DIFFUSER FOR SHAVING FOAM SPRAY

Inventors: Alain Marroncles, Saint Maur des Fosses (FR); Dominique Fournet, Belleville Sur Meuse (FR)

Correspondence Address: WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW, SUITE 700 WASHINGTON, DC 20036 (US)

Assignee: LINDAL FRANCE SAS, Briey (FR)

Appl. No.: 12/990,075
PCT Filed: Apr. 27, 2009
PCT No.: PCT/EP2009/055062
§ 371 (c)(1), (2), (4) Date: Oct. 28, 2010

ABSTRACT

The invention relates to a diffuser (20) for a shaving foam container (10). The purpose of the invention is to develop a diffuser according to the preamble, intended for finding more easily the different elements required for manual shaving. This purpose is achieved by providing the diffuser (20) with means (25) for attaching a razor blade (40). Accordingly, in the mounted and ready-to-use state, the container can be used as a razor handle.
DIFFUSER FOR SHAVING FOAM SPRAY

[0001] The invention relates to a diffuser for a shaving foam container.

[0002] Manual shaving is still very widespread. The application of a special shaving foam is recommended before shaving in order to reduce razor burn. This foam can be obtained by rubbing a piece of shaving soap, but most commonly it is contained inside a spray can, made up of a container with the soap and a propellant gas inside, and a diffuser that enables activating the valve of the container and obtaining the shaving foam.

[0003] When the user goes on a trip, he has to take along both his shaving foam and his razor. The blade of the razor must be protected to prevent anyone from being injured. In addition, the blade is either disassembled from the handle, in which case there are two parts rather than one, or it remains on the handle, but then the razor takes up a lot of space because the blade is in a position perpendicular to the handle. If the user has not forgotten one of them, these two or three elements take up some relative space in the toiletry kit.

[0004] The purpose of the invention is therefore to develop a diffuser according to the preamble enabling the user to more easily find the various elements needed for manual shaving.

[0005] This purpose is achieved by providing the diffuser with means for attaching a razor blade. In the assembled and ready-to-use state, the container can then serve as a handle for the razor.

[0006] Preferably, the diffuser comprises a substantially cylindrical or frustoconical main body, and in that the means for attaching the razor blade are placed inside the extension of the cylinder or cone frustum. This makes it possible to put a cap on the diffuser to protect the blade attachment means, the push button, and the spray nozzle.

[0007] It is preferable to equip the diffuser with a removable cap. The cap can be equipped with a receptacle in which a removable razor blade can be accommodated. Thus, in the assembled state, one has all the parts needed for shaving in a single assembly: the shaving foam spray can, the handle, and the razor blade, with the whole unit being compactly stowed.

[0008] In order to facilitate gripping the blade with the attachment means of the diffuser and removing the blade from its receptacle, the latter is preferably equipped with a longitudinal slot.

[0009] To prevent the blade from coming out on its own, the receptacle may be provided with means for preventing a razor blade from coming out of its receptacle on its own.

[0010] It is preferable to proportion the cap in such a way that when it is on the diffuser, the receptacle and, if applicable, the longitudinal slot of the cap are positioned inside the extension of the cylinder or cone frustum that forms the main element.

[0011] It is in accordance with the invention to accommodate a razor blade removably inside the cap.

[0012] When ready for use, the diffuser of the invention is equipped with a pressurized container of shaving foam.

[0013] The invention is described in greater detail below, with figures, which show:

[0014] FIG. 1: a perspective view of a diffuser according to the invention, mounted on a container of shaving foam and covered by a cap containing a razor blade;

[0015] FIG. 2: a cross-section view of the diffuser of FIG. 1 equipped with a razor blade, without the cap;

[0016] FIG. 3: a front view of the cap without the blade;

[0017] FIG. 4: a top view of the cap without the blade;

[0018] FIG. 5: a perspective view of the cap without the blade;

[0019] FIG. 6: a cross-section view of the diffuser (a) covered by a cap in which a blade is placed and (b) without the cap, and equipped with a blade;

[0020] FIG. 7: a back view of the diffuser (a) with and (b) without the blade;

[0021] FIG. 8: a front view of the diffuser (a) with and (b) without the blade;

[0022] FIG. 9: a top view of the diffuser (a) with and (b) without the blade, and (c) without the blade, but covered with a cap supplied with a blade;

[0023] FIG. 10: a bottom view of the diffuser (a) with and (b) without the blade;

[0024] When ready for use, the razor (1) of the invention is essentially made up of a pressurized container of shaving foam (10), the diffuser of the invention (20), and a removable cap (30).

