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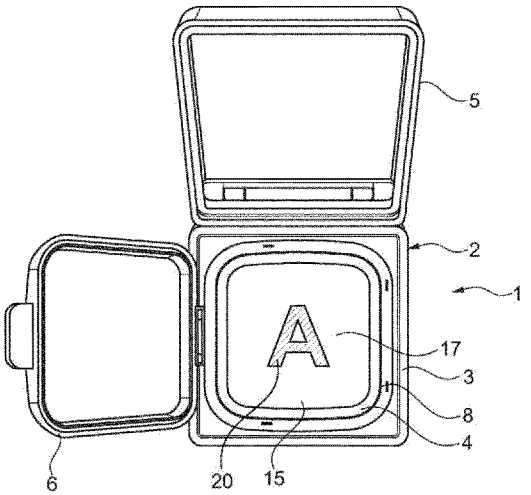
(54) **Title:** METHOD FOR MANUFACTURING A COSMETIC ARTICLE

[Fig. 1]



(57) **Abstract:** The present invention relates to a method for manufacturing a cosmetic article (1) comprising a textile (15) defining a surface (17) for applying, sampling or distributing a cosmetic composition (C), comprising a step involving implementing a treatment resulting in the melting of at least one part of the textile (15), the treatment being a treatment other than a hot roller treatment.

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Description

METHOD FOR MANUFACTURING A COSMETIC ARTICLE

Technical field

The present invention relates to the cosmetic field and, more specifically, but not exclusively, to a method for manufacturing a cosmetic article intended for make-up or for treating human keratinous materials, in particular the skin, as well as to the cosmetic article allowing sampling, distribution or application of a cosmetic composition, obtained by implementing this method.

Prior art

The impregnation of a cosmetic composition with a porous structure is known, with a finger or an applicator being able to come into contact with said porous structure in order to be loaded with product.

Numerous patent applications address cosmetic articles of this type. In particular, application WO 2017/016608 A1 can be cited, which discloses an article comprising a mat of fibres formed by a non-woven textile, covered on one face with a weft.

Cosmetic articles are also known that comprise a case housing a reservoir of cosmetic composition surmounted by a weft, through which the composition is sampled using a finger or using an applicator. Various wefts allowing passage of the composition are thus known from documents KR 101380587 and KR 2014/0147706. WO 2016/148371 discloses a supplementary part positioned on the weft.

WO 2018174620 relates to a puff for both liquid and powder cosmetics and a method for manufacturing the same. Specifically, the puff is manufactured in such a manner that after a pile of polyester fabric is cut to adjust the length of the pile, the polyester fabric is bonded to a urethane sponge with a urethane adhesive so as to form a waterproof layer on the urethane sponge, such that a sheet is manufactured. Then the edges of the sheet are sealed by ultrasonic fusion and cut so as to prevent the cosmetic material from penetrating into the inside and the side of the puff.

KR 101556904 relates to a compact for cosmetics comprising an upper case, a lower case rotatably coupled to the upper case and a refill case detachably received in the lower case. The refill case comprises a case main body where contents for cosmetics are received; a case cover which opens and closes the case main body; and a mesh screen cover having a border rim

part which is received in the case main body to be tightly received within a wall of the main body, and a high elasticity mesh screen which has a border area supported by the border rim part to extend inwardly so as to cover the contents for cosmetics from an outside.

US 2018016055 relates to a container that seals in a volume of material. The container may be routinely opened, closed and material may be removed or added. A removable plate and a base define a maximum volume available for material when the container is sealed. A screen may be disposed between the plate and the base. The screen may optionally be comprised within the base, adhered to the base, or removable from the base.

KR 20160073895 relates to a cosmetic container. According to an embodiment, the cosmetic container comprises a container main body unit; a cosmetic container unit which is coupled to the container main body unit and has a cosmetic product contained therein; and a mesh frame unit which is coupled to the cosmetic container, and has a mesh attached thereto by welding. The mesh frame unit is able to be turned over by outwardly pushing the inside thereof and to bend the mesh to surround the circumference thereof.

KR 20190002249 relates to a cosmetic comprising an improved impregnating material. According to KR20190002249, the cosmetic has an excellent feeling of use while containing a fabric on a surface of the impregnating material.

US 2018056578 relates to an ultrasonic tooling system for texturing a workpiece including a horn having an end portion forming an interface with the surface of the workpiece. The end portion of the horn has a texture formed thereon. As a result of a high frequency ultrasonic vibration, the surface of the workpiece takes on a mirror image of the texture of the end portion of the horn. Alternately, the texture may be formed on an anvil and wherein, as a result of a lower frequency ultrasonic vibration, the surface of the workpiece corresponding to the anvil takes on a mirror image of the texture of the upper surface of the anvil.

