

(12) STANDARD PATENT
(19) AUSTRALIAN PATENT OFFICE

(11) Application No. **AU 2004321547 B2**

(54) Title
Articulated razor having two shaving heads

(51) International Patent Classification(s)
B26B 21/00 (2006.01) **B26B 21/52** (2006.01)
B26B 21/22 (2006.01)

(21) Application No: **2004321547** (22) Date of Filing: **2004.07.22**

(87) WIPO No: **WO06/007874**

(43) Publication Date: **2006.01.26**

(44) Accepted Journal Date: **2011.03.31**

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(56) Related Art
JP 08 257263
US 4498236
US 5206994

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 January 2006 (26.01.2006)

PCT

(10) International Publication Number
WO 2006/007874 A1

(51) International Patent Classification⁷: **B26B 21/00**,
21/22, 21/52

(21) International Application Number:
PCT/EP2004/009164

(22) International Filing Date: 22 July 2004 (22.07.2004)

(25) Filing Language: English

(26) Publication Language: English

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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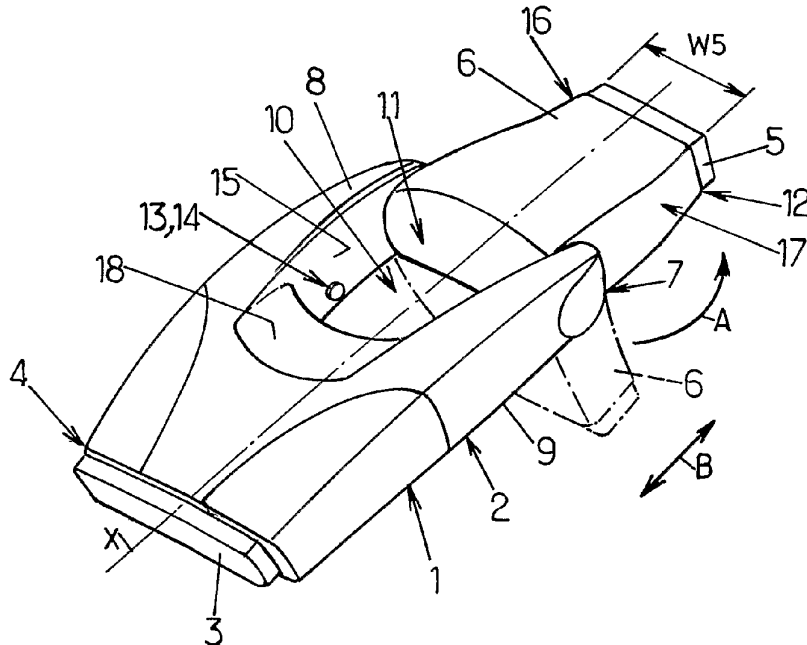
— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

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(54) Title: ARTICULATED RAZOR HAVING TWO SHAVING HEADS



(57) Abstract: Razor (1) comprising a handle (2) having an axis (X), a first shaving head (3) having one or more blades, mounted at a front end (4) of the handle (2), and a second shaving head (5) mounted on a support (6) which is mounted at a back end (7) of the handle (2) and is pivotable with respect of the same, between: - an open position in which said support (6) projects outward from the back end (7) of the handle (2) to allow shaving with said second shaving head (5), and - a closed position in which said support (6) is retracted within said handle (2).

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Articulated Razor having two shaving headsField of the invention

The invention relates to safety razors and, more
5 specifically, to razors provided with two shaving heads.

Background of the invention

Several attempts have been made to propose a razor
including at least two shaving heads having different sizes to
10 allow shaving of different hair areas of the body.

US patent No. 4,461,078 granted to Carreker discloses a
razor assembly including first and second handle portions, with
first and second razor heads mounted at the ends of the handle
portions . The handle portions are pivotally mounted together so
15 that the heads may be moved from a position wherein the handle
portions are substantially in a straight line with the heads
widely spaced, to a position wherein the handle portions make a
small acute angle with the heads close to each other.

One disadvantage of such a razor is that its handle is
20 near twice as long as a standard razor handle, which makes it
difficult to grip comfortably the razor.

