April 6, 1965 H. P. TAYLOR 3,176,398

RAZOR BLADE HAVING MULTIPLE CUTTING EDGES

Filed May 22, 1963

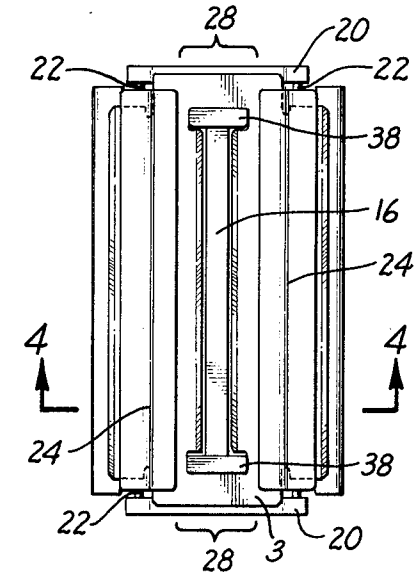


FIG. 1.

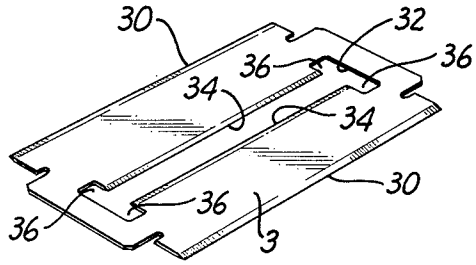


FIG. 3.

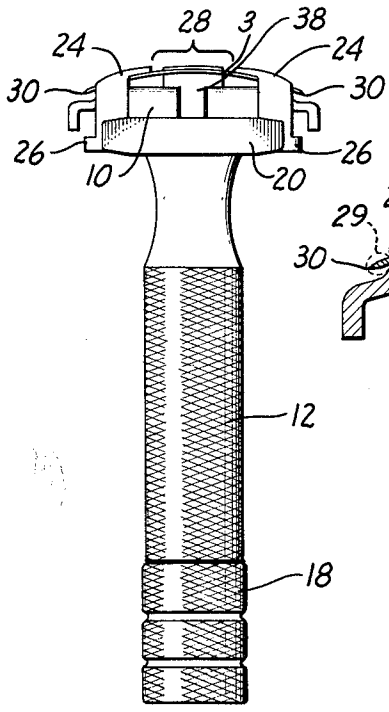


FIG. 2.

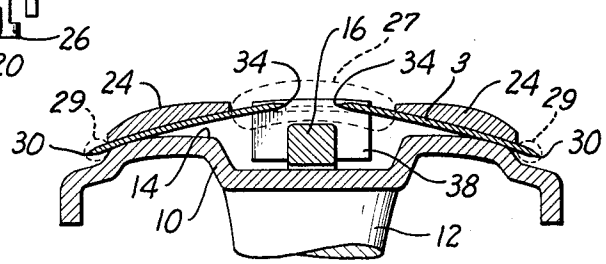


FIG. 4.

INVENTOR.
HARRY P. TAYLOR
BY Taylor & Neal
ATTORNEYS

United States Patent Office

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RAZOR BLADE HAVING MULTIPLE CUTTING EDGES

Harry P. Taylor, 15320 Blossom Hill Road, Los Gatos, Calif.

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This invention relates to shaving implements and more particularly to a novel razor blade and a novel razor for supporting the same.

In accordance with this invention there are provided novel razor blades and razors which can be manufactured substantially as easily and as economically as razors in wide spread commercial use today; additionally, the new razors and blades can be manufactured and distributed with very little change in the equipment which is used in connection with the manufacture and sale of the commercially available razors and blades. While these new razors and blades may be made and sold at no substantial increase in cost, they substantially double the normal life of each razor blade thereby affording an opportunity for the razor blade manufacturer to sell razor blades at a much higher profit margin while passing on to his customers a substantial saving in the total price the customer pays for his razor blades.

These advantages are obtained by providing a novel four edged razor blade and a razor for the blade in which all four blade edges are mounted for immediate use. Not only do the new razor and blade provide twice as many cutting edges as do the razors and blades in use today, but also the new blades are mounted in the razor in such a manner as to provide two different types of shaving action by two different pairs of blade edges. Thus, the blades have exterior edges which shave in a conventional manner, and they also have a pair of interior edges which cooperate with each other so that each interior edge guides the surface to be shaved into the other interior edge while limiting the angle of inclination of the shaving edge to the surface. This provision of two types of shaving action with a single blade may be very advantageous for certain users of the blades where the tender skin of the neck and a tough beard must both be shaved.

