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Yao(10) **Pub. No.: US 2015/0182013 A1**(43) **Pub. Date: Jul. 2, 2015**(54) **HAIRBRUSH****Publication Classification**(71) Applicant: **Ningbo Shunqiziran Arts and Crafts Co., LTD.**, Ningbo (CN)(72) Inventor: **Daqiu Yao**, Ningbo (CN)(21) Appl. No.: **14/561,231**(22) Filed: **Dec. 5, 2014****Related U.S. Application Data**

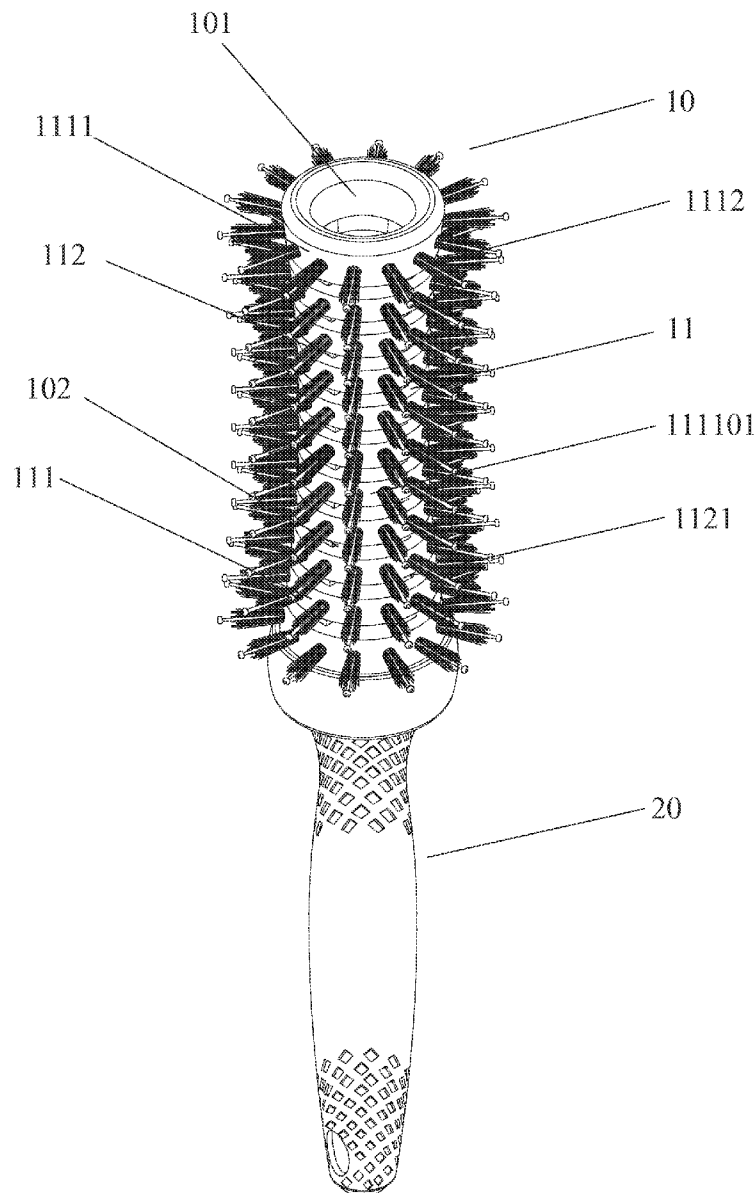
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A46B 2200/104 (2013.01)

(57)

ABSTRACT

Disclosed is a hairbrush, which comprising a combing portion, wherein the combing portion comprises a combing body, wherein the combing body defines a central air channel and a plurality of ventilating openings communicated with the central air channel for ventilating.



