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(54) **NO-GLUE COSMETIC BRUSH AND ITS MANUFACTURING METHOD**

(57) Disclosed are a no-glue cosmetic brush and its manufacturing method. The manufacturing method of the no-glue cosmetic brush of the present invention includes the steps of forming a shape of a brush hair by using a plurality of hair members; providing a fusion portion by applying heat to lower end of shaped brush hair;

processing the brush hair in a desired shape by pressing a hair fixing tube in a region to which the fusion portion is inserted; and coupling the brush hair to the hair fixing tube by pressing the hair fixing tube after inserting the brush hair to the hair fixing tube.

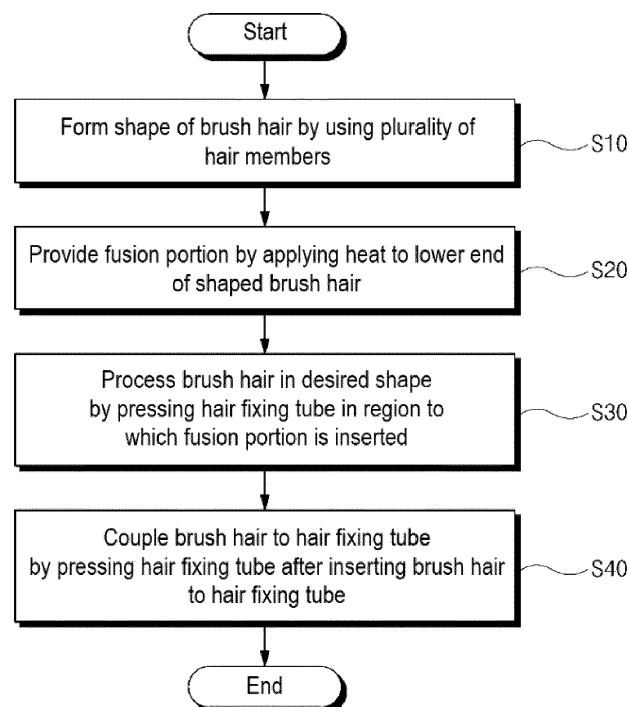


FIG.1

Description

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the priority of Korean Patent Application No. 10-2020-0073189 filed on June 16, 2020, in the Korean Intellectual Property Office, the disclosure of which is incorporated herein by reference.

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] The present invention relates to a hair brush, and more particularly, to a no-glue cosmetic brush and its manufacturing method capable of being manufactured without using a glue and manufactured using a shorter brush hair than the related art.

Description of the Related Art

[0003] In general, cosmetics used for make-up are formed in a liquid, a solid, and a mixed state of the liquid and the solid. Among them, in order to apply the solid cosmetics on the face, brushes having various shapes and sizes have been developed and used.

[0004] In color cosmetics, auxiliary instruments such as mirrors and cosmetic brushes are required, and even in the case of the cosmetic brushes, various types of brushes, such as a lip brush, a blender brush, an eye shadow brush, a mascara brush, a cheek brush are used according to a use purpose.

[0005] The above-described brushes are provided so that the cosmetics made of solid powder may be coated on bristles of the brush to be properly applied on the face and the like. Such a brush may be constituted by a handle which may be held by a user and a brush provided at the front end of the handle and formed of a plurality of bristles.

[0006] In the related art, the brush is coupled to the handle by using chemical materials such as a glue. In this case, the glue may be formed of a chemical material, which may harmful affect the human body, and considering this, when a glue harmless to the human body is used, there is a problem that the manufacturing cost increases.

[0007] In addition, since the glue is a material that is vulnerable to heat, there is a problem that when the glue is exposed to heat, a glue portion is detached so that the durability deteriorates.

[0008] The above-described technical configuration is the background art for helping in the understanding of the present invention, and does not mean a conventional technology widely known in the art to which the present invention pertains.

