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(54) **Device for cutting off split ends of hair**

Vorrichtung zum Abschneiden gespaltener Haarspitzen

Dispositif pour couper les extrémités fourchues des cheveux

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Description

[0001] The patent application concerns an object for use in hair styling and is a device for cutting off trichoptilosis, more commonly called split ends of hair.

[0002] It is well known that the ends of human hair have a tendency to split, in which case they must be cut off. Hair stylists accordingly treat the ends of strands of hair by shortening them slightly with scissors. Devices are also known for cutting off ends of hair.

[0003] EP 1 381 496 A discloses a device for cutting off split ends of hair with a body for holding a strand of hair and a slot into which the ends are inserted so that the ends can be cut off along the slot by means of a cutting mechanism.

[0004] WO 2004/113032 A relates to a hair trimming device with hair shafts and an inner cutting device. Hair is drawn through serpentine pathways and cut off by the cutting device, which is completely enclosed by a housing of the device.

[0005] The known device is relatively complicated from a technical point of view and is automated. It is therefore less suitable for hair stylists who would prefer a very simply designed but effective and economical device for use with their method, which is essentially manual.

[0006] The purpose of the invention is to eliminate this disadvantage.

[0007] The problem is solved as described in the characterizing part of Claim 1. Accordingly, the device has a connecting part that is used to connect it with a hairstyling device, especially with a blow dryer or hot air brush to allow a stream of air produced by one of the latter devices into the inside area of the device according to the invention. The inside area is located in a sleeve of the body in which the slot is positioned. There is a bracket on the outer surface of the sleeve for holding strands of hair. The bracket has an opening in it that at least partially fits the slot so that when strands of hair are clamped between the bracket and the sleeve, the ends are positioned between the opening and the slot and are therefore caught by the flow of air and blown through the opening of the bracket where they can be cut off with a cutting mechanism on the outside of the bracket.

[0008] The proposed device offers the advantage that it can be manufactured economically and is simple to use. The device is simply attached to another device which would already be present in a hair salon that produces a flow of air, for example a blow dryer or a hot air brush, thus using the blower of the attached device. After a strand of hair is clamped in place, the device is pulled back along the strand. When this happens, the split ends, which lie relatively flat, are blown out of the opening in the bracket. There they can be cut off with a pair of scissors or an electrical hair cutting machine. While the device is being used, the ends are blown out of the slot and are lying over it. The hair stylist can always decide where along the strands of hair and at what length the ends should be cut off.

[0009] Advantageous designs of the proposed device are described in Claims 2 through 6.

[0010] Use of the device is simplified if as described in Claim 2 the bracket is connected with the body by means of a joint and is held against the sleeve by a spring. Then the spring can be rotated away from the sleeve to receive a strand of hair and released again to grasp the strand of hair and hold it in place by spring force while the device is being used.

[0011] A divider tip on the device (Claim 3) is used to separate a strand of hair, which can then be held in place by the bracket. If a row of comb teeth is arranged between the sleeve and the bracket, either on the sleeve or on the bracket (Claim 4), it will help guide a wide strand of hair along the device more easily when the device is pulled back. The strand of hair can be held in a spread out shape more easily if the row runs along one edge of the bracket (Claim 5). This effect is further enhanced if as described in (Claim 6) a row is arranged on two opposite sides of the bracket. Instead of comb teeth, brush bristles can be used in a comparable manner along one edge or both edges of the bracket. It makes no differences whether the comb teeth or bristles are fastened to the sleeve or to the bracket.

[0012] The proposed device is described in greater detail below by way of figures representing an embodiment.

Figure 1 shows a side view of a device having a mechanism for cutting off split ends of hair with a bracket that has a slot-shaped opening connected to the air outlet of a hot air brush;

Figure 2 shows a side view of the object in Figure 1 rotated 90 degrees to the view in Figure 1 and

Figure 3 shows a side view of the object in Figure 2 along A-A of Figure 2, but with a strand of hair inserted in addition and with a cutting mechanism for cutting off the ends of hair that protrude out from the slot.

