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(54) **Hair conditioning device**

(57) A hair conditioning device (1) allows an optimal selection and isolation, such that the conditioning substance operates exclusively onto a selected lock of hair (H), and comprises a first valve-shaped member (2) and

a second valve-shaped member (3), apt to be fit together forming a closed chamber (7, 8) therebetween, and removable fitting means (4, 5, 6) of said first and second valve-shaped member (2, 3).

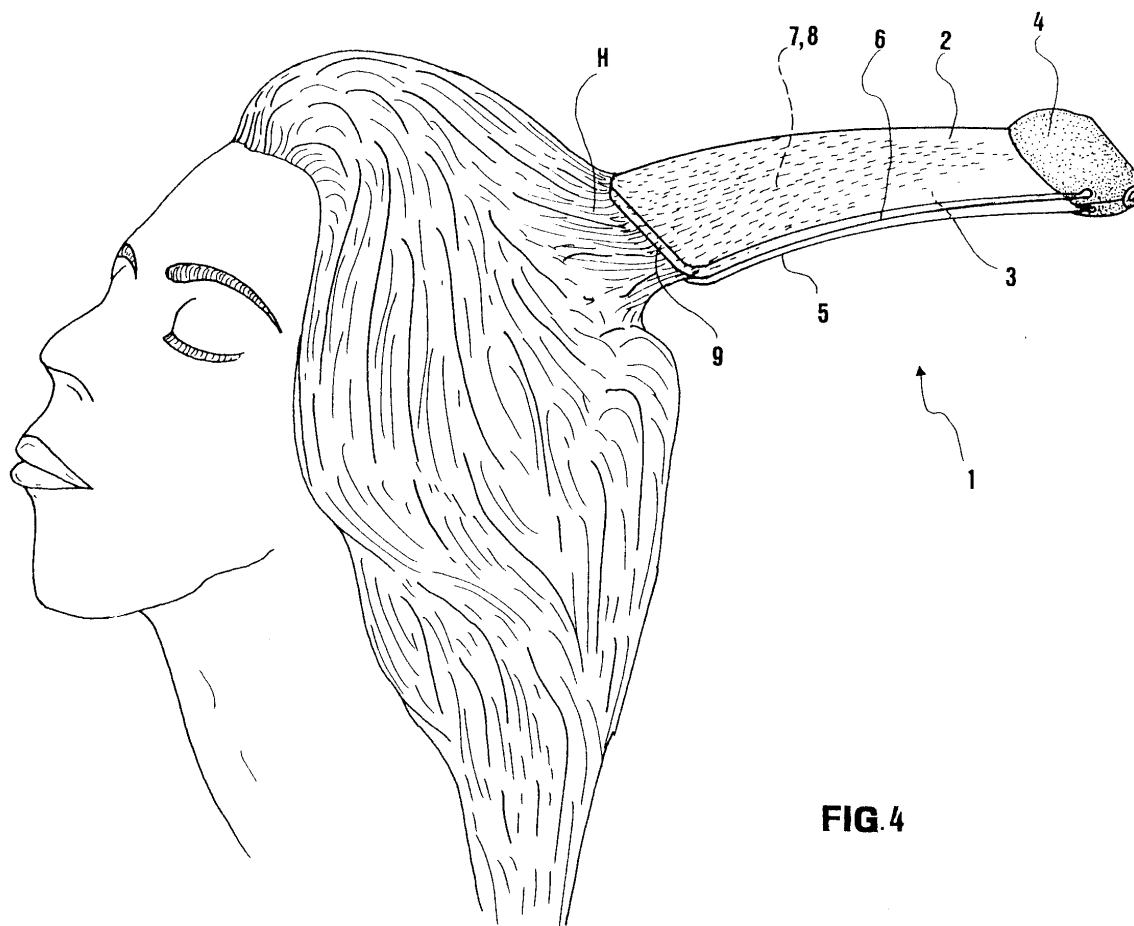


FIG. 4

Description

[0001] The present invention relates to a hair conditioning device, used on a hair lock selected in the context of a conditioning operation.

