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(54) **Nozzle for blow dryer**

(57) A nozzle for mounting on a blow dryer includes a group of sleeves and a mounting base. Each of the sleeves has a hollow structure defining an air channel and a plurality of openings communicating with the air channel. The group of sleeves is lined up end to end so that the air channels within the sleeves are communicated with each other. The mounting base is constructed in circular shape, wherein the mounting base has a plurality of retention grooves provided on an inner surface at a first end thereof for detachably engaging with an outlet of the blow dryer, wherein a second end of the mounting base is connected to a proximal end of the group of sleeves and a clipper for clipping a bundle of hair, wherein the clipper is mounted to a distal end of the group of sleeves.

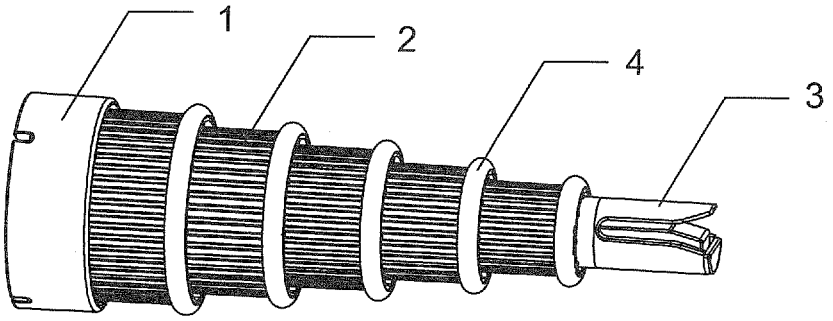

Fig. 1

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Description

Field of Invention

[0001] The present invention relates to a nozzle for a blow dryer, more particularly to a nozzle providing multi-direction air blow and preventing the hair from slipping off during application.

Description of Related Arts

[0002] A blow dryer or hair dryer is a necessity in our daily life; a conventional blow dryer consists essentially of a housing, a fan motor and a heating coil. The housing comprises a tubular body having an inlet provided at a first end thereof and an outlet provided at a second end thereof, wherein at the first end, the blow dryer further comprises a mesh filter for filtering a stream of air entering into the tubular body through the inlet. The air is drawn and blown by the rotation of the fan blades and is delivered along the hollow tubular body to the outlet, and the air can be heated by the heating coil provided at the outlet which is electrically connected to a switch. The switch is provided on the housing to control the alternation of cool air, hot air and volume speed. Generally, the conventional blow dryer is mounted with a nozzle, which has a flat outlet, a circular outlet, and the like, for diffusing the air, but the current nozzle hasn't solved the problem that the hair is easy to slip off during drying with the blow dryer.

[0003] When the blow dryer is in use, a user often has to grasp a bundle of hair with one hand, especially a root portion of the hair, and uses another hand to hold the blow dryer to blow air towards the bundle of hair. However when the user uses relatively hot air to dry the hair, the hot air will inevitably have contact with the hair grasping hand, resulting in a burnt to this hand. What's more, since the nozzle only has one outlet providing a stream of hot air in a single direction, the stream of hot air cannot dry a bundle of hair which is relatively heavy. And this disadvantage will be manifested particularly when the blow dryer is used for hairstyling that, since the hair cannot be dried quickly, the desired hairstyle is hard to achieve and the hair is also easy to slip off.

Summary of the Present Invention

[0004] The object of the present invention is to provide a nozzle for a blow dryer, wherein the nozzle comprises a group of sleeves having a plurality of openings provided along an outer surface thereof for providing multi-direction air blow, so that it is convenient to dry and style the hair of a user.

[0005] Another object of the present invention is to provide a nozzle for a blow dryer, wherein the nozzle comprises a clipper at an end thereof for clipping a bundle of hair or the root portion of the bundle of hair, so that a burnt to the hand of the user is prevented.

[0006] Another object of the present invention is to provide a nozzle for a blow dryer, wherein the nozzle comprises a retainer at the outer surface thereof so as to prevent the hair from slipping off.

[0007] Another object of the present invention is to provide a nozzle for a blow dryer, wherein the nozzle is detachably mounted to the blow dryer via a locker.

