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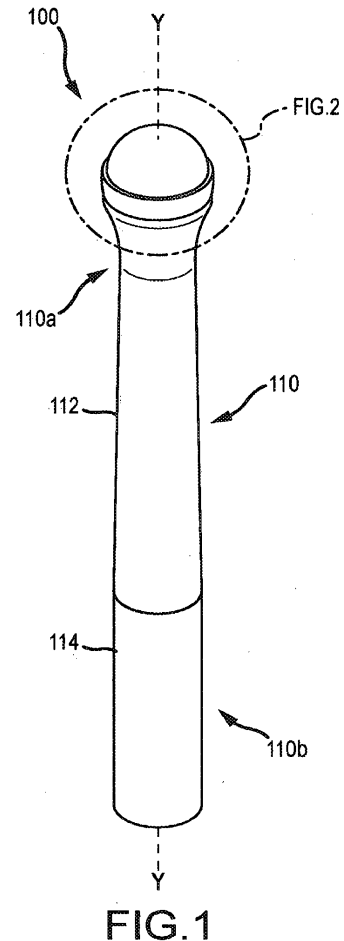
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(54) **DOME APPLICATOR**

(57) A dome applicator (100) is provided. The dome applicator (100) includes a handle (110) having a first end (110a) and a second end (110b), said first end (110a) and second end (110b) being collocated with a longitudinal axis (Y-Y) of the handle (110). The dome applicator (100) also includes a dome (120) affixed to and extending away from the first end (110a), wherein the first end (110a) extends over a portion of the dome (120).



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Description

TECHNICAL FIELD

[0001] The embodiments described below relate to cosmetic applicators and, more particularly, to a dome applicator.

BACKGROUND OF THE INVENTION

[0002] Cosmetics are applied to a person's skin to enhance the skin's attractiveness and overall health. The cosmetics can include lotions, creams, foundations, etc. The cosmetics may include moisturizers. Moisturizers include oils, or other substances, that can ensure that the skin does not dry out over a period of time, such as during the day. Applying the moisturizing cosmetic to the skin can be an immediate sensory experience in that dry skin, which may feel itchy and irritated, can immediately feel healthy and soothed. The moisturizer in the moisturizing cosmetic can also prevent unhealthy or unflattering effects of dry skin, such as scaling, splits in the skin, dry spots, etc.

[0003] Certain regions of the person's skin may also experience swelling or puffiness. For example, a person may experience swelling and puffiness below the lower eyelid after the person wakes up. The swelling can be moderated by pressing a cool surface to the skin, thereby cooling the skin and the associated tissues. The cooling causes the blood vessels in the tissue to constrict, which reduces the amount of fluid circulated to the region, while the pressure may force the fluids away from the region. For example, an ice cube can be pressed against the swollen skin under the eye to reduce swelling prior to applying the moisturizing cosmetic. However, this can cause the ice cube to melt thereby leading to water dripping and other undesirable effects.

[0004] The moisturizing cosmetics are typically applied using the person's finger, which, as can be appreciated, is at the person's body temperature. As a result, the person's finger has little to no effect on reducing the swelling, although the undesirable effects of dry skin are ameliorated. In addition, by using the finger to apply the moisturizing cosmetic, the swelling can increase because the finger may be employed in a wiping motion across a person's skin to spread out the moisturizer. More specifically, the wiping motion with the finger can cause the skin and underlying tissue to deform and stretch, thereby increasing fluid flow to the swollen region. Accordingly, there is a need to reduce swelling while applying a moisturizer to the skin.

SUMMARY OF THE INVENTION

[0005] A dome applicator is provided. According to an embodiment, the dome applicator comprises a handle having a first end and a second end, said first end and second end collocated with a longitudinal axis of the han-

dle and a dome affixed to and extending away from the first end, wherein the first end extends over a portion of the dome.

