March 28, 1944. H. MILLER 2,345,492

SAFETY RAZOR

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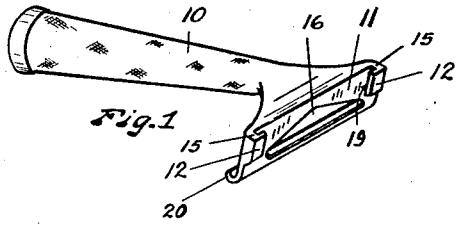


Fig. 1

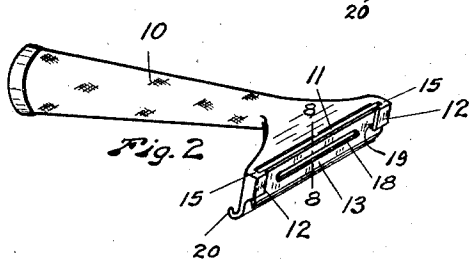


Fig. 2

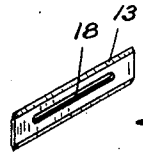


Fig. 3

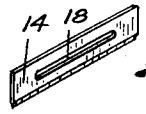


Fig. 4

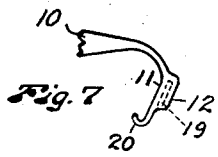


Fig. 7

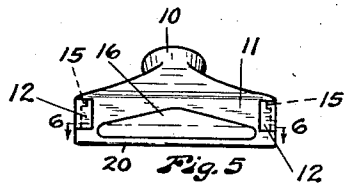


Fig. 5

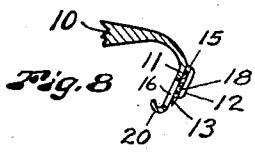


Fig. 8
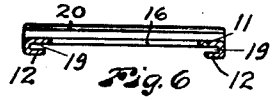


Fig. 6

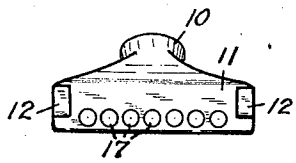


Fig. 9

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SAFETY RAZOR

Henry Miller, Seattle, Wash.

Application June 23, 1943, Serial No. 492,168

2 Claims. (Cl. 30—62)

This invention relates to safety razors and blades therefor and a general object of this invention is to provide a safety razor which does not require any metal in its construction and to provide a blade in which the requirements for steel per shaving edge of the blade have been reduced to a minimum.

Another object is to provide a safety razor that is extremely simple and inexpensive in construction, that is totally free from working parts, such as hinged joints, screw threaded members and the like, and one that can be made entirely of non-metallic material, such as molded plastic.

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.

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 that is free from working parts and one in which a blade can be quickly and easily inserted or removed without manipulating any relatively movable razor parts and one in which the blade will be accurately positioned and firmly held while in the razor.

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

In the drawing

Figure 1 is a perspective view of a safety razor constructed in accordance with my invention, showing the razor without any blade in it.

Fig. 2 is a similar perspective view of the razor showing a double edged blade in operative position therein.

Fig. 3 is a detached perspective view of a double-edged blade adapted for use in my razor.

Fig. 4 is a detached perspective view of a single-edged blade adapted for use in my razor.

Fig. 5 is an end view of my razor with a blade therein.

Fig. 6 is a sectional view of said razor taken substantially on broken line 6—6 of Fig. 5 and showing the blade holding clips on the razor.

Fig. 7 is a fragmentary side elevation of my razor with the blade omitted.

Fig. 8 is a fragmentary sectional view of said razor taken substantially on broken line 8—8 of Fig. 2 and showing a blade in the razor.

Fig. 9 is an end view of a slightly modified form of razor.

Like reference numerals designate like parts throughout the several views.

The razor shown in the drawing is of one piece construction and, in the interest of conserving metal, is preferably formed of a molded plastic, such as "Bakelite," "tenite" or "lucite" or similar material. However it will be understood that this razor will still have all of its desirable characteristics of operation if it is formed of metal and that only a small amount of metal will be required in its construction.

This razor comprises a handle portion 10 and a guard member 11. The handle 10 may be of any desired shape and size for convenient gripping and handling and is preferably scored or otherwise irregularly shaped so that it will not readily slip in the hand when in use.

