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(54) **TOOL AND METHOD FOR EYELASH EXTENSION**

(57) A tool for eyelash extension is provided and a method for extending eyelashes using this tool. The tool comprises a handle portion (2, 2') to be held by one hand, a first leg portion (31, 31') and a second leg portion (32, 32') for separating at least one eyelash from adjacent eyelashes, wherein the two leg portions extend from the handle portion (2, 2') and is held apart by spring action. The tool further comprises a heating portion (4, 4') for melting an adhesive attached to an extension element, said heating portion (4, 4') being attached to said handle portion (2, 2').

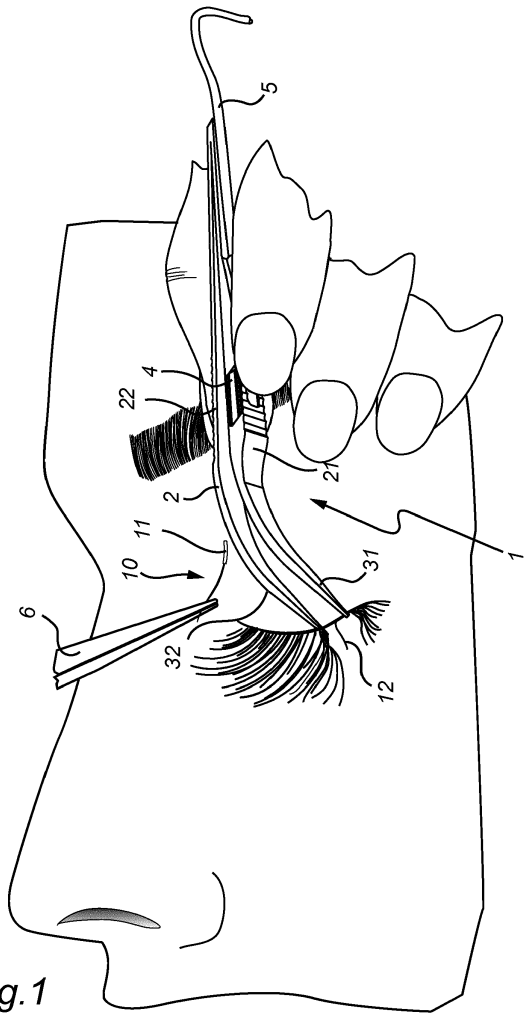

Fig.1

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Description

FIELD OF THE INVENTION

[0001] The present invention relates to a tool for eyelash extension. It also relates to a method for extending eyelashes.

BACKGROUND OF THE INVENTION

[0002] Eyelash extension is used for enhancing the length of a person's natural eyelashes. Extension elements, such as artificial eyelashes, are normally mounted to the eyelashes to be extended one by one, using an adhesive to attach them individually. Conventionally, an extension element is dipped in the adhesive and then directly attached to one of the eyelashes to be extended. There are different types of adhesives available, and a commonly used type is cyanoacrylate. Cyanoacrylate may cause skin irritation or have other hazardous effects for both the person performing the eyelash extension, and for the person whose eyelashes are being extended. Another drawback of dipping the extension element in the adhesive, which is typically in its melted form, and then attaching the extension element directly is that it is difficult to control the amount of adhesive applied to the element.

SUMMARY OF THE INVENTION

[0003] It is an object of the present invention to alleviate at least some of the mentioned drawbacks of the prior art and to provide an improved tool and a method for extending eyelashes. This and other objects, which will become apparent in the following, are accomplished by a tool and a method as defined in the accompanying independent claims.

[0004] The term exemplary should in this application be understood as serving as an example, instance or illustration.

[0005] The present invention is based on the realisation that if the extension elements are prepared by providing the adhesive and allowing it to bond to the extension element, the amount of adhesive may be more easily controlled. By providing a tool comprising a heating element, the adhesive attached to the extension element may then be melted just before attaching the extension element to the eyelash to be extended.

[0006] According to a first aspect of the present invention, a tool for eyelash extension is provided. The tool comprises a handle portion to be held by one hand, and a first leg portion and a second leg portion for separating at least one eyelash from adjacent eyelashes. The two leg portions extend from the handle portion and are held apart by spring action. The tool further comprises a heating portion for melting an adhesive attached to an extension element, said heating portion being attached to said handle portion.

[0007] The handle portion may be made in one piece, or it may comprise a plurality of parts. According to at least one exemplary embodiment, the handle portion may comprise a first and a second handle part connected to each other in one end, like a tweezer. The handle portion may suitably be made from a metallic and/or a plastic material.

