

(12) **UK Patent Application** (19) **GB** (11) **2 412 861** (13) **A**

(43) Date of A Publication **12.10.2005**

(21) Application No: **0407988.5**

(22) Date of Filing: **08.04.2004**

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(51) INT CL⁷:
A45D 26/00

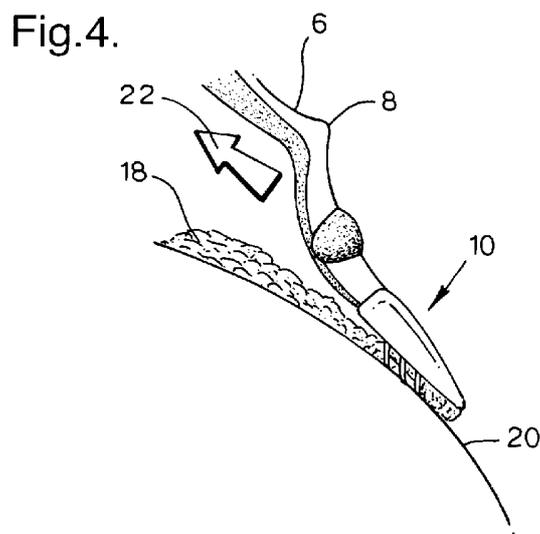
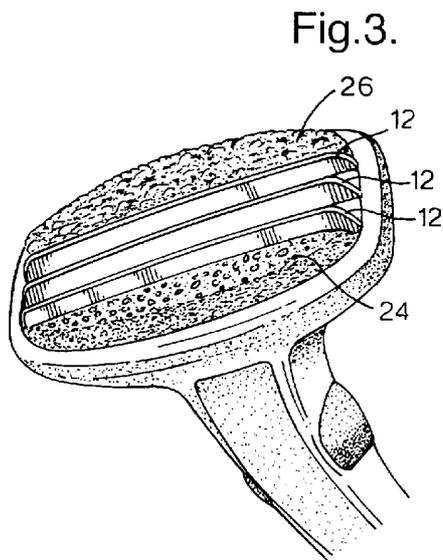
(52) UK CL (Edition X):
A4V V16 V29C

(56) Documents Cited:
GB 2384704 A **GB 2364502 A**
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WO 1996/002369 A1 **US 6675479 A**
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(58) Field of Search:
UK CL (Edition W) **A4V, B4B**
INT CL⁷ **A45D, B26B**
Other:

(54) Abstract Title: **Depilatory scraper including a source of non-depilatory material**

(57) A device is provided to remove a depilatory composition and depilated hair 18 from the skin 20 . The device comprises a handle (4, fig 1) and a head 10. The device 2 is moved in the direction of arrow 22 over the skin 20, and has fins 12 on the head which remove the depilatory composition and depilated hair. During this movement non-depilatory compositions, for example a moisturiser and/or a fragrance, are applied to the skin from an impregnated sponge or fabric part 24 leading the fins or from an impregnated sponge or fabric part 26 trailing the fins.



