June 30, 1925. 1,544,112

E. Q. SULLIVAN

SAFETY RAZOR

Filed April 4, 1922

Fig. 1.

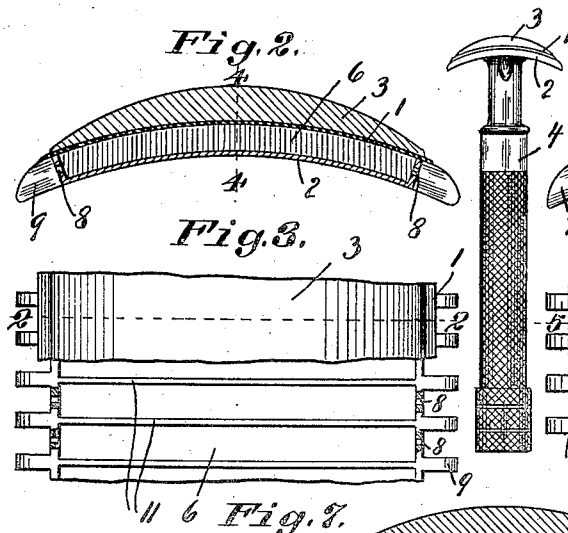


Fig. 2.



Fig. 6.

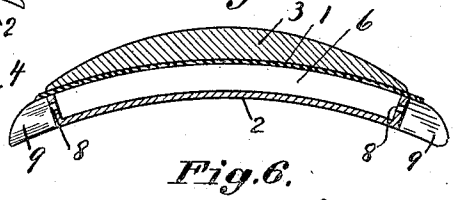


Fig. 3.



Fig. 6.

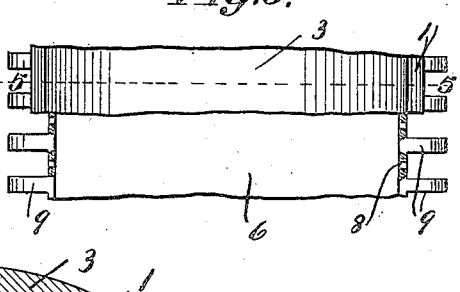


Fig. 7.

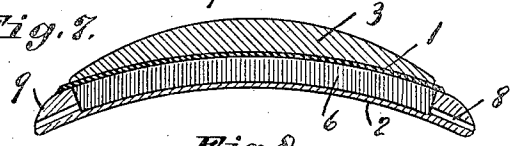


Fig. 4.

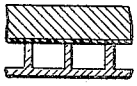


Fig. 8.

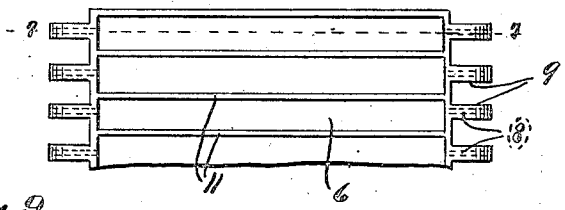


Fig. 9.

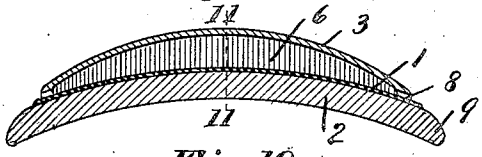


Fig. 12.

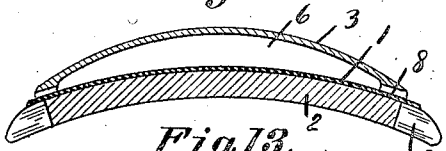


Fig. 10.

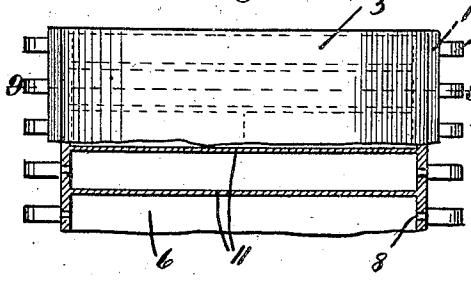


Fig. 13.

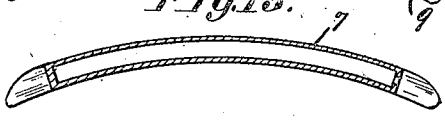
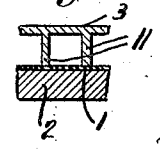


Fig. 11.



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# UNITED STATES PATENT OFFICE.

EDWIN Q. SULLIVAN, OF RED BLUFF, CALIFORNIA.

## SAFETY RAZOR.

Application filed April 4, 1922. Serial No. 549,432.

*To all whom it may concern:*

Be it known that I, EDWIN Q. SULLIVAN, a citizen of the United States, and a resident of Red Bluff, county of Tehama, and State of California, have invented a new and useful Safety Razor, of which the following is a specification.

