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(54) **SCISSORS WITH CURVED BLADES**

(57) The present disclosure provides a pair of scissors with curved blades, comprising a first cutter body (10) and a second cutter body (20), as well as a pivot (30) connecting the first cutter body (10) and the second cutter body (20), wherein the first cutter body (10) has a plurality of cutting teeth (11) spaced side by side; and a blade (12) of each cutting tooth (11) is in a concave curve shape, two ends of the blade (12) are a first blade tip (13) and a second blade tip (14), the first blade tip (13) is placed at a position closer to the pivot (30) as compared to the second blade tip (14), and the first blade tip (13) is placed at a position away from the root of the cutting tooth (11) as compared to the second blade tip (14). The scissors of such configuration can reduce, when cutting hair, the unsmooth feeling caused by the existing scissors and can solve the problems of unsmooth operation, overpower and damage to the hair profile.

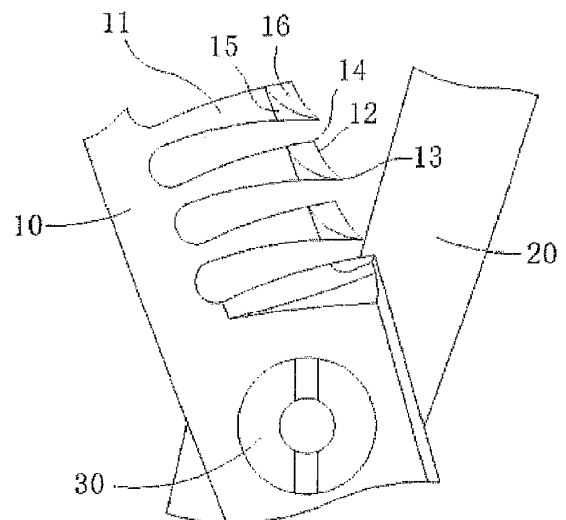


FIG. 2

Description

TECHNICAL FIELD

[0001] The present disclosure relates to a pair of scissors with curved blades.

BACKGROUND

[0002] The existing hair cutting scissors usually comprise a first cutter body, a second cutter body and a pivot, and the first cutter body and the second cutter body are connected by the pivot and rotationally open or close by taking the pivot as the center of a circle. The first cutter body is provided with a plurality of cutting teeth arranged in parallel with each other, a free end of each cutting tooth forms a blade, one end of the second cutter body corresponding to the first cutter body forms a sharp blade, and depending on the blades and the sharp blade, the cutting function is achieved.

[0003] The blades on the cutting tooth of the first cutter body are slightly straight, and the sharp blade on the second cutter body also is slightly straight, so, in a scissors closing process, an included angle between the blade and the sharp blade is gradually reduced, and there is a trend that the hair between the blade and the sharp blade is pushed outwards, that is, the hair between the blade and the sharp blade slides outwards, so that the hair will not be in contact with the blade and the sharp blade, and it is hard to be cut off; therefore, fast cutting is needed to directly cut off the hair between the blade and the sharp blade; this is easy to cause unsmooth feeling in use; additionally, the scissors has the disadvantages that the cutting is uncertain and large power is needed to cut off the hair; besides, problems of extrusion damage to the hair, unsmooth operation and overpower are generated.

SUMMARY

[0004] An objective of the present disclosure is to provide a pair of scissors with curved blades, which can reduce the unsmooth feeling caused by the existing scissors and can solve the problems of unsmooth operation, overpower and damage to the hair profile.

[0005] In order to achieve the above objective, the present disclosure adopts the following technical solution: a pair of scissors with curved blades comprise a first cutter body and a second cutter body, as well as a pivot connecting the first cutter body and the second cutter body, wherein the first cutter body has a plurality of cutting teeth spaced side by side; and the scissors with curved blades are characterized in that a blade of each cutting tooth is in a concave curve shape, two ends of the blade are a first blade tip and a second blade tip, the first blade tip is placed at a position closer to the pivot as compared to the second blade tip, and the first blade tip is placed at a position away from the root of the cutting tooth as

compared to the second blade tip.