[0008] Additional advantages and features of the invention will become apparent from the description which follows, and may be realized by means of the instrumentalities and combinations particular point out in the appended claims.

[0009] According to the present invention, the foregoing and other objects and advantages are attained by a nozzle comprising:

[0010] a nozzle body having a group of sleeves, wherein the group of sleeves has gradually decreasing diameters thereof and each of the sleeves is construed in stepped or spiral shape, wherein two adjacent sleeves are sleeved together defining a circular cavity, wherein the plurality of circular cavities form an air channel; and

[0011] a retainer provided along an edge of the sleeves for retaining a bundle of hair in position when the nozzle is in use.

[0012] In accordance with another aspect of the invention, the present invention provides a nozzle for mounting on a blow dryer, wherein the nozzle comprises:

[0013] a group of sleeves, wherein each of the sleeves has a hollow structure defining an air channel and a plurality of openings communicating with the air channel, wherein the sleeves are lined up in an end to end manner so that the air channels within the sleeves are communicated with each other;

[0014] a mounting base constructed in circular shape, wherein the mounting base has a plurality of retention grooves provided on an inner surface at a first end thereof for detachably engaging with an outlet of the blow dryer, wherein a second end of the mounting base is connected to a proximal end of the group of sleeves; and

[0015] a clipper for clipping a bundle of hair, wherein the clipper is mounted to a distal end of the group of sleeves.

[0016] Still further objects and advantages will become apparent from a consideration of the ensuing description and drawings.

[0017] These and other objectives, features, and advantages of the present invention will become apparent from the following detailed description, the accompanying drawings, and the appended claims.

Brief Description of the Drawings

[0018] Fig. 1 is a perspective view of a nozzle according to a preferred embodiment of the present invention.

[0019] Fig. 2 is a perspective view of a nozzle according to an alternative mode of the above preferred embodiment of the present invention.

[0020] Fig. 3 is a perspective view of a nozzle according to a second preferred embodiment of the present in-

vention.

[0021] Fig. 4 is a perspective view of a nozzle according to an alternative mode of the above preferred embodiment of the present invention.

[0022] Fig. 5 is a schematic view illustrating the locker of the nozzle according to the above preferred embodiment of the present invention.

Detailed Description of the Preferred Embodiment

[0023] Referring to Fig. 1 and Fig. 2 of the drawing, a nozzle for mounting on a blow dryer according to a preferred embodiment of the present invention is illustrated, wherein the nozzle comprises a nozzle body 1 having a group of cylindrical sleeves 2, wherein the group of sleeves has gradually decreasing diameters thereof and each of the sleeves is construed in stepped or spiral shape. Two adjacent sleeves are sleeved together defining a circular cavity, wherein the plurality of circular cavities forms an air channel of the nozzle. The nozzle further comprises a clipper 3 provided at an end thereof, a plurality of openings provide along an outer surface of the sleeves 2 and a retainer 4 provided along the edge of the sleeves 2.

[0024] Since the air channel is formed by a plurality of circular cavities between each two adjacent sleeves 2, a stream of air which is delivered to the nozzle will discharge through the circular cavities, so that the stream of air will not be easy to be directed towards the face of the user. The clipper 3 of the nozzle is able to clip a bundle of hair during drying, so that a user does not have to user his or her hand to grasp the bundle of hair. Therefore, a burnt to the hand of the user is avoided. Accordingly, when a bundle of heavy overlapping hair has to contact with the hot air through the nozzle, the openings of the nozzle effectively solve the problem. The retainer 4 on the edge of the sleeve 2 prevents the hair from slipping off during drying.

[0025] Referring to Fig. 3 of the drawings, a nozzle for detachably mounting to a blow dryer is illustrated, wherein the nozzle comprises a group of sleeves 1A, a mounting base 2A and a clipper 3A.Each of the sleeves 1A has a hollow structure defining an air channel 11A and a plurality of openings 12A communicating with the air channel 11A, wherein the sleeves 1A are lined up in an end to end manner so that the air channels 11A within the sleeves 1A are communicated with each other.