[0006] A method of forming a dome applicator is provided. According to an embodiment, the method comprises forming a handle having a first end and a second end, said first end and second end being collocated with a longitudinal axis of the handle and forming and affixing a dome to the first end, such that the dome extends away from the first end, and the first end extends over a portion of the dome.

ASPECTS OF THE INVENTION

[0007] According to an aspect, a dome applicator (100) comprises a handle (110) having a first end (110a) and a second end (110b), said first end (110a) and second end (110b) being collocated with a longitudinal axis (Y-Y) of the handle (110) and a dome (120) affixed to and extending away from the first end (110a), wherein the first end (110a) extends over a portion of the dome (120).

[0008] Preferably, the first end (110a) that extends over the portion of the dome (120) affixes the dome (120) to the first end (110a).

[0009] Preferably, the first end (110a) that extends over the portion of the dome (120) is over-molded over the portion of the dome (120).

[0010] Preferably, the first end (110a) that extends over the portion of the dome (120) comprises the first end (110a) extending at least to a planar section (122) of the dome (120).

[0011] Preferably, the dome (120) is a metal sphere.

[0012] Preferably, the handle (110) is comprised of a smooth portion (112) and a textured portion (114).

[0013] According to an aspect, a method of forming a dome applicator comprises forming a handle having a first end and a second end, said first end and second end being collocated with a longitudinal axis of the handle and forming and affixing a dome to the first end, such that the dome extends away from the first end and the first end extends over a portion of the dome.

[0014] Preferably, the first end that extends over the portion of the dome affixes the dome to the first end.

[0015] Preferably, the first end that extends over the portion of the dome is over-molded over the portion of the dome.

[0016] Preferably, the first end that extends over the portion of the dome comprises the first end extending at least to a planar section of the dome.

[0017] Preferably, the dome is a metal sphere.

[0018] Preferably, the handle is comprised of a smooth portion and a textured portion.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] The same reference number represents the same element on all drawings. It should be understood that the drawings are not necessarily to scale.

FIGS. 1 and 2 show a dome applicator 100.

FIG. 3 shows a detailed cross-sectional view of the dome applicator 100 and, in particular, the dome 120.

FIG. 4 shows a method 400 of forming a dome applicator.

DETAILED DESCRIPTION OF THE INVENTION

[0020] FIGS. 1-4 and the following description depict specific examples to teach those skilled in the art how to make and use the best mode of embodiments of a dome applicator. For the purpose of teaching inventive principles, some conventional aspects have been simplified or omitted. Those skilled in the art will appreciate variations from these examples that fall within the scope of the present description. Those skilled in the art will appreciate that the features described below can be combined in various ways to form multiple variations of the dome applicator. As a result, the embodiments described below are not limited to the specific examples described below, but only by the claims and their equivalents.

[0021] FIGS. 1 and 2 show a dome applicator 100. As shown in FIGS. 1 and 2, the dome applicator 100 includes a handle 110 and a dome 120. The handle 110 is comprised of a first end 110a and a second end 110b. The first end 110a and the second end 110b are collocated with a longitudinal axis Y-Y of the handle 110. The dome 120 is affixed to and extends away from the first end 110a of the handle 110. By being affixed to the first end 110a of the handle 110, the dome 120 does not rotate relative to the handle 110. The first end 110a extends over at least a portion of the dome 120. As shown in FIG. 1, the dome 120 has a hemispherical shape, although any suitable shape, such as an ovoid shape, may be employed. Also as shown in FIG. 1, the handle 110 has a smooth portion 112 and a textured portion 114. In alternative embodiments, the handle 110 may be comprised of a uniform surface. For example, the entire surface of the handle 110 may be smooth.

[0022] The smooth portion 112 may be comprised of an injection molded thermoplastic, although any suitable material or combination of materials (e.g., metal plating on a plastic substrate, etc.) may be employed. The textured portion 114 can be comprised of a rubberized material that is injected molded over a rigid structure comprising a portion of the handle 110. For example, the handle 110 may be constructed by injection molding a substrate that is affixed to or integral with the smooth portion 112. After finishing the smooth portion 112, the rubberized material may be injection molded over the substrate, but not the smooth portion 112, to form the textured portion 114.