SUMMARY OF THE INVENTION

[0009] Therefore, the present invention has been

made in an effort to provide a no-glue cosmetic brush and its manufacturing method capable of being manufactured without using a glue and manufactured using a shorter brush hair than the related art.

5 [0010] According to an aspect of the present invention, there is provided a manufacturing method of a no-glue cosmetic brush including the steps of: forming a shape of a brush hair by using a plurality of hair members; providing a fusion portion by applying heat to a lower end of the shaped brush hair; processing the brush hair in a desired shape by pressing a hair fixing tube in a region to which the fusion portion is inserted; and coupling the brush hair to the hair fixing tube by pressing the hair fixing tube after inserting the brush hair to the hair fixing tube.

10 [0011] The fusion portion may be provided with a diameter smaller than an upper portion of the brush hair and provided by thermal fusion.

15 [0012] The fusion portion may be disposed at a position of the shaped hair fixing tube when coupling the brush hair to the hair fixing tube so as not to require the fixing of the position of the brush hair.

20 [0013] According to another aspect of the present invention, there is provided a no-glue cosmetic brush manufactured by the aforementioned method, as a cosmetic brush.

25 [0014] According to the embodiments of the present invention, the fusion portion is provided by applying heat to the lower end of the shaped brush hair and inserted to the hair fixing tube and then the hair fixing tube is pressed, thereby manufacturing the brush without using a glue.

30 [0015] Further, according to the aforementioned method, the brush may be manufactured by using a shorter brush hair than the related art without using a glue, thereby reducing the brush hair.

BRIEF DESCRIPTION OF THE DRAWINGS

35 [0016] The above and other aspects, features and other advantages of the present invention will be more clearly understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

40 FIG. 1 is a flowchart of a manufacturing method of a no-glue cosmetic brush according to an embodiment of the present invention;

45 FIG. 2 is a diagram illustrating a brush hair provided with a fusion portion by applying heat to a lower end thereof after forming a brush hair shape according to an embodiment of the present invention;

50 FIG. 3 is a diagram schematically illustrating that a first pressing portion is provided in an upper region of a hair fixing tube to which the brush hair is coupled according to an embodiment of the present invention;

55 FIG. 4 is a diagram schematically illustrating the inside of the hair fixing tube to which the brush hair is

coupled according to an embodiment of the present invention; and

FIG. 5 is a diagram schematically illustrating that a side portion of the hair fixing tube is cut after the coupling is completed by providing a second pressing portion in the hair fixing tube according to an embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0017] In order to fully understand the present invention, operational advantages of the present invention and objects to be achieved by implementing the present invention, the present invention will be described with reference to the accompanying drawings which illustrate preferred embodiments of the present invention and the contents illustrated in the accompanying drawings.

[0018] Hereinafter, preferred embodiments of the present invention will be described in detail with reference to the accompanying drawings. Like reference numerals illustrated in the respective drawings designate like members.

[0019] FIG. 1 is a flowchart of a manufacturing method of a no-glue cosmetic brush according to an embodiment of the present invention, FIG. 2 is a diagram illustrating a brush hair provided with a fusion portion by applying heat to a lower end thereof after forming a brush hair shape according to an embodiment of the present invention, FIG. 3 is a diagram schematically illustrating that a first pressing portion is provided in an upper region of a hair fixing tube to which the brush hair is coupled according to an embodiment of the present invention, FIG. 4 is a diagram schematically illustrating the inside of the hair fixing tube to which the brush hair is coupled according to an embodiment of the present invention, and FIG. 5 is a diagram schematically illustrating that a side portion of the hair fixing tube is cut after the coupling is completed by providing a second pressing portion in the hair fixing tube according to an embodiment of the present invention.

