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(72) Inventor; and

(71) Applicant : HASHVEER, Singh [ZA/ZA]; Unit 62
Firenza, Airdlin Road Sunninghill, 2191 Johannesburg
(ZA).

(72) Inventor: TAYLOR, Adrian Sean; 17 Labri Complex, 3
Panther Rd, 2188 Boskruin (ZA).

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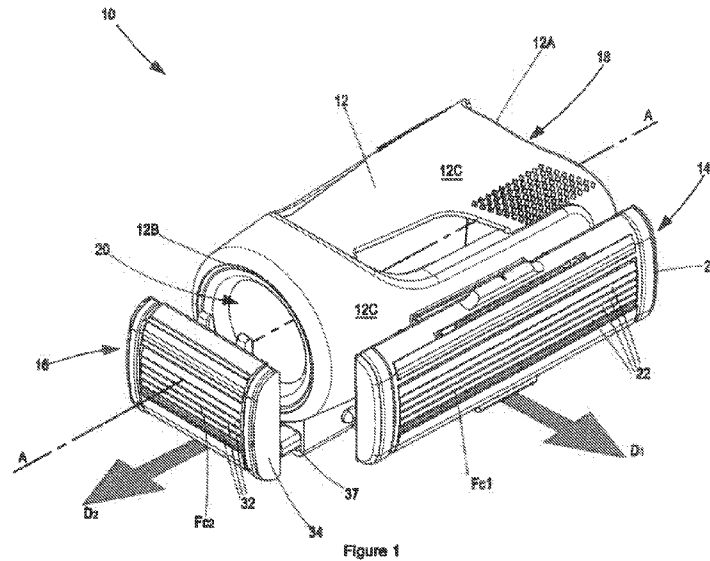


Figure 1

(57) Abstract: THIS invention relates to a shaving device. More specifically, the invention relates to a finger-mounted shaving device with first and second razors located thereon for general grooming and precision grooming respectively. The shaving device (10) comprises a finger mount (12), a first razor cartridge (14) and a second razor cartridge (16). The finger mount (12) defines a first end (12A), a second end (12B) and sides (12C) extending between the ends (12A), (12B). The first razor cartridge (14) comprises a plurality of razor blades (22) housed in a first housing (24) in a spaced and substantially parallel orientation relative to one another. The first razor cartridge (14) is connectable to the hollow finger mount body (12) along one of the sides (12C) thereof. The second razor cartridge (16) comprises a plurality of razor blades (32) housed in a second housing (34).



A SHAVING DEVICE

BACKGROUND OF THE INVENTION

5 THIS invention relates to a shaving device. More specifically, the invention relates to a finger-mounted shaving device having first and second razors located thereon for general grooming and precision grooming respectively.

Shaving devices in general are well known. Nowadays, one of the most popular
10 types of shaving devices is the safety razor comprising a multi-blade cartridge supported on the end of a handle.

Contrary to popular belief, this configuration may not be the most optimal, requiring a user to operably grasp the handle with a clenched fist and placing the user's hand
15 remotely from the area being shaved. It will be appreciated that this adversely affects the pressure, control and precision by which the user can groom himself/herself.

Attempts have been made to address the disadvantages of the safety razor described above. Published patent documents GB2265105, JPH09294878,
20 FR2636558, GB2465422 and US6112421 all generally teach of a finger engaging member having a razor mounted thereon, which acts to improve the pressure and control of shaving by bringing the user's fingers closer to the area being shaved.

Unfortunately, with the razors of these devices positioned in use either to the side or
25 underneath the finger(s), such devices work well for general grooming, i.e. shaving large areas quickly, but are not particularly suited to precision grooming, i.e. shaping moustaches, beards and sideburns.

Accordingly, it is an object of the present invention to provide a finger-mounted
30 shaving device that addresses the shortcomings of known finger-mounted shaving devices by combining on a first general razor and a second precision razor thereon, with the second precision razor extending in use from an end of the user's finger.

SUMMARY OF THE INVENTION

5 According to the invention there is provided a shaving device including:

a finger mount for mounting the shaving device on or between one or more fingers of a user;

10 a first razor cartridge holding at least one or more razor blades across a first contact face thereof, the first razor being connectable to the finger such that the first contact face of the first razor cartridge is directed in a first direction; and

15 a second razor cartridge holding at least one or more razor blades across a second contact face thereof, the second razor being connectable to the finger mount such that the second contact face of the second razor cartridge is directed in a second transverse direction relative to the first direction;

20 such that in use, with the shaving device mounted to the finger(s) of the user, the first direction is radially outwardly relative to the finger and the second direction is axially outwardly beyond the users finger tip(s).

Generally, the finger mount defines a first end, a second end and one or more sides
25 extending therebetween, such that in use the first end and the second ends are operably locatable nearer the base and the tips of the user's fingers respectively, wherein the first razor cartridge is connectable thereon along the one or more sides of the finger mount and the second razor cartridge is connectable thereon to extend beyond the second end of the finger mount.