[0002] For hair conditioning it is to be understood any hairdressing treatment in which conditioning substances are applied to a hair lock in order to modify the appearance thereof.

[0003] For instance, a bleaching treatment of a hair lock that will then be subjected to dyeing is a typical example of conditioning in accordance with the afore cited definition.

[0004] Other possible conditionings are the dyeing, the curl straightening treatment, the perm hairdressing treatment, the strengthening treatment, the nourishing treatment and so forth.

[0005] In particular, conditionings are known in the art in which only a specific hair lock is to be treated, e.g. in order to make it different from the other hair locks, as in the streak dyeing.

[0006] In such a case, the hair lock to be conditioned has to be isolated from the others, in order to prevent a possible interference of the conditioning substance used with the adjacent hair locks, therefore thwarting the purpose of the conditioning.

[0007] Conditioning devices by which a selection and an isolation of the hair lock to be conditioned is carried out are known in the art.

[0008] Usually, strips of a waterproof and easy to cut sheet material, e.g. aluminum foil, are used in such devices, wherewith the hair lock is enveloped prior to its being soaked in the conditioning substance.

[0009] After the administration of said substance the hair lock is laid down on the remaining hair, isolated therefrom by the sheet material.

[0010] Usually, such devices are prepared at the moment they are needed by the hairdresser, to whom a remarkable manual skill, as well as a certain waste of time, are required, however not sufficient to obtain a really effective isolation.

[0011] The technical problem underlying the present invention is that of providing a device allowing to overcome the drawbacks mentioned with reference to the known art.

[0012] Such problem is solved by a hair conditioning device comprising a first and a second valve-shaped member, apt to be fit together forming a closed chamber therebetween, and removable fitting means of said first and second valve-shaped member.

[0013] The main advantage of the hair conditioning device according to the present invention lies in its allowing an optimal selection and isolation, in order to allow the action of the conditioning substance exclusively on a selected hair lock.

[0014] The present invention will be hereinafter disclosed according to one of its preferred embodiments, given by way of example and not for limitative purposes,

referring to the examples herebelow and to the annexed drawings, wherein:

- * figure 1 is an exploded perspective view of a hair conditioning device according to the present invention;
- * figure 2 is a side view of the device of figure 1;
- * figure 3 is a plan view of the device of figure 1; and
- * figure 4 is a perspective view of the device of figure 1 in the course of an application thereof in a hair-dressing process.

[0015] With reference to the figures, a hair conditioning device is globally indicated with 1.

[0016] Such device is substantially pincer-shaped with elongated pliers, having a first valve-shaped member 2 and a second valve-shaped member 3 rotatably hinged by a pincer member 4.

[0017] Preferably, said valve-shaped members 2, 3 of the present embodiment are made of a transparent, semirigid, strainable and partially flexible plastic material, e.g. polycarbonate, a vinyl chloride resin, a polyethylene or the like.

[0018] They are apt to be approached, having a concordant curving, overlapping edges and a substantially trapezoidal outline, elongated into a spatula.

[0019] Each valve-shaped member 2, 3 has a first and a second raised rim 5, 6, respectively, apt to be approached and to be fit together.

[0020] The raised rim 5, 6 of each valve-shaped member 2, 3, contouring the entire respective member, delimits a respective first and second hemichamber 7, 8, located over the entire inner face of the valve-shaped member.

[0021] In the present embodiment, the pincer member 4 and the raised rims 5, 6 form removable fitting means of said first and second valve-shaped member 2, 3.

[0022] It is understood that the pincer member 4 and the raised rims 5, 6 are deliberately redundant, in order to ensure a better adhering of the valve-shaped members.

[0023] In other embodiments of the present invention, said fitting means may alternatively comprise either the raised rims 5, 6, provided that the above-described restrained joint suffices to fit together the valve-shaped members 2, 3, or exclusively the pincer member 4, possibly provided with a spring system in order to keep the valve-shaped members 2, 3 pressed together.