[0008] The first leg portion and the second leg portion may suitably also be made from a metallic and/or a plastic material. According to at least one embodiment the two leg portions and the handle portion may be made in one piece, or they may be made from separate parts which are attached to each other. By the two leg portions being held apart by spring action is meant that when no external force is applied to the two leg portions, they are held at a certain distance from each other, and when a force is applied to both or one of the leg portions urging them to approach each other or be brought further apart, the spring action works to return the leg portions to their original position. This is advantageous from an ergonomic perspective for the person performing the eyelash extension, since no force has to be applied to keep the eyelash to be extended out of contact from the adjacent eyelashes once it has separated from them.

[0009] By the heating portion being attached to said handle portion is meant that the heating portion is arranged on or inside said handle portion. In some embodiments the heating portion may be integrated into the handle portion, and in other embodiments the heating portion may be external of the handle portion. The heating portion comprises at least one resistor, preferably two resistors, for creating the heat. The heating portion may further comprise additional resistors e.g. for regulating the temperature and as disconnectors. A separate source of energy may be needed to heat the heating portion, such as e.g. a battery or a cable for connecting the tool to a source of electricity.

[0010] According to an exemplary embodiment of the present invention, the two leg portions are pointed. In other words, the two leg portions have a narrowing shape. This makes it easier to separate at least one eyelash from the adjacent eyelashes.

[0011] According to an exemplary embodiment of the present invention, the tool has a length of 8 - 20 cm, and/or the handle portion has a length of 6 - 18 cm, and/or the first leg portion and the second leg portion have a length of 1 - 4 cm. The dimensions are suitably adapted such that the tool may be held by one hand.

[0012] According to an exemplary embodiment of the present invention, the first leg portion and the second leg portion are held apart 0.3 - 2 cm by said spring action. This distance is suitable for separating the adjacent eyelashes from the eyelash to be extended enough, such that the extension element or the adhesive is not in contact with any of the other eyelashes while mounting it.

[0013] According to an exemplary embodiment of the present invention, the heating portion is configured to be heated to a temperature of 80 - 150°C, preferably 110 -

130°C. These temperature intervals are advantageous since the heating portion is to be used to melt the adhesive attached to the extension element, and adhesives which are suitable for eyelash extension typically have a melting point covered by these intervals.

[0014] According to an exemplary embodiment of the present invention, the two leg portions are inclined in relation to said handle portion. In other words, the two leg portions extend at an angle from said handle portion. The transition between the handle portion and the two leg portions may be curved. Having leg portions inclined in relation to the handle portion is advantageous since it enables the person performing the eyelash extension to have a more ergonomic work position than if the two leg portions would not be inclined.

[0015] According to an exemplary embodiment of the present invention, a surface of the heating portion is U-shaped or V-shaped. An advantage of this is that it enables having a more uniform distribution of heat, which will enhance melting of the adhesive.

[0016] According to an exemplary embodiment of the present invention, the heating portion comprises at least two walls facing each other. By the two walls facing each other is meant that the surface of each wall which is intended to be heated has a respective surface normal, and the two respective surface normals intersect each other. This also enables having a more uniform distribution of heat, which enhances the melting of the adhesive.

[0017] According to an exemplary embodiment of the present invention, the heating portion comprises a user protection cover made of a plastic material. This is advantageous to prevent the user from burning while using the tool.

[0018] According to a second aspect of the present invention, a method for extending eyelashes using a tool according to the first aspect of the present invention is provided. The method comprises the steps of:

- providing an extension element provided with an adhesive,
- separating at least one eyelash to be extended from adjacent eyelashes using the first and the second leg portions of said tool
- heating the adhesive attached to the extension element using said heating portion, such that said adhesive melts,
- mounting the extension element to one of the eyelashes which has been separated out by holding the extension element against the eyelash to be extended,
- fastening the extension element to the eyelash by adhering and solidification of said adhesive.

[0019] In relation to this invention the term adhesive include compositions that may act as bonding between the eyelash and the extension element, e.g. hot melts and waxes.

[0020] The method according to the second aspect of the present invention is a general method which may be performed using other tools than a tool according to the first aspect of the present invention.

[0021] The extension element may be any element suitable for attaching to an eyelash. Typically, the extension element will be an artificial eyelash, but other types of extension elements are also conceivable, such as for example feathers or other decorations.

[0022] The adhesive is an adhesive composition which may be heated such that it melts. The adhesive composition may comprise a plurality of different components. The adhesive may be provided on the extension element for example by dipping a portion of the extension element in the adhesive while it is in its melted form. The adhesive is then allowed to solidify e.g. while it cools, whereafter a desired amount of adhesive is attached to the extension element. Preferably only a portion of the extension element is covered with the adhesive, but in some embodiments the whole extension element may be covered.

[0023] By separating at least one eyelash to be extended from adjacent eyelashes is meant that the eyelash to be extended should not be in contact with the adjacent eyelashes. This is to avoid adhering the extension element to the adjacent eyelashes when mounting it to the eyelash to be extended.

