device,
- figures 16 and 17 represent variants of the device with a removable application member.

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Figures 1 and 2 show an example of a packaging and application device 1 according to the invention.

This device 1 comprises a holding member 2 and an

20 application member 4 having a connection means 3 for connection to the holding member 2. The connection means is for example a stem 3. The device also comprises a cap 8 being removably attached, for example by means of a thread, to the holding member and making

25 it possible to cover the application member in order to protect it when not in use.

The application member 4 extends mainly along a longitudinal axis X, and comprises a core 5 situated at

30 the distal end of the stem 3 and on which the retention elements 6 extend radially placed all around the core 5 in order to retain a block 7 of composition P supported by the core 5. The block 7 is thus fixedly mounted on the core 5.

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The stem 3 may have, over at least a fraction of its length, a cross section with a shape that is circular, square, rectangular, triangular, trapezoidal, cross-shaped, star-shaped, oval, polygonal, this list being

non-limiting. The shapes of the stem that are other than circular allow a better adhesion of the block of product to the application member thus preventing the block from rotating about the stem.

5

The stem may have a larger transverse dimension, notably a diameter, that is less than or equal to 6 mm.

10 In figures 14 and 14bis, the section of the stem 3 and/or that of the core 5 at the distal end of the stem 3 are rectangular so that the stem 3 and/or the core 5 are flat. The stem 3 also has a recess 14 for example emerging on each side of the stem. The recess 14 extends over a portion of the length of the stem 3 and
15 of the core 5. The flat shape of the stem 3 and of the core 5 allows a better adhesion of the block 7 of product to the application member thus preventing the block from rotating about the stem, while the recess 14 allows a better adhesion of the block 7 of product to
20 the application member thus preventing a longitudinal movement of the block relative to the stem because a portion of the block 7 will be situated in the recess 14.

25 The core 5 may be rectilinear, curvilinear, twisted or of another configuration. The longitudinal axis of the core 5 of the application member 4 may be indistinguishable from the longitudinal axis of the stem 3, or else be off-centre relative to the stem.

30

The core 5 may have a cross section of any shape, for example circular, polygonal, square, rectangular, triangular, trapezoidal, star-shaped, oval, this list being non-limiting. Similarly, the core 5 may have a
35 variable transverse dimension that is larger, notably as in figure 8, the core may be conical, its cross section reducing as it gets further from the stem 3.

The diameter of the core 5 may, for example, be less than or equal to 6 mm. The diameter of the core may be less than that of the stem.

- 5 The core 5 of the application member may comprise means making it easier to couple the block of composition. In addition to the retention elements 6, the core of the application member may have undergone any appropriate treatment making it easier to couple the block 7 to the
10 core 5, such as for example a surface treatment making it possible to create a roughness on the core.

The core 5 of the application member 4 may be made in a single piece with the stem 3 as in figure 7, the core
15 if necessary being overmoulded onto the stem. As a variant illustrated in figure 6, the core 5 of the application member may be fitted to the stem 3, optionally in a removable manner, for example by bonding, snap-fitting, screwing, stapling.

20

The composition P is a composition of cosmetic product for example that can be dry degraded for keratinous fibres.

- 25 "Dry degradable" means a composition capable, at ambient temperature of approximately 20°C or when hot, of forming a deposit adhering to the skin or the lips and/or adhering to and sheathing the eyelashes, eyebrows or hair, without requiring previously placing
30 the composition in contact with a solvent phase, as opposed to the cake mascaras that are degradable in water and must first be partially solubilized in order to be applied to the fibres or the skin.

- 35 The composition may optionally be heated for the application, notably when it is not dry degradable at ambient temperature. In this case, it may be heated to a temperature from 40°C to 95°C, preferably from 45°C

to 75°C. In this case, the device may be associated with means for heating the composition.

Preferably, the solid cosmetic composition used in the device according to the invention has a hardness making it possible to obtain a product that is sufficiently rigid to take the form of a block while having a texture that is sufficiently soft to allow a direct and easy application to the eyelashes, notably a deposit of material simply by placing in contact with the eyelashes, without applying too much pressure to the fringe of the eyelashes.

As in the example of figures 1 and 2, the composition P therefore takes the form of a one-piece solid block 7 which completely surrounds the core 5.

