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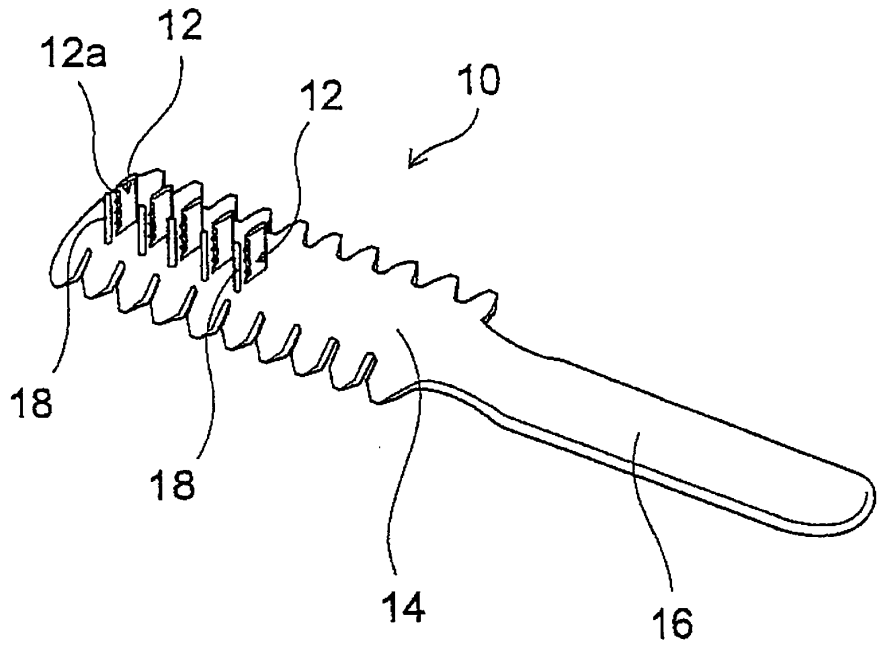
(54) RAZOR FOR HAIR CUT AND REPLACEMENT RAZOR FOR HAIR CUT

(57) A razor for hair cut capable of easily and rapidly performing various types of hair cutting operations and finely finishing the hair cut. Cutters having edges are fitted to the base body of the razor for hair cut in an upright state so that the edges are positioned in a direction perpendicular to the upright direction of the cutters. Also, the razor for hair cut is formed integrally with the bristle part of a hairbrush so that brushing and cutting operations can be performed simultaneously. Thus, a desirable hairstyle can be easily formed.

Figure 1



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Description

TECHNICAL FIELD

[0001] The present invention relates to a hair-cutting razor for partially cutting hair, and a replaceable hair-cutting razor applied to the hair-cutting razor.

BACKGROUND ART

[0002] Hair-cutting razors are used widely for creating attractive hairstyles.

[0003] The invention described in Japanese Unexamined Patent Application Publication 2003-190675 is known as an example thereof.

[0004] In this example, a blade body 32 of a razor 30 is structured such that a blade edge 34 is covered discontinuously by semicircular protrusions 36 protruding from the blade edge 34, and thus an exposed blade edge 34a and a covered blade edge 34b are provided alternately.

[0005] Further, a groove 38 for limiting the amount of combing during hair cutting is provided between adjacent pairs of the protrusions 36, 36 (see Figs. 16 and 17).

[0006] However, in the background art described above, although the advantage of stabilizing the amount of hair that is supplied to the exposed blade edges 34a of the blade body 32 during hair cutting through use of the protrusions 36 can be appreciated, the exposed blade edges 34a face the hair at a right angle (in the shape of a cross), similarly to known razors of this type (see Figs. 18 and 19).

[0007] Hence, although hair H can be cut reliably by moving the razor 30 along the scalp of a head T, problems arise in the following points.

[0008] Since the exposed blade edges 34a face the hair H at a right angle, the hair H may be cut excessively.

[0009] To describe this point further with reference to Figs. 16 through 19, the blade edge 34a of the blade body 32 moves in a right-angled direction to the hair H, as shown in the drawings, and hence the hair H can be cut reliably. However, the cutting function improves as the angle of incline of the blade edge 34a relative to the hair H shifts from an acute angle toward a right angle, and as the cutting function improves, the hair H may be cut excessively, leading to a difference between the hair in the uncut portion and the hair in the cut portion. As a result, an unbalanced haircut may be created.

[0010] To avoid an unbalanced haircut for the hair H, the angle of incline of the blade edge 34a may be varied, thereby suppressing excessive hair cutting, but an operation to vary the angle of incline is not always easy.

[0011] When the razor 30 is used to cut the hair H on one's own head, particularly the hair H on the rear surface of the head which is difficult to see, it is necessary to rely on a "knack", or in other words intuition, and therefore the hair H may be cut excessively, or on the other hand, the amount of hair that is cut may be insufficient. Hence, the difficult of avoiding an unbalanced haircut remains.

[0012] To prevent unbalanced haircuts, it is necessary to adjust the angle at which the blade edge 34a of the razor 30 contacts the hair H appropriately.

[0013] However, a manual operation to keep the incline angle of the blade edge 34a of the razor 30 constant and cut the hair H continuously while maintaining the angle is extremely difficult, and as a result, it is difficult to cut the hair H in a balanced fashion.

DISCLOSURE OF THE INVENTION

[0014] An object of the present invention is to solve the problems of the background art described above by providing a hair-cutting razor which cuts hair in a balanced fashion without cutting the hair excessively or insufficiently, and a replaceable hair-cutting razor which is applied to the hair-cutting razor.

[0015] Another object is to provide a hair-cutting razor and a replaceable hair-cutting razor which excel in safety such that human fingers or the like are not injured by a blade when handling the hair-cutting razor and replaceable hair-cutting razor.

[0016] Other objects of the hair-cutting razor and replaceable hair-cutting razor will be understood easily from the following description and the drawings.

[0017] The present invention has been devised through repeated experiment and study in order to solve the problems in the background art described above, and possesses the following technical characteristics.

[0018] A first invention for solving the problems is characterized in that at least one blade comprising a cutting edge stands upright on a hair-cutting razor host material, and the cutting edge is disposed in a right-angled direction to the upright direction of the blade.

[0019] In this specification, the phrase "the cutting edge is disposed in a right-angled direction to the upright direction of the blade" includes a case in which the cutting edge of the blade is disposed at a right angle (90 degrees) to the upright direction of the blade, a case in which the angle is smaller than a right angle, and a case in which the angle is larger than a right angle. In other words, the phrase includes any angle within a range which enables the blade to stroke the hair during hair cutting.

[0020] A second invention for solving the problems is a hair-cutting razor in which at least two blades, each having a cutting edge, stand upright on a hair-cutting razor host material, and the cutting edge is disposed in a right-angled direction to the upright direction of the blade, characterized in that the cutting edges of the at least two blades are disposed in different directions to each other.

[0021] A third invention for solving the problems is characterized in that, in the first or second invention for solving the problems, the cutting edge of the blade is inclined about a reference line of the hair-cutting razor host material.

[0022] A fourth invention for solving the problems is a hair-cutting razor in which at least two blades, each hav-

ing a cutting edge, stand upright on a hair-cutting razor host material, the cutting edge is disposed in a right-angled direction to the upright direction of the blade, and the cutting edges of the at least two blades are disposed in different directions to each other, characterized in that the blades are not disposed parallel to each other.

[0023] In this specification, the phrase "the blades are not disposed parallel to each other" indicates that the blades are not arranged in series, but disposed so as to protrude and retreat when seen from above.

[0024] A fifth invention for solving the problems is a hair-cutting razor in which at least two blades, each having a cutting edge, stand upright on a hair-cutting razor host material, and the cutting edge is disposed in a right-angled direction to the upright direction of the blade, characterized in that the cutting edges of the at least two blades are disposed in the same direction as each other, and the blades are disposed parallel to each other.

[0025] A sixth invention for solving the problems is characterized in that, in the first, second, third, fourth, or fifth invention for solving the problems, a control member for suppressing injuries during handling is provided adjacent to the cutting edge of the blade.

[0026] A seventh invention for solving the problems is characterized in that, in the first, second, third, fourth, fifth, or sixth invention for solving the problems, the control member for suppressing injuries during handling doubles as a bristle.

[0027] The eighth through fourteenth inventions for solving the problems to be described below all relate to a replaceable hair-cutting razor having blades, which is provided detachably on the hair-cutting razor host material.

[0028] An eighth invention for solving the problems is a replaceable hair-cutting razor in which at least one blade having a cutting edge stands upright on a razor host material, and the cutting edge is disposed in a right-angled direction to the upright direction of the blade, characterized in being provided detachably on a hair-cutting razor host material.

[0029] A ninth invention for solving the problems is a replaceable hair-cutting razor in which at least two blades, each having a cutting edge, stand upright on a razor host material, the cutting edge is disposed in a right-angled direction to the upright direction of the blade, and the cutting edges of the at least two blades are disposed in different directions to each other, characterized in being provided detachably on a hair-cutting razor host material.

[0030] A tenth invention for solving the problems is characterized in that, in the eighth or ninth invention for solving the problems, the cutting edge of the blade is inclined about a reference line of the razor host material.

[0031] An eleventh invention for solving the problems is a replaceable hair-cutting razor in which at least two blades, each having a cutting edge, stand upright on a razor host material, the cutting edge is disposed in a right-angled direction to the upright direction of the blade, the cutting edges of the at least two blades are disposed in different directions to each other, and the blades are not disposed parallel to each other, characterized in being provided detachably on a hair-cutting razor host material.

[0032] A twelfth invention for solving the problems is a replaceable hair-cutting razor in which at least two blades, each having a cutting edge, stand upright on a razor host material, the cutting edge is disposed in a right-angled direction to the upright direction of the blade, the cutting edges of the at least two blades are disposed in the same direction as each other, and the blades are disposed parallel to each other, characterized in being provided detachably on a hair-cutting razor host material.

[0033] A thirteenth invention for solving the problems is characterized in that, in the eighth, ninth, tenth, eleventh, or twelfth invention for solving the problems, a control member for suppressing injuries during handling is provided adjacent to the cutting edge of the blade.

[0034] A fourteenth invention for solving the problems is characterized in that, in the eighth, ninth, tenth, eleventh, twelfth, or thirteenth invention for solving the problems, the control member for suppressing injuries during handling doubles as a bristle.

[0035] A fifteenth invention for solving the problems is a hairbrush integrated with a hair-cutting razor, characterized in that cutting edges of a plurality of blades standing upright on a hair-cutting razor host material integrated with bristles of the hairbrush are oriented in appropriate different directions either alternately or randomly.

[0036] A sixteenth invention for solving the problems is a hairbrush integrated with the hair-cutting razor, in which the hair-cutting razor according to any one the first through seventh inventions for solving the problems is integrated with bristles of the hairbrush, characterized in that hair resistance during brushing is caused to differ between a cutting edge side and a blade rear side by causing a bristle density to differ between the cutting edge side and the blade rear side.

[0037] A seventeenth invention for solving the problems is the hairbrush integrated with a hair-cutting razor according to the sixteenth invention for solving the problems, characterized in that the hair resistance during brushing is made lower on the cutting edge side than on the blade rear side by making the bristle density on the cutting edge side lower than that of the blade rear side.

[0038] An eighteenth invention for solving the problems is the hairbrush integrated with a hair-cutting razor according to the sixteenth or seventeenth invention for solving the problems, characterized in that the hair-cutting razor integrated with the hairbrush is detachable and replaceable relative to the brush.

[0039] The first invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0040] The blade body side of the hair-cutting razor is oriented toward the hair and typically moved over the scalp from the crown side of the head to the neck side.