[0020] As illustrated in these drawings, a manufacturing method of a no-glue cosmetic brush according to the embodiment includes the steps of forming a shape of a brush hair 10 by using a plurality of hair members (S10), providing a fusion portion 20 by applying heat to a lower end of the shaped brush hair 10 (S20), processing the brush hair in a desired shape by pressing a hair fixing tube 30 in a region to which the fusion portion 20 is inserted (S30); and coupling the brush hair 10 to the hair fixing tube 30 by pressing the hair fixing tube 30 after inserting the brush hair 10 to the hair fixing tube 30 (S40).

[0021] The step (S10) of forming the shape of the brush hair 10 by using the plurality of hair members is a step of gathering the plurality of hair members and providing an upper portion having a round shape, as illustrated in FIG. 2.

[0022] The step (S20) of providing the fusion portion

20 by applying heat to the lower end of the shaped brush hair 10 is a step of providing the fusion portion 20 by applying heat to the lower end of the brush hair 10 as illustrated in FIGS. 2 and 3.

[0023] Like the embodiment, when the fusion portion 20 is provided at the lower end of the brush hair 10, the fusion portion 20 may serve as one position fixing means. As a result, when the brush hair 10 provided with the fusion portion 20 is inserted to the hair fixing tube 30, the fusion portion 20 is engaged and supported on an inner wall of the hair fixing tube 30 to be positioned and fixed, and thus, there is an advantage of omitting a process of adjusting the position unlike a conventional method using a glue.

[0024] In the embodiment, the fusion portion 20 may be provided with a diameter smaller than the upper portion of the brush hair 10 and provided by thermal fusion.

[0025] The step (S30) of processing the brush hair in a desired shape by pressing the hair fixing tube 30 in the region to which the fusion portion 20 is inserted is a step of providing the brush hair in a desired shape by pressing one side portion, for example, an upper portion of the hair fixing tube 30, as illustrated in FIG. 3.

[0026] In the embodiment, a first pressing portion 31 is provided by pressing the hair fixing tube 30 and the upper portion of the hair fixing tube 30 may have various known shapes such as a circular or elliptical shape depending on a pressing degree of the first pressing portion 31.

[0027] The step (S40) of coupling the brush hair 10 to the hair fixing tube 30 by pressing the hair fixing tube 30 after inserting the brush hair 10 to the hair fixing tube 30 is a step of coupling the brush hair 10 to the inside of the hair fixing tube 30 by pressing an outer wall of the hair fixing tube 30 while the fusion portion 20 is inserted into the hair fixing tube 30 by a pressing means including a press machine, as a final step of the embodiment. In this step, a second pressing portion 32 illustrated in FIG. 6 may be provided.

[0028] Like the embodiment, the fusion portion 20 is provided in the brush hair 10, the first pressing portion 31 and the second pressing portion 32 are sequentially provided in the hair fixing tube 30, and then the brush hair 10 is coupled to the hair fixing tube 30 without using a glue, thereby obtaining an almost similar result value to an existing intensity. In addition, the brush is able to be manufactured by using shorter hair members than an existing product, thereby greatly reducing the costs required for the hair members.

[0029] As described above, according to the embodiment, the fusion portion is provided by applying heat to the lower end of the shaped brush hair and inserted to the hair fixing tube and then the hair fixing tube is pressed, so that the brush may be manufactured without using a glue.

[0030] As described above, the present invention is not limited to the embodiments described herein, and it will be apparent to those skilled in the art that various

changes and modifications may be made without departing from the spirit and the scope of the present invention. Therefore, it will be understood that these changes and modifications are included in the appended claims of the present invention.

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Claims

1. A manufacturing method of a no-glue cosmetic brush comprising the steps of:
 - forming a shape of a brush hair by using a plurality of hair members;
 - providing a fusion portion by applying heat to a lower end of the shaped brush hair;
 - processing the brush hair in a desired shape by pressing a hair fixing tube in a region to which the fusion portion is inserted; and
 - coupling the brush hair to the hair fixing tube by pressing the hair fixing tube after inserting the brush hair to the hair fixing tube.
2. The manufacturing method of the no-glue cosmetic brush of claim 1, wherein the fusion portion is provided with a diameter smaller than the upper portion of the brush hair and provided by thermal fusion.
3. The manufacturing method of the no-glue cosmetic brush of claim 1, wherein the fusion portion is disposed at a position of the shaped hair fixing tube when coupling the brush hair to the hair fixing tube so as not to require the fixing of the position of the brush hair.
4. A no-glue cosmetic brush manufactured by the method of claim 1.