[0023] The smooth portion 112 can allow the user to easily shift and move the user's fingers as the moisturizing cosmetic is applied to a person's skin. This can ensure that a desired pressure and amount of the moisturizing cosmetic is used. For example, due to excessive

swelling, the user may firmly press the dome applicator 100 into the person's skin while rapidly rotating the dome applicator 100 with the fingers. This rapid rotation can be enabled by the smooth surface because the smooth surface may be less likely to snag the user's finger. Accordingly, a suitable amount of moisturizing cosmetic can be applied to the skin while also reducing the swelling.

[0024] The textured portion 114 can ensure that the angle of the dome applicator 100 relative to the person's skin is stable. For example, the textured portion 114 may stably rest in the palm of the user's hand due to friction forces between the texture portion 114 and the user's hand. The textured portion 114 can therefore prevent an undesirable lateral displacement of the second end 110b. By preventing the undesirable lateral displacement of the second end 110b, the angle of the dome applicator 100 relative to the person's skin may be substantially constant or, if varying, only doing so under the control of the user. This precise control of the angle can ensure that, for example, moisturizing cosmetic on the sides of the dome 120 can be subsumed into the space between the dome 120 and the person's skin in precise amounts.

[0025] The handle 110 is shown as having a cylindrical shape that slightly tapers from the second end 110b to the first end 110a. The first end 110a includes a neck just below the dome 120. The cylindrical shape can allow the user to easily rotate the dome applicator 100, thereby ensuring that the cosmetic moisturizer is more evenly applied to the person's skin. The neck can be used to manipulate the dome applicator 100 while applying a moisturizing cosmetic to a person's skin. For example, the user's fingers may rest in the neck, or somewhere along the tapering, while the dome applicator is pressed against the person's skin. This can enhance the control of the dome applicator 100 compared to a neck-less dome applicator when the dome 120 is being pressed against a person's skin.

[0026] FIG. 3 shows a detailed cross-sectional view of the dome applicator 100 and, in particular, the dome 120. As shown in FIG. 3, the dome applicator 100 includes the handle 110 and the dome 120 described in the foregoing with reference to FIGS. 1 and 2. The first end 110a is collocated with the longitudinal axis Y-Y of the handle 110. The dome 120 is affixed to and extends away from the first end 110a of the handle 110. As shown in FIG. 3, the first end 110a extends over a portion of the dome 120 to a planar section 122 of the dome 120. Also as shown in FIG. 3, the planar section 122 of the dome 120 forms a hemisphere of a metal sphere. More specifically, the first end 110a extends to the planar section 122 such that the first end 110a extends over one of the hemispheres of the metal sphere.

[0027] As can be appreciated, half of the mass of the dome 120 is on either side of the planar section 122 of the dome 120. Accordingly, the dome 120 has a significant amount of thermal mass that is disposed within the first end 110a of the handle 110. In embodiments where the first end 110a of the handle 110 is comprised of a

material, such as a thermoplastic, with thermal conductivity that is lower than the dome 120, heat may not transfer from the user's fingers to the dome 120. As a result, heat can transfer between the dome 120 and the person's skin while a user (e.g., the person) manipulates the dome applicator 100. The thermal mass of the dome 120 can also be utilized almost exclusively to cool the person's skin, rather than conducting heat away from the user's fingers. This can ensure that a maximal amount of heat is transferred from the person's skin while the moisturizing cosmetic is being applied.

