Jan. 16, 1945. V. T. VAN SLYKE 2,367,547

ELEMENT FOR SAFETY RAZORS

Original Filed Dec. 31, 1940

Fig. 1.

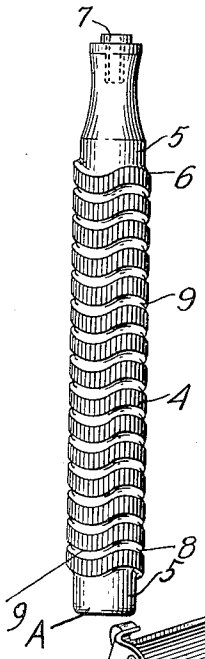


Fig. 2.

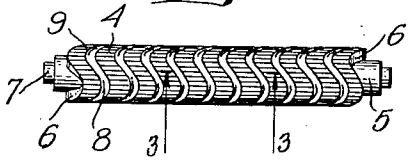
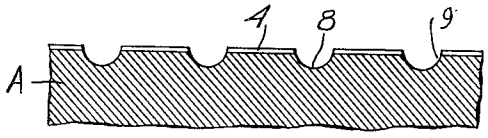


Fig. 3.



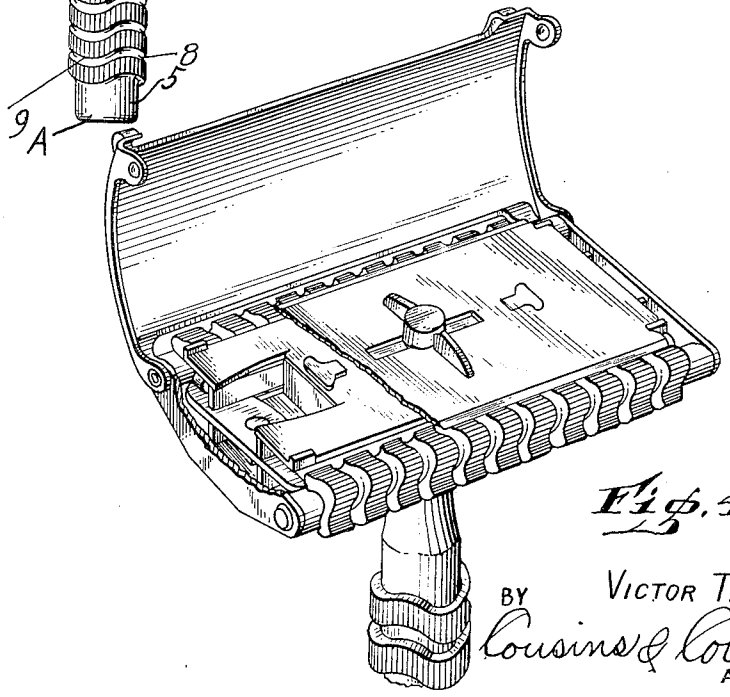


Fig. 4.

INVENTOR
VICTOR T. VAN SLYKE

BY Cousins & Cousins
ATTORNEYS

Patented Jan. 16, 1945

2,367,547

UNITED STATES PATENT OFFICE

2,367,547

ELEMENT FOR SAFETY RAZORS

Victor T. Van Slyke, Philadelphia, Pa., assignor to Reciprocating Razors Corporation, Philadelphia, Pa.

Original application December 31, 1940, Serial No. 372,586. Divided and this application January 16, 1942, Serial No. 426,959

3 Claims. (Cl. 30—46)

This invention relates to automatic reciprocating razors—that is to say, a safety razor having its blade arranged to be reciprocated lengthwise of the razor blade head by reason of movement of the razor assemblage over the skin of the user. The application is a division of my pending application, Serial No. 372,586, filed December 31, 1940.

The object of the invention is to produce an element, such as a handle or actuating roller, which may readily be affixed to a head assembly of a razor or which may be used as a handle, embodying a plurality of grooves encircling the handle, the walls of which grooves are formed in merging, continuous curves in each instance, and which in cross-section present walls which are thicker at their bases and narrower at their apices. The outer surfaces of the walls are characterized by grooves, arranged preferably entirely on lines parallel to the longitudinal axis of the elements, so that perfect drainage of the elements may be effected. It has been found that in ordinary knurling the handles of safety razors, or other parts similar thereto, become corroded and do not form a perfect hold for the hand of the user. This invention, in practice, is designed to overcome these objections.

