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(54) **THREADED CAP, PARTICULARLY FOR BOTTLES OF COSMETIC PRODUCTS**

(57) A threaded cap (10), particularly for bottles of cosmetic products and the like, which comprises a cap body (1) to which a brush (2) is integrally connected internally; the brush is detachably connected to the cap body, so as to allow a separation between the cap and the brush by way of a manual action on the part of a user.

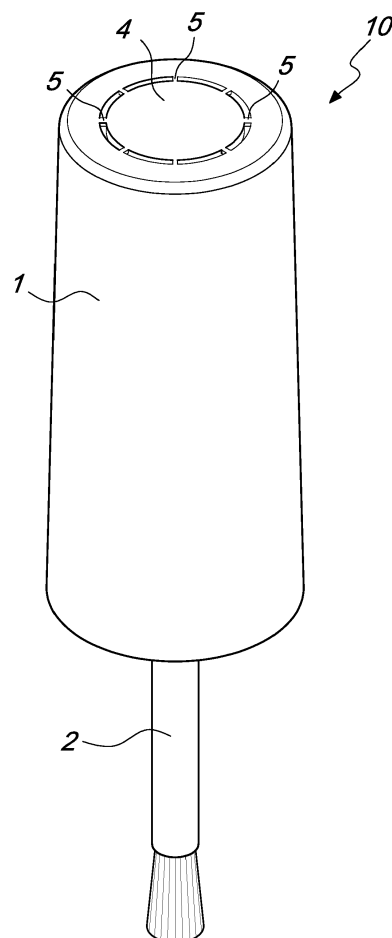


Fig. 1

Description

[0001] The present invention relates to a threaded cap, particularly for bottles of cosmetic products. More specifically, the invention relates to a threaded cap that is coupled to a brush, particularly for bottles of cosmetic products.

[0002] As is known, bottles of cosmetic products, for example for nail varnish, are provided with a threaded cap which is usually coupled, in a forced manner and so that it is difficult to remove, to a brush which is used to apply the cosmetic product to the nails or the like.

[0003] The cap with brush incorporated is then screwed onto the body of the bottle, and in order to be able to use the brush the user has to unscrew the cap from the bottle, so that the brush loaded with cosmetic product can be removed from the bottle and then used, in order to then be reinserted in order to immerse the brush in the cosmetic product contained in the bottle, and then repeat the operation. Once the job is finished, the user screws the cap back on the body of the bottle, thus closing the bottle.

[0004] The drawback of the solution given above consists in that, while the cap is made of plastic and therefore potentially recyclable, the brush cannot be recycled because it is contaminated by the varnish and by the steel staple that locks the nylon bristles of the brush in place.

[0005] Therefore, the ecological cap disposal is not currently possible.

[0006] The aim of the present invention is to provide a cap, particularly for bottles of cosmetic products and the like, that can be easily recycled.

[0007] Within this aim, an object of the present invention is to provide a cap, particularly for bottles of cosmetic products and the like, in which the disposal of the components can be performed in different ways.

[0008] Another object of the present invention is to provide a cap, particularly for bottles of cosmetic products and the like, in which the cap can be made with recyclable plastics.

[0009] Another object of the present invention is to provide a cap which is highly reliable, easily and practically implemented and of low cost.

[0010] This aim and these and other objects which will become better apparent hereinafter are achieved by a threaded cap, particularly for bottles of cosmetic products and the like, which comprises a cap body to which a brush is integrally connected internally, characterized in that said brush is detachably connected to said cap body, so as to allow a separation between the cap and the brush by way of a manual action on the part of the user.

[0011] Further characteristics and advantages of the invention will become better apparent from the description of preferred, but not exclusive, embodiments of the cap according to the invention, which are illustrated by way of non-limiting example in the accompanying drawings, wherein:

Figure 1 is a perspective view of a first embodiment of the cap according to the invention, in an active configuration;

Figure 2 is a perspective view of the cap of Figure 1 in a condition of separating the brush;

Figure 3 is a perspective view of a second embodiment of the cap according to the invention, in the active configuration;

Figure 4 is a perspective view of the cap of Figure 3 in the condition of separating the brush;

Figure 5 is a perspective view of a third embodiment of the cap according to the invention, in the active configuration;

Figure 6 is a perspective view of the cap of Figure 5 in the condition of separating the brush.