The present invention relates to improvements in razors and its particular object is to provide means in connection with the safety razors now commonly used for delivering liquid to the face in close proximity to the cutting edge of the razor blade during the shaving operation. It is proposed to provide a container for this liquid in the member or members holding the blade and cause the same to be fed by capillary action.

With this object in view I have illustrated the preferred forms of my invention in the accompanying drawing in which Figure 1 shows a side elevation of a well-known type of razor; Figure 2 is a cross section along line 2—2 of Figure 3 through the blade holding device provided with my improvement; Figure 3 a top plan view of the blade holding device, certain portions being broken away; Figure 4 a vertical cross-section along line 4—4 of Figure 2; Figure 5 a cross-section along 5—5 of Figure 6; Figure 6 a top plan view of the blade holding device showing a slightly modified form, Figure 7 a cross-section along line 7—7 of Figure 8; Figure 8 a top plan view of a blade holding member provided with my improvement; Figure 9 a cross-section along line 9—9 of Figure 10; Figure 10 a top plan view of the blade holding device showing a modified arrangement of my container; Figure 11 a cross-section along line 11—11 of Figure 9; Figure 12 a cross-section through a further modification and Figure 13 a cross-section through a still further modification. While I have shown a number of different forms in which my idea may be reduced to practice I wish to have it understood that various other changes or modifications may be made within the scope of the claims hereto attached without departing from the spirit of the invention.

In Figure 1 is shown a side elevation of a well-known type of razor consisting of the blade (1) compressed between a base (2) and a cap (3), a handle (4) engaging a threaded member projecting from the cap and extending through the blade and the base so as to firmly engage the base with the cap and to hold the blade between the same. The construction thus far described does not offer any novel features.

My improvement consists in providing a container for a liquid within this blade holding device and means for allowing this liquid to be delivered to the face to be shaved by capillary action. The container (6) may assume various forms and may comprise a recess in the base as shown in the forms illustrated in Figures 2 to 8 or a recess in the cap as illustrated in Figures 9 to 12. In all these above mentioned modifications the container is a mere recess in either cap or base requiring the co-operation of the blade (1) for closing the same. In the modification shown in Figure 13 the top wall (7) is provided in the base for closing the recess.

It should be realized that all the detail views shown in the drawings are enlarged considerably; in reality the recesses or containers are of very slight depth so as to be subject to capillary action. In other words the recesses or containers should be so formed that when submersed in water or any other liquid they will draw the latter into the recesses or containers through the ports (8) and hold it there until the liquid is withdrawn when the teeth (9) slide over the face to be shaven. To accentuate this capillary action I provide in some forms the longitudinal ribs (11) which cause the container to be divided in a plurality of compartments lending themselves more readily to capillary action.

The ports (8) may be arranged in various ways. They may lead to the spaces between the teeth (9) as shown in Figures 3 and 6 or they may lead through the teeth to their points as shown in Figures 7 and 8. If the container is in the cap the ports will lead to the edge of the blade as shown in Figures 9 and 12.

Thus the principle involved in the present invention may be expressed in various ways and it should be remembered that the principal feature of the device is the providing of a container within the blade holding device in such a manner that it can be filled by capillary action and that it will feed the liquid to the face to be shaven in operative proximity to the cutting edge of the blade during the shaving operation, also by capillary action.

I claim:

1. A safety razor of the character de-

scribed comprising a razor blade, two clamping members contacting the blade from opposite sides and means for clamping the members upon the blade, one of the clamping members being formed with a shallow recess in its contacting face allowing the bottom of the recess and the blade to cooperate in drawing in and dispensing a liquid by capillary action.

2. A safety razor of the character described comprising a razor blade, two clamping members contacting the blade from opposite sides and means for clamping the members upon the blade, one of the clamping members being formed with a shallow recess in its contacting face with the bottom of the recess arranged parallel to the blade to allow the same to cooperate with the blade in drawing in and dispensing a liquid by capillary action.

3. A safety razor of the character described comprising a razor blade, two clamping members contacting the blade from opposite sides and means for clamping the members upon the blade, one of the clamping members being formed with a shallow recess in its contacting face allowing the bottom of the recess and the blade to cooperate in drawing in and dispensing a liquid by capillary action, small openings in the wall of the recess providing intake and discharge ports.

4. A safety razor of the character described comprising a razor blade, two clamping members contacting the blade from opposite sides and means for clamping the members upon the blade, one of the clamping members being formed with a shallow recess in its contacting face with the bottom of the recess arranged parallel to the blade to allow the same to cooperate with the blade in drawing in and dispensing a liquid by capillary action, small openings in the wall of the recess providing intake and discharge ports.

EDWIN Q. SULLIVAN.