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(71) Applicant: **Adachi Kogyo, Inc.**
Seki-shi, Gifu-ken 501-3263 (JP)

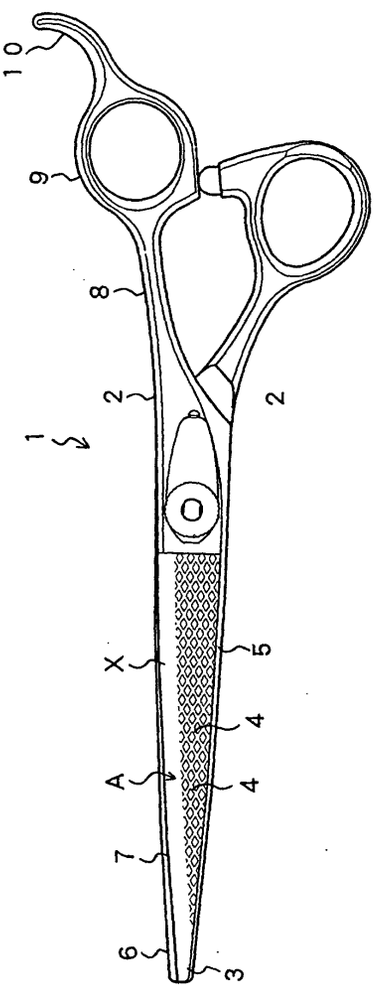
(72) Inventor: **ADACHI, Hidemi**
Seki-shi, Gifu 501-3263 (JP)

(74) Representative: **Raynor, Simon Mark**
Urquhart-Dykes & Lord,
Midsummer House,
413 Midsummer Boulevard
Central Milton Keynes MK9 3BN (GB)

(54) SCISSORS

(57) Haircut scissors having a weight-reducing engraving pattern or a weight-reducing opening pattern are provided. Weight of scissors can be reduced under control by controlling the engraving or opening pattern. The engraving or opening pattern may be filled with a filler material such as a plastic material or a metal different from the scissors material. The engraving pattern and the opening pattern with or without a filler provide an additional attractiveness to the scissors.

Fig.1



EP 1 270 153 A1

Description

BACKGROUND OF THE INVENTION

1. Field of the Invention:

[0001] The present invention generally relates to a pair of scissors which is provided with a weight-reducing engraving pattern. More particularly, this invention relates to a pair of haircut scissors having a weight-reducing engraving pattern.

2. Background Art:

[0002] A pair of conventional haircut scissors of six inches long generally weighs about 60 grams and a pair of conventional haircut scissors of eight inches long generally weighs about 80 grams. Such weights may not seem to cause any practical problem, however, to barbers and hairdressers who use haircut scissors practically all day, even such "light" weights do generate considerable concerns.

[0003] It is therefore desirable to further reduce weight of haircut scissors.

[0004] Light weight titanium alloy is conventionally used as a body material of haircut scissors to reduce weight, on which stainless steel cutting edges are subsequently provided. Alternatively, titanium alloy may be directly and partially hardened to provide cutting edges to titanium alloy scissors.

[0005] Barbers and hairdressers use a variety of haircut scissors. Those various scissors are generally made to weigh about the same such that barbers and hairdressers may retain the same finger feelings when they use haircut scissors of various types. Comb-type haircut scissors are artificially made "heavier" by intentionally adding weight thereto in order to increase and adjust weight of the otherwise "light" comb-type haircut scissors to match other "normal" haircut scissors.

[0006] Titanium alloy scissors are far lighter than mainstream stainless steel scissors. However, barbers or hairdressers are not necessarily happy to use titanium alloy scissors which are far lighter than non-titanium scissors due to difference of finger feelings.

[0007] Theoretically it is possible for barbers or hairdressers to change the stainless steel scissors in their possession with titanium alloy scissors all at once. However, such is usually impractical for economical reasons and due to the fact that titanium alloy haircut scissors can not presently replace all the existing stainless steel scissors.

[0008] Manufacturing titanium alloy scissors is technically more difficult than manufacturing stainless steel scissors. In addition, titanium alloy powder generated during scissors manufacture processes is combustible.

[0009] There are hair trim scissors for pets also. Since the types of pet scissors are limited, large and heavy barber's haircut scissors are usually utilized as pet scissors. It is desired by pet trimmers that light weight pet scissors become available.

[0010] Haircut scissors are generally made from a metal sheet material such as stainless steel sheet material, which is press cut into desired scissors body shapes and then refined and hardened to provide sharp and hard cutting edges. Conventional metallic scissors are mostly monochromatic, some scissors are color plated, however, the color is gradually removed as the scissors after repeated use go through sharpening processes which are required of haircut scissors.

[0011] some of conventional scissors are provided with cuts on their blade portions including names or trademarks of the manufacturers. Such cuts are provided by "shallowly" carving the blade portions. Some cuts are filled with paints. Such a conventional cut with or without a paint will gradually disappear through sharpening processes of the scissors.

[0012] Disappearance of conventional shallow cuts on scissors blade portions is unavoidable as it is indispensable for haircut scissors to be regularly sharpened.

[0013] Accordingly, it is an object of the present invention to controllably reduce weight of scissors with everlasting weight-reducing engraving or opening patterns which concurrently add attractiveness to the scissors.

SUMMARY OF THE INVENTION

[0014] The foregoing object of the present invention is attained by the present invention which provides a pair of scissors having weight-reducing patterned engraving on the outer surface of the blade portions (claim 1). The patterned engraving or engraving pattern is preferably provided on the "stationary" blade portion of scissors as against the "motional" blade portion of scissors. The engraving pattern can be provided on the blade portion by any conventional means. The engraving pattern of the present invention is provided on the blade portion deep and substantially enough so as to substantially reduce weight of the scissors and to let the scissors survive sharpening processes of the blade portion. By providing the scissors with weight-reducing engraving pattern under control, the weight of the scissors is reduced under control.

[0015] It is therefore possible for a barber or hairdresser to gradually replace his haircut scissors with scissors of the present invention which are provided not to be excessively lighter than stainless steel scissors. It is preferred that the scissors of the present invention are only about 5% to 10% lighter than stainless steel scissors. The engraving pattern can be anything including a geometrical design, letter, mark and picture.

[0016] The engraving pattern provided as such may be filled with a material which is lighter than the scissors material (claim 2). If the filler material is colored, the pair of scissors will have a colored engraving pattern. The filled material will be retained in the engraving pattern without disappearing since the engraving pattern is pro-

vided deep enough.

[0017] It is preferred that the filler material is substantially lighter than the scissors material. The filler material may be a plastic, fiberglass, aluminum, carbon, felt or Bakelite material (claim 3).