[0025] “Diffuser” is defined as a member that cooperates with the valve of the container to enable the product contained therein to go through a channel in the diffuser and come out in the form of a foam. When one presses on the diffuser, the valve is actuated, releasing the product, which then goes through the diffuser before being discharged as a foam.

[0026] The diffuser (20) is equipped in the usual manner with a main body of generally cylindrical shape. This main body comprises in particular a cylindrical skirt (26) in its lower part, inside which the container fits during use. Inside the main body there is a push button (21) under which means (22) are placed for cooperating with the valve (11) of a pressurized container of shaving foam (10), along with an outlet channel (23) ending in a spray nozzle (24). The push button (21) is connected to the main body by a hinge (29) located on the back thereof, opposite the spray nozzle (24). The spray nozzle (24), which moves down at the same time as the push button (21), faces an oblong window (28) fashioned in the main body. The diffuser is also equipped with snap-in means to attach it onto the shaving foam container (10).

[0027] According to the invention, the diffuser (20) also comprises attachment means (25) for attaching a removable razor blade (40). These attachment means are preferably made up of two sliders (25) that fit in the usual manner into the attachment grooves (41) located on the back of the razor blade (40). Standard blades can thus be used.

[0028] In order to prevent the user from cutting himself when positioning the blade, according to the invention, the latter is placed into a receptacle (31) provided in the cap (30). This receptacle (31) is proportioned so as to receive the blade in its entirety and prevent it from coming out on its own. This can be achieved by providing retaining means in the receptacle (31), for example. The sliders (25) of the diffuser are inserted from the side into the grooves (41) of the razor blade (40) and are conveyed therein until they reach the desired position. Once they are in the latter position, the user applies traction perpendicular to the blade to extract the blade (40) from its receptacle (31). It can be said that the blade is clipped into the receptacle (31).

[0029] The receptacle (31) is preferably arranged with its longitudinal axis parallel to the longitudinal axis of the cap (30), and in the assembled state, to that of the container (10).

[0030] The receptacle (31) has a longitudinal slot (32) into which the attachment means (25) on the diffuser can fit in
order to grasp the blade (40) to take it out of its receptacle (31), or conversely, to pull out again after it has been put back in it after use.

[0031] On the main body, which has a generally cylindrical shape, above the skirt (26), there is a shoulder (27) of the same thickness as the wall of the cap (30). As shown in FIGS. 9b and 9c, all of the appendages of the diffuser, such as the push button (21), the window (28), and the blade attachment means (25), are located inside a cylinder concentric with the cylinder that forms the skirt (26), but whose cross-section is reduced by the thickness of the shoulder (27). Consequently, it is possible to put a cap on the diffuser that, in the assembled state, covers the blade attachment means (25), the push button, and the nozzle (24). This cap (30) thus protects the blade attachment means (25). It blocks access to the push button (22) and prevents it from being actuated unintentionally. Lastly, it covers the window (28) and the nozzle (24), thereby preventing shaving foam residue from soiling the toiletry kit.

[0032] It is obvious that the shoulder (27) can be eliminated so that the cap partly covers the skirt (26). Likewise, instead of a cylindrical shape, the skirt and/or the main body can be conical. In this case, the elements to be protected will be placed inside the extension of the cone frustum.

[0033] Note that when the cap (30) is put on, the slot (32) and the receptacle (31) for the blade are also placed inside the extension of the cylinder or cone frustum (see FIG. 9c). In other words, in the stowed state, nothing protrudes outside the projection of the skirt (26) cylinder. Thus, the razor of the invention is particularly compact.

[0034] It is preferable that the skirt (26) in turn be proportioned so that it stays within the extension of the cylinder that forms the container (10). This way, as shown in FIGS. 1 and 2, the container (10), the diffuser (20), and the cap (30) have substantially the same outer diameter.

[0035] In the stowed state, the razor according to the invention appears as follows: the blade (40) is clipped into the receptacle (31) built into the cap (30). The cap is placed on the diffuser (20), which is in turn snapped onto a container of shaving foam (10).

[0036] The user removes the cap (30), takes the quantity of shaving foam he needs in the usual manner, and applies it. Next he inserts the sliders (25) into the slot (32) in the cap (30), and slides them in the attachment grooves until they reach the desired position. Then he extracts the blade with a slight pull.

