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(54) **HAIRDRESSING TOOL, HAIRDRESSING SYSTEM AND METHOD FOR HAIRDRESSING**

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(73) Proprietor: **Zizzorz Kapperz VOF**
**2311 CX Leiden (NL)**

(72) Inventor: **STIKKELBROECK, Franciscus Johannes**
**2311 CX Leiden (NL)**

(74) Representative: **Melchior, Robin**
**Octrooibureau Vriesendorp & Gaade B.V.**
**Koninginnegracht 19**
**2514 AB Den Haag (NL)**

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## Description

BACKGROUND

**[0001]** The invention relates to a hairdressing tool, a hairdressing system and a method for hairdressing.

**[0002]** Conventional hairdressing involves performing complex manual positioning techniques, such as manipulation, gathering, selection and/or separation, on a section of hair to prepare said section or underlying sections of hair for the actual hairdressing techniques, such as cutting, coloring, shaping and/or providing attaching hair extensions. Hairdressers are extensively trained to perform the positioning techniques with one hand while executing the hairdressing techniques simultaneously with the other hand. This limits the ability of the hairdresser to execute accurate and/or complex hairdressing techniques.

**[0003]** It is an object of the present invention to provide a hairdressing tool, a hairdressing system and a method for hairdressing that can simplify hairdressing. A hairdressing tool is for instance known from US2014261525A1.

SUMMARY OF THE INVENTION

**[0004]** A hairdressing tool according to the invention is defined by claim 1. The hairdressing tool comprising a tirst mouthpiece, wherein the first mouthpiece comprises a suction inlet, a suction outlet, and a suction duct extending between the suction inlet and the suction outlet, wherein the suction outlet is connectable to a suction unit, wherein the suction inlet is arranged for sucking in a section of hair from the human head into the suction duct and wherein the suction duct is arranged for retaining said section of hair along a retaining path inside the suction duct wherein the suction inlet comprises an inlet opening with an inlet width and an inlet height, wherein the ratio between the inlet width and the inlet height is at least 10:1, preferably at least 15:1 and most preferably at least 20:1.

**[0005]** This results in a relatively wide suction inlet in which the section of hair can be spread out in the width direction to allow for precise and/or accurate hairdressing techniques.

**[0006]** The suction duct defines a laminar flow area extending from the suction inlet towards the suction outlet along the retaining path, wherein the suction duct at the laminar flow area is formed so as to generate a laminar or a substantially laminar flow of air along said retaining path. Hence, the section of hair that is retained in said laminar flow area can be kept substantially stable and/or still, so that the hairdresser can accurately perform hairdressing techniques on said section of hair.

**[0007]** The suction duct has a cross section perpendicular to the retaining path, which cross section is constant or substantially constant in the laminar flow area. Hence, the air flow rate can be kept substantially constant in said laminar flow area.

**[0008]** In a preferred embodiment, the inlet height is less than ten millimeters, preferably less than eight millimeters and most preferably less than six millimeters

**[0009]** In a further embodiment the suction duct has a duct height and a duct width, wherein the ratio between the duct width and the duct height is at least 10:1, preferably at least 15:1 and most preferably at least 20:1. In particular, the duct height is less than ten millimeters, preferably less than eight millimeters and most preferably less than six millimeters. Said duct is relatively wide, which can promote formation of a laminar air flow inside said suction duct.

**[0010]** In a further embodiment the suction duct defines a retaining plane having a width of at least eight centimeters, preferably at least ten centimeters. Said width allows for the section of hair to be spread out across the retaining plane, to allow for precise and/or accurate hairdressing techniques on said section of hair.

**[0011]** In a further embodiment the retaining path is linear. Hence, the section of hair can be retained in a substantially linear manner.

**[0012]** Below is a list of optional features that could be incorporated either alone or in combination into the first mouthpiece or any of the further mouthpieces, if applicable.

**[0013]** In an exemplary embodiment the first mouthpiece is at least partially transparent at the suction duct to allow visual inspection of the section of hair inside the suction duct from outside the first mouthpiece. Hence, the hairdresser can easily assess the condition of the section of hair and/or prepare said section of hair for the hairdressing techniques.

**[0014]** Preferably, the first mouthpiece is provided with a magnification section located at the suction duct for visually inspecting the section of hair inside the suction duct from outside the first mouthpiece. The magnification section, e.g. a lens, can further increase the accuracy of the visual inspection. Preferably, the magnification is such that each hair in the section of hair can be inspected individually.

**[0015]** In another embodiment the first mouthpiece is provided with one or more leveling instruments for visually indicating the orientation of the first mouthpiece relative to a horizontal and/or a vertical plane. Hence, the hairdresser can set the orientation of the first mouthpiece more accurately based on the feedback from the one or more leveling instruments.

**[0016]** In a further embodiment the first mouthpiece comprises a laser for projecting a laser line and/or a laser pattern onto the section of hair retained in the first mouthpiece. The laser line and/or pattern can be used to more accurately position the first mouthpiece with respect to human head and/or to guide the hairdresser in performing the hairdressing techniques on the section of hair.

**[0017]** In a further embodiment the first mouthpiece comprises one or more projections that are adjustable in length with respect to the suction inlet for setting a dis-

tance between the human head and the suction inlet. Hence, the section of hair can be retained more accurately, i.e. with the first mouthpiece at the a preset distance from the human head.

**[0018]** In a further embodiment the first mouthpiece comprises a working surface that is extendable from the suction inlet in an extension direction in line with the retaining path for supporting at least a part of the section of hair between the suction inlet and the human head. The working surface can provide an effective working surface that can prevent the section of hair from slacking when performing hairdressing techniques.

**[0019]** In a further embodiment the first mouthpiece comprises one or more conduits that are connectable in fluid communication to a source of warm air, hot air, steam or liquid, wherein the one or more conduits debouch into the suction duct, preferably at or near the suction inlet. Hence, the section of hair can be dried, heated, washed and/or colored while said section of hair is retained in the suction duct.

**[0020]** In another embodiment, the hairdressing tool further comprises a support that is arranged for positioning the first mouthpiece with respect to a human head, wherein the hairdressing tool further comprises a fixation member for fixing the position of the first mouthpiece with respect to the support, wherein the hairdressing tool is arranged for hands-free retaining of said section of hair in the suction duct when the position of the first mouthpiece with respect to the support is fixed. The first mouthpiece can be conveniently set up for hands-free retaining of a section of hair to allow a hairdresser to perform hairdressing techniques, such as cutting, coloring, shaping and/or attaching hair extensions, on said section of hair or underlying sections of hair. There is no need for complex and simultaneously positioning techniques as in the prior art. Hence, a single hairdresser can execute complex hairdressing techniques with both hands and without the assistance of others.

**[0021]** In a further embodiment thereof the first mouthpiece comprises an air chamber between the suction duct and the suction outlet, wherein the air chamber is formed so as to generate a turbulent flow of air between the suction duct and the suction outlet. Preferably, the air chamber has a cross section perpendicular to the retaining path that is larger than the cross section of the suction duct perpendicular to said retaining path. The turbulent air flow in the air chamber can isolate the mouthpiece from the sound waves that originate from the suction unit upstream of the suction outlet.

**[0022]** In a preferred embodiment the support is a stand that is arranged to be placed on a floor. Hence, the support can be easily moved around over the floor with respect to the human head.

**[0023]** In alternative embodiment the support is a mount that is arranged to be mounted to a mounting surface of an object or a building. This allows for the support to be mounted in a secure and/or stable manner. The support can for example be mounted to a wall, the ceiling or a hairdressing chair.

**[0024]** In a further embodiment the first mouthpiece is coupled to the support via a coupling, wherein the coupling is arranged for rotating the first mouthpiece with respect to the support about a first axis of rotation. Preferably, the same coupling is also arranged for rotating the first mouthpiece with respect to the support about a second axis of rotation orthogonal to the first axis of rotation. Most preferably, the same coupling is additionally arranged for rotating the first mouthpiece with respect to the support about a third axis of rotation orthogonal to the first axis of rotation and the second axis of rotation. Hence, the first mouthpiece can be rotatable about one, two or even three axes of rotation so that the first mouthpiece can be positioned in many, if not any, orientation with respect to the support. Preferably, the coupling allows for three-dimensionally positioning the first mouthpiece relative to the human head.

**[0025]** In a further embodiment the hairdressing tool comprises a second and/or further mouthpieces supported by the same support and arranged for retaining further sections of hair in different positions with respect to the support. Hence, several sections of hair can be retained simultaneously and hands-free by the respective mouthpieces, to allow for further and/or more complex hairdressing techniques.

**[0026]** Alternatively or additionally, the hairdressing tool comprises a second and/or further mouthpieces, wherein the first mouthpiece and the second and/or further mouthpieces are interchangeable. Hence, the hairdresser can replace one mouthpiece by another mouthpiece depending on the hairdressing technique to be performed.

**[0027]** According to a second aspect, the invention provides a hairdressing system comprising the hairdressing tool to according to the previously discussed embodiments that include the support, wherein the hairdressing system further comprises a suction unit at the support or separate from the support, wherein the suction unit is connectable in fluid communication to the suction outlet of the first mouthpiece.

**[0028]** The suction unit is arranged to generate the suction in the suction duct to retain the section of hair. The suction unit can be connected to or placed near the support. Alternatively, the suction unit can be separated from the support, e.g. in a separate room, for reasons of noise isolation. One suction unit can be connected to several hairdressing tools simultaneously.

**[0029]** In an embodiment thereof the hairdressing system comprises a suction hose for connecting the suction outlet of the first mouthpiece in fluid communication to the suction unit. The suction hose can be guided through and/or along the support to connect the suction outlet to the suction unit.

**[0030]** In a further embodiment thereof the suction unit is provided with a filter for separating cut-off hairs from the air flow. Hence, in addition to retaining the section of hair, the first mouthpiece can also be used to suck in cut-

off hairs to prevent said cut-off hairs from falling on the ground. The cut-off hairs can be collected centrally at the suction unit and can be disposed of regularly.

**[0031]** The invention provides a method for hairdressing with the use of the hairdressing tool according to the invention, wherein the method comprises the step of:

- guiding the section of hair from the human head into the suction duct and retaining said section of hair along a retaining path inside the suction duct with suction.

**[0032]** The invention provides a method for hairdressing with the use of the hairdressing tool according to the invention that includes the support, wherein the method comprises the steps of;

- guiding the section of hair from the human head into the suction duct and retaining said section of hair along a retaining path inside the suction duct with suction;
- using the fixation member to fix the position of the first mouthpiece with respect to the support; and
- performing hairdressing techniques on said section or underlying sections of hair while the section of hair is retained hands-free in the suction duct of the hairdressing tool.

**[0033]** Hence, by employing the hairdressing tool according to the invention in the method according to the invention, the first mouthpiece can be conveniently set up for hands-free retaining of a section of hair to allow a hairdresser to perform hairdressing techniques, such as cutting, coloring and/or shaping, on said section of hair or underlying sections of hair. There is no need for complex and simultaneously positioning techniques as in the prior art. Hence, a single hairdresser can execute complex hairdressing techniques with both hands and without the assistance of others.

**[0034]** In a preferred embodiment of the method, the hairdressing tool comprises a second and/or further mouthpieces supported by the same support, wherein the method further comprises the step of retaining further sections of hair in different positions with respect to the support. Hence, several sections of hair can be retained simultaneously and hands-free by the respective mouthpieces, to allow for further and/or more complex hairdressing techniques.

**[0035]** Alternatively or additionally, the hairdressing tool comprises a second and/or further mouthpieces, wherein the method further comprises the step of interchanging the first mouthpiece and the second and/or further mouthpieces. Hence, the hairdresser can replace one mouthpiece by another mouthpiece depending on the hairdressing technique to be performed.

**[0036]** The various aspects and features described and shown in the specification can be applied, individually, wherever possible. These individual aspects, in particular the aspects and features described in the attached dependent claims, can be made subject of divisional patent applications.