[0026] The mounting base 2A is constructed in circular shape, wherein the mounting base 2A has a plurality of retention grooves provided on an inner surface at a first end 21A thereof for detachably engaging with an outlet of the blow dryer, wherein a second end of the mounting base 2A is connected to a proximal end of the group of sleeves 1A.

[0027] The clipper 3A is adapted for clipping a bundle of hair, wherein the clipper 3A is mounted to a distal end of the group of sleeves 1A.

[0028] In a preferred embodiment, each of the sleeves 1A is embodied as a circular cylinder, wherein the group of the sleeves 1A has a gradually decreasing diameters and a same height. The plurality of openings 12A is provided along the outer surface of each of the sleeves 1A with respect to a center line of the group of the sleeves 1A.

[0029] Accordingly, the group of sleeves 1A is coaxially lined up end to end in an order of gradually decreasing diameters so as to construct a stepped structure. One of the sleeves 1A having the largest diameter has an end connected to the first end 22A of the mounting base 2A, wherein another one of the sleeves 1A having the smallest diameter has an end connected to the clipper 3A.

[0030] In another preferred embodiment, each of the sleeves 1A is embodied as a circular truncated cone, wherein the bottom surfaces 13 and the upper surfaces 14 of the group of the sleeves 1A have gradually decreasing diameters, wherein each of the circular truncated cones has the same height. The plurality of openings 12A is provided along the outer surface of each of the sleeves 1A with respect to the center line of the group of the sleeves 1A.

[0031] According to an order of gradually decreasing diameters of the bottom surfaces of the group of sleeves 1A, the upper surface of a first sleeve 1A of the group of sleeves 1A is connected to the bottom surface 13A of an adjacent second sleeve 1A of the group of sleeves 1A so as to construct a stepped structure. The sleeves 1A are coaxially aligned with each other and the diameter of the upper surface of the first sleeve 1A is larger than or equal to the diameter of the bottom surface of the adjacent second sleeve 1A. One of the sleeves 1A having a bottom surface 13A of the largest diameter is connected to the first end 22A of the mounting base 2A, wherein another one of the sleeves 1A having an upper surface 14A of the smallest diameter is connected to the clipper 3A.

[0032] Accordingly, no matter the sleeves 1A are embodied as circular cylinders or circular truncated cones, the group of the sleeves 1A forms a taper structure having gradually decreasing diameters. In other words, the diameters are gradually decreased from the mounting base 2A to the clipper 3A so as to provide a tubular air blow which is convenient for hairstyling. What's more, the sleeves 1A are coaxially aligned with each other, and the air channels 11A are communicated with each other, so that a stream of air coming from the blow dryer can pass through each of the air channels 11A and discharge from the plurality of openings 12A which is provided along the outer surface of each of the sleeves 1A.

[0033] Referring to Fig. 4 of the drawing, in order to prevent the hair from slipping off during drying, especially hair styling, the nozzle further comprise a retainer 4A which has a spiral structure, wherein the retainer 4A is spirally provided on the outer surfaces the group of sleeves 1A in such a manner that the retainer 4A is extended between the mounting base 2A and the clipper 3A.

[0034] Accordingly, the retainer 4A is spirally protrud-

ed on the sleeves 1A, wherein the retainer 4A can be integrally and encircledly extended on each of the sleeves 1A, preferably, each of the sleeves 1A is provided with a spiral retainer 4A.

[0035] Referring to Fig. 4 and Fig. 5 of the drawings, the nozzle of the present invention is capable of being detachably mounted to a blow dryer, wherein the group of sleeves 1A is roatably mounted on the mounting base 2A. When the nozzle is in use, a bundle of hair is clipped by the clipper 3A which rotates corresponding to the rotation of the sleeves 1A, so that the hot air from the nozzle can have full contact with the bundle of hair, and thus the hair can be completely dried. Furthermore, when the nozzle is employed for making a hairstyle for the hair of the user, the sleeves 1A should be static with respect to the bundle of hair. And thus the nozzle further comprises a locker 20A provided on the mounting base 2A, wherein the locker 20A firmly retains the sleeves 1A in position so as to prevent the sleeves 1A from rotating with respect to the mounting base 2A.