30

Typically, the finger mount is a hollow finger mount body defining a central axis passing through the first and second ends thereof and having a first bore defined at the first end sized and shaped for receiving at least a portion of one of the user's fingers there through such that the hollow finger mount body is mountable on the

user's finger(s), and further wherein the second end of the hollow finger mount body is closed or defines a second bore through which at least a portion of the user's finger tip(s) is capable of protruding.

5 In a fully disposable embodiment of the invention, where the entire shaving device is disposable, the first razor cartridge may be integral with or fixedly connected to the hollow finger mount body, and lying adjacent the side of the hollow finger mount body with the first contact face thereof lying substantially parallel to the central axis.

10 In an alternative partially disposable embodiment of the invention, where only the razor cartridges are disposable, the first razor cartridge is releasably connectable to the hollow finger mount body such that the first razor cartridge is replaceable with other similar first razor cartridges, and further wherein the first contact face of the operably connected first razor cartridge lies substantially parallel to the central axis.

15 Generally, the first razor cartridge is rotatably connectable to the hollow finger mount body such that the first razor cartridge is rotatable on a plane being substantially parallel to the central axis.

20 Typically, the rotational orientation of the first razor cartridge relative to the hollow finger mount body is capable of being releasably fixed in one or more positions. It will be appreciated that the first razor cartridge may be releasably fixed against rotation relative to the hollow finger mount body by corresponding friction formations, locating formations or releasable locking formations.

25 Preferably, the first razor cartridge is rotatably connectable to the hollow finger mount body by a first connector, the first connector being rotatably connected to the hollow finger mount body on a first end thereof and having on a second end thereof a connecting formation correspondingly engageable with a connecting formation on the first razor cartridge such that the first razor cartridge is releasably connectable to
30 the first connector.

In the fully disposable embodiment of the invention, the second razor cartridge may be integral with or fixedly connected to the hollow finger mount body, and lying

beyond the second end of the hollow finger mount body with the second contact face thereof lying substantially perpendicularly to the central axis.

5 Alternatively, in the partially disposable embodiment of the invention, the second razor cartridge may be releasably connectable to the hollow finger mount body such that the second razor cartridge is replaceable with other similar second razor cartridges, and further wherein the second contact face of the operably connected second razor cartridge lies substantially perpendicularly to the central axis.

10 Generally, the second razor cartridge is connectable to the hollow finger mount body by a second connector, the second connector extending from a first end thereof axially outwardly from the second end of the hollow finger mount body and having on a second end thereof a connecting formation correspondingly engageable with a connecting formation on the second razor cartridge such that the second razor
15 cartridge is releasably connectable to the second connector.

Typically, the second end of the second connector is axially movable relative to the second end of the hollow finger mount body such that the axial position of the second razor cartridge is adjustable relative to the hollow finger mount body. It is
20 envisaged that the first end of the second connector may be movable along a connecting formation on the hollow finger mount body.

Preferably, the first end of the second connector is a male slide formation and the connecting formation on the hollow finger mount body is a female slide formation
25 sized and shaped for receiving the male slide formation of the second connector therein.

The axial position of the second connector relative to the hollow finger mount body may be capable of being releasably fixed by corresponding friction formations,
30 locating formations or releasable locking formations.

Generally, the first contact face of the first razor cartridge and the second contact face of the second razor cartridge respectively lie on planes that are substantially perpendicular to one another.

Typically, the first contact face of the first razor cartridge is wider in dimension than a width of the second contact face of the second razor cartridge.

- 5 Preferably, at least portions of the inside of the hollow finger mount body comprises a resiliently deformable material therein capable of resiliently moulding to any finger shape or size, thereby making the shaving device a universal, one-size-fits-all device.
- 10 The razor cartridges may each further comprise a trimming blade and a lubricating strip.

It will be appreciated that reference in this specification to the term "substantially parallel" or "substantially perpendicularly" will respectively be understood to include
15 parallel or perpendicular, or any variance of up to 10 degrees from parallel or perpendicular.

Furthermore, reference in this specification to the term "razor cartridge" will be understood to include a housing in which one or more razor blades are housed,
20 wherein where multiple razor blades are housed in the housing, the razor blades are spaced and substantially parallel to one another.

BRIEF DESCRIPTION OF THE DRAWINGS

25 The invention will now be described in more detail, by way of example only, with reference to the accompanying drawings in which:

Figure 1 is a perspective view of a shaving device in accordance with the present invention in a fully assembled form;

Figure 2 is an exploded perspective view of the shaving device of figure 1;

Figure 3 is a perspective view of the shaving device of figure 1 with a first razor cartridge thereof being rotated;

5

Figure 4 is a perspective view of the shaving device of figure 1 with the first razor cartridge in use and in contact with a shaving area; and

Figure 5 is a perspective view of the shaving device of figure 1 with a second razor cartridge thereof in use and in contact with a shaving area.

10

DETAILED DESCRIPTION OF THE DRAWINGS

A shaving device according to a preferred embodiment of the invention is designated generally with reference numeral 10 in the accompanying figures. The shaving device 10 comprises a finger mount 12, a first razor cartridge 14 and a second razor cartridge 16.

