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SAFETY RAZOR

2,444,105

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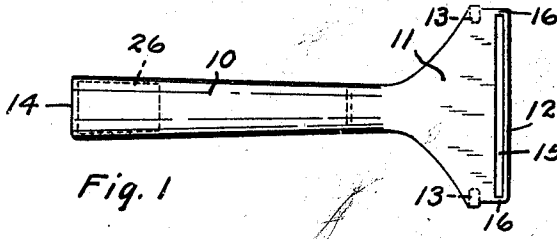


Fig. 1

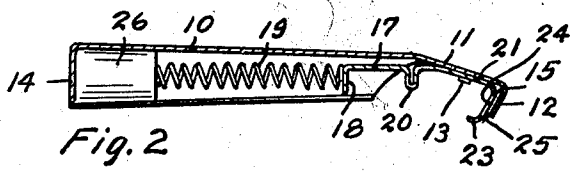


Fig. 2

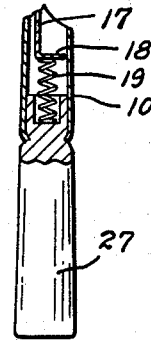


Fig. 6

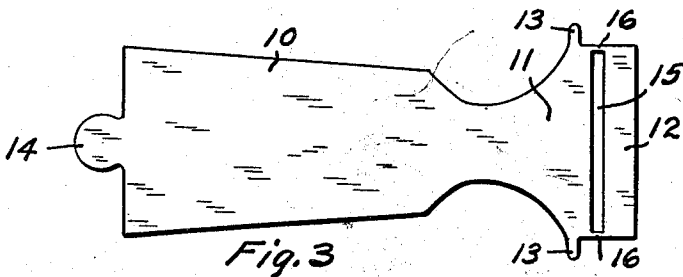


Fig. 3

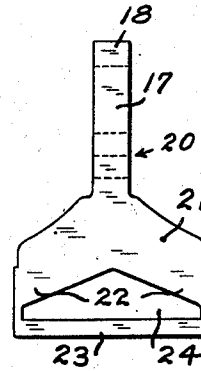


Fig. 4

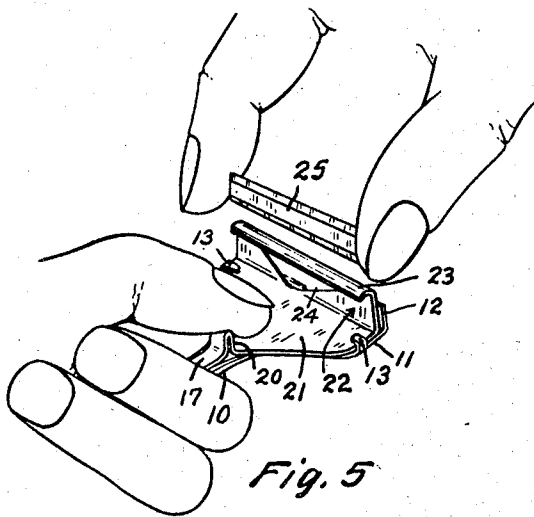


Fig. 5

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SAFETY RAZOR

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5 Claims. (Cl. 30-51)

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My invention relates to a safety razor and my present invention is in the nature of an improvement on the safety razor disclosed in my Patent No. 2,345,492 issued March 28, 1944.

An object of this invention is to provide a safety razor that is simple and inexpensive in construction, that has very few moving parts, that is highly efficient in operation, and one in which a blade can be very quickly and easily inserted into or removed from the razor without danger of cutting the hands.

Another object is to provide a safety razor that can be made from either metal or molded plastic or from part metal and part plastic.

Another object is to provide a safety razor of relatively small size that is convenient to shave with and that can be easily used for shaving parts of the face, such as portions of the upper lip around and under the nose, that are difficult to properly shave with a larger and more cumbersome razor.

Another object is to provide a safety razor and blade therefor in which the amount of steel per shaving edge required in the blades used in the razor is reduced to a minimum, said blades being relatively narrow and thin and each blade, preferably though not essentially, being of the double-edge type.

