MULTI-EDGE RAZOR BLADE HAVING VARIOUS SHAPES AND SIZES OF CUTTING EDGES

Albert J. Rypsc, Chicopee, Mass.

Application January 31, 1957, Serial No. 637,453

1 Claim. (Cl. 30—74.1)

This invention is concerned with safety razors for shaving of the type in which a flexible, replaceable blade is supported in position between two separate members that are affixed to a holder. The razor herein to be described has a unique feature in that there are three (3) separate cutting edges for shaving and one (1) short cutting edge for removing a beard beneath the nose of the person using the device.

Heretofore, razors have appeared on the market with two (2) cutting edges which are for the purpose of giving extra lift and use of the blade. It is a principal object of the within invention to provide a safety razor which has facilities for providing a medium, heavy, and a light cutting edge on the same blade which are separate from each other.

It is another object of the within invention to provide a safety razor that has the feature of a small cutting edge to cut away whiskers and hairs beneath the nose. It is yet another object of the within invention to provide a razor blade holder that has a novel geometrical shape that lends itself for speedy cutting of whiskers from the face and the body.

It is still another object of the within invention to provide a safety razor assembly that is inexpensive in the cost of manufacture and yet is of excellent and high efficiency. The above and other objects are attained by the use of a three sided razor blade mounted in a razor assembly in which the head itself appears to be triangular, except for a short, flat cutting surface between two of the three larger sides. Reference is made to the following specification and the accompanying drawing in which:

Figure 1 is a side elevational view of the razor blade assembly.

Figure 2 is a top plan view of the razor blade assembly looking down on Figure 1.

Figure 3 is a view of the inside portion of the cap, looking up into the head of Figure 1.

Figure 4 is a sectional view taken along line 4—4 of Figure 3.

Figure 5 is a view of an enlarged section along the line 5—5 of Figure 2.

Figure 6 is a top plan view of the razor blade itself looking down upon it.

Figure 7 is a top plan view of the razor blade support member.

Figure 8 is an exploded perspective view of the entire razor and blade assembly.

In Figure 1 the entire razor and blade as assembled is shown. The razor blade assembly has a handle portion 1 and a bottom of the handle 2. Above the handle portion 1 is a top tapered portion 3 which lies beneath the blade support 4. The blade support 6 is shown in detail in Figure 7. Above the blade support 6 is the razor blade itself 11, which is shown in detail in Figure 6 and which can be seen clearly in the exploded view of Figure 8.

In Figure 8 there are screw threads 5 on the screw portion 4 of the handle 1. In the support 6 there is an opening 12S into which the screw portion 4 passes. It is also to be noted that in the blade 11 there is an opening 12 also through which the screw portion 4 passes. Beneath the head 13 there is a cylindrical opening 12H having threads 5A for fastening of the threads 5 of the screw portion 4. It is by rotating the handle portion 1 so that the screw portion 4 threads into the opening 12H which is affixed to the head 13 that the three parts, the cap 13, the razor blade 11, and the support 6 are held securely together. The razor blade 11 has besides the central opening 12, other openings which align the razor blade 11 in the proper position on the support member 6. The opening, for example, 18B, fits around the protrusion 18 in the cap 13. The opening 19B similarly fits around the protrusion 19 of the cap 13. Similarly the openings 20B fit around the protrusion 20 in the cap 13. The protrusions 20, 19, and 18 pass through the openings in the razor blade 11 as just mentioned and also pass through the complementary openings in the support shown in Figure 7. That is to say, that the opening 18S lies proximate to opening 18B in the blade 11 and both fit around the protrusion 18 in the cap 13. Similarly the openings 19S and 20S lie around the protrusions 19 and 20 in the cap 13 and lie beneath, of course, the openings 19B and 20B in the razor blade 11.

It is to be noted in the view of Figure 2 that the letters, L, H and M appear on the surfaces of the cap 13. It is to be pointed out that the razor blade opposite these letters are for heavy (H), light (L), and medium (M) cutting. The surface on the head 13 opposite H is indicated on the cap 13 as 9H and on the support as 9S and on the razor blade itself as 9. The surface on the light edge 10 has an edge 1011 on the cap, an edge 10S on the support, and a cutting edge 10 on the razor blade. Opposite the medium cutting edge are the edges H on the cap, 8S on the support, and 15 on the razor blade 11. There is a short edge indicated on cap 13 in Figure 2 as 7S. This surface has beneath it a cutting edge 7 on the razor blade 11 and beneath that, an edge 7S on the support 6. This particular cutting edge 7 is small and is designed to fit beneath the nose of the person being shaved. It is, of course, small and may be utilized to cut hair in areas which are difficult to get to with the larger length of blade.

