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(54) **KIT AND RELATED METHOD FOR APPLYING HAIR EXTENSIONS**

(57) The present invention relates to a kit (1) for applying hair extensions of a person. In particular, the kit is provided with technical solutions that are capable of improving the functions of the extension. Furthermore, the

invention relates to a method for applying said extensions which is advantageous both from an operational and economic point of view.

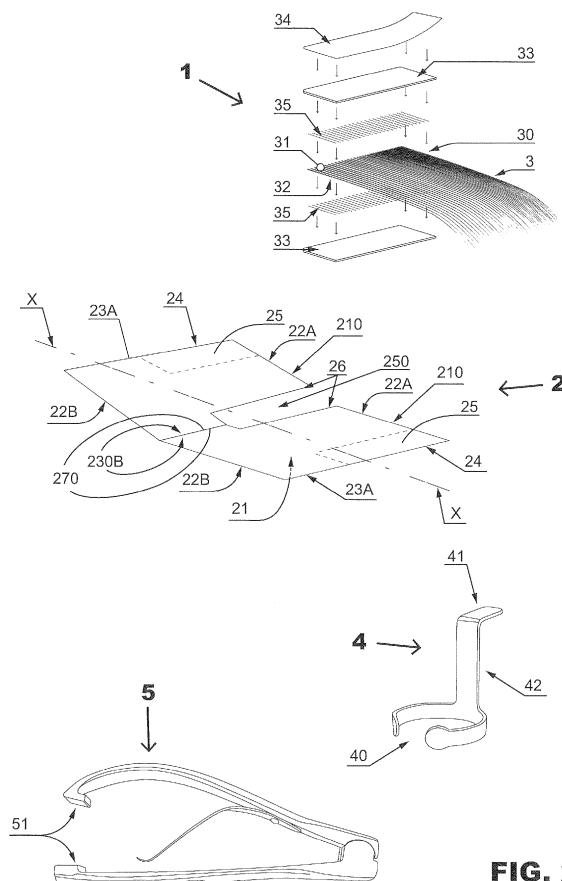


FIG. 2

Description

TECHNICAL FIELD OF THE INVENTION

[0001] The present invention relates to a kit for applying hair extensions of a person. In particular, the kit is provided with technical solutions that are capable of improving the functions of the extension. Furthermore, the invention relates to a method for applying said extensions which is advantageous both from an operational and economic point of view.

STATE OF THE PRIOR ART

[0002] The hair extensions of a person, also called extensions, are known to be useful applications for increasing the length and/or thickness, sometimes even changing the colour, of the natural hair of a person. These applications are generally obtained from natural tresses of hair picked up as a result of normal hair cutting.

[0003] Hair tresses of hair may vary in length, weight and colour depending on the characteristics of the person.

[0004] In any case, currently known application systems are generally divided into four types:

- so-called "clip-on" application which consists in the use of a metal or plastic clip for holding the extension locks with the actual hair; though the technique is simple, cost-effective, it requires daily setting given that the clip tends to yield and it moves easily with respect to the initial position of application;
- so-called "fusion" application which consists in treating the tresses at the end with a glue or thermoplastic resin which - through fusion (cold or hot) - fixes the tresses to the actual hair; this solution allows a stronger and longer-lasting resistance over time but it is very expensive, not easy to apply and the products used could damage the actual hair and create allergies and skin irritations;
- so-called "bi-adhesive" application which consists in providing the tresses with a double adhesive, that is two tresses are coupled as if they were a sandwich, one beneath and the other over the selection of actual hair; this solution requires a certain dexterity due to the difficulty of distancing from the skin and the correct positioning on the tresses to be selected;
- so-called "Brazilian" application which consists in knotting the tresses with the actual hair, either by making a braid or sewing them, with a result that lasts about 3 months but it is not easy to obtain, it is expensive and it damages the actual hair.

[0005] Basically, the "clip on" application has a low cost, a poor duration, it is quite difficult to make, it does not damage the actual hair very much and it has poor natural effect; the "fusion" application is of average cost, it has an average duration of about 3 months, it is quite

difficult to make, it has a high risk of damaging the actual hair and a great natural effect; the "bi-adhesive" application has an average cost, it has an average duration of about three months, it is quite difficult to make, it causes a considerable damage to the actual hair and it has a significant natural effect; the "Brazilian" application has a high cost, a duration of about three months, it is very difficult to make, a high damage to the actual hair and a great natural effect.

[0006] Therefore, at the moment there is no hair extension application system capable of solving the aforementioned drawbacks. In other words, there is no system that is capable of balancing the ease of making, the resistance of the application over time, the degree of damage to the actual hair as well as the difficulty and cost of production.

[0007] The Italian patent application No. 10200390111691 discloses a hair increasing set comprising at least one tress with a respective proximal end provided with a respective connection element and an adhesive tape which has a section with an adhesive surface on which the proximal ends are arranged. In addition, the adhesive tape comprises a remaining part suitable to be folded onto said section, which in turn is suitable to be reversibly applied onto the hair and the surface of said remaining part of the adhesive tape, designed to come into contact with said connection element, it is substantially covered with lint. The corresponding hair increasing method provides for the closure of a hair portion between the section and the remaining part of the folded adhesive tape, identifying an area designed to receive the proximal end and the activation of connection means operating on the connection element of the tress. In particular, the connection elements are activated by heating with a special tool so as to melt a thermoplastic material which allows adhesion with the hair to be increased. The set is complex to produce and, above all, difficult to handle given that it requires dexterity and precision.

[0008] The French patent application No. FR3087094 discloses a hair extension device comprising a support for a plurality of tresses to be applied such as hair extension, wherein the support is suitable to be folded in two identical halves along a folding line. Furthermore, the support has two adhesive windows one on each of said two halves of the support, and on which said tresses are arranged. The tresses are attached with an adhesive to the support and the exposed surface thereof is covered with a release film. The extension method provides for the removal of the film from said tresses, the positioning of the support with one half thereof under a portion of hair, the folding of the support along the line so as to enclose said hair portion in a sandwich-like fashion, the pressure at the two adhesive windows, the removal of the support. Although simpler than the previous one, this solution however requires a considerable dexterity of the operator especially in terms of picking up the right amount of hair to be extended.

SUMMARY OF THE INVENTION

[0009] Therefore, the technical problem underlying the present invention lies in providing a system for the application of hair extensions that has a low cost, a long extension duration, ease of making, low risk of damage to the actual hair and an aesthetic effect as natural as possible.

[0010] This problem is solved by a kit for the extension of the actual hair, provided with components specially designed to satisfy the aforementioned needs.