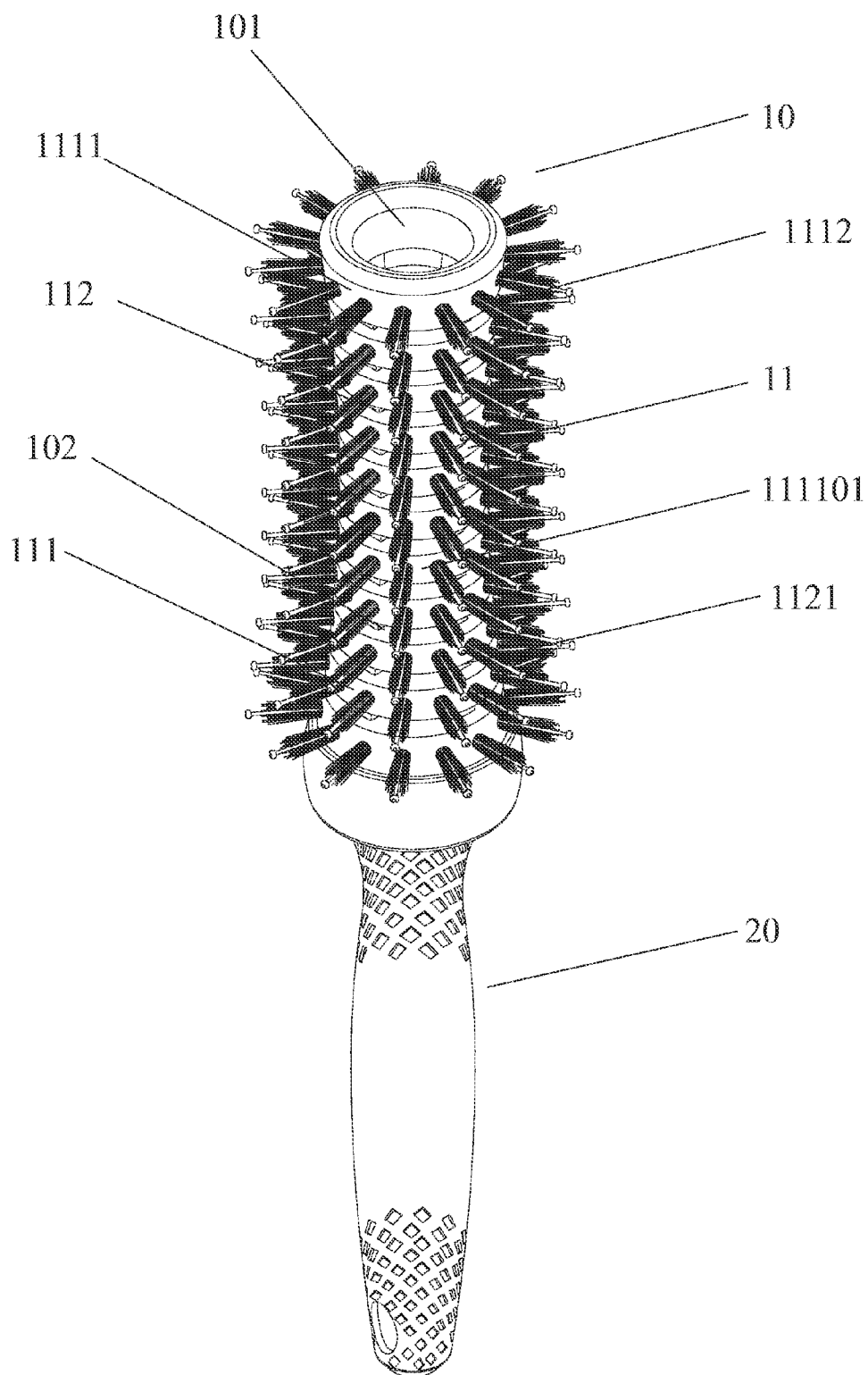


FIG.1

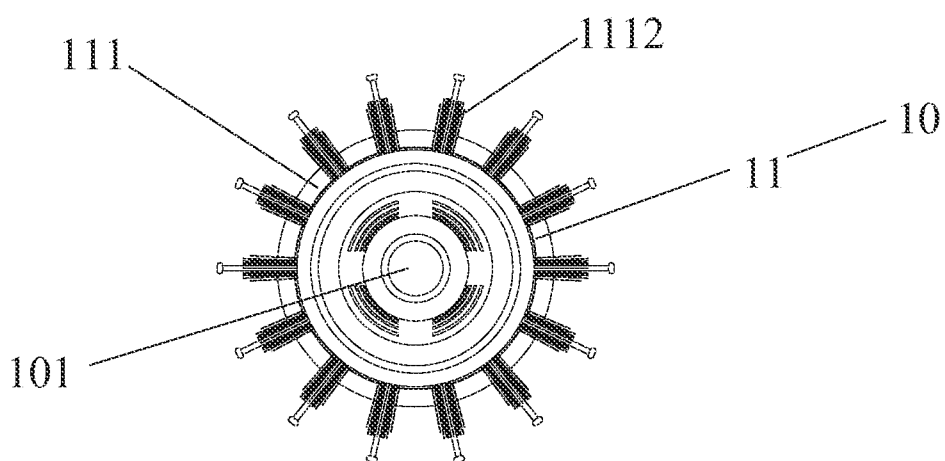


FIG.2

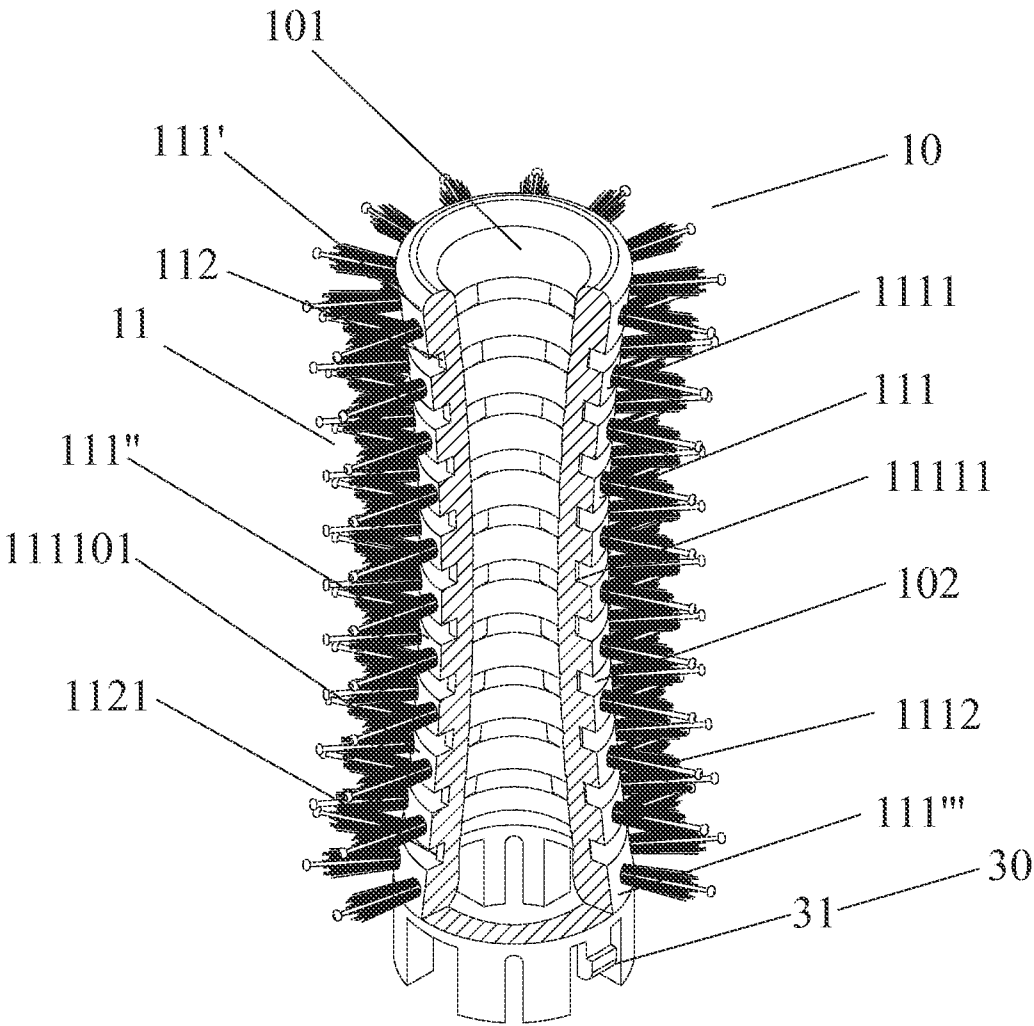


FIG.3

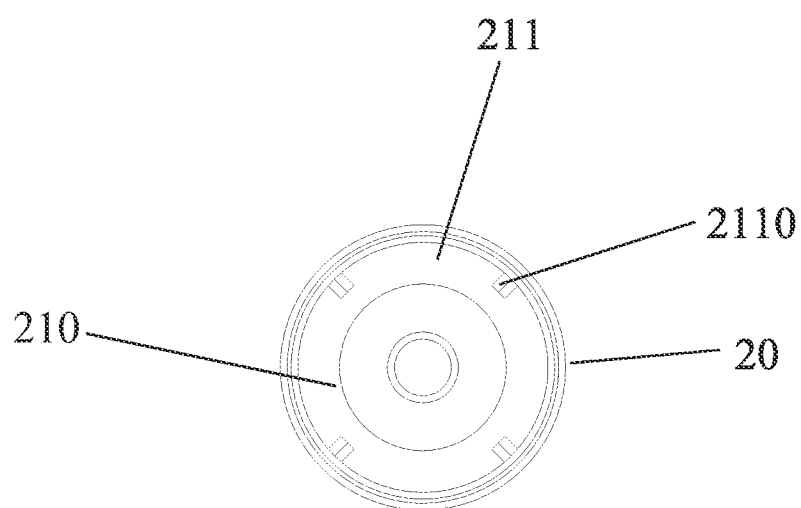


FIG.4

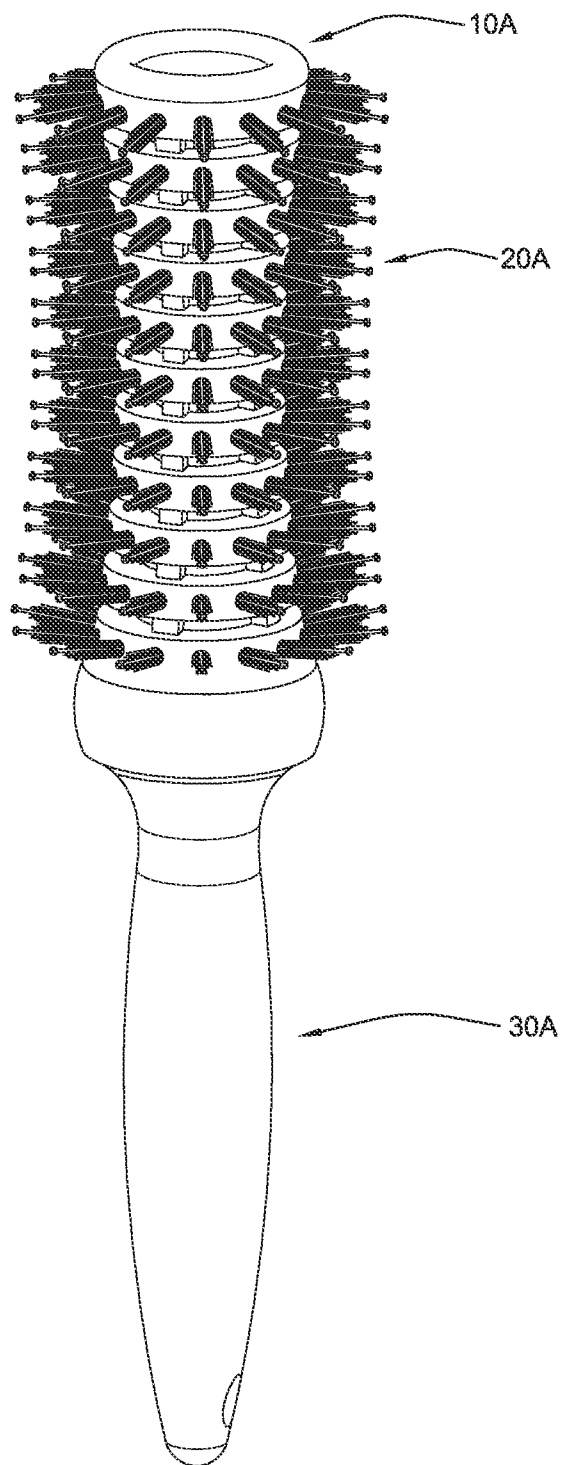


FIG. 5

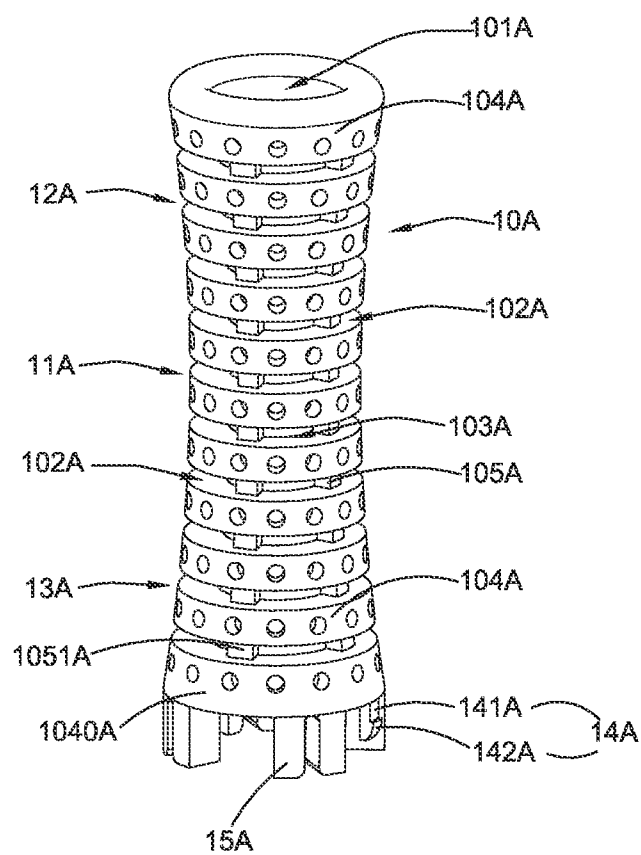


FIG. 6

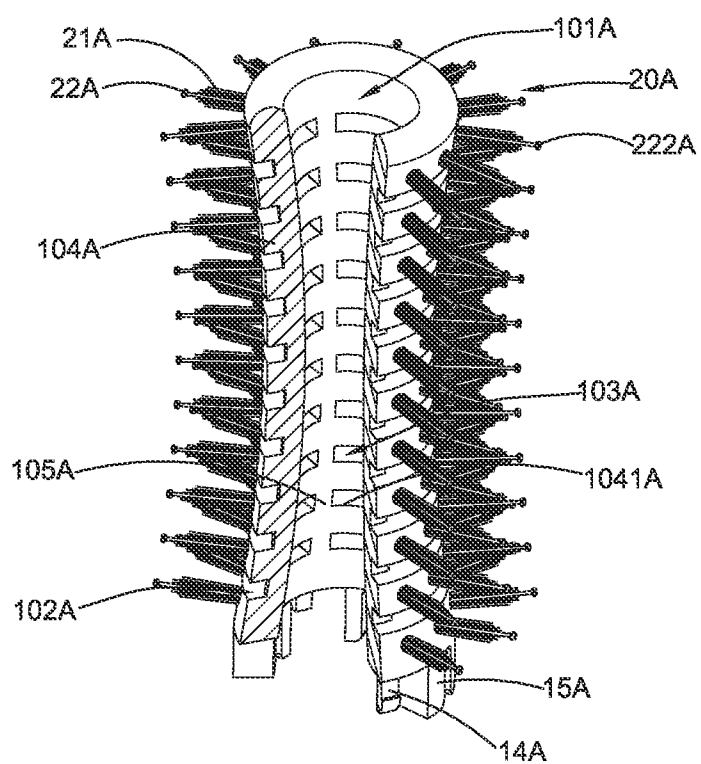


FIG. 7

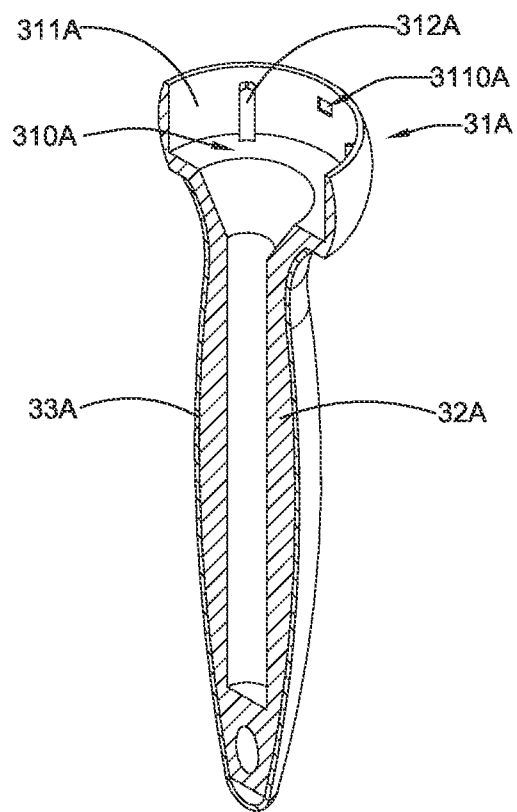


FIG. 8

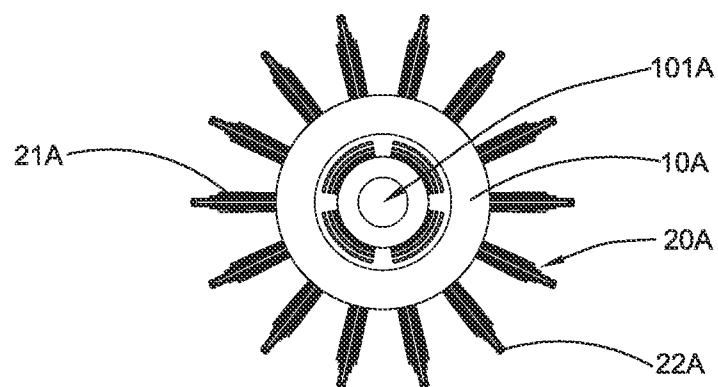


FIG. 9

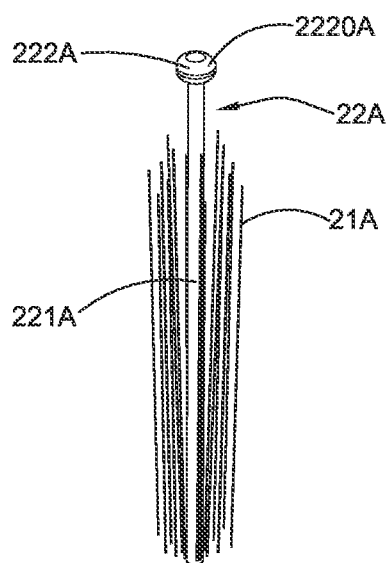


FIG. 10

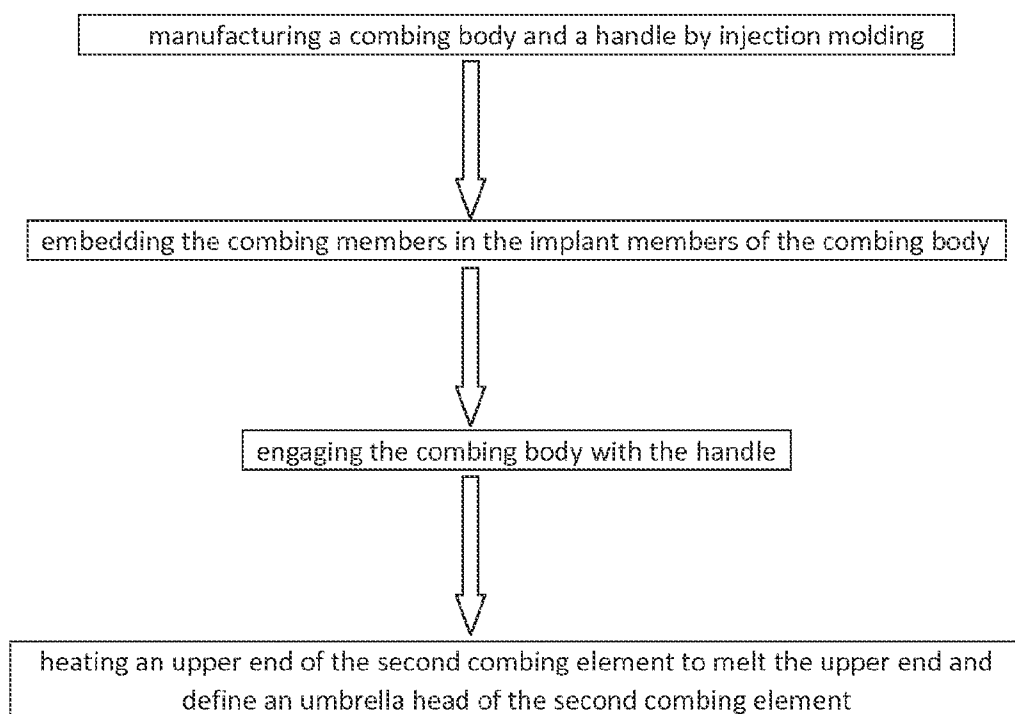


FIG. 11

HAIRBRUSH

CROSS REFERENCE OF RELATED APPLICATION

[0001] This is a non-provisional application that claims the benefit of priority under 35 U.S.C. § 119 to a provisional application, application number U.S. 61/921,522, filed on Dec. 29, 2013.

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BACKGROUND OF THE PRESENT INVENTION

[0003] 1. Field of Invention

[0004] The present invention relates to a sanitary product, and more particularly to a comb, wherein the comb has a central ventilating channel and a plurality of ventilating openings communicated with the central ventilating for preventing heat accumulation of the air flow from a hair drier.

[0005] 2. Description of Related Arts

[0006] As a kind of hairbrushes or combs, a circular hairbrush is a common sanitary product. It is used for various occasions, such as bathroom, barbershop and dressing room. Because wood is anisotropy and not adapted for making a circular