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(54) **PROCESS FOR MOLDING A MAKE-UP COMPOSITION**

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(30) **Foreign Application Priority Data**

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(58) **Field of Search** 424/401; 264/313, 264/316, 319, 337; 514/844

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(57) **ABSTRACT**

Process for moulding a make-up composition in a mould comprising a concave moulding surface forming the base of the mould and a bottom forming the upper component of the mould and closing off the space bounded by the said moulding surface, the composition being cast in the said mould in fluid form and subsequently solidifying to form a demouldable solid product capable of being packaged, in which the said composition is cast in a mould **(1)** whose bottom consists at least partly of a sheet **(2)** of open-cell plastic foam, so as partly to impregnate the said foam sheet **(2)** with the said composition and in which, after solidifying of the said composition, a moulded product consisting of the solidified composition and of the foam sheet which is bonded to it and which forms its support, is demoulded by removing the moulding surface **(1)**.

66 Claims, 2 Drawing Sheets

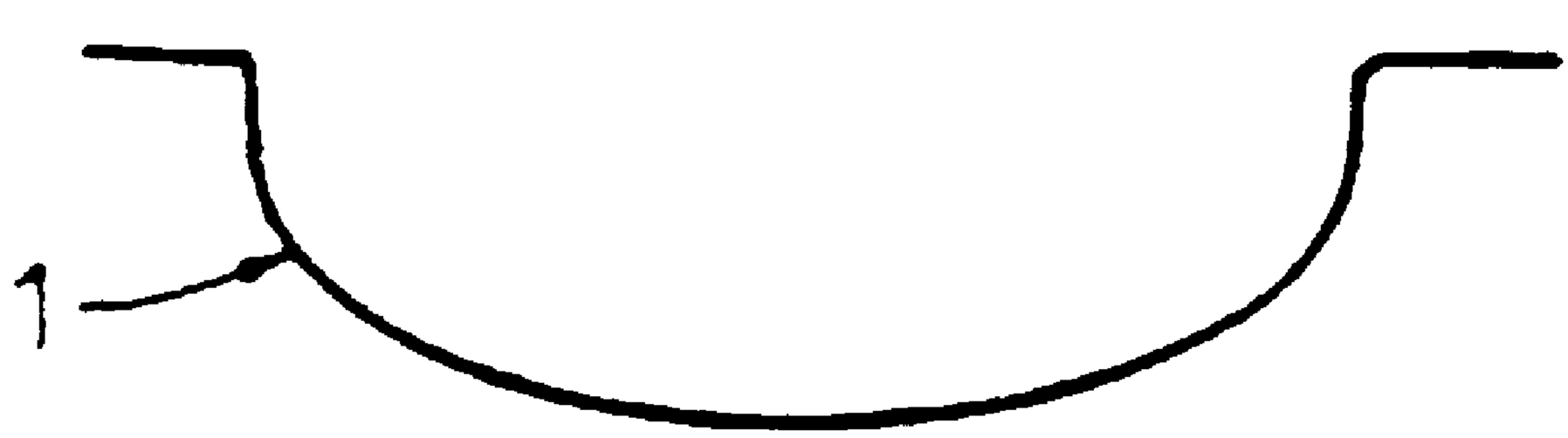

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FIG. 1a

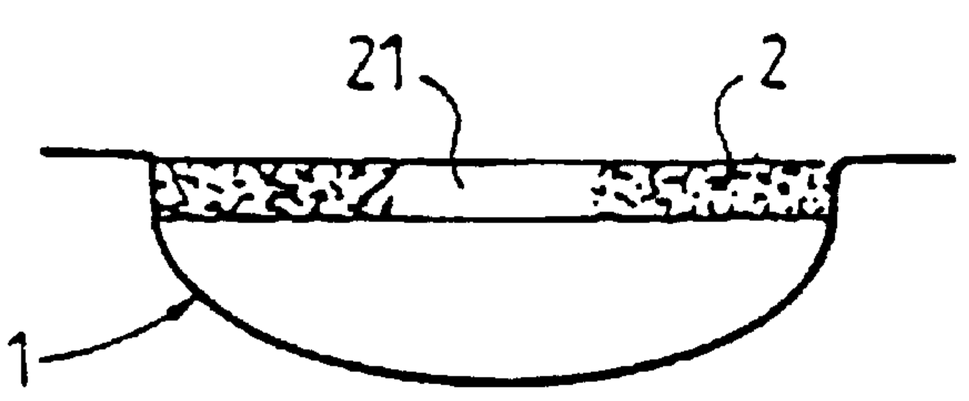


FIG. 1b

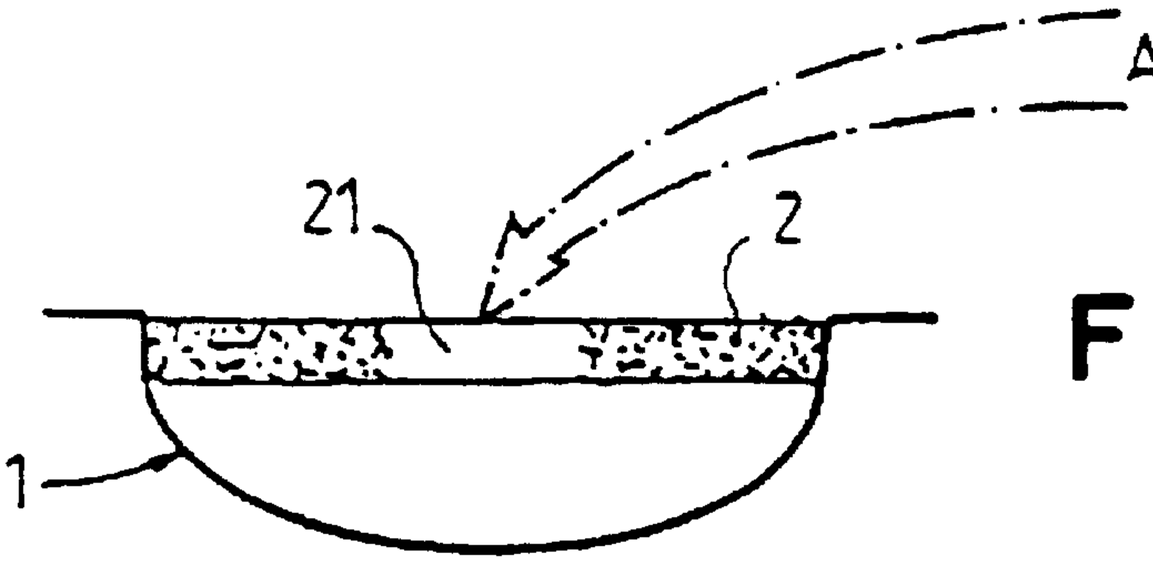


FIG. 1c

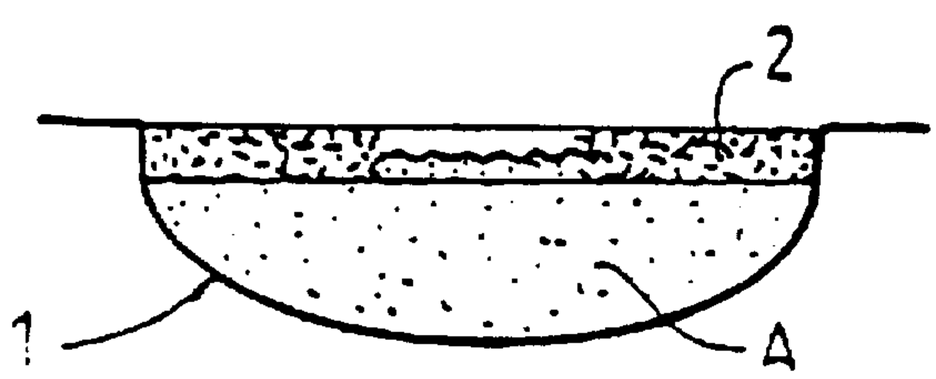


FIG. 1d

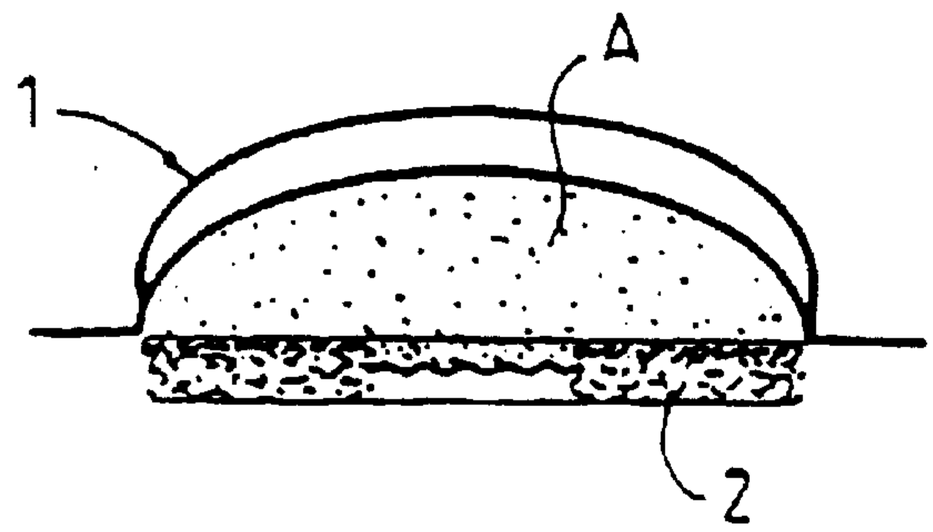


FIG. 1e

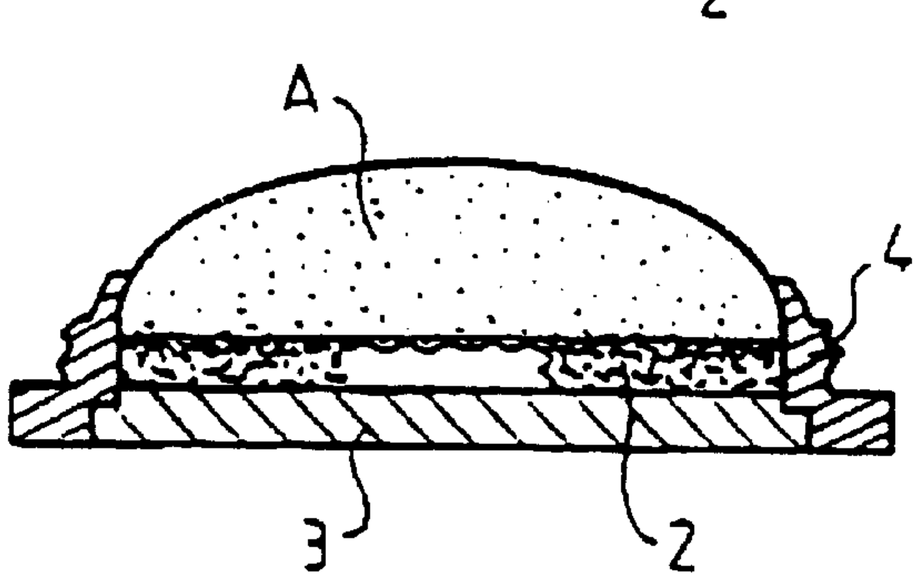


FIG. 1f

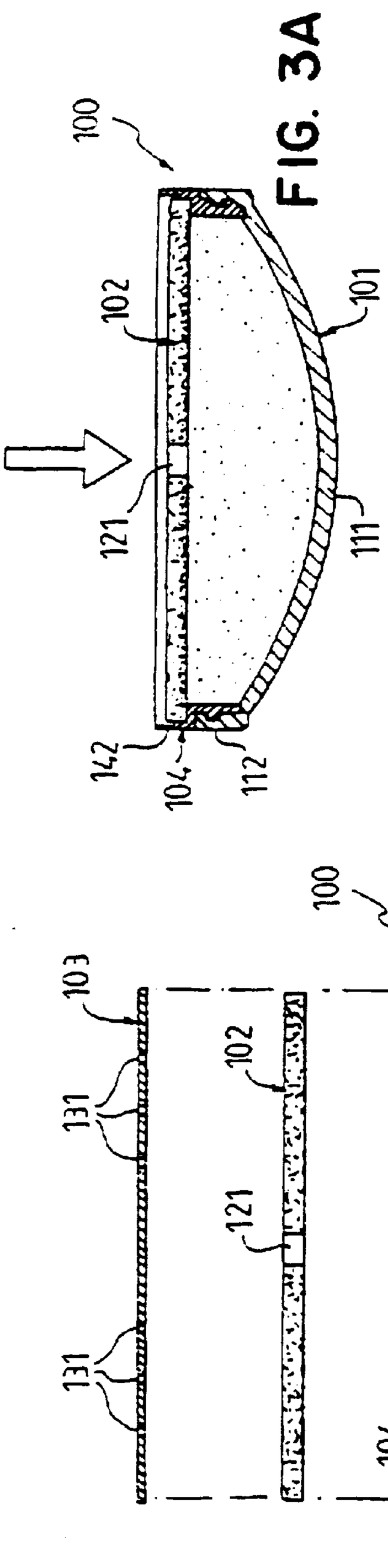


FIG. 3A

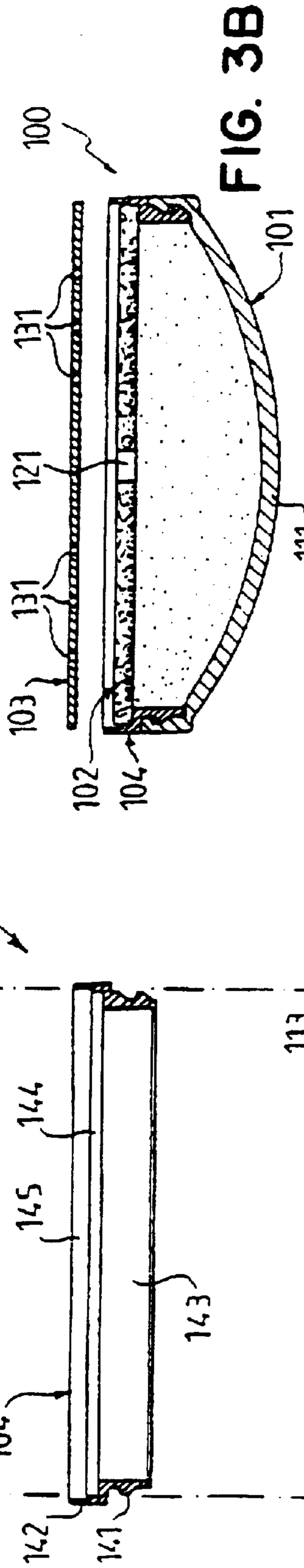


FIG. 3B