[0036] Accordingly, when the locker 20A is in an open position, the sleeves 1A with the clipper 3A will rotate with respect to the mounting base 2A when a rotating force is applied thereon, wherein when the locker 20A is in an closed position, the sleeves 1A will be firmly retained on the blow dryer, so that the sleeves 1A and the clipper 3A cannot rotate with respect to the mounting base 2A.

[0037] In other words, the nozzle is mounted to the blow dryer in a rotatable manner, for example, the mounting base 2A of the nozzle comprises a first thread portion on the inner surface thereof, while the outlet of the blow dryer comprises a second thread portion, wherein the first thread portion of the nozzle engages with the second thread portion of the blow dryer so that the nozzle is capable of being detachably mounted to the blow dryer by rotating the nozzle with respect to the blow dryer clockwise or counterclockwise.

[0038] Referring to Fig. 5 of the drawing, the locker 20A comprises a plurality of first teeth parallelly and spacedly provided on an end thereof, wherein the blow dryer comprises a plurality of second teeth parallelly and spacedly provided on the outlet thereof, wherein the first teeth engage with the second teeth so that the locker 20A is capable of moving between an open position and a closed position. Accordingly, when the nozzle is mounted to the blow dryer, the locker 20A is pushed away from the outlet of the blow dryer while the locker 20A is in the open position, so that the first teeth are detached from the second teeth, and thus the sleeves 1A can rotate with respect to the mounting base 2A when a rotating force is applied thereon on. When the locker 20A is in the closed position, the locker 20A is engaged with the outlet of the blow dryer in such a manner that the first teeth are coupled with the second teeth, so that the nozzle is retained on the blow dryer and cannot rotate with respect to the mounting base 2A, and thus the nozzle remains to be static with respect to the hair during hairstyling.

[0039] One skilled in the art will understand that the embodiment of the present invention as shown in the drawings and described above is exemplary only and not intended to be limiting.

[0040] It will thus be seen that the objects of the present invention have been fully and effectively accomplished. The embodiments have been shown and described for the purposes of illustrating the functional and structural principles of the present invention and is subject to change without departure from such principles. Therefore, this invention includes all modifications encompassed within the spirit and scope of the following claims.

Claims

1. A nozzle for mounting on a blow dryer, comprising:

a nozzle body having a group of sleeves, wherein said group of sleeves has gradually decreasing diameters thereof and each of said sleeves is construed in stepped shape, wherein two adjacent sleeves are sleeved together defining a circular cavity, wherein said plurality of circular cavities forms an air channel; and

a retainer provided along an edge of said sleeves for retaining a bundle of hair in position when said nozzle is in use.

2. A nozzle for mounting on a blow dryer, comprising:

a nozzle body having a group of sleeves, wherein said group of sleeves has gradually decreasing diameters thereof and each of said sleeves is construed in spiral shape, wherein two adjacent sleeves are sleeved together defining a circular cavity, wherein said plurality of circular cavities forms an air channel; and

a retainer provided along an edge of said sleeves for retaining a bundle of hair in position when said nozzle is in use.

3. A nozzle for mounting on a blow dryer, comprising:

a group of sleeves, wherein each of said sleeves has a hollow structure defining an air channel and a plurality of openings communicating with said air channel, wherein said group of sleeves is lined up in an end to end manner so that said air channels within said sleeves are communicated with each other;

a mounting base constructed in a circular shape, wherein said mounting base has a plurality of retention grooves provided on an inner surface at a first end thereof for detachably engaging with an outlet of said blow dryer, wherein a second end of said mounting base is connected to a proximal end of said group of sleeves; and

a clipper for clipping a bundle of hair, wherein

said clipper is mounted to a distal end of said group of sleeves.

4. The nozzle, as recited in claim 3, wherein each of said sleeves is a circular cylinder, wherein said group of said sleeves has a gradually decreasing diameters and said group of sleeves is coaxially lined up end to end in a order of gradually decreasing diameters so as to construct a stepped structure, wherein one of said sleeves having the largest diameter has an end connected to said first end of said mounting base while another one of said sleeves having the smallest diameter has an end connected to said clipper.