hairbrush, so a circular hairbrush is normally made of synthetic materials. A current circular hairbrush generally comprises a combing portion and a handling portion, wherein the combing portion comprises an attaching body and a plurality of combing element, wherein each of combing elements comprises a bunch of bristles, wherein each of combing elements is provided in the attaching body. But the attaching body of the current comb has a solid structure and is bad for allowing the heat accumulation of the air from a hair drier to be exhausted or ventilated.

SUMMARY OF THE PRESENT INVENTION

[0007] The invention is advantageous in that it provides a hairbrush, wherein the hairbrush comprises a combing body and a handle provided with the combing body, wherein the combing body is hollowed out to facilitate the air flow from a hair drier to be ventilated.

[0008] Another advantage of the invention is to provide a hairbrush, wherein the hairbrush comprises a ventilating mechanism for facilitating the air flow from a hair drier to be ventilated therethrough and preventing the hot air flow from the hair drier from producing turbulent hot air flows and hurting a hand of a user.

[0009] Another advantage of the invention is to provide a hairbrush, wherein the combing body of the hairbrush defines a central air channel and a plurality of ventilating openings communicated with the central air channel for ventilating and heat dissipation.

[0010] Another advantage of the invention is to provide a hairbrush, wherein the combing body of the hairbrush comprises a plurality of combing members and a plurality of connecting members, wherein each of the connecting members is provided between two neighboring combing members in an inward-concave manner. In other words, each of the

connecting members is extended from the inner edge of one of the two neighboring combing members to the inner edge of another of the two neighboring combing members.

[0011] Another advantage of the invention is to provide a hairbrush, wherein at least one connecting member is provided between every two neighboring combing members in an inward-concave manner.

[0012] Another advantage of the invention is to provide a hairbrush, wherein the combing body has two thicker head portions and a thinner middle portion. In other words, the combing members define a first combing member, a middle combing member and a last combing member, wherein multiple combing members provided between the first combing member and the middle attaching are wider in diameter from bottom to top, and multiple combing members provided between the last combing member and the middle attaching are wider in diameter from bottom to top such that the combing body has a dumbbell-shaped exterior.

[0013] Another advantage of the invention is to provide a hairbrush, wherein each of the combing members has an attaching portion and a plurality of combing elements provided in the attaching portion, wherein each of the combing elements comprises bunch of bristles.

[0014] Another advantage of the invention is to provide a hairbrush, wherein the attaching portions are respectively integrated with the connecting members.

[0015] Another advantage of the invention is to provide a hairbrush, wherein the combing portion of the hairbrush is stably engaged with the handle such that the handle is connected with the combing portion in a glueless manner.

[0016] Another advantage of the invention is to provide a hairbrush, wherein each of the attaching portions has a smooth outer surface, and each of the connecting members has a smooth and arc-shaped side surface.

[0017] 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.

[0018] According to the present invention, the foregoing and other objects and advantages are attained by a hairbrush, which comprising a combing portion, wherein the combing portion comprises a combing body, wherein the combing body defines a central air channel and a plurality of ventilating openings communicated with the central air channel for ventilating.

[0019] Still further objects and advantages will become apparent from a consideration of the ensuing description and drawings.

[0020] 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

[0021] FIG. 1 is a perspective view of a hairbrush according to a first preferred embodiment of the present invention.

[0022] FIG. 2 is a top view of the hairbrush according to the above first preferred embodiment of the present invention.