[0013] In a device for cutting off split ends 2 of hair, a body 3 of the device holds a strand of hair 4. The ends 2 are inserted into a slot 5, after which the ends 2 can be cut off by means of a cutting mechanism 6. The device 1 has a connecting part 7 designed for connecting to a hairstyling device, which is a hot air brush 8. This allows a stream of air produced by the hot air brush to flow into an inside area 10 of the device 1. The inside area 10 is located in a sleeve 11 of the body 13 in which the slot 5 is positioned. A bracket 12 for holding the strand of hair 4 is arranged on the outer surface of the sleeve 11 with a slot-shaped opening 13 in the bracket 12 designed to be wider than the slot and which approximately fits the slot 5 in the sleeve 11. When the strand of hair 4 is clamped between the bracket 12 and the sleeve 11, the ends 2 are between the opening 13 and the slot 5. Thus they are caught by the flow of air 9 and blown through

the opening 13 in the bracket 12, where they can be cut off outside the bracket 12 by a cutting mechanism 6. The device 1 with the strand of hair 4 clamped in it is pulled back along the strand. The flow of air 9 from the slot 5 easily blows the split ends of the hair, i.e. the area close to the ends 2, out through the opening 13 where they can be cut off by the blade 18 of the manually operated cutting mechanism.

[0014] A divider tip 16 on the body 3 of the device 1 serves to separate each strand of hair 4 with split ends. The strand of hair 4 is placed under the open bracket by pressing the button 20. This triggers a spring 15 force which causes the bracket 12 to rotate about a joint 14 back to its starting position against the sleeve 11, thereby clamping the strand of hair in place 4. A row 17 of comb teeth is positioned on the bracket along the two opposite edges of the bracket 12 to hold the strand of hair 4 constantly spread out while the device 1 is pulled back along the strand of hair 4.

- 1 Device
- 2 End
- 3 Body
- 4 Strand of hair
- 5 Slot
- 6 Cutting mechanism
- 7 Connecting part
- 8 Hot air brush
- 9 Flow of air
- 10 Inside area
- 11 Sleeve
- 12 Bracket
- 13 Opening
- 14 Joint
- 15 Spring
- 16 Divider tip
- 17 Row of comb teeth
- 18 Blade
- 19 Edge

20 Button

Claims

- 5 1. Device (1) for cutting off split ends (2) of hair with a body (3) for holding a strand of hair (4) and a slot (5) into which the ends are inserted (2) so that the ends (2) can be cut off with a cutting device (6), wherein the device (1) has a connecting part (7) designed to be connected with a hair styling device, especially a blow dryer or hot air brush (8) to allow a flow of air (9) produced by that device to flow in an inside area (10) of the device (1) and wherein the inside area (10) is located in a sleeve (11) of the body (3) in which the slot (5) is positioned, wherein a bracket (12) is present on the outer surface of the sleeve (11) for holding the strand of hair (4), **characterized in that** an opening (13) is formed in the bracket (12) which at least partially fits the slot (5) on the sleeve (11) so that when the strand of hair (4) is clamped between the bracket (12) and the sleeve (11), the ends (2) are located between the opening (13) and the slot (5) and are thereby caught by the flow of air (9) and are blown through the opening (13) in the bracket (12) to the other side of the bracket (12) where they can be cut off by the cutting mechanism (6).
- 10 2. Device according to Claim 1, wherein the bracket (12) is connected with the body (3) by means of a joint (14) and is held on the sleeve (11) by means of a spring (15).
- 15 3. Device according to Claim 1 or Claim 2, wherein a dividing tip (16) is arranged on the device (1) to cut off a strand of hair (4) from the hair.
- 20 4. Device according to one of Claims 1 through 3, wherein a row (17) of comb teeth is arranged either on the sleeve (11) or on the bracket (12) between the sleeve (11) and the bracket (12).
- 25 5. A device according to Claim 4, wherein the row (17) runs along the edge (19) of the bracket (12).
- 30 6. Device according to Claim 5, wherein there is a row (17) on each of the two opposite sides of the bracket (12).