## BRIEF DESCRIPTION OF THE DRAWINGS

**[0037]** The invention will be elucidated on the basis of an exemplary embodiment shown in the attached schematic drawings, in which:

figure 1 shows a side view of a hairdressing tool with a first mouthpiece according to a first embodiment of the invention;
figure 2 shows an isometric view of the first mouthpiece according to figure 1;
figure 3 shows an isometric view of the first mouthpiece according to figure 2 while retaining a section of hair;
figure 4 shows a cross section of the first mouthpiece according to the line IV-IV in figure 3;
figure 5 shows a top view of the first mouthpiece according to figure 3;
figure 6 shows an alternative hairdressing tool with a first mouthpiece and a second mouthpiece according to a second embodiment of the invention;
figures 7-14 show various embodiments of the first mouthpiece with optional features that could be incorporated either alone or in combination into the first mouthpiece or any of the further mouthpieces, if applicable; and
figure 15 show a hairdressing system comprising several hairdressing tools according to a third embodiment of the invention.

## DETAILED DESCRIPTION OF THE INVENTION

**[0038]** Figures 1-5 show a hairdressing tool 1 according to a first exemplary embodiment of the invention. The hairdressing tool 1 is used for hands-free retaining of a section of hair 6, as shown in figure 3. 'Hands-free retaining' in the context of the present invention means retaining without the use of hands, so that the hairdresser has both hands available for performing other hairdressing on the retained section of hair 6 or the underlying section of hair.

**[0039]** As shown in figure 1, the hairdressing tool 1 comprises a first mouthpiece 2 and a support 3 that is arranged for positioning the first mouthpiece 2 with respect to a human head, for example in the orientation as shown in figure 3. The first mouthpiece 2 is coupled to the support 3 via a coupling 4, in this exemplary embodiment in the form of a flexible suction hose 8, that is arranged for rotating the first mouthpiece 2 with respect to the support 3 about a first axis of rotation X. Alternatively, the coupling 4 may be a hinge-like coupling with one or more degrees of freedom, in which case the flexible suction hose 8 is separately attached to the first mouthpiece 2. Preferably, the coupling 4 is arranged for rotating the

first mouthpiece 2 with respect to the support 3 about a second axis of rotation Y orthogonal to the first axis of rotation X. Most preferably, the coupling 4 is arranged for rotating the first mouthpiece 2 with respect to the support about a third axis of rotation R orthogonal to the first axis of rotation X and the second axis of rotation Y. Hence, said coupling 4 provides considerable degrees of freedom for positioning the first mouthpiece 2 with respect to a human head.

**[0040]** The hairdressing tool 1 further comprises a fixation member 5 that is arranged to fixate the first mouthpiece 2 in a set position with respect to the support 3. The hairdressing tool 1 is arranged for hands-free retaining of said section of hair 6 in the suction duct 23 when the position of the first mouthpiece 2 with respect to the support 3 is fixed. In this exemplary embodiment, the fixation member 5 is a plastically deformable, stiff element 50 running alongside and/or parallel to the coupling 4 between the first mouthpiece 2 and the support 3. Said fixation member 5 is sufficiently stiff to support the weight of the first mouthpiece 2 and to maintain the position thereof relative to the support 3. When additional manual force is applied, the positioning of the first mouthpiece 2 with respect to the support 3 can be conveniently altered. Alternatively, mechanical fasteners, such as wing nuts or clamps can be used to fixate the position of the first mouthpiece 2 with respect to the support 3.

**[0041]** As shown in figures 1-5, the first mouthpiece 2 comprises a mouthpiece body 20 with a suction inlet 21, a suction outlet 22, and a suction duct 23 extending between the suction inlet 21 and the suction outlet 22. The suction outlet 22 is connectable via the suction hose 8 to a suction unit 9, as for example shown in figure 15. Said suction unit 9 is arranged for generating an low pressure or partial vacuum for drawing ambient air into the suction inlet 21, through the suction duct 23 and out of the suction outlet 22. The capacity of the suction unit 9 is sufficient to generate an air flow rate inside the suction duct 23 that is sufficient to reliably retain the section of hair 6 inside the first mouthpiece 2.

**[0042]** As shown in figures 2 and 3, the suction inlet 21 has an inlet opening 24 that is dimensioned and/or shaped to suck the section of hair 6 into the suction duct 23 when said section of hair 6 is presented by the hairdresser in the proximity of said inlet opening 24. The suction duct 23 is arranged for retaining said section of hair 6 along a retaining path P inside the suction duct 23. As best seen in figure 4, the suction duct 23 defines a laminar flow area 25 extending from the suction inlet 21 towards the suction outlet 22 along the retaining path P. The suction duct 23 at the laminar flow area 25 is formed so as to generate a laminar or a substantially laminar flow of air A along said retaining path P. To achieve said laminar flow of air A, the suction duct 23 has a cross section perpendicular to the retaining path P, which cross section is constant or substantially constant in the laminar flow area 25. In this exemplary embodiment, the retaining path P inside the suction duct 23 is linear or substantially linear.

**[0043]** The suction duct 23 has a ratio between the duct height H and a duct width W of at least 10:1, preferably at least 15:1 and most preferably at least 20:1. In this exemplary embodiment, the duct height H is less than ten millimeters, preferably less than eight millimeters and most preferably less than six millimeters. As shown in figure 5, the suction duct 23 further defines a retaining plane K having a width of at least eight centimeters, preferably at least ten centimeters.

**[0044]** To prevent any turbulence generation between the inlet opening 24 and the suction duct 23, it is preferred that the inlet opening 24 has the same ratio and or the same dimensions as the suction duct 23. Therefore, in this exemplary embodiment, the inlet height is equal to the duct height H and is less than ten millimeters, preferably less than eight millimeters and most preferably less than six millimeters.

**[0045]** In the embodiment as shown in figures 1-5, the first mouthpiece 2 comprises an air chamber 26 between the suction duct 23 and the suction outlet 22. The air chamber 26 is formed so as to generate a turbulent flow of air T between the suction duct 23 and the suction outlet 22. The turbulent flow of air T interrupts the sound waves originating from the suction unit 9 and can thus reduce the noise of the suction unit 9 that is perceived at the first mouthpiece 2. In this exemplary embodiment, the air chamber 26 has a cross section perpendicular to the retaining path P that is larger than the cross section of the suction duct 23 perpendicular to said retaining path P.

**[0046]** The first mouthpiece 2 is preferably at least partially transparent at the suction duct 23 to allow visual inspection of the section of hair 6 inside the suction duct 23 from outside the first mouthpiece 2.

**[0047]** Figure 6 shows an alternative embodiment of the hairdressing tool 101 that comprise the first mouthpiece 2 of figures 1-5 and a second mouthpiece 2' and/or further mouthpieces supported by the same support 3 and arranged for retaining further sections of hair in different positions with respect to the support 3. Said alternative hairdressing tool 101 is provided with an adapter 110 for mounting the two mouthpieces 2, 2' to the same suction hose 8.

**[0048]** The one or more mouthpieces 2, 2' of the hairdressing tool 1 are interchangeable depending on the hairdressing techniques that are to be performed. Figures 7-14 show a variety of further mouthpieces 102, 202, 302, 402, 502, 602, 702, 802 that can be placed at the coupling 4 of the hairdressing tool 1 instead of the previously described first mouthpiece 2.

**[0049]** Figure 7 shows an unclaimed first alternative mouthpiece 102 that differs from the first mouthpiece 2 as shown in figures 1-5 in that its suction duct 123 extends along a non-linear retaining path P. In this example, the retaining path P is at least partially helical. Said retaining path P can be used to shape the section of hair 6 into a curl. In an alternative embodiment (not shown), the retaining path P may be corrugated to shape the section

of hair 6 into a wave pattern. Other non-linear paths P may be provided depending on the hairdressing requirements.

**[0050]** Figure 8 shows an unclaimed second alternative mouthpiece 202 that differs from the first mouthpiece 2 as shown in figures 1-5 in that it has three individual or separate suction ducts 223 that extend parallel or substantially parallel to each other along respective retaining paths P1, P2, P3. Each suction duct 223 is arranged for retaining a section of hair 61, 62, 63 along said retaining path P1, P2, P3. By applying elastic bands E around said suction ducts 223 prior to the retaining, said elastic bands E can be slid off the alternative mouthpiece 202 and onto the retained sections of hair 61, 62, 63. Hence, the alternative mouthpiece 202 of figure 8 provides a convenient way of applying elastic bands E around sections of hair 61, 62, 63.

**[0051]** Figure 9 shows a third alternative mouthpiece 302 that differs from the previously discussed mouthpiece 2 as shown in figures 1-5 in that it is provided with a magnification section 327 located at the suction duct 323 for visually inspecting the section of hair 6 inside the suction duct 323 from outside the alternative mouthpiece 302.

**[0052]** Figure 10 shows a fourth alternative mouthpiece 402 that differs from the previously discussed mouthpiece 2 as shown in figures 1-5 in that it is provided with a laser 427 on the mouthpiece body 420 for projecting a laser line L and/or a laser pattern onto the section of hair 6 retained in the alternative mouthpiece 402.

**[0053]** Figure 11 shows a fifth alternative mouthpiece 502 that differs from the previously discussed mouthpiece 2 as shown in figures 1-5 in that it is provided with one or more leveling instruments 527 for visually indicating the orientation of the alternative mouthpiece 502 relative to a horizontal and/or a vertical plane.

**[0054]** Figure 12 shows a sixth alternative mouthpiece 602 that differs from the previously discussed mouthpiece 2 as shown in figures 1-5 in that it comprises one or more projections 627, 628 that are adjustable in length with respect to the suction inlet for setting a distance between the human head and the suction inlet.

**[0055]** Figure 13 shows a seventh alternative mouthpiece 702 that differs from the previously discussed mouthpiece 2 as shown in figures 1-5 in that it comprises a working surface 727 that is extendable from the suction inlet 721 in an extension direction D in line with the retaining path P for supporting at least a part of the section of hair 6 between the suction inlet 721 and the human head.

**[0056]** Figure 14 shows a eighth alternative mouthpiece 802 that differs from the previously discussed mouthpiece 2 as shown in figures 1-5 in that it comprises one or more conduits 827, 828 that are connectable in fluid communication to a source of warm air, hot air, steam or liquid (not shown), wherein the one or more conduits 827, 828 debouch into the suction duct 823, preferably at or near the suction inlet 821.

**[0057]** Figure 15 schematically shows a hairdressing shop 900 with a plurality of hairdressing chairs 901, 902, 903 and a plurality of the aforementioned hairdressing tools 1, 101 placed in close proximity to those chairs 901, 902, 903. Two of the hairdressing tools 1, 101 are provided with the previously discussed stand 30 that is arranged to be placed on the floor 990 of the hairdressing shop 900. Figure 15 shows a further hairdressing tool 201 that is provided with an alternative support 203 in the form of a mount 230 that is arranged to be mounted to a mounting surface of an object or a building, e.g. to a wall 991 or directly to one of the chairs 901, 902, 903.

**[0058]** The hairdressing tools 1, 101, 201 in the hairdressing shop 900 of figure 15 form part of a hairdressing system 7. In said hairdressing system 7, the suction unit 9 can be provided at the support 3, as with the hairdressing tool 1. Alternatively, the suction unit 9 may be provided separate from the support 3, as with the hairdressing tools 101, 201. In both cases, the suction unit 9 is connected to in fluid communication to the respective first and second mouthpieces 2, 2' via the suction hose 8. When the suction unit 9 is separate from the support 3, it may be provided in a different room of the building, e. g. separated from the room where the hairdressing chairs 901, 902, 903 are located, to prevent noise.

**[0059]** Preferably, the suction unit 9 is provided with a filter 90 for separating cut-off hairs from the air flow. Hence, the hairdressing tool 1, 101, 201 can be used when cutting hairs.