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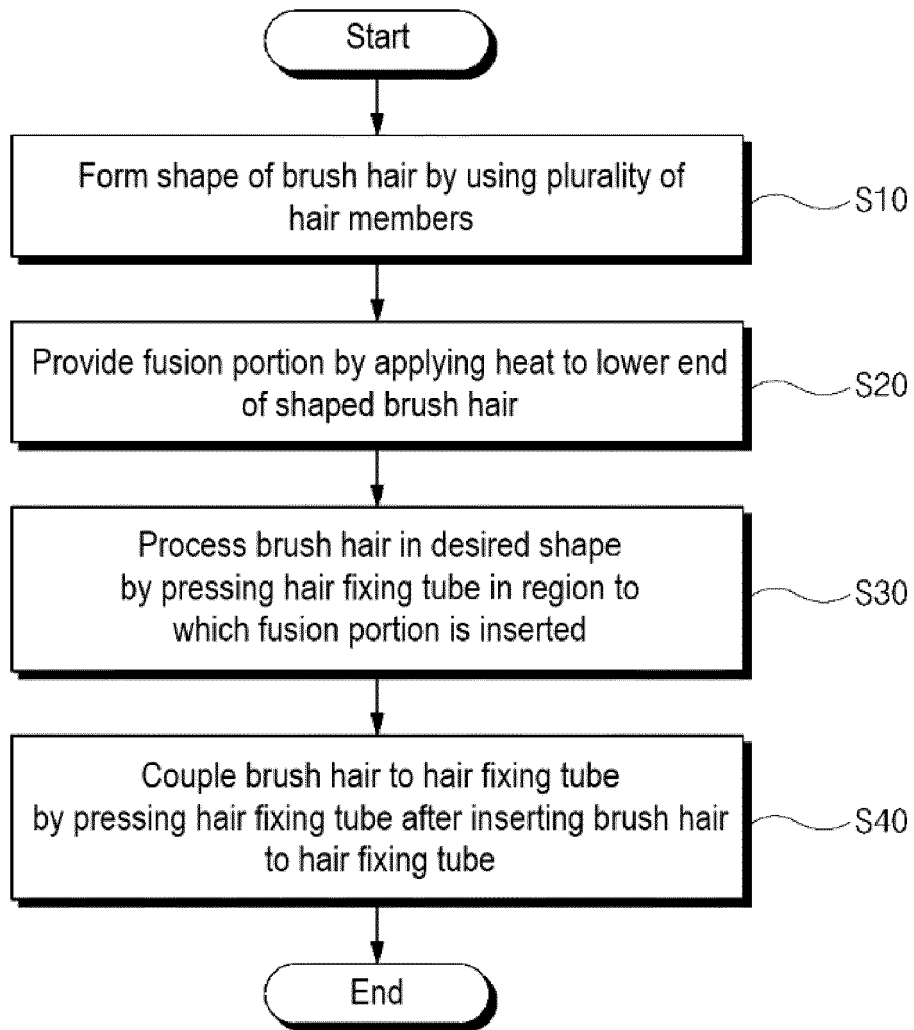