[0011] Therefore, a first object of the invention is a kit with components that are easy to produce and handle.

[0012] A second object is a kit with components capable of allowing to find an excellent balance between all the aforementioned requirements.

[0013] A further object is a method for applying extensions of the actual hair using said kit in a practically automatic manner and without the need for specialised personnel.

BRIEF DESCRIPTION OF THE FIGURES

[0014] Further characteristics and advantages of the kit of the present invention will be more apparent from the following description and from the non-limiting examples with reference to the following figures wherein:

- figure 1 represents an exploded view of the kit for applying hair extensions according to the present invention;
- figure 2 represents an exploded view of the kit for applying hair extension according to a variant embodiment of the invention;
- figure 3 represents a first step for assembling the kit of figure 2;
- figure 4 represents a second step for assembling the kit of figure 2;
- figure 5 represents a first step for using the kit of figure 2;
- figure 6 represents a second step for using the kit of figure 2;
- figure 7 represents a third step for using the kit of figure 2;
- figure 8 represents a fourth step for using the kit of figure 2;
- figure 9 represents a fifth step for using the kit of figure 2;
- figure 10 represents an example of application of an extension by means of the kit of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0015] With reference to figure 1, the kit of the invention is indicated in its entirety with reference number 1. The kit comprises a temporary support 2 for hair extension, at least one tress 3 of hair extension provided with an end for temporary engagement with said support, pref-

erably a first tool 4 for picking up a correct amount of hair of a person to whom the extension is to be applied, and preferably, a second tool 5 for fixing said at least one tress to the actual hair of said person.

[0016] Advantageously, the support 2 is a flat strip having a first face 20 opposite to a second face 21. Furthermore, the strip comprises two first sides 22A, 22B opposite to each other and two second sides 23A, 23B opposite to each other, preferably the first and second sides are parallel to each other to form a generally quadrangular flat figure, for example rectangular. Preferably, the strip is made of semi-rigid plastic material such as transparent PVC, more preferably it is a soft plastic material.

[0017] According to a first embodiment of the invention, the first face 20 of the strip 2 comprises at least one portion 24, preferably coated with an adhesive layer 25, for the temporary fixing of the extension tresses 3, as explained hereinafter. In particular, said portion 24 extends from an edge defined by the intersection of one of said second sides 23A with one of said first sides 22A. In addition, the other side of said second sides 23B has a step-like development with a first recessed section 26 and a second protruding portion 27. The first section 26 is aligned with said portion 24 and it is suitable to receive a defined portion of the hair of a person, as explained hereinafter. It should be noted that with the tress of hair 3 applied to the support 2 in a straight manner, the second step-like side 23B orthogonally intersects the longitudinal extension of the tress and, in particular, the first recessed section 26 thereof is exactly on said extension of the tress from the opposite direction with respect to that of the tress of hair.

[0018] According to a preferred embodiment of the invention, as shown in figure 2, the kit 100 comprises a support 200 consisting of a flat strip extending along a longitudinal axis X-X and it consists of two wings 210, identical to the strip 2 described above, and joined together in a mirror-like fashion. In particular, the two wings are joined along the second protruding section 270 of one of the two second sides 230B of the wings, similar to the second side 23B of the strip 2. Therefore, the joining of the two wings 210 forms a recess 250 delimited by the first recessed sections 260 of a second side 230B of each wing. It should be noted that the joining of said second sections 270 is weakened so as to allow the folding of the two wings 210 on themselves, as explained in detail hereinafter.

[0019] It should be borne in mind that the remaining parts of the support 200 comprise the parts described with reference to the previous support 2 and they have the same reference numerals. Therefore, they will not be explained further here.

[0020] The tresses 3 (figures 1 and 2) consist of normal hair cut from the head of person, picked up and joined together at one end 30 so as to form a flat strip of variable length according to the preferences of the extension one desires to apply.

[0021] Advantageously, the end 30 of the tresses is

treated with an elastomeric polymeric substance with characteristics of elasticity, softness and lightness such to adapt to be applied in proximity of the skin of a person. Preferably, the elastomeric polymer substance is transparent polyurethane.

[0022] In particular, said substance embeds a section of the end of the extension hair to facilitate the handling and the fixing thereof to the hair of a person. In this manner, the end 30 is compact, homogeneous and generally smooth so as to create two juxtaposed first 31 and second 32 surfaces.

[0023] According to a first embodiment of the invention, both the first 31 and the second 32 surface of the end 30 are coated with a layer 33 of glue, preferably biocompatible, at least on a surface 31 for joining with a portion of the actual hair of a person, as explained hereinafter, the other surface 32 being suitable to adhere to the aforementioned portion 24 of the support 2. The layer 33 of glue is protected by a protective film 34 (only one is shown in figures 1 and 2) which is removed when the end is to be applied to the support, on the one hand, and on the other hand it is to be attached to the actual lock of hair of a person. In this manner, a plurality of tresses thus prepared can be picked up in a container suitable to be used with the kit of the invention, as described hereinafter.

[0024] According to a preferred embodiment of the invention, the elastomeric polyurethane substance embeds at least one ferromagnetic filament 35 provided with a positive or negative polarity.

[0025] Should one desire to apply tresses according to the aforementioned preferred embodiment of the invention shown in figure 2, the kit 100 comprises for each support 200 at least two tresses 3 whose ends 30 have opposite polarity. Actually, advantageously, when the two tresses are applied on a pre-established portion of hair of the person, the ends of the tresses with opposite polarity attract each other, providing a more firm fixing on the hair of the person as described in greater detail hereinafter. In this case, preferably, there will be used a clamping tool such as a gripper 5 as shown in figures 1 and 2.

[0026] The gripper 5 is a conventional tool with two arms hinged in a fulcrum positioned at one end of the tool and two plates 51 positioned each at the respective free end of the arms to sandwich-press two tresses 3 with a tress of hair to be extended by a person therebetween.

[0027] The tool 4 for picking up a correct and pre-established amount of hair has a first open ring-like portion 40 which can be comfortably fitted on a finger of an operator. This portion is connected to a second portion 41 for picking up the correct amount of hair by means of a third spacing portion 42. The second portion 41 forms a sort of flat hook with rounded edges for the easy picking up or easy separation of a pre-established amount of hair to be fixed to the extensions or tresses described previously. In particular, this second portion 41 has an extension

equal to the extension of the first section 26, 260 of the second sides 23B, 230B.

[0028] Now, described hereinafter is a method for applying hair extensions according to the present invention.