**[0060]** It is to be understood that the above description is included to illustrate the operation of the preferred embodiments and is not meant to limit the scope of the invention. From the above discussion, many variations will be apparent to one skilled in the art that would yet be encompassed by the scope of the present invention.

## Claims

1. Hairdressing tool (1, 101, 201) comprising a first mouthpiece (2, 302, 402, 502, 602, 702, 802), wherein the first mouthpiece comprises a mouthpiece body (20, 420) with a suction inlet (21, 721, 821), a suction outlet (22), and a suction duct (23, 323) extending between the suction inlet (21, 721, 821) and the suction outlet (22), wherein the suction outlet (22) is connectable to a suction unit (9), wherein the suction inlet (21, 721, 821) is arranged for sucking in a section of hair (6) from the human head into the suction duct (23, 323) and wherein the suction duct (23, 323) is arranged for retaining said section of hair (6) along a retaining path (P) inside the suction duct (23, 323), wherein the mouthpiece body (20, 420) is continuous between the suction inlet (21, 721, 821) and the suction outlet (22) such that the suction duct (23, 323) is open only at the suction inlet (21, 721, 821) and the suction outlet (22), wherein the suction inlet (21, 721, 821) comprises an inlet opening (24) with an

inlet width (W) and an inlet height (H), **characterized in that** the ratio between the inlet width (W) and the inlet height (H) is at least 10:1, wherein the suction duct (23, 323) defines a laminar flow area (25) extending from the suction inlet (21, 721, 821) towards the suction outlet (22) along the retaining path (P), wherein the suction duct (23, 323) at the laminar flow area (25) has a cross section perpendicular to the retaining path (P) that is constant or substantially constant in the laminar flow area (25) so as to generate a laminar or a substantially laminar flow of air along said retaining path (P).

**2.** Hairdressing tool (1, 101, 201) according to claim 1, wherein the ratio between the inlet width (W) and the inlet height (H) is at least 15:1 and preferably at least 20:1.

**3.** Hairdressing tool (1, 101, 201) according to any one of the preceding claims, wherein the inlet height (H) is less than ten millimeters, preferably less than eight millimeters and most preferably less than six millimeters.

**4.** Hairdressing tool (1, 101, 201) according to any one of the preceding claims, wherein the suction duct (23, 323) has a duct height (H) and a duct width (W), wherein the ratio between the duct width (W) and the duct height (H) is at least 10:1, preferably at least 15:1 and most preferably at least 20:1, preferably wherein the duct height (H) is less than ten millimeters, preferably less than eight millimeters and most preferably less than six millimeters, more preferably wherein the suction duct (23, 323) defines a retaining plane (K) having a width of at least eight centimeters, preferably at least ten centimeters.

**5.** Hairdressing tool (1, 101, 201) according to any one of the preceding claims, wherein the retaining path (P) is linear.

**6.** Hairdressing tool (1, 101, 201) according to any one of the preceding claims, wherein the first mouthpiece (2, 302, 402, 502, 602, 702, 802) comprises an air chamber (26) between the suction duct (23, 323) and the suction outlet (22), wherein the air chamber (26) is formed so as to generate a turbulent flow of air between the suction duct (23, 323) and the suction outlet (22), preferably wherein the air chamber (26) has a cross section perpendicular to the retaining path (P) that is larger than the cross section of the suction duct (23, 323) perpendicular to said retaining path (P).

**7.** Hairdressing tool (1, 101, 201) according to any one of the preceding claims, wherein the first mouthpiece (2, 302, 402, 502, 602, 702, 802) is at least partially transparent at the suction duct (23, 323) to allow visual inspection of the section of hair (6) inside the suction duct (23, 323) from outside the first mouthpiece (2, 302, 402, 502, 602, 702, 802), preferably wherein the first mouthpiece (302) is provided with a magnification section (327) located at the suction duct (323) for visually inspecting the section of hair (6) inside the suction duct (323) from outside the first mouthpiece (302).

**8.** Hairdressing tool (1, 101, 201) according to any one of the preceding claims, wherein the first mouthpiece (502) is provided with one or more leveling instruments (527) for visually indicating the orientation of the first mouthpiece (502) relative to a horizontal and/or a vertical plane; or wherein the first mouthpiece (402) comprises a laser (427) for projecting a laser line (L) and/or a laser pattern onto the section of hair (6) retained in the first mouthpiece (402).

**9.** Hairdressing tool (1, 101, 201) according to any one of the preceding claims, wherein the first mouthpiece (602) comprises one or more projections (627, 628) that are adjustable in length with respect to the suction inlet (21) for setting a distance between the human head and the suction inlet (21); or wherein the first mouthpiece (702) comprises a working surface (727) that is extendable from the suction inlet (721) in an extension direction (D) in line with the retaining path (P) for supporting at least a part of the section of hair (6) between the suction inlet (721) and the human head.

**10.** Hairdressing tool (1, 101, 201) according to any one of the preceding claims, wherein the first mouthpiece (802) comprises one or more conduits (827, 828) that are connectable in fluid communication to a source of warm air, hot air, steam or liquid, wherein the one or more conduits (827, 828) debouch into the suction duct (823), preferably at or near the suction inlet (821).

**11.** Hairdressing tool (1, 101, 201) according to any one of the preceding claims, wherein the hairdressing tool further comprises a support (3, 203) that is arranged for positioning the first mouthpiece (2, 302, 402, 502, 602, 702, 802) with respect to a human head, wherein the hairdressing tool (1, 101, 201) further comprises a fixation member (5) for fixing the position of the first mouthpiece (2, 302, 402, 502, 602, 702, 802) with respect to the support (3, 203), wherein the hairdressing tool (1, 101, 201) is arranged for hands-free retaining of said section of hair (6) in the suction duct (23, 323) when the position of the first mouthpiece (2, 302, 402, 502, 602, 702, 802) with respect to the support (3, 203) is fixed, preferably wherein the support (3) is a stand (30) that is arranged to be placed on a floor (990), or wherein the support (203) is a mount (230) that is arranged

to be mounted to a mounting surface of an object (991, 901, 902, 903) or a building.

**12.** Hairdressing tool (1, 101, 201) according to claim 11, wherein the first mouthpiece (2, 302, 402, 502, 602, 702, 802) is coupled to the support (3, 203) via a coupling (4), wherein the coupling (4) is arranged for rotating the first mouthpiece (2, 302, 402, 502, 602, 702, 802) with respect to the support (3, 203) about a first axis of rotation (X), preferably wherein the coupling (4) is arranged for rotating the first mouthpiece (2, 302, 402, 502, 602, 702, 802) with respect to the support (3, 203) about a second axis of rotation (Y) orthogonal to the first axis of rotation (X), more preferably wherein the coupling (4) is arranged for rotating the first mouthpiece (2, 302, 402, 502, 602, 702, 802) with respect to the support (3, 203) about a third axis of rotation (R) orthogonal to the first axis of rotation (X) and the second axis of rotation (Y) .

**13.** Hairdressing tool (101) according to claim 11 or 12, wherein the hairdressing tool (101) comprises a second and/or further mouthpieces (2') supported by the same support (3, 203) and arranged for retaining further sections of hair (6) in different positions with respect to the support (3, 203); or wherein the hairdressing tool (101) comprises a second and/or further mouthpieces (2'), wherein the first mouthpiece (2, 302, 402, 502, 602, 702, 802) and the second and/or further mouthpieces (2') are interchangeable.

**14.** Hairdressing system (7) comprising the hairdressing tool (1, 101, 201) according to any one of claims 11-13, wherein the hairdressing system (7) further comprises a suction unit (9) at the support (3, 203) or separate from the support (3, 203), wherein the suction unit (9) is connectable in fluid communication to the suction outlet (22) of the first mouthpiece (2, 302, 402, 502, 602, 702, 802), preferably wherein the hairdressing system (7) comprises a suction hose (8) for connecting the suction outlet (22) of the first mouthpiece (2, 302, 402, 502, 602, 702, 802) in fluid communication to the suction unit (9), more preferably wherein the suction unit (9) is provided with a filter (90) for separating cut-off hairs from the air flow.

**15.** Method for hairdressing with the use of the hairdressing tool (1, 101, 201) according to any one of claims 1-13, wherein the method comprises the step of:

- guiding the section of hair (6) from the human head into the suction duct (23, 323) and retaining said section of hair (6) along a retaining path (P) inside the suction duct (23, 323) with suction.

**16.** Method for hairdressing with the use of the hairdressing tool (1, 101, 201) according to any one of claims 11-13, wherein the method comprises the steps of:

- guiding the section of hair (6) from the human head into the suction duct (23, 323) and retaining said section of hair (6) along a retaining path (P) inside the suction duct (23, 323) with suction;
- using the fixation member (5) to fix the position of the first mouthpiece (2, 302, 402, 502, 602, 702, 802) with respect to the support (3, 203); and
- performing hairdressing techniques on said section (6) or underlying sections of hair while the section of hair (6) is retained hands-free in the suction duct (23, 323) of the hairdressing tool (1, 101, 201), preferably wherein the hairdressing tool (101) comprises a second and/or further mouthpieces (2') supported by the same support (3, 203), wherein the method further comprises the step of retaining further sections of hair (6) in different positions with respect to the support (3, 203), or wherein the hairdressing tool (101) comprises a second and/or further mouthpieces (2'), wherein the method further comprises the step of interchanging the first mouthpiece (2, 302, 402, 502, 602, 702, 802) and the second and/or further mouthpieces (2').

**Patentansprüche**

**1.** Frisierwerkzeug (1, 101, 201) mit einem ersten Ansatzstück (2, 302, 402, 502, 602, 702, 802), wobei das erste Ansatzstück einen Ansatzstückkörper (20, 420) mit einem Ansaugeinlass (21, 721, 821), einem Ansaugauslass (22) und einem Ansaugkanal (23, 323) aufweist, der sich zwischen dem Ansaugeinlass (21, 721, 821) und dem Ansaugauslass (22) erstreckt, wobei der Ansaugauslass (22) mit einer Ansaugeinheit (9) verbindbar ist, wobei der Ansaugeinlass (21, 721, 821) zum Ansaugen eines Abschnitts von Haaren (6) von dem menschlichen Kopf in den Ansaugkanal (23, 323) angeordnet ist, und wobei der Ansaugkanal (23, 323) zum Halten des Abschnitts von Haaren (6) entlang eines Haltewegs (P) im Inneren des Ansaugkanals (23, 323) angeordnet ist, wobei der Ansatzstückkörper (20, 420) zwischen dem Ansaugeinlass (21, 721, 821) und dem Ansaugauslass (22) derart durchgehend ist, dass der Ansaugkanal (23, 323) nur an dem Ansaugeinlass (21, 721, 821) und dem Ansaugauslass (22) offen ist, wobei der Ansaugeinlass (21, 721, 821) eine Einlassöffnung (24) mit einer Einlassbreite (W) und einer Einlasshöhe (H) aufweist, **dadurch gekennzeichnet, dass** das Verhältnis zwischen der Einlassbreite (W) und der Einlasshöhe (H) zumindest 10:1 beträgt, wobei der Ansaugkanal (23, 323) einen laminaren Strömungsbereich (25) definiert,

der sich von dem Ansaugeinlass (21, 721, 821) entlang des Haltewegs (P) in Richtung des Ansaugauslasses (22) erstreckt, wobei der Ansaugkanal (23, 323) an dem laminaren Strömungsbereich (25) einen Querschnitt senkrecht zu dem Halteweg (P) aufweist, der in dem laminaren Strömungsbereich (25) konstant oder im Wesentlichen konstant ist, um so eine laminare oder eine im Wesentlichen laminare Luftströmung entlang des Haltewegs (P) zu erzeugen.

**2.** Frisierwerkzeug (1, 101, 201) gemäß Anspruch 1, bei dem das Verhältnis zwischen der Einlassbreite (W) und der Einlasshöhe (H) zumindest 15:1 beträgt und vorzugsweise zumindest 20:1.