[0012] With reference to the figures, the cap according to the invention, generally designated by the reference numeral 10, comprises a cap body 1 which is connected internally to a brush 2, which is adapted to be immersed in a cosmetic product contained in a bottle (not shown) of which the cap acts as the stopper.

[0013] Conveniently, the cap body 1 is threaded internally with a threading 3 in order to allow the cap to be screwed on the bottle.

[0014] The coupling between the brush 2 and the cap body 1 is provided in such a way as to render the brush 2 detachable from the cap body 1. In particular, in the first embodiment, the coupling between the brush 2 and the cap body 1 is provided by way of a disk-like element 4 to which the brush 2 is connected and which constitutes an integral part of the upper surface of the cap body 1, and is connected to the body by way of bridges 5, which constitute fracture points that make it possible, by exerting a pressure, manually or with an instrument, to remove the brush 2 from the cap body 1, by detaching the disk-like element 4 from the cap body 1.

[0015] In the second embodiment of the invention, the disk-like element 4 is also connected by bridges 5, which constitute fracture points, to the cap body 1, and is provided, at a central region thereof, with a recess 6 that is adapted to allow the insertion of a tip of an instrument or the like, in order to allow the points 5 that connect the disk-like element 4 to be broken from the cap body 1 and so make it possible to separate the brush 2 from the cap body 1.

[0016] In the third embodiment of the cap according to the invention, there is a cylinder-shaped disk-like element 14, protruding from the cap body 1, which is connected by bridges 5, which constitute fracture points, to the cap body 1. In this case too, pressure exerted on the disk-like element 14 enables the bridges 5 to be broken and therefore enables the brush 2 to be separated from the cap body 1.

[0017] Both the disk-like element 4 and the cylinder-shaped disk-like element 14 are provided integral with the brush 2 so as to be able to remove the brush 2 from the cap body 1, by way of an action performed by the

user. In this manner it is possible to separately recycle the cap, which is made of plastic material, and the brush 2 which, because it is caked with varnish and contains a steel staple and nylon bristles, cannot be disposed of, i. e. recycled, together with the cap body.

[0018] In substance, therefore, the invention provides a cap with a brush detachably connected to that cap, so that it can be removed when it is desired to recycle the cap.

[0019] In practice it has been found that the cap according to the invention fully achieves the set aim and objects, in that it makes it possible to be able to detach, with a simple manual action, the cap from the brush connected to it, thus making it possible to separately recycle the cap and the brush (which normally, because it is caked with varnish, is not recyclable).

[0020] The cap, thus conceived, is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims.

[0021] Moreover, all the details may be substituted by other, technically equivalent elements.

[0022] In practice, the materials used, as well as the contingent shapes and dimensions, may be any according to the requirements and to the state of the art.

[0023] The disclosures in Italian Patent Application No. 102019000013623 from which this application claims priority are incorporated herein by reference.

[0024] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

4. The threaded cap according to one or more of the preceding claims, **characterized in that** said disk-like element (4) is a cylinder (14) adapted to be connected to said cap body (1) and to protrude from the upper surface of said cap body (1).

5. The threaded cap according to one or more of the preceding claims, **characterized in that** it is provided internally with a thread (3) for screwing onto a bottle.

6. The threaded cap according to one or more of the preceding claims, **characterized in that** it is made of recyclable plastic.

Claims

1. A threaded cap (10), particularly for bottles of cosmetic products and the like, which comprises a cap body (1) to which a brush (2) is integrally connected internally, **characterized in that** said brush (2) is detachably connected to said cap body (1), so as to allow a separation between the cap and the brush (2) by way of a manual action on the part of a user.
2. The threaded cap according to claim 1, **characterized in that** said brush (2) is connected in an upper region to a disk-like element (4), which in turn is connected to said cap by way of bridges (5) which constitute fracture points for the separation of said disk-like element (4) from the body of said cap.
3. The threaded cap according to claim 1 or 2, **characterized in that** said disk-like element (4) has, at a central region, a recess (6) for the insertion of a tip of a utensil or the like.

