Oct. 30, 1934. J. C. CHALMERS 1,978,857

RAZOR BLADE HOLDER

Filed Oct. 3, 1933

Fig. 1

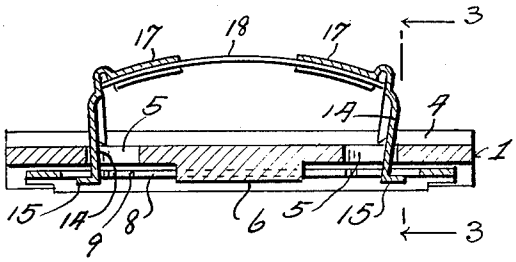


Fig. 3

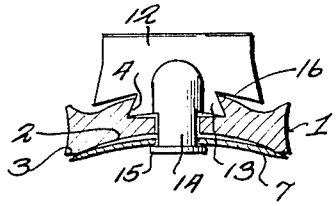


Fig. 2

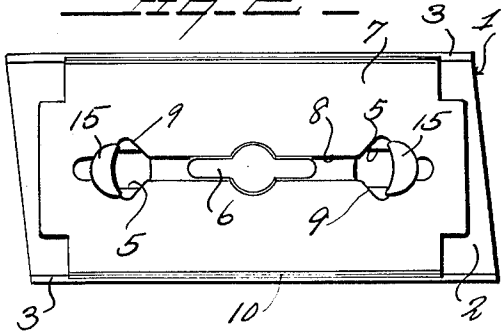


Fig. 4

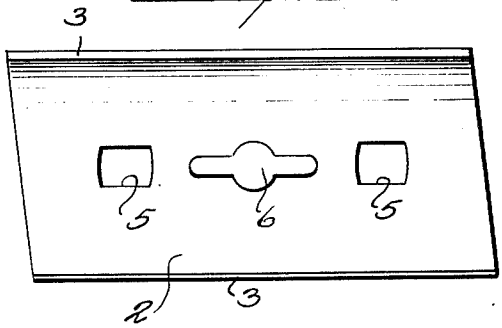


Fig. 6

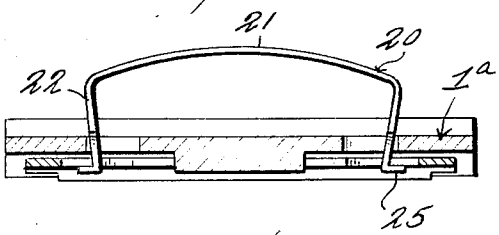


Fig. 5

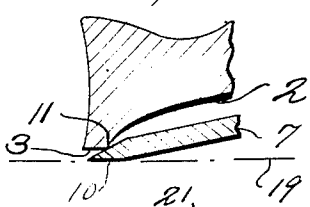


Fig. 8

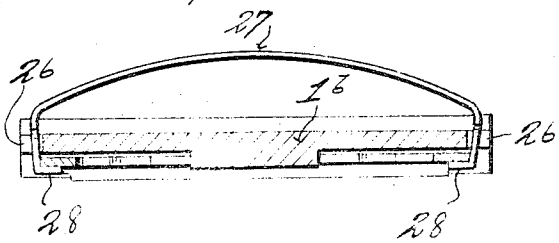
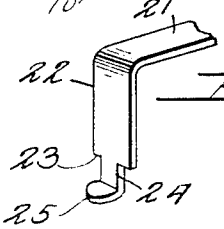


Fig. 7



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RAZOR BLADE HOLDER

James C. Chalmers, Toronto, Ontario, Canada

Application October 3, 1933, Serial No. 691,986
In Canada November 23, 1932

7 Claims. (Cl. 51—221)

This invention relates to improvements in devices for sharpening safety razor blades and pertains particularly to a novel holding device for the blade.

The primary object of the present invention is to provide a novel safety razor blade holder for facilitating the movement of the blade over the surface of a hone in such a manner as to evenly smooth down the beveled edge of the blade and thus thoroughly and accurately sharpen the same.

Another object of the invention is to provide a novel razor blade holder of the character described, wherein novel means is employed for retaining the blade in working position.