Other objects of the invention will be apparent from the following description taken in connection with the accompanying drawings.

In the drawings Figure 1 is a plan view showing the back of a safety razor constructed in accordance with this invention.

Fig. 2 is a longitudinal sectional view of the same taken on broken line 2-2 of Fig. 1.

Fig. 3 is a plan view of a stamped out piece of metal from which one part of the razor is formed.

Fig. 4 is a plan view of a stamped out piece of metal from which another part of the razor is formed.

Fig. 5 is a perspective view illustrating a preferred manner of inserting a blade in this razor.

Fig. 6 is a sectional view of a razor having a handle of modified form.

Like reference numerals designate like parts throughout the several views.

The razor shown in Figs. 1 to 5 is of three piece construction and is entirely free from screw threaded and hinged parts. This razor comprises a main frame portion and a blade holding and guard portion which, after they are stamped out and before they are bent have the respective shapes shown in Figs. 3 and 4 respectively.

The main frame portion comprises a handle part 10, a head part 11, a blade holding end part 12, two side lugs 13 and a closure member 14 for the outer end of the handle. A transverse slot 15 is provided between the head part 11 and end part 12. The slot 15 terminates short of the sides

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of the parts 11 and 12 to leave narrow connecting portions 16 which serve as stop members and positioning members for a blade 25. The slot 15 forms an opening across the razor at the location where the edge of the blade 25, that is not in use is positioned. This makes it possible to use a double edged blade 25 without danger of dulling the shaving edge of the blade adjacent to this slot 15. The corners of the blade 25 will engage with the stop members 16 but this will not objectionably damage the shaving edge of the blade.

In its final shape the handle 10 is of cylindrical cross section, larger at its outer end and tapered so it can be more firmly gripped. The body portion 11 is flat and inclined at a convenient angle preferably of from ten to twenty degrees to the axis of the handle. The blade holding part 12 is flat and the connecting parts 16 are bent through angles of more than ninety degrees so that the part 12 is preferably positioned at an acute angle in the order of sixty degrees relative to the axis of the handle.

The blade holding and guard member has a stem portion 17 provided with an outer end portion 18 bent substantially at right angles to the portion 17 and adapted to engage with a compression spring 19 in the handle 10. The stem portion 17 is further bent or crimped to form a thumb lug 20 by which the blade holding and guard member can be retracted as shown in Fig. 5.

The main body portion 21 of the blade holding member is flat and of the same shape as the frame part 11 and underlies said frame part 11. The lugs 13 on the part 11 extend downwardly and under the part 21 and serve as guide and holding means for slidably supporting the part 21 of the blade holding member.

Forwardly of the body part 21 is a blade engaging member 22 which terminates in a rearwardly bent and upwardly curved guard member 23. A relatively large opening 24 preferably of triangular shape is provided in the part 22 to permit the escape therethrough of whisker-bearing lather or shaving cream.

The spring 19 urges the blade holding member toward the part 12 of the main frame member to clamp a blade 25. As the spring 19 can be relatively short I preferably provide a filler member 26 in the outer end portion of the handle 10.

Fig. 6 shows a handle of modified construction. In this figure a portion 10 of the handle is made relatively short and a handle member 27 of molded plastic or like material is secured thereto.

This razor is of small size, is light in weight, is convenient to handle and shave with, is not expensive to make and is very easy to handle in the insertion and removal of blades.

The blades are of small size and preferably but not essentially each blade has two shaving edges. To insert a blade the user preferably grasps the

razor with one hand with the guard member 23 uppermost as shown in Fig. 5, places a thumb or finger on the lug 20, retracts the member 22 relative to the member 12, inserts the blade 25 with the other hand and releases the lug 20 to allow the members 22 and 12 to clamp the blade. In inserting the blade 25 said blade is held between a thumb and a finger, which are pressed against opposite ends of the blade, and there is very little danger of cutting the hands on the blade. To remove a blade the razor is turned with the guard member 23 downward, the member 22 is retracted from the member 12 and the blade is allowed to drop out or is shaken or jarred out of the razor.