[0028] FIG. 4 shows a method 400 of forming a dome applicator. The dome applicator formed by the method 400 may be the dome applicator 100 described in the foregoing with reference to FIGS. 1-3. The method 400 begins by forming a handle having a first end and a second end. The first end and second end are collocated with a longitudinal axis of the handle. In an embodiment, the handle can be formed by injection molding, or the like, although any suitable method can be employed. In step 420, the method forms and affixes a dome to the first end. The dome extends away from the first end. The first end extends over a portion of the dome. The dome can be affixed to the first end during a molding process that extends the first end over a portion of the dome. For example, the handle may be partially formed by injection molding such that a cup is at the first end. An adhesive may be deposited into the cup and the dome may be inserted into the cup. The first end can be over-molded over the portion of the dome (e.g., metal ball), such that the first end, along with the adhesive, affixes the dome to the first end of the handle.

[0029] In operation, the dome applicator 100 can be used to apply a moisturizing cosmetic to a person's skin. The moisturizing cosmetic includes moisturizers that can prevent excessive dryness of the skin. The moisturizing cosmetic may first be dispensed onto the dome 120. Additionally or alternatively, the user can apply the moisturizing cosmetic to the person's skin. The moisturizing cosmetic can be dispensed onto the dome 120 while the user is holding the handle 110, or the handle 110 may simply be positioned such that the second end 110b rests on a flat surface, such as a top of a vanity. The user can then apply the moisturizing cosmetic to the person's skin with the dome 120.

[0030] Prior to applying the moisturizing cosmetic, the dome 120 may be maintained at room temperature, which can range from, for example, 60 to 70 degrees. Alternatively, the dome 120 can be chilled in a refrigerator, in running water, etc. In either case, the temperature of the dome 120 may be significantly less than the person's body temperature. As a result, when the dome 120 is pressed against the person's skin, the dome 120 can cool the skin while the moisturizing cosmetic is being applied. In addition, in embodiments where, for example, the dome 120 is comprised of metal, the dome 120 can function as an efficient heat sink to draw heat away from the person's skin, thereby enhancing the cooling effect

of the dome 120. As can be appreciated, the material of the dome 120 can be selected based on the desired amount of heat transfer.

[0031] Additionally, the dome 120 may have a smooth surface. The smooth surface, combined with the moisturizing cosmetic, can ensure that the dome applicator 100 does not deform or stretch the person's skin while the moisturizing cosmetic is being applied. For example, the moisturizing cosmetic can function as a lubricant that is interposed between the dome 120 and the person's skin, thereby minimizing any friction between the dome 120 and the person's skin. In contrast, the moisturizing cosmetic, due to the inherent roughness of a finger, may not prevent the finger from contacting the skin, thereby causing friction that can deform or stretch the person's skin.

[0032] Accordingly, the dome applicator 100 can cool down a person's skin while a moisturizing cosmetic is applied, thereby reducing swelling and puffiness that may be present in the person's skin. Other benefits may also be realized. For example, the dome applicator may be cleaned and/or sterilized more easily compared to a person's finger or other means of applying the moisturizing cosmetic. The result is a more pleasant experience for the person, and a more attractive and healthier skin.

[0033] The detailed descriptions of the above embodiments are not exhaustive descriptions of all embodiments contemplated by the inventors to be within the scope of the present description. Indeed, persons skilled in the art will recognize that certain elements of the above-described embodiments may variously be combined or eliminated to create further embodiments, and such further embodiments fall within the scope and teachings of the present description. It will also be apparent to those of ordinary skill in the art that the above-described embodiments may be combined in whole or in part to create additional embodiments within the scope and teachings of the present description.

[0034] Thus, although specific embodiments are described herein for illustrative purposes, various equivalent modifications are possible within the scope of the present description, as those skilled in the relevant art will recognize. The teachings provided herein can be applied to other dome applicators and not just to the embodiments described above and shown in the accompanying figures. Accordingly, the scope of the embodiments described above should be determined from the following claims.

Claims

1. A dome applicator (100), comprising:

a handle (110) having a first end (110a) and a second end (110b), said first end (110a) and second end (110b) being collocated with a longitudinal axis (Y-Y) of the handle (110); and

a dome (120) affixed to and extending away from the first end (110a), wherein the first end (110a) extends over a portion of the dome (120).

and a textured portion (114).