[0024] The step of heating the adhesive attached to the extension element using said heating portion, such that said adhesive melts, is suitably performed by gripping the extension element using a tool, such as a tweezer, and holding the extension element against or above the heating portion. The temperature of the heating portion is suitably adapted to the melting point of the adhesive, to enable melting of the adhesive.

[0025] When mounting the extension element to one of the eyelashes which has been separated out, the extension element is suitably still gripped with tool such as a tweezer. Once the step of fastening the extension element by solidifying of said adhesive has been performed, the extension element may be released from the tweezer. Due to the solidifying which results in a bonding of the adhesive, the extension element will then stay attached to the eyelash to be extended.

[0026] According to an exemplary embodiment of the second aspect of the present invention, the extension element comprises at least one artificial eyelash. In some exemplary embodiments, the extension element may comprise a strand or a bundle of artificial eyelashes. The artificial eyelashes may suitably be made of a synthetic material, or they may be made of hair. Other types of extension elements are also conceivable, such as feathers or other decorations of different materials and shapes.

[0027] According to an exemplary embodiment of the second aspect of the present invention, the adhesive is a composition selected from a group comprising: hot melts, low temperature melting hotmelts waxes such as microcrystalline waxes and combinations thereof. For hot melts including low temperature melting hotmelts (such

as ethylene vinyl acetate polymer) and micro crystalline waxes the bond to the lash is established upon solidification. Low temperature melting hotmelts and waxes are advantageous as they melt to liquid form at temperatures which is safe to use close to the human eye.

[0028] According to an exemplary embodiment of the second aspect of the present invention, said composition also comprises:

a) one or more pigments, wherein preferably said one or more pigments is carbon black.

[0029] Using one or more pigments in the composition may be beneficial to reduce the visibility of the adhesive, such that the extension looks more natural.

BRIEF DESCRIPTION OF THE DRAWINGS

[0030] These and other features and advantages of the present invention will in the following be further clarified with reference to the appended drawings showing different embodiments of the present invention.

Figure 1 is a perspective view showing use of a first exemplary embodiment of a tool for eyelash extension according to the first aspect of the present invention.

Figure 2 is a perspective view showing the same exemplary embodiment of a tool according to the first aspect of the present invention as is illustrated in Figure 1.

Figure 3 is a perspective view showing a second exemplary embodiment of a tool according to the first aspect of the present invention.

Figure 4a - 4c are perspective views showing an exemplary embodiment of a method according to the second aspect of the present invention, using a tool according to the first exemplary embodiment illustrated in Figure 1 and Figure 2.

DETAILED DESCRIPTION OF EMBODIMENTS

[0031] In the following detailed description, some embodiments of the present invention will be described. However, it is to be understood that features of the different embodiments are exchangeable between the embodiments and may be combined in different ways, unless anything else is specifically indicated. Even though in the following description, numerous specific details are set forth to provide a more thorough understanding of the present invention, it will be apparent to one skilled in the art that the present invention may be practiced without these specific details. In other instances, well known constructions or functions are not described in detail, so as not to obscure the present invention.

[0032] Figure 1 illustrates use of a first exemplary embodiment of a tool for eyelash extension according to the first aspect of the present invention. The same tool is also illustrated in Figure 2. The tool 1 comprises a handle portion 2, which is adapted for being held by one hand. The handle portion 2 of this exemplary embodiment comprises a first handle part 21 and a second handle part 22 connected to each other in one end, like a tweezer. From the first handle part 21, a first leg portion 31 extends. A second leg portion 32 extends from the second handle part 22. The two leg portions 31, 32 are used for separating at least one eyelash 12 from the adjacent eyelashes, and they are being held apart by spring action. In this embodiment, the spring action is arranged between the first 21 and the second handle parts 22. The first leg portion 31 and the second leg portion 32 are held apart 0.3 - 2 cm by the spring action. In other words, when no external force is applied to the tool 1, the distance between the tip of the first leg portion 31 and the tip of the second leg portion 32 is 0.3 - 2 cm. When a compressional force is applied to the handle portion 2 and/or to one or both of the leg portions 31, 32, in a direction urging the leg portions 31, 32 towards each other, the distance between the tip of the first leg portion 31 and the tip of the second leg portion 32 decreases. When the force is removed, the tool 1 will return to its original state with 0.3 - 2 cm between the first leg portion 31 and the second leg portion 32.

[0033] The first leg portion 31 and the second leg portion 32 extend at an angle from the handle portion 2. In other words, the first leg portion 31 and the second leg portion 32 are inclined in relation to the handle portion 2. In the illustrated exemplary embodiment, the first leg portion 31 and the second leg portion 32 are partially curved. The first leg portion 31 and the second leg portion 32 are in this embodiment also pointed, to make it easier to separate the eyelash to be extended from the adjacent eyelashes.