When the roller is used as an actuating roller, in connection with an automatically reciprocable razor blade, the roller comprehends a cylindrical body having a reduced bearing at each end, adapted to be inserted into the opening of a razor frame. When used as an actuating device the roller is provided with a less reduced portion at each end so formed as to leave at each end a double cam adapted to contact another actuating device, so the rotation of the roller, caused by passing the same over the skin will cause rocking of the actuating device and consequently reciprocation of the blade of the razor.

For the purpose of defining the particular merging of the groove, above referred to, separated by walls of greater thickness at their bases, I have adopted the words "Para Metric" made up of the words "Para," meaning equal, and, "Metric" meaning measure. In other words, I mean by this expression an element having drainage grooves of equal size, separated by equal walls, in which each groove is formed of merging curves so that perfect drainage is effected by standing the element on one or the other of its ends and by means of which, when used as a roller actuating element, and passed over the skin of the user, the skin will be kneaded and the detergent or softening means, such as shaving cream or shaving soap, will be evenly spread over the surface to be shaved and massaged into the skin.

The invention consists of the construction, combination and arrangement of parts, as herein illustrated, described and claimed.

In the accompanying drawing, forming a part hereof, is illustrated a form of embodiment of the invention, in which drawing similar reference characters designate corresponding parts, and in which:

Figure 1 is an elevational view of a roller when used as a handle;

Figure 2 is an elevational view of a roller when used as a roller and actuating element for a reciprocable razor blade;

Figure 3 is a fragmentary detail in enlarged section, taken approximately on line 3—3 of Figure 2;

Figure 4 is a perspective view of a complete embodiment of a reciprocating blade razor, showing applications of the present invention.

Referring to the drawing, a cylindrical body A (applied generally as all of the surfaces are operated on and the new surfaces thereof are specifically numbered) is formed of a suitable material, such as metal, plastic compounds, etc.

For its entire length the cylindrical body A is provided with a plurality of grooves or channels 4, preferably formed parallel to the axis of the body A.

The body A is then reduced at its end to leave a reduced portion 5, in such way that at its opposite ends the body is left with a continuous multicam surface 6.

At one or both ends of the body A there is a further reduced portion 7, which in the case of the element being used as a handle may be counterbored to receive an attaching means and when used as a roller will form a bearing.

Intermediate of its ends the element is provided with a plurality of separated grooves 8, the side walls of which are curved as at 9, so that any moisture in the grooves will flow to the center and in certain positions will flow gradually from the elements. This construction presents a plurality of grooves, the walls of which are formed in merging, continuous curves, and which in alined cross-section are thicker at their bases and narrower at their apices.

Further, it has been found by experiment that this construction not only gives a maximum of drainage to the elements, and any residuum of moisture, accumulation of lather or cream, or other residuum of hair or epithelial matter may be easily removed.

When the element is used as an actuating roller, the razor to which it is attached is pressed upon the skin and with a slow continuous stroke is caused to cover a certain area of the skin. The roller rotates performing a number of functions, among others, to spread the lather evenly in front of the blade of the razor and to work the same backwards and forwards into the roots of the hair, and secondly, the action of the walls of the grooves, due to their particular formation, is to massage and stretch the skin. The effect of this is to make shaving easier and more comfortable. Of course, when the roller is used as an actuating means the cam surfaces 6 actuate the moving mechanism as disclosed in the original application, of which this is a division.

Having thus fully described the invention, what is claimed as new and desired to be secured by Letters Patent of the United States is:

1. As an article of manufacture, an element of a safety razor comprising a cylindrical body having means for attachment to a razor head, said body containing a plurality of independent circumferential grooves diminishing in cross-section towards their bottoms, each groove being laterally sinuous and completely circuitous and a plurality of shallow longitudinal channels formed in said body intermediate the grooves, said grooves being spaced apart a distance at least twice their width.

2. As an article of manufacture, an element of a safety razor comprising a cylindrical body having means for attachment to a razor head, said body containing a plurality of independent circumferential grooves diminishing in cross-section towards their bottoms, each groove being laterally sinuous and completely circuitous, the convex elements of the groove walls disposed opposite the concave walls of the adjacent grooves, a plurality of shallow longitudinal channels formed in said body intermediate the grooves, and a cam formed with said body adjacent each of its ends.

3. As an article of manufacture, an element of a safety razor having means for rotatable attachment to a razor head, comprising a cylindrical body having a cam at each end and provided with sinuous channels of arcuate cross-section.

VICTOR T. VAN SLYKE.