15

With reference to figure 1 and figure 2, the finger mount 12 defines a first end 12A, a second end 12B and sides 12C extending between the ends 12A, 12B.

20

The first end 12A of the finger mount 12 defines a first bore 18 sized and shaped for receiving a user's finger 100 therein, as depicted in figure 4, such that in use the first end 12A and the second end 12B are operably locatable nearer the base or knuckles 100A and the tip 100B of the user's finger 100 respectively.

25

Although not necessary, it is preferable that the second end 12B of the finger mount 12 also defines a bore 20 therein for enabling the user's finger tip 100B to pass there through to lie in close proximity with the second razor cartridge 16.

30

It will be appreciated then that the finger mount 12 is a hollow finger mount body enabling the user's finger 100 to pass axially there through substantially along a central axis A-A passing centrally through the hollow finger mount body 12 and through the respective first and second ends 12A, 12B thereof.

The first razor cartridge 14 comprises a plurality of razor blades 22 housed in a first housing 24 in a spaced and substantially parallel orientation relative to one another such that cutting edges of each of the razor blades 22 lie over a first contact face "Fc1".

The first razor cartridge 14 is connectable to the hollow finger mount body 12, and specifically along one of the sides 12C thereof, such that the first razor cartridge 14 lies adjacent the hollow finger mount body 12 with the first contact face Fc1 thereof orientated substantially parallel with the central axis A-A.

In this orientation, it will be appreciated that the first contact face Fc1 of the first razor cartridge 14 is facing in a first direction "D1", which direction is radially outwardly with respect to the central axis A-A and/or a finger 100 operably received in the hollow finger mount body 12.

In the preferred illustrated embodiment of the invention, the first razor cartridge 14 is connectable to the hollow finger mount body 12 by a first connector 26. The first connector 26 comprises a first end 26A and a second end 26B.

The first end 26A of the first connector 26 is rotatably connected to the hollow finger mount body 12, with the second end 26B thereof comprising a connecting formation 28 being correspondingly engageable with a connecting formation 30 on the first razor cartridge 14, such that a worn out first razor cartridge 14 is replaceable with a similar new first razor cartridges 14.

It will be appreciated that the rotatable connection of the first connector 26 on the hollow finger mount body 12 provides a user with the ability to rotate the first razor cartridge 14 connected thereto relative to the hollow finger mount body 12 on a plane substantially parallel to the central axis A-A, as depicted in figure 3. This enables a user 200 to rotatably orientate the first razor cartridge 14 as required to shave with or against the grain of the area being shaved.

Furthermore, the rotational orientation of the first razor cartridge 14 relative to the

hollow finger mount body 12 may be releasably fixed in one or more positions via corresponding formations co-operating between the first connector 26 and the hollow finger mount body 12, which formations may be friction formations, locating formations or releasable locking formations.

5

The second razor cartridge 16 comprises a plurality of razor blades 32 housed in a second housing 34 in a spaced and substantially parallel orientation relative to one another such that cutting edges of each of the razor blades 32 lie over a second contact face "Fc2".

10

The second razor cartridge 16 is connectable to the hollow finger mount body 12, and specifically to the second end 12B thereof, such that the second razor cartridge 16 extends axially beyond the second end 12B of the hollow finger mount body 12 with the second contact face Fc2 thereof orientated substantially perpendicularly with the central axis A-A.

15

In this orientation, it will be appreciated that the second contact face Fc2 of the second razor cartridge 16 is facing in a second direction "D2", which direction is axially outwardly from the second end 12B of the hollow finger mount body 12 and/or a finger 100 operably received therein and transverse, more specifically substantially perpendicular, with the first direction D1.

20

In the preferred illustrated embodiment of the invention, the second razor cartridge 16 is connectable to the hollow finger mount body 12 by a second connector 36. The second connector 36 comprises a first end 36A and a second end 36B.

25

The second end 36A of the second connector 36 is a male slide formation slidably engageable with a female slide formation 37 defined on the hollow finger mount body 12, such that the second end 36A of the second connector 36 is axially movable relative to the second end 12B of the hollow finger mount body 12.

30

Furthermore, the second end 36B of the second connector 36 comprises a connecting formation 38 being correspondingly engageable with a connecting formation 40 on the second razor cartridge 16, such that a worn out second razor

cartridge 16 is replaceable with a similar new second razor cartridges 16.

It will be appreciated that the corresponding connecting formations 28, 30; 38, 40 are preferably the same and similar to those used on already commercially available
5 razor cartridges.

Furthermore, the axial position of the second razor cartridge 16 relative to the hollow finger mount body 12 may be releasably fixed in one or more positions via corresponding formations co-operating between the second connector 36 and the
10 hollow finger mount body 12, which formations may be friction formations, locating formations or releasable locking formations.

It is envisaged that the first razor cartridge 14 will have a width "W1" greater than the width "W2" of the second razor cartridge 16, such that the first razor cartridge 14 is a
15 general grooming razor to shave large shaving areas quickly as depicted in figure 4, and the second razor cartridge 16 is a precision grooming razor to precision shave areas around the user's moustache, beard and side burns.