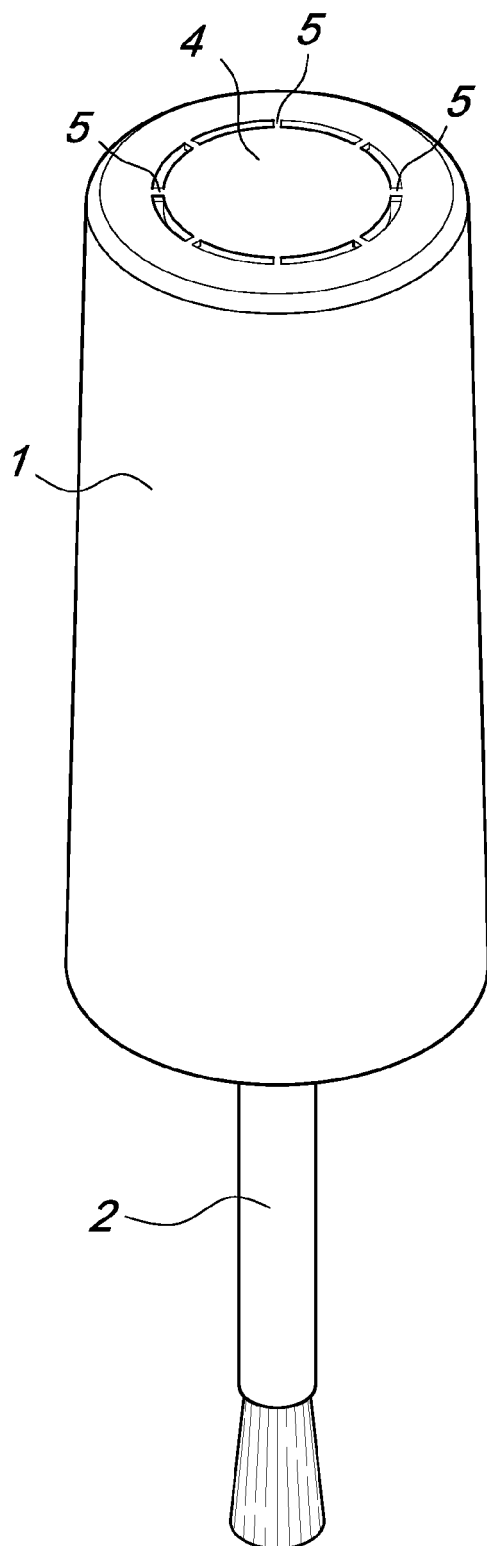


Fig. 1

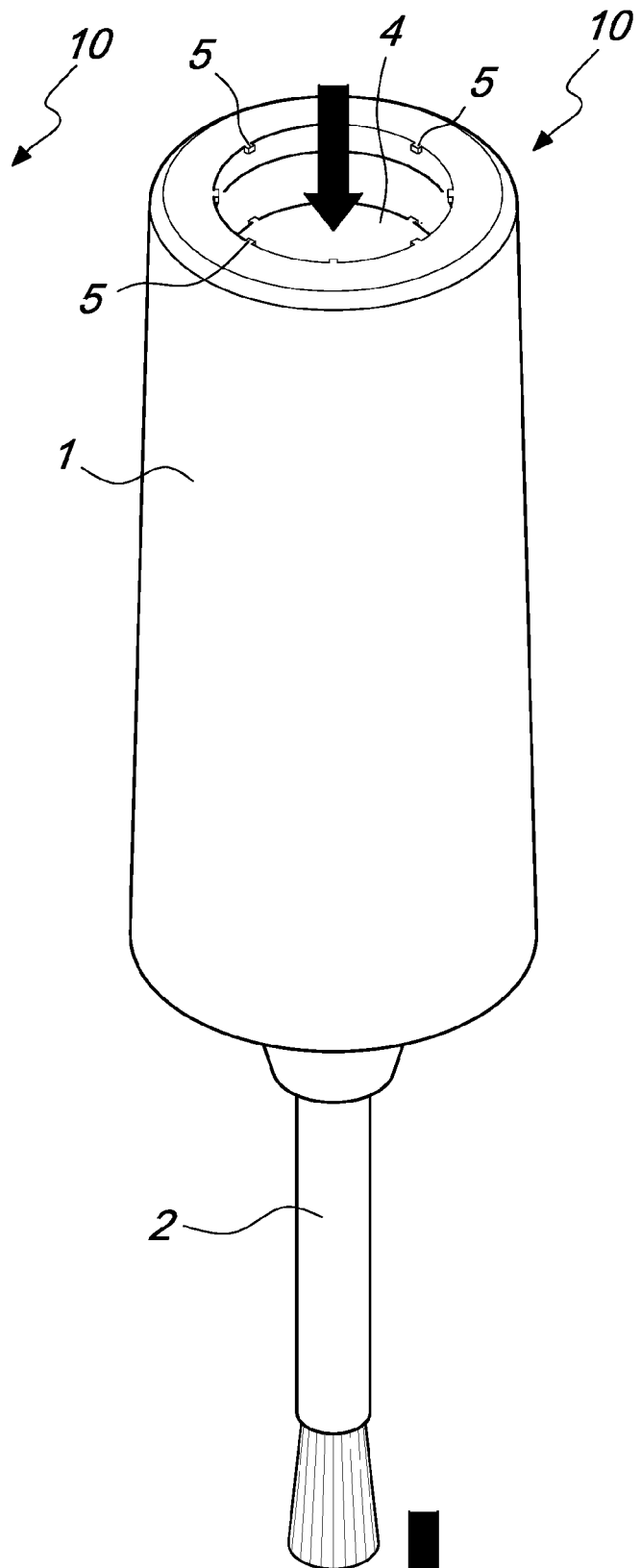


Fig. 2

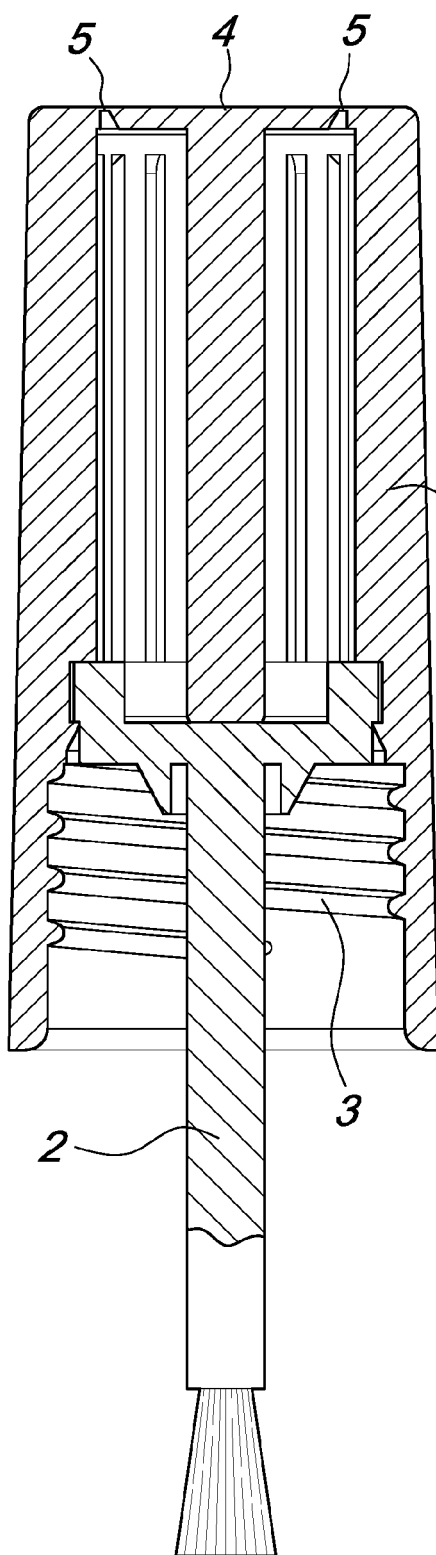


Fig. 3

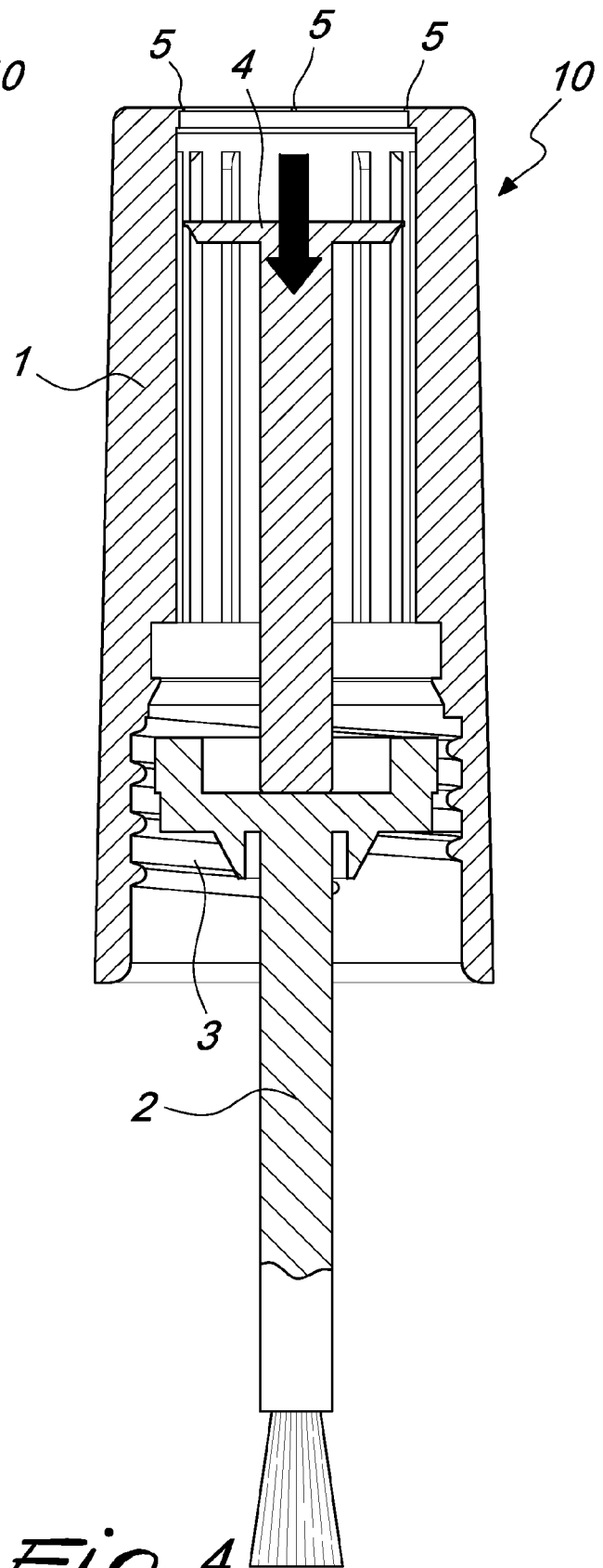


Fig. 4

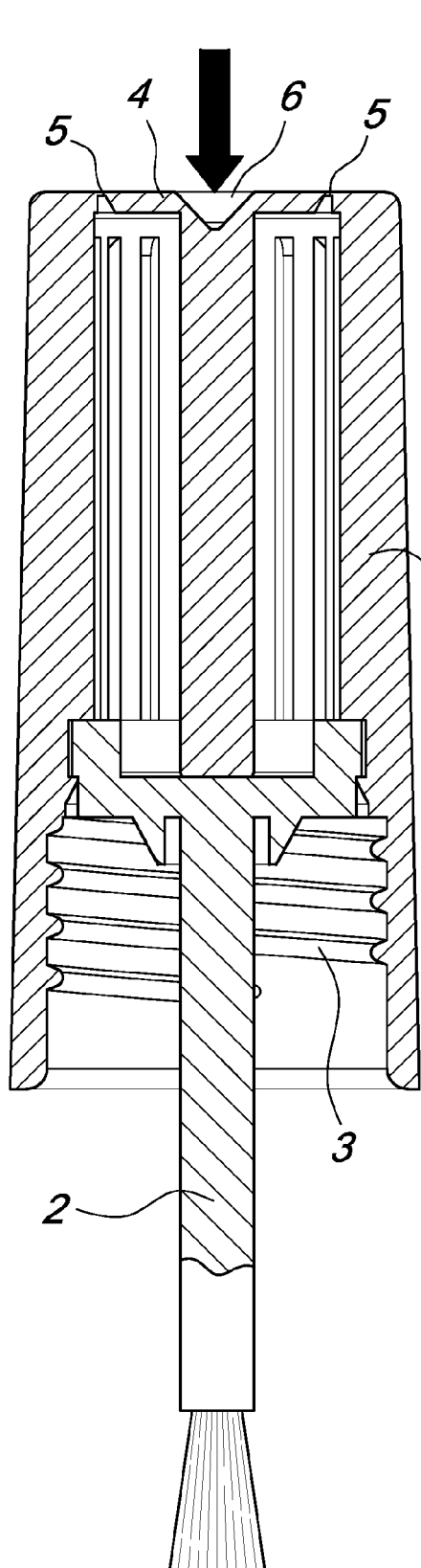


Fig. 5