[0006] According to the technical solution, an included angle between a hypothetical line joining the first blade tips of the plurality of cutting teeth and the blade of each cutting tooth is 20° to 45° .

[0007] According to the technical solution, an included angle between a hypothetical line joining the first blade tips of the plurality of cutting teeth and the blade of each cutting tooth is 24.5° .

[0008] According to the technical solution, the blade of each cutting tooth is in shape of a curve formed by an arc.

[0009] According to the technical solution, each cutting tooth is provided with a first blade surface and a second blade surface both of which are bevels and are intersected, and a thinnest part of the first blade surface is connected with a thickest part of the second blade surface to form an intersection line.

[0010] According to the technical solution, the blade of each cutting tooth is in shape of a curve formed by two sequentially connected arcs, which are a first arc-shaped blade and a second arc-shaped blade, respectively.

[0011] According to the technical solution, the blade of each cutting tooth is in shape of a curve formed by two sequentially connected straight lines, which are a first straight blade and a second straight blade, respectively.

[0012] According to the technical solution, each cutting tooth is provided with a first blade surface, a second blade surface and a third blade surface, which are bevels and are intersected in pairs, a thinnest part of the first blade surface is connected with a thickest part of the second blade surface and a thickest part of the third blade surface to form an intersection line, and the second blade surface is connected with the third blade surface to form an intersection line.

[0013] According to the technical solution, an included angle between the first straight blade and the second straight blade is 165° .

[0014] According to the technical solution, an included angle between a hypothetical line joining the first blade tip and the second blade tip of each cutting tooth, and the first straight blade is 11° .

[0015] In the present disclosure, the blade on each cutting tooth of the first cutter body is designed in a concave curve shape, and meanwhile, the two blade tips of the blade are of different heights, specifically, a blade tip close to the pivot is higher than another blade tip away from the pivot, so, a part of the blade between the two blade tips is of a certain bevel angle; when the hair is placed on the blade and the scissors are closed to cut the hair, the hair generates slight sliding on the blade, at this time, the bevel angle can prevent the hair from continuously sliding, the hair generates slight rotation on the blade with the bevel angle and is still in contact with the blade at the same time, so pull-cutting and roll-cutting effects will be generated in this cutting process, the hair can be easily cut off under a small power, the unsmooth feeling is reduced in the cutting process, and the problems of unsmooth operation and overpower caused by

the unsmooth feeling of the existing scissors are solved; besides, the hair profiles are uniform, and the hair is not extruded and damaged.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016]

FIG. 1 is a structure diagram of the present disclosure.

FIG. 2 is a schematic diagram of a first embodiment of the present disclosure.

FIG. 3 is a schematic diagram of a second embodiment of the present disclosure.

FIG. 4 is a schematic diagram of a third embodiment of the present disclosure.

[0017] In the accompanying drawings: 10-first cutter body; 20-second cutter body; 30-pivot; 11-cutting tooth; 12-blade; 13-first blade tip; 14-second blade tip; 15-first blade surface; 16-second blade surface; 17-third blade surface; 121-first arc-shaped blade; 122-second arc-shaped blade; 123-first straight blade; and 124-second straight blade.

DESCRIPTION OF THE EMBODIMENTS

[0018] The following illustrates the technical solution of the present disclosure in conjunction with the accompanying drawings and embodiments.