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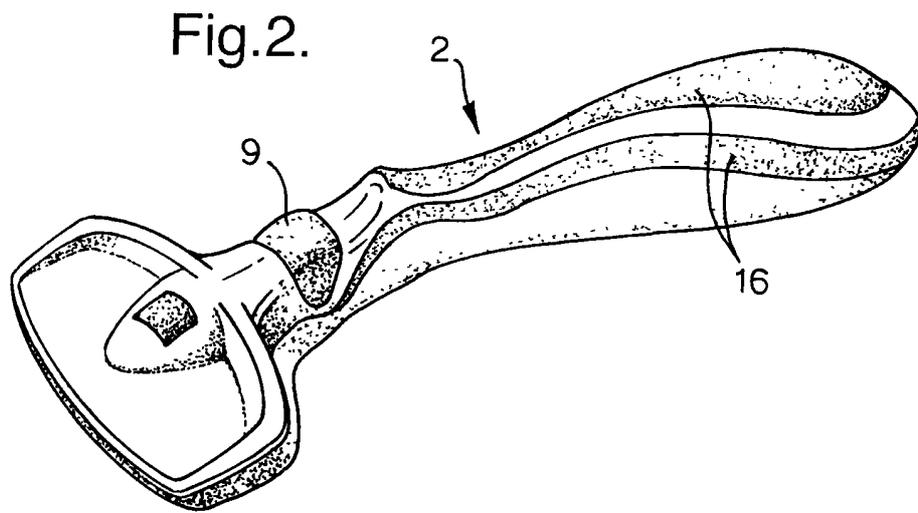
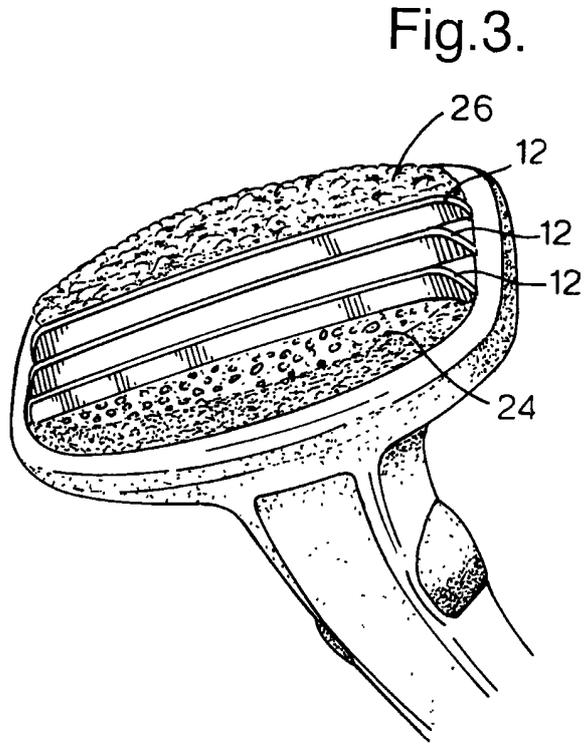
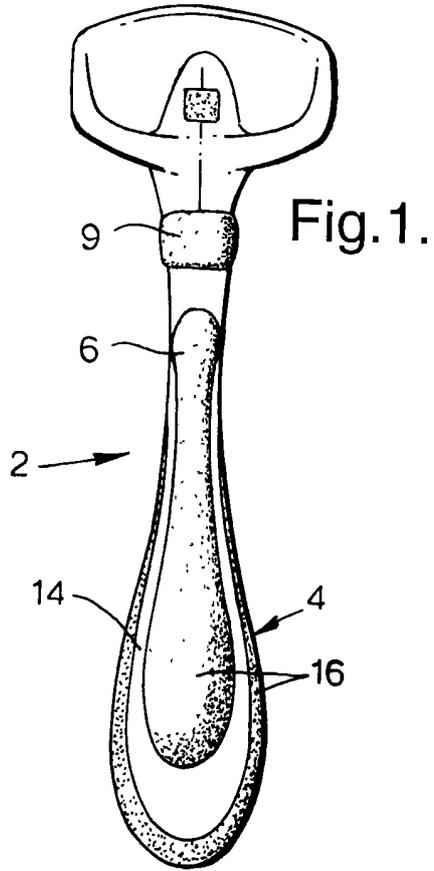


Fig.4.

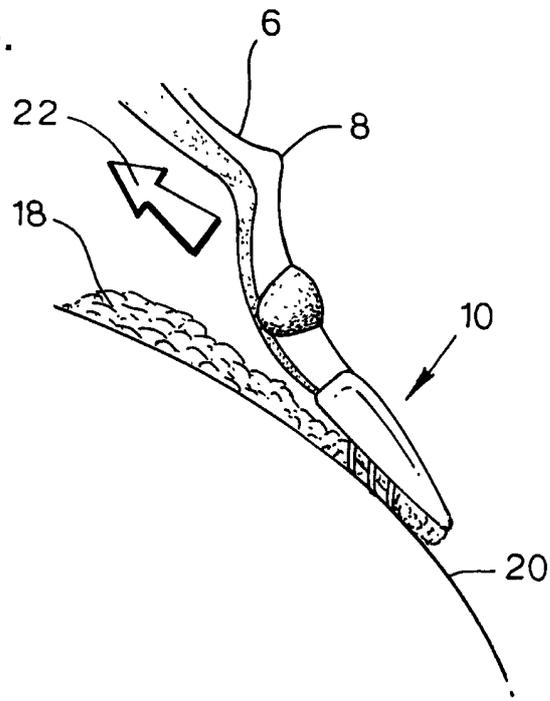
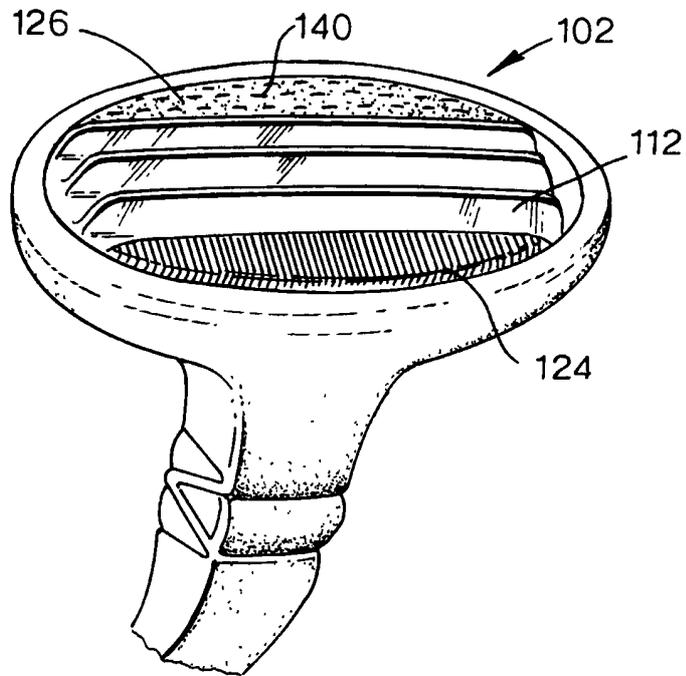