[0029] The method generally comprises the steps of:

- providing a temporary support for at least one tress of hair, consisting of a flat strip made of plastic material comprising at least one portion for the temporary receipt of an end of said at least one tress and a step-like edge;
- providing at least one tress of hair extension provided with an end for fixing to the hair of a person, said end comprising at least one adhesive surface;
- temporarily fixing said end of said at least one tress to said portion of said support by means of adhesive contact with one of said surfaces of the end of the tress;
- taking a lock of hair of a person;
- positioning said step-like edge of said support at contact with the skin of a person in proximity of said lock of hair;
- sliding the support along the skin until said edge reaches said lock of hair;
- fixing said lock of hair onto said adhesive end of the tress;
- removing said support from the tress so as to leave the tress fixed to the lock of hair free.

[0030] As shown in figure 3 with specific reference to the embodiment of figure 2, upon removing the protective film 34 from one of the two surfaces 31 and 32 of the end 30 of the tress 3 of extension hair, and possibly also the protective film of the adhesive portion 24 of the support 200 or vice versa, the end is applied to said support portion. Therefore, the support 200 temporarily carries two tresses 3 in a symmetrical position with respect to the recess 250 consisting of the two step-like edges 230B joined at the two second sections 270 of the two wings 210 of the support (figure 4).

[0031] Now with the help of the tool 4 for picking up the hair, a pre-established amount of hair is separated by sliding the hook portion parallel to the skin of a person until the correct amount of hair automatically determined by the extension of the second portion 41 is picked up, and then lifting it with respect to the rest of the hair (figure 5).

[0032] In this manner, it is advantageously possible to insert the support 200 to the base of the amount of hair picked up by inserting the latter into the recess 250, as indicated by the arrow of figure 5.

[0033] In this position, the protective film 34 is removed from the other surface of one end 30 of one of the two tresses applied to the support 200 (figure 5) so as to be able to glue the amount of hair picked up with the tool 4 (figure 6).

[0034] At this point, the film 34 of the end 30 of the other tress (figure 6) can also be removed and the support

200 can be enclosed on itself by bending its two wings 210, as indicated by the arrow of figure 7. In this position, the two tresses 3 of the hair extension enclose the actual hair of a person in a sandwich-like fashion.

[0035] In order to ensure the resistance of the extension tresses on the hair of the person, a pressure is applied to the aforementioned sandwich portion by means of the grippers 5 described previously (figure 8). This operation ensures a greater gluing between the tresses and the hair interposed with respect to the gluing of the tresses on the respective wings 210 of the support 200. Therefore, as shown in figure 9, it is possible to separate the two wings 210 and to remove the support leaving the tresses firmly sandwich-pressed on the hair.

[0036] The final result shown in figure 10 is a hair extension obtained in a simple, safe and long-lasting manner over time.

[0037] Actually, in the light of the above, it is clear that all the drawbacks outlined above have been overcome. In particular, the kit provides a hair extension application system that is simple to apply, long-lasting and free from side effects.

[0038] It should be noted that, above all, thanks to the use of the temporary support of the tresses, it is possible to easily and precisely handle the tresses in order to arrange them correctly in the optimal position for fixing to the actual hair of a person. The particular step-like edge or the recess actually advantageously allows to rest the support on the skin of the person in such a way as to facilitate the receipt of the correct amount of hair to be extended at a pre-established distance from the skin, this distance is thus automatically defined without the need for particular care, as opposed to what occurs with systems of the prior art such as those described in the introductory part of the present description.

[0039] In addition, the use of the tool 4 allows to pick up the aforementioned correct amount of hair in an easy, fast and practical manner, contrary to what happens with the known systems. Actually, for example, the patent application FR3087094 described previously requires a conventional comb which is cumbersome and lacks a second portion 41 such as that of the tool of the present invention which is arranged to automatically pick up the correct amount of hair to be extended.

[0040] The provision of the adhesive ends of the tresses with a greater adhesion capacity with respect to the adhesion on the support facilitates the detachment from the support.

[0041] The preferred embodiment in which at least one ferromagnetic filament is also provided on each of the two ends of two tresses (with opposite polarity) carried by the support provided with two wings which can be enclosed on themselves, offers the further important advantage of securing the tresses even more firmly to the actual hair, therefore increasing the resistance and the duration of the extensions.

[0042] In addition, hot glue activation systems are not provided for, thus facilitating and greatly speeding up the

application method, besides making it more secure.

[0043] Numerous variants can also be adopted by the person skilled in the art, but without departing from the scope of protection of the attached claims.

[0044] For example, the embodiments of the support and the materials they consist of can vary depending on the specific needs or preferences, still maintaining the functions of an automatic and comfortable positioning on the skin of the person.

[0045] The resistance of the glues and their nature, preferably biocompatible, are known in the art and can be chosen based on the desired durability characteristics of the extensions and the characteristics of the actual hair of a person.

[0046] Colours, lengths and degree of density of the tresses can be chosen at will and they are not a limitation to exploitation in the kit according to the present invention.

Claims

1. Kit (1; 100) for applying hair extension of a person, comprising a support (2;200) for hair extension, at least one hair-extension tress (3) provided with an end (30) for engaging with said support, **characterised in that** said support (2;200) consists of a flat strip comprising two first sides (22A, 22B) opposite to each other and two second sides (23A, 23B; 230A, 230B) opposite to each other, at least one portion (24) suitable to temporarily receive said end (3) of said hair tress (3), one of said second sides (23B; 230B) having a step-like development with a first recessed section (26; 260) aligned with said portion (24) and suitable to temporarily receive a defined portion of hair of a person, and a second protruding section (27;270).
2. Kit (1 ;100) according to claim 1, wherein one of said second step-like sides (23B; 230B) orthogonally intersects the longitudinal extension of the tress (3) and the first section (26) thereof is on said extension of the tress from the opposite direction with respect to that of the hair of the tress.
3. Kit (100) according to claim 1 or 2, wherein said support (200) is a flat strip extending along a longitudinal axis (X-X) and it consists of two wings (210) identical to said strip (2) and joined together in a mirror-like fashion along said second protruding section (270) so as to form a recess (250) delimited by said first sections (260), said second section being weakened so as to allow the folding of said two wings.
4. Kit (1; 100) according to any one of claims 1 to 3, wherein the end (30) of the tresses is treated with an elastomeric polymeric substance so as to form two opposite first (31) and second (32) surfaces, at

least one surface (31) being covered with glue for joining with a portion of a person's hair, the other surface (32) being suitable to temporarily adhere to the aforementioned portion (24) of the support (2;200).