It will be appreciated that the pointed orientation of the user's finger 100 and the
20 close proximity of the user's fingertip 100B with the second razor cartridge 16 provides the user with somewhat of an optimum "touch feel" accuracy that existing shaving devices do not.

Preferably, at least portions of the inside of the hollow finger mount body 12
25 comprises a resiliently deformable material therein capable of resiliently moulding to any finger shape or size, thereby making the shaving device 10 a universal, one-size-fits-all device.

Although the invention has been described above with reference to preferred
30 embodiments, it will be appreciated that many modifications or variations of the invention are possible without departing from the spirit or scope of the invention.

For example, the first and second razors may be fixed to the hollow finger mount body 12 in a fully disposable version of the shaving device 10.

CLAIMS

1. A shaving device comprising:

5 a finger mount for mounting the shaving device on or between one or more fingers of a user;

a first razor cartridge holding at least one or more razor blades across a first contact face thereof, the first razor being connectable to the finger such that
10 the first contact face of the first razor cartridge is directed in a first direction;
and

a second razor cartridge holding at least one or more razor blades across a second contact face thereof, the second razor being connectable to the finger mount such that the second contact face of the second razor cartridge is
15 directed in a second transverse direction relative to the first direction;

wherein the shaving device mounted to one or more fingers of the user, such that the first direction is radially outwardly relative to the finger and the second
20 direction is axially outwardly beyond the users finger tips.

2. A shaving device according to claim 1, wherein the finger mount is a hollow body sized and shaped for receiving the user's finger therein such that in use the first end and the second end are operably locatable nearer the base or
25 knuckles, and the tip of the user's finger.

3. A shaving device according to claim 2, wherein the finger mount is a hollow finger mount body enabling the user's finger to pass axially there through substantially along a central axis passing centrally through the hollow finger mount body and through the respective first and second ends.

30 4. A shaving device according to claim 3, wherein first razor cartridge is connectable to the hollow finger mount body, and along one of the sides thereof, such that the first razor cartridge lies adjacent the hollow finger mount body with the first contact face thereof orientated substantially parallel with the central axis.

5. A shaving device according to claim 4, wherein the first razor cartridge comprises a plurality of razor blades housed in a first housing in a spaced and substantially parallel orientation relative to one another such that cutting edges of each of the razor blades lie over a first contact face.
- 5 6. A shaving device according to claim 5, wherein the first end of a first connector is rotatably connected to the hollow finger mount body, with the second end thereof comprising a connecting formation being correspondingly engageable with a connecting formation on the first razor cartridge.
7. A shaving device according to claim 6, where the first connector is rotatably
10 connected to the hollow finger mount body provides a user with the ability to rotate the first razor cartridge connected thereto relative to the hollow finger mount body on a plane substantially parallel to the central axis.
8. A shaving device according to claim 7, wherein the rotational orientation of the first razor cartridge relative to the hollow finger mount body is fixed releasably
15 in one or more positions via corresponding formations co-operating between the first connector and the hollow finger mount body.
9. A shaving device according to claim 8, which formations are friction formations, locating formations or releasable locking formations.
10. A shaving device according to claim 9, wherein the fixed rotational orientation
20 of the first razor cartridge relative to the hollow finger mount body deviate from its parallel orientation relative to the finger mount body.
11. A shaving device according to claim 10, wherein the second razor cartridge is connectable to the hollow finger mount body, and specifically to the second end thereof, such that the second razor cartridge extends axially beyond the
25 second end of the hollow finger mount body with the second contact face thereof orientated substantially perpendicularly with the central axis.
12. A shaving device according to claim 11, wherein the second razor cartridge comprises a plurality of razor blades housed in a second housing in a spaced and substantially parallel orientation relative to one another such that cutting
30 edges of each of the razor blades lie over the second contact face.
13. A shaving device according to claim 21, wherein the second razor cartridge is connected to the body by means of a second connector, which is a male slide formation slidably engageable with a female slide formation defined on the hollow finger mount body.

14.A shaving device according to claim 13, wherein the second end of the second connector comprises a connecting formation being correspondingly engageable with a connecting formation on the second razor cartridge.

5 15.A shaving device according to claim 14, wherein the fixed rotational orientation of the second razor cartridge relative to the hollow finger mount body deviate or flex from its orientation relative to the finger mount body through means of the connector.

16.A shaving device according to claim 15, wherein the width of the first razor cartridge is greater than the width of the second razor cartridge.

10 17.A shaving device according to claim 16, wherein at least portions of the inside of the hollow finger mount body comprises a resiliently deformable material therein capable of resiliently moulding to any finger shape or size.

18.A shaving device according to claim 1, wherein the second cartridge razor is affixed with a trimming blade situated above the razor blades.

15 19.A shaving device according to claim 1, wherein the finger mount comprises perforations allowing water or shaving cream drainage during the shaving or cleaning process.