WO 2009066086 relates to a friction tool for the treatment of mammalian skin. The tool comprises a support having a planar support face; a resiliently deformable friction pad provided to the support face, the friction pad defining a friction face. The friction pad further comprises a net-like layer provided at said friction face such as integrally thereto. A cosmetic method, which can be performed using the friction tool, is also provided.

JP 3217163 provides a carrier for carrying a liquid cosmetic. The carrier has a printed pattern on at least one part of a design surface of the carrier. The carrier is made of a

polymer foam, and the printed pattern is selected between an acrylic resin, a methacrylic resin, and a urethane resin.

A requirement exists for benefiting from a method for manufacturing a cosmetic article for sampling, distributing or applying a cosmetic composition that provides the possibility of easily obtaining an aesthetic effect if so desired, and of obtaining skin contact with the article that is pleasant for the user, as well as a good rendering of the cosmetic composition.

The aim of the invention is to provide a method for further improving the cosmetic articles comprising a reservoir containing a cosmetic composition, as well as such articles. A further aim of the invention is to propose a method for manufacturing a cosmetic article that can be used as an applicator and to propose such an article.

Disclosure of the invention

Method for manufacturing a cosmetic article

Thus, the aim of the present invention, according to one of the aspects thereof, is a method for manufacturing a cosmetic article comprising a textile defining a surface for applying, sampling or distributing a cosmetic composition, comprising a step involving implementing a treatment resulting in the melting of at least one part of the textile, the treatment being a treatment other than a hot roller treatment.

By virtue of the invention, a method is provided for manufacturing an article having a textile that is modified by the treatment, which particularly allows the requirements of decoration, of feel, of managing the permeability of the textile to be addressed, among others. In particular, the textile can be marked, in particular on the surface, by the treatment, like a decor, but without requiring an element, such as an ink or a film, to be transferred onto the textile. The treatment allows an impression to be left on the textile by melting, in particular locally, part of the textile. This enables a shape to be textured, to be pressed, on the textile and its properties to be modified, in particular permeability with respect to the composition.

The method according to the invention allows precise positioning of the one or more zone(s) of the textile intended to be treated by implementing a melting process.

The term treatment “other than a hot roller treatment” is understood to exclude any type of treatment with a roller or a cylinder that is rotated and results in the melting of at least one part of the textile, such as a hot calendering process. The advantage of a treatment that is implemented other than with the use of a roller is that it facilitates the customization of the pattern that is produced, where appropriate, and that it allows a textile to be treated in particular

conditions, for example, under tension or mounted on a support, which are not possible with a roller treatment. Tensioning the textile during treatment can help to produce a precise pattern, particularly when the fabric exhibits some elasticity.

The term "melting of at least one part of the textile" is understood to mean that one or more zone(s) of the textile, by virtue of the treatment implemented during the method according to the invention, transition(s) to a liquid state before again solidifying after treatment. The appearance of the textile is therefore modified, as are, optionally, all or some of its mechanical properties depending on the shape provided by the treatment. Preferably, only one part of the textile is affected by the melting process, with the treatment enabling only one or more zone(s) of the textile to be treated. The treatment may or may not result in the creation of a relief portion. The textile advantageously comprises a mesh structure of threads, in particular, and even exclusively, synthetic threads, with the treatment then resulting in the melting of at least one part of the threads of the mesh structure, in particular at least on one part of a surface of the textile. The local melting can result in, where appropriate, a weld seam between at least one weft and warp thread, in the case of a woven textile.

The treatment advantageously comprises applying heat by conduction and/or by radiation and/or by ultrasonic or radiofrequency energy. Applying pressure on the textile, in particular in order to press the textile or part thereof flat, can be carried out during, before or after the treatment, in particular during the treatment, particularly to create a relief portion on the textile.

The treatment is advantageously implemented by bringing the textile, in particular at least one surface of the textile, into contact with a treatment tool. The treatment can, by way of a variant, be implemented with the treatment tool without contact with the textile.

In one embodiment, the treatment comprises transfer-free hot marking, in particular using a heated pad and/or a gilding iron.

The term "transfer-free hot marking" is understood to mean bringing the textile into contact with or drawing it close to a hot marking tool such as a pad or an iron that is heated electrically, for example, which tool is equipped with a marking instrument, such as an engraved block or an interchangeable type-carrier strip, without using a transfer film. In this case, the treatment tool comprises the marking tool with a marking instrument.

The treatment can also comprise applying ultrasonic waves using a sonotrode. In this case, the treatment tool can comprise a sonotrode connected to an ultrasonic wave generator

and an anvil, the sonotrode advantageously being disposed on one side of the textile and the anvil being disposed on the other side of the textile during the treatment.

Other treatments can be implemented in order to implement the melting of at least one part of the textile, in particular laser treatment or induction treatment.

The treatment can be implemented via a treatment tool that is brought into contact with or close to the textile substantially perpendicular to the surface of the textile, even perpendicular to the surface of the textile. This tool, unlike a roller, is not rotated on itself.