Obviously changes in this razor may be made within the scope and spirit of the following claims.

I claim:

1. A safety razor comprising a handle; a relatively wide flat head part rigid with one end portion of said handle; a blade support rigid with said head part and extending sidewise therefrom; downwardly and inwardly extending side lugs provided on the lateral edges of said head part; a flat plate member positioned against the inner side of said head part and supported by said side lugs for longitudinal movement relative to said head part and said blade support; a blade clamping member rigid with the forward end portion of said plate member and extending sidewise therefrom parallel to said blade support; a rearwardly extending blade guard carried by said blade clamping member; and spring means urging said blade clamping member toward said blade support, whereby a razor blade can be clamped between said blade clamping member and said blade support.

2. A safety razor comprising a tubular handle; a relatively wide flat head part rigid with one end portion of said handle; a blade support rigid with said head part and extending sidewise therefrom; a flat plate member positioned against the under side of said head part and supported for longitudinal movement relative to said head part and said blade support; a blade clamping member rigid with the forward end portion of said plate member and extending sidewise therefrom in parallel relation to said blade support; a rearwardly extending blade guard carried by said blade clamping member; a shank on said plate member extending into said tubular handle; and a compression spring in said tubular handle exerting a yielding pressure on said shank.

3. A safety razor comprising a tubular handle; a relatively wide flat head part rigid with one end portion of said handle; a blade support rigid with said head part and extending sidewise therefrom; a flat plate member positioned against the under side of said head part and supported for longitudinal movement relative to said head part and said blade support; a blade clamping member rigid with the forward end portion of said plate member and extending sidewise therefrom in parallel relation to said blade support; a rearwardly extending blade guard carried by said blade clamping member; a shank on said plate member extending into said tubular handle; a compression spring in said tubular handle exerting an outward pressure on said shank to yieldingly urge said blade clamping member against said blade support; and a thumb

piece on said shank whereby said blade clamping member may be retracted against the pressure of said spring.

4. A safety razor comprising a handle; a relatively wide flat head part rigid with one end portion of said handle; a blade support rigid with said head part and extending sidewise therefrom; a transverse blade clearance slot provided at the junction of said head part and said blade support, said slot terminating a short distance from the edges of said head part and said blade support to thereby leave relatively narrow pieces of material that connect the head part and the blade support and that form blade stop members positioned to engage with the corner portions of a razor blade; a flat plate member positioned against the inner side of said head part and supported for longitudinal movement relative to said head part and said blade support; a blade clamping member rigid with the forward end portion of said plate member and extending sidewise therefrom in parallel relation to said blade support; a rearwardly extending blade guard carried by said blade clamping member; and spring means urging said blade clamping member toward said blade support to thereby clamp a razor blade therebetween.

5. A safety razor comprising a tubular handle; a relatively wide flat head part carried by one end portion of said handle; a blade support integral with said head part and extending sidewise therefrom; a transverse blade clearance slot provided at the junction of said head part and said blade support, said slot terminating a short distance from the respective lateral edges of the head part and blade support to leave relatively narrow pieces of material that connect the head part and the blade support and that form blade stop members positioned to engage with the corners of a blade; downwardly and inwardly extending side lugs provided on the lateral edges of said head part; a flat plate member positioned against the inner side of said head part and supported by said side lugs for longitudinal movement relative to said head part and said blade support; a shank on said plate member extending into said handle; a compression spring in said handle yieldingly urging said shank and said plate member outwardly; a blade clamping member integral with the forward end portion of said plate member and extending sidewise therefrom and disposed substantially parallel with said blade support for cooperation therewith to clamp a blade, said blade clamping member having a lather discharge opening therein; a thumb piece on said shank whereby said blade clamping member may be retracted against the pressure of said spring; and a rearwardly and upwardly curved blade guard carried by said blade clamping member.

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REFERENCES CITED

The following references are of record in the file of this patent:

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