US patent No. 4,285,124 granted to Diakonov discloses a
safety razor comprising a normal sized razor head and a
retractable miniature razor head which is movable from a first
25 position where it is retracted behind the normal sized head to a
second position where it is deployed above the normal sized head
for use in trimming the area beneath the center of the user's
nose.

One disadvantage of such a razor is that its structure is
30 quite complicated. That makes the razor difficult to manufacture
and, hence, quite expensive.

Summary of the invention

In broad terms the invention provides a razor having two shaving heads, with improved ergonomics.

- 5 More specifically one aspect of the invention provides a razor comprising: a handle having a longitudinal axis, a first shaving head having one or more blades, mounted at a front end of the handle, and a second shaving head having one or more blades mounted on a support which is mounted at a back end of the handle and is pivotable with respect to the handle, between:
- 10 • an open position in which said support projects outward from the back end of the handle to allow shaving with said second shaving head, and
- a closed position in which said support is retracted within said handle;
- 15 the handle comprising two parallel arms which together define a housing for receiving the support in its closed position,
- the support being pivotally mounted between respective ends of said arms;
- 20 latching means for holding said support in its closed position, said latching means comprising an indent protruding from an internal face of each arm, and biasing a lateral face of said support; and
- a stop wall extending between the at least two parallel
- 25 arms, and against which the support abuts in the closed position,
- wherein the stop wall and the arms delimit a through aperture provided on the housing to allow the support retracted in the recess to be pushed open through the through aperture in
- 30 order to pivot the second shaving head to the open position, and
- wherein each of the one or more blades of the first shaving head has an edge lying perpendicular to the longitudinal axis, and the one or more blades of the second shaver head are perpendicular to the longitudinal axis when the second shaver head is in the open or closed position.
- 35

In an embodiment of the invention the shaving heads may have different sizes. For instance, the first shaving head is of standard width, which makes it usable for common purposes (e.g. for shaving cheek hair) , while the second one has a small width
5 which makes it usable for particular purposes (e.g. for beard or mustache trimming).

In an embodiment of the invention the first head has a standard width, while the second head has a smaller width.

In an embodiment of the invention the support has a
10 rotation axis substantially perpendicular to the longitudinal axis.

In another embodiment of the invention each razor head may consist in a removable cartridge which is to be replaced as soon as the blades are dulled.

15 An embodiment of the invention will be explained by way of example only with reference to the accompanying drawings.

Brief description of the drawings

Figure 1 is a perspective view of a razor according to an
20 embodiment of the invention having a broad shaving head and a narrow shaving head, shown in a closed position wherein the narrow head is retracted in the handle.

Figure 2 is a perspective view of the razor of figure 1,
shown in an open position wherein the narrow shaving head is
25 deployed.

Figure 3-5 are, respectively, a top plan view, a side view and a bottom view of the razor of figure 1, shown in its closed position.

A razor according to an embodiment of the invention is
30 indicated generally by reference number 1 in the drawings. Razor 1 comprises a handle 2 which has a substantially planar

and parallelepipedic shape and extends along a longitudinal axis X. Razor 1 comprises a first shaving head 3 comprising one or more blades, which is mounted at a front end 4 of the handle 2 so that the edges of the blades are substantially perpendicular to the handle axis X.

Razor 1 also comprises a second shaving head 5 comprising one or more blades substantially perpendicular to the handle axis X. In other words, first head 3 and second head 5 are parallel.

The heads 3, 5 have different sizes, the first one 3 having a standard width W_3 while the second one 5 has a width W_5 which is less than W_3 .

First head 3, thereafter called standard head 3, is used in normal shaving (beard, legs), while second head 5,

thereafter called narrow head 5, is dimensioned for easy maneuverability to facilitate accurate trimming of particular hair areas, e.g. moustaches or pubic hairs.

As illustrated on figure 2, narrow head 5 is mounted
5 on a support 6 which is mounted on the handle at the back end 7 thereof and is capable of rotating with respect to the handle 2 about an axis Y perpendicular to the handle axis X, between:

10 - an open position in which the support 6 projects outward from the back end 7 of the handle 2 (figure 2), and

- a closed position in which the support is retracted and lodged within the handle 2 (figures 1).

15 In the open position, the narrow head 5 is available for shaving, whereas in the closed position, it is out of reach and, hence, not available for shaving.