20

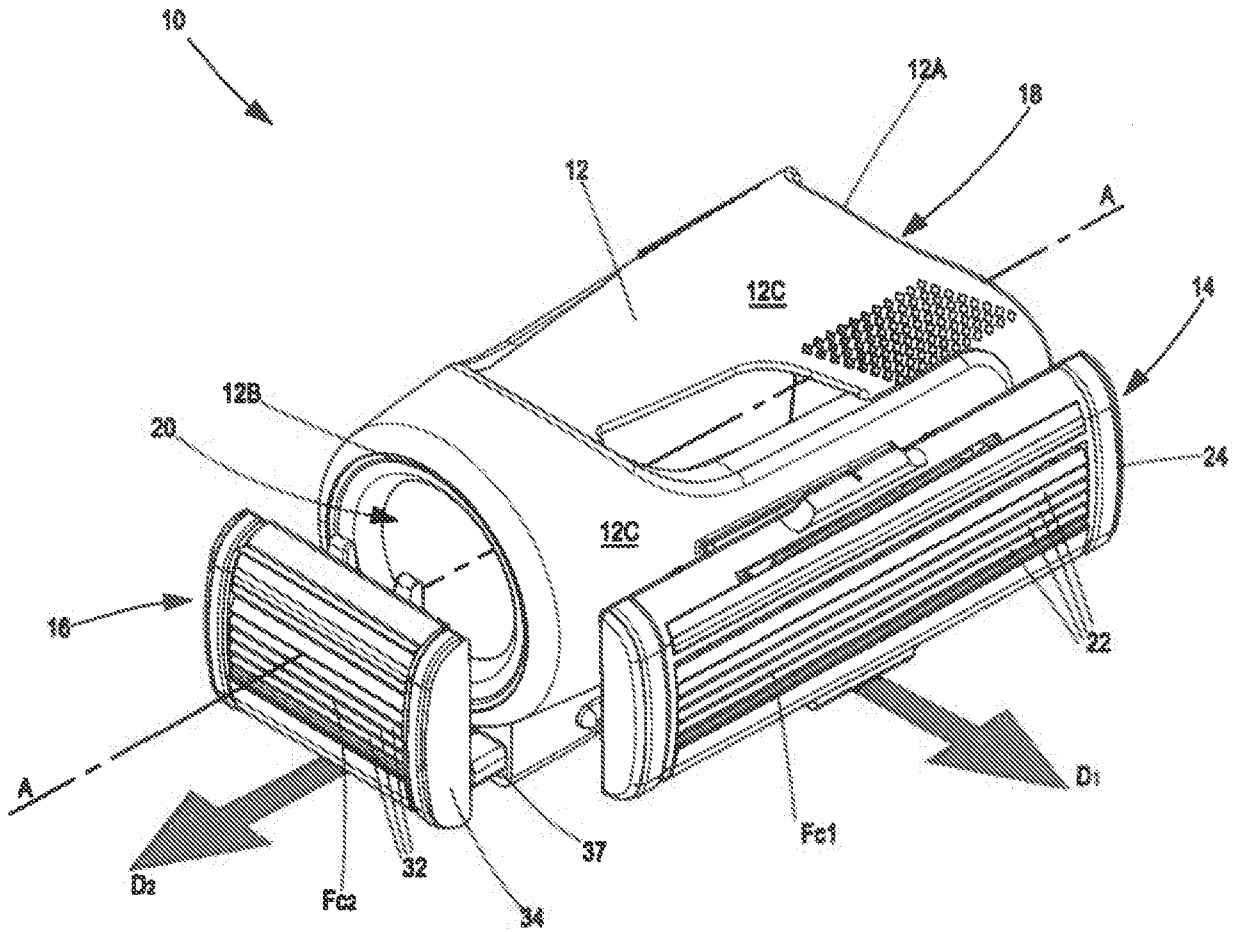


Figure 1

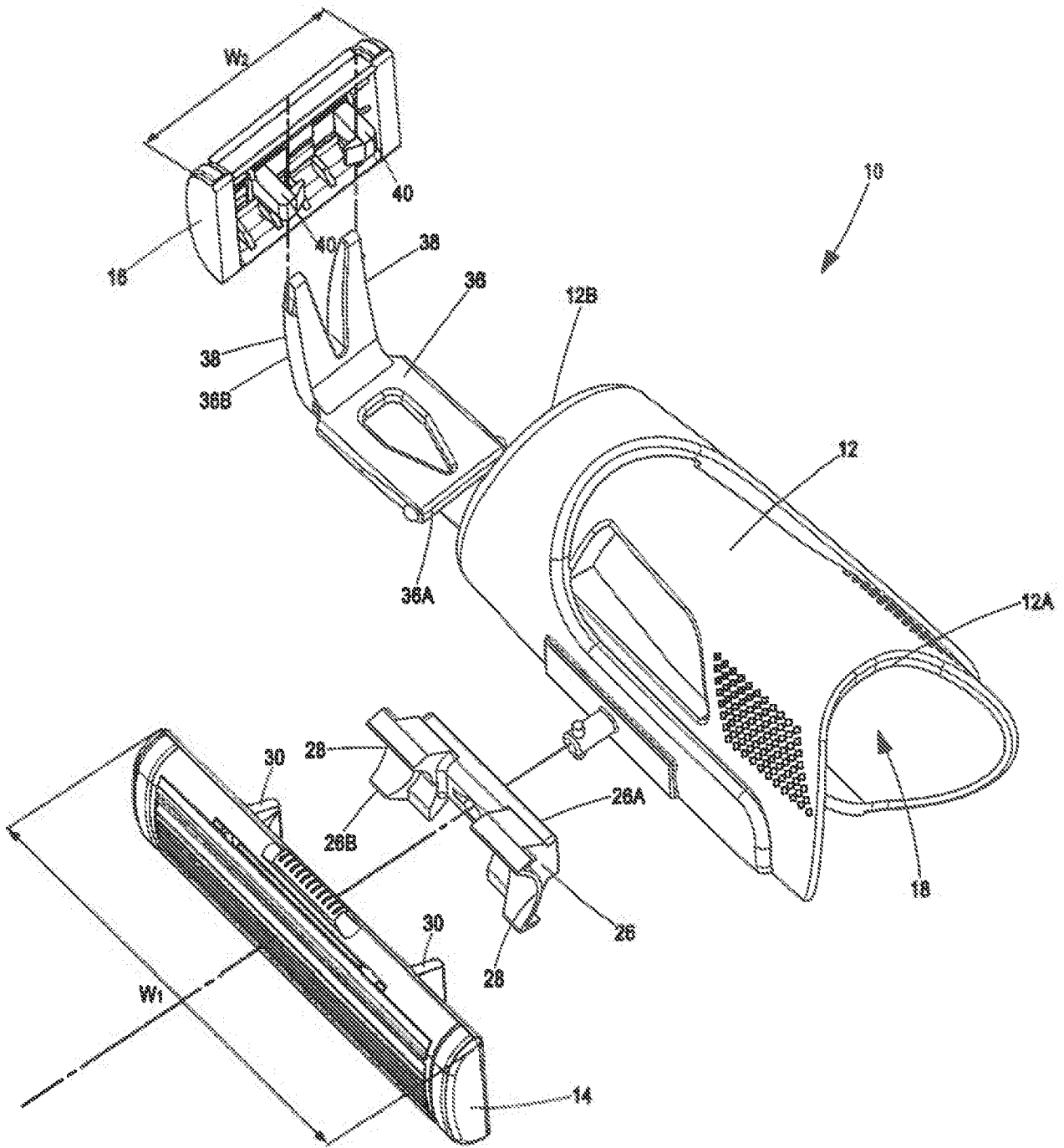


Figure 2

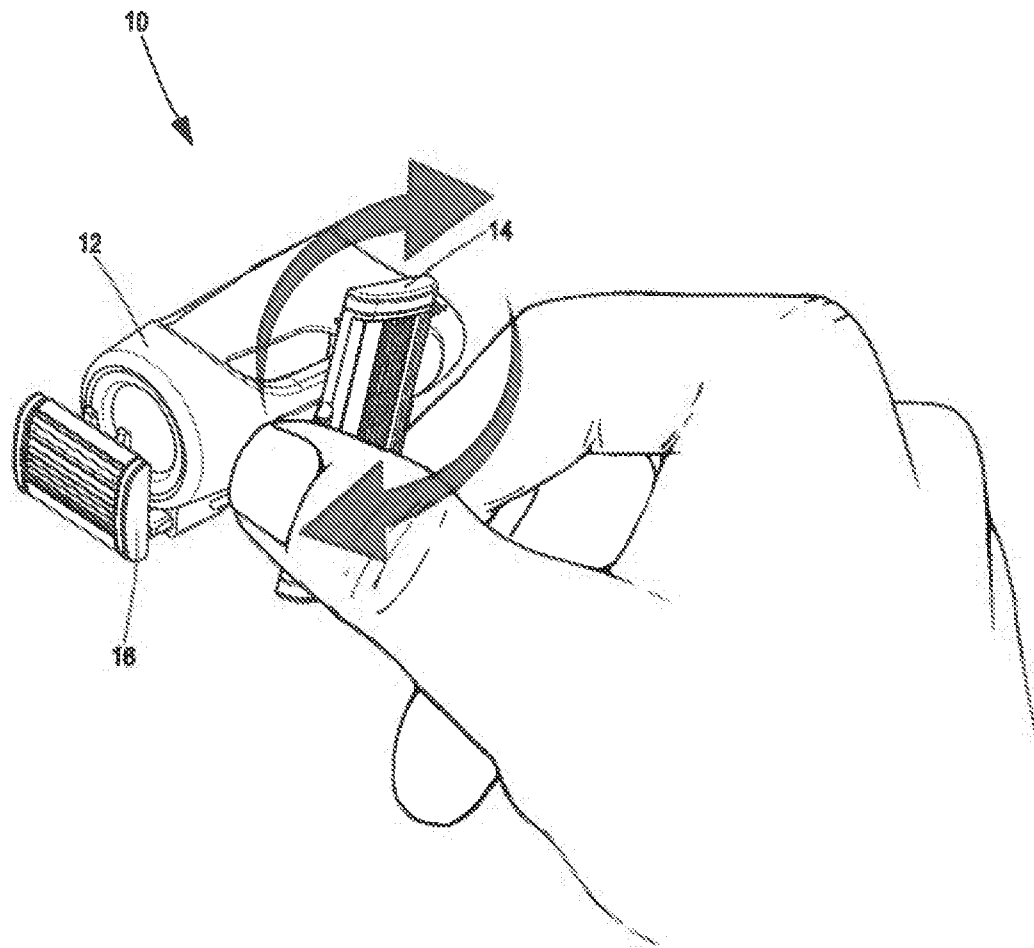


Figure 3

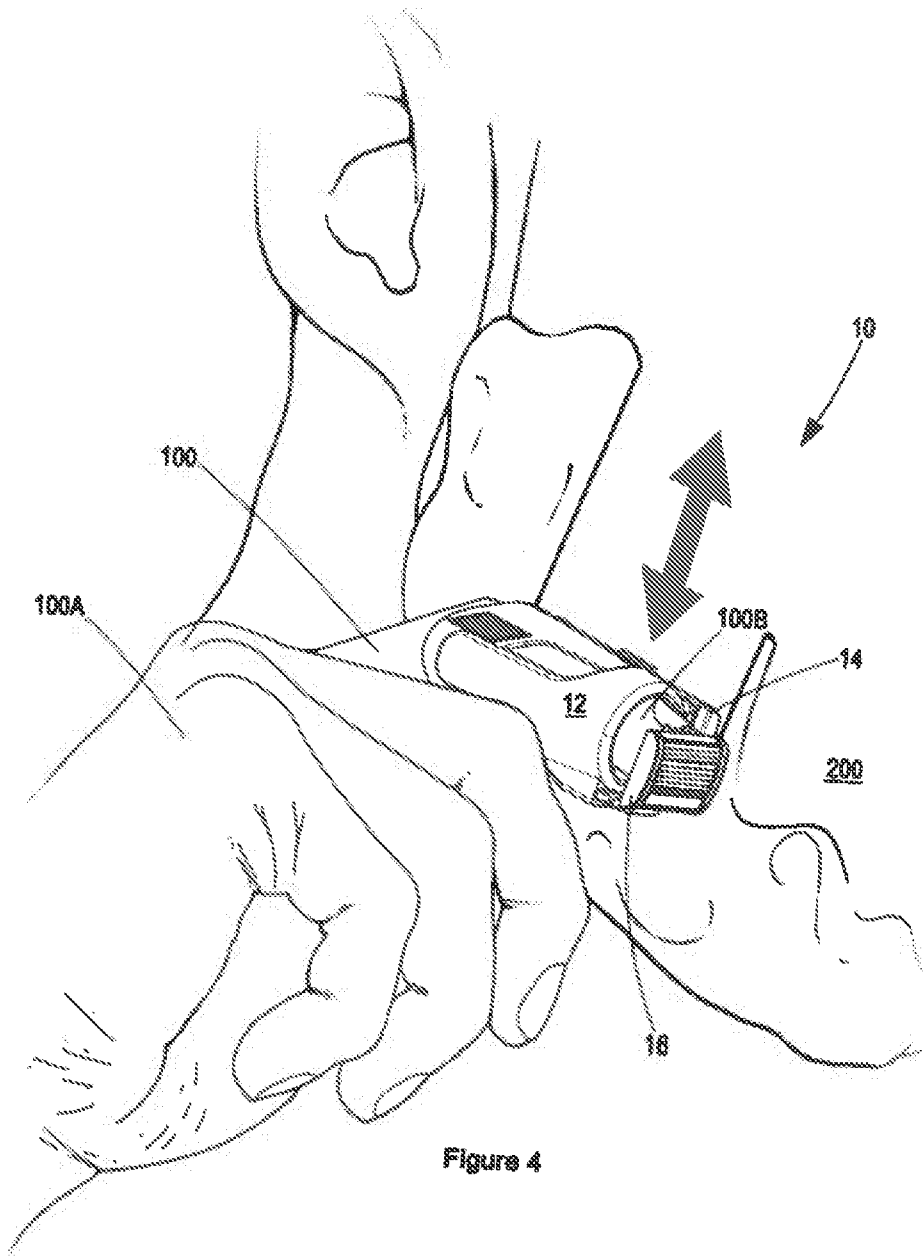


Figure 4

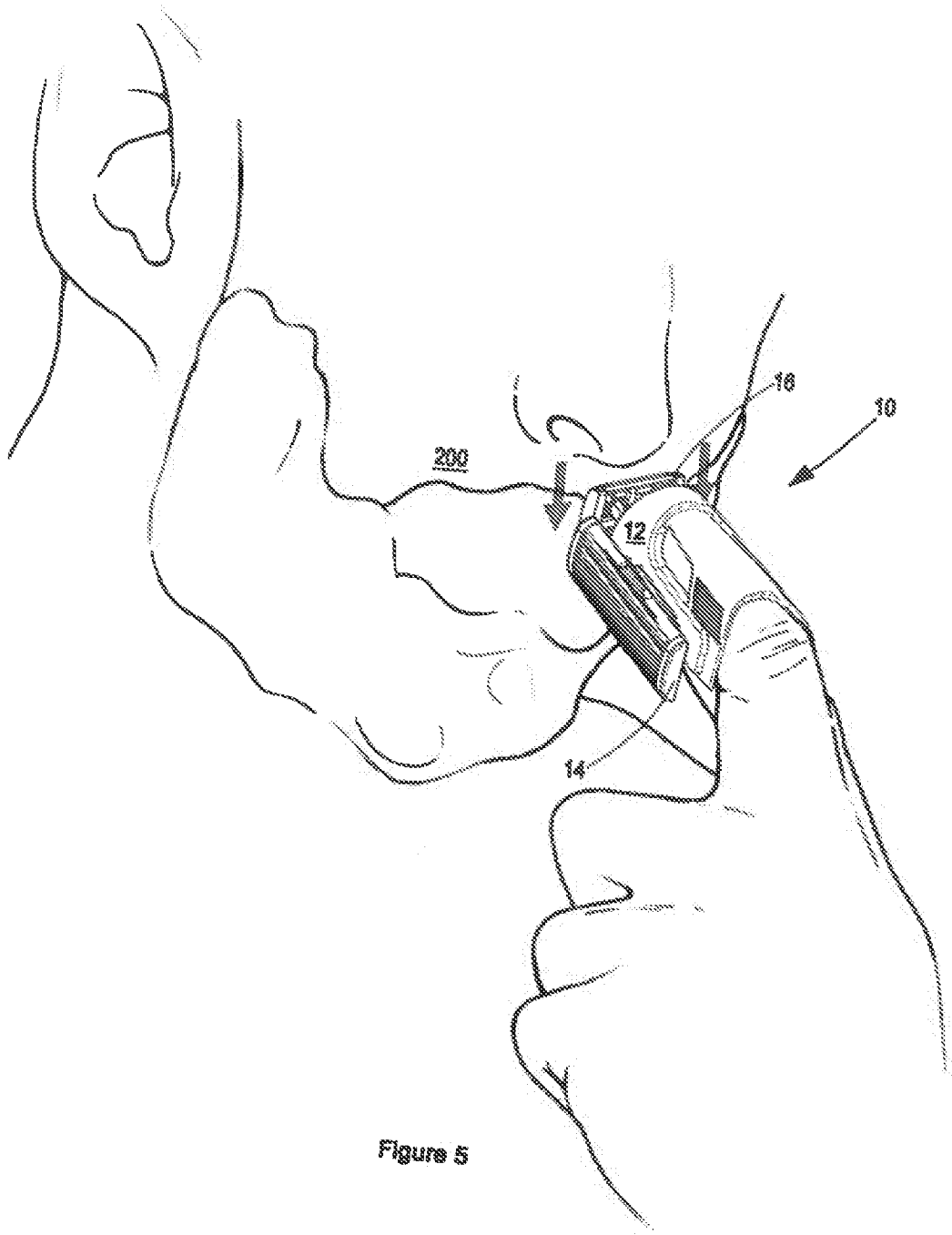


Figure 5

INTERNATIONAL SEARCH REPORT

International application No.

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<p>A. CLASSIFICATION OF SUBJECT MATTER IPC: <i>B26B 21/52</i> (2006.01) According to International Patent Classification (IPC) or to both national classification and IPC</p>		