5. Kit (100) according to claim 4, wherein said elastomeric polyurethane substance embeds at least one ferromagnetic filament (35) provided with a positive or negative polarity and wherein each support (200) is provided with two tresses (3) whose ends (30) comprise said at least one filament with opposite polarity. 10
6. Kit (1;100) according to any one of claims 1 to 5, further comprising a first tool (4) for picking up a correct and pre-established amount of hair, provided with a first open ring-like portion (40) so as to be comfortably fitted on a finger of an operator, this portion being connected to a second portion (41) for picking up a correct amount of hair by means of a third spacing portion (42). 15 20
7. Kit (1;100) according to any one of claims 1 to 6, further comprising a second gripper-like tool (5) with free-ends provided with plates (51) to sandwich-press two tresses (3) with a lock of hair to be extended of a person therebetween. 25
8. Method for applying hair extension of a person, comprising the steps of: 30
 - providing a temporary support for at least one tress of hair, consisting of a flat strip made of plastic material comprising at least one portion for the temporary receipt of an end of said at least one tress and a step-like edge; 35
 - providing at least one tress of hair extension provided with an end for fixing to the hair of a person, said end comprising at least one adhesive surface; 40
 - temporarily fixing said end of said at least one tress to said portion of said support by means of adhesive contact with one of said surfaces of the end of the tress; 45
 - taking a lock of hair of a person;
 - positioning said step-like edge of said support at contact with the skin of a person in proximity of said lock of hair;
 - sliding the support along the skin until said edge reaches said lock of hair; 50
 - fixing said lock of hair onto said adhesive end of the tress;
 - removing said support from the tress so as to leave the tress fixed to the lock of hair free. 55
9. Method according to claim 8, wherein the step of providing the temporary support for the tresses con-

sists in providing a support according to any one of claims 1 to 3.

10. Method according to claim 8 or 9, wherein the step of providing the tresses consists in providing the tresses according to any one of claims 1 to 5.
11. Method according to any one of claims 8 to 10, wherein the step of picking up a lock of hair of a person is carried out with the tool (4) according to claim 6.