2. The dome applicator (100) of claim 1, wherein the first end (110a) that extends over the portion of the dome (120) affixes the dome (120) to the first end (110a). 5

3. The dome applicator (100) of claim 1 or claim 2, wherein the first end (110a) that extends over the portion of the dome (120) is over-molded over the portion of the dome (120). 10

4. The dome applicator (100) of any of the preceeding claims, wherein the first end (110a) that extends over the portion of the dome (120) comprises the first end (110a) extending at least to a planar section (122) of the dome (120). 15

5. The dome applicator (100) of any of the preceeding claims, wherein the dome (120) is a metal sphere. 20

6. The dome applicator (100) of any of the preceeding claims, wherein the handle (110) is comprised of a smooth portion (112) and a textured portion (114). 25

7. A method of forming a dome applicator (100), the method comprising: 30

forming a handle (110) having a first end (110a) and a second end (110b), said first end (110a) and second end (110b) being collocated with a longitudinal axis (Y-Y) of the handle (110); and forming and affixing a dome (120) to the first end (110a), such that the dome (120) extends away from the first end (110a) and the first end (110a) extends over a portion of the dome (120). 35

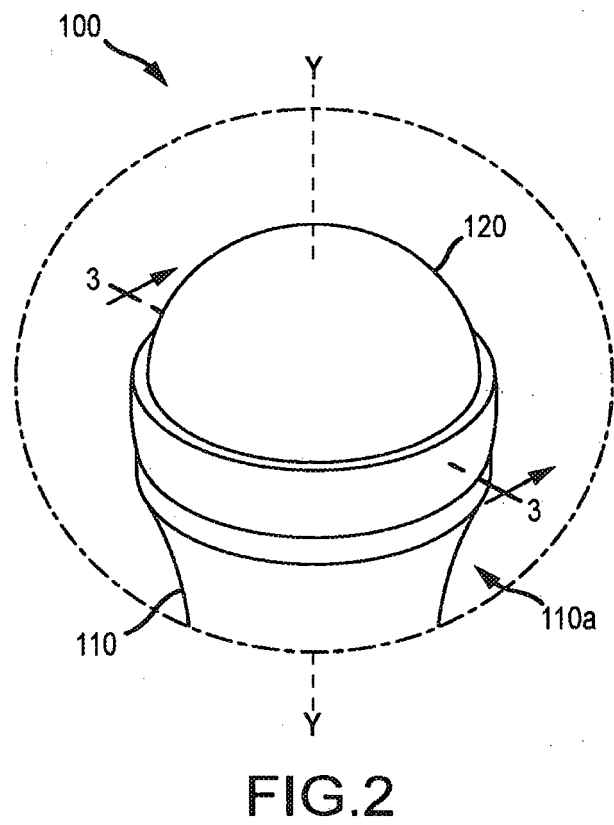
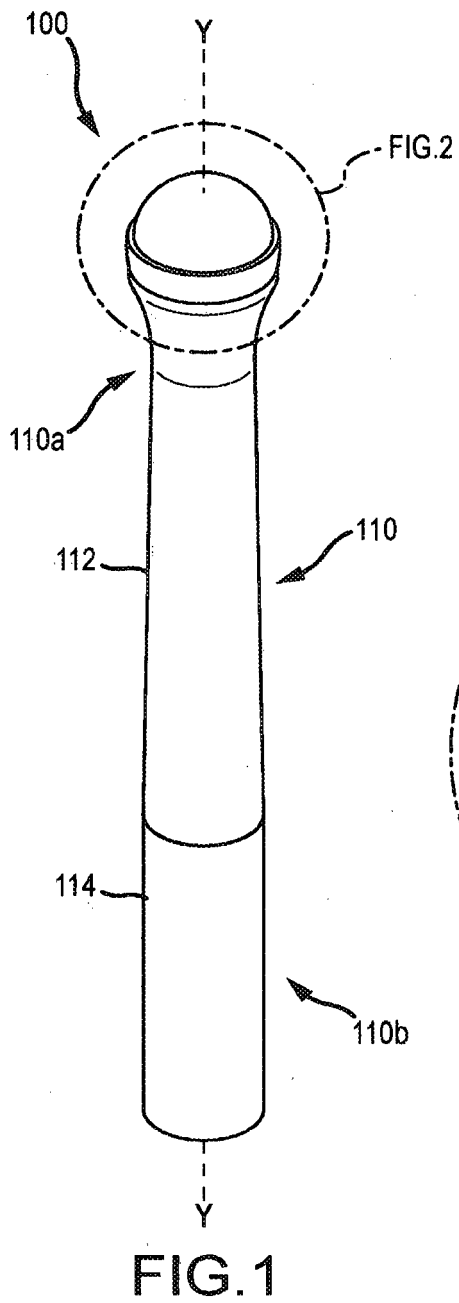
8. The method of claim 7, wherein the first end (110a) that extends over the portion of the dome (120) affixes the dome (120) to the first end (110a). 40