In the example of figure 10, the block 7 surrounds only an angular portion of the core for example less than 180°.

"Solid block" means a compact mass of predetermined shape which, in the absence of stress, at ambient temperature and at atmospheric pressure, retains its initial shape.

The block 7 comes into contact with the core 5, the thickness of the composition of the block 7 being for example substantially uniform over 360° around the longitudinal axis X of the core, as shown in figure 8.

The block 7 may have a cross section of any shape, for example circular, polygonal, square, rectangular, triangular, trapezoidal, star-shaped, oval, this list being non-limiting. Certain shapes may make it easier to load the eyelashes with composition by offering a larger contact surface between the composition and the eyelashes.

The core 5 and/or the retention elements 6 play(s) the role of a framework in the block 7, which allows the block 7 to be better held on the core 5 and allows a more fragile composition, the block being mechanically reinforced by the core 5 and/or the retention elements 6.

The block 7, for example shown in figures 1, 2 or 5 to 9, is of substantially conical shape, its circular cross section reducing as it moves away from the holding member 2.

However, the block 7 may have other shapes and notably a substantially tubular shape, for example cylindrical, which may surround the core 5 over the whole of its length.

The largest transverse dimension of the block 7, notably a diameter, may be less than or equal to 15 mm or even less than or equal to 10 mm.

The block may be placed symmetrically relative to the longitudinal axis of the core, the block thus being distributed uniformly about the core of the application member.

The longitudinal axis of the block may or may not also be indistinguishable from the longitudinal axis of the application member. The block may therefore be distributed unevenly for example thicker on one side of the core than on the other.

The block 7 initially envelops at least some retention elements. Thus the block initially, that is to say before the first use, entirely covers all or only a portion of the retention elements 6. For example, the block 7 may entirely cover at least 20%, or even 40%, 60%, 80% or even the totality of the retention elements.

For example, with reference to figures 10, 11 and 12, a portion of the retention elements 6 are not covered or are partially covered by the block 7 of product.

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"Before the first use" should be understood to mean before the user makes use of the device for the first time. This may correspond to the state of the device as purchased by the user for example. This may correspond
10 notably to the device in its wrapping or in the state in which it is presented to the consumer, with no wrapping.

The retention elements 6 are for example protruding
15 elements such as teeth made by injection of thermoplastic material with the core 5 and shown in figure 6. As least some of the retention elements 6 have their distal end of the core immersed in the block 7 before the first use.

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When the protruding elements 6 are teeth, these protruding elements are for example placed in longitudinal rows, each row comprising for example between 5 and 40 protruding elements.

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The protruding elements may extend from the core in at least three different angular directions.

The protruding elements may be distributed at regular
30 or variable intervals along the core. For example, two consecutive protruding elements may be adjacent or at most 2 mm apart.

The protruding elements may all have the same length or
35 different lengths. This length, extending between a first attachment end, called the proximal end, connected to the core and a second free end, may be between 0.5 mm and 15 mm.

The casing surface defined by the free ends of the protruding elements may have, in cross section or longitudinal section, various shapes, for example circular, square, rectangular, triangular, trapezoidal, star-shaped, oval, polygonal this list being non-limiting.

Naturally, any other arrangement of protruding elements suitable for retaining the block is possible without departing from the context of the present invention. The protruding elements may notably have non-radial orientations.

The protruding elements may be made with the application member in a one-piece manner, by moulding of material or machining. As a variant, they may be fitted to the core or be bi-injected with the core. The protruding elements may be made in a material that is identical to or different from that of the core.

The protruding elements may be made in a thermoplastic material such as a polyolefin such as for example PP or PE, acrylonitrile butadiene styrene (ABS), a thermoplastic elastomer, a polyamide, this list being non-limiting.

When the thickness of the block 7 of product reduces after a few uses, and the protruding elements appear, the protruding elements for retaining the block may then be used as combing elements suitable for separating the eyelashes.

With reference to figure 5, the retention elements 6 may consist of the bristles of a brush with a twisted core. Such a brush comprises bristles clamped between two metallic branches of the core, twisted together. The twisted core 5 is for example inserted into an orifice of the stem 3.

The brush that supports the composition P may be of any known type and notably one of those appearing in the earlier applications in the name of the applicant, for example in the patent applications EP 1 977 661 and
5 EP 1 977 662.