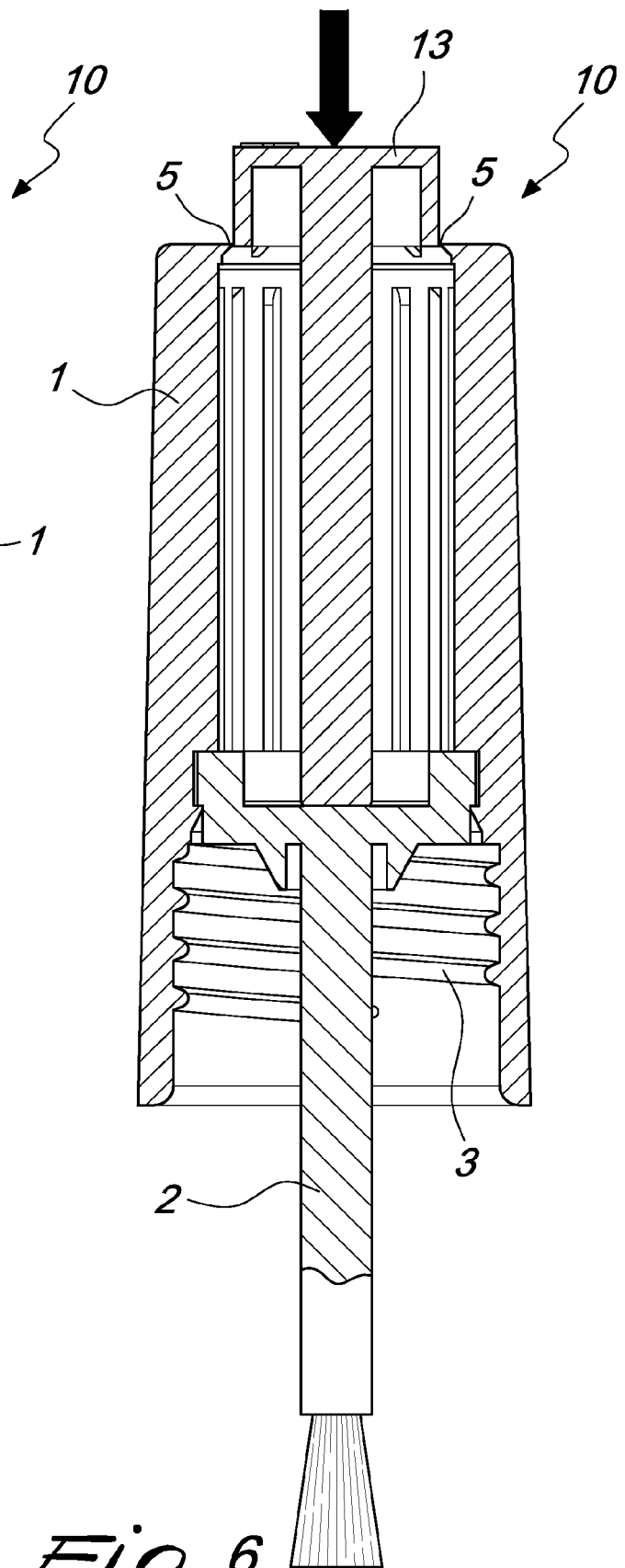


Fig. 6



EUROPEAN SEARCH REPORT

 Application Number
 EP 20 18 8252

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A	* paragraph [0019] - paragraph [0029]; figures *	2-4	

A	WO 2005/060905 A1 (WU ZHENDONG [CN]; GAO SHENGLIN [CN]) 7 July 2005 (2005-07-07) * paragraph [0075]; figure 25 *	1-6	

			TECHNICAL FIELDS SEARCHED (IPC)
			A45D B65D A61D A46B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		31 August 2020	van de Beek-Duijker
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
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EP 20 18 8252

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The members are as contained in the European Patent Office EDP file on
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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