The method can comprise a step involving exerting a tension on the textile along at least one stretching axis, before said treatment and/or during the treatment. In this case, the exerted tension causes, for example, an elongation of at least 10%, preferably of at least 20% of the textile, and even more preferably of at least 30% of the textile.

This tension is advantageously applied in the plane defined by the surface of the textile. This can allow a more visible aesthetic effect to be obtained on the textile after the treatment, if the tension is released after the treatment. The tension applied during the treatment can be greater than that which is applied during the use of the article, with the exception of tension exerted by the user, for example, when sampling the composition through the textile.

With the textile having a contour, in particular a circular contour, on its periphery, the tension can be exerted over the entire periphery of the textile, in particular in a uniform manner.

The method can comprise a step involving producing the article with the textile after the treatment. In particular, the textile can be cut after the treatment in order to produce the article.

By way of a variant, the method can comprise a step involving producing the article with the textile at least partially before the treatment. In particular, the textile can be cut before the treatment in order to produce the article.

The method can comprise, for example, a step involving fixing the textile on a support of the cosmetic article, such as a frame, before implementing said treatment, in particular by exerting a tension on the textile along at least one stretching axis, preferably over the entire periphery of the textile. Fixing the textile on the frame before the treatment can allow better control of the location of said at least one part of the textile undergoing melting. In particular, it is easier to centre one or more patterns obtained by the treatment. When the textile is fixed to a frame of the cosmetic article before the treatment is implemented, the treatment tool can be

configured, for example, by means of complementing shapes between a sonotrode and an anvil around the frame, to ensure that it is positioned relative to the frame and therefore to precisely control the location of said at least one part of the textile that is melted during the treatment. The frame can assume various shapes, with or without rotational symmetry, for example, a circular or polygonal shape. The frame can be circular shaped and form a ring.

The textile can be fixed on the frame without tension, with the tension being able to be applied during the treatment only, in particular using the treatment tool.

The textile can be fixed on the frame at the same time as the treatment. The textile can be fixed on the frame by bonding, welding, or by any other fixing means. The tool that causes the local melting of the textile in order to form a pattern thereon can also enable fixation by locally melting textile material on the frame. Thus, a single operation allows the textile to be both fixed and decorated.

Cosmetic article

A further aim of the present invention, according to another one of the aspects thereof, in combination with the aforementioned description, is a cosmetic article comprising a textile defining a surface for applying, sampling or distributing a cosmetic composition, the article being obtained using the method as described above.

In one embodiment, said surface has undergone said treatment.

By way of a variant or additionally, the reverse side of said surface has undergone said treatment.

The textile can comprise threads produced with synthetic fibres and/or microfibres selected from the group made up of polyamide, elastane, polyester, acrylic, viscose, acetate, cellulose, a polyolefin, polyether, the mixtures thereof, preferably polyamide, the textile being or not being elastically deformable. The presence of microfibres can enable a particular soft feel to be obtained, which can be pleasant for the user.

The synthetic fibres of the text can be melted locally, by virtue of the treatment.

The textile can be a woven, a non-woven or a knitted textile, preferably a woven or a knitted textile.

The textile can have a mesh structure, the structure of which has been modified by said treatment. In particular, the mesh structure can be destructured following the treatment, for example, by hot marking or by applying ultrasonic waves. The porosity of the textile can be

reduced in order to reduce the permeability of the textile, without necessarily blocking the textile in the one or more treated zones.

The textile can comprise, on the one or more treated surface(s), at least one pattern resulting from the treatment. The textile can have at least one relief portion resulting from the treatment, in particular a relief portion with a depth that is greater than or equal to 0.5 mm or forming a projection of 0.5 mm or more. When present, the relief portion can assume multiple pattern shapes. The pattern, optionally as a relief portion, can be geometric, even or uneven.

The textile can have at least one opening, the appearance of which has been modified by the treatment.

The textile can be at least in a taut state along at least one stretching axis before or at the time of undergoing said treatment.

The properties of the textile may have been modified by the treatment. The textile is, for example, locally impermeable or has reduced permeability in one or more zones of the textile that has undergone the treatment, in particular a central zone. The porosity of the textile can be modified by the treatment, as intended, in particular toward lower porosity. The textile can maintain permeability with respect to the cosmetic composition. The porosity may not be uniform within the surface. The treatment zone of the textile can be a central zone and not cover the full extent of the textile.

The article can comprise a support, in particular a frame, which is fixed or movable within the article, the textile being held by the support above a reservoir of composition, such that the composition is able to pass through the textile, in particular by pressing the textile against the composition. The textile can then act like a weft.

In the article, the textile can be fixed, in particular by bonding, to an underlying porous structure, in particular a sponge, optionally impregnated with the cosmetic composition.

The article can comprise a case comprising a body having a housing containing the cosmetic composition, the textile being disposed above the cosmetic composition, the case preferably comprising a lid arranged to engage with the body.