[0018] The engraving pattern of the present invention may be an opening or openings (cut-through pattern) provided on the blade portion or blade portions instead of carvings (claim 4). Such openings may be provided practically in any desired shape and number. The weight of the scissors of the present invention having an opening or openings can be readily controlled by the total volume of the opening(s) to be cut through or removed from the scissors material.

[0019] The opening may be filled with a material different from the scissors material. Such a filler material may be colored to provide the scissors with an everlasting colored engraving (claim 5).

[0020] The filler material is preferred to be substantially lighter than the scissors material to substantially reduce weight of the scissors (claim 6).

[0021] The opening may be reinforced with ribs (claim 7). The ribs will also work to safely retain the filler material filled in the opening.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022]

FIG.1 is a plan view showing a pair of haircut scissors whose stationary blade portion is provided with an engraving pattern according to an embodiment of the present invention;

FIG.2 is a diagrammatic perspective view showing a roughly cut half-finished stationary blade portion provided with an engraving pattern according to an embodiment of the present invention;

FIG.3 is a plan view of the roughly cut half-finished blade portion shown in FIG.2;

FIG.4 is a sectional view of the roughly cut stationary blade portion shown in FIG.2, indicating the finish shape with a broken and curved line;

FIG.5 is a rear view of the half-finished stationary blade portion shown in FIG.2, indicating the engraving pattern with broken lines;

FIG.6 is a plan view showing another pair of haircut scissors whose stationary blade portion is provided with an engraving pattern according to another embodiment of the present invention;

FIG.7 is a plan view showing another pair of haircut scissors whose stationary blade portion is provided with an engraving pattern according to another embodiment of the present invention;

FIG.8 is a plan view showing another pair of haircut scissors whose stationary blade portion is provided with an engraving pattern according to another embodiment of the present invention;

FIG.9 is a plan view showing another pair of haircut scissors whose stationary blade portion is provided with an engraving pattern according to another embodiment of the present invention;

FIG.10 is a plan view showing another pair of haircut scissors whose stationary blade portion is provided with an engraving pattern according to another embodiment of the present invention;

FIG.11 is a plan view showing another pair of haircut scissors whose stationary blade portion is provided with an engraving pattern according to another embodiment of the present invention;

FIG.12 is a plan view showing another pair of haircut scissors whose stationary blade portion is provided with an engraving pattern according to another embodiment of the present invention;

FIG.13 is a plan view showing a pair of haircut scissors whose stationary blade portion is provided with an opening pattern according to an embodiment of the present invention;

FIG.14 is a plan view showing another pair of haircut scissors whose stationary blade portion is provided with an opening pattern according to another embodiment of the present invention;

FIG.15 is a sectional view of the stationary blade portion shown in FIG.14 along line K-K;

FIG.16 is a plan view showing another pair of haircut scissors whose blade portions are provided with an opening pattern according to another embodiment of the present invention;

FIG.17 is a plan view showing another pair of haircut scissors whose blade portions are each provided with an opening pattern according to another embodiment of the present invention;

FIG.18 is a plan view showing another pair of haircut scissors whose blade portions are each provided with an opening pattern according to another embodiment of the present invention, which is filled with a plastic material;

FIG.19 is a sectional view of the blade portions shown in FIG.14 along line L·L;

FIG.20 is a diagram showing a blade portion having an opening pattern according to an embodiment of the present invention, which is provided with rib means and filled with a plastic material;

FIG.21 is a sectional view of the blade portions shown in FIG.20 along line M-M;

FIG.22 is a sectional view of the blade portions shown in FIG.20 along line N-N; and

FIG.23 is a diagram showing a manufacturing process.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0023] The present invention is described in detail hereunder using several embodiments of the invention.

(Embodiment 1)

[0024] Fig.1 shows a pair of haircut scissors 1 consisting of a pair of proximal and distal half scissors portions 2. The proximal half scissors portion 2 comprises a proximal blade portion 3 and a proximal handle portion (8,9,10), and the distal half scissors portion 2 comprises a distal blade portion 6 and a distal handle portion. The proximal blade portion 3 is a stationary blade portion 3 and the distal blade portion 6 is a motional blade portion 6. As will be understood by barbers or hairdressers, the stationary blade portion 3 is the proximal side of the scissors and the motional blade portion 6 is the distal side of the scissors when the scissors are in use by them on the hair.

[0025] The stationary blade portion 3 is provided with an engraving pattern 4 as shown in Figs.2 and 3. This engraving pattern 4 is a net-like pattern including 1mm-wide engraved channels which are provided 3mm apart. These channels are provided in the stationary blade portion on the proximal surface thereof such that the distances from the bottoms of the channels to the distal surface B of the blade portion 3 are constant 0.8mm.

[0026] This blade portion 3 with the net-like engraving pattern may be provided as follows. A stainless steel material is made into a plate 5 (rough blade portion), 3.3mm thick, by forging (Fig.4). The plate-like blade portion 5 is provided with a net - like engraving pattern 4 by conventional means. The depth of each channel (not shown) is 2.5mm. The plate-like blade portion 5 with the channels is a half-finished blade portion 2' (Fig. 5), which is grind machined into the shape indicated by a broken curved line Y in Fig.4. The channels provided in the area X will be lost during the grind machining process. Here, the channels have different depths, however, the distances of the channel bottoms to the distal surface B of the blade portion are held constant.

[0027] A pair of scissors 1 having such a blade portion 3 with an everlasting design engraving will look attractive. In addition, the pair of scissors with the designed engraving will be considerably lighter than comparative scissors without such a pattern as the weight of the stationary blade portion of the scissors is reduced. The present invention can practically reduce weight of a pair of haircut scissors of about 60 grams by 5 to 6 grams. As will be appreciated by barbers or hairdressers, even 5 to 6 gram reduction in weight of scissors will be a great benefit to barbers or hairdressers who use haircut scissors many hours every day.

[0028] The engraving pattern to be provided on the stationary blade portion 3 may be any pattern including such patterns shown in Figs.6 to 11 as well as the one shown in Fig.12.

[0029] The engraving pattern may be provided by any appropriate conventional means including electric discharge machining.

[0030] The engraving pattern may be provided on the motional blade portion 6 also or instead of the stationary blade portion 3.

(Embodiment 2)

[0031] The channels may be filled with a plastic material by conventional means. Advantageously, the plastic material is colored. Scissors with plastic material filled channels are still lighter that those without such channels as the plastic material is far lighter than the scissors material.

[0032] The plastic material filled engraving will not disappear even when the scissors are repeatedly sharpened as those channels are provided deep enough.

[0033] The inner walls of the channels of the present invention may be provided perpendicular to the surface A, or the channels may be tapered in a narrowing way or widening way towards the bottoms. The channel walls may be artificially roughened so that the plastic material filled in the channels may be securely held in the channels. Such roughening of the channel walls may be provided, e.g., by speeding up the electric discharge machining ("intended imperfect machining").