[0034] In the illustrated exemplary embodiment, the first leg portion 31 and the first handle part 21 are made in one piece, and the second leg portion 32 and the second handle part 32 are made in one piece. In other exemplary embodiments, the two leg portions 31, 32 and the handle parts 21, 22 of the handle portion 2 may be made from separate pieces which are attached to each other. The leg portions 31, 32 and the handle portions 21, 22 are in this embodiment made from a metallic material, but they may also be made from a plastic material, or a combination thereof.

[0035] The tool 1 further comprises a heating portion 4 attached to the handle portion 2. In this exemplary embodiment, the heating portion 4 is integrated in the first handle portion 21. This makes the tool 1 compacter and easier to hold compared to if the heating portion 4 is not integrated. The heating portion 4 is adapted for melting an adhesive 11 attached to an extension element 10. In the exemplary embodiment, the heating portion 4 comprises two resistors for creating heat, one resistor for regulating the temperature, and one resistor as a disconnector. A cable 5 runs from the first handle part 21, for connecting the tool 1, i.e. the heating element 4, to a

source of electricity.

[0036] The heating portion 4 has a surface 40 which in this embodiment is V-shaped. This V-shaped surface 40 is the part of the heating portion which is to be heated. The surface 40 comprises two walls 41, 42 facing each other. When using the heating portion 4 to melt the adhesive 11 attached to the extension element 10, the part of the extension element 10 covered by the adhesive 11 is suitably held above the surface 40, and/or at least partly between the two walls 41, 42 facing each other.

[0037] The heating element 4 is configured to be heated to a temperature within a range of e.g. 100°C - 120°C. This is suitable for the adhesive 11 used together with this embodiment, which will be further described below. In other embodiments, other temperatures may be used. The temperature of the heating element 4 is adapted to the melting point of the adhesive 11 to be melted.

[0038] The 1 tool according to the illustrated exemplary embodiment has a length of 8 - 20 cm. The handle portion 2 has a length of 6 - 18 cm, and the first leg portion 31 and the second leg portion 32 have a length of 1 - 4 cm. Other embodiments may have other dimensions, but the dimensions should suitably be adapted for the tool 1 to be held by one hand.

[0039] Fig. 3 shows a second exemplary embodiment of a tool 1' according to the first aspect of the present invention. This second exemplary embodiment has a handle portion 2' comprising a first handle part 21' and a second handle part 22', similarly to the first exemplary embodiment. The tool 1' also has a first leg portion 31' and a second leg portion 32', which also have the same properties as those of the first exemplary embodiment. The tool 1' according to the second exemplary embodiment differs from the first exemplary embodiment in that the heating portion 4' is different. In this second exemplary embodiment, the heating portion 4' is not integrated in the handle portion 2', but is attached to the outside of the first handle part 21' of the handle portion 2'. The heating portion 4' also has a V-shaped surface 40', with two walls 41', 42' facing each other. In this second exemplary embodiment, the surface 40' of the heating element 4' is larger than the surface 40 of the heating element 4 according to the first exemplary embodiment. This may be beneficial since it may be easier to melt the adhesive 11 when the heat is distributed over a larger area. The heating portion 4' in this embodiment also comprises a user protection cover 45 made of a plastic material, to prevent the user from burning when holding the tool. A cable 5' runs directly from the heating portion 4' for connecting it to a source of power.

[0040] The heating portion 4' according to the second exemplary embodiment may be retrofitted to a tool having a handle portion 2' and two leg portions 31', 32', or the tool 1' may be provided as a whole.

[0041] Fig. 4a - 4c show an exemplary embodiment of a method according to the second aspect of the present invention, using a tool 1 according to the first exemplary embodiment illustrated in Figure 1 and Figure 2. In Fig. 4a, an extension element 10 provided with an adhesive 11 is provided. In this particular embodiment, the extension element 10 comprises an artificial eyelash, which is partially provided with an adhesive 11. According to this non-limiting example the adhesive 11 is Polycaprolactone Capa 6250 with a melting temperature of 60° C, where the bond to the lash is established upon solidification.

[0042] The method further comprises a step of separating at least one eyelash to be extended 12 from adjacent eyelashes, which is also illustrated in Fig. 4a. This is done using the first and the second leg portions 31, 32 of the tool 1. Once the eyelash to be extended 12 has been separated out, the portion of the extension element 10 covered in the adhesive 11 is held just above the surface 40 of the heating portion 4, such that the adhesive 11 is heated to a temperature where it melts. This is illustrated in Fig. 4b.