9. The method of claim 7 or claim 8, wherein the first end (110a) that extends over the portion of the dome (120) is over-molded over the portion of the dome (120). 45

10. The method of any of claims 7 to 9, wherein the first end (110a) that extends over the portion of the dome (120) comprises the first end (110a) extending at least to a planar section of the dome (120). 50

11. The method of any of claims 7 to 10, wherein the dome (120) is a metal sphere. 55

12. The method of any of claims 7 to 11, wherein the handle (110) is comprised of a smooth portion (112)



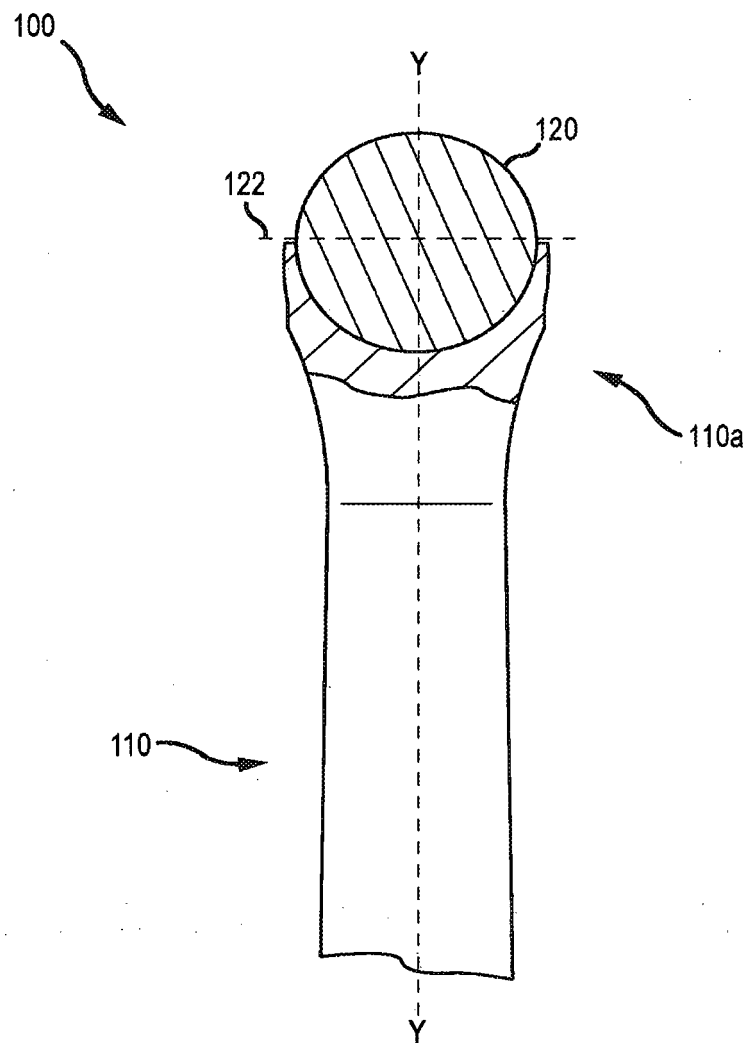


FIG.3

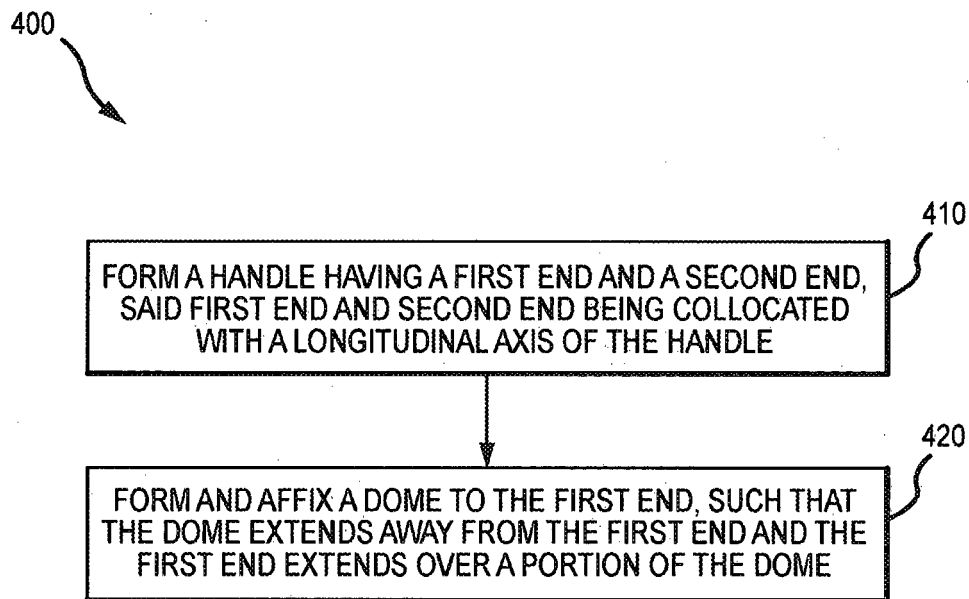


FIG.4



EUROPEAN SEARCH REPORT

 Application Number
 EP 18 00 0286

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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	FR 2 951 936 A1 (OREAL [FR]) 6 May 2011 (2011-05-06) * page 7, lines 12-17; figure 6 * -----	1-4,7-10	INV. A45D34/04 A45D40/26 A61H15/00
X	WO 2012/032148 A1 (OREAL [FR]; DURU NICOLAS [FR]) 15 March 2012 (2012-03-15) * page 2, line 28 - page 5, line 10; figures 1,2 * -----	1,2,4, 6-8,10, 12	
X	WO 2012/114257 A1 (OREAL [FR]; GUERET JEAN-LOUIS [FR]) 30 August 2012 (2012-08-30) * page 11, lines 24-31; figure 7 * -----	1,3,5,7, 8,10,11	
			TECHNICAL FIELDS SEARCHED (IPC)
			A45D A61H
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 27 July 2018	Examiner Ionescu, C
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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 EPO FORM 1503 03/02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 18 00 0286

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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ORM P0459

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 2951936 A1	06-05-2011	CN 102595962 A	18-07-2012
		EP 2493350 A2	05-09-2012
		ES 2542602 T3	07-08-2015
		FR 2951936 A1	06-05-2011
		JP 5914343 B2	11-05-2016
		JP 2013509231 A	14-03-2013
		US 2012213571 A1	23-08-2012
		WO 2011051878 A2	05-05-2011

WO 2012032148 A1	15-03-2012	FR 2964541 A1	16-03-2012
		JP 5844370 B2	13-01-2016
		JP 2013537811 A	07-10-2013
		US 2013223913 A1	29-08-2013
		WO 2012032148 A1	15-03-2012

WO 2012114257 A1	30-08-2012	FR 2971920 A1	31-08-2012
		WO 2012114257 A1	30-08-2012