In the vicinity of the back end 7, the handle 2 has two parallel arms 8, 9 extending in the direction of the axis X and defining together a housing 10 capable of
20 receiving the support 6 which has such a shape that, in closed position, it is lodged within the housing 10 in a complementary manner (figure 1, 5).

As illustrated on figures 2 and 5, the rotating support 6 has a broad end 11, by which it is pivotally
25 mounted on the handle 2 (e.g. by means of spindles), and a narrow end 12 onto which the narrow head 5 is attached.

Razor 1 also comprises latching means 13 to hold the support 11 in his retracted position. Latching means 13
30 comprise an indent 14 which protrudes from an internal face 15 of each arm 8, 9, and which biases a corresponding lateral face 16, 17 of the support 6, so that the support 6 can be clipped closed by the user from the open position.

Handle 2 is provided, on a top side thereof, with a
35 stop wall 18, extending between the arms 8, 9, which

partly closes the housing 10 and against which the support 6 abuts in the closed position.

Accordingly, the stop wall 18 and the indents 14 hold together the support 6 in its closed position.

5 The user is thereby allowed to selectively utilize the standard head 3 or the narrow one 8, whichever is the most convenient to him/her.

During use of the standard head 3, the narrow head 5 is hidden within the handle 2, so that the razor is compact and ergonomic. Moreover, there is no risk for the user to cut his/her fingers with the narrow head 5 or to damage the blades.

10 In order to utilize the narrow head 5, the user simply pushes the support 6 open (in the direction of arrow A on figure 2).

During use of the narrow head 5, standard head 3 may be covered with a protective cap (not shown), in order to prevent any finger cutting or blade damaging, or retracted within the handle 2. Accordingly, while narrow head 5 is in use position, standard head 3 is protected within the razor handle 2.

20 The support 6 may be maintained by the user, while shaving with the narrow head 5, in any position intermediate between the closed position illustrated on figure 1 and the wide open position shown on figure 2 in dark lines, depending on the way the user wishes to hold the razor 1 while shaving with the narrow head 5.

For instance, the support 6 may be held by the user in a position, shown in dashed lines on figure 2, wherein it forms a right angle with the handle 2, allowing the user to grasp the handle 2 and/or the support 6 in such a manner that shaving with the narrow head 5 is achieved by movements along a direction parallel to the handle axis X, as shown by arrow B on figure 2.

35 In addition, razor 1 may be either entirely disposable

or have a reusable handle 2.

In the first case, the heads 3, 5 are permanently attached to the handle 2, so that as soon as the edges are dulled the entire razor 1 is disposed of.

5 In the second case, each head 3, 5 consists of a replaceable cartridge which is removably attached to the support 6 so that after the edges are dulled only the cartridges are disposed of and replaced by new ones. One skilled in the art may be inspired by existing disposing mechanism (see e.g. US patent
10 No. US-4, 492, 024).