The bristles may be natural or synthetic and the number of bristles supported by the core of the application member may be between 20 and 500.
10

With reference to figure 7, the retention elements 6 may also be formed by flocking of the core 5 of the application member 4.

15 The flocking may prevent the eyelashes from being too strongly trapped, from sticking them or from pulling them, so limits the risk of eyelashes being lost during use when the thickness of the block 7 of product reduces.

20 A conventional electrostatic method of flocking may allow a relatively even random distribution of the bristles on the core of the application member, if that is desired.

25 When the application member comprises flocking, the flocking bristles have for example a length of from 0.2 to 2 mm. The bristles may have a linear density of from 0.7 to 3.3 dtex, for example of 0.9 dtex. Depending on
30 the length of the flocking bristles, the linear density may be different. There are for example linear densities of 1.7 dtex, 0.7 dtex, 3 dtex and 3.3 dtex respectively for lengths of flocking bristles of 0.2 mm, 0.5 mm, 1.2 mm and 1.5 mm.

35 The retention elements 6 may also be formed by a helical screw thread about the core.

The various types of retention elements 6 may be combined. For example, a core 5 may comprise teeth and flocking, teeth and bristles or any other combination.

5 Irrespective of the shape of the retention elements 6, all the retention elements may be immersed in the block 7 on the first use of the application member or, as a variant, certain retention elements are partially or totally situated outside the block 7.

10

For example, with reference to figure 9, the flocking bristles situated at the free end of the core are not situated in the block 7 of product or have their free end outside the block 7, while the bristles situated on
15 the proximal portion of the core relative to the stem 3 are entirely immersed in the block 7 but can be uncovered progressively as the block 7 wears.

The thickness of the block 7 may be non-uniform about
20 the longitudinal axis X of the core as illustrated in figure 5, but may also be uniform as illustrated in figure 8. In the latter case, the core 5 is conical as is the block 7 and the thickness of the product is for example less than 3 mm or even less than 2 mm.

25

A method for obtaining such a block 7 on a core 5 will now be described.

The product may be poured in the fluid state for
30 example when hot into the cap 8 forming a mould which has an internal volume defined by a smooth internal face, and having a relief, that is to say tapering towards its opening in order to allow the block of product 7 to be subsequently stripped from the mould.

35 The core 5 is then inserted into the cap before solidification of the product P for example by cooling in order to form a block 7. The retention elements 6 make it possible to define a framework in order to mechanically reinforce the block of composition.

According to the invention, the application member 4 can turn relative to the holding member 2. In particular, the device may comprise a motor 20
5 connected to an electric power supply 22 such as a battery, for example placed in the holding member, the motor 20 comprising an output shaft fixedly or removably connected to the stem 3 thus making it possible to rotate the application member 4.

10

The speed of rotation of the application member is for example between 3 and 500 revolutions per minute, or even between 4 and 200 rpm, better between 5 and 120 rpm, being for example of the order of 60 rpm.

15

The starting of the rotary motor 20 can be actuated by a contactor 21. The contactor 21 protrudes on the outer surface of the holding member 2, so as to be able to be actuated by the user, as shown in figure 1.

20

Advantageously, the contactor 21 comprises three positions: an off position, and two other positions for choosing the direction of rotation of the motor.

25

As a variant shown in figure 15, the stem 3 may be mounted to rotate freely relative to the holding member 2. For this the proximal end 9 of the stem may be spherical and mounted in a pivoting connection in a spherical housing of the holding member. Other
30 assemblies in a pivoting connection may also be envisaged.

The device, notably the holding member, may be arranged to receive a vibrating source 30.

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The vibrating source makes it possible to subject the application member to vibrations during the application of the product, which may improve the make-up result.

The frequency of the vibrations is for example between 0.5 Hz and 1000 Hz, better 1 to 500 Hz. The vibrations may be oriented for example parallel to the axis of rotation or transversely to the latter, for example be
5 perpendicular to the axis of rotation, or have an inclination that can be adjusted by the user.

This vibrating source 30 may comprise its own contactor which, when it is actuated by the user, triggers the
10 operation of a vibrator. The latter comprises for example a motor rotating an eccentric weight. The triggering of the operation of the vibrator may also be obtained by a common contactor with the rotary member 20, the vibrator of the vibrating source 30 being for
15 example electrically connected in parallel with the motor of the rotary member.