**3.** Frisierwerkzeug (1, 101, 201) gemäß einem der vorherigen Ansprüche, bei dem die Einlasshöhe (H) kleiner als zehn Millimeter ist, vorzugsweise kleiner als acht Millimeter und am bevorzugtesten kleiner als sechs Millimeter.

**4.** Frisierwerkzeug (1, 101, 201) gemäß einem der vorherigen Ansprüche, bei dem der Ansaugkanal (23, 323) eine Kanalhöhe (H) und eine Kanalbreite (W) aufweist, wobei das Verhältnis zwischen der Kanalbreite (W) und der Kanalhöhe (H) zumindest 10:1 beträgt, vorzugsweise zumindest 15:1 und am bevorzugtesten zumindest 20:1, wobei vorzugsweise die Kanalhöhe (H) kleiner als zehn Millimeter ist, vorzugsweise kleiner als acht Millimeter und am bevorzugtesten kleiner als sechs Millimeter, wobei noch bevorzugter der Ansaugkanal (23, 323) eine Halteebene (K) mit einer Breite von zumindest acht Zentimetern definiert, vorzugsweise zumindest zehn Zentimetern.

**5.** Frisierwerkzeug (1, 101, 201) gemäß einem der vorherigen Ansprüche, bei dem der Halteweg (P) linear ist.

**6.** Frisierwerkzeug (1, 101, 201) gemäß einem der vorherigen Ansprüche, bei dem das erste Ansatzstück (2, 302, 402, 502, 602, 702, 802) eine Luftkammer (26) zwischen dem Ansaugkanal (23, 323) und dem Ansaugauslass (22) aufweist, wobei die Luftkammer (26) so gebildet ist, dass sie eine turbulente Luftströmung zwischen dem Ansaugkanal (23, 323) und dem Ansaugauslass (22) erzeugt, wobei vorzugsweise die Luftkammer (26) einen Querschnitt senkrecht zu dem Halteweg (P) aufweist, der größer ist als der Querschnitt des Ansaugkanals (23, 323) senkrecht zu dem Halteweg (P).

**7.** Frisierwerkzeug (1, 101, 201) gemäß einem der vorherigen Ansprüche, bei dem das erste Ansatzstück (2, 302, 402, 502, 602, 702, 802) an dem Ansaugkanal (23, 323) zumindest teilweise transparent ist, um eine visuelle Überprüfung des Abschnitts von Haaren (6) im Inneren des Ansaugkanals (23, 323) von außerhalb des ersten Ansatzstücks (2, 302, 402, 502, 602, 702, 802) zu erlauben, wobei vorzugsweise das erste Ansatzstück (302) mit einem Vergrößerungsabschnitt (327), der sich an dem Ansaugkanal (323) befindet, zum visuellen Überprüfen des Abschnitts von Haaren (6) im Inneren des Ansaugkanals (323) von außerhalb des ersten Ansatzstücks (302) versehen ist.

**8.** Frisierwerkzeug (1, 101, 201) gemäß einem der vorherigen Ansprüche, bei dem das erste Ansatzstück (502) mit einem oder mehr Nivellierinstrumenten (527) zum visuellen Anzeigen der Ausrichtung des ersten Ansatzstücks (502) relativ zu einer horizontalen und/oder einer vertikalen Ebene versehen ist; oder bei dem das erste Ansatzstück (402) einen Laser (427) zum Projizieren einer Laserlinie (L) und/oder eines Lasermusters auf den Abschnitt von Haaren (6) aufweist, die in dem ersten Ansatzstück (402) gehalten werden.

**9.** Frisierwerkzeug (1, 101, 201) gemäß einem der vorherigen Ansprüche, bei dem das erste Ansatzstück (602) einen oder mehr Vorsprünge (627, 628), die in ihrer Länge in Bezug auf den Ansaugeinlass (21) anpassbar sind, zum Einstellen einer Entfernung zwischen dem menschlichen Kopf und dem Ansaugeinlass (21) aufweist; oder bei dem das erste Ansatzstück (702) eine Arbeitsoberfläche (727), die von dem Ansaugeinlass (721) in einer Erweiterungsrichtung (D) in einer Linie mit dem Halteweg (P) erweiterbar ist, zum Tragen zumindest eines Teils des Abschnitts von Haaren (6) zwischen dem Ansaugeinlass (721) und dem menschlichen Kopf aufweist.

**10.** Frisierwerkzeug (1, 101, 201) gemäß einem der vorherigen Ansprüche, bei dem das erste Ansatzstück (802) eine oder mehr Leitungen (827, 828) aufweist, die in Fluidkommunikation mit einer Quelle warmer Luft, heißer Luft, Wasserdampf oder einer Flüssigkeit verbindbar sind, wobei die eine oder die mehr Leitungen (827, 828) in den Ansaugkanal (823) einmünden, vorzugsweise an oder nahe dem Ansaugeinlass (821) .

**11.** Frisierwerkzeug (1, 101, 201) gemäß einem der vorherigen Ansprüche, wobei das Frisierwerkzeug ferner einen Träger (3, 203) aufweist, der zum Positionieren des ersten Ansatzstücks (2, 302, 402, 502, 602, 702, 802) in Bezug auf einen menschlichen Kopf angeordnet ist, wobei das Frisierwerkzeug (1, 101, 201) ferner ein Fixierbauteil (5) zum Fixieren der Position des ersten Ansatzstücks (2, 302, 402, 502, 602, 702, 802) in Bezug auf den Träger (3, 203) aufweist, wobei das Frisierwerkzeug (1, 101, 201) zum freihändigen Halten des Abschnitts von Haaren

(6) in dem Ansaugkanal (23, 323) angeordnet ist, wenn die Position des ersten Ansatzstücks (2, 302, 402, 502, 602, 702, 802) in Bezug auf den Träger (3, 203) fixiert ist, wobei vorzugsweise der Träger (3) ein Ständer (30) ist, der so angeordnet ist, dass er auf einem Boden (990) platziert ist, oder wobei der Träger (203) eine Halterung (230) ist, die so angeordnet ist, dass sie an einer Montieroberfläche eines Objekts (991, 901, 902, 903) oder eines Gebäudes montiert ist.

**12.** Frisierwerkzeug (1, 101, 201) gemäß Anspruch 11, bei dem das erste Ansatzstück (2, 302, 402, 502, 602, 702, 802) mit dem Träger (3, 203) über ein Koppelelement (4) gekoppelt ist, wobei das Koppelelement (4) zum Drehen des ersten Ansatzstücks (2, 302, 402, 502, 602, 702, 802) in Bezug auf den Träger (3, 203) um eine erste Rotationsachse (X) angeordnet ist, wobei vorzugsweise das Koppelelement (4) zum Drehen des ersten Ansatzstücks (2, 302, 402, 502, 602, 702, 802) in Bezug auf den Träger (3, 203) um eine zweite Rotationsachse (Y), die orthogonal zu der ersten Rotationsachse (X) ist, angeordnet ist, wobei noch bevorzugter das Koppelelement (4) zum Drehen des ersten Ansatzstücks (2, 302, 402, 502, 602, 702, 802) in Bezug auf den Träger (3, 203) um eine dritte Rotationsachse (R) angeordnet ist, die orthogonal zu der ersten Rotationsachse (X) und der zweiten Rotationsachse (Y) ist.

**13.** Frisierwerkzeug (101) gemäß Anspruch 11 oder 12, wobei das Frisierwerkzeug (101) ein zweites und/oder weitere Ansatzstücke (2') aufweist, die durch den gleichen Träger (3, 203) getragen werden und zum Halten weiterer Abschnitte von Haaren (6) an unterschiedlichen Positionen in Bezug auf den Träger (3, 203) angeordnet sind; oder wobei das Frisierwerkzeug (101) ein zweites und/oder weitere Ansatzstücke (2‘) aufweist, wobei das erste Ansatzstück (2, 302, 402, 502, 602, 702, 802) und das zweite und/oder die weiteren Ansatzstücke (2') austauschbar sind.

**14.** Frisiersystem (7) mit dem Frisierwerkzeug (1, 101, 201) gemäß einem der Ansprüche 11-13, wobei das Frisiersystem (7) ferner eine Ansaugeinheit (9) an dem Träger (3, 203) oder separat von dem Träger (3, 203) aufweist, wobei die Ansaugeinheit (9) in Fluidkommunikation mit dem Ansaugauslass (22) des ersten Ansatzstücks (2, 302, 402, 502, 602, 702, 802) verbindbar ist, wobei vorzugsweise das Frisiersystem (7) einen Ansaugschlauch (8) zum Verbinden des Ansaugauslasses (22) des ersten Ansatzstücks (2, 302, 402, 502, 602, 702, 802) in Fluidkommunikation mit der Ansaugeinheit (9) aufweist, wobei noch bevorzugter die Ansaugeinheit (9) mit einem Filter (90) zum Trennen abgeschnittener Haare von der Luftströmung versehen ist.

**15.** Verfahren zum Frisieren mit Verwendung des Frisierwerkzeugs (1, 101, 201) gemäß einem der Ansprüche 1-13, wobei das Verfahren folgende Schritte aufweist:

- Führen des Abschnitts von Haaren (6) von dem menschlichen Kopf in den Ansaugkanal (23, 323) und Halten des Abschnitts von Haaren (6) mit Ansaugen entlang eines Haltewegs (P) im Inneren des Ansaugkanals (23, 323).

**16.** Verfahren zum Frisieren mit Verwendung des Frisierwerkzeugs (1, 101, 201) gemäß einem der Ansprüche 11-13, wobei das Verfahren folgende Schritte aufweist:

- Führen des Abschnitts von Haaren (6) von dem menschlichen Kopf in den Ansaugkanal (23, 323) und Halten des Abschnitts von Haaren (6) mit Ansaugen entlang eines Haltewegs (P) im Inneren des Ansaugkanals (23, 323);
- Verwenden des Fixierbauteils (5), um die Position des ersten Ansatzstücks (2, 302, 402, 502, 602, 702, 802) in Bezug auf den Träger (3, 203) zu fixieren; und
- Durchführen von Frisiertechniken an dem Abschnitt (6) oder darunterliegenden Abschnitten von Haaren, während der Abschnitt von Haaren (6) freihändig in dem Ansaugkanal (23, 323) des Frisierwerkzeugs (1, 101, 201) gehalten wird, wobei vorzugsweise das Frisierwerkzeug (101) ein zweites und/oder weitere Ansatzstücke (2') aufweist, die durch den gleichen Träger (3, 203) getragen werden, wobei das Verfahren ferner den Schritt eines Haltens weiterer Abschnitte von Haaren (6) an unterschiedlichen Positionen in Bezug auf den Träger (3, 203) aufweist, oder wobei das Frisierwerkzeug (101) ein zweites und/oder weitere Ansatzstücke (2‘) aufweist, wobei das Verfahren ferner den Schritt eines Austauschens des ersten Ansatzstücks (2, 302, 402, 502, 602, 702, 802) und des zweiten und/oder weiterer Ansatzstücke (2‘) aufweist.