[0024] By virtue of the shape thereof, said valve-shaped members 2, 3 are apt to be fit together forming a closed chamber therebetween.

[0025] The device 1, due to the shape of the valve-shaped members 2, 3, has an elongation extending from said pincer member 4 to an insertion end 9.

[0026] At the insertion end 9, the respective raised

rims 5, 6 are shaped so as to allow the passage of a hair lock, indicated as whole with H (figure 4).

[0027] The pincer member 4 has a pair of jaws 10, to which a respective valve-shaped member 2, 3 is fit.

[0028] Accordingly, at an end thereof facing said insertion end 9, each valve-shaped member 2, 3 has a rib 11, apt to be inserted, or removably fixed, into a corresponding groove 12 formed onto the outer rim of each jaws 10.

[0029] The groove 12 runs through the respective jaws 10, allowing the corresponding valve-shaped member 2, 3 to be inserted and extracted.

[0030] In order to fix the valve-shaped member 2, 3, the groove 12 has a cleft portion 15 in which the corresponding end of the valve-shaped member 2, 3 is fixed, although it can slide sideways.

[0031] The jaws 10 are rotatably hinged at a pin 13, housed in a suitable hole 14, formed through said jaws 10.

[0032] With reference to the above described device 1, hereinafter a description of the operation thereof will be provided, with reference to the particular case of conditioning carried out with fluid bleachers that are applied during dyeing operations, e.g. to perform streak dyeing.

[0033] Inside of each hemichamber 7, 8 a semifluid conditioning substance is positioned, apt to soak a hair lock for the bleaching thereof.

[0034] For this purpose, the hairdresser selects a lock of hair H from the hair, and inserts it between the valve-shaped members 2, 3, letting the lock of hair H pass through the insertion end 9.

[0035] Then, the valve-shaped members 2, 3 are approached and the lock is imprisoned inside the chamber thus formed.

[0036] The removable fitting means, in particular the mutually fixed raised rims 5, 6, seal said chamber and prevent the outflow of the conditioning substance and/or of the hair of the lock H.

[0037] Thus, said lock H is isolated from the remaining hair and it can be released onto the latter, provided that said device, as a consequence said fitting means, remains dangling from the head of hair itself.

[0038] Obviously, a large number of locks can be treated at the same time, employing a corresponding number of devices 1 with no interference among locks, that therefore can also undergo different treatments at the same time.

[0039] Through said valve-shaped members 2, 3 that are conveniently transparent, the hairdresser can perform a visual check of the conditioning in progress.

[0040] For this purpose, it is required for at least one of said valve-shaped members 2, 3, and preferably for both, to be transparent.

[0041] Once the conditioning has ended, the device 1 can be opened releasing the conditioned lock H, and, after a possible washing and/or replacing of the valve-shaped members 2, 3, it can be promptly reutilized.

[0042] Among the possible variants, the fact that the

jaws members can be of any shape, and can also differ therebetween themselves provided they fit together forming a sealed chamber apt to house a lock is noteworthy.

[0043] Further, in each valve-shaped member, a pre-determined quantity can be set beforehand. Thus, a valve-shaped member can be provided already filled up of substance and with a removable film sealing the respective hemichamber.

[0044] Possibly, the conditioning substance can be arranged in a gel.

[0045] Besides the above-mentioned advantage, the above-described device can be used in a large and simultaneous quantity, possibly allowing the hairdresser to use different types or doses of substances, therefore giving him the chance to control the conditioning under way.

[0046] Moreover, such device always allows anyhow to select a lock of any thickness, making it possible to imprison even a large quantity of hairs, possibly curly ones as well, between the valve-shaped members.

[0047] To the above-described hair conditioning device a person skilled in the art, in order to satisfy further and contingent needs, may effect several further modifications and variants, all however comprised within the protective scope of the present invention, as defined by the annexed claims.