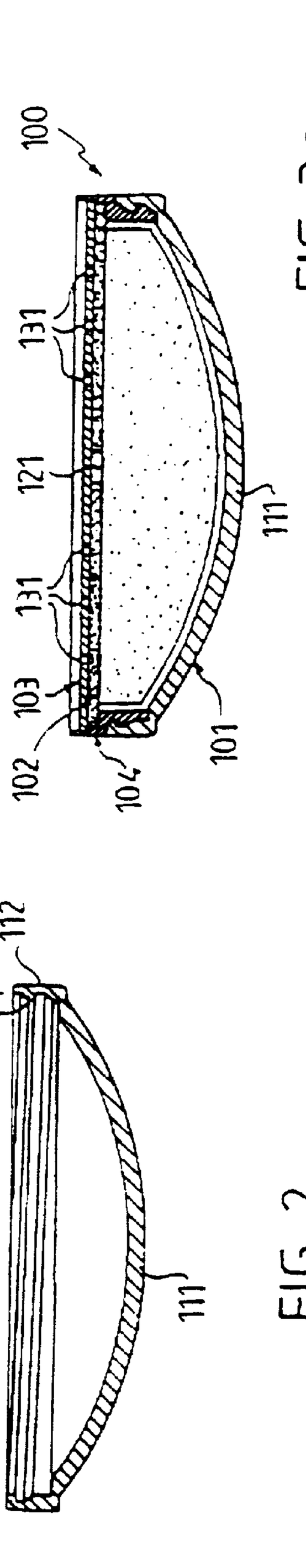


FIG. 3C

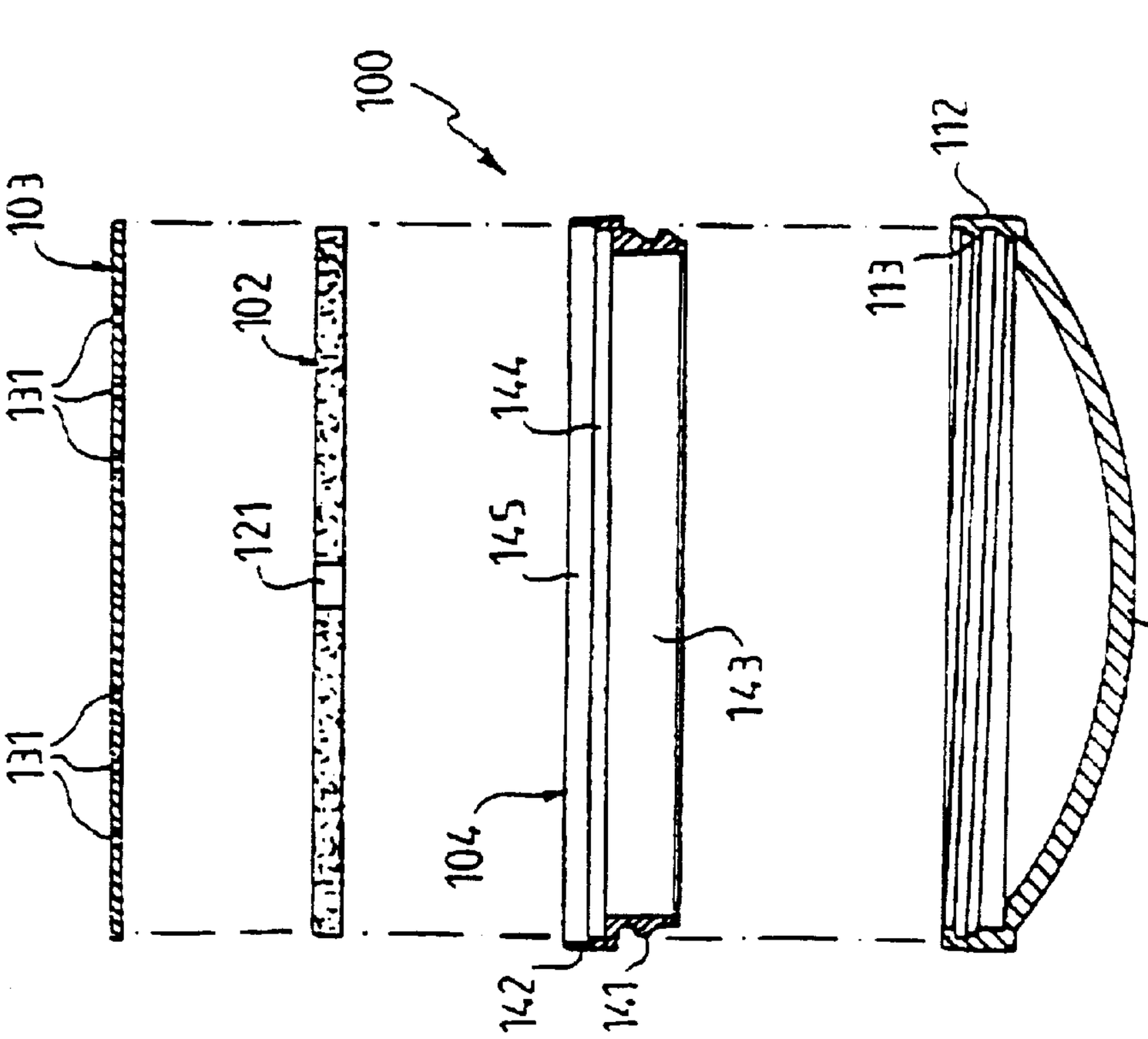


FIG. 2

PROCESS FOR MOLDING A MAKE-UP COMPOSITION

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates the additions made by reissue.

This application is a continuation of application Ser. No. 08/469,818, filed Jun. 6, 1995, now abandoned, which is a divisional of U.S. Ser. No. 08/238,055, filed May 4, 1994 abandoned.

The present invention relates to a process for molding a make-up composition by casting in a mold, in fluid form, and solidifying the composition, so as to obtain a solid molded product in the form of a block or cake, it being subsequently possible for the composition to be picked off from the molded product with the aid of a finger, a brush or of a puff; the invention also relates to the product obtained by this process.

The make-up composition to be molded may be in the form of a paste obtained by mixing a solid particulate phase either with an aqueous phase or with a binding agent, especially a fatty phase, in a solvent; it may also be in the form of a product based on a heat-fusible wax or of a gel which is cast in the hot state. Depending on the composition employed, the solidification therefore takes place either by evaporation of water or of solvent, or by cooling, or by chemical reaction.

It is known to cast a make-up composition in a mold of a certain volume including chiefly a molding surface which imparts its shape (flat, curved or provided with relief or indented figures) to the surface for taking off the composition and a bottom, in most cases flat, provided with one or more openings through which the composition to be molded is cast. Depending on the make-up composition which is processed, the phenomenon of shrinkage