[0034] The plastic material may be replaced by a metal material which is different from the scissors material such as copper or brass. The engraving pattern of copper or brass color on stainless steel will look attractive.

(Embodiment 3)

[0035] A pair of scissors 11 shown in Fig.13 is provided with a pattern consisting of openings 13a on its blade portion 12 instead of engraving. The openings 13a of this embodiment are diamond-shaped through-holes 13a and may be provided by conventional punching means. Such opening 13a may be provided in any shape such as a heart shape, spade shape or clover shape among others. It is equally possible to control weight of the scissors by controlling the size and number of such openings 13a.

[0036] The openings 13a can be provided by any practical means such as punching, wire electric discharge machining or laser machining.

[0037] Fig.14 shows another pair of haircut scissors having a plurality of circular holes or openings 13b. While it is practical to provide such circular holes 13a or any other holes only on the stationary blade portion, it is preferred that the openings 13b are identically provided on both stationary and motional blade portions and that both openings 13b are precisely aligned one another correspondingly. The inner walls 14 of the openings 13a may be tapered as shown in Fig.15.

[0038] Fig.16 shows another embodiment of such holes 13c, which may be decorated with peripheral ornamentation 15 as shown.

(Embodiment 4)

[0039] Fig.17 shows another pair of scissors 11 which

is provided with paired longitudinal openings 13d identically provided on the stationary and motional blade portions 12. These paired openings 13d are each rimed with peripheral ornamentation 16 and will be perfectly aligned with each other when the scissors 11 are closed.

(Embodiment 5)

[0040] Fig.18 shows another pair of scissors 11 which has paired longitudinal openings 13e on the stationary and motional blade portions 12. The openings 13e are both filled with a plastic material 17. In order to retain the plastic materials 17 safely in the openings 13e, each opening 13e is provided with a longitudinal shoulder portion 18 as shown in Fig.19.

(Embodiment 6)

[0041] Fig.20 shows another opening embodiment comprising paired longitudinal openings 13f and ribs 19 which enforce the opening structure and retention of the plastic materials 17 in the openings 13f. Fig.21 is a sectional view along line M-M of Fig.20 and Fig.22 is a sectional view along line N-N of Fig.20, showing the rib structure.

[0042] While the present invention has been described using various embodiments, it is to be understood that various modifications and changes may be readily made to those embodiments within the scope of the present invention.

Claims

1. A pair of scissors including a stationary blade portion having a first outer surface and a first inner surface and a motional blade portion having a second outer surface and a second inner surface, both blade portions made from a scissors material, wherein at least one of said first and second outer surfaces is provided with a weight-reducing engraving pattern.

2. A pair of scissors of claim 1, wherein said weight-reducing engraving pattern is filled with a filler material whose color is different from that of said scissors material.

3. A pair of scissors of claim 2, wherein said filler material is lighter than said scissors material.

4. A pair of scissors including a stationary blade portion and a motional blade portion, both blade portions made from a scissors material, wherein at least one of said blade portions is provided with a weight-reducing opening pattern.

5. A pair of scissors of claim 4, wherein said weight-reducing opening pattern is filled with a filler material whose color is different from that of said scissors material.