Fig.5.



DEVICE AND METHOD

This invention relates to a device for removing a composition from the skin and to a method for such removal. The invention relates in particular, but not exclusively, to a device for use in a depilatory method.

Hair removing compositions are widely available. They may be epilatory and effect hair removal by mechanical action. They may be depilatory and effect hair removal by causing hair degradation.

In the case of depilatory compositions the user applies these to their skin, leaves them for a predetermined interval to allow them to work and then removes them from the skin, usually using an article which is provided.

The compositions are effective but they may be perceived to have some undesirable skin effects, such as drying, as well as a residual odour.

According to a first aspect of the present invention, there is provided a device for removing a depilatory composition from the skin, the device comprising a head which, in use, is moved over the skin to effect removal of the depilatory composition and depilated hair and a handle to effect movement of the head, the head including at least one removal edge arranged, in use, to move over the skin to effect removal of the depilatory composition and depilated hairs, the head further including a source of a non-depilatory composition arranged to be applied to the skin when the head is moved over the skin.

In use the device is moved, such that the removal edge is traversed over the skin, to remove the depilatory composition and depilated hairs. In so doing it may break hairs weakened by exposure to the depilatory composition.

5 However it would not normally break intact hairs, untreated by a depilatory composition. Preferably it has a scraping action, acting in the manner of a *strigil*. Whilst the device may effect the breaking of some hairs which have been weakened by the depilatory composition it

10 cannot be used as a shaving device. Accordingly it does not have a cutting blade.

Preferably the head of the device is wider than the handle. Preferably the average width of the head is at

15 least 50% greater than the average width of the handle, preferably at least 80% greater. For the purpose of this definition the average width of the handle is determined by taking width measurements at 1cm intervals along the handle, starting 1cm from its distal (free) end, summing

20 the measurements and dividing by the number of measurements; and the average width of the head is determined by taking width measurements at 0.5cm intervals along the head, starting 0.5cm from its distal (free) end, summing the measurements and dividing by the number of

25 measurements.

Preferably the maximum width of the head exceeds the maximum width of the handle. Preferably the maximum width of the head is at least 50% greater than the maximum width

30 of the handle, preferably at least 80% greater.

Preferably the maximum length of the handle exceeds the maximum length of the head, preferably by a factor of at

least 3, more preferably by a factor of at least 5. The head will often be quite squat. Nevertheless it will be appreciated that what is meant by "length of the head" is its dimension in the same sense as the length of the
5 handle.

Preferably then handle is slender. Preferably the head is not slender. Preferably it is broad.

10 Preferably the device has a stick-like or wand-like or rod-like handle, and a wider head or head part.

Preferably the head is firmly carried by the handle in use; in the absence of a force or when merely touched
15 there is preferably no tendency for it to be deflected. In use when bearing upon the skin it may articulate against a resistance force.

The non-depilatory composition may be a moisturiser.

20

The non-depilatory composition may be a fragrance.

The non-depilatory composition may be an oil. An oil may be both a moisturiser and a fragrance. An oil could be
25 aromatherapy oil.