By way of a variant, the article forms a cosmetic composition applicator. In this case, the article can form a pad or a puff. The article then can be washable. By way of a variant, the applicator is fixed to a gripping part.

The cosmetic composition can be liquid or in powder form.

Irrespective of the embodiment, the textile is advantageously a single layer. The textile is preferably not directly connected, from the reverse side or the reverse surface of the textile, to underlying filaments. The reverse side of the textile can be free, i.e. not connected by weaving or knitting to an underlying layer or structure.

Brief description of the drawings

The invention will be better understood from reading the following detailed description of non-limiting embodiments thereof, and with reference to the accompanying drawings, in which:

figure 1 is a schematic perspective view of an example of a case of an article according to the invention;

figure 2 shows a schematic view of a surface for applying, sampling or distributing another example of a textile of an article according to the invention;

figure 3 shows a schematic view of a surface for applying, sampling or distributing another example of a textile of an article according to the invention;

figure 4 shows a schematic transverse section view of part of an example of an article, before treatment according to the method of the invention;

figure 5 is a partial schematic transverse section view illustrating the implementation of the method according to the invention on an example of an article;

figure 6 is a schematic transverse section view of another embodiment of the method on a textile intended to produce a cosmetic article;

figure 7 schematically shows, as a transverse section view, a textile after treatment according to the method of the invention;

figure 8 partially, schematically shows a perspective view of an example of a tool for implementing the method according to the invention;

figure 9 partially, schematically shows a perspective view of another example of a tool for implementing the method according to the invention, placed close to the textile before implementing the treatment;

figure 10 represents the implementation of the treatment step of the method according to the invention with the tool of figure 9 on the textile of figure 9;

figure 11 partially, schematically shows a transverse section view of another example of a cosmetic article according to the invention;

figure 12 schematically shows a front view of another example of a cosmetic article according to the invention; and

figure 13 schematically shows a front view of another example of a cosmetic article according to the invention.

Detailed description

Throughout the remainder of the description, identical elements or elements having identical functions bear the same reference sign. In order to make the present description concise, they are not described for each of the figures, with only the differences between the embodiments being described.

Figure 1 shows a cosmetic article 1 according to the invention, comprising a case 2 having a body 3. The case 2 also comprises a lid 5 that is, in this example, articulated on the body 3. The lid can be secured differently, for example, screwed on the body.

The case 2 also houses an applicator holder 6, which is, in this example, articulated on the body 3 about an axis of rotation that is perpendicular to that of the articulation between the lid 5 and the body 3. The applicator is not shown in this figure. A dish 4 is received in a housing 8 of the body 3 of the case 2. The dish 4 houses a reservoir of cosmetic composition.

The reservoir is surmounted with a textile 15 defining a surface 17 for applying, sampling or distributing the composition, forming the visible side of the textile 15, with substantially square shaped edges and round corners, in this example. The textile 15 is produced by a mesh structure formed by polyamide threads, in this example, by knitting. At least one part of the textile 15, in this example at least one part of the surface 17, has been treated using a treatment, other than a hot roller treatment, resulting in the melting of at least one part of the textile 15, at least on the surface. In particular, in this example, the treatment results in the melting of at least some sections of threads of the mesh structure.

In the illustrated example, part of the surface 17 of the textile has been treated by transfer-free hot marking, in particular with a gilding iron or a heated pad, in order to form, by melting, a pattern 20 in the form of the letter A, in this example. By virtue of the invention, the pattern is properly centred on the surface 17. In this case, heat is applied on the textile 15 by conduction.

In this example, the textile 15 is designed to allow sampling of a cosmetic composition contained in the underlying reservoir. The textile 15 is permeable with respect to the composition and allows the composition to pass through its constituent meshes. The

treatment can modify, in particular reduce, the permeability of the textile 15 in the vicinity of the pattern 20.

Most of the cosmetic composition is contained in the reservoir, in particular fully contained therein, for example, in liquid form.

The scope of the invention is not departed from if the treatment comprises applying heat by radiation and/or by ultrasonic or radiofrequency energy, nor if the treatment is implemented using a treatment comprising applying ultrasonic waves using a sonotrode or a laser treatment or even treatment by induction or another suitable treatment, different from a treatment with a hot roller. The scope of the invention is also not departed from if it is the reverse of the surface 17 that undergoes the treatment, instead of the surface 17 or in addition to the surface 17.

Figure 2 shows, in isolation, a surface 17 of a textile 15 mounted and fixed on a circular frame 21, treated so as to form, by local melting of the textile, a central pattern 20, in the form of a ring in this example, produced by applying heat by ultrasonic energy, using a sonotrode.

In the example of figure 3, the surface 17 of the textile 15 has been treated by applying ultrasonic waves so as to form a geometric pattern 20 in the form of concentric circles, like a target, around a central point O of the surface. Each circle of the pattern 20 forms a local melting zone of the textile 15, at least on the surface, so as to form the pattern 20 and optionally to modify the properties of the surface, for example, to reduce the permeability of the textile 15 in these zones.