[0019] As shown in FIG. 1, a pair of scissors with curved blades, provided by the present disclosure, comprise a first cutter body 10, a second cutter body 20 and a pivot 30, the pivot 30 connects the first cutter body 10 and the second cutter body 20, so the first cutter body 10 and the second cutter body 20 pivot by taking the pivot 30 as the center of a circle, respectively to achieve opening and closing of the first cutter body 10 and the second cutter body 20 in order to complete a cutting process. Specifically, for conveniently describing, it is defined that one end of a cutter point of the scissors is the front end while one end of a handle of the scissors is the back end. The first cutter body 10 and the second cutter body 20 have a cutting part at the front end and a hand-hold part at the back end, respectively, the hand-hold part may be hook-shaped or ring-shaped in order to be convenient to operate, and a cushion is mounted on the hand-hold part in order to release an impact force when the first cutter body 10 and the second cutter body 20 are closed. The first cutter body 10 is provided with a plurality of cutting teeth 11, the plurality of cutting teeth 11 face the second cutter body 20 and are spaced side by side, a blade 12 is arranged on an end face, facing the second cutter body 20, of each cutting tooth 11, and a sharp blade is arranged on one side, facing the first cutter body 10, of the second

cutter body 20, wherein the blades 12 and the sharp blade form a cutting state. Two ends of each blade 12 are a first blade tip 13 and a second blade tip 14, the first blade tip 13 is placed at a position close to the pivot 30, and the second blade tip 14 is placed at a position away from the pivot 30, that is, the first blade tip 13 is located at the back end while the second blade tip 14 is located at the front end. Furthermore, the first blade tip 13 is placed at a position away from the root of the cutting tooth 11, and the second blade tip 14 is placed at a position close to the root of the cutting tooth 11, that is, when the first cutter body 10 is horizontally placed, the first blade tip 13 is higher than the second blade tip 14. Additionally, a part of the blade 12 between the first blade tip 13 and the second blade tip 14 is designed to be of a concave curve shape, that is, the part of the blade 12 located between the first blade tip 13 and the second blade tip 14 is retracted toward the back of the corresponding cutter tooth 11 in order that the blade 12 has a certain curvature, and any parts of the blade 12 can form a shape of a bevel angle, so, when the hair is located on the blade 12 and the scissors are closed to cut the hair, the hair generates slight sliding on the blade 12, at this time, because the bevel angle prevents the hair from continuously sliding, the hair generates slight rotation on the blade 12 with the bevel angle and is still in contact with the blade 12, therefore, pull-cutting and roll-cutting effects will be generated in this cutting process, the hair can be easily cut off under a small power, the unsmooth feeling is reduced in the cutting process, and the problems of unsmooth operation and overpower caused by the unsmooth feeling of the existing scissors are solved; besides, the hair profiles are uniform, and the hair is not extruded and damaged.

[0020] In order to improve the cutting effect of the blade, an included angle between a hypothetical line joining the first blade tips 13 of the plurality of cutting teeth 11 and the blade 12 of each cutting tooth 11 is 20° to 45° . Specifically, the plurality of first blade tips 13 of the plurality of cutting teeth 11 are connected through a straight line to form a hypothetical cutting line, the first blade tip 13 and the second blade tip 14 of the single blade 12 are connected through a straight line to form a blade line of the blade 12, and an included angle between the cutting line and the blade line is designed to be 20° to 45° , preferably 24.5° , so, the sharp blade of the second cutter body 20 and the blades 12 of the first cutter body 10 have a larger included angle in the cutting process, the bevel angle of each blade 12 is more suitable for cutting, and uniform hair profiles will be obtained by a slight force.

[0021] Specifically, the curve-shape blade 12 may be formed by a whole arc-shaped blade, two sequentially connected arc-shaped blades, or two sequentially connected straight blades, the radian of the arc may be large or small, and whatever the curve forming manner is, any one part of the blade 12 has the bevel angle in order to achieve the cutting effect of the present disclosure.