6. A pair of scissors of claim 5, wherein said filler material is lighter than said scissors material.

7. A pair of scissors of claim 6, wherein the opening pattern is provided with ribs.

Fig.1

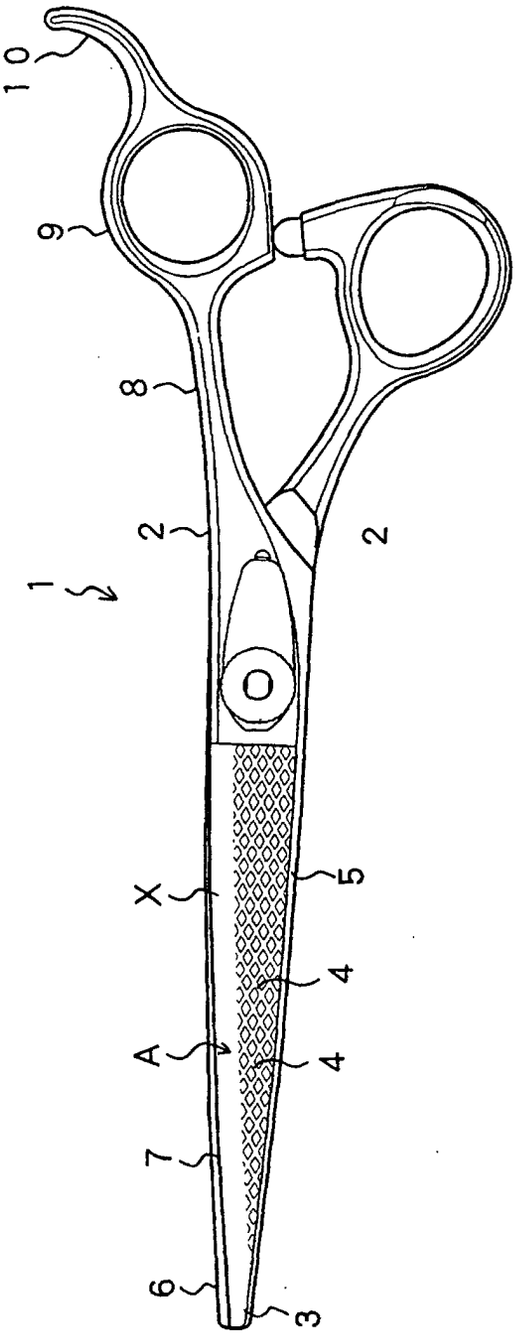


Fig.2

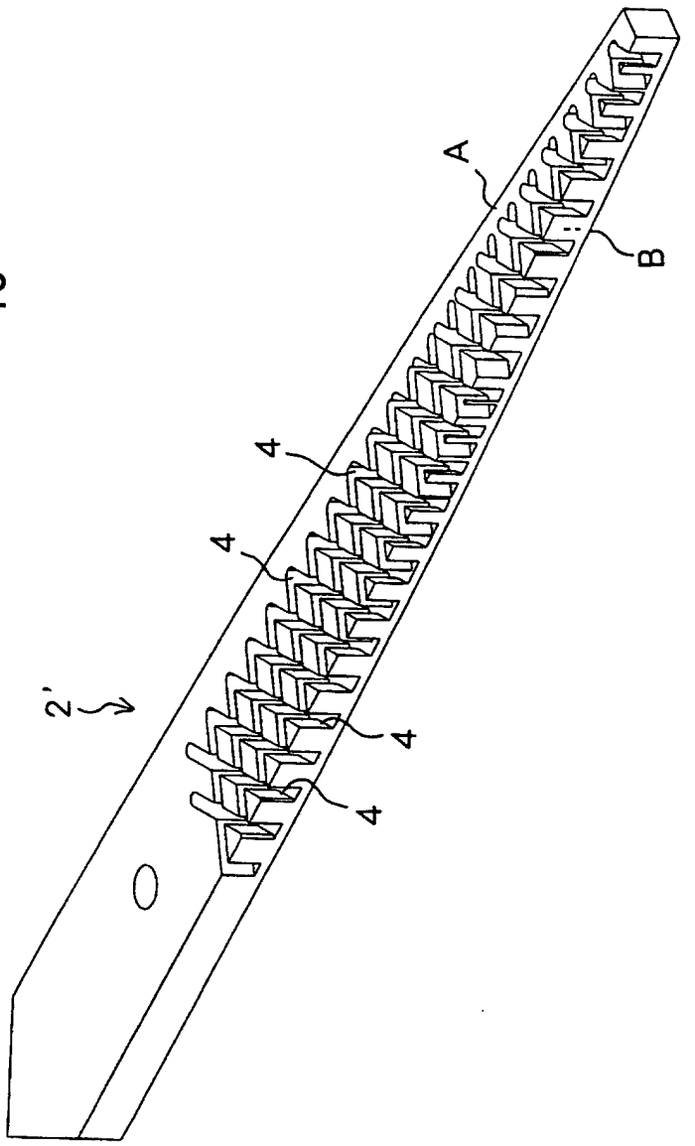


Fig.3

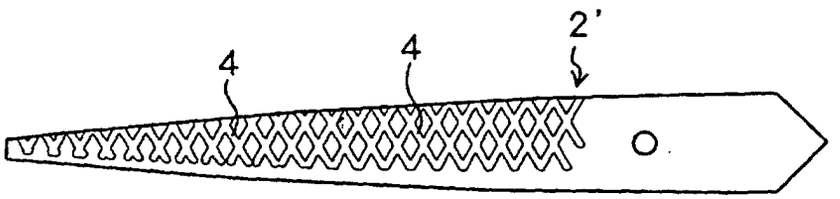


Fig.4

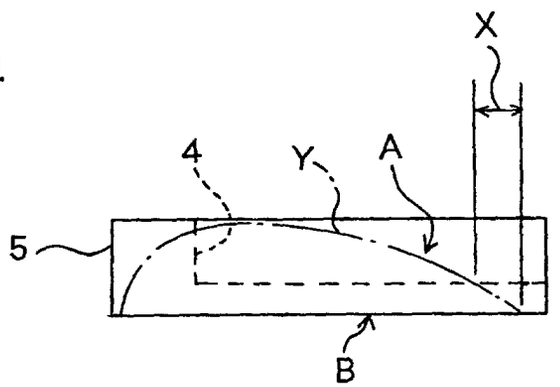


Fig.5

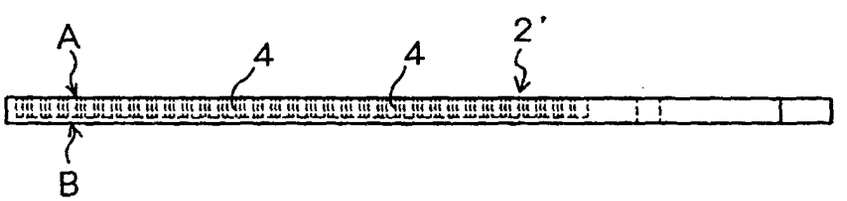


Fig.6

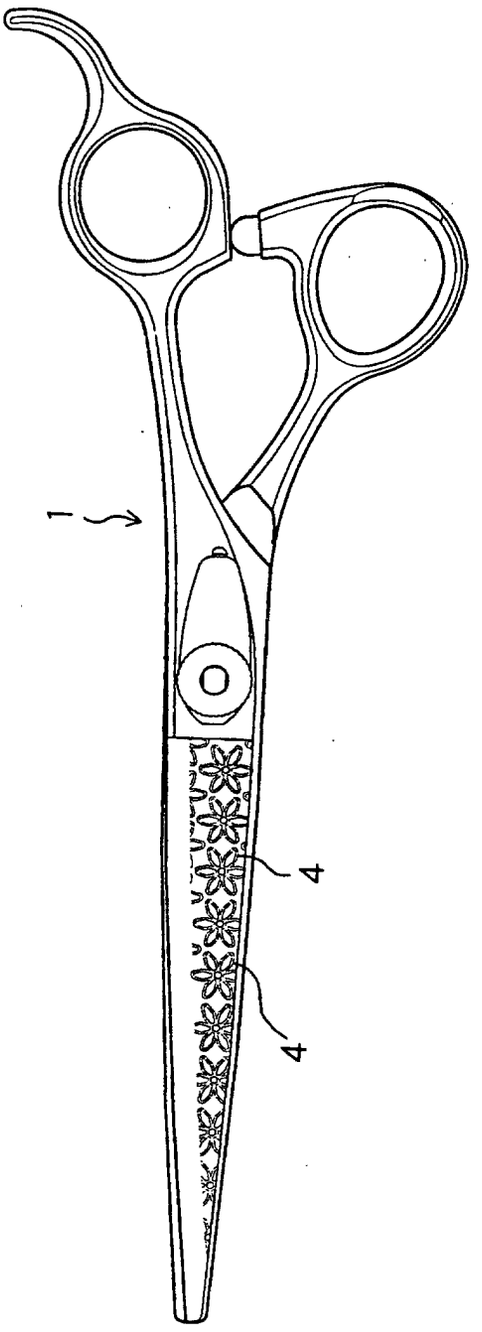