5. The nozzle, as recited in claim 4, wherein each of said sleeves has a same height.

6. The nozzle, as recited in claim 3, wherein each of said sleeves is a circular truncated cone, wherein bottom surfaces and upper surfaces of said group of said sleeves have gradually decreasing diameters, wherein according to an order of gradually decreasing diameters of said bottom surfaces of said group of sleeves, said upper surface of a first sleeve of said group of sleeves is connected to said bottom surface of an adjacent second sleeve of said group of sleeves so as to construct a stepped structure, wherein said sleeves are coaxially aligned with each other, wherein said diameter of said upper surface of said first sleeve is larger than said diameter of said bottom surface of said adjacent second sleeve, wherein one of said sleeves having a bottom surface of the largest diameter is connected to said first end of said mounting base, wherein another one of said sleeves having an upper surface of the smallest diameter is connected to said clipper.

7. The nozzle, as recited in claim 3, wherein each of said sleeves is a circular truncated cone, wherein bottom surfaces and upper surfaces of said group of said sleeves have gradually decreasing diameters, wherein according to an order of gradually decreasing diameters of said bottom surfaces of said group of sleeves, said upper surface of a first sleeve of said group of sleeves is connected to said bottom surface of an adjacent second sleeve of said group of sleeves so as to construct a stepped structure, wherein said sleeves are coaxially aligned with each other, wherein said diameter of said upper surface of said first sleeve is equal to said diameter of said bottom surface of said adjacent second sleeve, wherein one of said sleeves having a bottom surface of the largest diameter is connected to said first end of said mounting base, wherein another one of said sleeves having an upper surface of the smallest diameter is connected to said clipper.

8. The nozzle, as recited in claim 3, wherein each of said sleeves has a same height.

9. The nozzle, as recited in claim 5, further comprising a retainer which has a spiral structure, wherein said retainer is encircledly protruded on the outer surfaces of said group of sleeves in such a manner that said retainer is spirally extended between said mounting base and said clipper.

10. The nozzle, as recited in claim 7, further comprising a retainer which has a spiral structure, wherein said retainer is encircledly protruded on the outer surfaces of said group of sleeves in such a manner that said retainer is spirally extended between said mounting base and said clipper.

11. The nozzle, as recited in claim 9, wherein said group of sleeves is rotably mounted to said mounting base, so that said group of sleeves is capable of rotating with respect to said mounting base when a rotating force is applied thereon.

12. The nozzle, as recited in claim 10, wherein said group of sleeves is rotably mounted to said mounting base, so that said group of sleeves is capable of rotating with respect to said mounting base when a rotating force is applied thereon.

13. The nozzle, as recited in claim 11, wherein said mounting base further comprises a locker for retaining said group of sleeves in position.

14. The nozzle, as recited in claim 12, wherein said mounting base further comprises a locker for retaining said group of sleeves in position.

15. The nozzle, as recited in claim 14, wherein when said locker is in an open position, said group of sleeves rotates with respect to said mounting base when a rotating force is applied thereon on, wherein when said locker is in a closed position, said locker is retained on said blow dryer so that said group of sleeves is not able to rotate with respect to said mounting base.