[0043] In fig. 4c, the extension element 10 is mounted to one of the eyelashes which has been separated out by holding the extension element 10 against the eyelash to be extended 12. In this embodiment, the extension element 10 is held with a tweezer 6. It is held in place against the eyelash to be extended 12 until the adhesive 11 has cured such that the extension element 10 is fastened. The tweezer 6 can then be removed, and the extension element 10 is attached to the eyelash to be extended 12.

[0044] The person skilled in the art realizes that the present invention by no means is limited to the embodiments described above. The features of the described embodiments may be combined in different ways, and many modifications and variations are possible within the scope of the appended claims. For example, the handle portion may comprise only one handle part, or the tool may comprise a battery instead of a cable for providing the heating portion with energy. In the claims, any reference signs placed between parentheses shall not be construed as limiting to the claim. The word "comprising" does not exclude the presence of other elements or steps than those listed in the claim. The word "a" or "an" preceding an element does not exclude the presence of a plurality of such elements.

Claims

1. A tool (1, 1') for eyelash extension comprising

a handle portion (2, 2') to be held by one hand,
a first leg portion (31, 31') and a second leg portion (32, 32') for separating at least one eyelash from adjacent eyelashes, said two leg portions (31, 32, 31', 32') extending from the handle portion (2, 2') and being held apart by spring action, and
a heating portion (4, 4') for melting an adhesive attached to an extension element, said heating

portion (4, 4') being attached to said handle portion (2, 2').

2. A tool (1, 1') according to claim 1, wherein the two leg portions (31, 32, 31', 32') are pointed.

3. A tool (1, 1') according to any one of the preceding claims, wherein

the tool (1, 1') has a length of 8 - 20 cm, and/or the handle portion (2, 2') has a length of 6 - 18 cm, and/or
the first leg portion (31, 31') and the second leg portion (32, 32') have a length of 1 - 4 cm.

4. A tool (1, 1') according to any one of the preceding claims, wherein the first leg portion (31, 31') and the second leg portion (32, 32') are held apart 0.3 - 2 cm by said spring action.

5. A tool (1, 1') according to any one of the preceding claims, wherein the heating portion (4, 4') is configured to be heated to a temperature of 80 - 150°C, preferably 110 - 130°C.

6. A tool (1, 1') according to any one of the preceding claims, wherein the two leg portions (31, 32, 31', 32') are inclined in relation to said handle portion (2, 2').

7. A tool (1, 1') according to any one of the preceding claims, wherein a surface (40, 40') of the heating portion (4, 4') is U-shaped or V-shaped.

8. A tool according to any one of the preceding claims, wherein the heating portion (4, 4') comprises at least two walls (41, 42, 41', 42') facing each other.

9. A tool (1, 1') according to any one of the preceding claims, wherein the heating portion (4') comprises a user protection cover (45) made of a plastic material.

10. A method for extending eyelashes using a tool (1, 1') according to any one of the preceding claims, said method comprising the steps of:

- providing an extension element (10) provided with an adhesive (11),
- separating at least one eyelash to be extended (12) from adjacent eyelashes using the first and the second leg portions (31, 32, 31', 32') of said tool (1, 1'),
- heating the adhesive (11) attached to the extension element (10) using said heating portion (4, 4'), such that said adhesive (11) melts,
- mounting the extension element (10) to one of the eyelashes which has been separated out by holding the extension element (10) against the eyelash to be extended (12),
- fastening the extension element (10) by curing of said adhesive (11).

11. A method according to claim 10, wherein the extension element (10) comprises at least one artificial eyelash.

12. A method according to any one of claims 10-11, wherein the adhesive (11) is a composition selected from a group comprising: hot melts, low temperature melting hotmelts, waxes and combinations thereof.