Fig.7

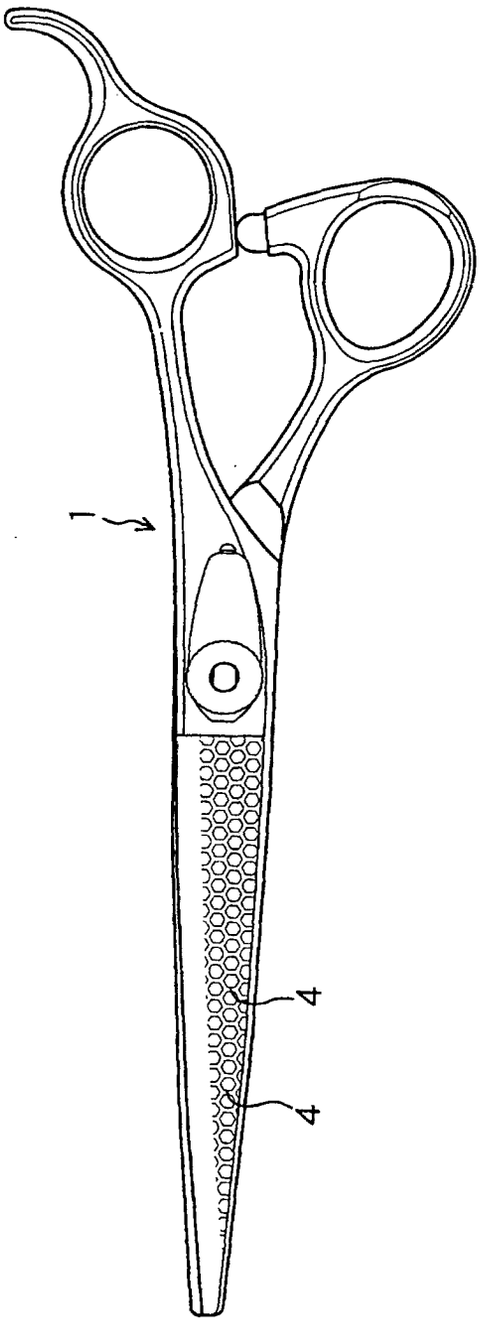


Fig.8

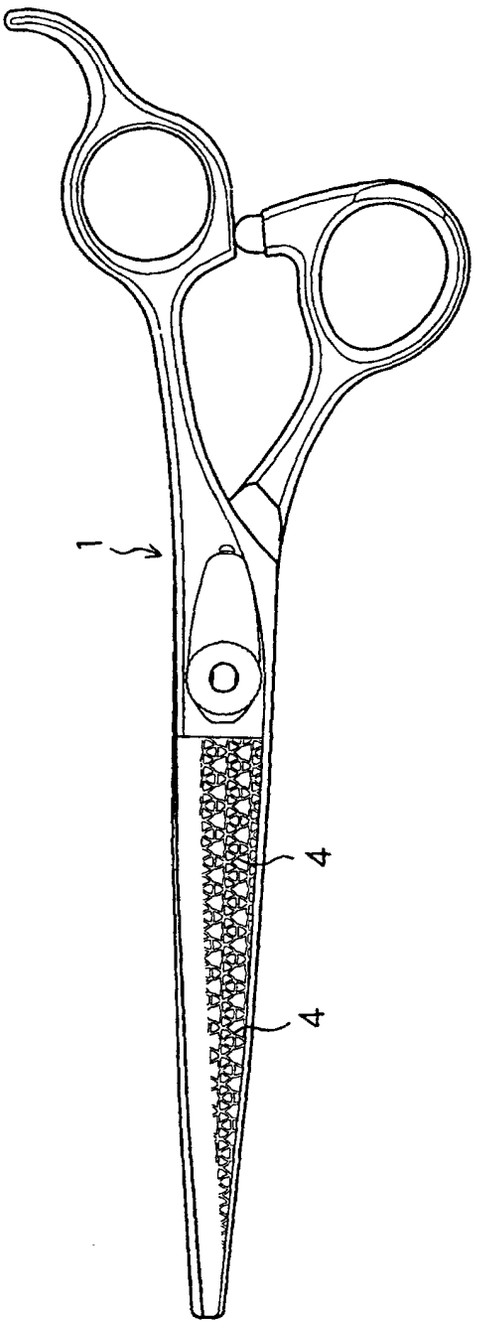


Fig.9

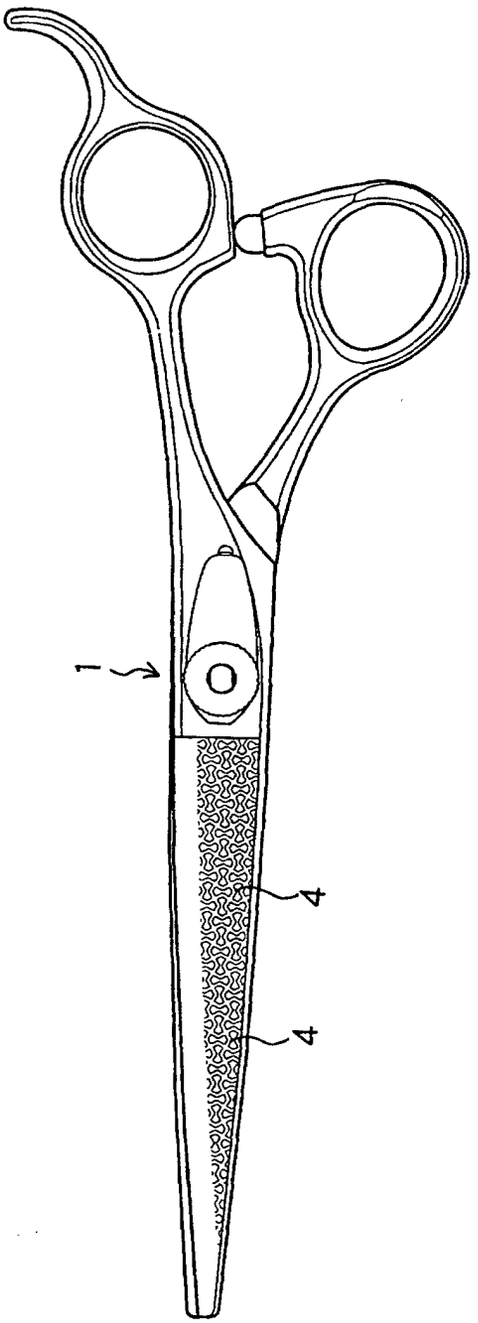


Fig.10

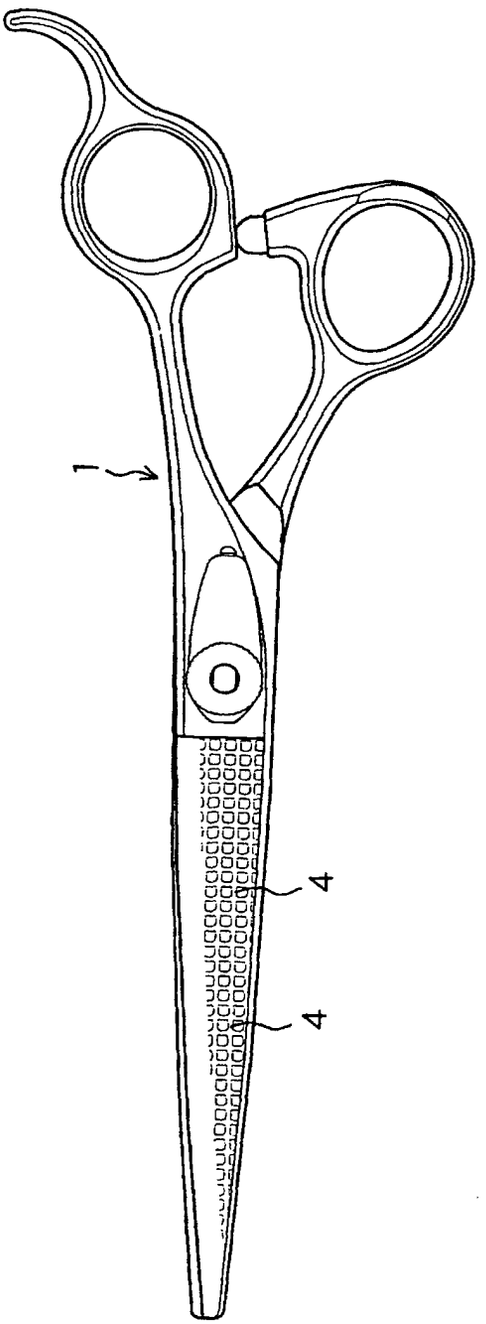


Fig.11

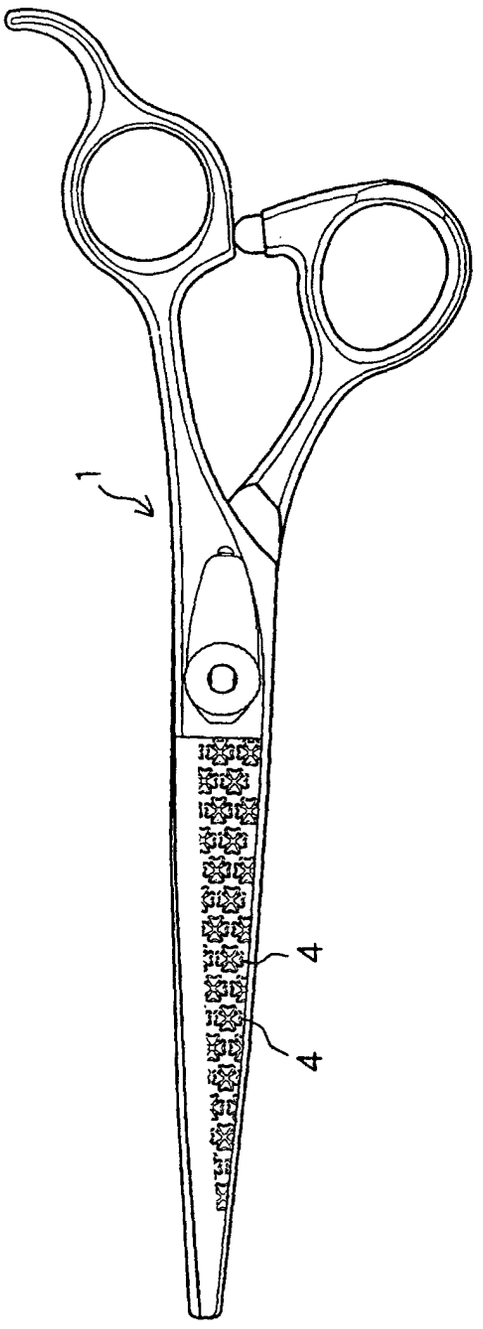


Fig.12

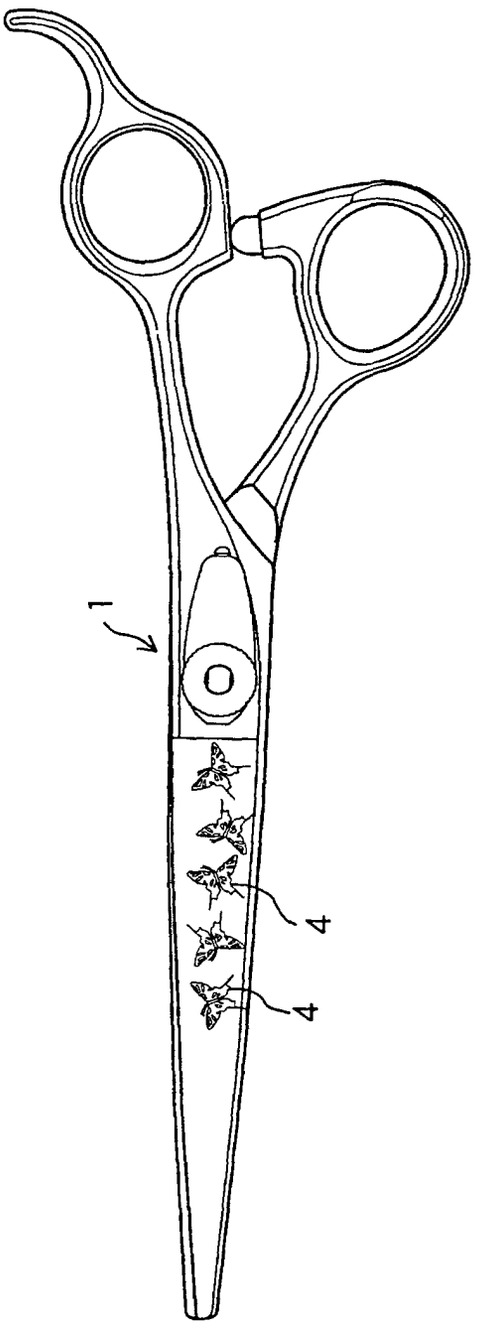


Fig.13

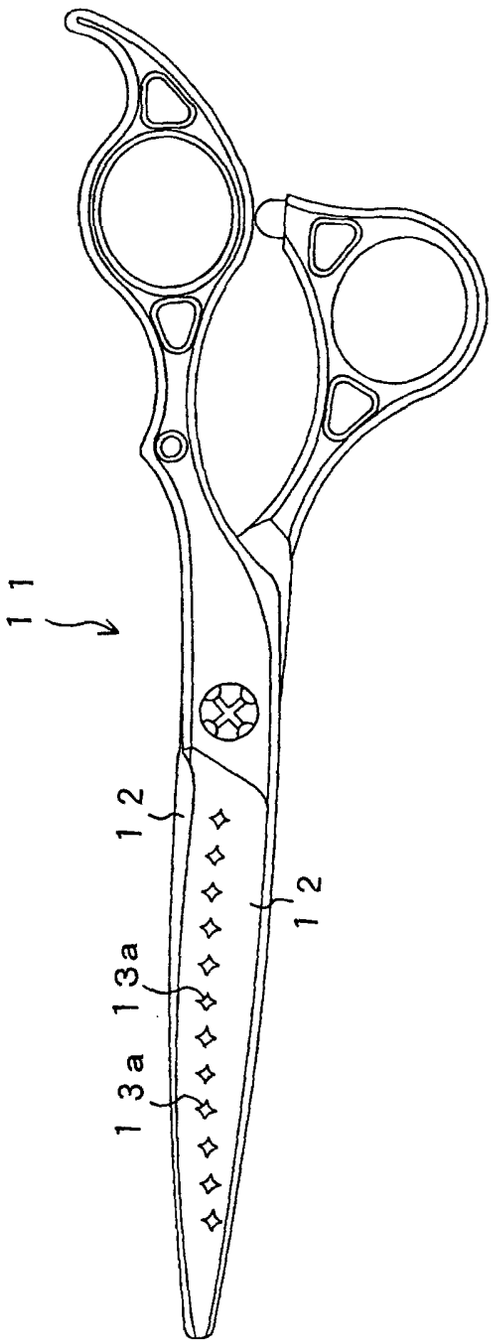


Fig.14

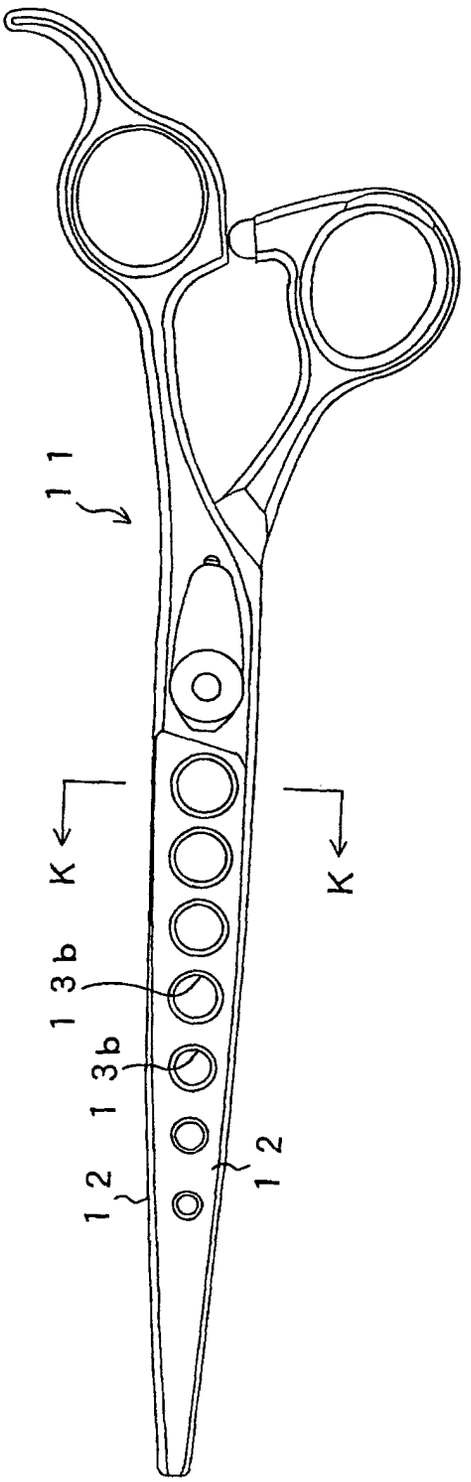


Fig.16

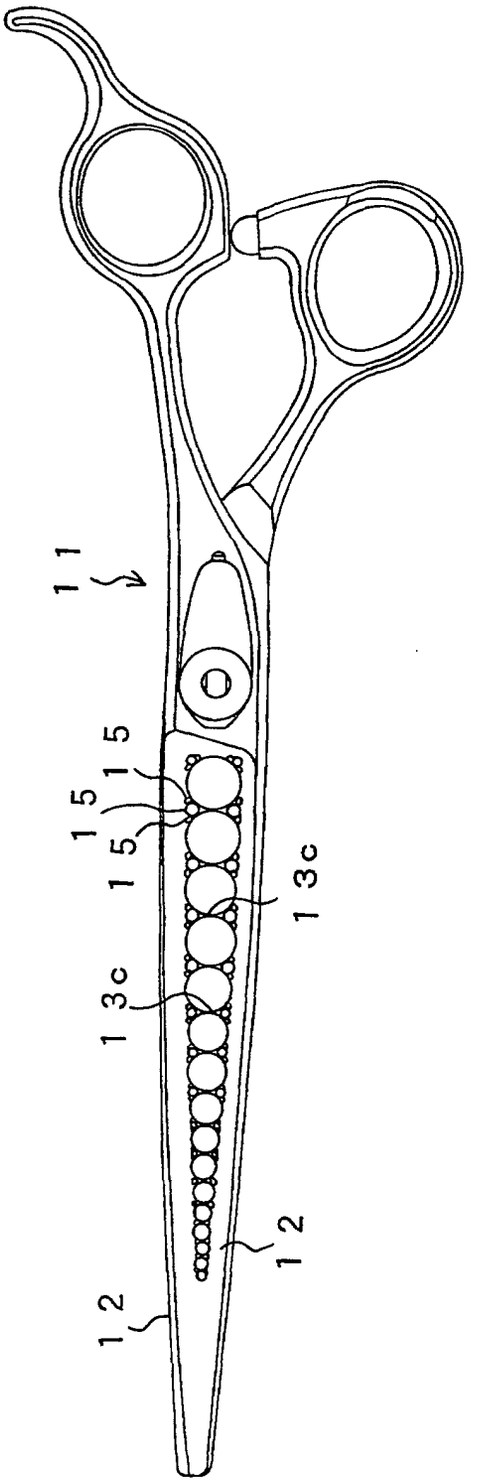