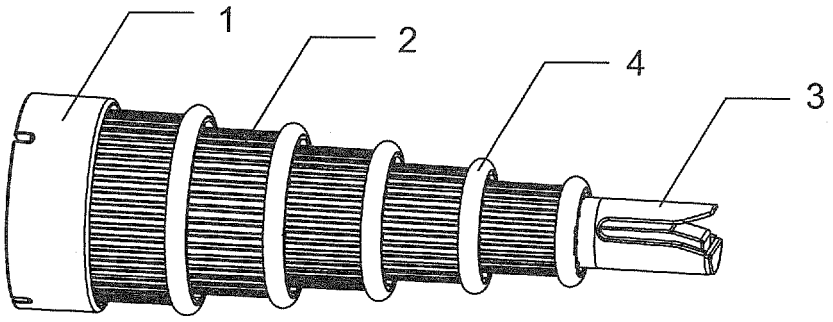

Fig. 1

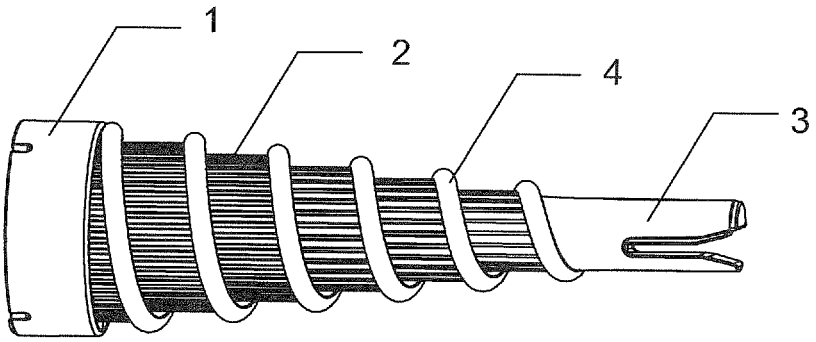

Fig. 2

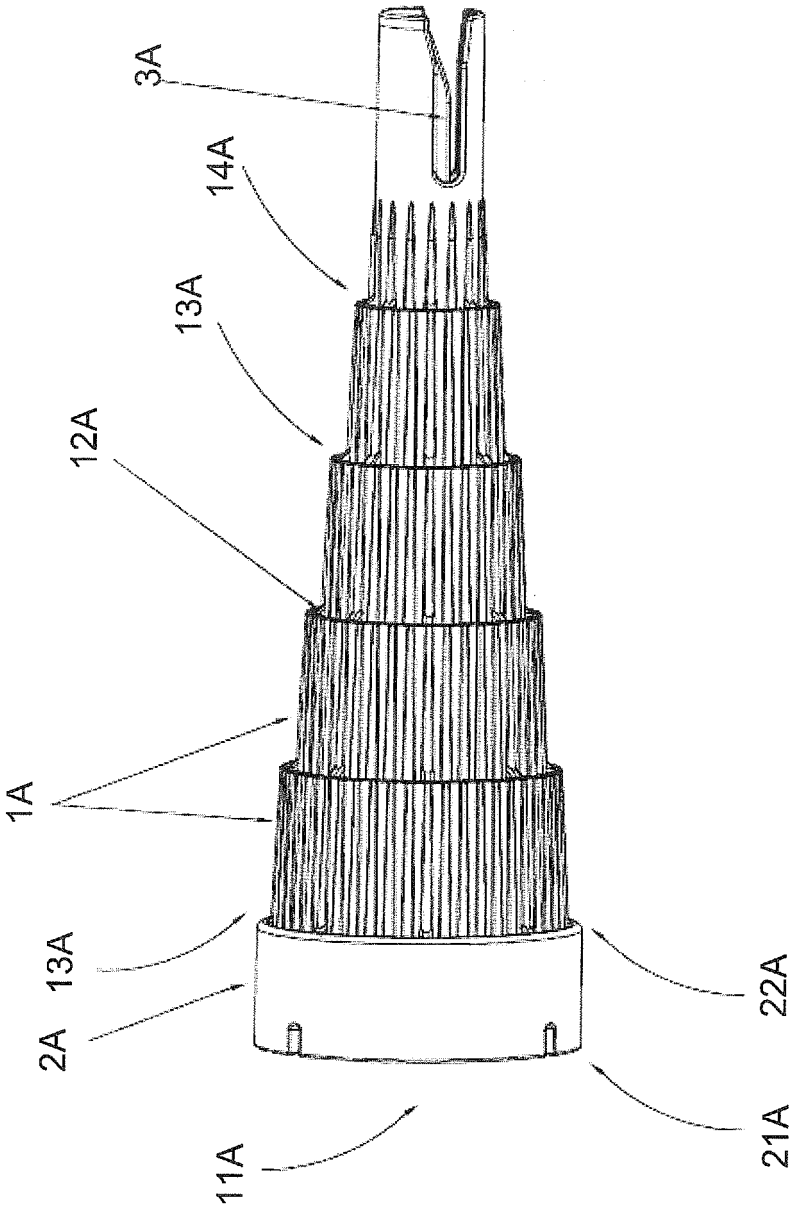