during the solidification may be considerable. This is the case especially with the compositions described in patents U.S. Pat. No. 4,804,538, EP-A-165,137 and DE-A-3,327,001. The molded block obtained is then packaged but, because of the shrinkage, its dimensions and its shape can vary, and it is difficult to keep it in place in this package and to wedge it against the rigid surface forming the bottom of the package such as a case; the main function of the rigid surface is to prevent the molded block from breaking up in the course of the various handling operations and to protect it, but the shrinkage destroys the wedging and prevents the packaging from fulfilling its function in a satisfactory manner. If the molded block is badly wedged it tends to break up in the course of storage; because of its nature it is actually very brittle because it must be capable of being disintegrated to allow it to be picked off.

To avoid this disadvantage it has already been proposed, in EP-A-191,198 and in EP-A-38,645, to perform the casting in a dish resting on a molding surface, the bottom of the dish being provided with crosspieces, reinforcement or other anchoring devices. On solidifying, the composition binds to the bottom of the dish and a product of molding is then packaged, including the solidified composition and its associated dish. The dish is used as a support for the solidified composition and, since the dish has determined dimensions, the molded product is easy to keep in place and to wedge in a rigid package. However, it has been found that after drying or cooling, cracks are formed because of shrinkage of the composition in relation to the dish and to the regions for bonding to the latter. The product sold is consequently embrittled and tends to fragment during the various subsequent handling operations, especially when the product is being used.

It is therefore desirable to define a packaging for this type of composition, which at the same time makes it possible to ensure the wedging and the maintaining of the solidified composition in a protective packaging eliminating the risk of breaking up and to permit the shrinking of the composition without embrittlement of the molded block; two functions must therefore be ensured simultaneously.

SUMMARY OF THE INVENTION

According to the present invention it has been found that the abovementioned disadvantages are avoided by employing a mold bottom including a sheet of open-cell foam which is partly impregnated with the cast composition. The process according to the invention makes it possible to ensure the two desirable functions defined above simultaneously with the product obtained.

The subject of the present invention is therefore a process for molding a make-up composition in a mold including a concave molding surface forming the base of the mold and a bottom forming an upper component of the mold and shutting off the space bounded by the said molding surface, the composition being cast in the mold in fluid form and subsequently solidifying to form a demoldable solid product capable of being packaged, characterized in that the said composition is cast in a mold the bottom of which is at least partly formed by a sheet of open-cell plastic foam, so as partly to impregnate the foam sheet with the composition. After solidification of the composition a molded product, including the solidified composition and the foam sheet which is bonded to it and which forms its support, is demolded by removing the molding surface.