The vibrating source may be produced in a manner other than with a weight that is rotated, for example with a
20 sliding contact or with an electromechanical or piezoelectric device. Other examples of vibrating sources are given in documents FR 2 882 506 and WO 2006/0903343.

25 The composition may also be able to be fluidized by an application of heat. The composition has for example a melting temperature of less than or equal to 60°C.

The device may also comprise or interact with a heating
30 system 40 suitable for softening or melting at least on the surface the solid cosmetic composition.

The block may also be heated by being exposed to an infrared ray, to a radioelectric ray, be heated by
35 blowing of hot air, be heated while being exposed to ultrasound vibrations or be heated by heat transfer in contact with or close to a hot surface.

The composition may be heated locally to a temperature greater than or equal to 40°C, or even greater than 45°C or even greater than 50°C. The temperature of the surface of the block must not cause a risk of burning
5 at the time of application. This is why a waiting time between the moment of heating and the application to the keratinous fibres may possibly be necessary.

The temperature to which the block is initially heated
10 may be between 40°C and 95°C, better 45°C to 85°C, even better 45°C to 75°C.

As illustrated in figure 13, the heating system may comprise an electric resistance 40 incorporated into
15 the core 5, for example when the core 5 is moulded with the stem 3. The resistance 40 is connected to the power source by means of connectors 41.

The triggering of the operation of the heating element
20 may be obtained by an independent contactor or by a contactor that is common with the rotary member 20 and/or the vibrator of the vibrating source 30 while being for example electrically connected in parallel with the motor of the rotary member and/or the
25 vibrating source.

The device 1 may comprise a system for regulating the temperature of the application member 4, this regulation system being for example an electronic
30 circuit housing in the holding member 6.

The regulation system may use a programmed time-out for the power supply of the heating element.

35 The regulation system may also be connected by connection wires to a temperature sensor, for example situated on the heating element 40 and make it possible to power or not power the heating element depending on

a temperature setpoint programmed into the regulation system.

5 The heating system, the vibrating source and the rotary motor may be incorporated into the device individually or combined altogether or in pairs.

10 According to the invention, the application member may be removable so as to change the application member after the block of composition is worn. The stem 3 of the application member 4 may have a free end 9 the cross section of which defines a shape matching a cavity 10 of the holding member 2 for example a cavity of the shaft of the rotary motor as illustrated in 15 figures 2, 3, 3bis, 4 and 4bis. These matching shapes may be square, oval, cross-fluted or of any other shapes.

20 The free end 9 of the stem 3 may also comprise a means 11 for snap fitting on the holding member 2. Figures 2, 3 and 4 therefore illustrate a lug 12 situated in the cavity 10 of the shaft of the motor 20 and interacting with a housing 13 of the free end 9 of the stem 3 so as to hold the application member on the holding member 25 when the device 1 is used.

30 As a variant shown in figures 16 and 17, the application member takes the form of a closed capsule that can be removed from the holding member.

35 Accordingly, the connection means 3 for connecting the application member 4 comprises a transverse seat 15 from which the core 5 extends longitudinally. The seat 15 is for example of circular cross section.

The face of the seat opposite to the core 5 comprises a means for coupling to the holding member 2. For example, the seat 15 comprises a recess 16 in the shape of a cross into which the end of the shaft of the

- 19 -

rotary motor 20 of the holding member 2 can be inserted. For this, the end of the shaft of the rotary motor is of a shape to match the recess 16. Other matching shapes of the "male-female" type that are not
5 circular may be used such as shapes that are square, rectangular, triangular, trapezoidal, star-shaped, oval, fluted, polygonal or other shapes.

The seat 15 comprises a means 17 for the removable and preferably sealed mounting of the cap of the application member so that the seat 15 supporting the core 5 and the block of product 7, and the cap 8 form together an independent capsule in which the block of product 7 is protected from any degradation. All kinds
15 of known removable mounting mechanism can be used.

For example, with reference to figure 16, the edge of the seat 15 on the side of the core 5 has a shoulder with a circular groove 17 in which a rib of the inner
20 face of the cap 8 can be housed.