With the treatment being implemented other than with a roller, it is easier to have a pattern 20 centred within the article 1, as is the case in figure 3.

Figure 4 illustrates the textile 15 extending perpendicular to the axis X, with the textile 15 being fixed, in this example, by bonding, to its periphery 16 on the frame 21, before the treatment of the method according to the invention. This figure also shows the reverse side 18 of the textile 15, which extends from the opposite, reverse, side of the surface 17. In this example, the textile 15 is stretched on the frame 21 with an elongation of at least 10%, along at least one stretching axis, in this example over the entire periphery, for example, a circular periphery, of the textile 15.

Figure 5 shows a hot marking tool O close to the surface 17, perpendicular thereto in the direction of the arrows, parallel to the axis X, in order to implement the treatment. The

tool O comprises a surface with elements R as relief portions, in particular for producing the pattern on the surface 17 of the textile 15.

In the example of figure 5, the textile 15 is mounted on a frame 21 of the cosmetic article, which is the first step in producing the article, before the assembly thereof inside a case similar to that of figure 1, for example. Thus, the production of the article 1 begins before the implementation of the treatment.

It is possible for the textile 15 to be treated before the production of the article 1. For example, a sheet 12 of textile 15, as shown in figure 6, is treated, as in the example of figure 5, before cutting the textile 15. The textile 15 can be a coil before marking.

Figure 7 shows that the treatment implemented on the textile 15 can result in the formation of relief portion(s) 25 on the textile 15, as a hollow on the side of the surface 17, in this example, in particular by applying a pressure on the textile during, before or after the treatment.

Figure 8 shows an example of a pad for a hot marking tool O with an A-shaped pattern allowing an A-shaped pattern 20 to be obtained on the surface 17 of the textile 15. The diameter and the shape of the surface S of the pad that will be in contact with the textile 15 during the treatment can be similar to those of the textile on the finished cosmetic article 1. The treatment can be implemented without any contact with the textile, without departing from the scope of the invention, for example, using a laser.

Figures 9 and 10 illustrate the implementation of the treatment using a sonotrode D on the textile 15 mounted on a frame 21. In figure 9, the treatment tool comprises the sonotrode D, connected to an ultrasonic wave generator (not shown on the figure for the sake of the clarity of the drawing) extending from the reverse side 18, in abutment against an end of the frame 21 opposite the end of the frame 21 that is fixed to the textile 15, so as to be kept at a non-zero distance from the reverse side 18 of the textile 15. The tool also comprises an anvil E disposed opposite, on the side of the surface 17 of the textile 15, in contact therewith. The anvil E comprises a peripheral border on the upper part coming into contact with the sonotrode D and fully surrounding it, corresponding to complementing shapes between the anvil E and the sonotrode D, around the frame 21 supporting the textile 15. Thus, the sonotrode D is positioned by being centred on the frame 21, which allows precise control of the location of the one or more zone(s) of the textile 15 that are subsequently treated. In order to melt at least one part of the textile 15, as shown in figure 10, the anvil E is brought closer so as to tension the textile 15 until

the reverse side 18 is brought into contact with the sonotrode D and heat is applied by ultrasonic energy, with the application of ultrasonic waves resulting in the melting of at least one part of the textile according to the desired pattern.

In figure 1, the textile 15 is in contact with the cosmetic composition at least after a first use.

In the example of figure 11, the textile 15 is fixed by bonding to an underlying structure 35 made up of, in this example, a sponge or a block of cellular porous material containing the cosmetic composition C at least during use. In this example, the surface 17 of the textile lacks a relief portion, with the treatment resulting in the melting of at least one part of the textile 15 that had not created a relief portion.

The invention is not limited to cosmetic articles 1 that come into contact with the composition in a reservoir.

In particular, the alternative embodiments illustrated in figures 12 and 13 show a cosmetic article 1 with a textile 15 covering, for example, a sponge, not shown, for forming a cosmetic composition applicator that is not impregnated with the composition. This applicator is used to sample the composition on a composition laden surface or on a block of product and to apply it whilst it is held in the hand, or, by way of a variant, it is used to blend or withdraw the composition that is applied in a different manner.

The applicator of figure 12 is completely flexible. The applicator of figure 13 comprises an end piece 28 covered with the textile 15 and fixed to a rigid or semi-rigid gripping part 29, which in this example forms a stem.

The textile 15 may or may not comprise openings that are independent of those of the mesh structure of the textile and have larger dimensions.

Claims

1. Method for manufacturing a cosmetic article (1) comprising a textile (15) defining a surface (17) for applying, sampling or distributing a cosmetic composition (C), comprising a step involving implementing a treatment resulting in the melting of at least one part of the textile (15), the treatment being a treatment other than a hot roller treatment.