Fig.17

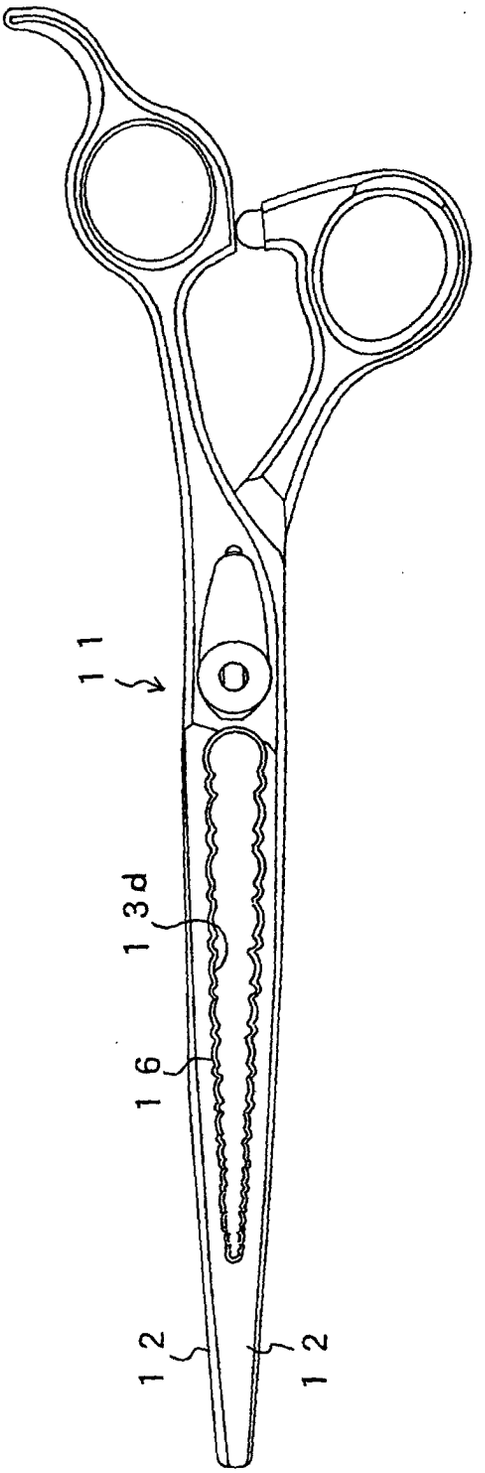


Fig.18

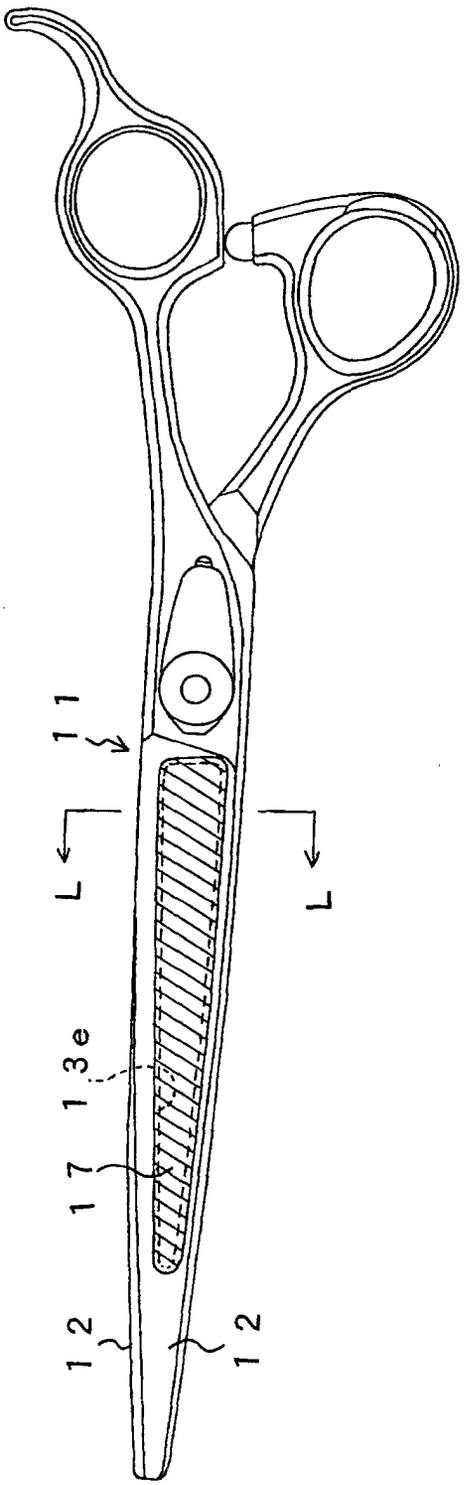


Fig.15

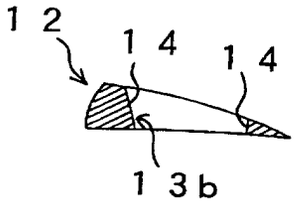


Fig.19

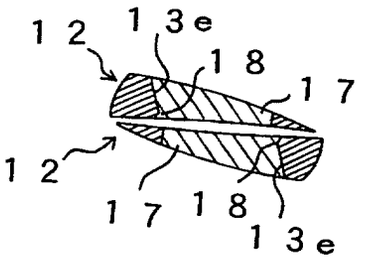


Fig.20

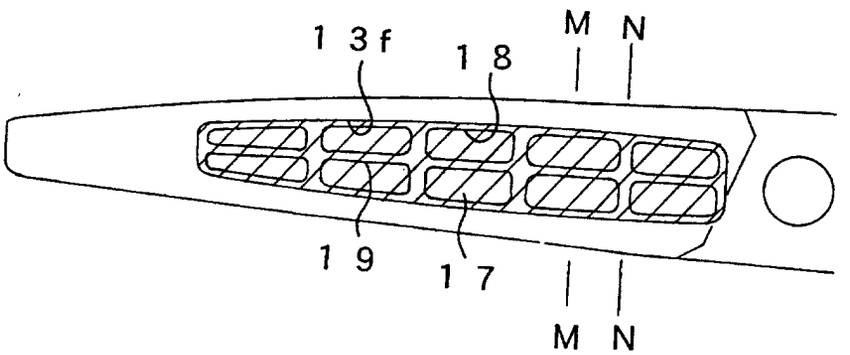


Fig.21

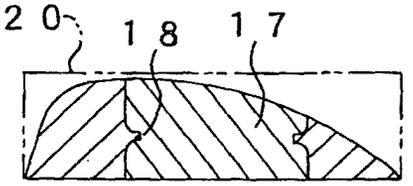


Fig.22

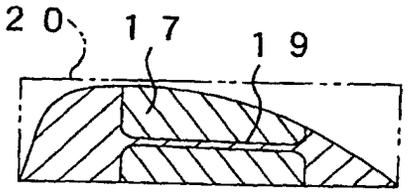
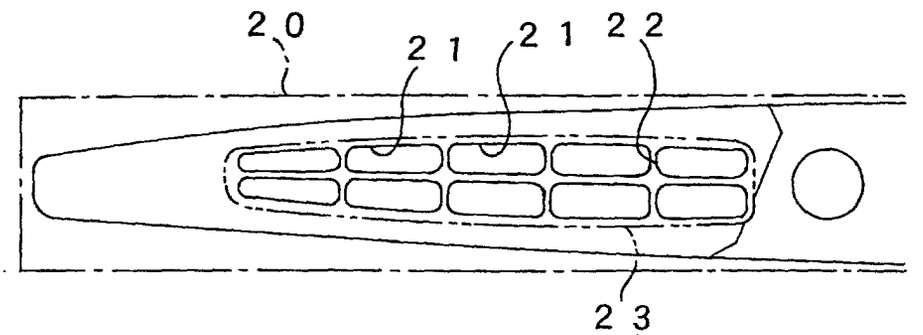


Fig.23



INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP00/01981

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl[7] B26B13/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl[7] B26B13/06, B27B17/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1920-2000 Toroku Jitsuyo Shinan Koho 1994-2000
Kokai Jitsuyo Shinan Koho 1971-2000 Jitsuyo Shinan Toroku Koho 1996-2000

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	JP, 63-98172, U (Kabushiki Kaisha Kaijirushi Hamono Kaihatsu Center), 25 June, 1988 (25.06.88), Claims of Utility Model (Family: none)	1 2,3
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A	JP, 2-31701, U (Suehiro Seiko K.K.), 28 February, 1990 (28.02.90), Claims of Utility Model (Family: none)	5

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:
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Date of the actual completion of the international search	Date of mailing of the international search report
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