Other facets of the invention will become apparent from the following description read in conjunction with the attached drawings in which:

FIG. 1 is a top plan view of a razor and blade constructed in accordance with this invention;

FIG. 2 is a view in side elevation of the razor and blade shown in FIG. 1;

FIG. 3 is a perspective view of the blade employed in the razor of FIGS. 1 and 2; and

FIG. 4 is a sectional view of the razor and blade assembly of FIG. 1 taken along the plane indicated at 4—4 in FIG. 1.

Referring now in detail to the drawings, the razor illustrated therein is similar in many regards to razors now in wide spread use, the razor including a base portion 10 mounted on a handle 12 and having an upper surface 14 for supporting a razor blade. A central arbor 16 is mounted on top of the base 10 and may be moved upwardly and downwardly by manipulation of a screw member 18 on the end of the handle 12. A pair of wings 20 are mounted on the arbor 16 and pivotally support at 22 a pair of web members 24, the web members 24 being positioned inwardly from the side edges of the base 10 and have ears 26 on their lower sides which engage the underside of the base 10 to pivot the web members 24 outwardly to facilitate blade replacement when the arbor 16 is raised upwardly by the screw 18.

In accordance with this invention, the web members 24 are spaced apart from each other to provide an opening 28 in the top of the razor. The web members 24 and the upper surface 14 of the base 10 provide a generally convex razor blade receiving zone as indicated in FIG. 4 where the zone has an intermediate portion in the opening 28 between the web members 24 and terminal zone portions between the web members 24 and the outer edges of the upper surface of the base 10. Thus, the entire blade receiving zone is shown by the razor blade 3 in FIGS. 2 and 4, and the intermediate and terminal zone portions are indicated by the enclosed areas 27 and 29 respectively in FIG. 4.

As illustrated in FIG. 3, the four edged razor blade which is mounted in the razor is made of a conventional sheet of razor blade forming metal having a conventional exterior profile which provides a pair of exterior sharpened razor edges 30. The razor blade is provided with an interior I-shaped aperture 32 which defines a pair of interior edges 34 which are parallel to the edges 30 and which face each other. The edges 34 are also sharpened. The two end portions of the I-shaped aperture 32 in the blade provide recesses 36 at opposite ends of the razor edges 34, the recesses facilitating the centering of the razor blade in the razor blade receiving zone of the razor and also facilitating deformation of the razor blade into the convex condition illustrated in FIG. 4 while permitting the two edges 34 to be coplanar.

A pair of protruding bosses 38 are provided on the central arbor 16 at opposite ends thereof with the bosses 38 received in the recesses 36 in the blade to center the blade in the blade receiving zone of the razor and to provide protecting abutments adjacent to the corners of the interior edges 34.

As indicated in FIG. 4, the blade, when mounted in the razor is deformed into a convex condition with the interior cutting edges 34 positioned laterally from a plane through the exterior cutting edges 30 and with the interior cutting edges 34 in the intermediate zone portion of the blade receiving zone while the exterior cutting edges 30 are in the terminal portions of the blade receiving zone. The shaving edges 30 may be employed during shaving in conventional manner by drawing the razor over the skin with the handle 18 inclined to the skin at a substantial angle, and the interior edges 34 may be employed in shaving by drawing the razor over the skin with the handle 12 substantially perpendicular to the skin; when the interior edges 34 are employed in this manner, the edge 34 facing the direction of movement of the razor performs as a shaving edge while the other edge 34 serves to guide the surface to be shaved into the shaving edge while limiting the angle of inclination of the shaving edge to the surface. Where it is desirable to provide other means for centering the blade on the razor, other positioning means may be provided such as protruding portions of the razor base 10 which engage the ends of the razor blade adjacent to the ends of the cutting edges 30, but the centering of the blades with the protrusions 38 provides a particularly advantageous arrangement.

While one particular embodiment of the invention has been illustrated and described in detail herein, it is obvious that many modifications thereof may be made without departing from the spirit and scope of the invention.

I claim:

A razor blade consisting essentially of a generally rectangular and integral sheet of metal having long and short exterior sides and a thickness substantially less than said short sides with said sheet having a bounded interior aperture with elongated interior sides thereof extending generally parallel to said long exterior sides and with said sheet being sharpened into razor edges along both of said

elongated interior sides and along both of said long exterior sides.

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