[0022] When the blade 12 is formed by a whole arc-

shaped blade, as shown in FIG. 2, a first blade surface 15 and a second blade surface 16 are designed on the corresponding cutting tooth 11, the first blade surface 15 and the second blade surface 16 are designed to be a bevel, respectively, a thinnest part of the first blade surface 15 is connected with a thickest part of the second blade surface 16 to form an intersection line, the intersection line is located at a diagonal line of an approximate quadrangle formed by the first blade surface 15 and the second blade surface 16, that is, the intersection line smoothly extends from the first blade tip 13 to the root of the second blade tip 14 so that the first blade surface 15 and the second blade surface 16 both form an approximate triangle, and the thickness of the cutting tooth 11 is decreased gradually from the cutter back to the blade part, therefore, the blade surface has a certain thickness to keep its firmness, and the blade 12 is thinner to facilitate cutting.

[0023] When the blade 12 is formed by two sequentially connected arc-shaped blades, as shown in FIG. 3, a first blade surface 15, a second blade surface 16 and a third blade surface 17 are designed on the corresponding cutting tooth 11, these three blade surfaces are designed to be a bevel, respectively, a thinnest part of the first blade surface 15 is connected with a thickest part of the second blade surface 16 and a thickest part of the third blade surface 17 to form an intersection line, the intersection line is located at a diagonal line of an approximate quadrangle formed by the first blade surface 15, the second blade surface 16 and the third blade surface 17, that is, the intersection line smoothly extends from the first blade tip 13 to the root of the second blade tip 14, meanwhile, the second blade surface 16 is connected with the third blade surface 17 to form another intersection line, so that the first blade surface 15 forms an approximate triangle, the second blade surface 16 forms an approximate triangle, and the third blade surface 17 forms an approximate quadrangle. It is defined that the two arc-shaped blades are a first arc-shaped blade 121 and a second arc-shaped blade 122, the first blade tip 13 is located at the back end of the first arc-shaped blade 121 (one end close to the pivot 30), and the second blade tip 14 is located at the front end of the second arc-shaped blade 122 (one end away from the pivot 30). Similarly, the thickness of the cutting tooth 11 is decreased gradually from the cutter back to the blade part, therefore, the blade surface has a certain thickness to keep its firmness, and the blade 12 is thinner to facilitate cutting.

[0024] When the blade 12 is formed by two sequentially connected straight blades, as shown in FIG. 4, a first blade surface 15, a second blade surface 16 and a third blade surface 17 are designed on the corresponding cutting tooth 11, these three blade surfaces are designed to be a bevel, respectively, a thinnest part of the first blade surface 15 is connected with a thickest part of the second blade surface 16 and a thickest part of the third blade surface 17 to form an intersection line, the intersection line is located at a diagonal line of an approximate

quadrangle formed by the first blade surface 15, the second blade surface 16 and the third blade surface 17, that is, the intersection line smoothly extends from the first blade tip 13 to the root of the second blade tip 14, meanwhile, the second blade surface 16 is connected with the third blade surface 17 to form another intersection line, so that the first blade surface 15 forms an approximate triangle, the second blade surface 16 forms a triangle, and the third blade surface 17 forms an approximate quadrangle. It is defined that the two straight blades are a first straight blade 123 and a second straight blade 124, the first blade tip 13 is located at the back end of the first straight blade 123 (one end close to the pivot 30), and the second blade tip 14 is located at the front end of the second straight blade 124 (one end away from the pivot 30). Similarly, the thickness of the cutting tooth 11 is decreased gradually from the cutter back to the blade part, therefore, the blade surface has a certain thickness to keep its firmness, and the blade 12 is thinner to facilitate cutting. Furthermore, the second blade surface 16 may also be designed to be a bevel with a larger curvature, that is, an included angle is formed between the second blade surface 16 and the third blade surface 17 so as to avoid a problem of tooth locking generated between the sharp blade and the blade 12 when the scissors are closed by a large power. Preferably, the included angle between the first straight blade 123 and the second straight blade 124 is 165° so as to greatly avoid the tooth locking problem. Besides, the first blade tip 13 and the second blade tip 14 are connected by a straight line to form a hypothetical blade line, the blade line forms an obtuse-angle triangle with the first straight blade 123 and the second straight blade 124, the obtuse angle of the obtuse-angle triangle is the included angle of 165° between the first straight blade 123 and the second straight blade 124, and an included angle between the blade line and the first straight blade 123 is designed to be 11° so as to further avoid the tooth locking problem.