[0041] In this case, the cutting edges of the blades do

not contact the hair in a right-angled direction, as in the background art, and instead move so as to stroke the hair. As a result, steps do not occur in the hair, and a single hair is cut diagonally from a cut starting portion to a cut end portion (see Fig. 6).

[0042] In the present invention, when the razor is moved, the cutting edges of the blades are oriented downward in alignment with the length direction of the hair, and hence the hair is cut gradually as the cutting edges move so as to stroke or trim the hair (see Figs. 4, 5, and 6).

[0043] In this case, the cutting edges of the blades cut while moving along the hair, and hence the amount of hair that is cut decreases gradually from the head side to the neck side.

[0044] In so doing, the natural growth pattern of the hair, in which the root of the hair is generally thick and the hair becomes gradually thinner toward the tip end side, is emulated, and hence an unbalanced haircut is not produced (see Figs. 4, 5, and 6).

[0045] The second invention for solving the problems is constituted as described above, and therefore shares the actions and effects of the first invention for solving the problems as well as exhibiting the following actions and effects.

[0046] When cutting the hair on the rear surface side of the head, the hair-cutting razor may be held in the right hand and moved from the right side of the rear surface side of the head toward the left of the neck side, or conversely, the hair-cutting razor may be held in the left hand and moved in an arc movement from the left side of the rear surface side of the head toward the right of the neck side.

[0047] In these cases, the cutting edges of the blades are preferably oriented in the movement direction.

[0048] However, to achieve this, the razor must be manufactured in left-handed and right-handed versions, and to produce both versions separately is complicated, leading to an increase in production costs. Therefore, the inventor has disposed the cutting edges of the blades in different directions as described above so that the hair-cutting razor can be used in both the left and right hands.

[0049] The third invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0050] In addition to the actions and effects exhibited by the first or second invention for solving the problems, the cutting edges are inclined about a reference line of the hair-cutting razor host material, which contributes to a further improvement in the hair-cutting function.

[0051] More specifically, hair is cut along the spherical human scalp, and in this case, the cutting edges of the blades move in an arc movement having a fixed angular range.

[0052] By inclining the cutting edges to correspond to the movement angle, an almost ideal cutting angle can be obtained, and hence the hair can be cut even more favorably.

[0053] The fourth invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0054] In addition to actions and effects shared with the second invention for solving the problems, the blades are not disposed parallel to each other, and therefore, when cutting short hair in particular, for example a man's hair, the hair is more likely to fly up and become caught in the cutting edge of the blade, making it easier to cut short hair.

[0055] The fifth invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0056] In addition to actions and effects shared with the first invention for solving the problems, the cutting edges of the blades are disposed in the same direction as each other and parallel to each other, and therefore a further improvement in the cutting function can be expected.

[0057] The sixth invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0058] In addition to the actions and effects exhibited by the first, second, third, fourth, or fifth invention for solving the problems, a control member for suppressing injuries during handling of the hair-cutting razor is provided adjacent to the cutting edge, and therefore injuries to fingers and so on do not occur.

[0059] The seventh invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0060] In addition to the actions and effects exhibited by the first, second, third, fourth, fifth, or sixth invention for solving the problems, the control member doubles as a bristle, and hence the hair can be cut by the blades while being combed by the bristles.

[0061] The eighth invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0062] By attaching the replaceable hair-cutting razor to the hair-cutting razor main body, actions and effects shared with the first invention for solving the problems are exhibited, and in addition, the replaceable hair-cutting razor can be replaced when the razor becomes worn. As a result, a hair-cutting razor which cuts well can be obtained easily at all times.

[0063] The ninth invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0064] Actions and effects shared with the second and eighth inventions for solving the problems can be obtained.

[0065] The tenth invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0066] Actions and effects shared with the third and eighth inventions for solving the problems can be obtained.

[0067] The eleventh invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0068] Actions and effects shared with the fourth and eighth inventions for solving the problems can be obtained.

[0069] The twelfth invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0070] Actions and effects shared with the fifth and eighth inventions for solving the problems can be obtained.

[0071] The thirteenth invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0072] Actions and effects shared with the sixth and eighth inventions for solving the problems can be obtained.

[0073] The fourteenth invention for solving the problems is constituted as described above, and therefore exhibits the following actions and effects.

[0074] Actions and effects shared with the seventh and eighth inventions for solving the problems can be obtained.

[0075] By integrating the hair-cutting razor of the present invention with a hairbrush, the fifteenth invention for solving the problems is capable of achieving actions and effects whereby a desired haircut can be performed at the same time as a brushing operation.

[0076] The sixteenth invention for solving the problems basically exhibits similar actions and effects to those of the fifteenth invention for solving the problems, but by making the bristle density different to the front and rear of the cutting edges, which are oriented in a fixed direction, it is possible to achieve actions and effects whereby a hair-cutting operation can be performed more smoothly.

[0077] By making the bristle density on the front side of the cutting edges lower than the bristle density on the rear side, the seventeenth invention for solving the problems is capable of achieving actions and effects whereby a hair-cutting operation can be performed smoothly and a finished hairstyle achieved by brushing can be improved.

[0078] When the hair-cutting razor of the present invention is integrated with a hairbrush, the eighteenth invention for solving the problems is capable of achieving actions and effects whereby the hair-cutting razor can be replaced easily at any time when the cutting edges become blunt. As a result, the required cutting performance can be secured continuously.

BRIEF DESCRIPTION OF THE DRAWINGS

[0079]

Fig. 1 is a perspective view of a hair-cutting razor according to a first embodiment of the present invention;

Fig. 2 is a perspective view of another hair-cutting razor according to the first embodiment of the present invention;

Fig. 3 is an enlarged side view showing the main parts of a hair-cutting razor according to an embodiment of the present invention;

Fig. 4 is an enlarged illustrative view showing a state of use of the hair-cutting razor according to an embodiment of the present invention;

Fig. 5 is an enlarged illustrative view showing a state of use of the hair-cutting razor according to an embodiment of the present invention;

Fig. 6 is an enlarged illustrative view showing a state in which hair is cut by the hair-cutting razor according to an embodiment of the present invention;

Fig. 7 is a perspective view showing a hair-cutting razor according to a second embodiment of the present invention;

Fig. 8 is a perspective view showing a hair-cutting razor according to a third embodiment of the present invention;

Fig. 9 is a perspective view showing another hair-cutting razor according to the third embodiment of the present invention;

Fig. 10 is a perspective view showing a hair-cutting razor according to a fourth embodiment of the present invention;

Fig. 11 is a perspective view showing a hair-cutting razor according to a fifth embodiment of the present invention;

Fig. 12 is a perspective view showing a hair-cutting razor according to a sixth embodiment of the present invention;

Fig. 13 is a perspective view showing a replaceable hair-cutting razor according to an embodiment of the present invention;

Fig. 14 is a perspective view showing a state of use of the replaceable hair-cutting razor according to an embodiment of the present invention;

Fig. 15 is an enlarged sectional view showing the main parts of Fig. 13;

Fig. 16 is an enlarged front view showing the main parts of the background art;

Fig. 17 is another enlarged front view showing the main parts of the background art;

Fig. 18 is an enlarged illustrative view showing a state of use of the background art;

Fig. 19 is an enlarged front view showing a state in which hair is cut by a hair-cutting razor according to the background art; and

Fig. 20 is a view showing an example of a state of implementation when the hair-cutting razor of the present invention is integrated with a hairbrush.

BEST MODES FOR CARRYING OUT THE INVENTION

[0080] A hair-cutting razor 10 and a replaceable hair-

cutting razor 20 according to embodiments of the present invention will now be described with reference to the drawings.

(First Embodiment)

[0081] The hair-cutting razor 10 of a first embodiment will now be described.

[0082] In this example, blades 12 each comprising a cutting edge 12a are fixed onto a hair-cutting razor host material 14. The blades 12 are arranged in parallel, and the respective cutting edges 12a of the five blades 12 are disposed in the same direction such that the cutting edges 12a are oriented toward the left side of the drawing (see Fig. 1).

[0083] Note that the example shown in Fig. 1 is a preferred example of a case in which hair on the rear scalp surface of a head T is cut from the right side to the neck side, and hence is for right-handed use, as will be described in more detail below.

[0084] Conversely, in the example shown in Fig. 2, the cutting edges 12a are oriented toward the right side of the drawing, i.e. in symmetry with the example shown in Fig. 1, and hence this example is for left-handed use.

[0085] These examples are basically constituted such that the blades 12 comprising the cutting edges 12a stand upright on the hair-cutting razor host material 14, and the cutting edges 12a are disposed in a right-angled direction to the upstanding direction of the blades 12.

[0086] In this type of razor 10, a handle 16 is typically provided at one end of the hair-cutting razor host material 14, but the handle 16 is merely provided for convenience, and is not a requirement of the present invention.

[0087] In principle, a single blade 12 comprising a cutting edge 12a is sufficient, but preferably two or more, and up to about five, as shown in Figs. 1 and 2, upstanding blades 12 are provided.

[0088] To describe the constitution of the blade 12 in further detail with reference to Fig. 3, the thin plate form, rectangular blade 12 is inserted into a plastic blade cover 12b having a substantially U-shaped cross-section such that the cutting edge 12a is exposed to an open side of the cover 12b.

[0089] As is well-known, the blade 12 is made of metal, and when used to cut hair on the scalp, care is required to reduce danger.

[0090] Hence, in the present invention, the majority of the periphery of the blade 12, excluding the cutting edge 12a side which is required to cut hair, is covered by the blade cover 12b and the hair-cutting razor host material 14 to prevent injury to the human scalp caused by careless contact with the blade 12 during use.

[0091] Further, as described above, the blade 12 typically takes a thin plate form and is therefore undeniably lacking in strength. Hence, by inserting the blade 12 into the blade cover 12b, an increase in the strength of the blade 12 is achieved.

[0092] Moreover, when plastic is employed for the blade cover 12b, the material qualities thereof may help to prevent injury to the scalp during use of the razor 10.

[0093] As shown in Fig. 3, three protrusions 12c are provided on the cover 12b of the blade 12 at fixed intervals so as to protrude slightly beyond the line of extension of the cutting edge 12a of the blade 12 in a right-angled direction to the line of extension of the cutting edge 12a.

[0094] By means of these protrusions 12c, the strength of the cover 12b can be increased, and by providing the protrusions 12c at fixed intervals, hair H that is led between adjacent blades 12 during cutting can be separated by the protrusions 12c.

[0095] Accordingly, the hair H does not become concentrated in a local portion of the cutting edge 12a, and therefore concentrated stress is not applied to the cutting edge 12a. As a result, the hair H can be cut smoothly, and no load is placed on the cutting edge 12a.

[0096] A pin-shaped object standing upright beside the cutting edge 12a of the blade 12 is a control member 18 for protecting human fingers and so on during handling of the razor 10.

[0097] The control member 18 is preferably positioned approximately 5mm, for example, to the left and right of a center line of the cutting edge 12a so as not to damage the hair H that is led to the cutting edge 12a during cutting of the hair H.

[0098] The actions and effects of the first embodiment of the present invention will now be described (see Figs. 4, 5, and 6).

[0099] The blade 12 side of the hair-cutting razor 10 is oriented toward the hair H and generally moved along the scalp T from the crown of the head to the neck side.

[0100] In this case, the cutting edge 12a of the blade 12 does not contact the hair H in a right-angled direction, as in the background art, and instead, the cutting edge 12a moves along the hair H so as to stroke the hair H.

[0101] To describe this point in further detail, by moving the razor 10, the cutting edge 12a of the blade 12 faces the neck side of the body so as to follow the length direction of the hair H, and as the razor 10 moves, the hair H is gradually cut in the direction of an arrow Y in Figs. 4 and 5 along the hair H and so as to stroke the hair H.