**Revendications**

**1.** Outil de coiffure (1, 101, 201) comprenant une première embouchure (2, 302, 402, 502, 602, 702, 802), dans lequel la première embouchure comprend un corps d'embouchure (20, 420) avec une entrée d'aspiration (21, 721, 821), une sortie d'aspiration (22), et un conduit d'aspiration (23, 323) s'étendant entre l'entrée d'aspiration (21, 721, 821) et la sortie d'aspiration (22), dans lequel la sortie d'aspiration (22) peut être raccordée à une unité d'aspiration (9), dans lequel l'entrée d'aspiration (21, 721, 821) est agencée pour aspirer une section de cheveux (6) depuis

la tête humaine dans le conduit d'aspiration (23, 323) et dans lequel le conduit d'aspiration (23, 323) est agencé pour retenir ladite section de cheveux (6) le long d'un trajet de retenue (P) à l'intérieur du conduit d'aspiration (23, 323), dans lequel le corps d'embouchure (20, 420) est continu entre l'entrée d'aspiration (21, 721, 821) et la sortie d'aspiration (22) de sorte que le conduit d'aspiration (23, 323) est ouvert uniquement au niveau de l'entrée d'aspiration (21, 721, 821) et de la sortie d'aspiration (22), dans lequel l'entrée d'aspiration (21, 721, 821) comprend une ouverture d'entrée (24) avec une largeur d'entrée (W) et une hauteur d'entrée (H), **caractérisé en ce que** le rapport entre la largeur d'entrée (W) et la hauteur d'entrée (H) est au moins 10:1, dans lequel le conduit d'aspiration (23, 323) définit une zone de flux laminaire (25) s'étendant depuis l'entrée d'aspiration (21, 721, 821) vers la sortie d'aspiration (22) le long du trajet de retenue (P), dans lequel le conduit d'aspiration (23, 323) au niveau de la zone de flux laminaire (25) a une section transversale perpendiculaire au trajet de retenue (P) qui est constante ou sensiblement constante dans la zone de flux laminaire (25) de façon à générer un flux laminaire ou sensiblement laminaire d'air le long dudit trajet de retenue (P).

**2.** Outil de coiffure (1, 101, 201) selon la revendication 1, dans lequel le rapport entre la largeur d'entrée (W) et la hauteur d'entrée (H) est au moins 15:1 et de préférence au moins 20:1.

**3.** Outil de coiffure (1, 101, 201) selon l'une quelconque des revendications précédentes, dans lequel la hauteur d'entrée (H) est inférieure à dix millimètres, de préférence inférieure à huit millimètres et de manière préférée entre toutes inférieure à six millimètres.

**4.** Outil de coiffure (1, 101, 201) selon l'une quelconque des revendications précédentes, dans lequel le conduit d'aspiration (23, 323) a une hauteur de conduit (H) et une largeur de conduit (W), dans lequel le rapport entre la largeur de conduit (W) et la hauteur de conduit (H) est au moins 10:1, de préférence au moins 15:1 et de manière préférée entre toutes au moins 20:1, de préférence dans lequel la hauteur de conduit (H) est inférieure à dix millimètres, de préférence inférieure à huit millimètres et de manière préférée entre toutes inférieure à six millimètres, plus préférablement dans lequel le conduit d'aspiration (23, 323) définit un plan de retenue (K) ayant une largeur d'au moins huit centimètres, de préférence au moins dix centimètres.

**5.** Outil de coiffure (1, 101, 201) selon l'une quelconque des revendications précédentes, dans lequel le trajet de retenue (P) est linéaire.

**6.** Outil de coiffure (1, 101, 201) selon l'une quelconque des revendications précédentes, dans lequel la première embouchure (2, 302, 402, 502, 602, 702, 802) comprend une chambre à air (26) entre le conduit d'aspiration (23, 323) et la sortie d'aspiration (22), dans lequel la chambre à air (26) est formée de façon à générer un écoulement turbulent d'air entre le conduit d'aspiration (23, 323) et la sortie d'aspiration (22), de préférence dans lequel la chambre à air (26) a une section transversale perpendiculaire au niveau du trajet de retenue (P) qui est plus grande que la section transversale du conduit d'aspiration (23, 323) perpendiculaire audit trajet de retenue (P).

**7.** Outil de coiffure (1, 101, 201) selon l'une quelconque des revendications précédentes, dans lequel la première embouchure (2, 302, 402, 502, 602, 702, 802) est au moins partiellement transparente au niveau du conduit d'aspiration (23, 323) pour permettre l'inspection visuelle de la section de cheveux (6) à l'intérieur du conduit d'aspiration (23, 323) depuis l'extérieur de la première embouchure (2, 302, 402, 502, 602, 702, 802), de préférence dans lequel la première embouchure (302) est pourvue d'une section de grossissement (327) située au niveau du conduit d'aspiration (323) pour inspecter visuellement la section de cheveux (6) à l'intérieur du conduit d'aspiration (323) depuis l'extérieur de la première embouchure (302).

**8.** Outil de coiffure (1, 101, 201) selon l'une quelconque des revendications précédentes, dans lequel la première embouchure (502) est pourvue d'un ou plusieurs instruments de nivelage (527) pour indiquer visuellement l'orientation de la première embouchure (502) par rapport à un plan horizontal et/ou vertical ; ou dans lequel la première embouchure (402) comprend un laser (427) pour projeter une ligne laser (L) et/ou un motif laser sur la section de cheveux (6) retenue dans la première embouchure (402).

**9.** Outil de coiffure (1, 101, 201) selon l'une quelconque des revendications précédentes, dans lequel la première embouchure (602) comprend une ou plusieurs projections (627, 628) qui sont réglables en longueur par rapport à l'entrée d'aspiration (21) pour régler une distance entre la tête humaine et l'entrée d'aspiration (21) ; ou dans lequel la première embouchure (702) comprend une surface de travail (727) qui est extensible depuis l'entrée d'aspiration (721) dans une direction d'extension (D) alignée avec le trajet de retenue (P) pour soutenir au moins une partie de la section de cheveux (6) entre l'entrée d'aspiration (721) et la tête humaine.

**10.** Outil de coiffure (1, 101, 201) selon l'une quelconque des revendications précédentes, dans lequel la première embouchure (802) comprend un ou plusieurs

conduits (827, 828) qui peuvent être raccordés en communication fluidique avec une source d'air tiède, d'air chaud, de vapeur ou de liquide, dans lequel les un ou plusieurs conduits (827, 828) débouchent dans le conduit d'aspiration (823), de préférence au niveau ou à proximité de l'entrée d'aspiration (821).

**11.** Outil de coiffure (1, 101, 201) selon l'une quelconque des revendications précédentes, dans lequel l'outil de coiffure comprend en outre un support (3, 203) qui est agencé pour positionner la première embouchure (2, 302, 402, 502, 602, 702, 802) par rapport à une tête humaine, dans lequel l'outil de coiffure (1, 101, 201) comprend en outre un élément de fixation (5) pour fixer la position de la première embouchure (2, 302, 402, 502, 602, 702, 802) par rapport au support (3, 203), dans lequel l'outil de coiffure (1, 101, 201) est agencé pour retenir avec les mains libres ladite section de cheveux (6) dans le conduit d'aspiration (23, 323) lorsque la position de la première embouchure (2, 302, 402, 502, 602, 702, 802) par rapport au support (3, 203) est fixe, de préférence dans lequel le support (3) est un socle (30) qui est agencé pour être placé sur un sol (990), ou dans lequel le support (203) est un montage (230) qui est agencé pour être monté sur une surface de montage d'un objet (991, 901, 902, 903) ou d'un bâtiment.

**12.** Outil de coiffure (1, 101, 201) selon la revendication 11, dans lequel la première embouchure (2, 302, 402, 502, 602, 702, 802) est raccordée au support (3, 203) par l'intermédiaire d'un raccord (4), dans lequel le raccord (4) est agencé pour permettre la rotation de la première embouchure (2, 302, 402, 502, 602, 702, 802) par rapport au support (3, 203) autour d'un premier axe de rotation (X), de préférence dans lequel le raccord (4) est agencé pour permettre la rotation de la première embouchure (2, 302, 402, 502, 602, 702, 802) par rapport au support (3, 203) autour d'un deuxième axe de rotation (Y) orthogonal au premier axe de rotation (X), plus préférablement dans lequel le raccord (4) est agencé pour permettre la rotation de la première embouchure (2, 302, 402, 502, 602, 702, 802) par rapport au support (3, 203) autour d'un troisième axe de rotation (R) orthogonal au premier axe de rotation (X) et au deuxième axe de rotation (Y).

**13.** Outil de coiffure (101) selon la revendication 11 ou 12, dans lequel l'outil de coiffure (101) comprend une deuxième embouchure et/ou des embouchures supplémentaires (2') soutenues par le même support (3, 203) et agencées pour retenir des sections de cheveux (6) supplémentaires dans différentes positions par rapport au support (3, 203) ; ou l'outil de coiffure (101) comprenant une deuxième embouchure et/ou des embouchures supplémentaires (2'), dans lequel la première embouchure (2, 302, 402, 502, 602, 702, 802) et la deuxième embouchure et/ou les embouchures (2') supplémentaires sont interchangeables.

**14.** Système de coiffure (7) comprenant l'outil de coiffure (1, 101, 201) selon l'une quelconque des revendications 11 à 13, le système de coiffure (7) comprenant en outre une unité d'aspiration (9) au niveau du support (3, 203) ou séparée du support (3, 203), dans lequel l'unité d'aspiration (9) peut être raccordée en communication fluidique avec la sortie d'aspiration (22) de la première embouchure (2, 302, 402, 502, 602, 702, 802), le système de coiffure (7) comprenant de préférence un tuyau flexible d'aspiration (8) pour raccorder la sortie d'aspiration (22) de la première embouchure (2, 302, 402, 502, 602, 702, 802) en communication fluidique avec l'unité d'aspiration (9), l'unité d'aspiration (9) étant plus préférablement pourvue d'un filtre (90) pour séparer les cheveux coupés du flux d'air.

**15.** Procédé de coiffure utilisant l'outil de coiffure (1, 101, 201) selon l'une quelconque des revendications 1 à 13, le procédé comprenant l'étape de :

- guidage de la section de cheveux (6) depuis la tête humaine dans le conduit d'aspiration (23, 323) et retenue de ladite section de cheveux (6) le long d'un trajet de retenue (P) à l'intérieur du conduit d'aspiration (23, 323) sous aspiration.

**16.** Procédé de coiffure utilisant l'outil de coiffure (1, 101, 201) selon l'une quelconque des revendications 11 à 13, le procédé comprenant les étapes de :

- guidage de la section de cheveux (6) depuis la tête humaine dans le conduit d'aspiration (23, 323) et retenue de ladite section de cheveux (6) le long d'un trajet de retenue (P) à l'intérieur du conduit d'aspiration (23, 323) sous aspiration ;
- utilisation de l'élément de fixation (5) pour fixer la position de la première embouchure (2, 302, 402, 502, 602, 702, 802) par rapport au support (3, 203) ; et
- conduite de techniques de coiffure sur ladite section (6) ou des sections de cheveux sous-jacentes tandis que la section de cheveux (6) est retenue avec les mains libres dans le conduit d'aspiration (23, 323) de l'outil de coiffure (1, 101, 201), de préférence dans lequel l'outil de coiffure (101) comprend une deuxième embouchure et/ou des embouchures supplémentaires (2') soutenues par le même support (3, 203), le procédé comprenant en outre l'étape de retenue de sections de cheveux (6) supplémentaires dans différentes positions par rapport au support (3, 203), ou dans lequel l'outil de coiffure (101) comprend une deuxième embouchure

et/ou des embouchures supplémentaires (2'), le procédé comprenant en outre l'étape consistant à interchanger la première embouchure (2, 302, 402, 502, 602, 702, 802) et la deuxième embouchure et/ou les embouchures (2') supplémentaires.