2. Method according to Claim 1, wherein said treatment comprises applying heat by conduction and/or by radiation and/or by ultrasonic or radiofrequency energy.

3. Method according to Claim 1 or 2, wherein the treatment comprises transfer-free hot marking, in particular using a heated pad and/or a gilding iron.

4. Method according to any one of the preceding claims, wherein the treatment comprises applying ultrasonic waves using a sonotrode.

5. Method according to any one of the preceding claims, comprising a step involving exerting a tension on the textile (15) along at least one stretching axis, before said treatment and/or during said treatment.

6. Method according to Claim 5, the exerted tension causing an elongation of at least 10%, preferably of at least 20%, of the textile (15), even more preferably of at least 30% of the textile (15).

7. Method according to Claim 5 or 6, the textile (15) having, on its periphery (16), a contour, in particular a circular contour, the tension being exerted over the entire periphery (16) of the textile (15).

8. Method according to any one of the preceding claims, comprising a step involving producing the article (1) with the textile (15) after the treatment.

9. Method according to any one of Claims 1 to 7, comprising a step involving producing the article (1) with the textile (15) at least partially before the treatment.

10. Method according to the preceding claim, comprising a step involving fixing the textile (15) on a support, in particular a frame (21), of the cosmetic article (1) before implementing said treatment.

11. Cosmetic article (1) comprising a textile (15) defining a surface (17) for applying, sampling or distributing a cosmetic composition (C), the article (1) being obtained using the method according to any one of the preceding claims.

12. Article (1) according to the preceding claim, wherein said surface (17) has undergone said treatment.

13. Article (1) according to Claim 11 or 12, wherein the reverse side (18) of said surface (17) has undergone said treatment.

14. Article (1) according to any one of Claims 11 to 13, the textile (15) comprising threads produced with synthetic fibres and/or microfibres selected from the group made up of polyamide, elastane, polyester, acrylic, viscose, acetate, cellulose, a polyolefin, polyether, the mixtures thereof, preferably polyamide, the textile being or not being elastically deformable.

15. Article (1) according to the preceding claim, the synthetic fibres of the textile (15) being locally melted.

16. Article (1) according to any one of Claims 11 to 15, the textile (15) being a woven, a non-woven or a knitted textile, preferably a woven or a knitted textile.

17. Article (1) according to any one of Claims 11 to 16, the textile (15) having a mesh structure, the structure of which has been modified by said treatment.

18. Article (1) according to any one of Claims 11 to 17, the textile (15) comprising, on the treated surface (17, 18), at least one pattern (20) resulting from the treatment.

19. Article (1) according to any one of Claims 11 to 18, the textile (15) having at least one relief portion (25) resulting from the treatment, in particular a relief portion having a depth that is greater than or equal to 0.5 mm or forming a projection of 0.5 mm or more.

20. Article (1) according to any one of Claims 11 to 19, the textile (15) being at least in a taut state along at least one stretching axis before or at the time of undergoing said treatment.

21. Article (1) according to any one of Claims 11 to 20, the textile (15) being locally impermeable or having reduced permeability in one or more zones of the textile (15) that have undergone the treatment, in particular a central zone.

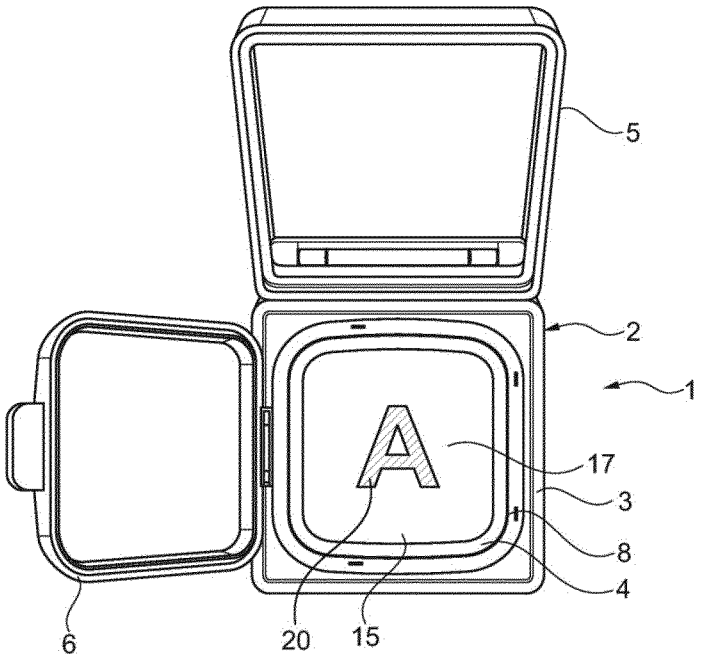
22. Article (1) according to any one of Claims 11 to 21, comprising a support, in particular a frame (21),which is fixed or movable within the article, the textile (15) being held by the support (21) above a reservoir of composition (C), such that the composition is able to pass through the textile (15), in particular by pressing the textile (15) against the composition.