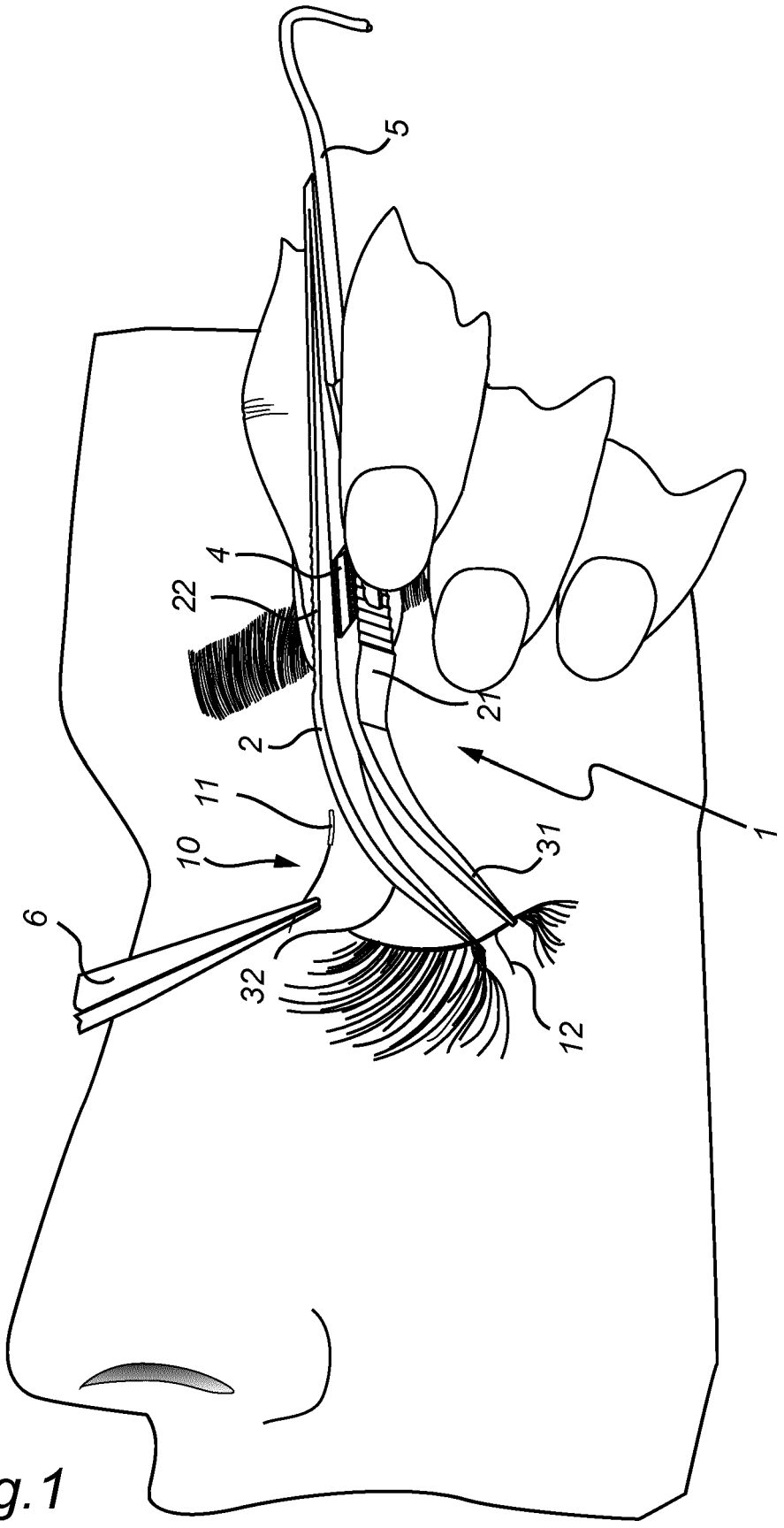

Fig.1

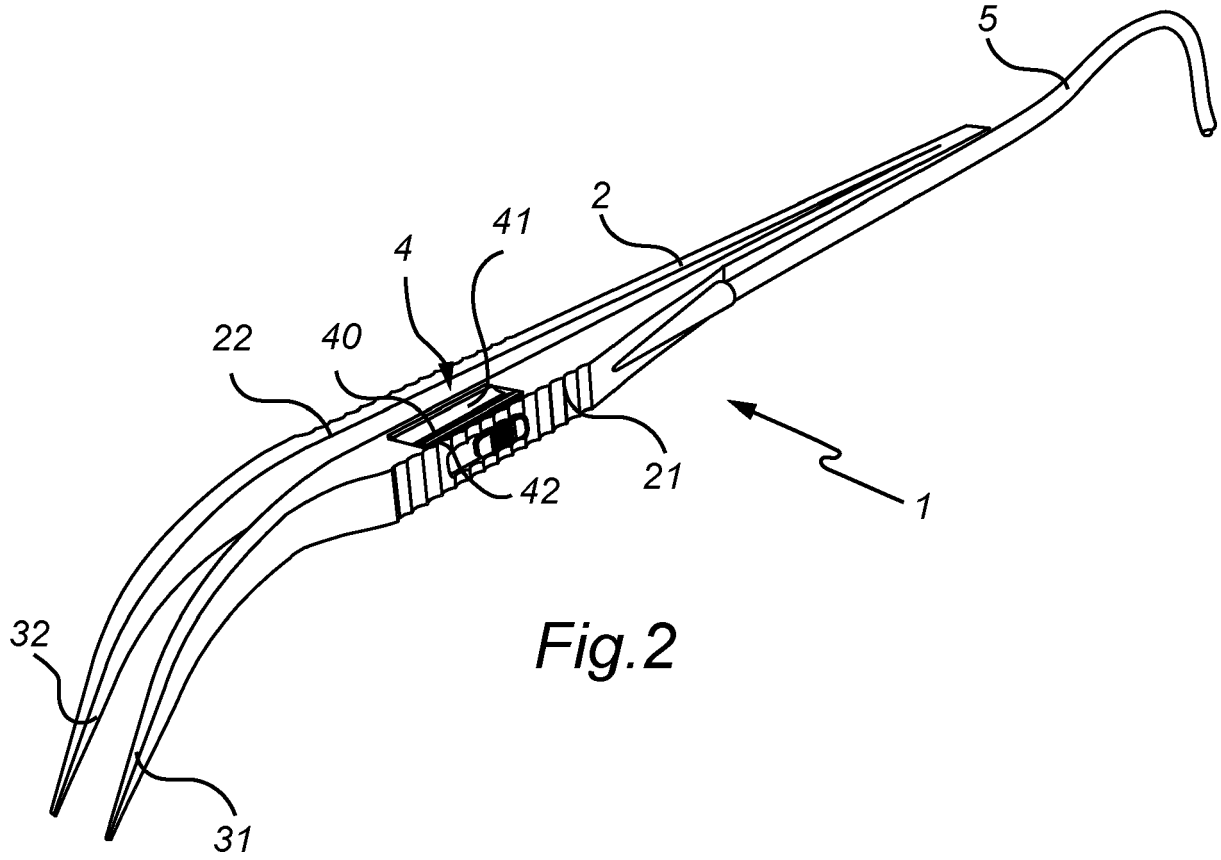

Fig.2

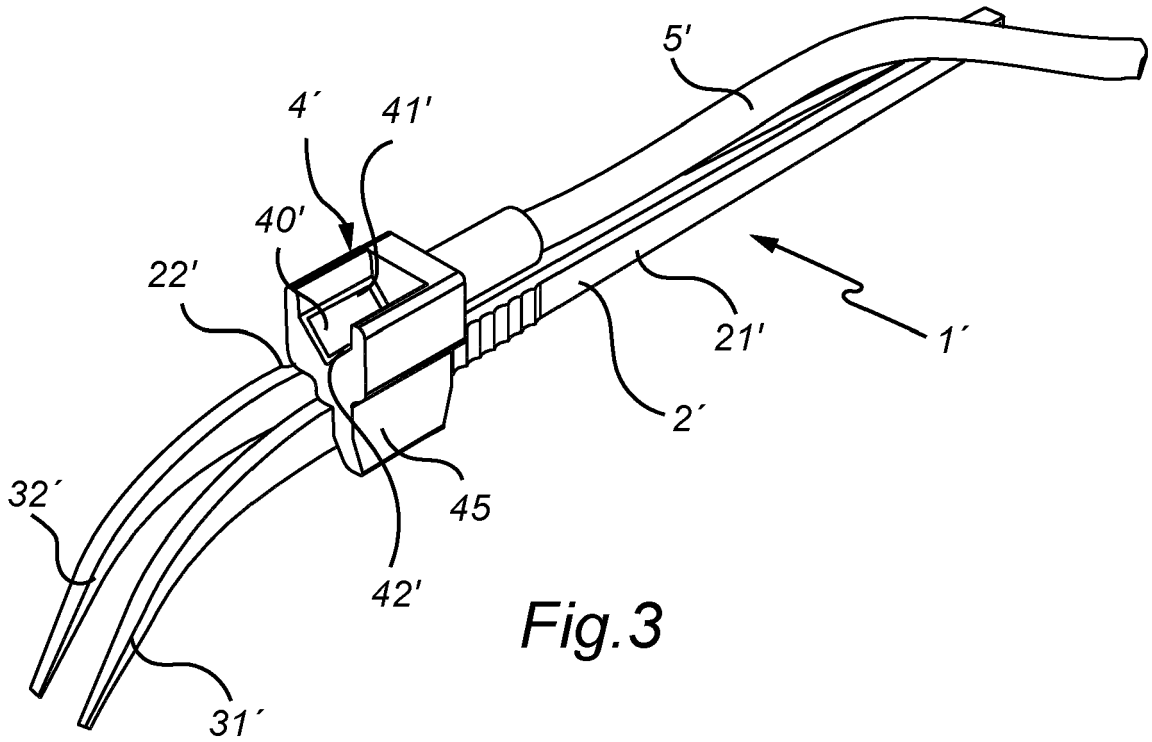

Fig.3

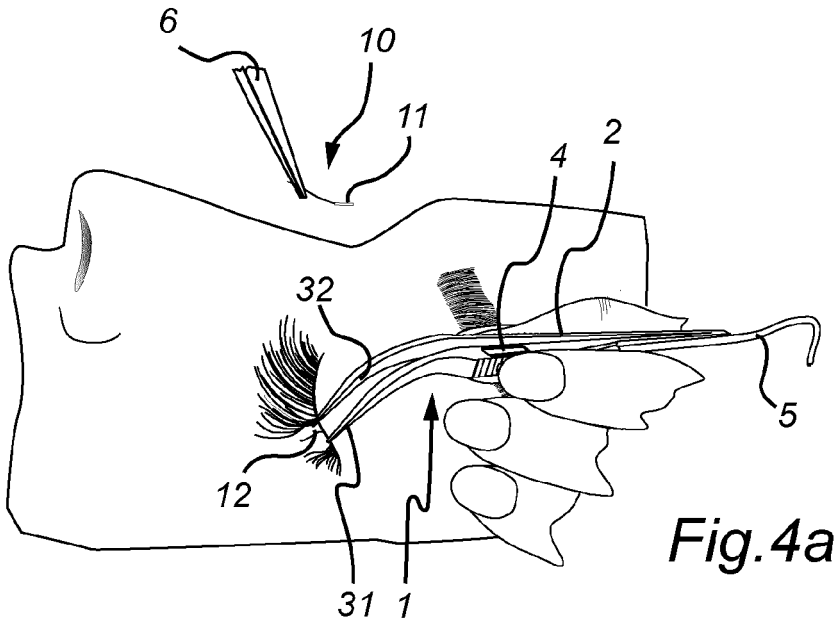

Fig.4a

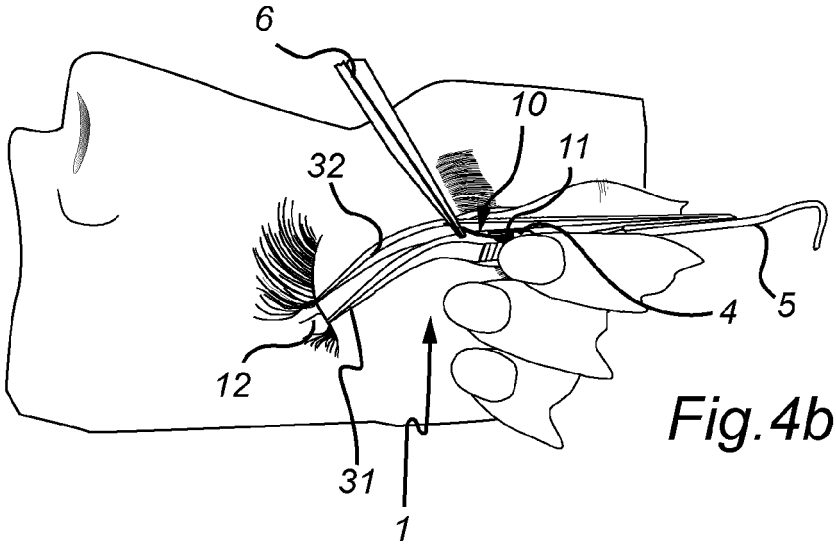

Fig.4b

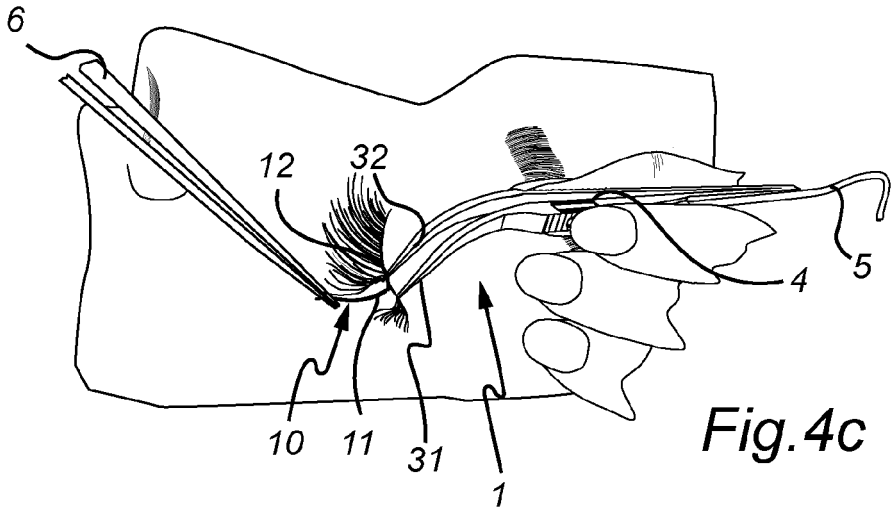

Fig.4c

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EUROPEAN SEARCH REPORT

Application Number
EP 22 17 4391

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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X	CN 216 309 596 U (CHANGZHOU NAT MEDICINE MEDICAL EXAMINATION LABORATORY LIMITED COMPANY) 15 April 2022 (2022-04-15) * abstract * * figures *	1,2,7,10	TECHNICAL FIELDS SEARCHED (IPC) A41G A45D A61B B25B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	22 October 2022	Zetzsche, Brigitta

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 22 17 4391

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