The cap 13 is not flat but has inclined planes reaching down from the top pyramid point 21. The surfaces which are inclined from point 21 are all triangular. Upon inspection of Figure 2 it can be seen that the surfaces marked M, H, and L are separate triangles and that the surface marked 14H is also a triangular surface. The cap 13 and the support 6 pressing together cause the razor blade 11 to have tension at its central area of the various inclined surfaces. These surfaces are indicated on the razor as 14 for the surface opposite the cutting edge 7; 15 for the area opposite the cutting edge 8; 16 for the area opposite the cutting edge 9; and 17 for the area opposite the cutting edge 10. The numbers in the drawings on the cap are similar and proximate to the areas indicated in the razor blade. However, these numbers have an H thereafter. They are, 15H on the area opposite the cutting edge 8H; 16H on the area opposite the cutting edge 9H; 17H on the area opposite the cutting edge 10H; and 14H on the area opposite the cutting edge 10H. Similarly, on the support 6, the numbers are similar and the opposite sides of the blade that have the letter S thereafter.
the triangular surface 16S; the cutting edge 8S is opposite the triangular area 15S; the cutting edge 7S is opposite the triangular area 14S, and the cutting edge 10S is opposite the triangular area 17S. There is in the support 6 a sleeve 22 which can be seen in a cross-section in the view of Figure 5. This sleeve 22 is complementary to the receptacle 12H and assists in the alignment of the support 6, the razor blade 11, and the cap 13.

In operation, it is necessary to assemble the support 6, the razor-blade 11, and the cap 13 as indicated in the exploded view of Figure 8. Because of the openings 12S, 12H through the center of the support 6, and the razor blade 11, with the screw 4 passing therethrough into the cylindrical opening 12H, and because of the protrusions 18, 19, and 20 already mentioned, in the cap which pass through the openings complementary thereto in the razor blade 11 and the support 6; and because of the sleeve 22, the parts align themselves automatically upon being placed one over the other as shown in Figure 8 and it is only necessary for the user of the razor to turn the handle 1 so that the threads 5 on the screw portion 4 will engage the threads 5H within the receptacle 12H and tie in its threads 5 therein.

Once the razor has been assembled, it is then at the discretion of the user to select whichever cutting edge he so desires. The difference between the heavy and the light cutting edges is, of course, extreme. The differences, however, may depend upon how long it has been between the time the person has shaved and the growth of his beard, and the nature of his beard.

In order to use the small cutting edge indicated as 7 in the razor blade 11 it is only necessary that edge 7 be used at right angles against the skin. As pointed out, the edge 7 leads and adapts itself to getting into places which are small and difficult to reach with the longer cutting edge.

A pressure is exerted by the cap 13 on the blade 11 against the support 6 causing the blade 11 to conform to the pyramid shape of the cap 13.

Dimensions in the drawing have been exaggerated to teach more clearly the within invention. Changes in certain of the detailed structure are contemplated without departing from spirit and scope of the within invention. Having thus described my invention, I claim:

In a razor assembly, a handle having a reduced screw portion formed on the outermost end thereof, a blade support defined by three relatively large inclined surfaces and a relatively small inclined surface, the small inclined surface positioned between two of said large inclined surfaces, and adapted to enter shaving areas that are inaccessible to the large inclined surfaces, each of said inclined surfaces having a triangular configuration, the bases of the triangles defining edges for receiving and supporting the cutting edges of a razor blade, the apices of said triangles terminating at an opening, said screw portion extending through said opening for mounting said blade support on said handle, a cap having a configuration similar to said blade support and including three relatively large triangularly shaped inclined surfaces, and a relatively small triangularly shaped inclined surface, the bases of said cap inclined surfaces terminating adjacent said blade support edges and the apices of said cap inclined surfaces terminating at an apex that defines the outermost end of said razor assembly, an internally threaded projection formed on the underside of said cap for receiving said reduced screw portion therein, said blade support secured between said cap and handle and cooperating with said cap to secure a flat blade therebetween, said blade adapted to be bent from its flat position to correspond to the inclined surfaces of said blade support as said screw portion is tightened in said projection.

References Cited in the file of this patent

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Patent Number</th>
<th>Invention Date</th>
<th>Invention Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>892,629</td>
<td>July 7, 1908</td>
<td>Taylor</td>
</tr>
<tr>
<td>1,021,003</td>
<td>Mar. 26, 1912</td>
<td>Rubens</td>
</tr>
<tr>
<td>1,221,065</td>
<td>Apr. 3, 1917</td>
<td>Lutz</td>
</tr>
<tr>
<td>1,470,757</td>
<td>Oct. 16, 1923</td>
<td>Lauterbach</td>
</tr>
<tr>
<td>1,875,538</td>
<td>Sept. 6, 1932</td>
<td>Winkler</td>
</tr>
<tr>
<td>2,086,426</td>
<td>July 6, 1937</td>
<td>Mackensie</td>
</tr>
<tr>
<td>2,402,116</td>
<td>June 11, 1946</td>
<td>Mignon</td>
</tr>
</tbody>
</table>