23. Article (1) according to any one of Claims 11 to 22, the textile (15) being fixed, in particular by bonding, to an underlying porous structure (35), in particular a sponge, optionally impregnated with the cosmetic composition.

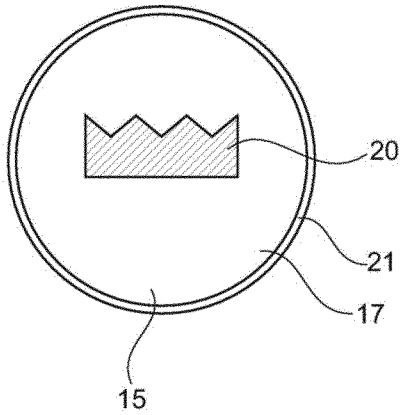
24. Article (1) according to any one of Claims 11 to 23, comprising a case (2) comprising a body (3) having a housing containing the cosmetic composition, the textile (15) being disposed above the cosmetic composition, the case (2) preferably comprising a lid (5) arranged to engage with the body (3).

25. Article (1) according to any one of Claims 11 to 21, forming a cosmetic composition applicator.

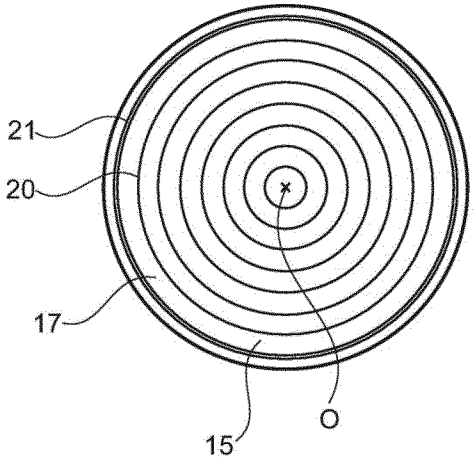
[Fig. 1]



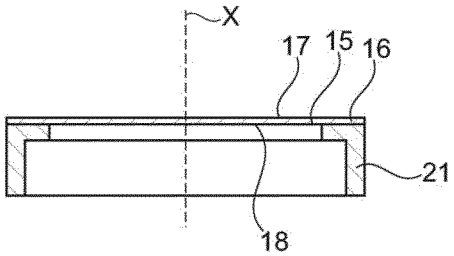
[Fig. 2]



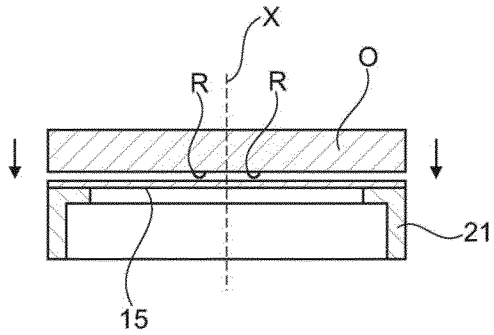
[Fig. 3]



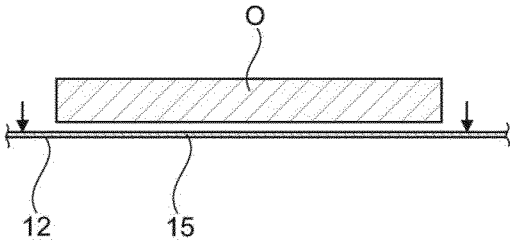
[Fig. 4]



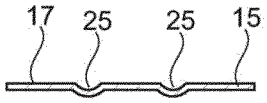
[Fig. 5]



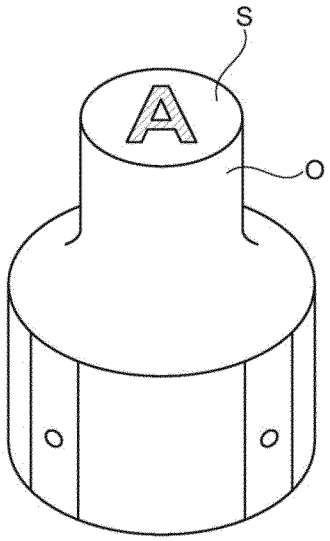
[Fig. 6]



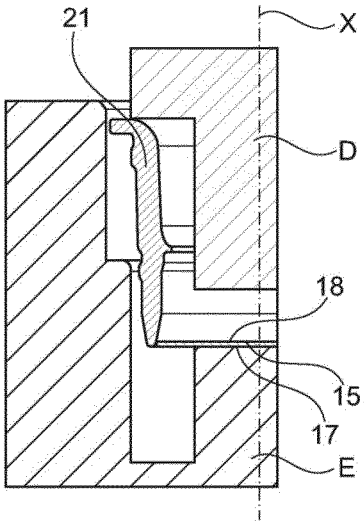
[Fig. 7]