FIG.1

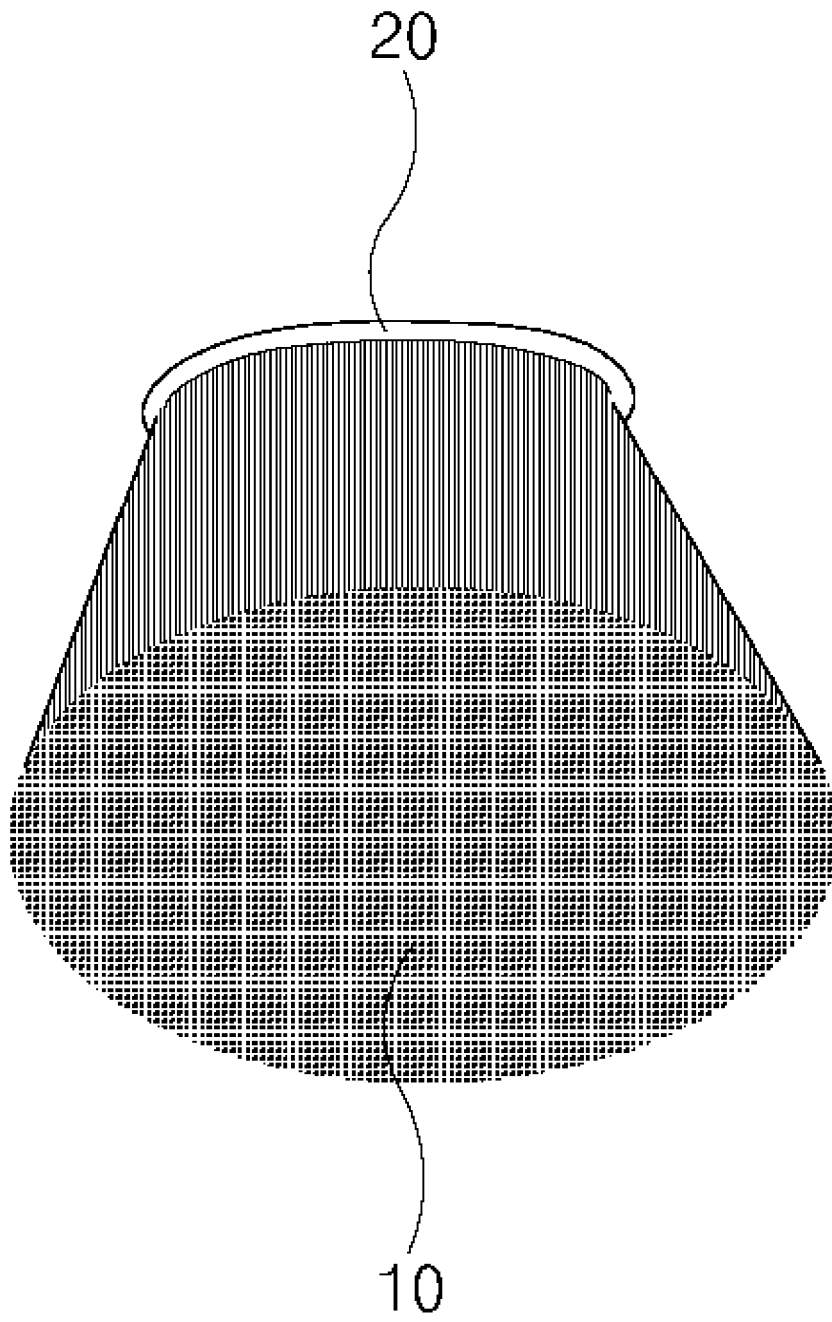


FIG.2

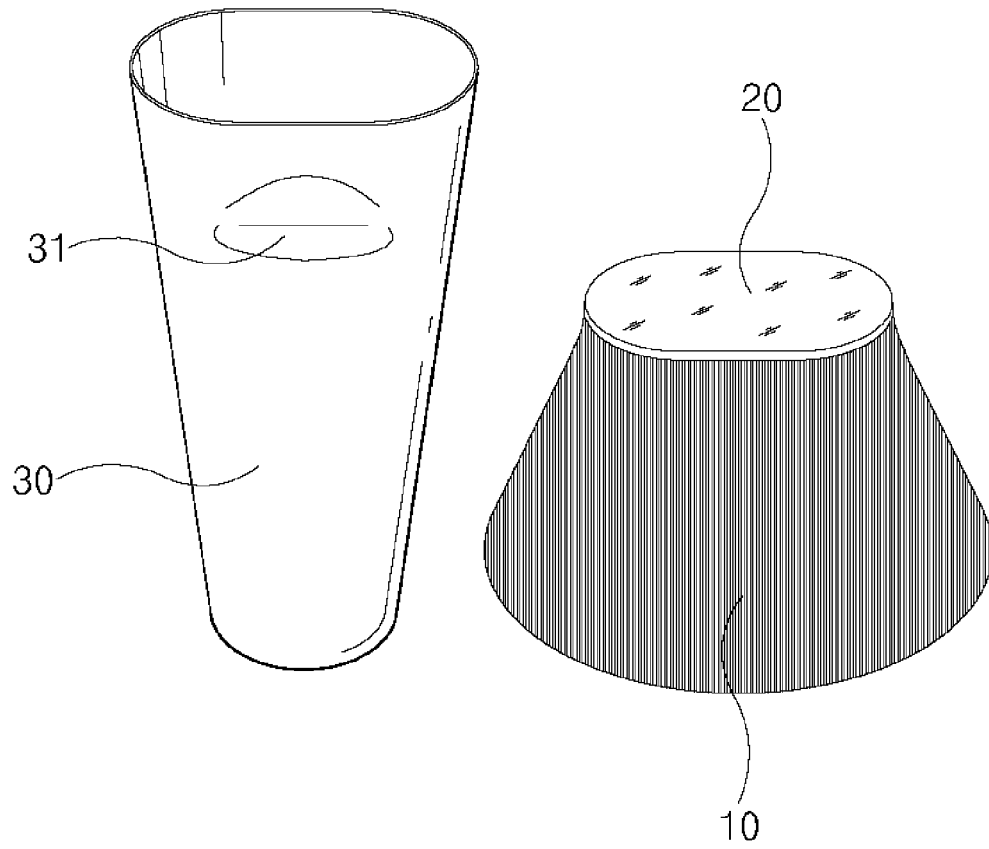


FIG.3

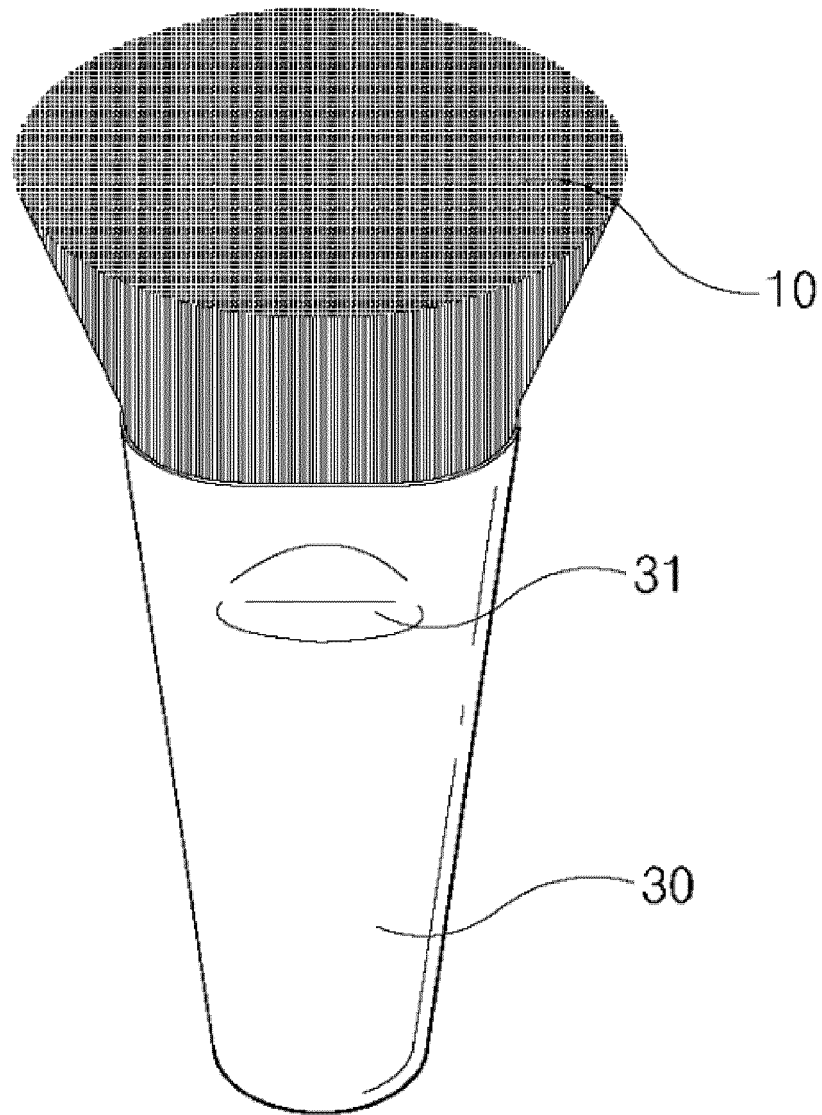


FIG.4

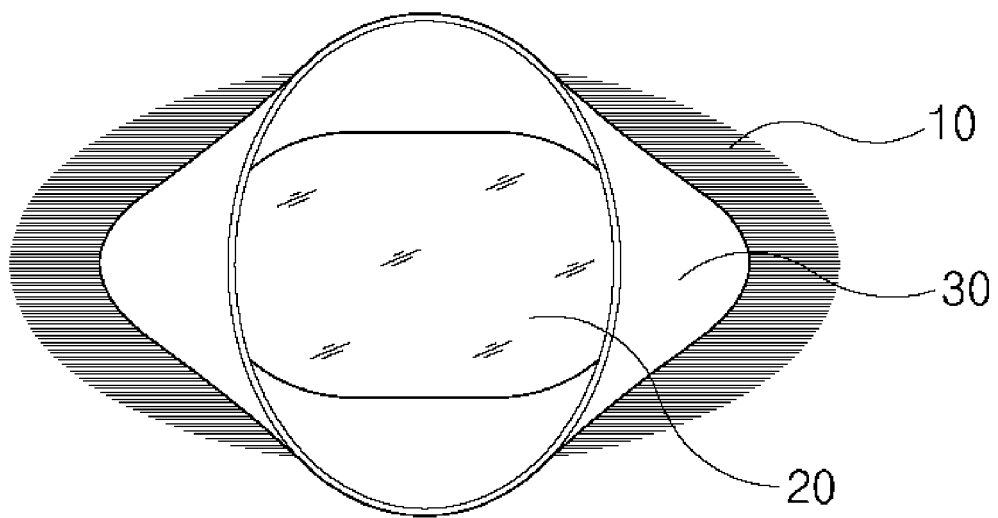


FIG.5

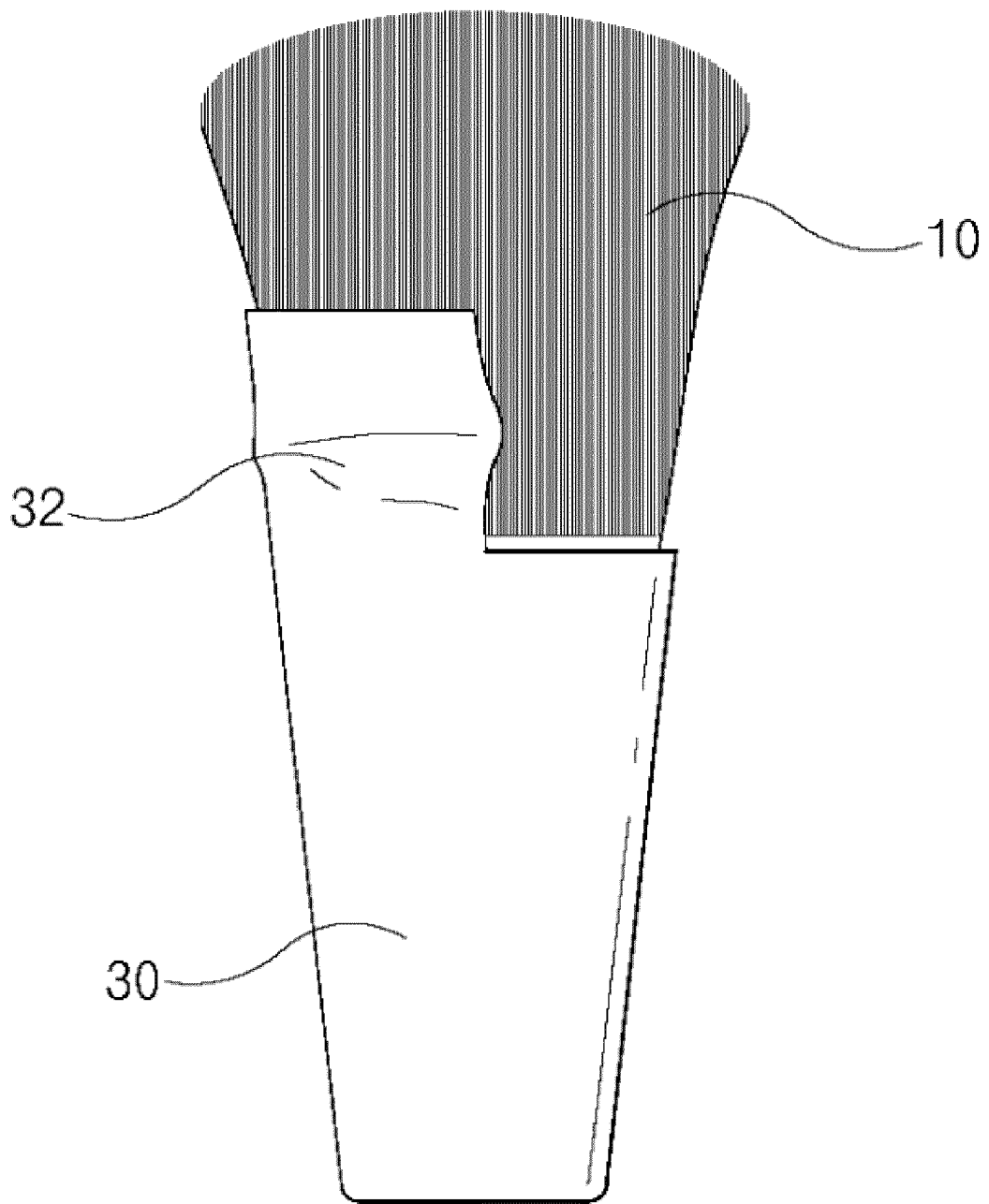


FIG.6



EUROPEAN SEARCH REPORT

Application Number
EP 21 17 2443

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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	US 2006/288511 A1 (BAEK WOON [KR]) 28 December 2006 (2006-12-28) * paragraphs [0005], [0034]; figures 1-3 *	1-4	INV. A46B3/06 A46B3/08 A46B9/02
X	GB 2 370 220 A (SYNLATEX LTD [GB]) 26 June 2002 (2002-06-26) * fourth paragraph; page 2; figure 1 * -----	1-4	
			TECHNICAL FIELDS SEARCHED (IPC)
			A46B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 3 August 2021	Examiner Kun, Karla
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 03.82 (P04C01)

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

EP 21 17 2443

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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03-08-2021

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REFERENCES CITED IN THE DESCRIPTION

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