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SAFETY RAZOR WITH ANGULARLY ADJUSTABLE HANDLE

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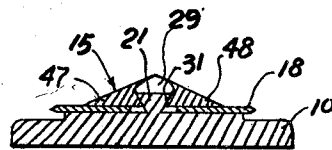
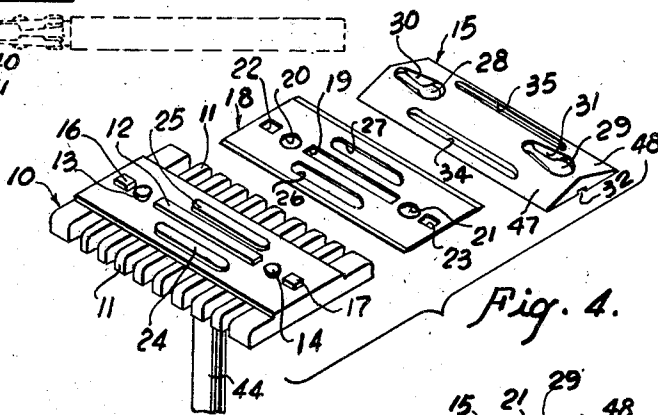
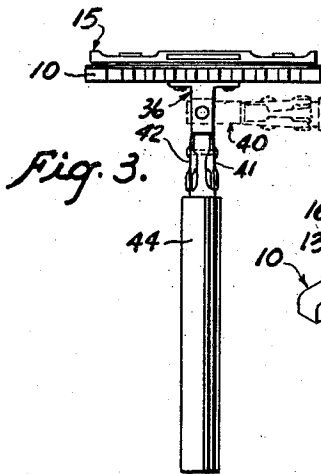
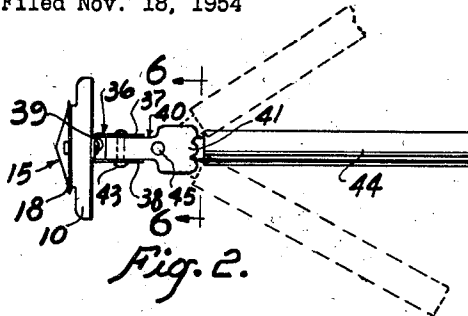
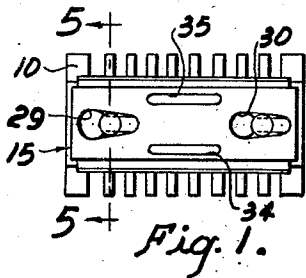


Fig. 5.

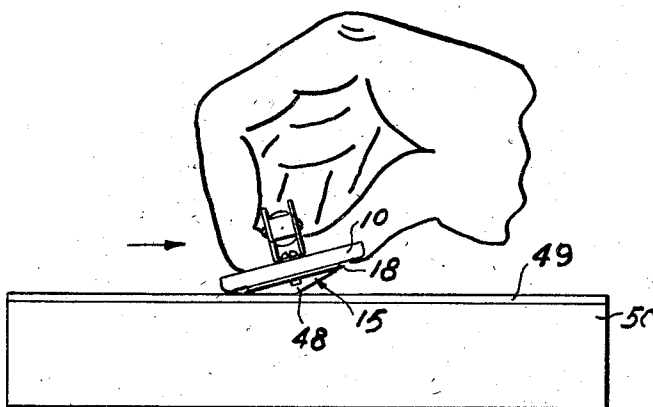


Fig. 7.

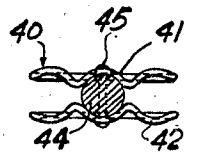


Fig. 6.

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## SAFETY RAZOR WITH ANGULARLY ADJUSTABLE HANDLE

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5 Claims. (Cl. 30—67)

This invention relates to a safety razor construction. It is an object of the present invention to provide a safety razor wherein the handle can be angled with respect to the blade in order to adapt the handle for use in operating the blade and the guard plate parts over a strap or sharpening surface conveniently and in a manner such as to apply a sharpening operation upon the edge of the blade.

It is another object of the invention to provide a safety razor construction wherein the handle can be adjusted relative to the blade guard plates to extend downwardly relative to the cutting edge of the blade so that a better angle of the cutting edge on the face can be effected than where the handle is rigid and fixed.