Claims

1. A hair conditioning device (1) comprising: a first valve-shaped member (2) and a second valve-shaped member (3), apt to be fit together forming a closed chamber (7, 8) therebetween; and removable fitting means (4, 5, 6) of said first and second valve-shaped member (2, 3).
2. The hair conditioning device (1) according to claim 1, wherein said first and second valve-shaped member (2, 3) are rotatably hinged at one end thereof.
3. The hair conditioning device (1) according to claim 2, comprising a pincer member (4) having a pair of jaws (10) to which said first and second valve-shaped member (2, 3) are removably fixed.
4. The hair conditioning device (1) according to claim 3, wherein said pincer member (4) is comprised in said removable fitting means (4, 5, 6).
5. The hair conditioning device (1) according to claim 1, wherein each valve-shaped member (2, 3) comprises a respective raised rim (5, 6) delimiting a corresponding hemichambers (7, 8) formed in the valve-shaped member (2, 3) at the face thereof facing the corresponding thereof, said hemichambers

(7, 8) being apt to be approached to form said closed chamber.

6. The hair conditioning device (1) according to claim 5, wherein said raised rims (5, 6) are apt to be mutually fixed, thereby sealing said closed chamber being comprised in said removable fitting means (5, 6). 5
7. The hair conditioning device (1) according to claim 6, wherein said valve-shaped members (2, 3) comprise an insertion end (9) at which the respective raised rims are shaped in such a way to allow the passage of a lock of hair (H). 10 15
8. The hair conditioning device (1) according to claim 1, wherein said valve-shaped members (2, 3) are elongated.
9. The hair conditioning device (1) according to claim 1, wherein at least one of said valve-shaped members (2, 3) is made of in a transparent material. 20