Patentansprüche

- 50 1. Gerät (1) zum Abschneiden von gespaltenen Haarenden (2) mit einem Körper (3) zum Halten einer Haarsträhne (4) und einem Schlitz (5), in den die Enden (2) eingeführt werden, so dass die Enden (2) mit einem Schneidgerät (6) abgeschnitten werden

können, wobei das Gerät (1) einen Verbindungsteil (7) auf weist, der dafür bestimmt ist, mit einem Friergerät, besonders einem Föhn oder einer Heißluftbürste (8), verbunden zu werden, um zu ermöglichen, dass ein durch dieses Gerät erzeugter Luftstrom (9) in einen Innenbereich (10) des Geräts (1) strömt, und wobei sich der Innenbereich (10) in einer Muffe (11) des Körpers (3) befindet, in welcher der Schlitz (5) positioniert ist, wobei eine Klemme (12) an der Außenoberfläche der Muffe (11) vorhanden ist, um die Haarsträhne (4) zu halten, **dadurch gekennzeichnet, dass** eine Öffnung (13) in der Klemme (12) ausgebildet ist, die mindestens teilweise auf den Schlitz (5) an der Muffe (11) passt, so dass dann, wenn die Haarsträhne (4) zwischen der Klemme (12) und der Muffe (11) eingeklemmt ist, die Enden (2) sich zwischen der Öffnung (13) und dem Schlitz (5) befinden und dabei durch den Luftstrom (9) erfasst und durch die Öffnung (13) in der Klemme (12) auf die andere Seite der Klemme (12) geblasen werden, wo sie durch den Schneidmechanismus (6) abgeschnitten werden können.

2. Gerät nach Anspruch 1, wobei die Klemme (12) durch ein Gelenk (14) mit dem Körper (3) verbunden ist und durch eine Feder (15) an der Muffe (11) gehalten wird.
3. Gerät nach Anspruch 1 oder Anspruch 2, wobei eine Trennspitze (16) an dem Gerät (1) angeordnet ist, um eine Haarsträhne (4) von dem Haar zu trennen.
4. Gerät nach einem der Ansprüche 1 bis 3, wobei eine Reihe (17) von Kammzähnen entweder an der Muffe (11) oder an der Klemme (12) zwischen der Muffe (11) und der Klemme (12) angeordnet ist.
5. Gerät nach Anspruch 4, wobei die Reihe (17) entlang dem Rand (19) der Klemme (12) verläuft.
6. Gerät nach Anspruch 5, wobei eine Reihe (17) an jeder der beiden gegenüberliegenden Seiten der Klemme (12) vorhanden ist.

Revendications

1. Dispositif (1) pour couper les extrémités fractionnées (2) de cheveux avec un corps (3) pour maintenir une mèche de cheveux (4) et une encoche (5) dans laquelle les extrémités sont insérées (2) de sorte que les extrémités (2) peuvent être coupées avec un dispositif de coupe (6), où le dispositif (1) a une partie de liaison (7) conçue pour être reliée à un dispositif de coiffage des cheveux, spécialement un sèche-cheveux ou une brosse soufflante (8) pour permettre à un flux d'air (9) produit par ce dispositif de s'écouler dans une zone intérieure (10) du dispositif (1) et dans

lequel la zone intérieure (10) est située dans un manchon (11) du corps (3) dans lequel l'encoche (5) est positionnée, dans lequel un étrier (12) est présent sur la surface externe du manchon (11) pour maintenir la mèche de cheveux (4), **caractérisé en ce qu'une** ouverture (13) est formée dans l'étrier (12) laquelle ajuste au moins partiellement l'encoche (5) sur le manchon (11) de sorte que lorsque la mèche de cheveux (4) est clampée entre l'étrier (12) et le manchon (11), les extrémités (2) sont situées entre l'ouverture (13) et l'encoche (5) et sont de ce fait capturées par le flux d'air (9) et sont soufflées à travers l'ouverture (13) dans l'étrier (12) vers l'autre côté de l'étrier (12) où elles peuvent être coupées par le mécanisme de coupe (6).