Claims

1. A pair of scissors with curved blades, comprising a first cutter body (10) and a second cutter body (20), as well as a pivot (30) connecting the first cutter body (10) and the second cutter body (20), wherein the first cutter body (10) has a plurality of cutting teeth (11) spaced side by side; and **characterized in that** a blade (12) of each cutting tooth (11) is in a concave curve shape, two ends of the blade (12) are a first blade tip (13) and a second blade tip (14), the first blade tip (13) is placed at a position closer to the pivot (30) as compared to the second blade tip (14), and the first blade tip (13) is placed at a position away from the root of the cutting tooth (11) as compared to the second blade tip (14).
2. The scissors with curved blades according to claim

1, **characterized in that** an included angle between a hypothetical line joining the first blade tips (13) of the plurality of cutting teeth (11) and the blade (12) of each cutting tooth (11) is 20° to 45°.

3. The scissors with curved blades according to claim 2, **characterized in that** an included angle between a hypothetical line joining the first blade tips (13) of the plurality of cutting teeth (11) and the blade (12) of each cutting tooth (11) is 24.5°.
4. The scissors with curved blades according to claim 2, **characterized in that** the blade (12) of each cutting tooth (11) is in shape of a curve formed by an arc.
5. The scissors with curved blades according to claim 4, **characterized in that** each cutting tooth (11) is provided with a first blade surface (15) and a second blade surface (16) both of which are bevels and are intersected, and a thinnest part of the first blade surface (15) is connected with a thickest part of the second blade surface (16) to form an intersection line.
6. The scissors with curved blades according to claim 2, **characterized in that** the blade (12) of each cutting tooth (11) is in shape of a curve formed by two sequentially connected arcs, which are a first arc-shaped blade (121) and a second arc-shaped blade (122), respectively.
7. The scissors with curved blades according to claim 2, **characterized in that** the blade (12) of each cutting tooth (11) is in shape of a curve formed by two sequentially connected straight lines, which are a first straight blade (123) and a second straight blade (124), respectively.
8. The scissors with curved blades according to claim 6 or 7, **characterized in that** each cutting tooth (11) is provided with a first blade surface (15), a second blade surface (16) and a third blade surface (17), which are bevels and are intersected in pairs, a thinnest part of the first blade surface (15) is connected with a thickest part of the second blade surface (16) and a thickest part of the third blade surface (17) to form an intersection line, and the second blade surface (16) is connected with the third blade surface (17) to form an intersection line.
9. The scissors with curved blades according to claim 7, **characterized in that** an included angle between the first straight blade (123) and the second straight blade (124) is 165°.
10. The scissors with curved blades according to claim 9, **characterized in that** an included angle between a hypothetical line joining the first blade tip (13) and the second blade tip (14) of each cutting tooth (11),

and the first straight blade (123) is 11°.

Amended claims in accordance with Rule 137(2) EPC.