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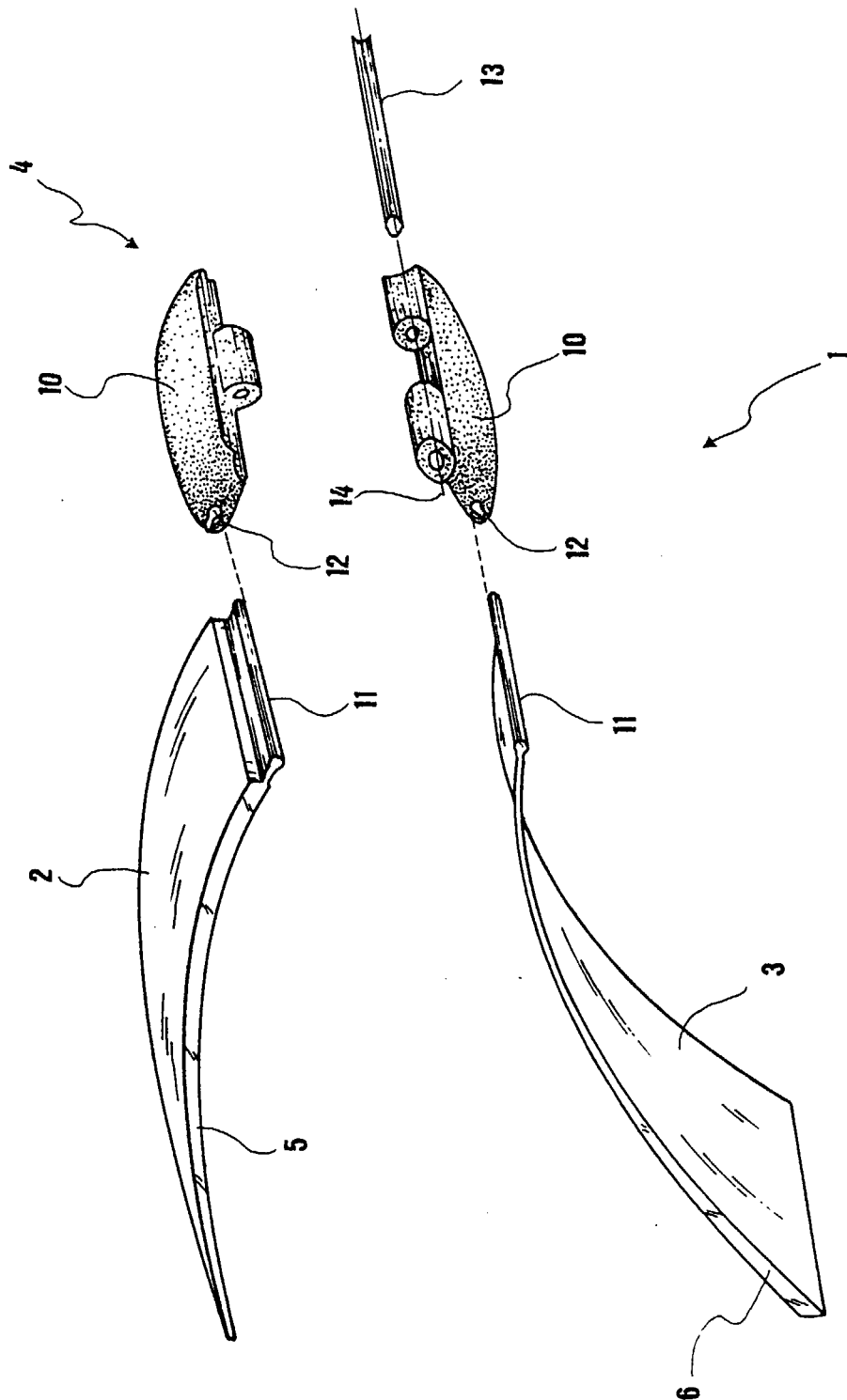