<p>B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) B26B 21/52, 21/22, 21/08, 21/10, 21/14, 21/24, 21/40, 21/00 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p>		
<p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) epodoc</p>		
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2002050065 A1 (KLUDJIAN DAVID, CORESH ALON LEON) 02 May 2002 (02.05.2002) Fig. 4 - 6; 10 - 13; [0033] - [0035], [0040] - [0045]	1 - 5
Y	CN 202540341 U (ZHU LINKUN) 21 November 2012 (21.11.2012) Fig. , abstract	1 - 5
A	AU 2012223119 A1 (EVEREADY BATTERY COMPANY, INC. EDGEWELL PERSONAL CARE BRANDS, LLC) 04 October 2012 (04.10.2012) Fig. 3 - 6; [0029] - [0036]	1, 18
<input type="checkbox"/> Further documents are listed in the continuation of Box C.		<input checked="" type="checkbox"/> See patent family annex.
<p>* Special categories of cited documents:</p> <p>“A” document defining the general state of the art which is not considered to be of particular relevance</p> <p>“E” earlier application or patent but published on or after the international filing date</p> <p>“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>“O” document referring to an oral disclosure, use, exhibition or other means</p> <p>“P” document published prior to the international filing date but later than the priority date claimed</p> <p>“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>“&” document member of the same patent family</p>		
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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

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CN	U	202540341	CN	U	202540341	2012-11-21
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			AU	A1	2012222836	2012-10-04