It is another object of the present invention to provide a safety razor construction wherein the blade will be held with additional force between the clamping plates so as to render the safety razor available as a holder for the blade to effect a positive and effective sharpening operation upon the blade.

It is still a further object of the invention to provide a top guard plate which is connected to the inner guard plate by wedge means including keyhole slots and in such a manner that the guard plate can be loosened by, or attached to, the inner guard plate by a mere sliding action of the guard plate over projections rising from the attaching face of the plate.

It is a still further object of the invention to provide a razor construction wherein the outer guard plate is provided with two inclined surfaces that extend at such an angle as to properly locate the cutting edge of the blade upon the strop and without need for positioning the cutting edge of the blade by guess, the sharpening angle thereby being predetermined and fixed.

Other objects of the invention are to provide a safety razor construction having the above objects in mind which is of simple construction, has a minimum number of parts, durable, compact, easy to operate, of pleasing appearance, efficient and effective in use.

For a better understanding of the invention, reference may be had to the following detailed construction taken in connection with the accompanying drawing, in which:

Figure 1 is an end view of the razor looking upon the outer clamping plate with a blade secured in place therein;

Fig. 2 is a side elevational view of the safety razor construction with illustration made as to the manner in which the handle may be angled downwardly or upwardly from the edge of the blade to adapt the same for a better cutting position upon the face;

Fig. 3 is an elevational view of the razor construction with illustration made as to the manner in which the handle is angled relative to the clamping plates and blade at the time the handle is to be used as a holder for effecting the sharpening of the blade over a strop or surface for sharpening;

Fig. 4 is an exploded perspective view of the clamp parts and of one of the blades;

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Fig. 5 is an enlarged transverse sectional view taken through the clamping plate and on line 5—5 of Fig. 1;

Fig. 6 is an enlarged sectional view taken through the handle and looking in elevation upon the retaining clamp for the handle, the view taken on line 6—6 of Fig. 2;

Fig. 7 is an end elevational view of the safety razor with illustration made as to the manner in which it is applied to the strop or sharpening surface, the hand being illustrated and its direction of movement for the safety razor and the tilted position of the safety razor upon the strop.

Referring now particularly to the figures, 10 represents a guard plate having a plurality of teeth 11 along each edge thereof that are applied to the skin surface as the razor is used. This plate 10 serves as the inner guard. A large bead or projection 12 extends longitudinally of the guard plate and intermediate the length thereof. At the opposite end of this projection are respectively raised attaching formations 13 and 14 for receiving outer guard plate 15 in a manner to be soon described. Outwardly of the respective attaching projections 13 and 14 are respectively further raised formations 16 and 17 to give further support to a safety razor blade 18 that respectively has an elongated opening 19 centrally thereof for receiving the projection 12, round openings 20 and 21 for receiving respectively the attaching projections 13 and 14, and substantially square openings 22 and 23 lying respectively outwardly beyond the round openings 20 and 21 and adapted to receive respectively the short square projections 16 and 17.

Also upon the surface of the guard plate 10 and running parallel to the central elongated bead 12 are parallel beads 24 and 25 which will further steady the blade to render the construction safe for use in the sharpening of the blade and which respectively extend through parallel elongated openings 26 and 27 of the blade 18.

With the blade in place upon the inner guard 10, the outer guard 15 is slid into place so that its key openings 28 and 29 respectively receive the attaching projections 13 and 14 and wherein, by a wedging action, as the guard 15 is slid endwise, there is effected by the sides 30 and 31 of the respective openings 28 and 29 as the guard plate is slid home upon the projections 13 and 14 and over the blade 18 to hold the blade against outward displacement from the inner guard plate 10.

The underside of the outer guard plate 15 has a central groove 32 to accommodate the several projections 12, 13, 14, 16 and 17 on the inner plate 10 and slots 34 and 35 for respectively receiving the raised parallel projections 24 and 25. It will be apparent that a rigid clamping action is effected upon the blade 18 so that it will be adequately held at times when the safety razor is being used as a holder for sharpening the blade.

In order to adapt the safety razor for use in sharpening the blade as illustrated in Fig. 6, there is attached to the inner clamp plate 10 a bracket 36 having parallel legs 37 and 38. This bracket is secured to the plate 10 by fastening screws 39.