Fig. 3

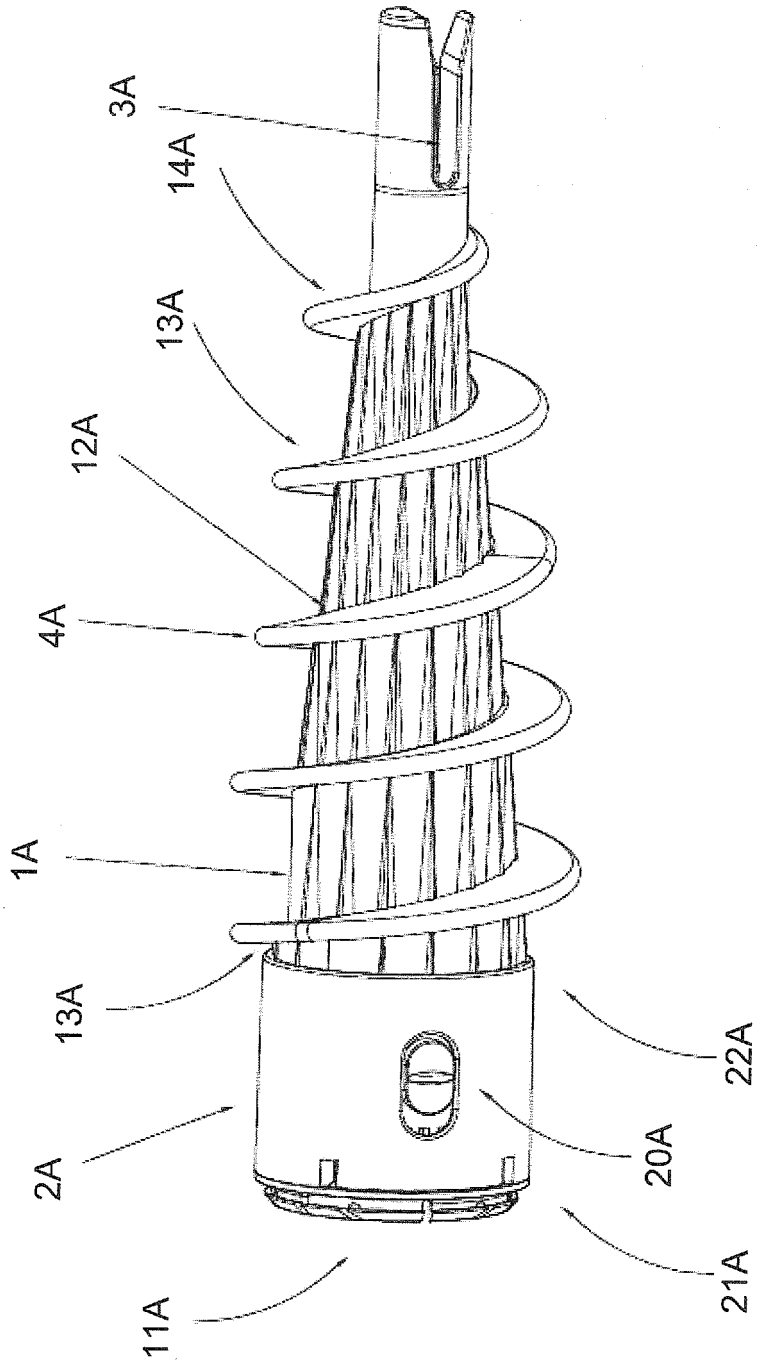

Fig. 4

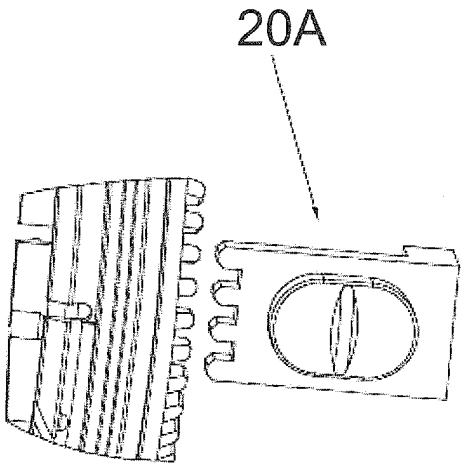

Fig. 5