The non-depilatory composition may be any other material which could beneficially be applied to the skin, for example a colorant (such as a chemical "tanning" product),
30 a soap, an exfoliating agent, an insect repellent or a deodorising agent.

The non-depilatory composition could be a solid, including a gel. The solid may wear down as it deposits on the skin. Preferably, however, the non-depilatory composition is a liquid.

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The non-depilatory composition may be applied upstream of the removal edge(s) or downstream of the removal edge(s) or, when there are two or more removal edge(s), from between them. Preferably, it is applied downstream of the
10 removal edge(s).

The source of the non-depilatory composition may, for example, comprise a compressible or resilient part such as a fabric ply, felt pad or sponge, may be a film-forming
15 mechanical device, for example a roller, or one of more small recesses, for example in the form of grooves or wells, into which the composition was deposited in manufacture, and from which it is drawn, when moved over the skin.

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The removal edge may be supplied by a fin, preferably of an elastomeric material. More than one fin could be employed.

25 The fin(s) may be flexible. In use, the fin(s) may project beyond the head to a greater extent than the course of a material to be applied to the skin when the fin(s) just contacts the skin. The source is arranged to be brought into contact with the skin when the fin(s) is
30 caused to be flexed.

The or each fin may include a surface facing the skin, which surface has an angle, in use, of less than 90° to

the skin with respect to the intended direction of movement of the device.

5 Preferably, the head has an underside (facing the skin in use). This underside is generally flat and preferably carries the removal edge(s) - preferably fin(s) - and the source of the non-depilatory composition. Preferably, the removal edge(s) project(s) transversely from the underside of the head. Preferably, the leading edge of the head
10 does not function as a removal edge.

According to a second aspect of the present invention there is provided a method of effecting depilation comprising the steps of:

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applying a depilatory composition to the skin;

allowing the depilatory composition to remain on the skin for a predetermined period of time, and

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moving a device over the skin to remove the depilatory composition and depilated hair from the skin and to apply a non-depilatory composition to the skin.

25 The device and/or the non-depilatory composition may be as defined above in relation to the first aspect.

The invention will now be further described, by way of example, with reference to the accompanying drawings, in
30 which:

Figure 1 is a plan view of a first embodiment of a device 2 of the invention, for removing a depilatory composition and depilated hair from a user's skin;

5 Figure 2 is a front perspective view of the same device;

Figure 3 is a view from underneath, of the head of the same device;

10 Figure 4 is a detail showing the removal of depilatory composition and depilated hair the skin using the same device; and

Figure 5 is a perspective view of the head of a second 15 embodiment of device of the invention.

In the drawings shaded areas denote elastomeric material, soft to the touch, whereas areas shown unshaded (or uncoloured) denote plastics material, which is of higher 20 modulus than the elastomeric material. In the following examples there is a difference in colour between the elastomeric and plastics materials. For example the elastomeric material may be coloured and plastics material white, or of a colour which contrasts with the colour of 25 the elastomeric material. The attached informal drawings show these differences of material and colour by means of shading. When we later submit formal line drawings we reserve the right to describe in words the shaded and unshaded regions in the attached informal drawings as, 30 respectively, regions of coloured elastomeric material and of plastics material of higher modulus, uncoloured or of a colour which contrasts with the colour of the elastomeric material.

The device 2 includes a handle 4 which is designed to be comfortably held by a user with a finger or thumb against a ramped portion 6, immediately adjoining a pronounced peak or step 8 in the handle. The handle is able to flex slightly about the step 8, and also about an elastomeric packing 9 between the step 8 and a head 10. The device is somewhat arched. In use, the arch faces the skin and, as the user presses down on it, it can flex slightly, leading to improved sensation of control.

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As shown in Figure 3, the head 10 includes three parallel, closely spaced fins. Each fin is straight and extends across substantially the full width of the head, and each is approximately 35mm in length. The fins 12 are of elastomeric material. The fins 12 may be integrally moulded with the handle (which comprises a plastics section 14 and elastomeric sections 16 or may be added separately). The plastics material 14 extends down past the step 8 and forms the top of the head 10. The elastomeric material extends down beneath the step 8 towards the head 10.

As seen in Figure 4, depilatory composition (typically containing potassium thioglycolate as active ingredient) is applied to the skin and left for a predetermined time. After that time, a user, holding the handle 4, pulls the head across the surface of the skin in the direction of arrow 22 (Figure 4). This removes depilatory composition and depilated hair with the fins 12 also acting to detach weakened hairs from the skin, by a mild to moderate scraping action. It can be seen from Figures 3 and 4 that the fins project perpendicularly from the generally flat underside of the head but that they flex, during use, such

that their surfaces which face the skin 20 are less than 90° with respect to the direction of movement 22.