[0102] In this case, the cutting edge 12a of the blade 12 moves in an acute angle direction relative to the hair H, unlike the blade body 32 of the background art, which moves in a right-angled direction to the hair H.

[0103] The cutting edge 12a, which moves in an acute angle direction, then moves gradually from the hair H positioned on the top of the head toward the hair H positioned on the neck side, and since the movement direction of the cutting edge 12a is an acute angle direction nearly parallel to the hair H in this case, the cutting edge 12a never moves in a right-angled direction relative to the hair H. As a result, the hair H can be trimmed such that tapered hair H is obtained, in contrast to the cutting edge 34a of the background art which moves in a right-angled direction to the hair H, and hence an attractive

hairstyle can be obtained (see Fig. 6).

[0104] Accordingly, no difference occurs between the amount of hair in the cut portion and the uncut portion of the hair H, and as a result, an even haircut can be performed.

(Second Embodiment)

[0105] A second embodiment will now be described.

[0106] The second embodiment will be described with reference to Fig. 7.

[0107] This example does not differ greatly from the first embodiment in terms of the essence of the present invention, and therefore constitutions which differ in principle will be described, while the above description of the first embodiment will be incorporated in relation to shared constitutions.

[0108] Six of the blades 12, each comprising the cutting edge 12a, stand upright in parallel on the hair-cutting razor host material 14 provided with the handle 16.

[0109] In the first embodiment, all of the cutting edges 12a of the blades 12 face the same direction, but in this example, as shown in the drawing, the cutting edges 12a of the six blades 12 are disposed such that adjacent cutting edges 12a are oriented in different directions.

[0110] The disposal directions of the cutting edges 12a differ from each other by 180 degrees in the illustrated example, but this difference is not limited to 180 degrees.

[0111] The pin-shaped control member 18 is provided beside the cutting edge 12a of the blade 12, as in the first embodiment.

[0112] This example is advantaged in that the cutting edges 12a of the blades 12 are provided in different directions to each other, and therefore the razor 10 can be used with both the left and right [hands], as is evident from the above description of the first embodiment.

(Third Embodiment)

[0113] A third embodiment will now be described.

[0114] This example does not differ greatly from the first embodiment in terms of the essence of the present invention, and therefore constitutions which differ in principle will be described, while the above description of the first embodiment will be incorporated in relation to shared constitutions.

[0115] To describe this example with reference to Figs. 8 and 9, in the first embodiment the blades 12 are not inclined, but provided in parallel, whereas in this embodiment, the cutting edges 12a of the blades 12 are oriented in the same direction and divided into those which are inclined to the upper right of the drawing about a reference line L, and those which are inclined to the upper left of the drawing about the reference line L (see Figs. 8 and 9).

[0116] Hence, this embodiment is applicable for use with both the left and right hands, similarly to the first embodiment.

[0117] The angle of the cutting edge 12a relative to the hair H during use of the hair-cutting razor 10 differs considerably according to the preferences of the user, the combing location of the hair H, and the cutting location of the hair H.

[0118] The angle relative to the hair H may also differ according to differences in the dominant arm.

[0119] Taking these differences in use conditions into account, the inventor has researched a use angle through experiment.

[0120] It was determined as a result of this research that when the dominant arm is the right arm, for example, and the hair-cutting razor 10 is moved diagonally over the hair H on the right side of the back of the head from the right side toward the neck in order to comb and cut the hair H, the angle of incline of the cutting edge 12a of the blade 12 is preferably within a range of 10 to 80 degrees, and more preferably approximately 60 degrees, toward the upper left of the drawing relative to the reference line L of the hair-cutting razor host material 14 (see Fig. 8).

[0121] Meanwhile, when the dominant arm is the left arm and the hair H on the left side of the back of the head is combed and cut, the angle of incline is preferably symmetrical to that described above, i.e. within a range of 100 to 170 degrees, and more preferably 120 degrees, toward the upper right of the drawing relative to the reference line L of the hair-cutting razor host material 14 (see Fig. 9).

(Fourth Embodiment)

[0122] A fourth embodiment will now be described.

[0123] This example does not differ greatly from the first embodiment in terms of the essence of the present invention, and therefore constitutions which differ in principle will be described, while the above description of the first embodiment will be incorporated in relation to shared constitutions.

[0124] To describe this example with reference to Fig. 10, in the first embodiment the cutting edges 12a of the blades 12 are provided on only one side, but in this example, the cutting edges 12a are provided on both sides of the blades 12, and hence user-friendliness is taken into account regardless of whether the left or right hand is used.

[0125] All other constitutions are similar to those of the first embodiment.

(Fifth Embodiment)

[0126] A fifth embodiment will now be described.

[0127] This example does not differ greatly from the first embodiment in terms of the essence of the present invention, and therefore constitutions which differ in principle will be described, while the above description of the first embodiment will be incorporated in relation to shared constitutions.

[0128] To describe this example with reference to Fig. 11, in the first embodiment the cutting edges 12a of the blades 1[ii] are disposed in both directions and the blades 12 are disposed parallel to each other, whereas in this example, as shown in the drawing, six blades 12n1, 12n2, 12n3, 12n4, 12n5, and 12n6 are not disposed parallel to each other.

[0129] In other words, the respective cutting edges a of the six adjacent blades 12n are oriented differently to each other when seen from above.

[0130] As shown in Fig. 11, the six blades 12n1, 12n2, 12n3, 12n4, 12n5, and 12n6 are disposed from the left end to the right end of the drawing such that the cutting edge 12a of the first blade 12n1 (left end) is positioned on the upper side of the drawing, while the cutting edge 12a of the second blade 12n2 is oriented toward the lower side of the drawing. The blade 12n2 also protrudes toward the upper side of the drawing. In sequence thereafter, the cutting edge 12a of the third blade 12n3 is positioned on the upper side of the drawing together with the cutting edge 12a of the first blade 12n1, while the fourth blade 12n4 is set in the same orientation as the second blade 12n2. Thereafter, the configuration described above is repeated such that the fifth blade 12n5 and sixth (right end) blade 12n6 are disposed in a receding-protruding, or in other words non-parallel, fashion.

[0131] With this configuration, the aforementioned control member 18, such as a safety pin or the like, is preferably provided next to the respective cutting edges 12a of the first blade 12n1 positioned at the left end of the drawing and the sixth blade 12n6 positioned at the right end of the drawing to suppress injuries to the fingers and so on during handling of the razor 10.

[0132] Meanwhile, the respective cutting edges 12a of the blades 12n2, n3, n4, n5 positioned between the two blades 12nl, n6 are positioned on the opposite inner side of the cutting edges 12a of the respective adjacent blades 12nl, 12n2, n3, n4, n5, n6.

[0133] Since the cutting edges 12a are positioned on the opposite inner side of the cutting edges 12a of the respective adjacent blades 12n1, 12n2, n3, n4, n5, n6, fingers and so on interfere with the opposite side of the respective cutting edges 12a of the blades 12n1, 12n2, n3, n4, n5, n6 during handling of the razor 10, and therefore the control member 18 does not necessarily have to be provided on any of the cutting edges 12a except those of the two end blades 12n1, n6.

[0134] Particularly when the blades 12n1, 12n2, n3, n4, n5, n6 are respectively inserted into the aforementioned blade cover 12b, fingers and so on interfere with the blade cover 12b when handling the razor 10, and hence there is no danger of injury.

(Sixth Embodiment)

[0135] A sixth embodiment will now be described.

[0136] This example does not differ greatly from the first embodiment in terms of the essence of the present invention, and therefore constitutions which differ in principle will be described, while the above description of the first embodiment will be incorporated in relation to shared constitutions.

[0137] To describe this example with reference to Fig. 12, in the first embodiment so-called bristles do not stand upright around the blades 12, but in this embodiment, a large number of the control members 18, doubling as bristles, are provided in an upright manner adjacent to the cutting edges 12a.

[0138] The configuration of the blades 12 shown in Fig. 12 is symmetrical with that of the fifth embodiment described above, and no limitations are placed thereon.

[0139] In this specification, the term "bristle" may refer to the bristles of a brush, the bristles of a comb, and so on[iii].

[0140] The bristles typically take an elongated pin form, but may take any form, such as a form having a circular transverse section, other than an angular form which may injure fingers and so on.

[0141] Note that when the control members 18 double as bristles, the hair H can be cut while being combed.

[0142] Next, another embodiment of the present invention will be described.

[0143] In the example to be described below, a replaceable hair-cutting razor 20 is provided detachably on the hair-cutting razor host material 14 in anticipation of use-related wear to the blades 12 of the hair-cutting razor 10.

[0144] The replaceable hair-cutting razor 20 is described in detail in Figs. 13 to 15. The replaceable hair-cutting razor 20 differs from the hair-cutting razor 10, in which the blades 12 are attached non-detachably to the hair-cutting razor host material 14, merely in that instead of attaching the blades 12 to the hair-cutting razor host material 14, the blades 12 and control members 18 are provided on a razor host material 22. Accordingly, constitutions shared with the hair-cutting razor 10 are incorporated herein, and description thereof has been omitted.

[0145] The constitution of the razor host material 22 to and from which the hair-cutting razor 10 can be attached and detached will also be described (see Figs. 13, 14, 15).

[0146] In the hair-cutting razor 10, the blades 12 stand upright on the razor host material 22, and the control members 18 stand upright adjacent to the blades 12 (see Figs. 13, 14).

[0147] In this embodiment, five blades 12 are provided, but as in the hair-cutting razor 10 described above, the number of blades may be set freely in accordance with requirements.

[0148] The hair-cutting razor 10 is provided detachably in a fitting hole 24 formed in the razor host material 22, and hence the blade host material 22 is provided in accordance with the shape of the fitting hole 24 (see Figs. 13 to 15).

[0149] More specifically, one side of the host material 22 is formed with a wave-shaped undulating surface 22a,

and one side of the fitting hole 24 of the hair-cutting razor host material 14 is formed with a wave-shaped undulating surface which corresponds to the wave-shaped undulating surface 22a on one side of the host material 22 (see Fig. 14).

[0150] Further, stoppers 22b, 22b are formed on each side of the host material 22 in the lengthwise direction.

[0151] Meanwhile, engaging stepped portions 22e, 22e corresponding to the stoppers 22b, 22b are formed on the two sides of the opening of the fitting hole 24 on the surface side of the hair-cutting razor host material 14 (see Fig. 15).

[0152] Hence, by orienting the blade 12 side of the hair-cutting razor 10 downward from the surface of the hair-cutting razor host material 14, the blade host material 22 is fitted into the fitting hole 24 of the hair-cutting razor host material 14.

[0153] The wave-shaped undulating surface 22a of the host material 22 is fitted into the wave-shaped undulating surface of the fitting hole 24 in the hair-cutting razor host material 14, and the stoppers 22b, 22b provided on the host material 22 are supported by the engaging stepped portions 22e, 22e of the hair-cutting razor host material 14. As a result, the replaceable hair-cutting razor 20 can be attached securely and unmovingly to the hair-cutting razor host material 14. Further, a grip 22c is provided on the host material 22 to assist removal of the replaceable hair-cutting razor 20 (see Fig. 13).

[0154] Hence, by fitting the host material 22 of the replaceable hair-cutting razor 20 into the fitting hole 24 of the hair-cutting razor host material 14, the hair-cutting razor 10, in which the blades 12 comprising the cutting edges 12a stand upright on the hair-cutting razor host material 14, can be obtained (see Figs. 13, 14).