It has been found that, in the process according to the invention, compositions exhibiting a high shrinkage during their solidification can be cast without the molded product obtained being fragile because the foam support adapts its shape to the dimensional changes in the solidified composition by virtue of its elasticity. Nevertheless, since the foam is partly impregnated with the composition, a bond is formed between the plastic foam sheet and the composition during the solidification and the said foam sheet forms a support for the solidified composition, a support which, of itself, contributes to the mechanical reinforcement of the molded block. A molded product is therefore prepared, including the combination of the solidified composition and the foam sheet. The unimpregnated portion of the foam sheet, more particularly the unimpregnated layer of the foam sheet, which has retained its elasticity, can be employed in the packaging of the molded product to wedge the latter onto a rigid surface by compensating the changes in dimensions of the solidified composition; the wedging is produced by a slight compression of the foam sheet. In addition, the solidified composition, being held in the package on an elastic surface, is properly protected against the impacts to which it might be subjected during the various handling operations. A good conservation of the molded product is therefore ensured as soon as it is manufactured, until it reaches the user's hands.

According to a first embodiment the composition is solidified after casting by cooling or by evaporation of a solvent present in the composition. According to another embodiment a composition which contains plaster ($CaSO_4.\frac{1}{2}H_2O$) and a sufficient quantity of water to obtain a pourable mixture is cast, the solidification taking place after casting by setting of the plaster. The molding process according to the invention is then particularly advantageous.

According to the invention the composition may be cast through the foam sheet; casting takes place preferably

through an opening, advantageously a central opening, made in the foam sheet. The size of this opening is a function of the size of the mold and of the composition which is cast.

The foam sheet is preferably slightly compressed at the solidification stage, advantageously with the aid of a rigid plate; this rigid plate is advantageously provided with openings to facilitate the evaporation when the solidification takes place by evaporation.

The foam sheet employed according to the invention includes, as indicated above, an open-cell plastic foam. This foam is chosen so that it practically does not swell in the presence of the various ingredients of the make-up composition, such as water, oil and fatty substances, and so that it can be impregnated with the composition. A foam is advantageously employed which has a cell structure such that the volume occupied by the walls of the cells does not represent more than 3% of the total volume of the foam. The foam advantageously has a homogeneous cell structure, that is to say forming a three-dimensional network. Suitable plastic foams are, for example, crosslinked polyurethane foams, in particular those marketed under the names "Bulpren S 20", "Bulpren S 30" and "Filtren S 2120" by the "Recticel" company.

The thickness of the foam sheet employed is a function of the size of the mold and of the composition which is cast. A suitable thickness is generally of the order of 3 to 6 mm.

Another subject of the present invention is the molded make-up product obtained by the process defined above.

This product is preferably packaged, after demolding, in a rigid display case including a component which supports the foam sheet and of a ring which surrounds the molded product and is integrally attached to the component.

In a first alternative form the component is a base which interacts with a ring which bears on the solidified composition to hold the molded product against the base, the base overlapping laterally in relation to the foam sheet.

In a second alternative form the component is a plate and the ring includes a means of integral fastening capable of ensuring peripherally, in a removable manner, its bonding to a cap in order to form a molding surface with it. In addition, the plate preferably includes at least one opening.

Provision can be advantageously made for the product according to the invention to contain hydrated plaster ($CaSO_4.2H_2O$), preferably in a proportion by weight of between 10 and 50%.

BRIEF DESCRIPTION OF THE DRAWINGS

The description given below, purely by way of illustration and without any limitation being implied, will make it possible to understand the invention better, reference being made to the attached drawings.

In the drawings:

FIG. **1** is a diagram of the various stages (a to f) of a first alternative form of the molding process according to the invention;

FIG. **2** shows an exploded view of a mold employed according to a second alternative form of the process according to the invention; and

FIG. **3** shows the various stages of use of the mold illustrated in FIG. **2**.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In the scheme shown in FIG. **1**:

in stage a, a thermoformed dish **1**, which forms a concave molding surface for the make-up composition is placed in position;

in stage b, a foam sheet **2** provided with a central opening **21** is placed in position in the dish **1**, this foam sheet **2** forming the bottom of the mold;

in stage c, a cosmetic composition A is poured in through the opening **21**, as shown by the arrow, and the mold is completely filled so as to impregnate the lower layer of the foam sheet **2** with composition A while leaving free the upper layer of the foam sheet, this upper layer consequently retaining its elasticity;

in stage d, the composition A is allowed to solidify; a mechanical bond is then formed between the foam sheet **2** and the solidified composition A;

in stage e, the molded product, including a curved tablet of solidified composition A and of the foam sheet **2** which forms its support, is removed from the mold;

stage f is the stage of packaging of the molded product; the molded product is held down on a rigid base **3** with the aid of a ring **4** while the foam sheet **2** is slightly compressed; the ring **4** bears on the tablet of composition A and the base **3** is integrally attached to the ring **4** to keep the foam compressed. In this way, by virtue of its elasticity, the foam sheet **2** makes it possible to compensate, in relation to the base **3** and the ring **4**, the deformations of the solidified tablet of composition A which are due to shrinkage during and after solidification. The tablet of composition A is therefore well supported and well wedged on the rigid base **3** without any risk of cracking of the solidified composition.

FIG. **2** shows an exploded view of the various parts forming a mold **100** for making use of a second alternative form of the process according to the invention, an alternative form which is preferred because it makes it possible to mold the molded product directly in the packaging. It is made up, firstly, of a molding surface in the form of a dish referred to as **101** as a whole, as can be seen in FIG. **3**A, secondly of a foam sheet **102** in the form of a circular disc and, thirdly, of a rigid plate **103** also in the form of a circular disc, of the same area as that of the foam sheet **102**.