[0023] FIG. 3 is a sectional view of the combing portion of the hairbrush according to the above first preferred embodiment of the present invention.

[0024] FIG. 4 is a top view of the handle of the hairbrush according to the above first preferred embodiment of the present invention.

[0025] FIG. 5 is a perspective view of a hairbrush according to a second preferred embodiment of the present invention.

[0026] FIG. 6 is a perspective view of the combing body of the hairbrush according to the above second preferred embodiment of the present invention.

[0027] FIG. 7 is a partial sectional view of the combing body of the hairbrush according to the above second preferred embodiment of the present invention.

[0028] FIG. 8 is a sectional view of the handle of the hairbrush according to the above second preferred embodiment of the present invention.

[0029] FIG. 9 is a top view of the hairbrush according to the above second preferred embodiment of the present invention.

[0030] FIG. 10 is a perspective view of the combing member of the hairbrush according to the second preferred embodiment of the present invention.

[0031] FIG. 11 is a flow chart of the method for manufacturing a hairbrush according to the above second preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0032] The following description is disclosed to enable any person skilled in the art to make and use the present invention. Preferred embodiments are provided in the following description only as examples and modifications will be apparent to those skilled in the art. The general principles defined in the following description would be applied to other embodiments, alternatives, modifications, equivalents, and applications without departing from the spirit and scope of the present invention.

[0033] Referring to FIG. 1 to FIG. 4 of the drawings, a hairbrush according to a first preferred embodiment of the present invention is illustrated, wherein the hairbrush comprises a combing portion 10, wherein the combing portion 10 comprises a combing body 11, wherein the combing body 11 is hollowed out to facilitate the air flow from a hair drier to be ventilated.

[0034] As shown in FIG. 1 and FIG. 2, the combing body 11 defines a central air channel 101 and a plurality of ventilating openings 102 communicated with the central air channel 101.

[0035] The combing body 11 of the combing portion 10 of the hairbrush of the present invention comprises a plurality of combing members 111 and a plurality of connecting members 112, wherein each of the connecting members 112 is provided between two neighboring combing members 111 in an inward-concave manner. In other words, at least one connecting member 112 is provided between every two neighboring combing members 111 in an inward-concave manner. Preferably, at least two connecting members 112 are respectively provided between every two neighboring combing members 111 in an inward-concave manner.

[0036] As shown in FIG. 1 and FIG. 2, each of combing members 111 comprises an attaching portion 1111 and a plurality of combing elements 1112 provided in the attaching portion 1111, wherein each of the combing elements 1112 comprises a bunch of bristles 11121 for combing hair of a user.

[0037] As shown in FIG. 3, the attaching portion 1111 has an inner edge 11111, wherein each of the connecting members 112 is extended between the inner edges 11111 of the attaching portions 1111 of two neighboring combing members 111 to minimize a contacting surface between hair of the user and the combing portion 11.

[0038] As shown in FIG. 1 and FIG. 3, the combing body 11 has two thicker head portions and a thinner middle portion. In other words, the plurality of combing members 111 define a first combing member 111', at least one middle combing member 111" and a last combing member 111', wherein multiple combing members 111 provided between the first combing member 111' and the middle combing member 111" gradually become wider in diameter from bottom to top, and multiple combing members 111 provided between the last combing member 111' and the middle combing member 111" gradually become wider in diameter from top to bottom such that the combing body 11 has a dumbbell-shaped exterior. Preferably, each of the attaching portions 1111 has a smooth outer surface 111101 for preventing the scalp of a user being scratched, and each of the connecting members 112 has a smooth and arc-shaped side surface 1121 for preventing hair being tangled up therein.

[0039] It is worth mentioning that the attaching portions 1111 are respectively integrated with the connecting members 112. Preferably, each of the ventilating openings 102 is provided between two neighboring combing members 111 and is defined between two neighboring connecting members 112.

[0040] As shown in FIG. 1, the hairbrush further comprises a handle 20, wherein the combing portion 10 is securely and stably engaged with the handle 20 such that the handle 20 is connected with the combing portion 10 in a glueless manner.

[0041] As shown in FIG. 3, the hairbrush further a connector 30, wherein the connector 30 comprises a plurality of connecting elements 31 extended downwardly from the combing portion 10 and a plurality of protrusions 32 extended outwardly and respectively from the connecting element 31, and the handle 20 comprises a connecting portion 21, wherein the connecting portion 21 defines a receiving chamber 210 for receiving the connector 30 and has an inner edge 211, wherein the connecting portion 21 has a plurality of recesses 2110 provided in the inner edge 211, wherein the protrusions 32 can be respectively engaged with the recesses 2110 such that each of protrusions is securely and stably received in the recess 2110.

[0042] The first embodiment of the present invention further provides a method for manufacturing a hairbrush, which comprising the following steps:

[0043] (1) manufacturing the attaching portions and the connecting members of the combing body of the combing portion by injection molding, wherein the attaching portions are respectively integrated with the connecting members;

[0044] (2) embedding respectively the combing elements in the attaching portions, wherein each of combing elements comprises a bunch of bristles;

[0045] (3) clipping the bristles of the combing member to define a synthetic longer bristle and multiple shorter bristles; and

[0046] (4) heating an upper end of the synthetic longer bristle for melting the upper end of the synthetic longer bristle and defining a head portion thereof

[0047] Preferably, the method for manufacturing method further comprises a step of engaging the protrusions of the connector with the recesses of connecting portion of the handle respectively.

[0048] Referring to FIG. 5 to FIG. 10 of the drawings, a hairbrush according to a second preferred embodiment of the present invention is illustrated, wherein the hairbrush com-

prises a combing body 10A and a plurality of combing members 20A provided in the combing body 10A, wherein the combing body 10A has an outer side 11A, wherein the combing body 10A defines a central air channel 101A therein, wherein the combing body 10A further defines a plurality of air grooves 102A provided in the outer side 11A and a plurality of ventilating openings 103A provided therethrough, wherein each of the air groove 102A is inwardly extended from the outer side 11A, wherein each of the ventilating openings 103A is respectively communicated with one of the air grooves 102A and the central channel 101A such that the central air channel 101A, the air grooves 102A and the ventilating openings 103A define a ventilating mechanism for the hairbrush of the present invention and facilitate the air flow from a hair drier to be ventilated therethrough. Preferably, the combing body 10A is hollow. More preferably, each of the air grooves 102A is circular and provided around the combing body 10A.