[0155] The actions and effects of the hair-cutting razor attached with the replaceable hair-cutting razor 20 are identical to the actions and effects of the hair-cutting razor 10 described above.

[0156] When the blades 12 become worn, the replaceable hair-cutting razor 20 can be removed from the hair-cutting razor host material 14 and a new replaceable hair-cutting razor 20 can be attached. As a result, a hair-cutting razor exhibiting an excellent cutting function can be obtained easily.

[0157] A further embodiment of the present invention will now be described.

[0158] As is evident from the representative example in Fig. 20, in this embodiment the hair-cutting razor 10 of the present invention is provided integrally with the bristles of a hairbrush, and in particular, the density of the bristles differs on the front side and rear side of the cutting edges.

[0159] More specifically, on the side having a relatively low bristle density, little resistance is generated during actual hair brushing and the like, and hence the brush moves smoothly. Meanwhile, on the side having a high bristle density, the brushing resistance increases relatively, enabling fine, careful brushing, and hence a favorable finish can be realized.

[0160] The side on which the bristle density is to be relatively increased, i.e. either the front or the rear of the cutting edges of the hair-cutting razor 10, may be selected arbitrarily in accordance with the purpose of the hair-cutting razor 10. Note, however, that in order to obtain an actual sense of the relative difference in the bristle density during hair cutting and brushing, the relative difference in the bristle density should be at least 5%. Preferably, the bristle density difference should be set between 10 and 30%.

[0161] In the present invention, the bristle density on the front side of the cutting edges is preferably set to be relatively lower than the bristle density on the rear side in order to perform hair cutting and brushing efficiently. The reason for this is that before cutting the hair, the hair need only be arranged roughly at the cutting edges, whereas after the hair is cut, the hairstyle is preferably finished through fine brushing.

INDUSTRIAL APPLICABILITY

[0162] According to the present invention described above, an appropriate and safe hair-cutting operation can be performed easily and speedily, enabling even a person without specialist skills to perform a desired hair-cutting operation reliably. Moreover, a person possessing specialist skills can perform a fine hair-cutting operation efficiently without the complicated work required conventionally, and hence the present invention may bring much new demand to the industry. Accordingly, the present invention is considered to possess excellent industrial applicability.

Claims

1. A hair-cutting razor **characterized in that** at least one blade comprising a cutting edge stands upright on a hair-cutting razor host material, and the cutting edge is disposed in a right-angled direction to the upright direction of the blade.

2. A hair-cutting razor in which at least two blades, each having a cutting edge, stand upright on a hair-cutting razor host material, and the cutting edge is disposed in a right-angled direction to the upright direction of the blade, **characterized in that** the cutting edges of the at least two blades are disposed in different directions to each other.

3. The hair-cutting razor according to claim 1 or claim 2, **characterized in that** the cutting edge of the blade is inclined about a reference line of the hair-cutting razor host material.

4. A hair-cutting razor in which at least two blades, each having a cutting edge, stand upright on a hair-cutting

razor host material, the cutting edge is disposed in a right-angled direction to the upright direction of the blade, and the cutting edges of the at least two blades are disposed in different directions to each other, **characterized in that** the blades are not disposed parallel to each other.

5. A hair-cutting razor in which at least two blades, each having a cutting edge, stand upright on a hair-cutting razor host material, and the cutting edge is disposed in a right-angled direction to the upright direction of the blade, **characterized in that** the cutting edges of the at least two blades are disposed in the same direction as each other, and the blades are disposed parallel to each other.

6. The hair-cutting razor according to claim 1, 2, 3, 4, or 5, **characterized in that** a control member for suppressing injuries during handling is provided adjacent to the cutting edge of the blade.

7. The hair-cutting razor according to claim 1, 2, 3, 4, 5, or 6, **characterized in that** the control member for suppressing injuries during handling doubles as a bristle.

8. A replaceable hair-cutting razor in which at least one blade having a cutting edge stands upright on a razor host material, and the cutting edge is disposed in a right-angled direction to the upright direction of the blade, **characterized in** being provided detachably on a hair-cutting razor main body.

9. A replaceable hair-cutting razor in which at least two blades, each having a cutting edge, stand upright on a razor host material, the cutting edge is disposed in a right-angled direction to the upright direction of the blade, and the cutting edges of the at least two blades are disposed in different directions to each other, **characterized in** being provided detachably on a hair-cutting razor main body.

10. The replaceable hair-cutting razor according to claim 8 or claim 9, **characterized in that** the cutting edge of the blade is inclined about a reference line of the razor host material.

11. A replaceable hair-cutting razor in which at least two blades, each having a cutting edge, stand upright on a razor host material, the cutting edge is disposed in a right-angled direction to the upright direction of the blade, the cutting edges of the at least two blades are disposed in different directions to each other, and the blades are not disposed parallel to each other, **characterized in** being provided detachably on a hair-cutting razor main body.

12. A replaceable hair-cutting razor in which at least two blades, each having a cutting edge, stand upright on a razor host material, the cutting edge is disposed in a right-angled direction to the upright direction of the blade, the cutting edges of the at least two blades are disposed in the same direction as each other, and the blades are disposed parallel to each other, **characterized in** being provided detachably on a hair-cutting razor main body.

13. The replaceable hair-cutting razor according to claim 8, 9, 10, 11, or 12, **characterized in that** a control member for suppressing injuries during handling is provided adjacent to the cutting edge of the blade.

14. The replaceable hair-cutting razor according to claim 8, 9, 10, 11, 12, or 13, **characterized in that** the control member for suppressing injuries during handling doubles as a bristle.

15. A hairbrush integrated with a hair-cutting razor, **characterized in that** cutting edges of a plurality of blades standing upright on a hair-cutting razor host material integrated with bristles of the hairbrush are oriented in appropriate different directions either alternately or randomly.

16. A hairbrush integrated with the hair-cutting razor, in which the hair-cutting razor according to any one of claims 1 through 7 is integrated with bristles of the hairbrush, **characterized in that** hair resistance during brushing is caused to differ between a cutting edge side and a blade rear side by causing a bristle density to differ between the cutting edge side and the blade rear side.

17. The hairbrush integrated with a hair-cutting razor according to claim 16, **characterized in that** the hair resistance during brushing is made lower on the cutting edge side than on the blade rear side by making the bristle density on the cutting edge side lower than that of the blade rear side.

18. The hair-cutting razor according to claim 16 or claim 17, **characterized in that** the hair-cutting razor integrated with the hairbrush is detachable and replaceable relative to the brush.