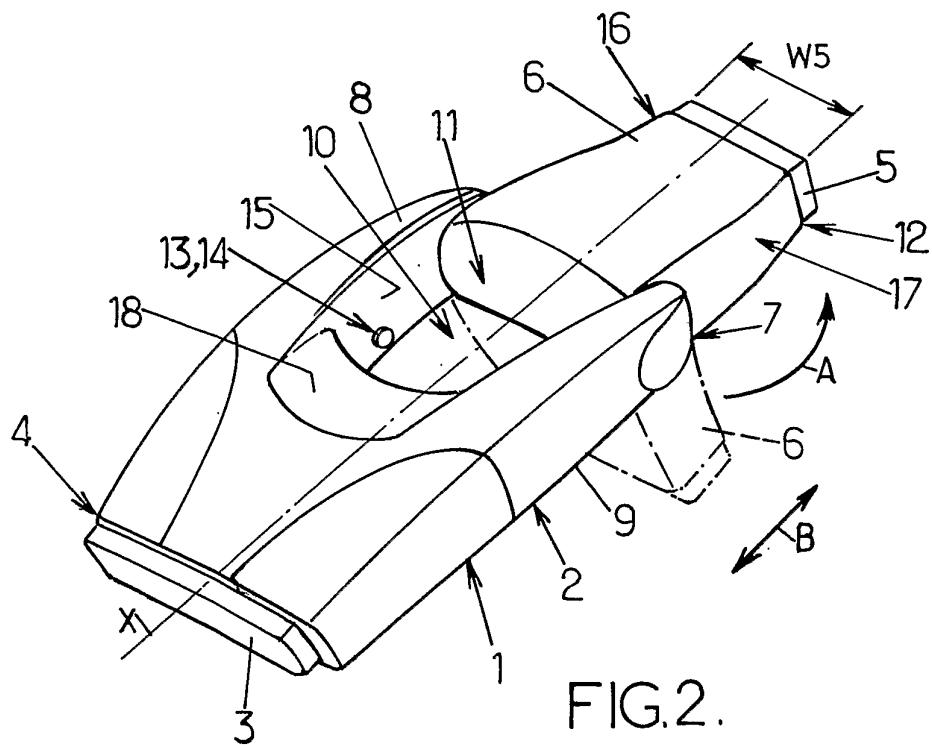
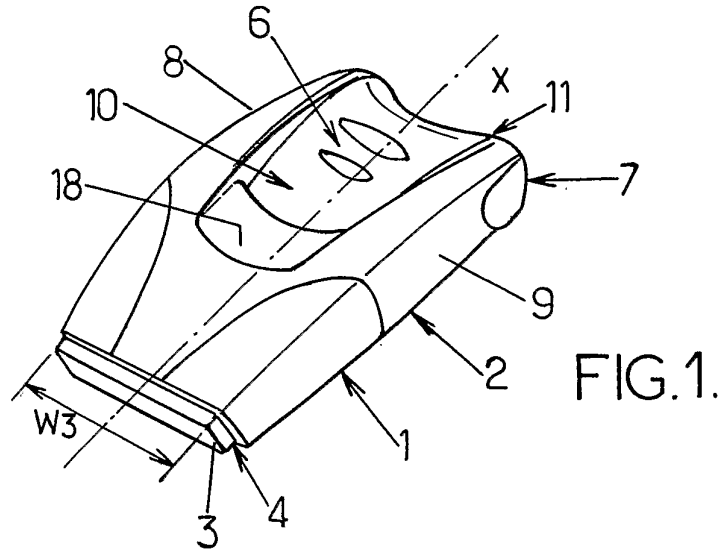
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15 country.

In the claims which follow and in the preceding description of the invention, except where the context requires otherwise due to express language or necessary implication, the word "comprise" or variations such as "comprises" or
20 "comprising" is used in an inclusive sense, i.e. to specify the presence of the stated features but not to preclude the presence or addition of further features in various embodiments of the invention.

The claims defining the invention are as follows:

1. A razor comprising: a handle having a longitudinal axis, a first shaving head having one or more blades, mounted at a front end of the handle, and a second shaving head having one or more blades mounted on a support which is mounted at a back end of the handle and is pivotable with respect to the handle, between:
- an open position in which said support projects outward from the back end of the handle to allow shaving with said second shaving head, and
 - a closed position in which said support is retracted within said handle;
- the handle comprising two parallel arms which together define a housing for receiving the support in its closed position,
- the support being pivotally mounted between respective ends of said arms;
- latching means for holding said support in its closed position, said latching means comprising an indent protruding from an internal face of each arm, and biasing a lateral face of said support; and
- a stop wall extending between the at least two parallel arms, and against which the support abuts in the closed position,
- wherein the stop wall and the arms delimit a through aperture provided on the housing to allow the support retracted in the recess to be pushed open through the through aperture in order to pivot the second shaving head to the open position, and
- wherein each of the one or more blades of the first shaving head has an edge lying perpendicular to the longitudinal axis, and the one or more blades of the second shaver head are perpendicular to the longitudinal axis when the second shaver head is in the open or closed position.
2. A razor according to claim 1, wherein the first and second shaving heads are of different size to each other.

3. A razor according to claim 2, wherein the first head has a standard width, while the second head has a smaller width.
- 5 4. A razor according to any of the preceding claims, wherein said support has a rotation axis substantially perpendicular to the longitudinal axis.
- 10 5. A razor according to any one of the preceding claims, wherein each shaving head consists of a removable cartridge.
6. A razor substantially as herein described with reference to the accompanying drawings.