Another example of removable mounting of the cap 8 is shown in figure 17. The edge of the seat 15 on the side of the core 5 has a peripheral skirt extending
25 longitudinally from the face of the seat supporting the core 5. This skirt is furnished with a thread 17 on the inner face of the skirt and interacting with a matching thread on the outer face of the cap 8. In order to obtain an optimal seal, notably in order to prevent the evaporation of compounds of the block of product 7, the
30 face of the seat 15 on the side of the block of product 7 comprises a flexible circular lip 18 designed to come into contact with the inside of the cap 8 when the latter is mounted onto the seat 15.

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In the examples of figures 16 and 17, the force necessary to remove the cap is weaker than that necessary to remove the seat from the holding member.

Accordingly, the cap may have a smooth inner face in order to limit the adhesion of the block of product.

5 In a variant of the invention that is not shown, the seat can be removed only when the cap is position to protect the block of composition when it is handled.

10 It is possible to provide the user with several application members to be mounted selectively on one and the same holding member 2 depending on the treatment to be carried out, for example, supporting compositions of different formulations varying for example in their colour and/or their active components.

15 The invention is not limited to the examples described; the latter may notably be combined together.

The expression "comprising a" should be understood as being synonymous with "comprising at least one".

CLAIMS

1. Device (1) for packaging and applying at least one cosmetic composition, designed for an application on the lips, the eyelashes, the eyebrows or hair, comprising:
- a holding member (2),
 - an application member (4) connected to the holding member, comprising:
- 10 - a connection means (3) for connection to the holding member,
- a core (5) secured to the connection means,
 - retention elements (6) secured to the core,
 - a solid block (7) of the said composition,
- 15 the said block having an outer casing extending around the core, at least to some of the retention elements being enveloped by the block of the composition.
- 20 2. Device according to Claim 1, characterized in that the totality of the retention elements (6) are enveloped in the block (7).
3. Device according to either one of the preceding
- 25 claims, characterized in that the retention elements (6) are a screw thread, bristles, teeth and/or flocking.
4. Device according to any one of the preceding
- 30 claims, characterized in that the retention elements (6) are moulded with the core (5).
5. Device according to any one of the preceding claims, characterized in that the retention elements
- 35 (6) are bristles supported by a twisted core.
6. Device according to any one of the preceding claims, characterized in that the connection means (3) for connecting the application member (4) to the

holding member is a stem connecting the core (5) to the holding member (2).

7. Device according to any one of the preceding
5 claims, characterized in that the application member (4) of the device can be removed from the holding member (2).

8. Device according to any one of the preceding
10 claims, characterized in that the connection means (3) for connecting the application member (4) to the holding member (2) comprises a seat (15) and a means for the removable mounting of a cap (8) so that, in the closed position, the cap and the seat form a closed
15 housing containing the block of product for its packaging.

9. Device according to any one of the preceding claims, characterized in that the holding member (2)
20 comprises a rotary motor (20) in order to rotate the application member (4).

10. Device according to any one of the preceding claims, characterized in that the composition can be
25 fluidized by an application of heat and in that the device (1) comprises a heating system (40) incorporated into the application member.

11. Device according to any one of the preceding
30 claims, characterized in that it comprises a vibrating member (30).

12. Kit for a device according to any one of the preceding claims, characterized in that it contains
35 several application members (4) supporting compositions of different formulations and/or of different colours.

13. Method for manufacturing the application member of a device (1) according to any one of claims 1 to 11, comprising the steps consisting in:

- pouring the composition having been brought to
5 the fluid state into a cap (8) of the device,
- inserting the core (5) of the application member (4) into the composition,
- solidifying the composition in order to form a block (7) of product around the core.