The guard member 11 is flat on the rear or outer side and is provided near its respective ends with two inwardly protruding hook shaped clip members 12 that are spaced from the guard member 11 to provide grooves 19 for the reception of the end portions of either a double-edged blade 13 of the form shown in Figs. 2, 3 and 8 or a single-edged blade 14 of the form shown in Fig. 4.

The grooves 19 are open and unobstructed at the bottom of the clip members 12, as shown in Figs. 1 and 6 so that a blade may be slipped upwardly into said grooves 19. A stop and positioning member 15 of less width than the clips 12 is provided at the tops of the grooves 19 between the top portion of each clip and the guard member 11. These step members 15 are best shown by dotted lines in Fig. 5. Said stop members 15 are relatively narrow so that they will only be engaged by a very small portion of the corners of the blade. This avoids any objectionable dulling of the blade through contact with these stop and positioning members 15 when double-edged blades are used.

The portion of the guard member 11 against which the blade rests has one or more openings therein through which the whisker-bearing lather or shaving cream may pass when the razor is being used for shaving. This obviates clogging of the razor when in use. A single large

opening 16 is shown in the guard member in Figs. 1, 5, 6 and 8, while a plurality of smaller openings 17 are shown in the guard member 11 illustrated in Fig. 9.

A curved pressure bar and face guard 20 is provided at the cutting edge of the guard member 11. When the razor is in use this pressure bar 20 depresses and stretches the skin in advance of cutting edge of the blade. This facilitates better and cleaner shaving and reduces the danger of cutting the skin.

Each blade, whether of the double-edged or single-edged type is preferably provided with a longitudinally extending slot 18 which is wide enough to receive the thumb nail of the user. This slot facilitates insertion and removal of the blade as respects the razor. The slot 18 is not wide enough to seriously impair the stiffness of the blade.

The clips 12 are somewhat resilient and are set close enough to the head 11 so that they will frictionally grip and hold a blade that has its end portions inserted under these clips.

The blade is inserted from below the clips 12 by placing the blade flatly against the guard member 11 and pushing said blade upwardly into the position shown in Figs. 2 and 8 in which the corner portions of the upper edge of the blade are stopped by engagement with the stop members 15 and the blade is thus properly positioned. When inserting the blade in the razor the upward pressure required to slide the end portions of the blade upwardly between the resilient clips 12 and guard member 11 is preferably exerted by engaging the thumb nail in the slot 18.

The blade is very quickly and easily removed from the razor by inserting the thumb nail in the slot 18 and exerting a downward pull on the blade.

The razor is small in size, light in weight and very convenient to handle in shaving. The small size of the razor makes it particularly convenient and efficient in shaving parts of the face around the nose that are not readily accessible to larger safety razors.

This razor can be made of molded plastic at a very low cost and thus makes possible the construction of a non-metallic article for a use for which metal articles have ordinarily been employed.

The blades are small and narrow and each blade preferably has two shaving edges thereby reducing to a minimum the amount of steel required per shaving edge of blade. In practice a double-edged blade for this razor does not need to be more than five sixteenths of an inch wide and one and one half inches long. A blade of this size has in it only about one half as much steel per shaving edge as the smallest safety razor blades now in common use.

The foregoing description and accompanying drawing clearly disclose a preferred embodiment of this invention but it will be understood that this disclosure is merely illustrative and that changes in this invention may be made within the scope and spirit of the following claims.

I claim:

1. In a razor, a relatively flat guard member; a handle connected with said guard member; an inwardly extending resilient blade receiving clip at each lateral edge portion of said guard member extending throughout the major portion of the width of said guard member and cooperating with said guard member to form a blade receiving groove that is open at the bottom to slidably and frictionally receive the edge portion of a blade member; and a stop and positioning member at the upper end portion of each groove positioned to engage with the corners of the upper edge portion of a blade.

2. In a razor and blade therefor, a relatively flat guard member; an inwardly extending blade receiving clip at each lateral edge portion of said guard member cooperating with said guard member to form a blade receiving groove; and a blade of slightly greater thickness than the width of said groove adapted to have its end portions received within said groove, said blade member having a longitudinally extending slot therein to receive the thumb nail whereby pressure may be exerted on said blade to insert said blade member in or withdraw said blade member from said grooves.

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