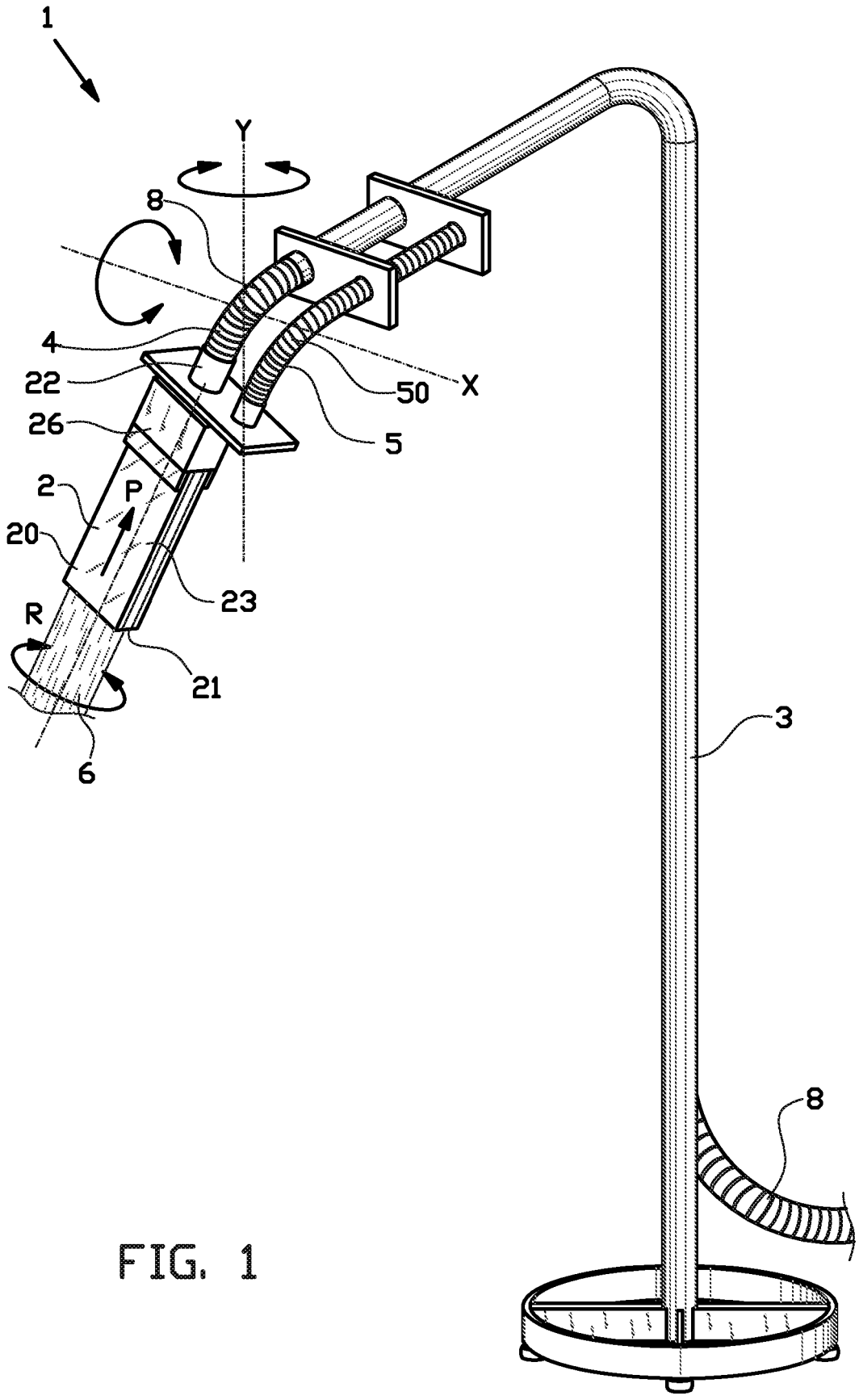


FIG. 1

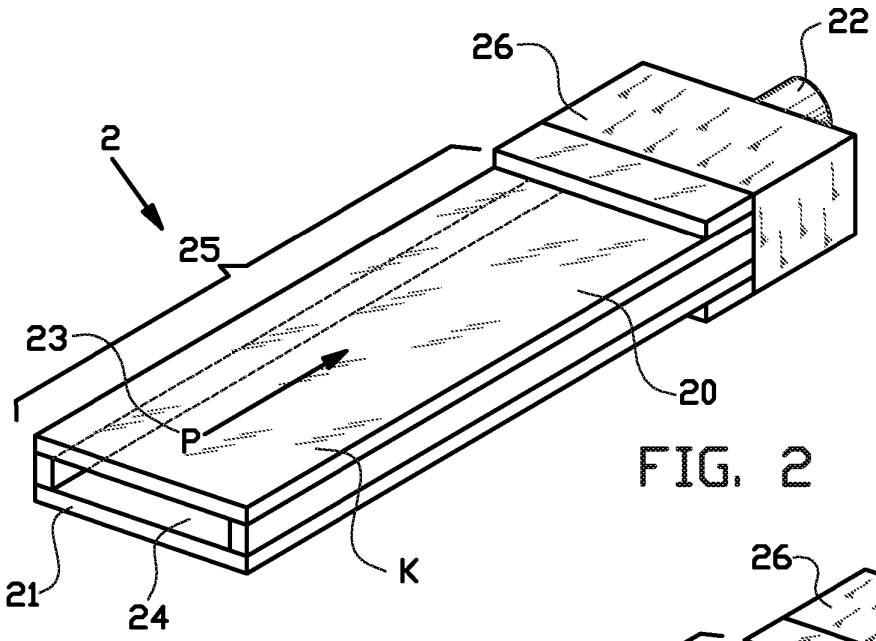


FIG. 2

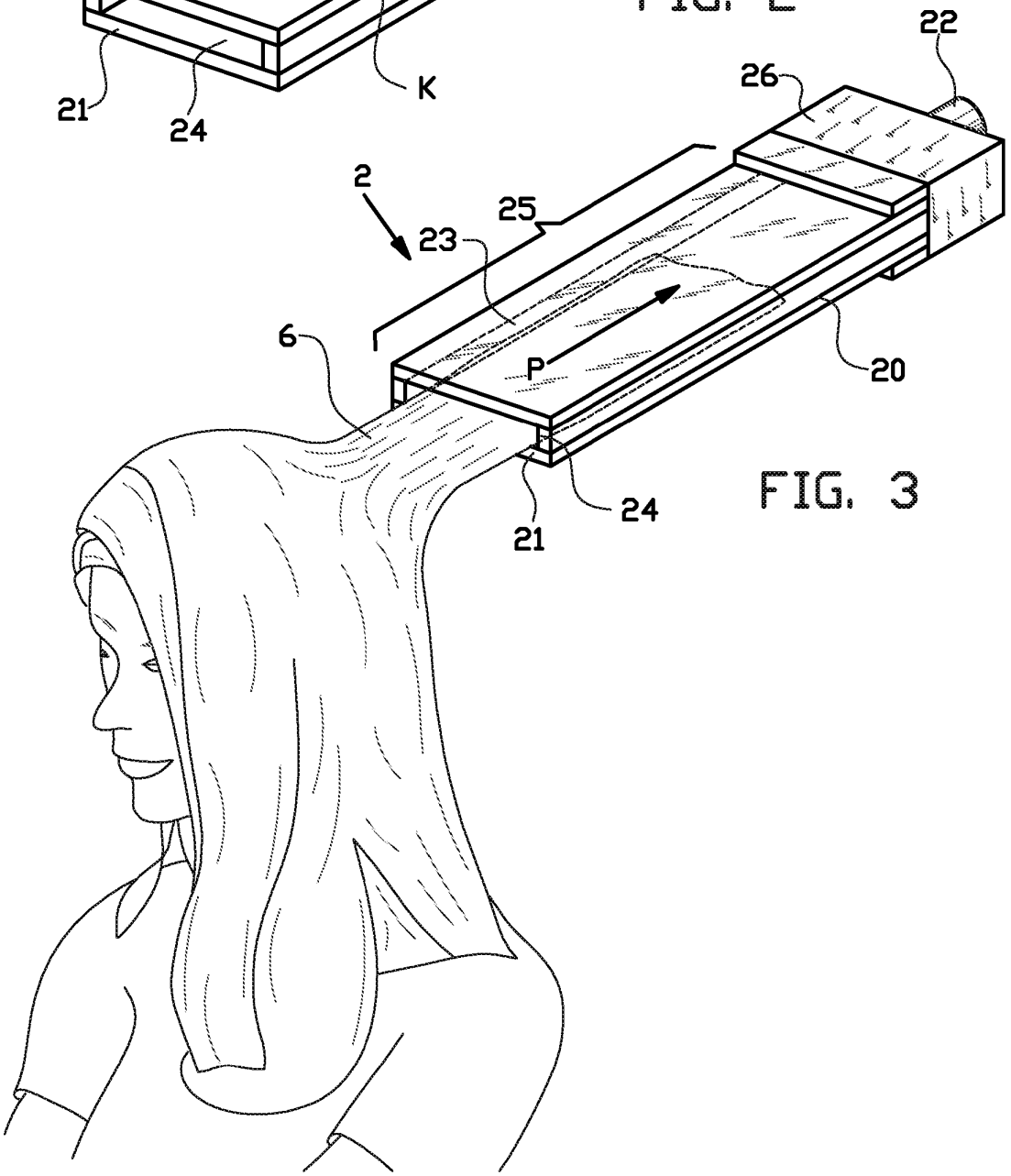


FIG. 3

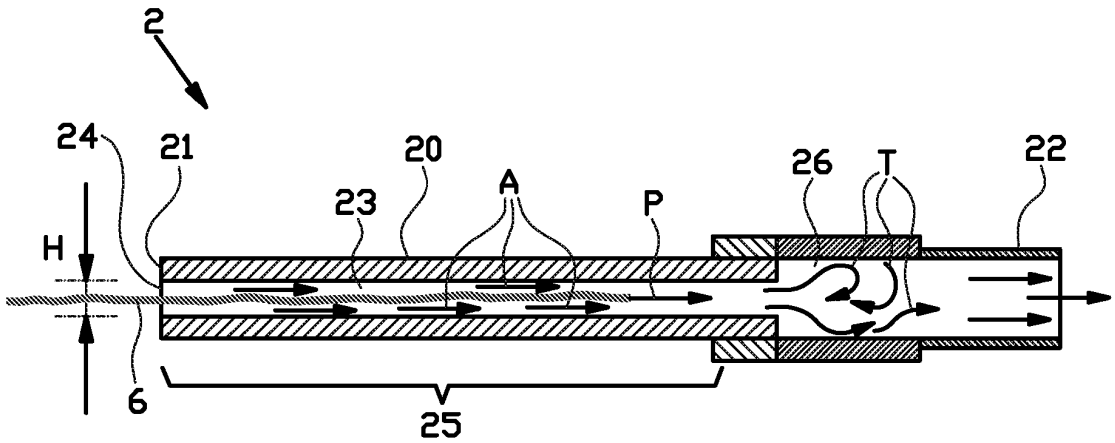


FIG. 4

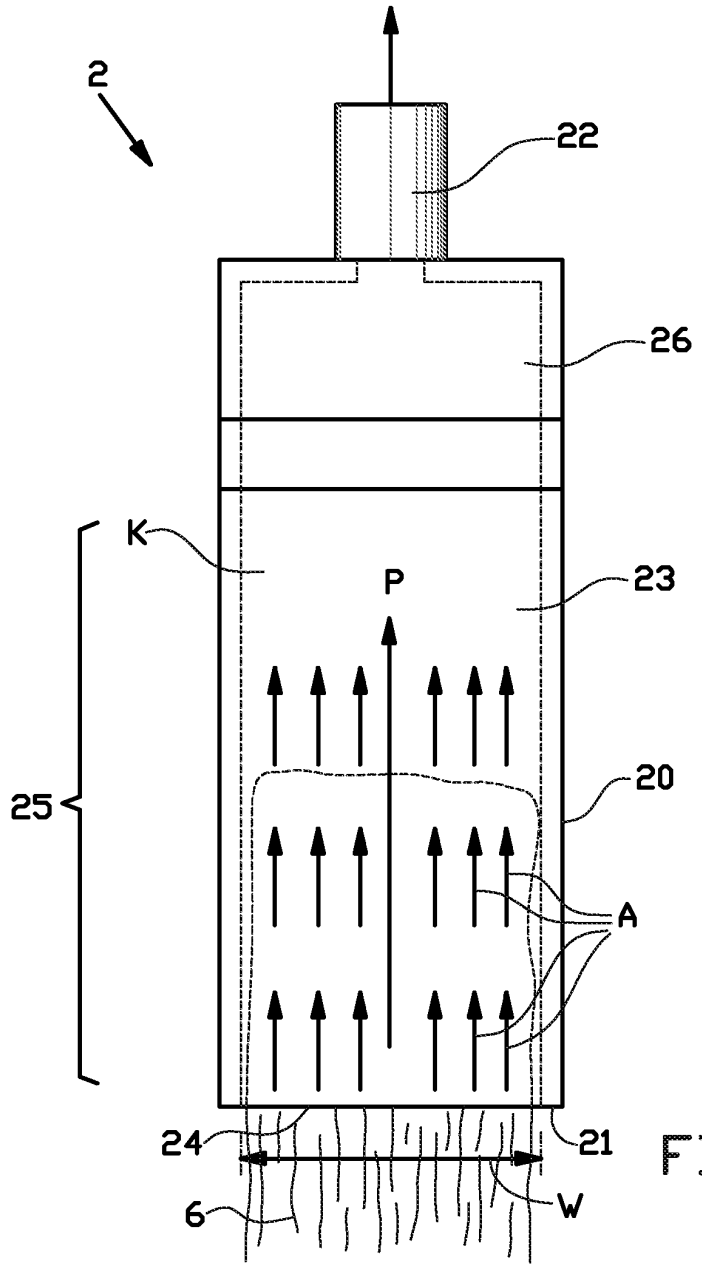


FIG. 5

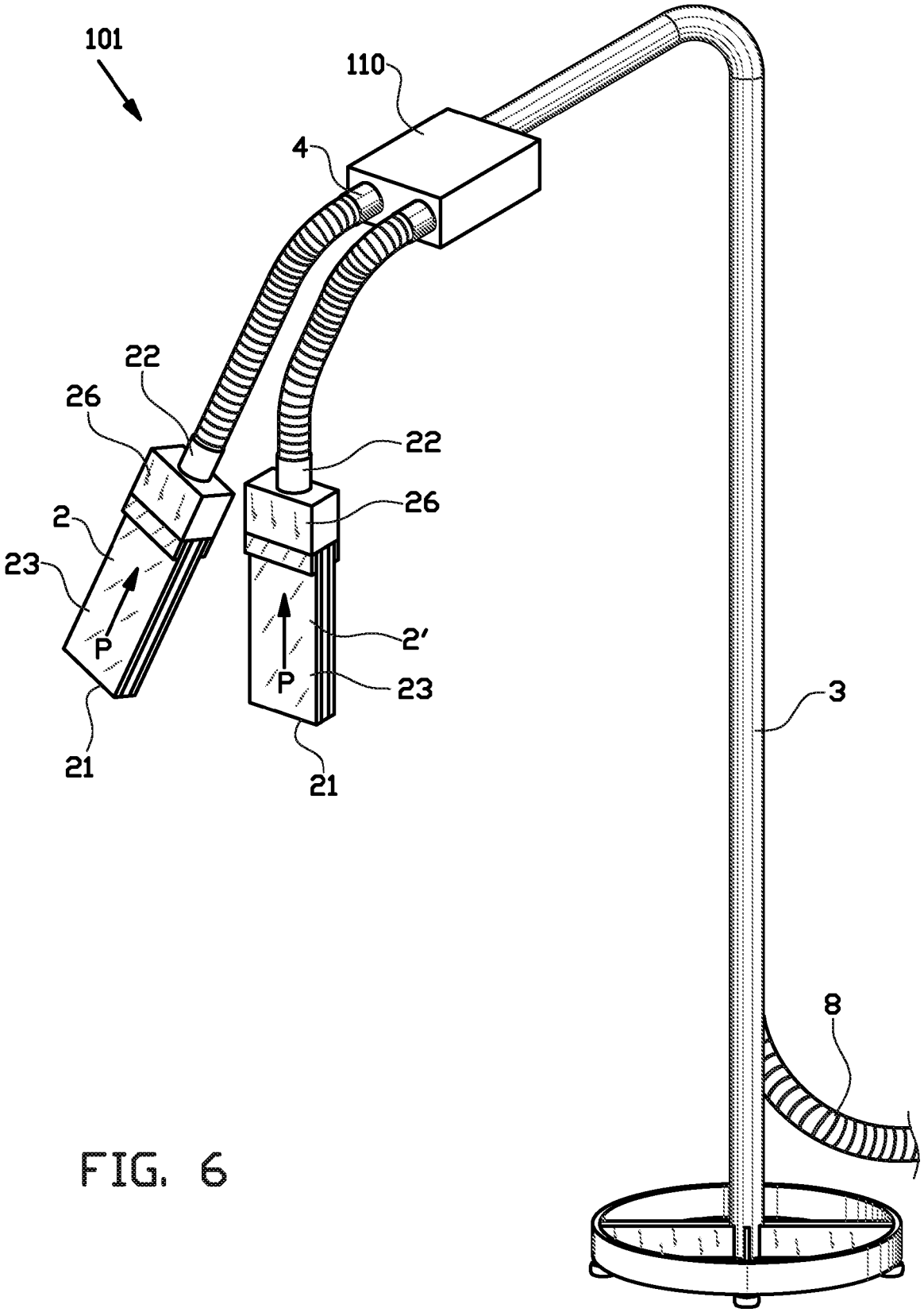


FIG. 6