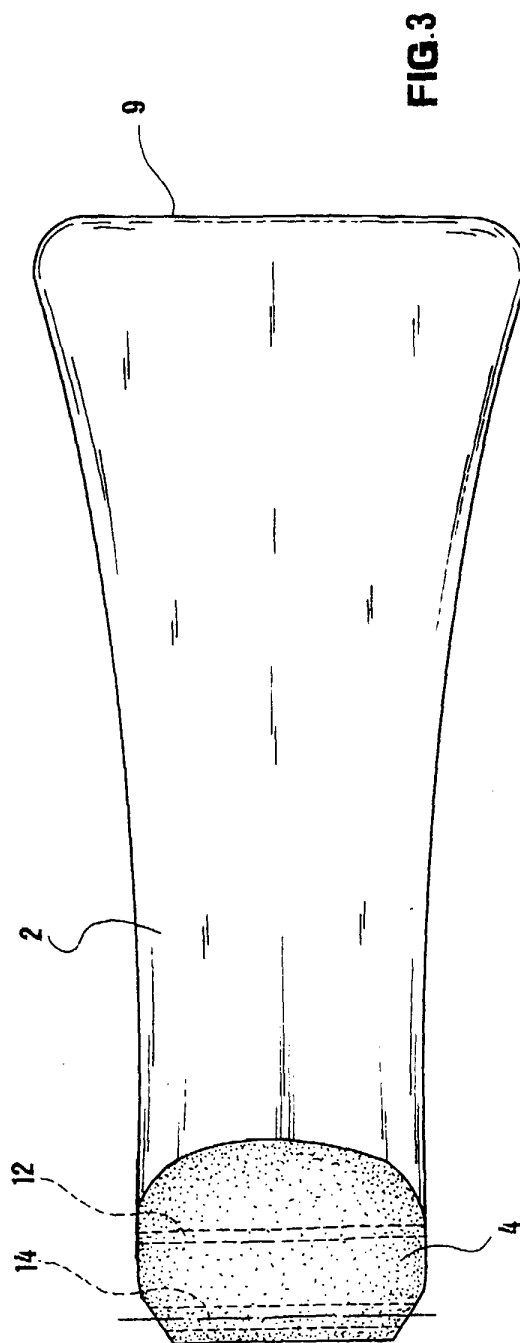
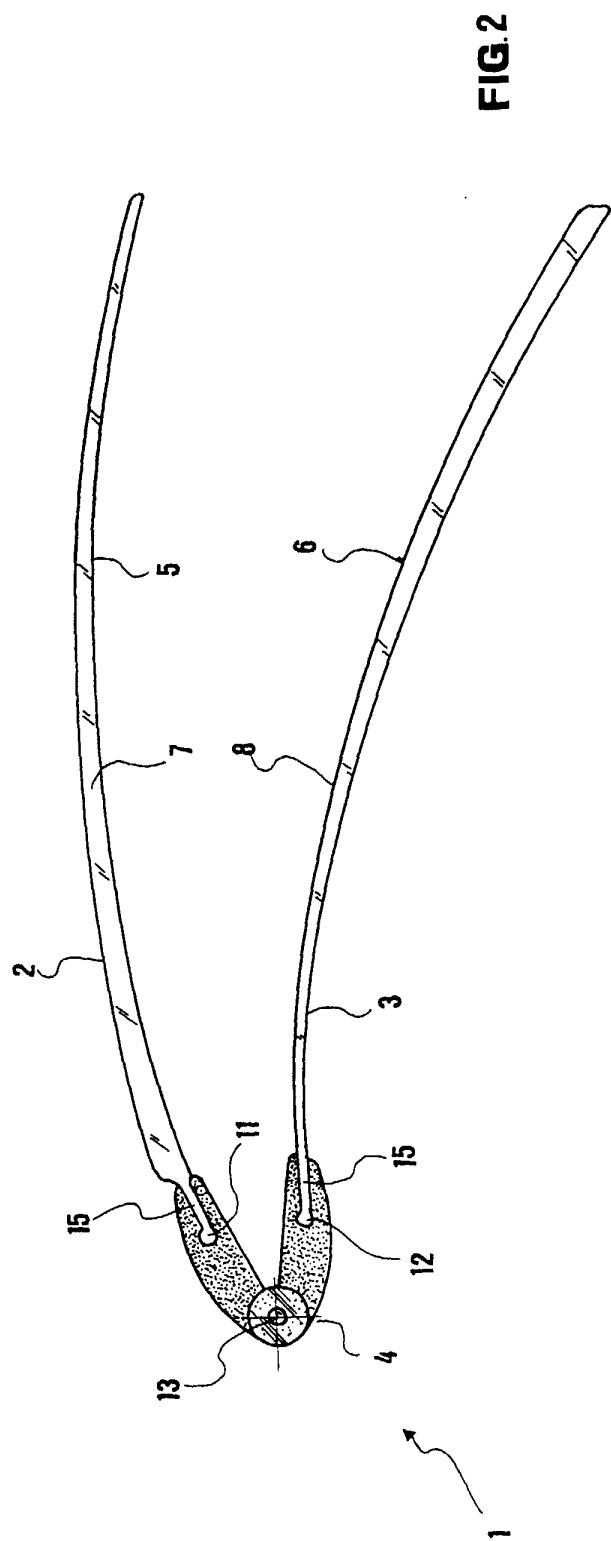