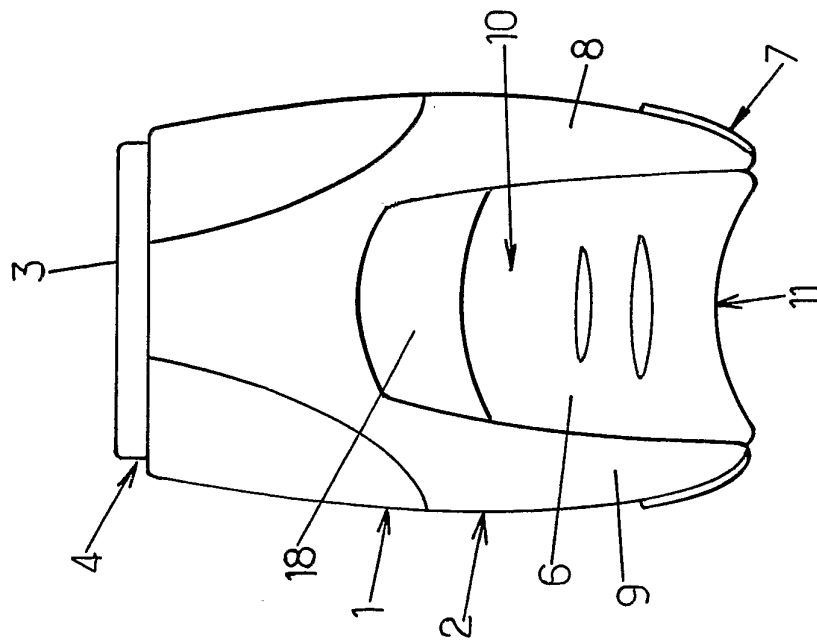


FIG. 3.

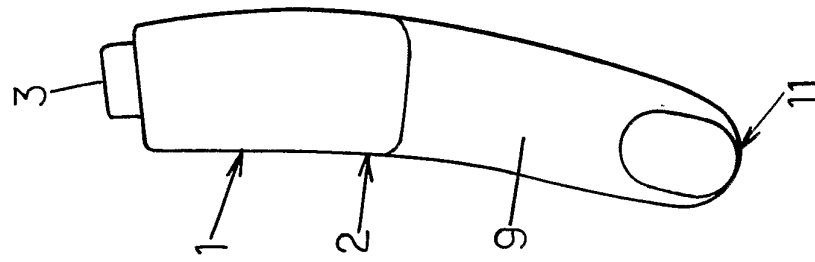


FIG. 4.

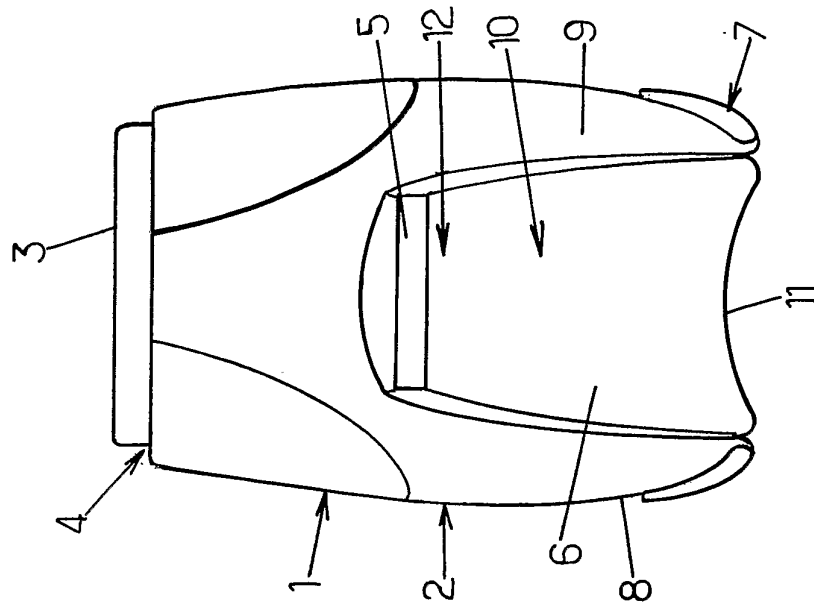


FIG. 5.