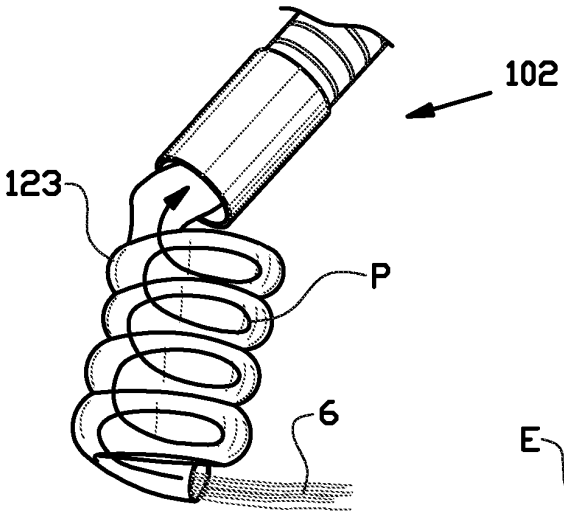


FIG. 7

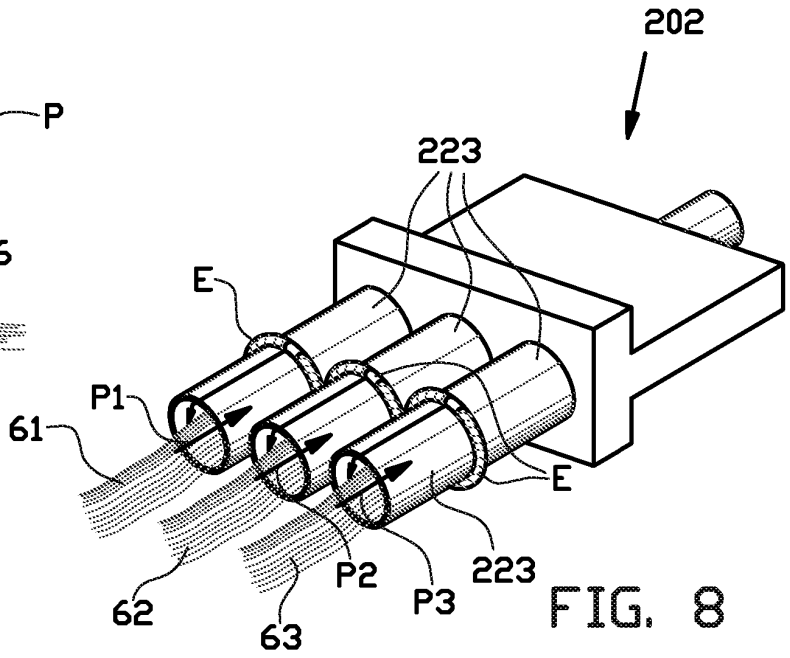


FIG. 8

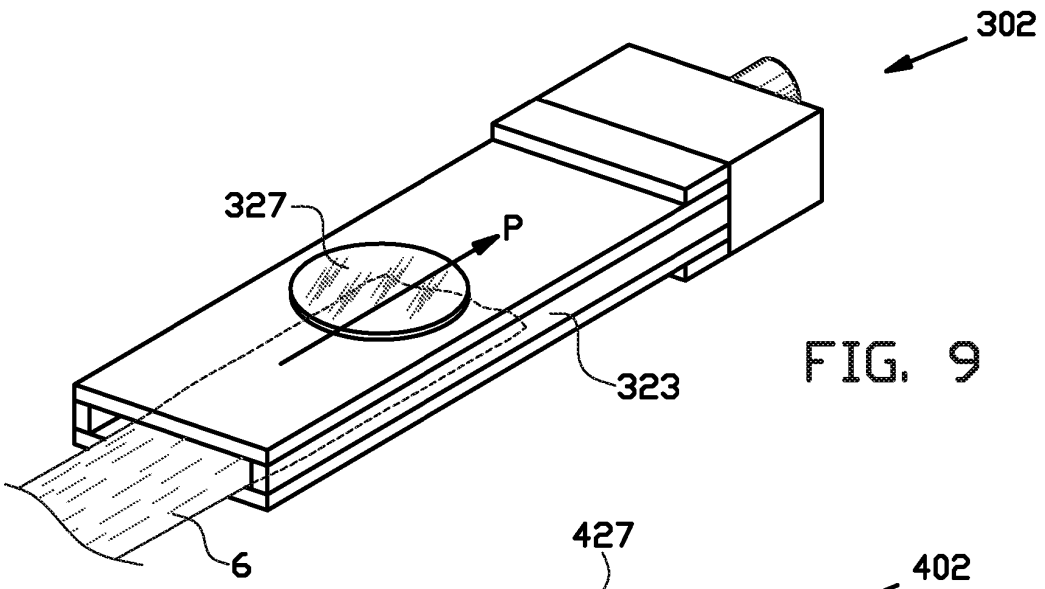


FIG. 9

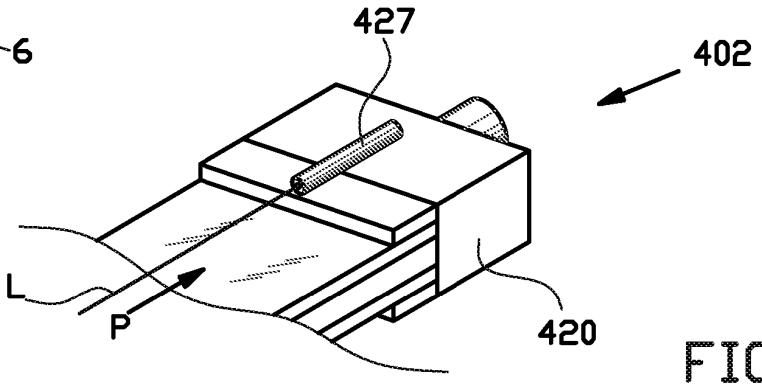


FIG. 10

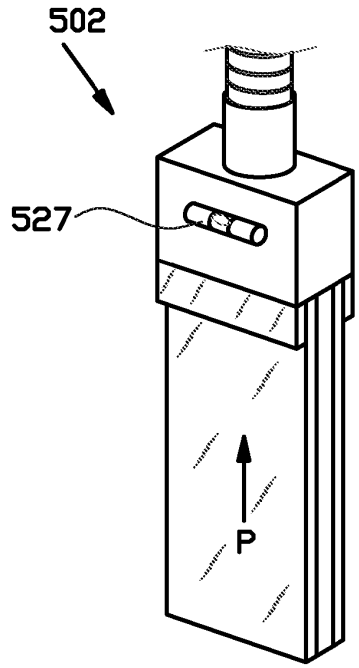


FIG. 11

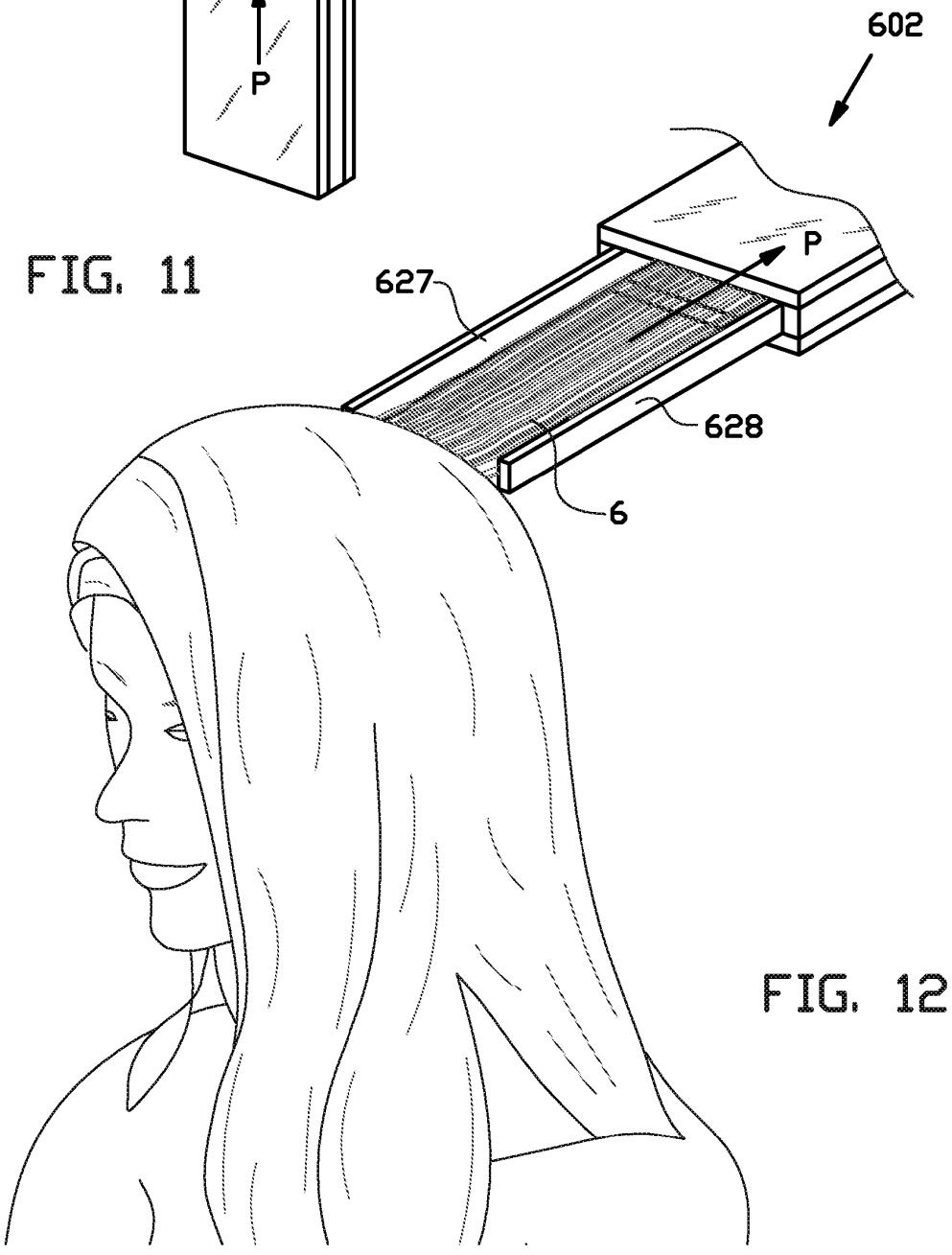


FIG. 12

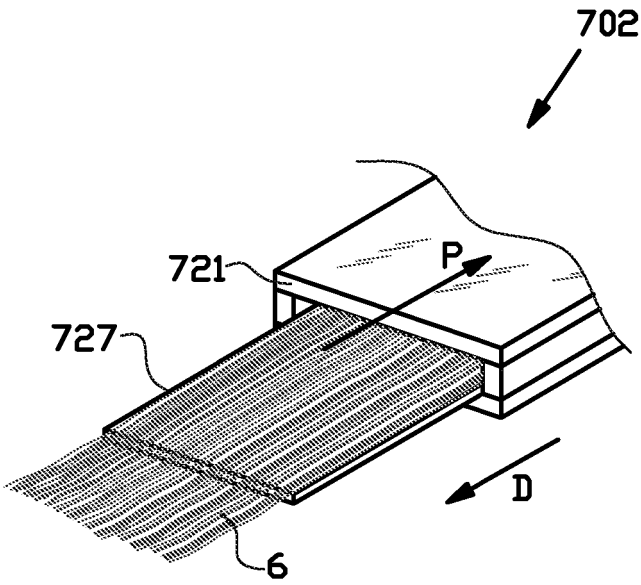