[0049] As shown in FIG. 5 to FIG. 7, the combing body 10A of the hairbrush of the present invention comprises a plurality of implant members 104A and a plurality of connecting members 105A, wherein each of the connecting members 105A is provided between two neighboring implant members 104A, and every two neighboring implant members 104A define at least one air groove 102A therebetween. Preferably, at least one connecting member 105A is provided between every two neighboring implant members 104A. More preferably, at least two connecting members 105A are respectively provided between every two neighboring implant members 104A.

[0050] It is worth mentioning that, the combing body 10A of the hairbrush of the present invention defines an upper portion 12A and a lower portion 13A extended from the upper portion 12A, wherein the diameter of the upper portion 12A of the combing body 10A becomes smaller and smaller from top to bottom, and the diameter of the lower portion 13A of the combing body 10A becomes bigger and bigger from top to bottom, so the combing body 10A has a dumbbell-shaped exterior, as shown in FIG. 5 to FIG. 7. In other words, the combing body 10A comprises two thicker head portions and a thinner middle portion to facilitate the hair of a user to be twisted round the combing body 10A.

[0051] It is appreciated that the central air channel 101A is also dumbbell-shaped to facilitate the air flow from the hair drier to be ventilated therethrough.

[0052] As shown in FIG. 7 and FIG. 10, the combing members 20A of the hairbrush of the present invention are respectively implanted in the implant members 104A, wherein each of the combing members 20A comprises a plurality of first combing elements 21A and a second combing element 22A for combing hair of a user, wherein each of the first combing element 21A and the second combing element 22A is thread-like, wherein each of the first combing elements 21A is more flexible than the second combing element 22A and shorter than the second combing element 22A. Further, the second combing element 22A comprises a thread body 221A implanted in the implant member 104A and an umbrella head 222A extended from the thread body 221A. Preferably, the umbrella head 222A has a smooth and arc-shaped top surface 2220A.

[0053] As shown in FIG. 7, each of the implant members 104A has an inner edge 1041A, wherein each of the connecting members 105A is extended between the inner edges

1041A of two neighboring implant members 104 to minimize a contacting surface between hair of the user and the combing body 10A.

[0054] Preferably, each of the implant members 104A has a smooth outer surface 1040A for preventing the scalp of a user from being scratched, and each of the connecting members 105A has a smooth and arc-shaped outer surface 1051A for preventing hair from being tangled up thereon, wherein each of the combing members 20A is provided in the smooth outer surface 1040A of the implant member 104A.

[0055] As shown in FIG. 5 and FIG. 8, the hairbrush according to the second preferred embodiment of the present invention further comprises a handle 30A, wherein the combing body 10A is securely and stably provided with the handle 30A in a glueless manner.

[0056] As shown in FIG. 5 and FIG. 8, the combing body 10A of the hairbrush further comprises a connector 14A, wherein the connector 14A comprises a plurality of connecting elements 141A extended downwardly and respectively from the lower portion 13A of the combing body 10A and a plurality of protrusions 142A extended outwardly and respectively from the connecting elements 141A, and the handle 30A comprises a connecting portion 31A and a grasping portion 32A extended from the connecting portion 31A, wherein the connecting portion 31A defines a receiving chamber 310A for receiving the connector 14A and has an inner side 311A, wherein the connecting portion 31A has a plurality of recesses 3110A provided in the inner side 311A, wherein each of the protrusions 142A is securely and stably engaged with the recess 3110A such that the handle 30A is securely and stably engaged with the combing body 10A.

[0057] As shown in FIG. 5 and FIG. 8, the combing body 10A of the hairbrush further a plurality of clips 15A extended downwardly and respectively from the lower portion 13A of the combing body 10A, and the connecting portion 31A of the handle 30A further comprises a plurality of ribs 312A provided in the inner side 311A, wherein the clips 15A respectively clamp the ribs 312A of the connecting portion 31A to hold the handle 30A to be engaged with the combing body 10A.

[0058] It is worth mentioning that the handle 30A of the hairbrush according to the second preferred embodiment of the present invention further comprises a sleeve 33A provided integrally on the grasping portion 32A of the handle 30A. Preferably, the sleeve 33A is made of rubber material.

[0059] As shown in FIG. 11, the second embodiment of the present invention further provides a method for manufacturing a hairbrush, which comprising the following steps:

[0060] (A) manufacturing the combing body 10A and the handle 30A by injection molding, wherein the combing body 10A is capable of being engaged with the handle 30A, wherein the combing body 10A has an outer side 11A, wherein the combing body 10A defines a central air channel 101A therein, wherein the combing body 10A further defines a plurality of air groove 102A provided in the outer side 11A and a plurality of ventilating openings 103A provided therethrough, wherein each of the air groove 102A is inwardly extended from the outer side 11A, wherein each of the ventilating openings 103A is respectively communicated with one of the air grooves 102A and the central channel 101A;

[0061] (B) embedding respectively the combing members 20A in the implant members 104A of the combing body 10A; and

[0062] (C) engaging the combing body 10A with the handle 30A.

[0063] As shown in FIG. 11, the method for manufacturing a hairbrush further comprises the step of:

[0064] (D) heating an upper end of the second combing element to melt the upper end and define an umbrella head of the second combing element, wherein the second combing element is made of synthetic material, wherein the umbrella head has a smooth and arc-shaped top surface.

[0065] 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.

[0066] 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.