The molding surface **101** is made up, firstly, of a concave cap **111** on the edge of which is formed a cylindrical skirt **112** provided with an internal screw thread **113** and, secondly, with a removable ring **104** provided with an external screw thread **141** and capable of being fitted by screwing onto the skirt **112**. The screw thread **141** is situated slightly set back from a cylindrical surface **142** which extends the external surface of the skirt **112** when the ring **104** is screwed onto the cap **111**.

The inner surface of the ring **104** defines three zones of increasing diameter which are separated by shoulders: a zone of smallest diameter **143** which is situated on the side of the concave part of the cap **111** when the ring **104** is screwed onto the cap, a zone of larger diameter **144** which, allowing for the necessary clearance, is equal to the external diameter of the foam sheet **102** and a height which is lower than the thickness of the foam sheet **102** and, finally, a zone **145** of still larger diameter and of height which is close to the thickness of the rigid plate **103**. The foam sheet **102** is provided with a central opening **121** and the rigid plate **103** is provided with several openings **131**.

As illustrated in FIG. **3**A, the ring **104** is fitted onto the cap **111**, the foam sheet **102** is arranged in the zone **144** of the ring **104** screwed onto the skirt **112** of the cap **111**, to form the molding surface **101**. The cosmetic composition is introduced through the central opening **121** in the foam sheet **102** until the cosmetic composition fills the zone **144** of the ring and impregnates the foam over a proportion of its thickness—generally half its thickness; a bond between the

solidified composition and the foam sheet **102** is thus obtained after solidifying. The plate **103** is then fitted by pressure in the zone **145** of the ring **104**, slightly crushing the foam sheet **102** (see FIGS. **3**B and **3**C) on the shoulder between the zones **144** and **145** and thus ensures that the foam sheet is secured to the cast composition. This crushing can be performed before solidification is complete, in which case it takes part in the partial impregnation of the foam sheet **102**, or after solidification is complete.

The cosmetic composition is then allowed to dry. The cells in the foam and the openings **131** arranged in the sheet **103** permit the evaporation of the solvent when the cosmetic composition solidifies by evaporation and, consequently, final drying.

After drying, the cap **111** is parted from the ring **104** and a unit **103**, **102**, **104** is thus obtained which can be marketed directly; the marketing may also take place with the cap **111** which then serves as a lid for protecting the composition.

The solidified cosmetic composition is held on the plate **103** by virtue of the foam sheet **102** trapped between the ring **104** and the plate **103**. The stiffness of the plate **103** prevents any risk of breaking of the block forming the solidified composition. Nevertheless, the solidified composition can undergo shrinkage without cracking as a result of the elasticity of the foam sheet **102**.

It suffices for the user to unscrew the molding surface **101** to release the surface for picking off the molded makeup composition and to pick off the make-up composition with the aid of a brush or of a puff.

Two examples of application of the process according to the invention are given below (the quantities are shown in g).

EXAMPLE 1

Preparation of an eye shadow

A paste which has the following formulation is prepared:

Phase A	
Talc	9.7
Chromium oxide	1.8
Ultramarine blue	0.7
Zinc stearate	0.7
Mica	5.3
Starch	1.7
Titanium mica	10.5
Hollow (single cavity) microspheres made of vinylidene chloride-acrylonitrile copolymer (density 0.02 g/cm^3) marketed under the name "Expancel 551 DE" by the company. "Kemanord Plast"	1.4
Phase B	
Polyvinylpyrrolidone-hexadecene copolymer	0.2
Jojoba oil	0.5
Isopropyl myristate	0.7
Lanolin	0.4
Sweet almond oil	1.2
Preserving agents	
Butylhydroxytoluene	0.015
Butylhydroxyanisole	0.015
Propyl para-hydroxybenzoate	0.1
Solvent	
Cyclomethicone	65

In a first step the constituents of phase B are mixed with each other. The constituents of phase A are introduced, separately, into a mixer, followed by the solvent and the whole is homogenized. Then, phase B into which the preserving agents have been introduced, is in its turn introduced into the mixer and mixing again carried out until a homogeneous paste is obtained.

The paste obtained is cast, at ambient temperature, in the concave mold **1** shown in FIG. **1**. This mold is made of injection-molded polypropylene and is 60 mm in diameter and 20 mm in height. The bottom includes of a "Bulpren S 20" foam sheet **2** which is 6 mm in thickness and has a central opening **21**, 15 mm in diameter; the paste is introduced through the said central opening **21**. The molds are then placed in an oven at 40° C. for 55 hours. A product including the solidified composition integrally attached to the foam sheet **2** is then demolded; the demolded product is then held down on the rigid base **3**, of the same size as the foam sheet **2**, with the aid of the ring **4**, so as to leave free the surface for picking off. A lid can then be fitted onto the ring **4** or the whole (solidified composition bonded to the foam sheet **2**, ring **4** and base **3**) can be introduced into a case.

The curved tablet of green-blue eye shadow which is obtained has a smooth and uniform surface which can be picked off easily with a finger or with a brush.

EXAMPLE 2

Blusher

A pulverulent mixture which has the following formulation is prepared:

Plaster ($CaSO_4.½H_2O$)	25
Talc	25
Talc coated with lauroyllysine, marketed under the name "EP 90025 Talc Treated" by the company "Mearl"	10
Hollow (single cavity) microspheres of vinylidene chloride-acrylonitrile copolymer (density 0.02 g/cm^3), marketed under the name "Expancel 551 DE" by the company "Kemanord Plast"	5
Mica	24
Calcium carbonate	5
Titanium dioxide	2
Red iron oxide	3.5
Black iron oxide	0.5
and an aqueous phase which has the following composition:	
Water	120
Surfactant marketed under the name "Glucquat 100" by the company "Amerchol"	4.5
Preserving agent	0.1

The pulverulent mixture and the aqueous phase are mixed in a mixer equipped with slow stirring for 5 minutes.

The mixture obtained is introduced into the mold shown in FIG. **2**; this mold is identical in dimensions with the mold in Example 1. The molding surface **101** uses, in combination with the concave cap **111**, a ring **104** comprising three zones **143**, **144**, **145**, which have the following heights: 7, 2, 2.5 mm, and the following diameters: 66, 70, 71.5 mm, respectively.