FIG. 13

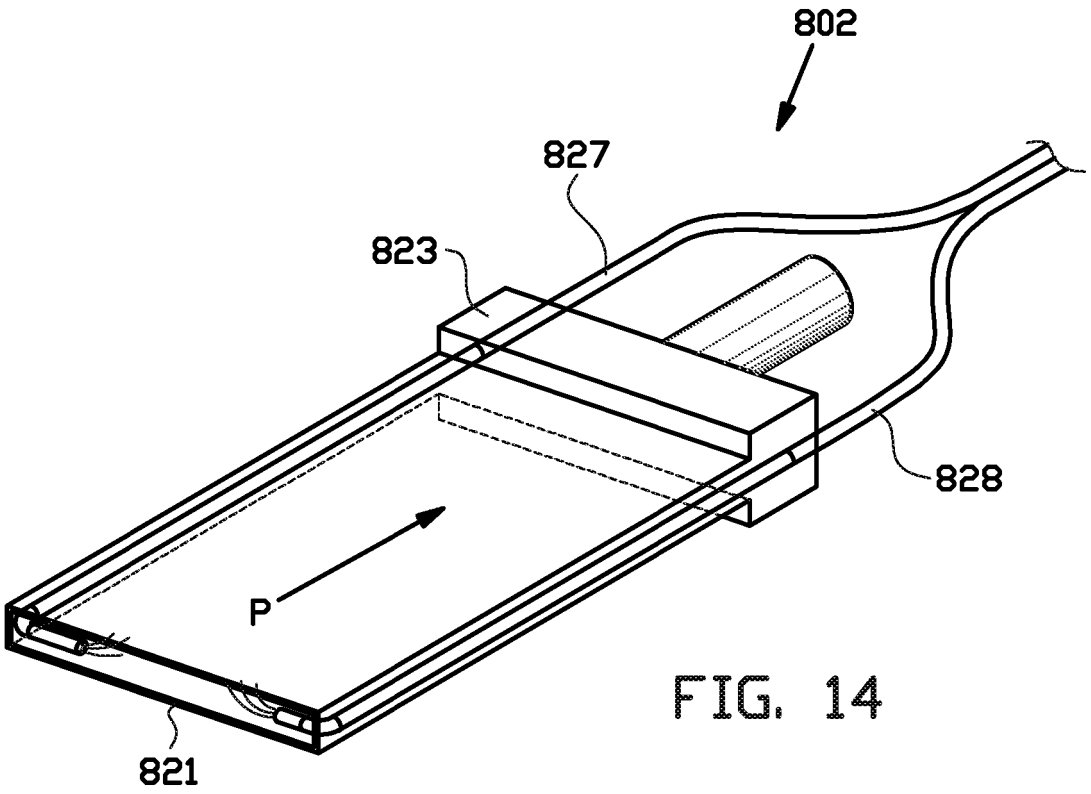


FIG. 14

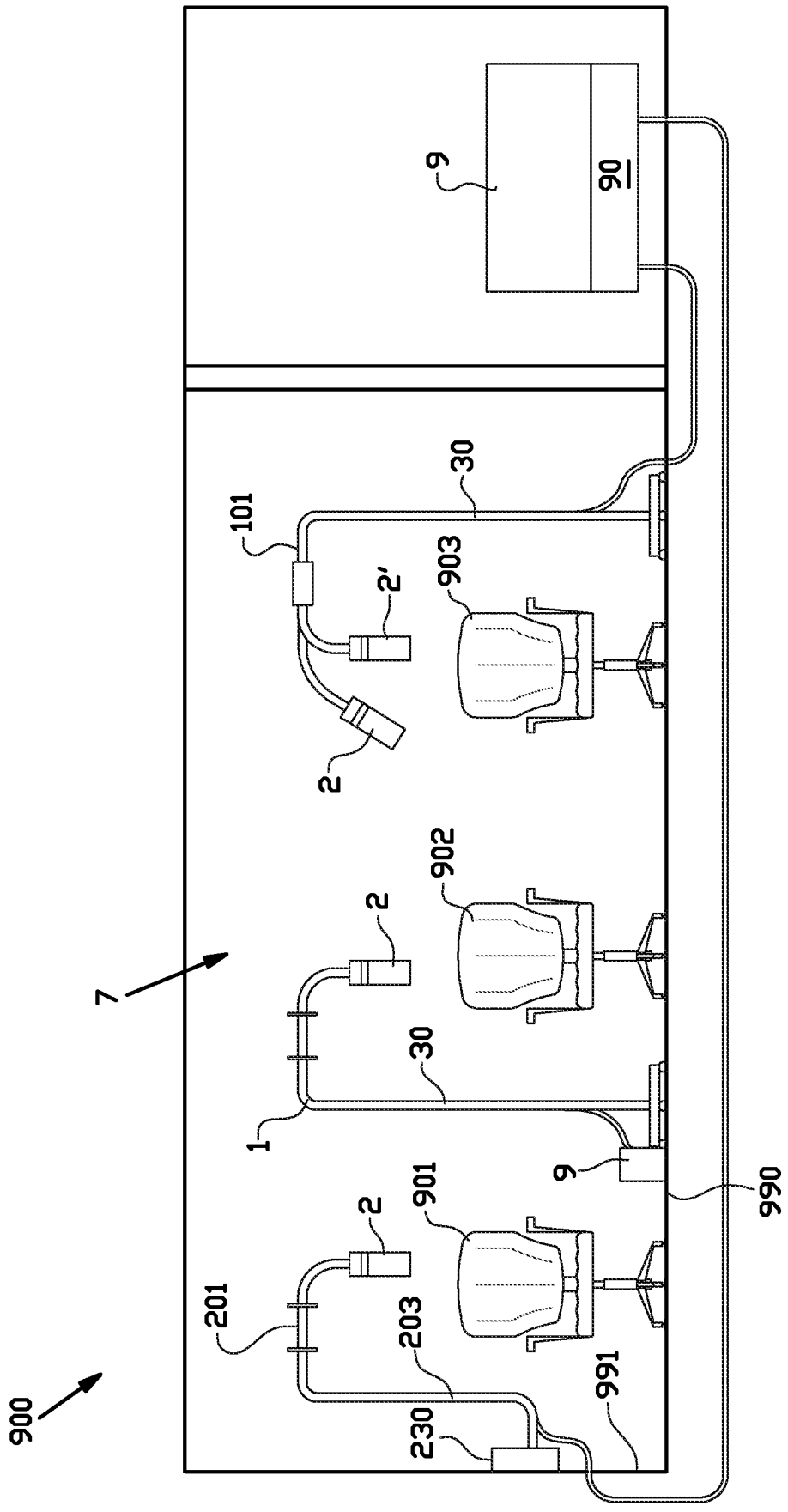


FIG. 15

## REFERENCES CITED IN THE DESCRIPTION

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### Patent documents cited in the description


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