Figure 1

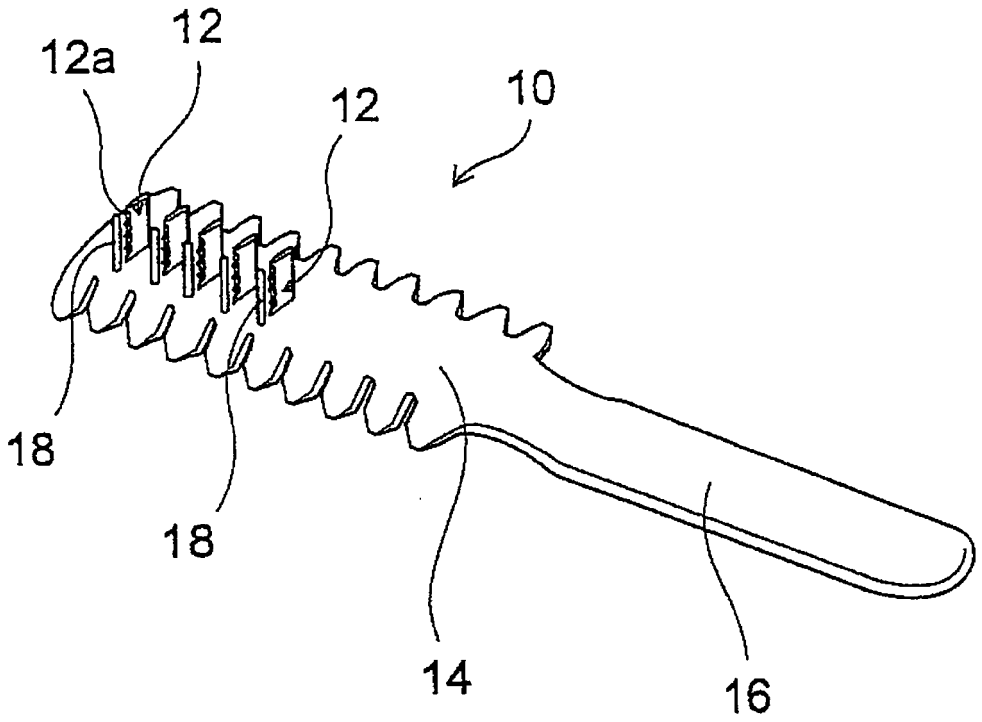


Figure 2

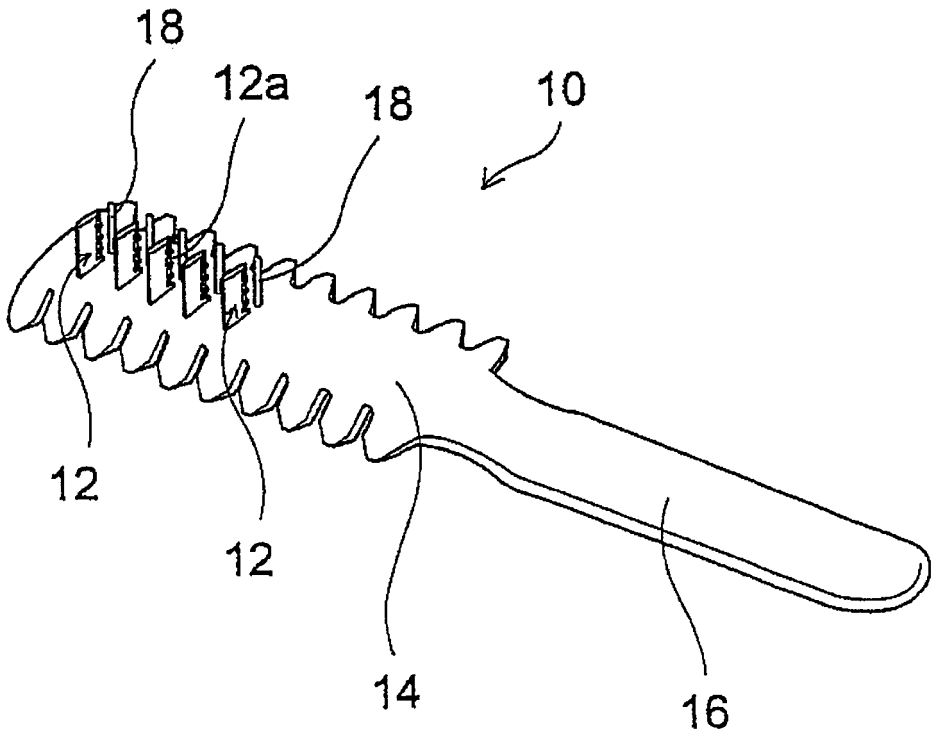


Figure 3

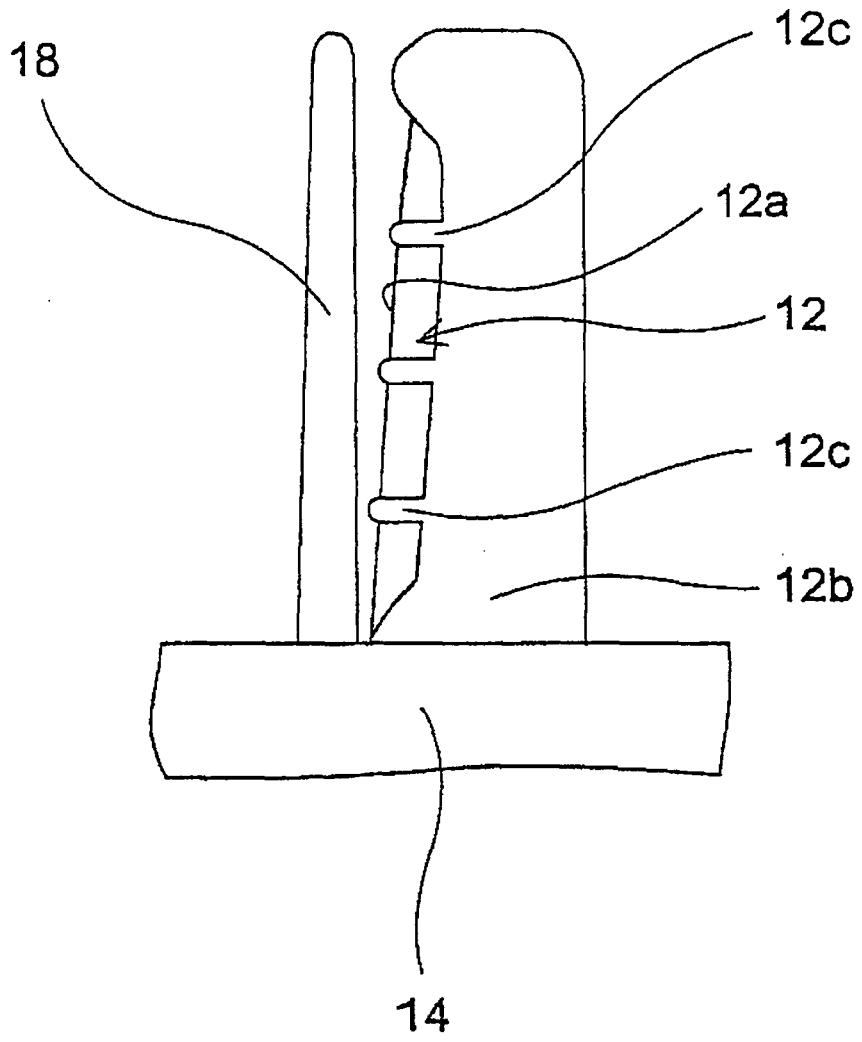


Figure 4

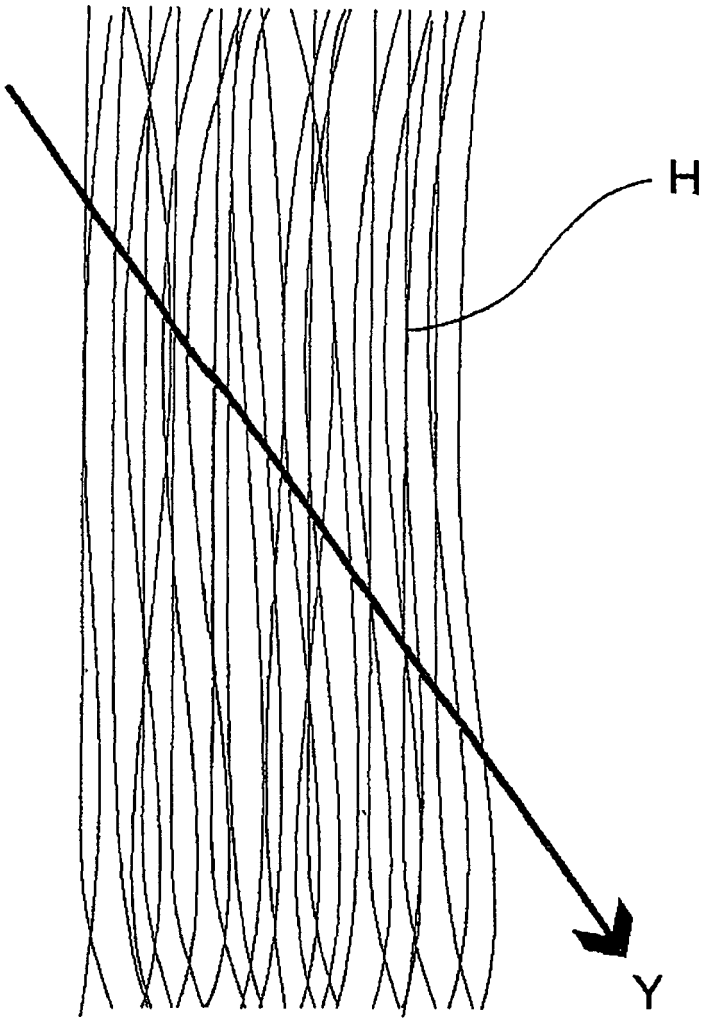


Figure 5

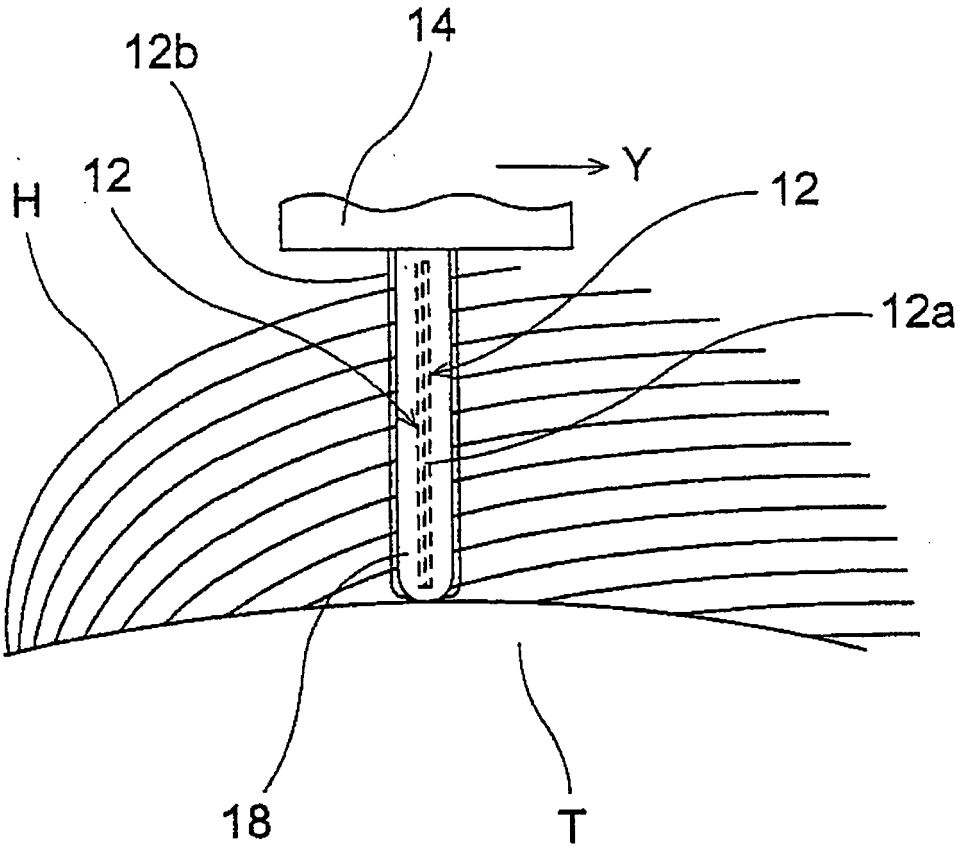


Figure 6