1. A pair of scissors with curved blades, comprising a first cutter body (10) and a second cutter body (20), as well as a pivot (30) connecting the first cutter body (10) and the second cutter body (20), wherein the first cutter body (10) has a plurality of cutting teeth (11) spaced side by side; wherein a blade (12) of each cutting tooth (11) is in a concave curve shape, two ends of the blade (12) are a first blade tip (13) and a second blade tip (14), the first blade tip (13) is placed at a position closer to the pivot (30) as compared to the second blade tip (14), and the first blade tip (13) is placed at a position away from the root of the cutting tooth (11) as compared to the second blade tip (14), wherein an included angle between a hypothetical line joining the first blade tips (13) of the plurality of cutting teeth (11) and the blade (12) of each cutting tooth (11) is 20° to 45°, the blade (12) of each cutting tooth (11) is in shape of a curve formed by an arc, and each cutting tooth (11) is provided with a first blade surface (15) and a second blade surface (16) both of which are bevels and are intersected, **characterized in that** a thinnest part of the first blade surface (15) is connected with a thickest part of the second blade surface (16) to form an intersection line.
2. The scissors with curved blades according to claim 1, **characterized in that** an included angle between a hypothetical line joining the first blade tips (13) of the plurality of cutting teeth (11) and the blade (12) of each cutting tooth (11) is 24.5°.
3. The scissors with curved blades according to claim 1, **characterized in that** the blade (12) of each cutting tooth (11) is in shape of a curve formed by two sequentially connected arcs, which are a first arc-shaped blade (121) and a second arc-shaped blade (122), respectively.
4. The scissors with curved blades according to claim 1, **characterized in that** the blade (12) of each cutting tooth (11) is in shape of a curve formed by two sequentially connected straight lines, which are a first straight blade (123) and a second straight blade (124), respectively.
5. The scissors with curved blades according to claim 3 or 4, **characterized in that** each cutting tooth (11) is provided with a first blade surface (15), a second blade surface (16) and a third blade surface (17), which are bevels and are intersected in pairs, a thinnest part of the first blade surface (15) is connected

with a thickest part of the second blade surface (16) and a thickest part of the third blade surface (17) to form an intersection line, and the second blade surface (16) is connected with the third blade surface (17) to form an intersection line.

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6. The scissors with curved blades according to claim 4, **characterized in that** an included angle between the first straight blade (123) and the second straight blade (124) is 165° .

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7. The scissors with curved blades according to claim 6, **characterized in that** an included angle between a hypothetical line joining the first blade tip (13) and the second blade tip (14) of each cutting tooth (11), and the first straight blade (123) is 11° .

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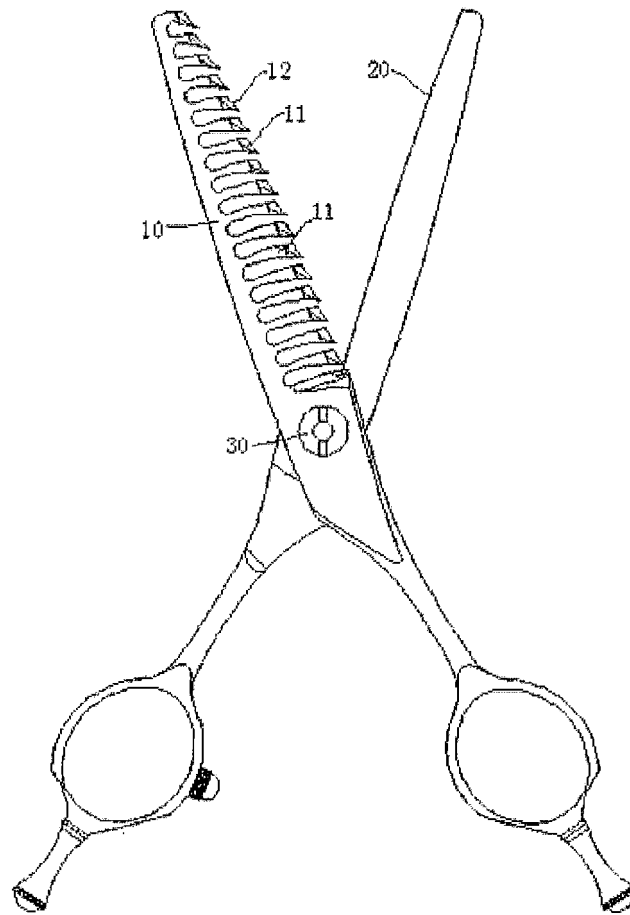