What is claimed is:

1. A hairbrush, comprising:
 - a combing body; and
 - a plurality of combing members provided in said combing body, wherein said combing body has an outer side, wherein said combing body defines a central air channel therein, a plurality of air groove provided in said outer side and a plurality of ventilating openings provided therethrough, wherein each of said air grooves is inwardly extended from said outer side, wherein each of said ventilating openings is respectively communicated with at least one air groove and said central channel such that said central air channel, said air grooves and said ventilating openings define a ventilating mechanism for facilitating an air flow from a hair drier to be ventilated therethrough.
2. The hairbrush, as recited in claim 1, wherein said combing body comprises a plurality of implant members and a plurality of connecting members, wherein each of said connecting members is provided between two neighboring implant members, and every two neighboring implant members define at least one air groove therebetween.
3. The hairbrush, as recited in claim 1, wherein said combing body has a dumbbell-shaped exterior to facilitate hair of a user to be twisted round said combing body.
4. The hairbrush, as recited in claim 2, wherein said combing body has a dumbbell-shaped exterior to facilitate hair of a user to be twisted round said combing body.
5. The hairbrush, as recited in claim 1, wherein said central air channel is dumbbell-shaped to facilitate said air flow from said hair drier to be ventilated therethrough.
6. The hairbrush, as recited in claim 4, wherein said central air channel is dumbbell-shaped to facilitate said air flow from said hair drier to be ventilated therethrough.
7. The hairbrush, as recited in claim 2, wherein said combing members are respectively implanted in said implant members, wherein each of said combing members comprises a plurality of first combing elements and a second combing element for combing hair of a user, wherein each of said first combing element and said second combing element is thread-like, wherein each of said first combing elements is more flexible than said second combing element and shorter than

said second combing element, wherein said second combing element comprises a thread body implanted in said implant member and an umbrella head extended from said thread body, wherein said umbrella head has a smooth and arc-shaped top surface.

8. The hairbrush, as recited in claim 6, wherein said combing members are respectively implanted in said implant members, wherein each of said combing members comprises a plurality of first combing elements and a second combing element for combing hair of a user, wherein each of said first combing element and said second combing element is thread-like, wherein each of said first combing elements is more flexible than said second combing element and shorter than said second combing element, wherein said second combing element comprises a thread body implanted in said implant member and an umbrella head extended from said thread body, wherein said umbrella head has a smooth and arc-shaped top surface.

9. The hairbrush, as recited in claim 2, wherein each of said implant members has an inner edge, wherein each of said connecting members is extended between said inner edges of two neighboring implant members to minimize a contacting surface between hair of said user and said combing body.

10. The hairbrush, as recited in claim 8, wherein each of said implant members has an inner edge, wherein each of said connecting members is extended between said inner edges of two neighboring implant members to minimize a contacting surface between hair of said user and said combing body.

11. The hairbrush, as recited in claim 2, wherein each of said implant members has a smooth outer surface, and each of said connecting members has a smooth and arc-shaped outer surface, wherein each of said combing members is provided in said smooth outer surface of said implant member.

12. The hairbrush, as recited in claim 10, wherein each of said implant members has a smooth outer surface, and each of said connecting members has a smooth and arc-shaped outer surface, wherein each of said combing members is provided in said smooth outer surface of said implant member.

13. The hairbrush, as recited in claim 2, further comprising a handle, wherein said combing body is securely and stably provided in said handle in a glueless manner.

14. The hairbrush, as recited in claim 12, further comprising a handle, wherein said combing body is securely and stably provided in said handle in a glueless manner.

15. The hairbrush, as recited in claim 13, wherein said combing body further comprises a connector, wherein said connector comprises a plurality of connecting elements extended downwardly and respectively from said lower portion of said combing body and a plurality of protrusions extended outwardly and respectively from said connecting elements, and said handle comprises a connecting portion and a grasping portion extended from said connecting portion, wherein said connecting portion defines a receiving chamber for receiving said connector and has an inner side, wherein said connecting portion has a plurality of recesses provided in said inner side, wherein each of said protrusions is securely and stably engaged with said recess such that said handle is securely and stably engaged with said combing body.

16. The hairbrush, as recited in claim 14, wherein said combing body further comprises a connector, wherein said connector comprises a plurality of connecting elements extended downwardly and respectively from said lower portion of said combing body and a plurality of protrusions extended outwardly and respectively from said connecting

elements, and said handle comprises a connecting portion and a grasping portion extended from said connecting portion, wherein said connecting portion defines a receiving chamber for receiving said connector and has an inner side, wherein said connecting portion has a plurality of recesses provided in said inner side, wherein each of said protrusions is securely and stably engaged with said recess such that said handle is securely and stably engaged with said combing body.

17. The hairbrush, as recited in claim **13**, wherein said combing body further a plurality of clips extended downwardly and respectively from said lower portion of said combing body, and said connecting portion of said handle further comprises a plurality of ribs provided in said inner side, wherein said clips respectively clamps said ribs of said connecting portion to hold said handle to be engaged with said combing body.

18. The hairbrush, as recited in claim **14**, wherein said combing body further a plurality of clips extended downwardly and respectively from said lower portion of said combing body, and said connecting portion of said handle further comprises a plurality of ribs provided in said inner side, wherein said clips respectively clamps said ribs of said connecting portion to hold said handle to be engaged with said combing body.

19. A method for manufacturing a hairbrush, which comprising the steps of:

- (A) manufacturing the combing body and the handle by injection molding, wherein the combing body is capable of being engaged with the handle, wherein the combing body has an outer side, wherein the combing body defines a central air channel therein, a plurality of air groove provided in the outer side and a plurality of ventilating openings provided therethrough, wherein each of the air groove is inwardly extended from the outer side, wherein each of the ventilating openings is respectively communicated with at least one air groove and the central channel;
- (B) embedding respectively the combing members in the implant members of the combing body; and
- (C) engaging the combing body with the handle.

20. The method, as recited in claim **19**, further comprising the step of:

- (D) heating an upper end of the second combing element to melt the upper end and define an umbrella head of the second combing element, wherein the second combing element is made of synthetic material, wherein the umbrella head has a smooth and arc-shaped top surface.

* * * * *