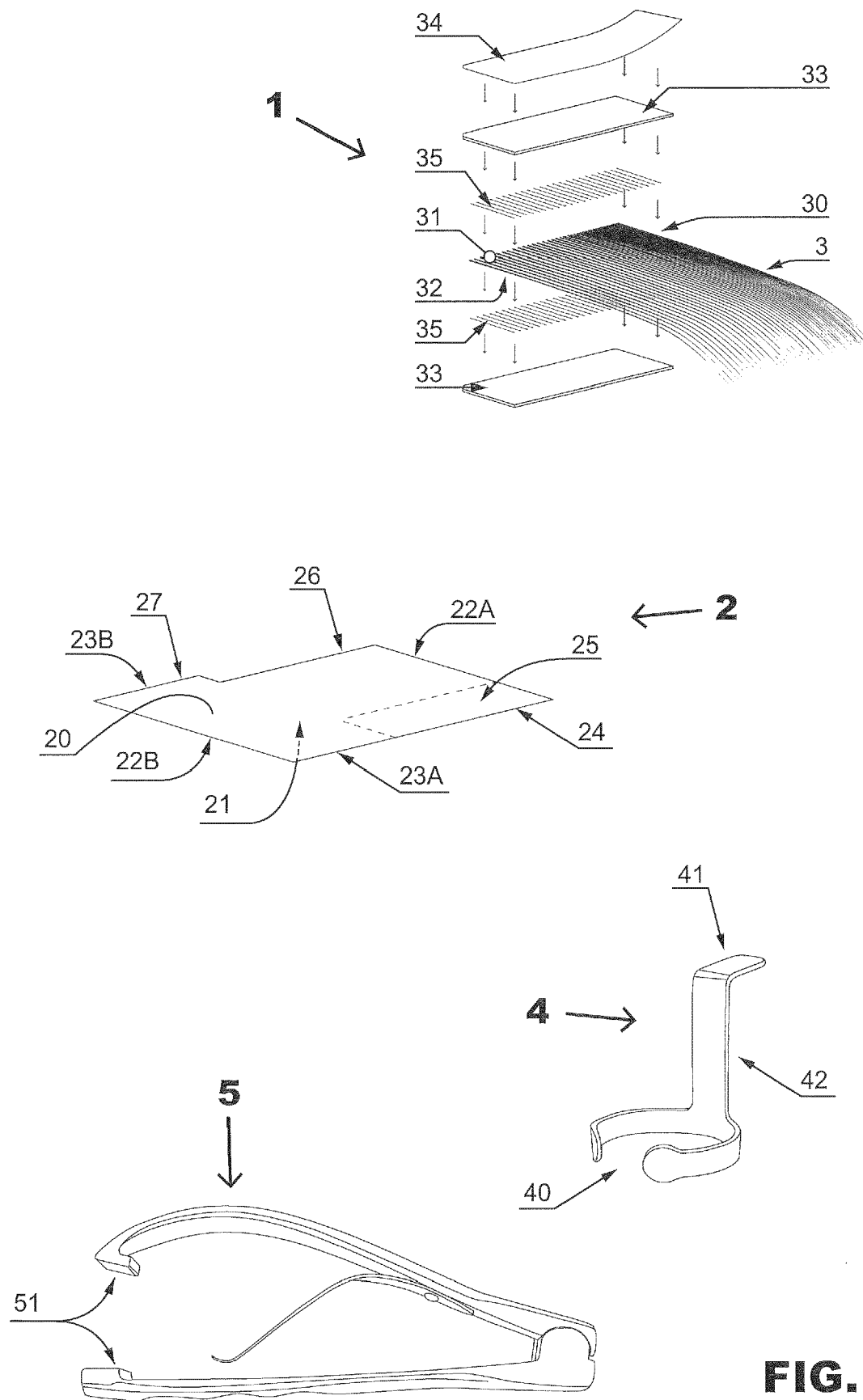


FIG. 1

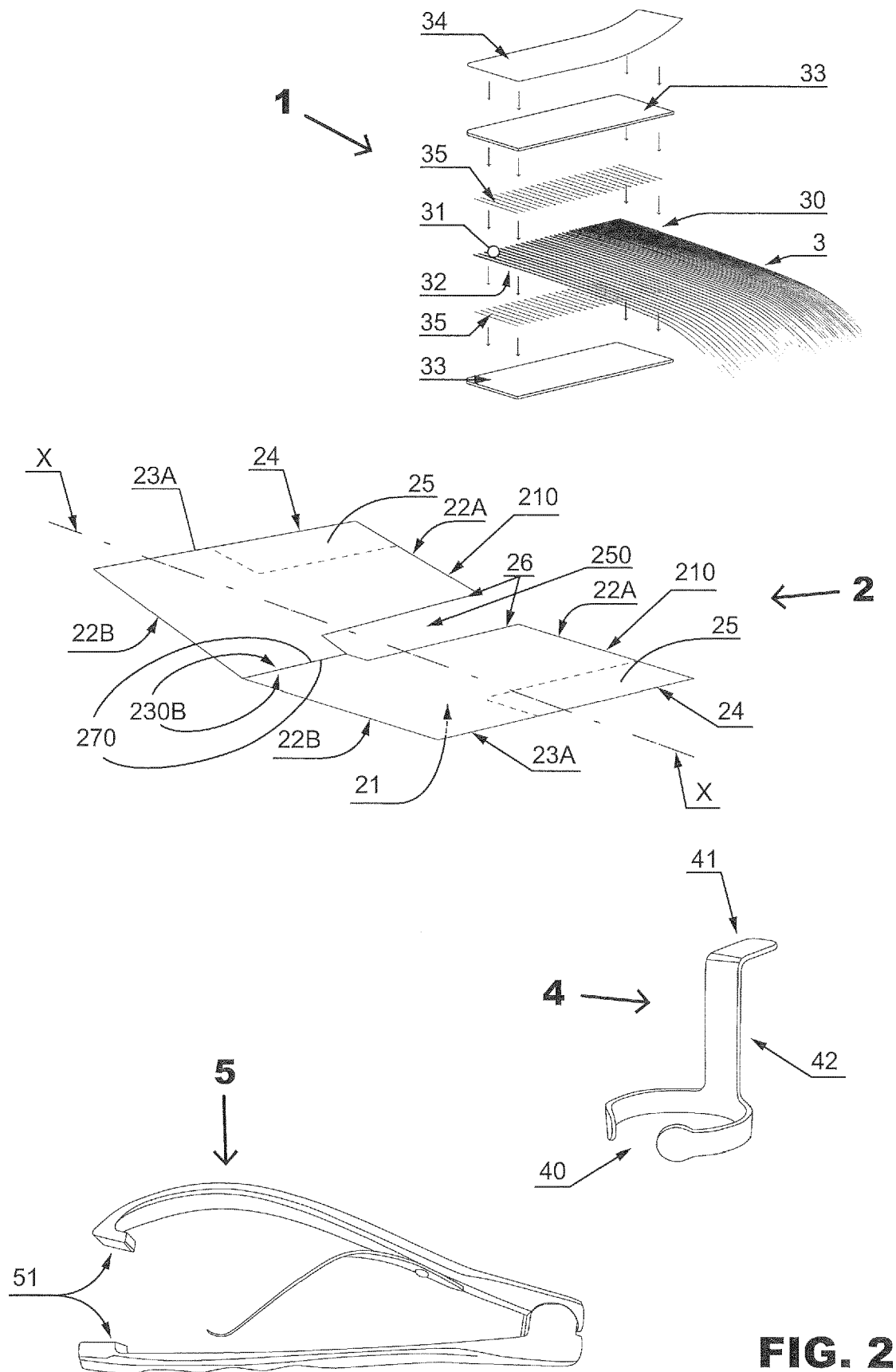


FIG. 2

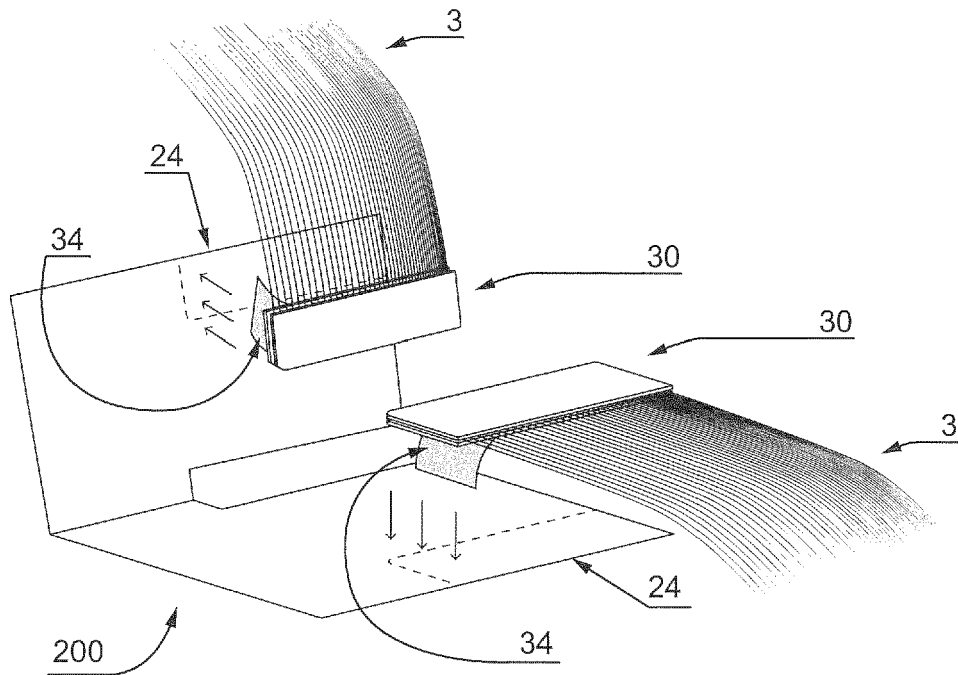


FIG. 3

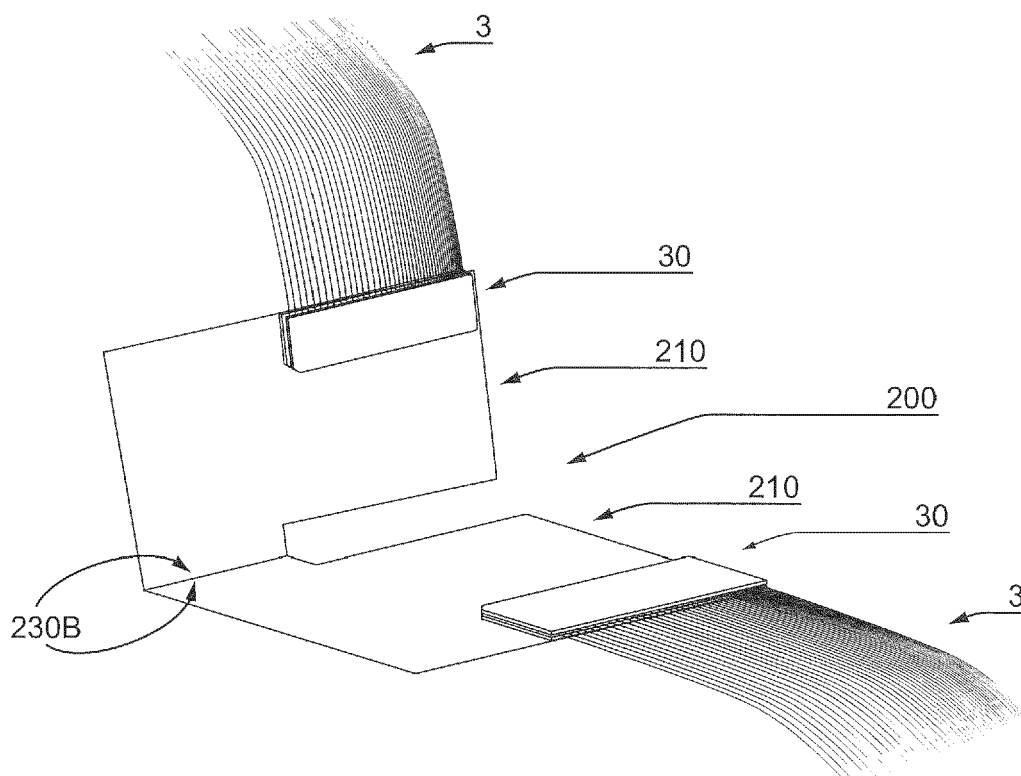


FIG. 4

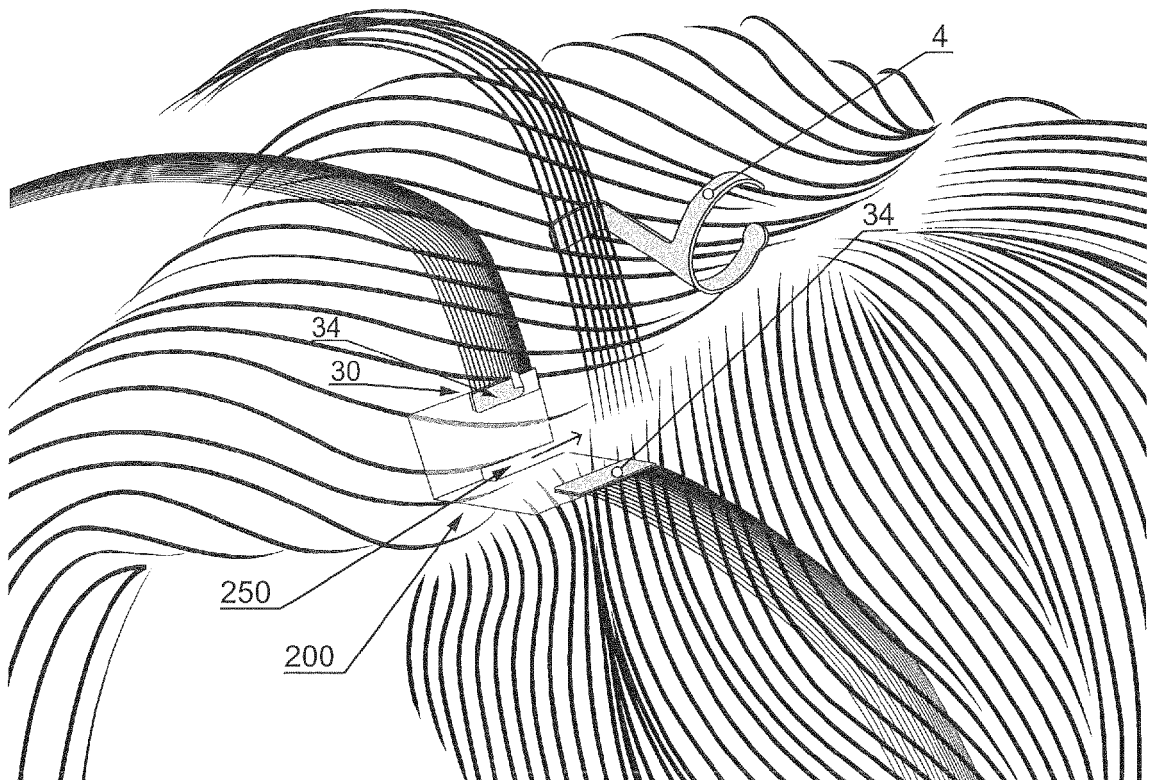


FIG. 5

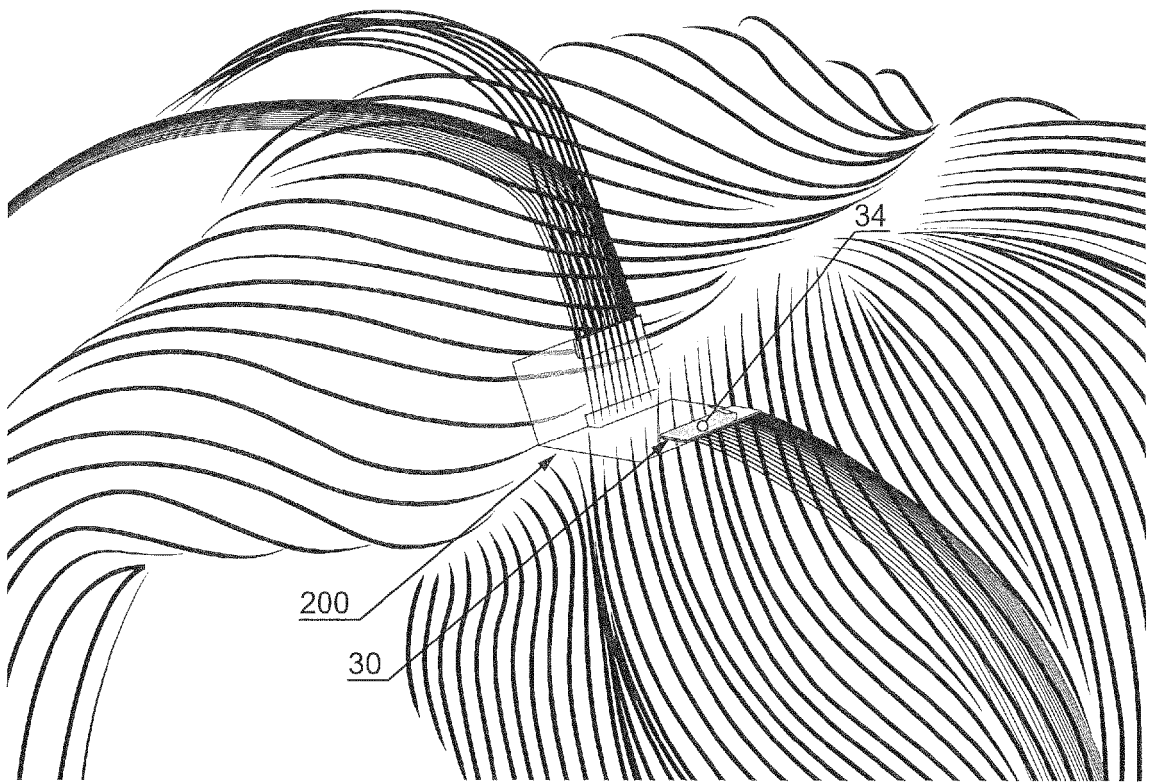


FIG. 6

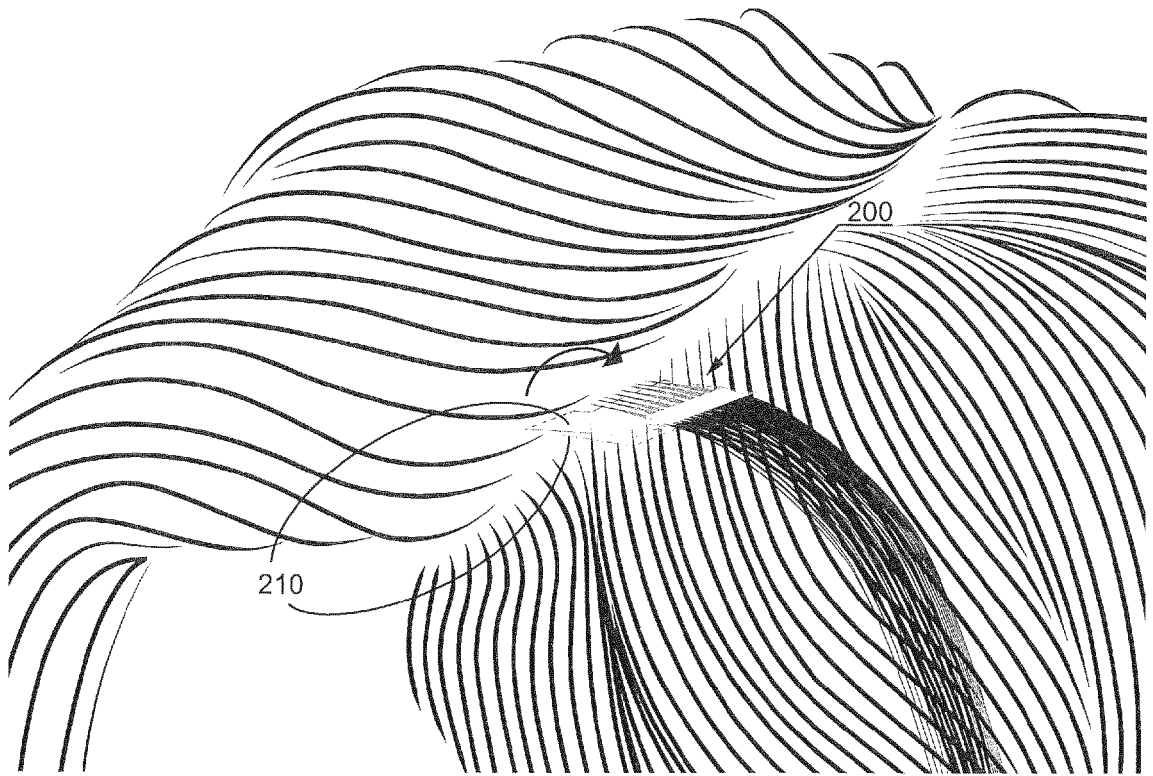


FIG. 7

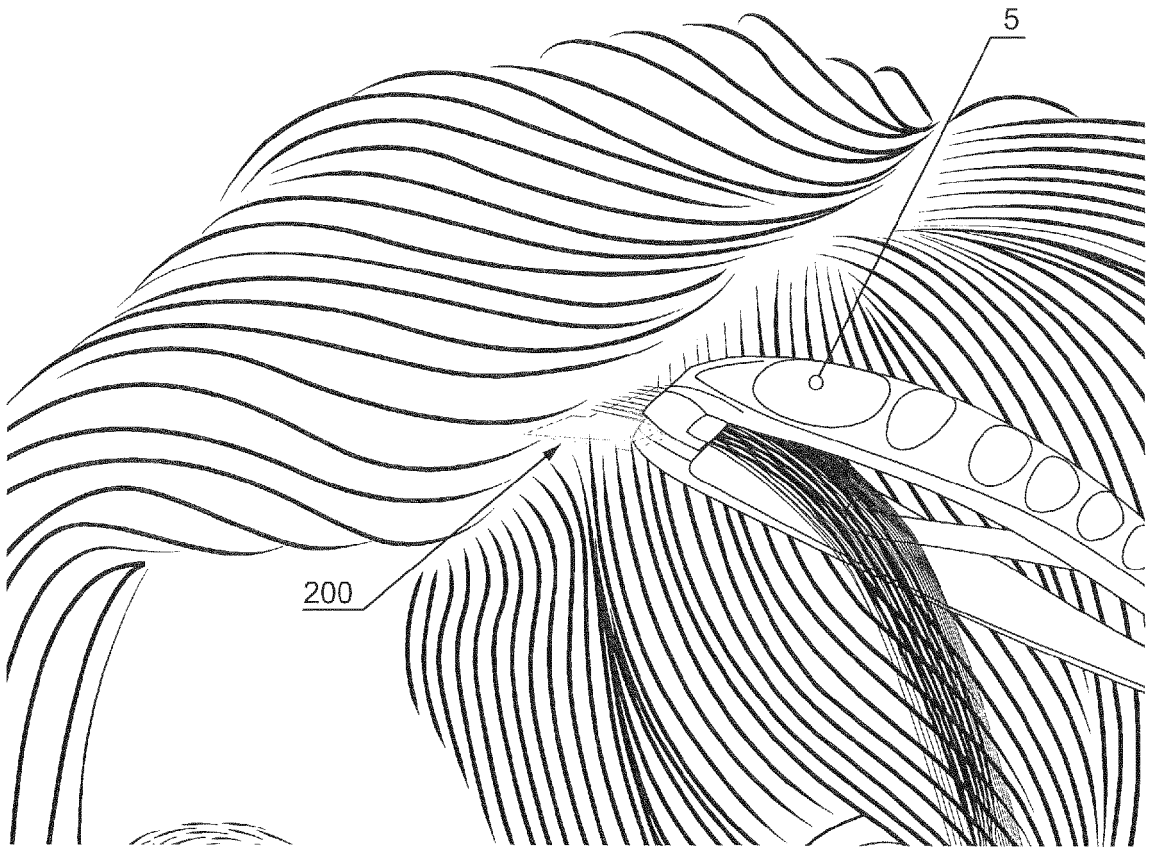