A disc of a foam **102** sold under the trade name "Filtren S 2120" 3 mm in thickness and which has a central circular opening **121** 20 mm in diameter is introduced by pressure into the zone **144**. The fluid composition is poured in through the opening **121**. A foam thickness of approximately 1.5 mm is impregnated with solution. Approximately 30 minutes after the mold is filled, a plate **103** which, allowing

for the necessary clearance, has the same diameter as the zone **145**, is introduced by pressure into the ring **104**, and this compresses the foam layer on the shoulder between the zones **143** and **144** over 2 mm and secures the foam sheet onto the plate **103**. The plate comprises 24 uniformly distributed holes 1 mm in diameter to permit the final drying. The mold containing the solidified product is stored as is for approximately three days, and this allows the composition to dry because water vapor can escape through the openings **131** in the plate **103**. The product is then marketed as is. It suffices for the user to unscrew the cap **111** to release the surface for picking off and to pick off the make-up composition with the aid of a puff or of a brush.

I claim:

1. Process for molding a make-up composition, comprising the steps of:

forming a mold including a concave molding surface as a base of the mold and defining a volume;

applying a sheet of open-cell plastic foam to the mold opposite the concave molding surface to substantially close off the volume, said sheet having a first portion facing the volume, and a second, opposite portion;

introducing a fluid make-up composition into the mold between the concave molding surface and the foam sheet;

impregnating the open cells of the first portion of the foam sheet with the fluid composition;

solidifying the composition to form a molded product, including both the solidified composition having a first usable surface from which make-up can be removed and the foam sheet attached to a second opposite surface,

wherein the solidifying step includes the substeps of bonding the foam sheet to the solidified composition via the impregnated open cells, and elastically supporting the solid composition via the foam sheet; and

removing the molded product from the molding surface, to form the make-up composition including both the solidified composition and the foam sheet bonded thereto.

2. Process according to claim **1**, wherein the solidifying step comprises, one of the steps of cooling the fluid composition and evaporating a solvent present in the fluid composition.

3. Process according to claim **1**, wherein the introducing step comprises the step of choosing the make-up composition to include plaster and a sufficient quantity of water to obtain a pourable mixture, the solidifying step taking place after the introducing step as a result of setting of the plaster.

4. Process according to claim **1**, wherein the introducing step includes the step of pouring the fluid make-up composition through the foam sheet.

5. Process according to claim **4**, wherein the fluid make-up composition is poured through a central opening made in the foam sheet.

6. Process according to claim **1**, further comprising the step of compressing the foam sheet in the mold using a rigid plate.

7. Process according to claim **6**, wherein the compressing step occurs during the solidifying step.

8. Process according to claim **7**, further comprising the step of providing the rigid plate with at least one opening.

9. Process according to claim **1**, further comprising the step of choosing the foam sheet to have a cell structure such that a volume occupied by walls of the cells does not represent more than 3% of a total volume of the foam.

10. Process according to claim **1**, further comprising the step of choosing the foam sheet to be a crosslinked polyurethane foam.

11. Process according to claim **1**, further comprising the step of choosing the foam to have a thickness of between 3 and 6 mm.

12. A process for molding a make-up composition, comprising:

providing a mold including a molding surface and defining a volume;

applying a sheet of open-cell foam to the mold opposite the molding surface to substantially close off the volume, said sheet having a first portion facing the volume, and a second, opposite portion;

introducing a fluid make-up composition into the mold;

impregnating the open cells of the first portion of the foam sheet with the fluid composition;

solidifying the composition to form a molded product, including both the solidified composition having a first usable surface from which make-up can be removed and the foam sheet attached to a second opposite surface of the solidified composition, wherein the solidifying includes bonding the foam sheet to the solidified composition via the impregnated open cells, and elastically supporting the solid composition via the foam sheet; and

removing the molded product from the molding surface, to form a make-up product including both the solidified composition and the foam sheet bonded thereto.

13. The process according to claim 12, wherein the introducing includes introducing the fluid into the mold between the molding surface and the foam sheet.

14. The process according to claim 12, wherein the molding surface is concave.

15. The process according to claim 12, wherein the introducing occurs after the applying of the sheet of open-cell foam to the mold.

16. The process according to claim 15, wherein the introducing includes introducing the fluid through the foam sheet.

17. The process according to claim 16, wherein the introducing includes pouring the fluid through a central opening in the foam sheet.

18. The process according to claim 12, wherein the solidifying includes one of cooling the fluid composition and evaporating a solvent present in the fluid composition.

19. The process according to claim 12, wherein the fluid make-up composition includes plaster and a sufficient quantity of water to obtain a pourable mixture.

20. The process according to claim 19, wherein the solidifying occurs after the introducing, as a result of setting of plaster in the composition.

21. The process according to claim 12, further comprising compressing the foam sheet in the mold using a rigid plate.

22. The process according to claim 21, wherein the compressing occurs during the solidifying.

23. The process according to claim 22, wherein the rigid plate includes at least one opening.

24. The process according to claim 12, wherein the foam sheet has a cell structure such that a volume occupied by walls of the cells does not represent more than 3% of a total volume of the foam.

25. The process according to claim 12, wherein the foam sheet includes a plastic material.

26. The process according to claim 25, wherein the plastic material is crosslinked polyurethane foam.

27. The process according to claim 12, wherein the foam sheet has a thickness ranging from 3 mm to 6 mm.

28. The process according to claim 12, further comprising packaging the molded product after the molded product is removed from the mold.

29. A process for molding a make-up composition, comprising: providing

a mold including a molding surface and defining a volume, and

a sheet of open-cell foam on the mold opposite the molding surface, said sheet substantially closing off the volume and having a first portion facing the volume, and a second, opposite portion;

introducing a fluid make-up composition into the mold;

impregnating the open cells of the first portion of the foam sheet with the fluid composition;

solidifying the composition to form a molded product, including both the solidified composition having a first usable surface from which make-up can be removed and the foam sheet attached to a second opposite surface of the solidified composition, wherein the solidifying includes bonding the foam sheet to the solidified composition via the impregnated open cells, and elastically supporting the solid composition via the foam sheet; and

removing the molded product from the molding surface, to form a make-up product including both the solidified composition and the foam sheet bonded thereto.