Fitted into the bracket 36 and between the legs 37 and 38 thereof is an adapter 40 that has extending therefrom parallel quadrant sectors 41 and 42. The adapter 40 is pivotally secured to the legs 37 and 38 by a pivot pin 43 and a handle 44 is pivotally connected between the parallel sectors 41 and 42 by a pivot pin 45 that extends at right angles to the pivot pin 43.

To adapt the safety razor construction for effecting the sharpening operation, the handle 44 and the adapter 40 are pivoted upon the pin 43 so as to extend co-extensively with the inner plate 11. The construction will be ready to be used as shown in Fig. 7. The outer guard plate 15 has inclined surfaces 47 and 48 extending

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at opposite angles which will serve to guide the razor over a strop 49 carried on a base 50.

The segments 41 and 42 of the adapter 40 are curved at three stations and oppose one another so that the handle 44 will be retained in either of three stations or to one side or the other from an intermediate or central station.

At times when it is desired to provide a better cutting angle for the blade upon the face, any one of two positions may be used so as to extend downwardly from the cutting edge of the blade, as shown in Fig. 2. This will provide a better angle of the cutting edge of the blade upon the face.

It should now be apparent that there has been provided a safety razor construction which is adaptable to adapt the same holder for effecting the sharpening of the blade and wherein not only can the handle be angled with respect to the guard plate but also can be angled with respect to the blade upon the face.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

What is claimed is:

1. A safety razor construction comprising an inner guard plate having an outer blade engaging face with attaching projections thereof, an outer guard plate having openings for engaging said attaching projections and adapted to fit over the blade engaging surface and to retain a blade thereupon, a razor handle and means for connecting said handle to said inner guard to permit angular adjustment of the handle relative thereto, said adjustable connecting means including a bracket having inwardly extending legs spaced from one another, and an adapter member extending between the legs and pivotally connected thereto for adjustment to extend the handle co-extensively with the inner guard member, said adapter in turn having separated portions, said handle disposed between said separated portions and pivotally connected to the adapter at an angle ninety degrees from the pivotal connection of the adapter to the bracket.

2. A safety razor construction comprising an inner guard plate having an outer blade engaging face with attaching projections thereon, an outer guard plate having openings for engaging said attaching projections and adapted to fit over the blade engaging surface and to retain the blade thereupon, a razor handle and means for connecting said handle to said inner guard to permit angular adjustment of the handle relative thereto, said blade engaging face having projections centrally aligned with the attaching projections and further elongated projections outwardly spaced from said central projections and parallel thereto to accommodate spaced parallel openings of a blade, said guard plate having a groove for receiving the central projections and slots for receiving the outwardly spaced projections of the blade engaging surface.

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3. A safety razor construction comprising an inner guard plate having an outer blade engaging face, an outer guard plate adapted to fit over said blade engaging surface and to retain a blade thereupon, means for securing said outer guard plate to said inner guard plate, a bracket secured to the inner face of said inner guard plate, an adapter pivotally connected to said bracket, said adapter having separated portions, a handle disposed between said separated portions and pivotally connected to said adapter at an angle of ninety degrees from the pivotal connection of said adapter to said bracket, the separated portions of said adapter having three opposing pairs of curved sections whereby said handle may be retained in angled positions.

4. A safety razor construction as defined in claim 1, and said separated portions of said adapter being relieved at three angular stations to retain the handle in any one of three positions, whereby said handle may be angled downwardly from the blade edge to make for a better cutting angle of the blade with the face while grasping the handle with the arm down.

5. A safety razor construction comprising an inner guard member having an outer blade engaging surface, attaching projections on said blade engaging surface, parallel elongated projections on said blade engaging surface, an outer guard member having spaced keyhole openings with inclined engaging surfaces for receiving said projections to hold the outer guard member upon said inner guard member and a blade clamped thereto, said outer guard member having inclined surfaces extending from the center thereof and downwardly toward the blade edges to serve as a rest upon the blade being drawn over a sharpening surface to effect the sharpening of the razor edge, a bracket having leg portions spaced from one another and secured to said inner guard member, an adapter extending between said leg portions and a pivot pin connecting the same thereto, said pivot pin extending transversely of the inner guard member to permit the adapter to be adjusted to a position running co-extensively with the inner guard member, said adapter having quadrant portions spaced from one another, a handle pivotally connected to said adapter between said quadrant portions whereby said handle can be adjusted to an angle downwardly from the edge of the blade retained by the guard members in order that the arm may be held down while shaving with the razor.

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