[0037] The ready-to-use razor (1) is thus made up of the container (10), which serves as a handle, topped by the diffuser (20), which is in turn equipped with the blade (40).

[0038] After shaving, the user rinses the blade (40), inserts it into the receptacle (31) in the cap, where it clips in, slides the attachment means along the grooves (41) and the slot (32), and thereby separates the blade from the attachment means (25). He can then put the cap (30) back onto the diffuser (20).

[0039] In just one piece, then, the user has not only his shaving foam spray can, but also the razor handle and blade. The whole unit can be stowed compactly, and does not require much space.

LIST OF REFERENCES:

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0040</td>
<td>Razor</td>
</tr>
<tr>
<td>0041</td>
<td>Pressurized container of shaving foam</td>
</tr>
<tr>
<td>0042</td>
<td>Valve</td>
</tr>
<tr>
<td>0043</td>
<td>Diffuser</td>
</tr>
<tr>
<td>0044</td>
<td>Push button</td>
</tr>
<tr>
<td>0045</td>
<td>Means for actuating the valve</td>
</tr>
<tr>
<td>0046</td>
<td>Outlet channel for the shaving foam</td>
</tr>
<tr>
<td>0047</td>
<td>Nozzle</td>
</tr>
<tr>
<td>0048</td>
<td>Means for attaching onto the container</td>
</tr>
<tr>
<td>0049</td>
<td>Cylindrical skirt of the main body</td>
</tr>
<tr>
<td>0050</td>
<td>Shoulder</td>
</tr>
<tr>
<td>0051</td>
<td>Window</td>
</tr>
<tr>
<td>0052</td>
<td>Hinge</td>
</tr>
<tr>
<td>0053</td>
<td>Cap</td>
</tr>
<tr>
<td>0054</td>
<td>Receptacle for the blade</td>
</tr>
<tr>
<td>0055</td>
<td>Longitudinal slot</td>
</tr>
<tr>
<td>0056</td>
<td>Razor blade</td>
</tr>
<tr>
<td>0057</td>
<td>Attachment grooves</td>
</tr>
</tbody>
</table>

1. Diffuser for a pressurized shaving foam container, which comprises means for attaching a razor blade.
2. Diffuser according to claim 1, which comprises a substantially cylindrical or frustoconical main body, and wherein the means for attaching the razor blade are placed inside the extension of the cylinder or cone frustum.
3. Diffuser according to claim 1, which is equipped with a removable cap.
4. Diffuser according to the claim 3, wherein the cap is equipped with a receptacle in which a removable razor blade can be accommodated.
5. Diffuser according to claim 4, wherein the receptacle is provided with a longitudinal slit.
6. Diffuser according to claim 4, wherein the receptacle is provided with means for preventing a razor blade from coming out of the receptacle on its own.
7. Diffuser according to claim 4, wherein the cap is proportioned in such a way that the receptacle is positioned inside the extension of the cylinder or cone frustum that forms the main body.
8. Diffuser according to claim 3, wherein a razor blade is removably accommodated in the cap.
9. Diffuser according to claim 1, which is equipped with a pressurized container of shaving foam.
10. Diffuser according to claim 7, wherein the longitudinal slit is positioned inside the extension of the cylinder or cone frustum that forms the main body.
11. Diffuser according to claim 2, which is equipped with a removable cap.
12. Diffuser according to the claim 10, wherein the cap is equipped with a receptacle in which a removable razor blade can be accommodated.
13. Diffuser according to claim 11, wherein the receptacle is provided with a longitudinal slit.
14. Diffuser according to claim 11, wherein the receptacle is provided with means for preventing a razor blade from coming out of the receptacle on its own.
15. Diffuser according to claim 11, wherein the cap is proportioned in such a way that the receptacle is positioned inside the extension of the cylinder or cone frustum that forms the main body.
16. Diffuser according to claim 10, wherein a razor blade is removably accommodated in the cap.
17. Diffuser according to claim 7, wherein the longitudinal slit is positioned inside the extension of the cylinder or cone frustum that forms the main body.
18. Diffuser according to claim 5, wherein the receptacle is provided with means for preventing a razor blade from coming out of the receptacle on its own.
19. Diffuser according to claim 5, wherein the cap is proportioned in such a way that the receptacle is positioned...
inside the extension of the cylinder or cone frustum that forms the main body.

20. Diffuser according to claim 6, wherein the cap is proportioned in such a way that the receptacle is positioned inside the extension of the cylinder or cone frustum that forms the main body.

* * * * *