FIG. 1

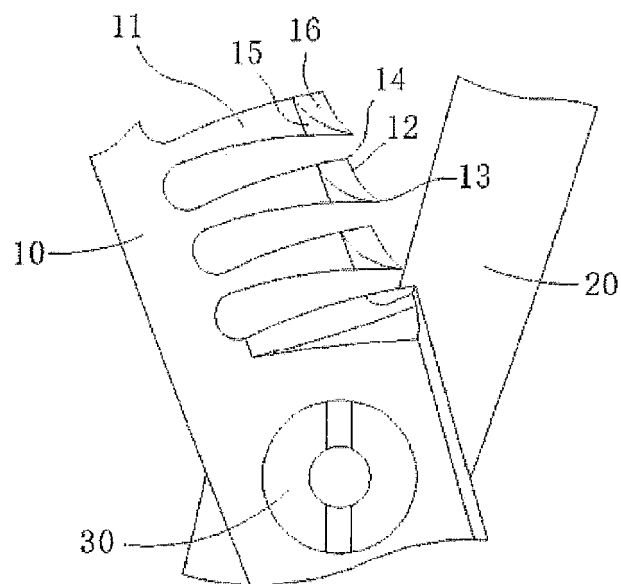


FIG. 2

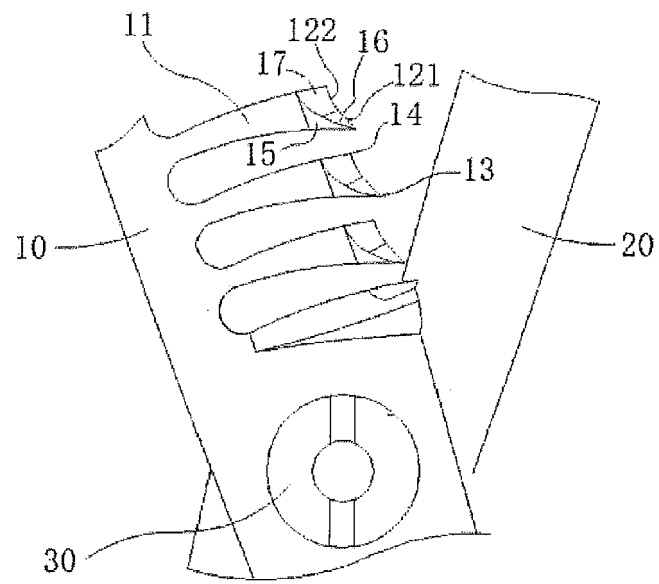


FIG. 3

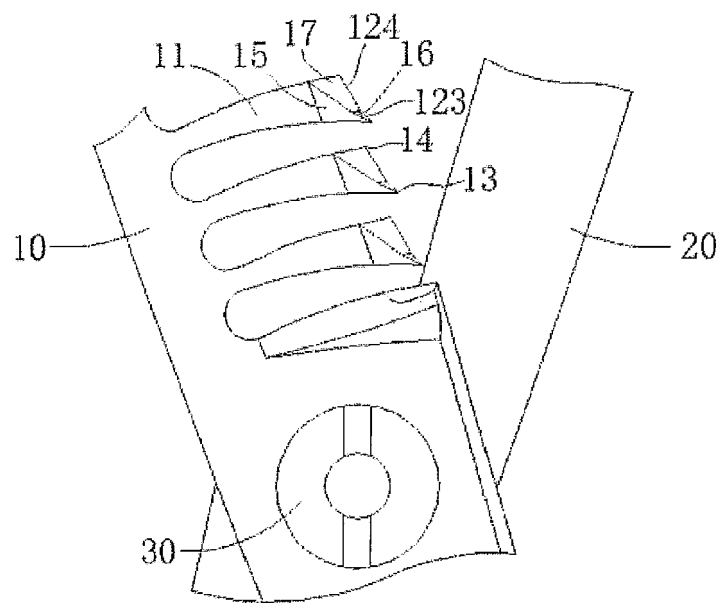


FIG. 4



EUROPEAN SEARCH REPORT

Application Number
EP 18 24 8234

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CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 18 24 8234

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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