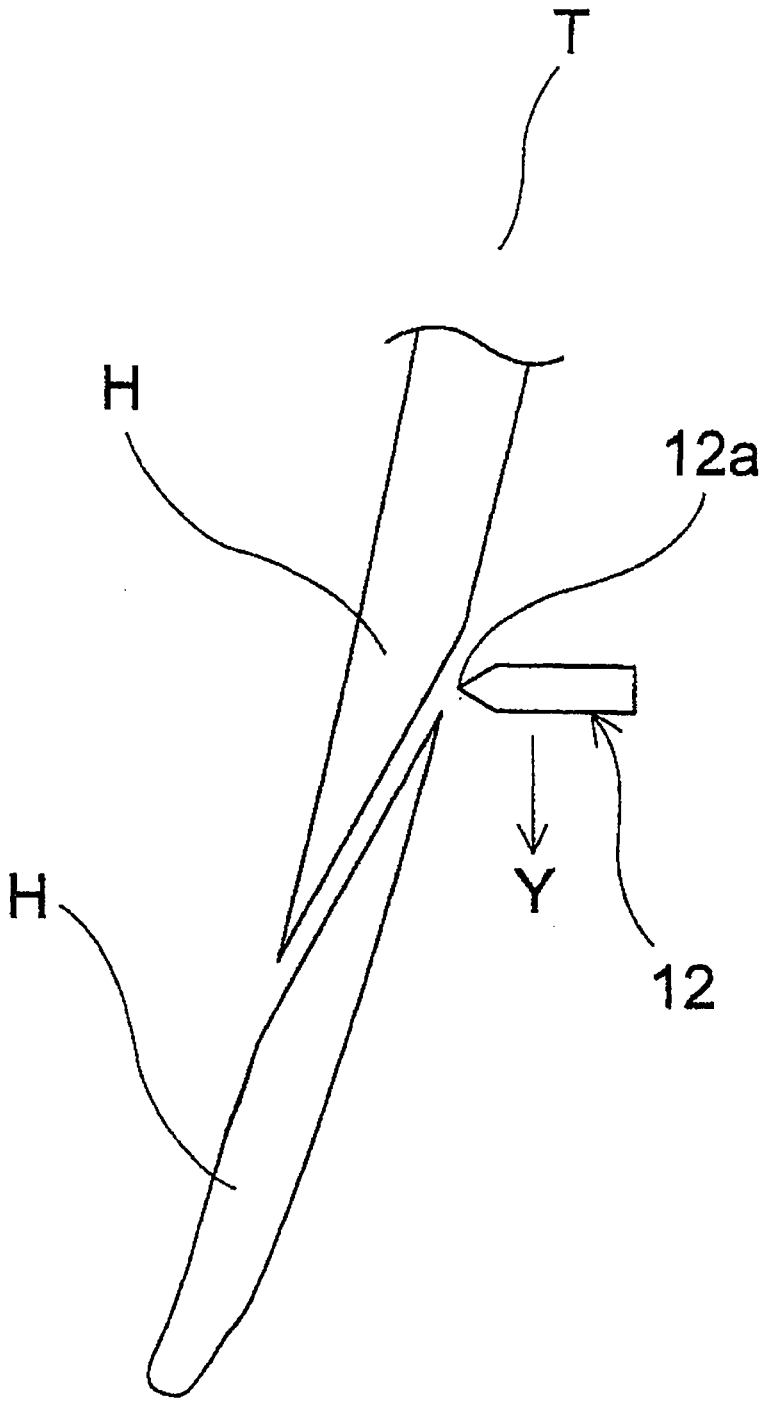


Figure 7

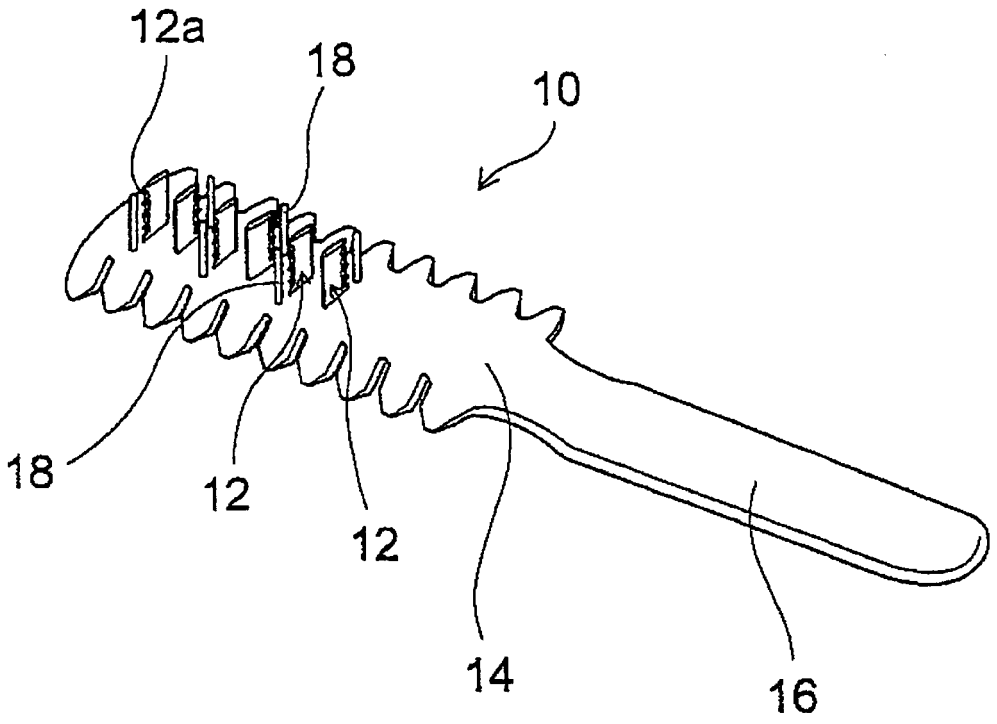


Figure 8

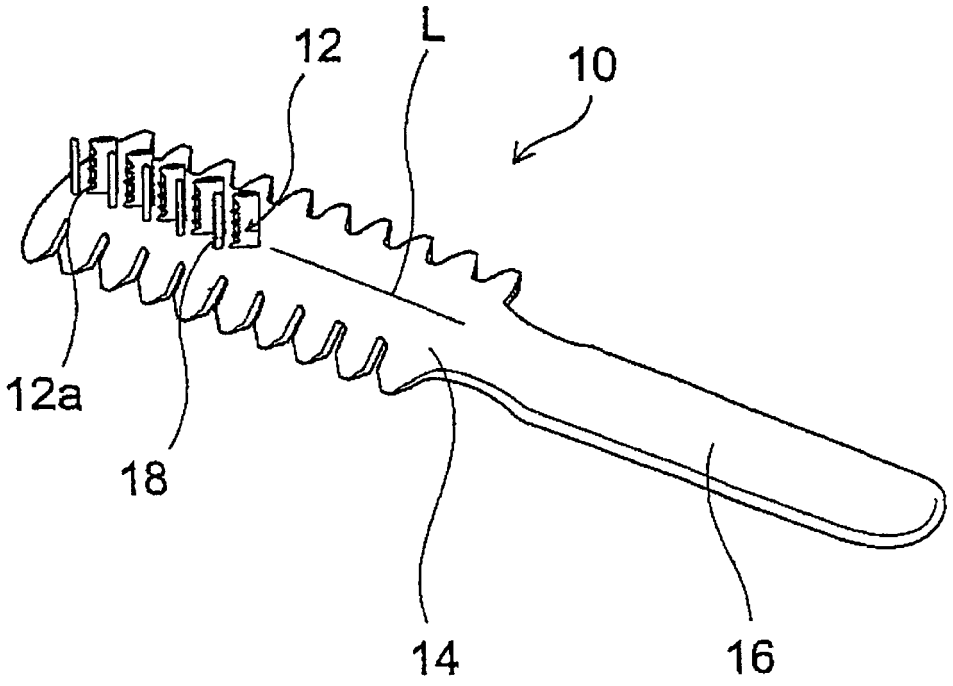


Figure 9

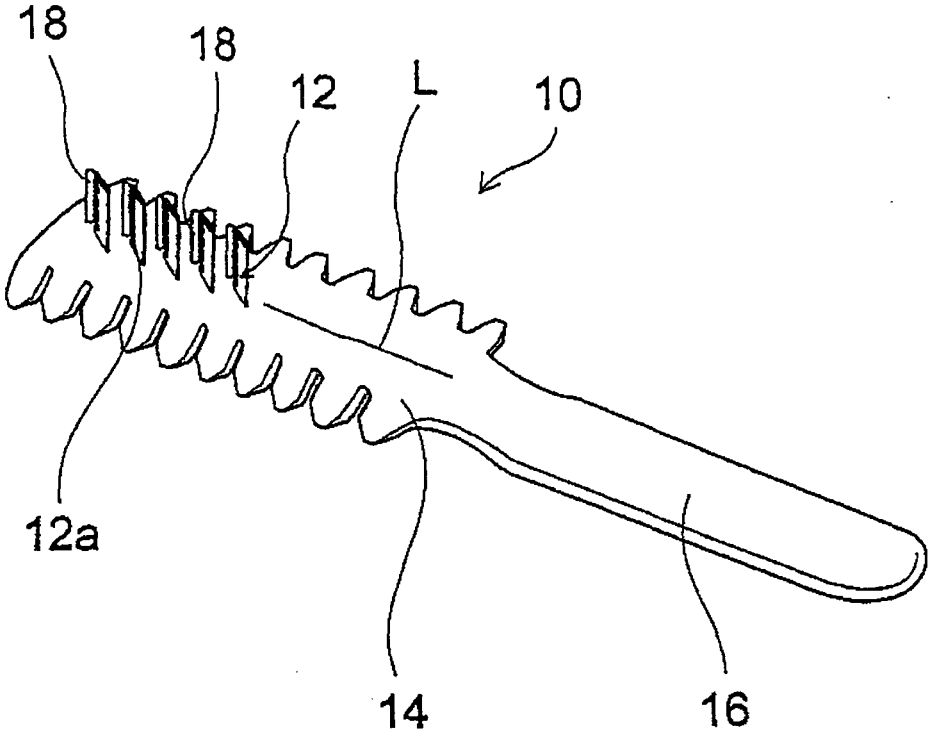


Figure 10

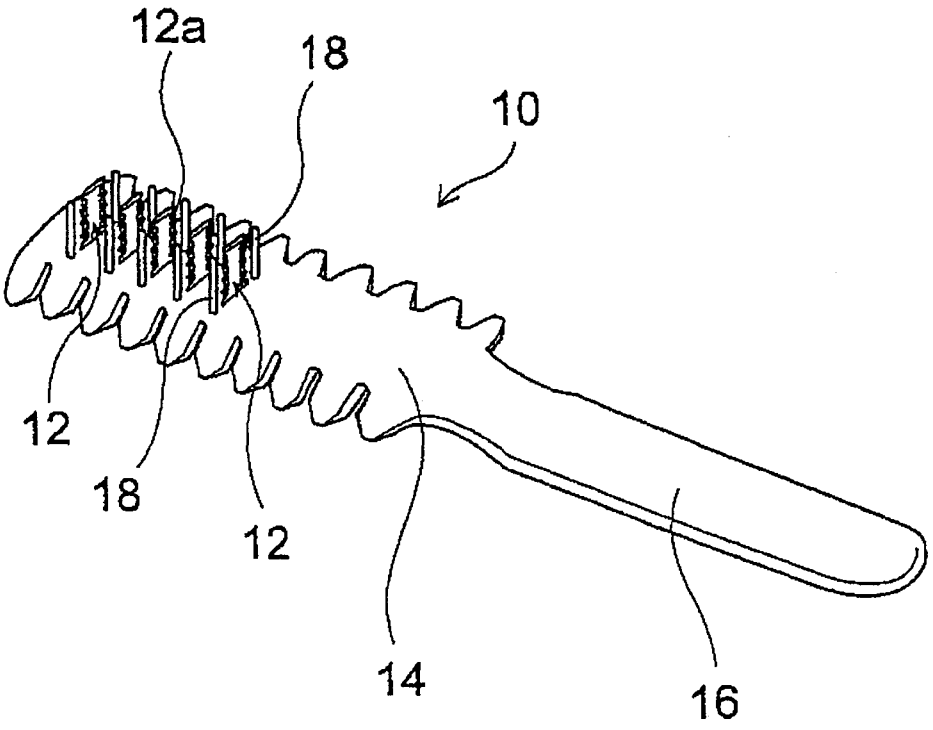


Figure 1 1

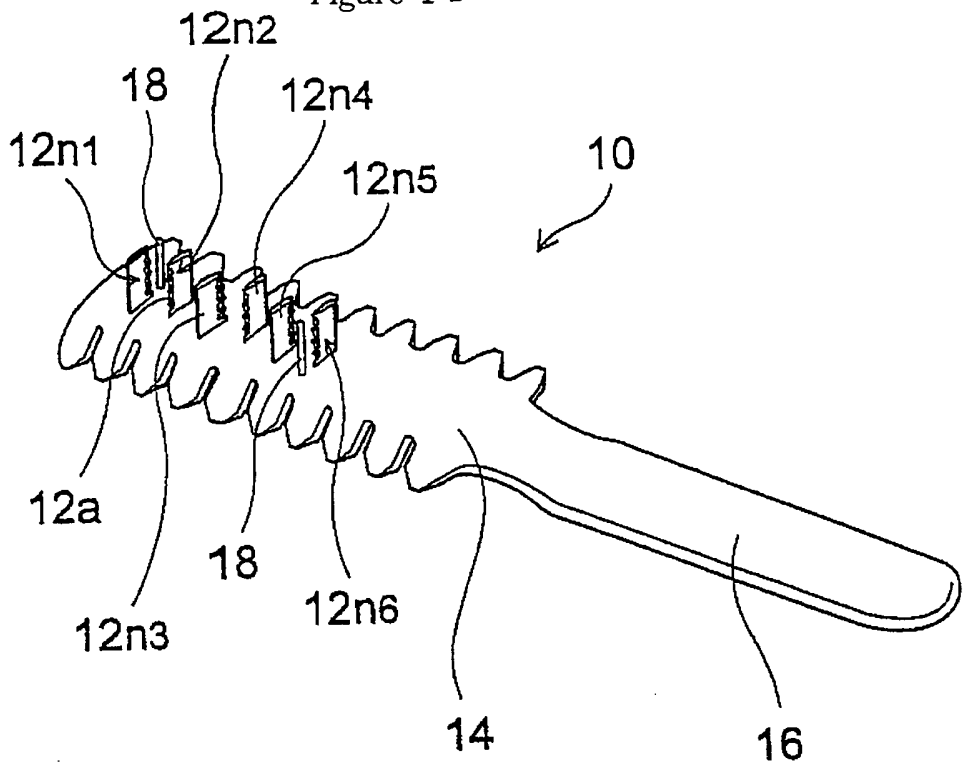