FIG. 8

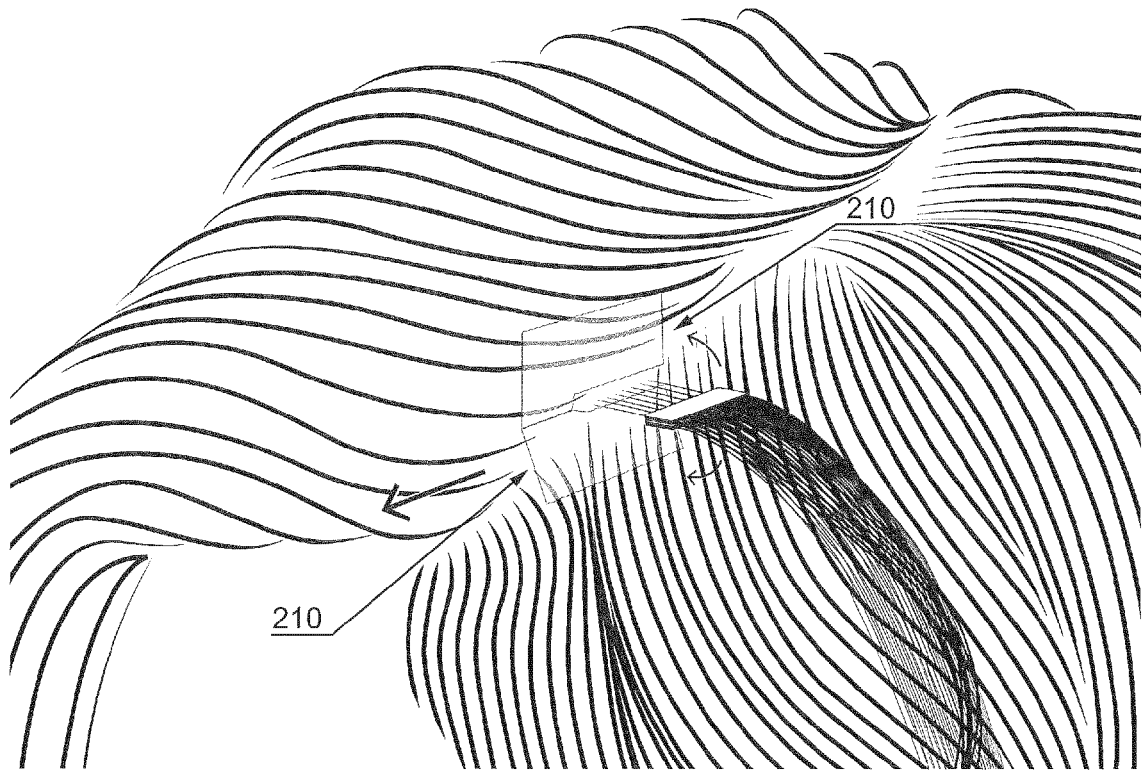


FIG. 9

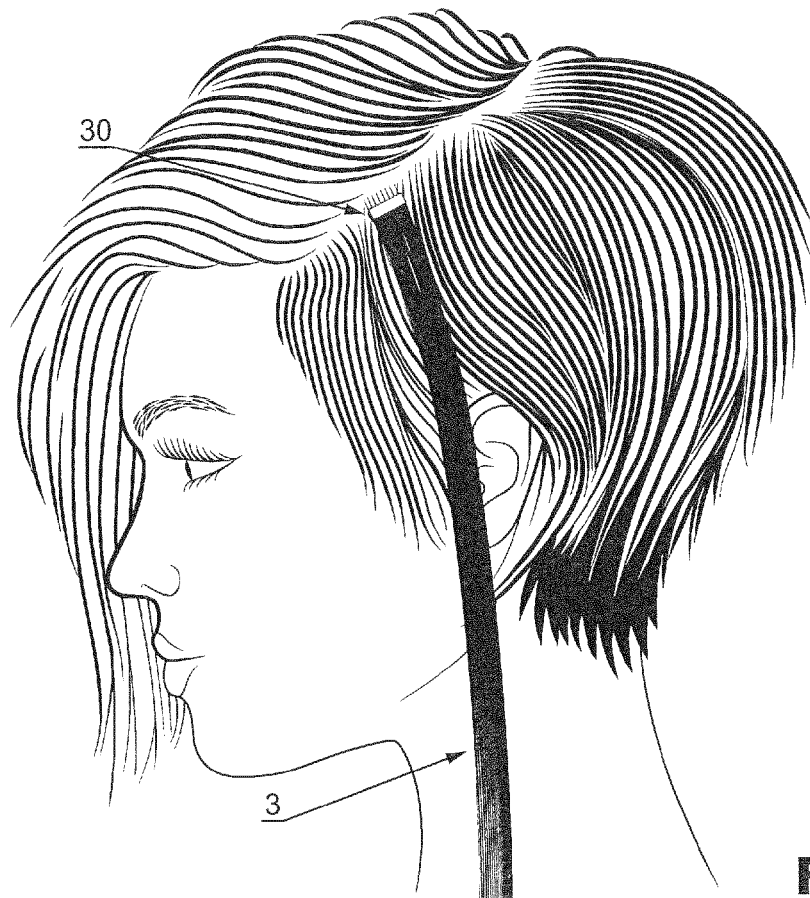


FIG. 10



EUROPEAN SEARCH REPORT

 Application Number
EP 21 18 6797

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EPO FORM 1503 03.82 (P04C01)

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	IT RM20 030 238 A1 (INDORATA SERVICOS & GESTAO LDA) 15 November 2004 (2004-11-15)	1-4,7-10	INV. A41G5/00
Y	* figures 5a-5c *	5	
X	FR 3 087 094 A1 (SOC CAPILLAIRE PARISIENNE [FR]) 17 April 2020 (2020-04-17)	1-4,6,8-11	
Y	* figures 1,4A-F *	5	
Y	US 2019/090567 A1 (JOHNSON SHAWNA [US]) 28 March 2019 (2019-03-28)	5	A41G
	* figure 1 *		
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		30 November 2021	van Voorst, Frank
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			

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

EP 21 18 6797

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
IT RM20030238 A1	15-11-2004	-----	
FR 3087094 A1	17-04-2020	NONE	
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EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- IT 102003901111691 [0007]
- FR 3087094 [0008] [0039]