2. Dispositif selon la revendication 1, dans lequel l'étrier (12) est relié au corps (3) au moyen d'une articulation (14) et est maintenu sur le manchon (11) au moyen d'un ressort (15).
3. Dispositif selon la revendication 1 ou la revendication 2, dans lequel un bout de division (16) est arrangé sur le dispositif (1) pour couper une mèche de cheveux (4) des cheveux.
4. Dispositif selon l'une des revendications 1 à 3, dans lequel une ligne (17) de dents de peigne est arrangée ou sur le manchon (11) ou sur l'étrier (12) entre le manchon (11) et l'étrier (12).
5. Dispositif selon la revendication 4, dans lequel la ligne (17) s'étend le long du bord (19) de l'étrier (12).
6. Dispositif selon la revendication 5, dans lequel il y a une ligne (17) sur chacun des deux côtés opposés de l'étrier (12).

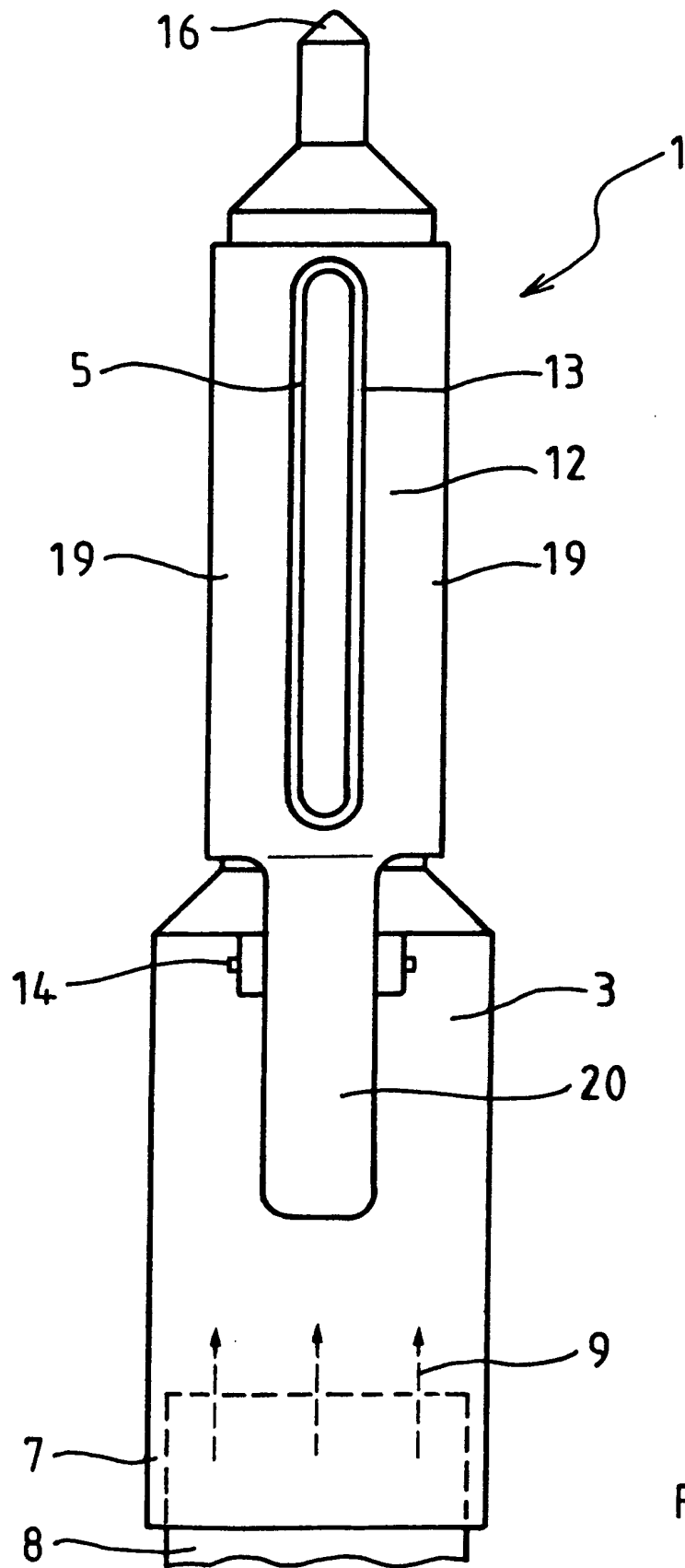
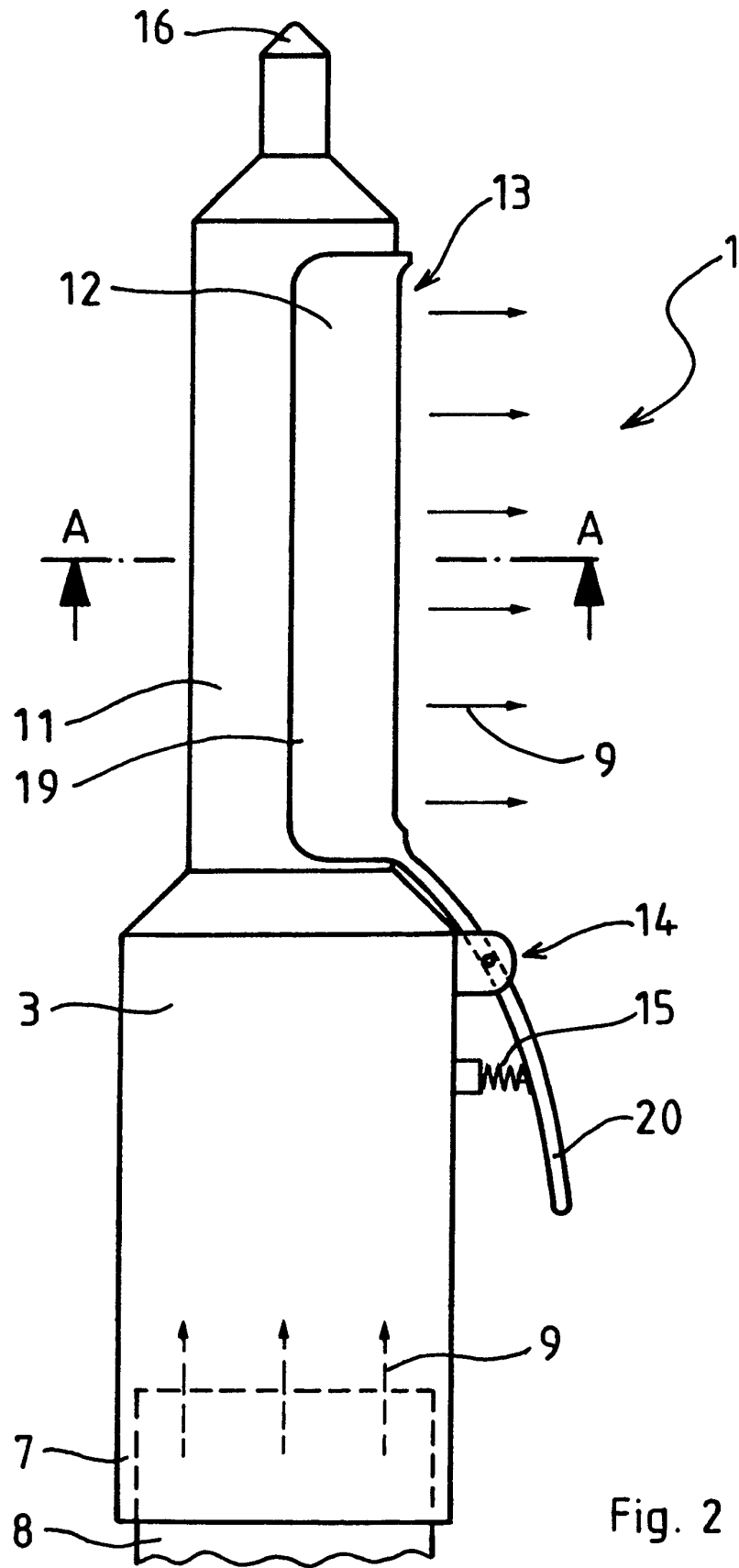
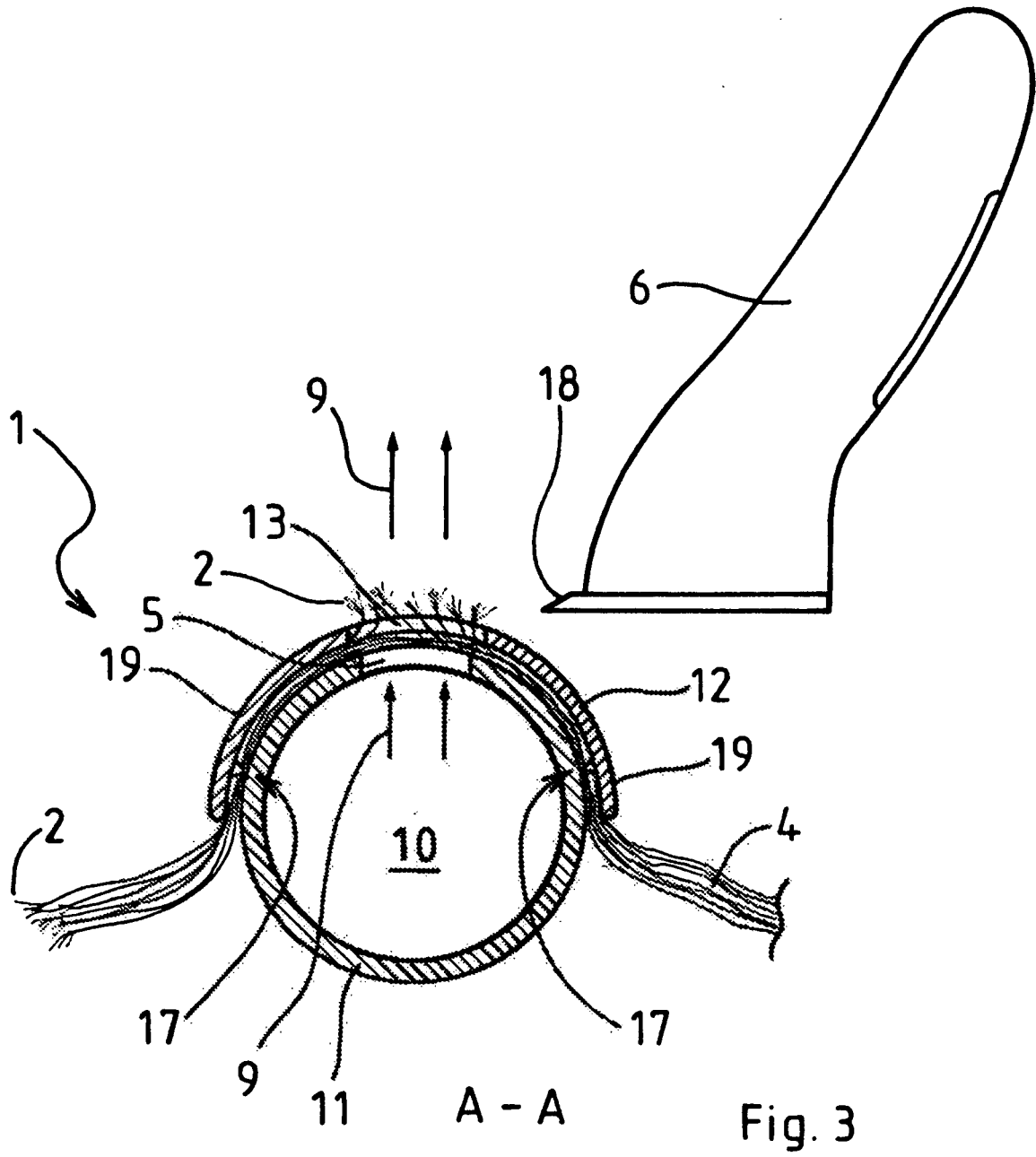


Fig. 1





REFERENCES CITED IN THE DESCRIPTION

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