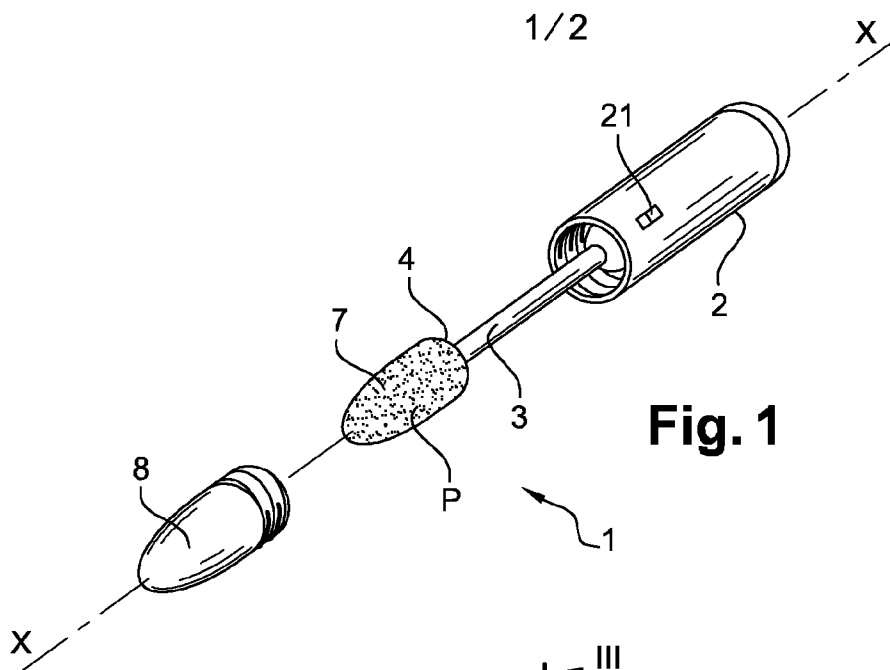


Fig. 1

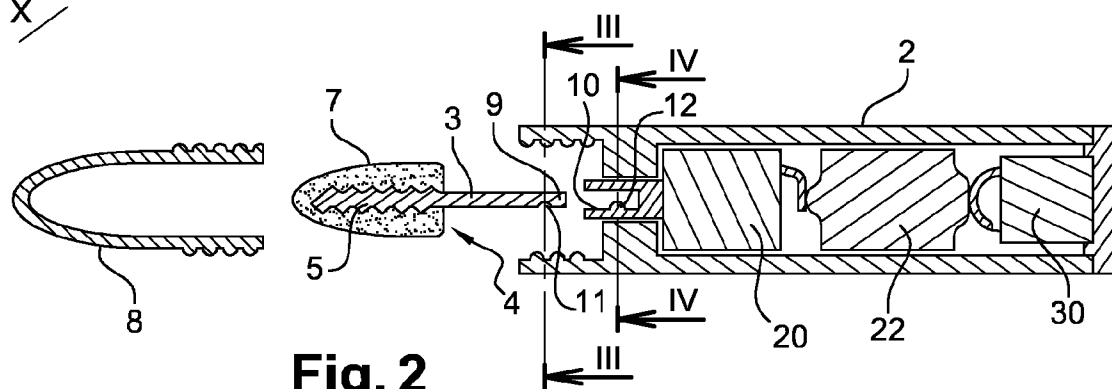


Fig. 2

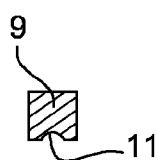


Fig. 3

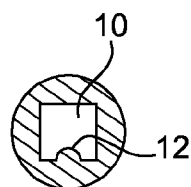


Fig. 4

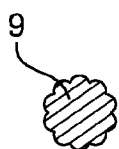


Fig. 3bis

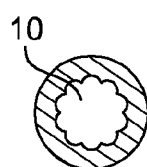


Fig. 4bis

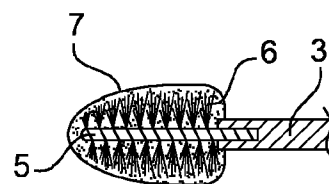


Fig. 5

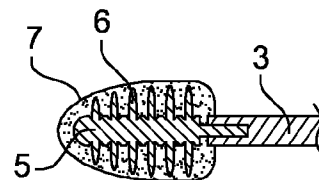


Fig. 6

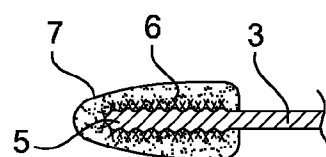


Fig. 7

2 / 2

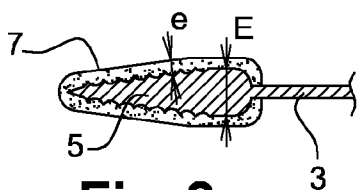


Fig. 8



Fig. 10

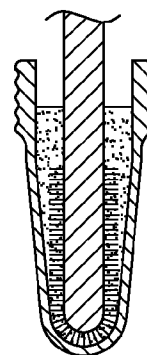


Fig. 9

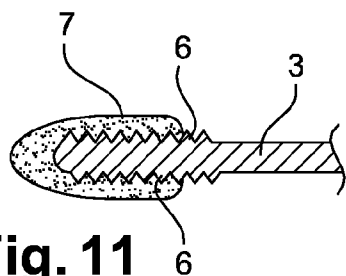


Fig. 11

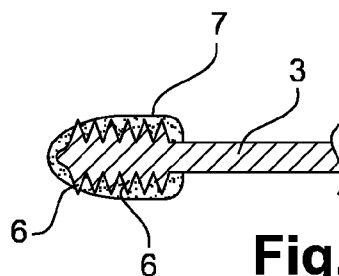


Fig. 12

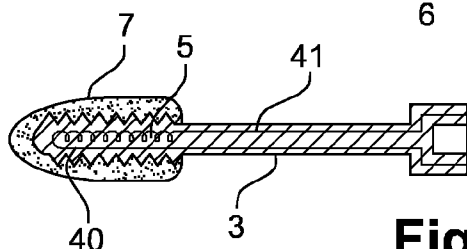


Fig. 13

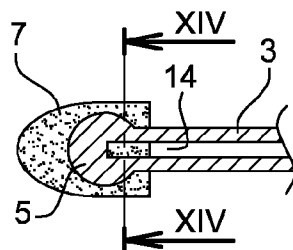


Fig. 14

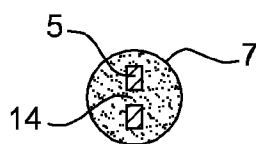


Fig. 14bis

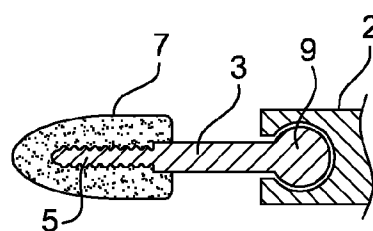


Fig. 15

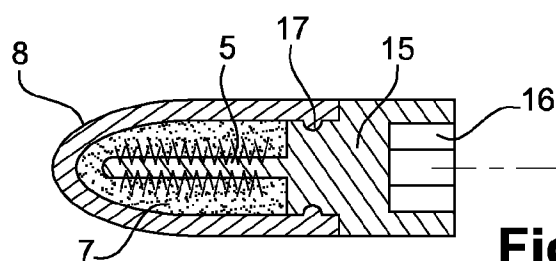


Fig. 16

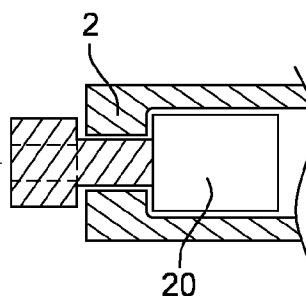


Fig. 17

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2011/062352

A. CLASSIFICATION OF SUBJECT MATTER
INV. A45D40/26
ADD.

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 A46B

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 practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2 939 289 A1 (OREAL [FR]) 11 June 2010 (2010-06-11)	1-6,8,13
Y	page 25, line 29 - page 38, line 11 page 55, line 9 - page 58, line 13 figures 1-12 figures 42-46	7,9-12
Y	----- WO 2006/090343 A1 (OREAL [FR]; GUERET JEAN-LOUIS [FR]) 31 August 2006 (2006-08-31) the whole document	7,9,11, 12
Y	----- FR 2 934 493 A1 (OREAL [FR]) 5 February 2010 (2010-02-05) page 49, line 22 - page 60, line 7 figures	10
	----- -/-	



Further documents are listed in the continuation of Box C.



See patent family annex.

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- "O" document referring to an oral disclosure, use, exhibition or other means
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Date of the actual completion of the international search

9 November 2011

Date of mailing of the international search report

16/11/2011

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Fax: (+31-70) 340-3016

Authorized officer

Frank, Lucia

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2011/062352

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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X	US 2 774 984 A (MORRELL JACQUE C) 25 December 1956 (1956-12-25) column 2, lines 18-39 figure 1 -----	1,2,6

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Information on patent family members

International application No

PCT/EP2011/062352

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