Figure 1 2

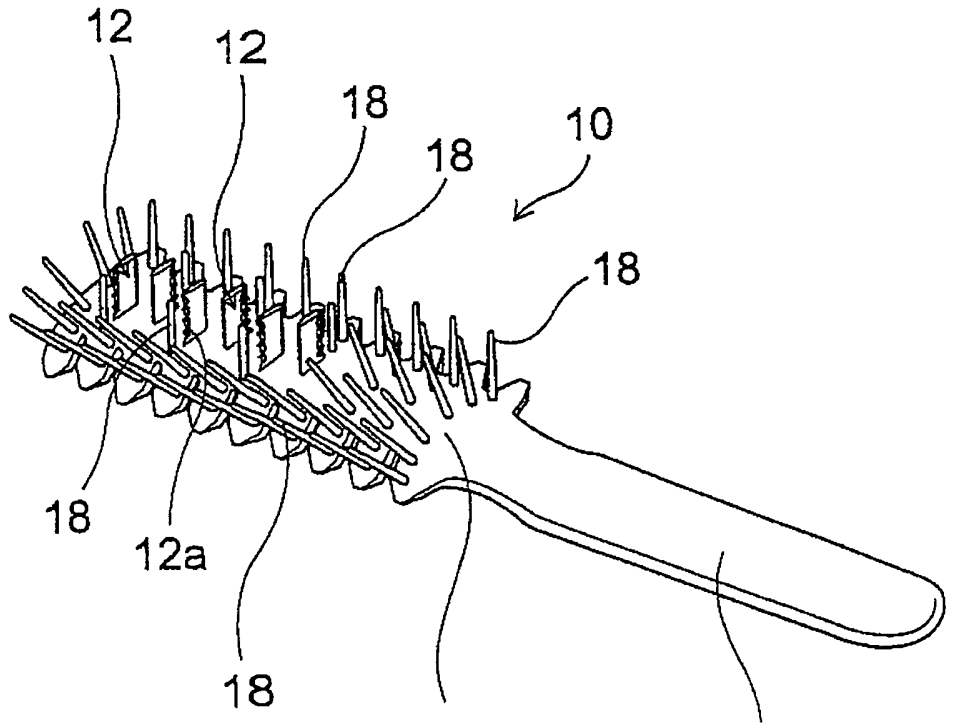


Figure 1 3

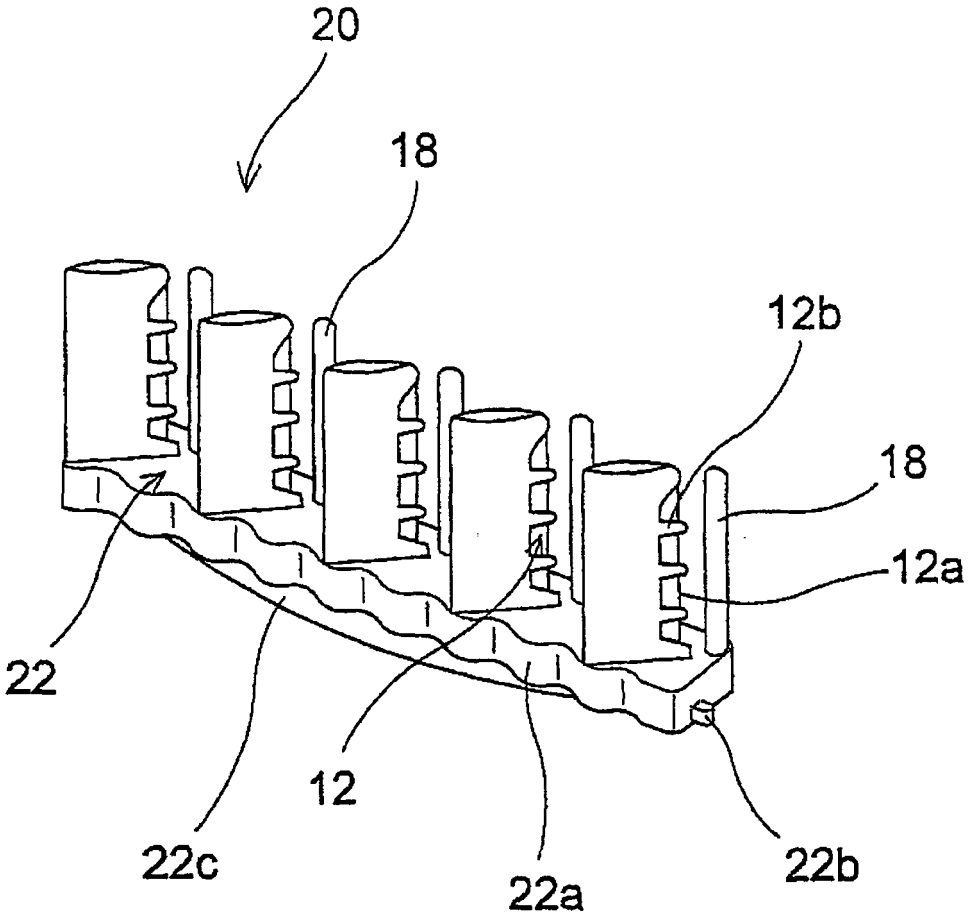


Figure 1 4

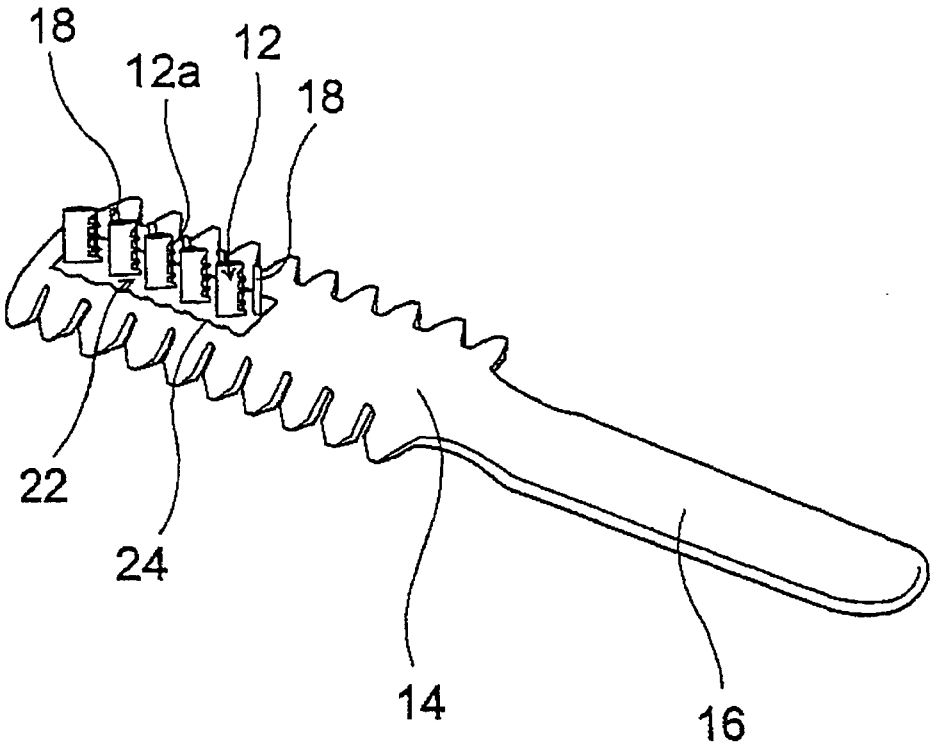


Figure 1 5

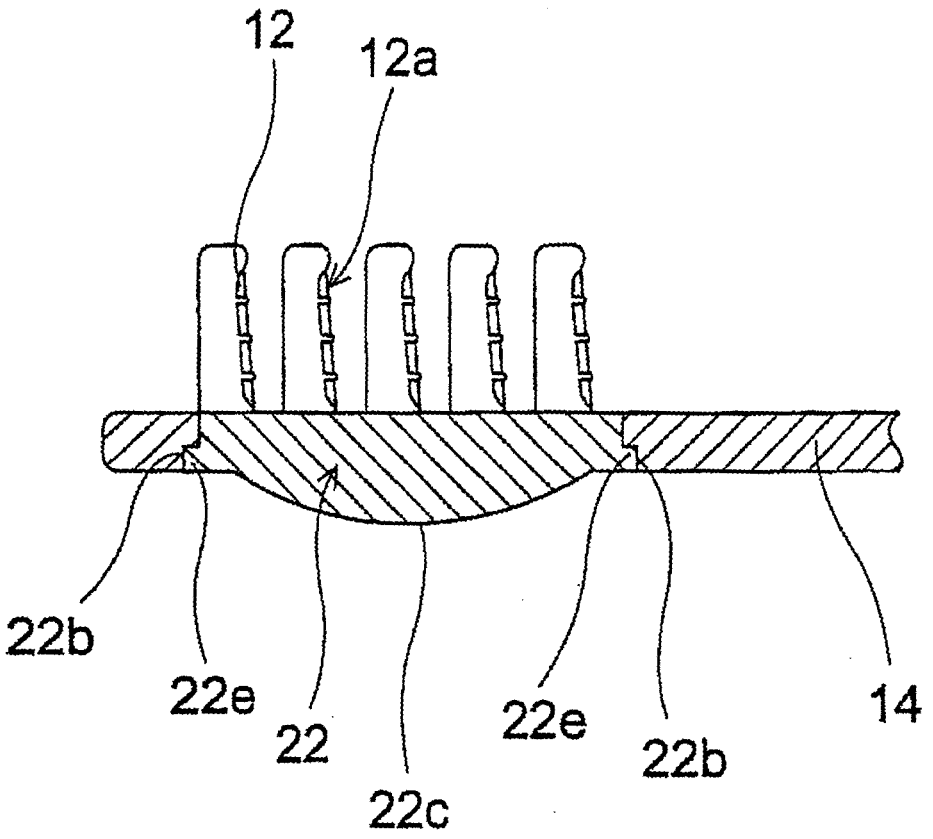


Figure 16

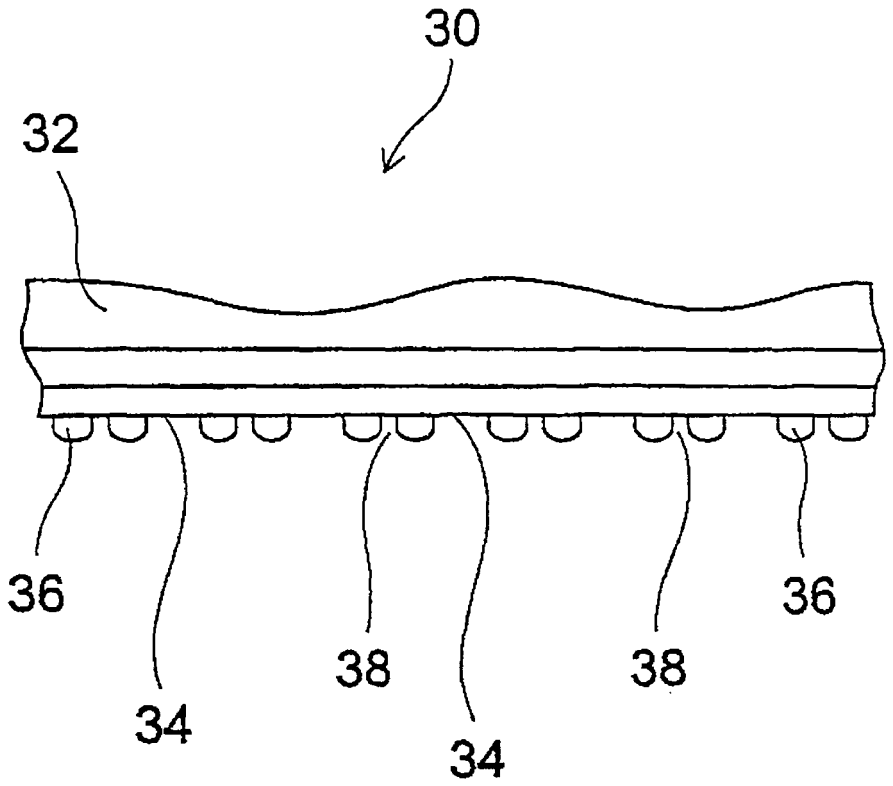