FIG.1



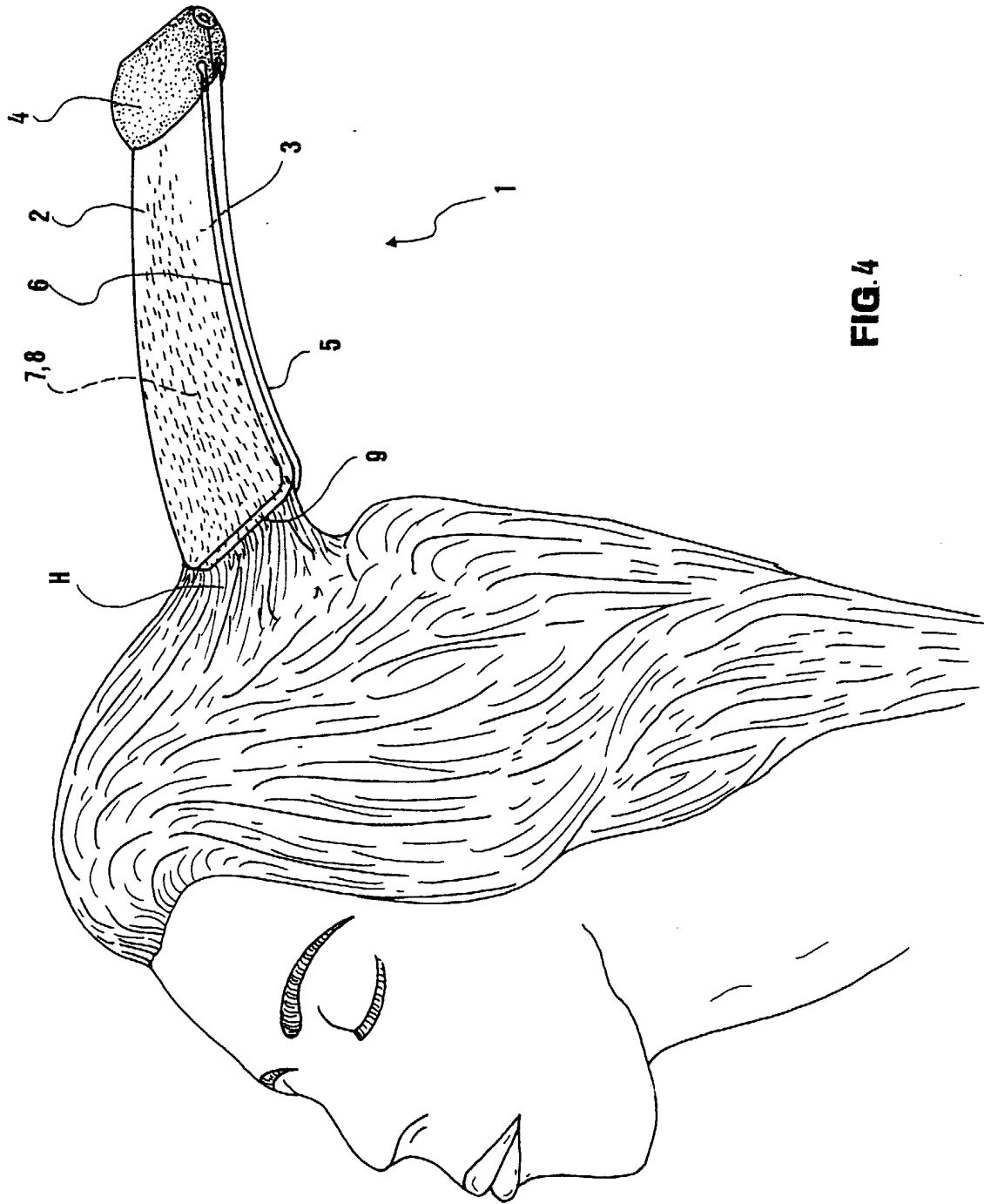


FIG. 4



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 99 83 0386

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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X	GB 2 203 645 A (DIXON ROBERT DEREK) 26 October 1988 (1988-10-26) * page 7, paragraph 4 - page 9, paragraph 2; figure 8 *	1,2,9	
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A	US 2 776 667 A (PAULINA FITZ GERALD) 8 January 1957 (1957-01-08) * the whole document *	1-9	TECHNICAL FIELDS SEARCHED (Int.Cl.7) A45D
A	FR 1 271 648 A (JEAN LECLABART) 17 January 1962 (1962-01-17) * the whole document *	1-9	
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 7 January 2000	Examiner Lang, D
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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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 83 0386

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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