The underside of the head 10 is also provided with a leading section 24 and a trailing section 26. The terms "leading" and "trailing" are used to denote the position of these sections relative to the fins, when the head is moved, in use, as shown by arrow 22. These sections project slightly from the underside of the head but not to the extent that the fins project, when in the relaxed position shown in Figure 3. However, it can be seen from Figure 4 that, when the fins flex, these sections 24, 26 may come into contact with the skin.

Either or both of the sections 24 and 26 may be comprised by a slightly compressible material such as sponge and impregnated with or otherwise able to deposit a non-depilatory composition onto the skin, in the same movement in which depilatory composition and depilated hair are removed.

There may be more than the number of sections that are shown either in advance of the fins with respect to the direction of the movement or trailing the blades or both. Alternatively or additionally, such sections may be provided between the fins.

The non-depilatory compositions may, for example, be selected from any one or more of the following substances: oils, moisturisers, perfumes, colourants, soaps, exfoliants and insect repellents. In this embodiment, however, the leading section 24 is of sponge impregnated with a mild liquid soap to lubricate the movement of the

fins and the trailing section 26 is of non-woven material impregnated with a dual action moisturiser/fragrance.

The device shown in Figure 5 is for the same purpose. The
5 head 102 is similar, but differs in a few respects. It is
oval in shape rather than spade-like. However, it is
still generally flat, and its underside also carries three
elastomeric fins 112, a leading section 124 and a trailing
section 126. In this embodiment, the leading section 124
10 is of a needlecord fabric material saturated with a skin
lubricating/conditioning oil and the trailing section 126
is of rubber formed with pimples 140, to provide a
massaging sensation. In this embodiment, the trailing
section does not release a composition onto the skin.

CLAIMS

1. A device for removing depilatory composition from the skin, the device comprising a head which, in use, is moved
5 over the skin to effect removal of the depilatory composition and depilated hair and a handle to effect movement of the head, the head including at least one removal edge arranged, in use, to move over the skin to effect removal of the depilatory composition and depilated
10 hairs, the head further including a source of a non-depilatory composition arranged to be applied to the skin when the head is moved over the skin.
2. A device as claimed in Claim 1 in which the non-
15 depilatory composition is selected from at least one of the following: moisturiser; fragrance; soap; colorant; insect repellent; exfoliating agent; and deodorising agent.
- 20 3. A device as claimed in claim 1 or 2 in which a said source is provided upstream of the removal edge.
4. A device as claimed in any preceding claim in which a said source is provided downstream of the removal edge.
25
5. A device as claimed in any preceding claim in which the removal edge is a flexible fin, which in its relaxed condition projects from the head to a greater extent than the source of the non-depilatory composition, but which in
30 use flexes to allow the source to contact the skin.
6. A device as claimed in any preceding claim in which the head has an underside (facing the skin in use) which

is generally flat and from which the removal edge projects transversely and on which is carried the source of non-depilatory composition.

5 7. A device as claimed in any preceding claim, having a plurality of removal edges.

8. A method of effecting depilation comprising the steps of:

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applying a depilatory composition to the skin;

allowing the depilatory composition to remain on the skin for a predetermined period of time, and

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moving a device over the skin to remove the depilatory composition and depilated hair from the skin and to apply a non-depilatory composition to the skin.

20 9. A depilatory device or a depilatory method substantially as herein referred to with reference to and as shown in any of accompanying drawings.



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Application No: GB0407988.5

Examiner: Mr Hal Young

Claims searched: 1-7

Date of search: 1 July 2004

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular reference
Y	1-4,6,7	GB2364502 A (RECKITT) see whole document.
Y	1-4,6,7	GB2384704 A (BOOTS) see whole document.
Y	1-3,6	WO96/02369 A1 (GILLETTE) see whole document.
Y	1,2,4,6,7	WO03/064121 A1 WARNER) see whole document.
Y	1,2,4,6	GB2009017 A (WARNER) see whole document.
A		US6675479 A (GILLETTE)
A		US2004/0016126 A1 (DEBLOIS)

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^W :

A4V; B4B

Worldwide search of patent documents classified in the following areas of the IPC⁰⁷



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A45D; B26B

The following online and other databases have been used in the preparation of this search report

WPI, EPODOC, JAPIO, Internet