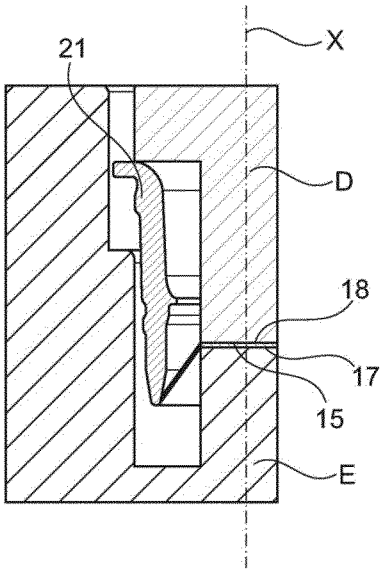
[Fig. 8]



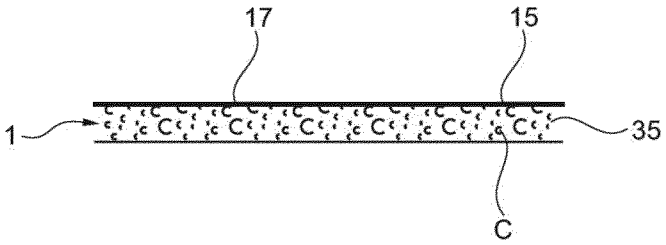
[Fig. 9]



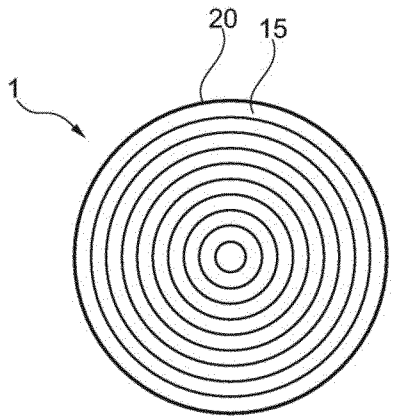
[Fig. 10]



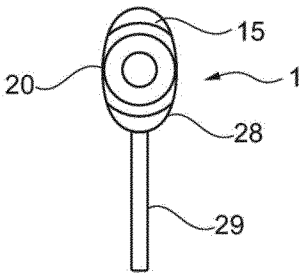
[Fig. 11]



[Fig. 12]



[Fig. 13]



INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2020/053923

A. CLASSIFICATION OF SUBJECT MATTER
INV. D06M10/02 A45D33/18 A45D34/04 A45D40/00 A61K8/02
D06C23/00 D06C23/04 B32B3/30 A45D33/34 B44B5/00
B44B5/02 B29C35/02 B32B5/18 B32B5/24 B32B7/12

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)
D06M A61Q A45F A45D A61K D06C B32B B44F B44B B29C

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
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	WO 2018/174620 A1 (S&P WORLD LTD [KR]) 27 September 2018 (2018-09-27) cited in the application the whole document	1,2,4,8, 9,11, 14-16, 23,25

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Y	paragraph [0041]; figures 6-8 paragraph [0049]; figure 9 claims 1-5	3,12-19

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
25 February 2020	13/03/2020

Name and mailing address of the ISA/	Authorized officer
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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Y	paragraphs [0033], [0118] - [0126], [0141] - [0143]; claims; figures 8B, 9B, 15A, 15B, 15C	3,12-19
X	KR 2016 0073895 A (SAMWHA PLASTIC IND CO [KR]) 27 June 2016 (2016-06-27) cited in the application paragraphs [0009] - [0011], [0014], [0077], [0019], [0212]; figures	1,2, 4-15,17, 18,20-25
Y	KR 2019 0002249 A (COSMAX INC [KR]) 8 January 2019 (2019-01-08) cited in the application paragraphs [0034] - [0035]; claims 7,8	3,12-18
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X	WO 2009/066086 A1 (BALL BURNISHING MACH TOOLS [GB]; LINZELL GEOFFREY ROBERT [GB]) 28 May 2009 (2009-05-28) cited in the application page 18, paragraph second page 26, paragraph 6 - page 27, paragraph 1 page 51, paragraph 3	11-16, 19,23,25
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A	WO 2018/026228 A1 (JOUNG JAE YONG [KR]) 8 February 2018 (2018-02-08) paragraphs [0085] - [0087], [0090] - [0098]; claims 1-10; figures 3,7,8	1-25
A	EP 3 260 109 A1 (AMOREPACIFIC CORP [KR]) 27 December 2017 (2017-12-27) claims; figures	1,22,24, 25
A	KR 2016 0053434 A (TOLY KOREA INC [KR]) 13 May 2016 (2016-05-13) figures 1-14	1-25

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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2020/053923

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 090 897 A (MINICK DAVID G) 23 May 1978 (1978-05-23) figures 4,6,7 -----	1,11

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Information on patent family members

International application No
PCT/EP2020/053923

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