Figure 1 7

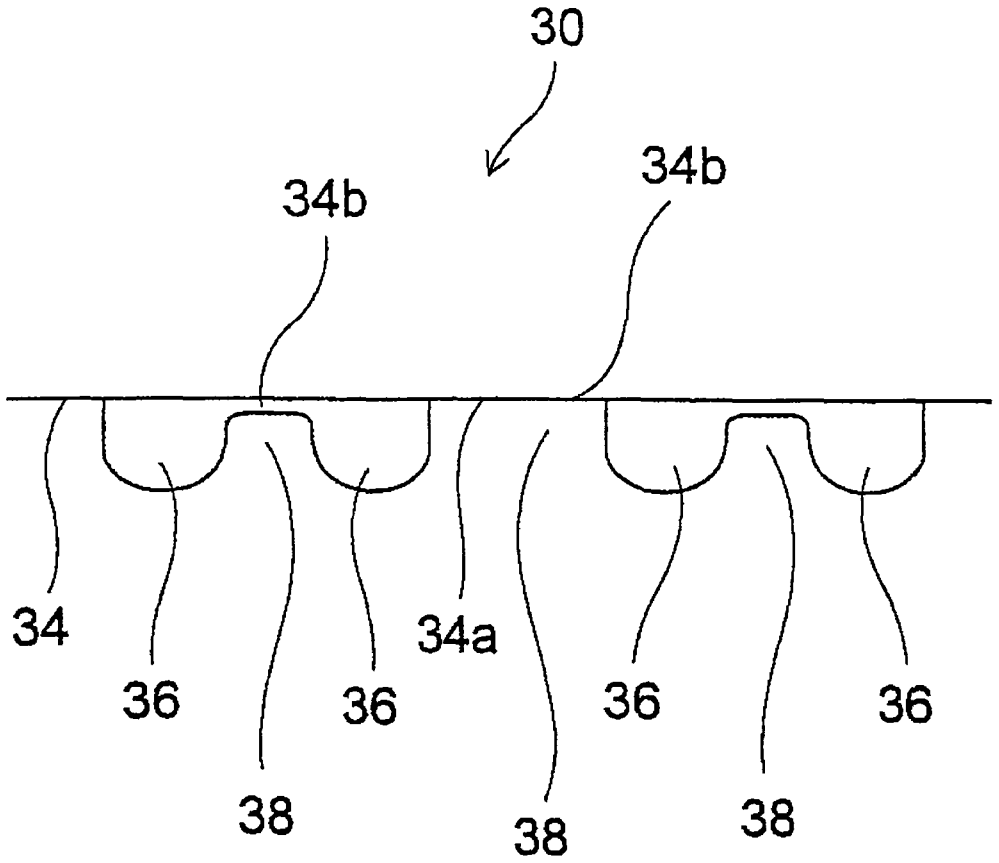


Figure 1 8

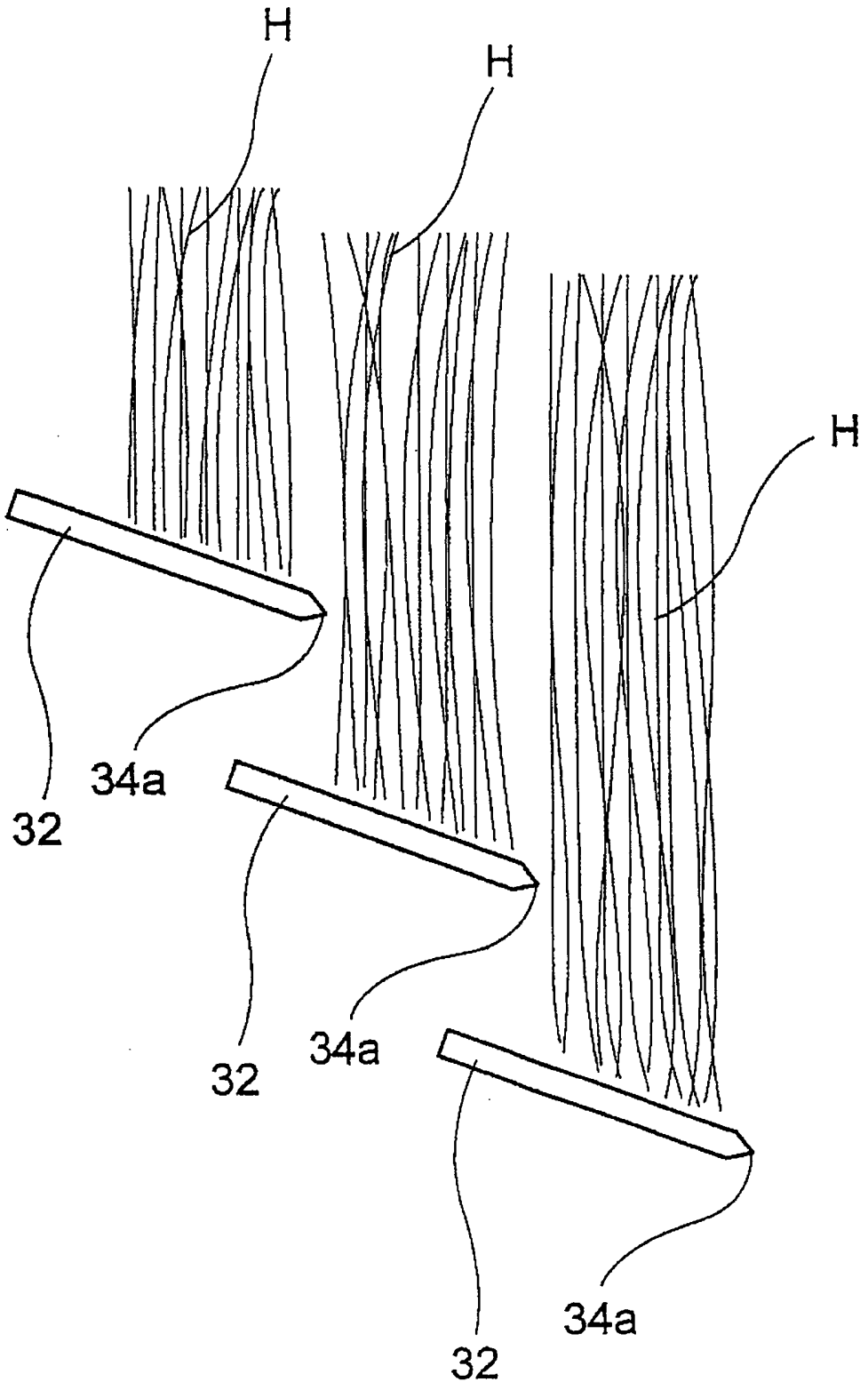


Figure 1 9

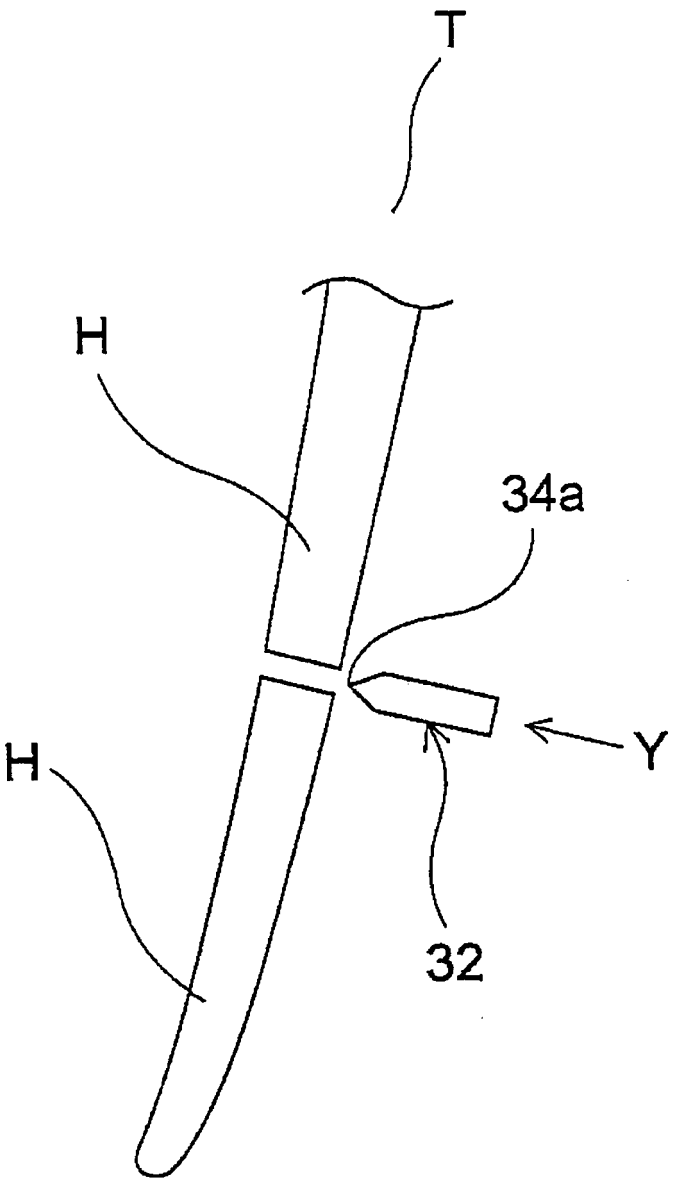
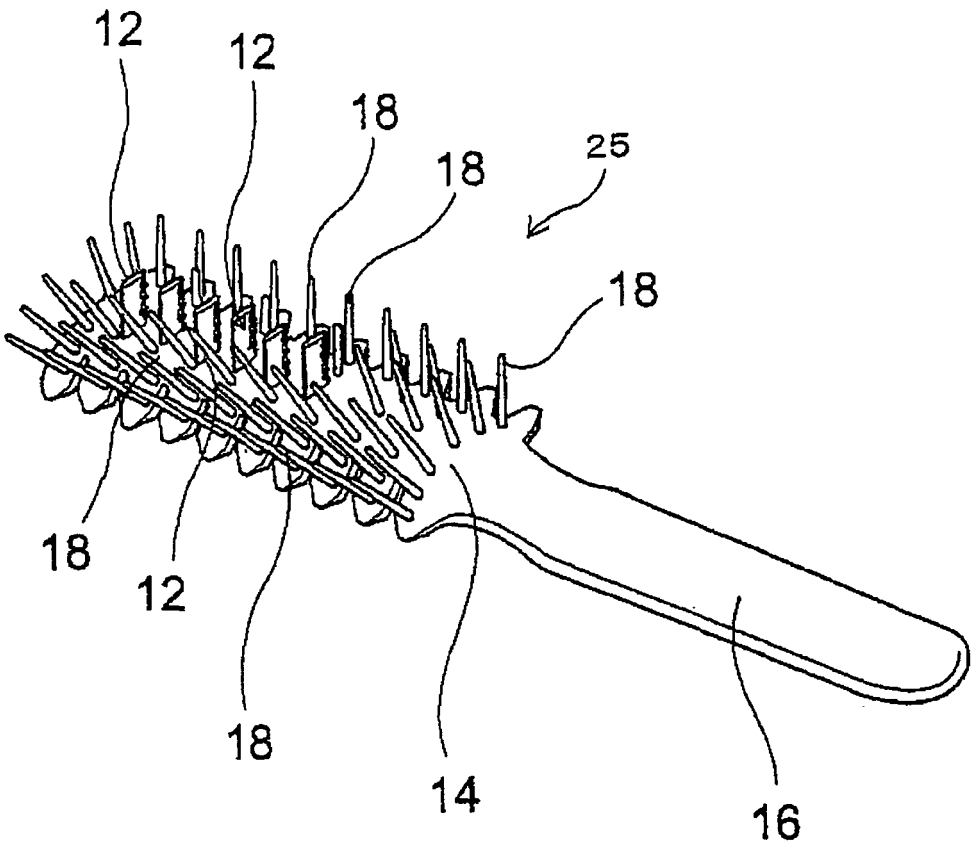


Figure 2 0



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