30. The process according to claim 29, wherein the introducing includes introducing the fluid make-up composition into the mold between the molding surface and the foam sheet.

31. The process according to claim 29, wherein the molding surface is concave.

32. The process according to claim 29, wherein the introducing includes introducing the fluid through the foam sheet.

33. The process according to claim 32, wherein the introducing includes pouring the fluid through a central opening in the foam sheet.

34. The process according to claim 29, wherein the solidifying includes one of cooling the fluid composition and evaporating a solvent present in the fluid composition.

35. The process according to claim 29, wherein the fluid make-up composition includes plaster and a sufficient quantity of water to obtain a pourable mixture.

36. The process according to claim 35, wherein the solidifying occurs after the introducing, as a result of setting of plaster in the composition.

37. The process according to claim 29, further comprising compressing the foam sheet in the mold using a rigid plate.

38. The process according to claim 37, wherein the compression occurs during the solidifying.

39. The process according to claim 38, wherein the rigid plate includes at least one opening.

40. The process according to claim 29, wherein the foam sheet has a cell structure such that a volume occupied by walls of the cells does not represent more than 3% of a total volume of the foam.

41. The process according to claim 29, wherein the foam sheet includes a plastic material.

42. The process according to claim 41, wherein the plastic material is crosslinked polyurethane foam.

43. The process according to claim 29, wherein the foam sheet has a thickness ranging from 3 mm to 6 mm.

44. The process according to claim 29, wherein the introducing occurs while the sheet of open cell foam is on the mold.

45. The process according to claim 29, further comprising packaging the molded product after the molded product is removed from the mold.

46. A process for molding a make-up composition, comprising:

providing

a mold including a molding surface and defining a volume, and

a sheet of open-cell foam on the mold opposite the molding surface, said sheet substantially closing off the volume and having a first portion facing the volume, and a second, opposite portion;

introducing a fluid make-up composition into the mold;

impregnating the open cells of the first portion of the foam sheet with the fluid composition; and

solidifying the composition to form a molded product, including both the solidified composition having a first usable surface from which make-up can be removed and the foam sheet attached to a second opposite surface of the solidified composition, wherein the solidifying includes bonding the foam sheet to the solidified composition via the impregnated open cells, and elastically supporting the solid composition via the foam sheet, and

wherein removal of the molded product from the molding surface forms a make-up product including both the solidified composition and the foam sheet bonded thereto.

47. The process according to claim 46, further comprising removing the molded product from the molding surface to form the make-up product including both the solidified composition and the foam sheet bonded thereto.

48. The process according to claim 47, further comprising packaging the molded product after the molded product is removed from the mold.

49. The process according to claim 46, wherein the introducing includes introducing the fluid make-up composition into the mold between the molding surface and the foam sheet.

50. The process according to claim 46, wherein the molding surface is concave.

51. The process according to claim 46, wherein the introducing includes introducing the fluid through the foam sheet.

52. The process according to claim 51, wherein the introducing includes pouring the fluid through a central opening in the foam sheet.

53. The process according to claim 46, wherein the solidifying includes one of cooling the fluid composition and evaporating a solvent present in the fluid composition.

54. The process according to claim 46, wherein the fluid make-up composition includes plaster and a sufficient quantity of water to obtain a pourable mixture.

55. The process according to claim 54, wherein the solidifying occurs after the introducing, as a result of setting of plaster in the composition.

56. The process according to claim 46, further comprising compressing the foam sheet in the mold using a rigid plate.

57. The process according to claim 56, wherein the compressing occurs during the solidifying.

58. The process according to claim 57, wherein the rigid plate includes at least one opening.

59. The process according to claim 46, wherein the foam sheet has a cell structure such that a volume occupied by walls of the cells does not represent more than 3% of a total volume of the foam.

60. The process according to claim 46, wherein the foam sheet includes a plastic material.

61. The process according to claim 60, wherein the plastic material is crosslinked polyurethane foam.

62. The process according to claim 46, wherein the foam sheet has a thickness ranging from 3 mm to 6 mm.

63. The process according to claim 46, wherein the introducing occurs while the sheet of open cell foam is on the mold.

64. The process according to claim 46, further comprising packaging the molded product.

65. The process according to claim 64, wherein the mold provides a packaging for the molded product.

66. The process according to claim 65, wherein the mold provides a cap covering the solidified composition.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : RE 38,185 E
DATED : July 15, 2003
INVENTOR(S) : Gérard Joulia

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

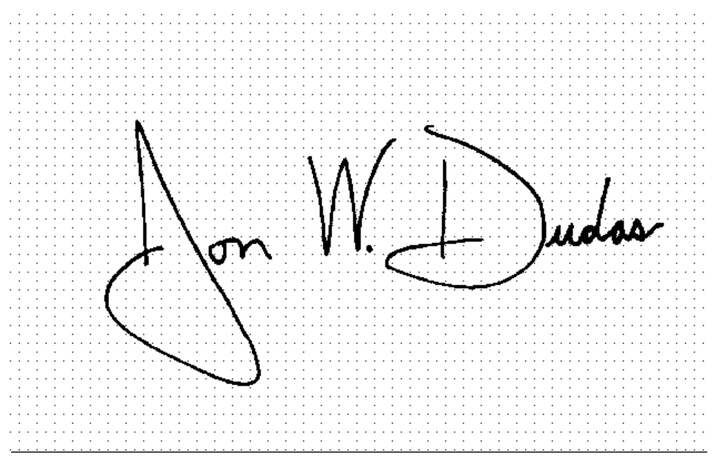
Column 9,
Line 53, change “compression” to -- compressing --.

Column 10,
Line 6, “providing” should be italicized.

Column 12,
Line 4, change “packaging” to -- package --.

Signed and Sealed this

Second Day of March, 2004



JON W. DUDAS
Acting Director of the United States Patent and Trademark Office