A still further object of the invention is to provide a novel blade holder of the character set forth wherein the blade securing means is so designed that the blade will be automatically centered and held in the proper position thereon.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:—

Figure 1 is a view in longitudinal section through a preferred form of the present invention;

Figure 2 is a view in bottom plan of the same;

Figure 3 is a sectional view taken upon the line 3—3 of Figure 1;

Figure 4 is a bottom plan view of the holder with the blade and other parts removed therefrom;

Figure 5 is an exaggerated enlargement of a section taken transversely of a portion of one edge of the holder and an adjacent portion of a blade showing the relation of these elements;

Figure 6 is a view in longitudinal section through the body of the holder and a blade showing a modified form of spring retaining means;

Figure 7 is a view in perspective of a portion of the spring retaining means shown in Figure 6;

Figure 8 is a view in longitudinal section of a modified form of blade holding body and spring retaining means, the blade being shown in longitudinal section.

Referring now more particularly to the drawing wherein like numerals of reference indicate corresponding parts throughout the several views, the numeral 1 indicates generally the body portion of the preferred form of the blade holder embodying the present invention. This body may, if preferred, be formed from pressed sheet metal bakelite or similar material but has been illustrated as being in the form of a solid or cast block. As shown, the body is elongated having parallel side edges and the under face is transversely arched as indicated at 2 and provided with the flat narrow surfaces 3 at each side of the arched portion. These flat surfaces are in the same plane and extend transversely of the bottom of the body.

In the back surface of the body 1 there is formed the longitudinally extending dove-tail shaped channel 4 and opening into this channel and extending transversely through the body are the spaced slightly elongated openings 5. These openings 5 are upon the longitudinal center of the body and disposed between them upon the convex under surface and also extending longitudinally of the body is the elongated rib 6 which engages in the central portion of that type of double edged safety razor blade which is provided with a central slot terminating in enlarged end openings. Such a blade is indicated by the numeral 7 and the central slot and enlarged end openings thereof are indicated respectively by the numerals 8 and 9. The beveled edges of this blade are indicated by the numeral 10 and as is shown in Figures 2 and 3 when the blade is in position before the convexed bottom surface of the body 1 with the rib 6 engaging in the slot 8, one beveled face of each edge rests against the corner 11 which is formed at the point of joinder between the surfaces 2 and 3, after the blade has been flexed in being secured in position in the manner hereinafter described. This brings each edge of the blade in spaced relation with the adjacent flat surface 3 of the holder and positions such edge slightly inwardly of the outer corner of the surface 3 as is clearly illustrated in Figure 5.

Disposed transversely of the back of the holder 1 and in spaced relation, are the plates 12 each of which is provided with the dove-tail shaped tongue 13 which engages in the groove 4 in the manner illustrated in Figure 3. From the central part of the tongue 3 there extends downwardly the integral leg 14 which passes through an opening 5 and is provided upon its lower end with the angularly extending foot 15 which engages the surface 2 adjacent the sides of the opening 5 through which the leg passes. This foot 15 is brought into position by initially positioning the plate 12 to extend longitudinally in

the channel 4 so that the foot may readily pass through the opening 5 and then turning the plate to extend transversely of the body 1. The tongue 13 is of less width than the plate so that there are thus formed bottom edge shoulders 16 which oppose the top or back surface of the body and permit limited rocking movement of the plates.

From the top edge of each plate there is extended an integral arm 17 which has its side edges turned inwardly to form a sleeve in which is engaged an end of a leaf spring 18. These arms are disposed at a slight obtuse angle with their respective plates 12 and the length of the spring 18 is so proportioned with respect to the space between the openings 5 that when the plates are in position the spring will be held slightly arcuately bent as shown in Figure 1 and thus retain the plates firmly in position.

As is illustrated, the foot portions 15 of the legs 14 are designed to engage in the openings 9 of a blade when the latter is placed against the surface 2 and bent inwardly at its central portion toward this surface. At the same time that the central portion of the blade is pressed or flexed inwardly toward the surface 2 the plates 12 are grasped between the fingers and forced together thus further flexing the spring 18 and causing the feet 14 to move away from the remotely related ends of the openings 5. The feet can then be made to enter the openings 9 of the blade and upon releasing the spring pressed members 12 they will be again forced outwardly and will engage the under surface of the blade and hold it firmly in the positions in which it is illustrated in Figures 2 and 3. The body is then placed upon the surface of a hone with the blade 7 beneath the body and it will be found that one beveled face of each edge of the blade will lie flat against the surface of the hone and by moving the body longitudinally transversely or using a rotating motion on the hone the proper edge will be given to the blade. The lower beveled surface of an edge of the blade is substantially parallel with the adjacent surface 3 and as will be seen upon reference to Figure 5 will rest flatly upon the hone surface which is disposed in the plane indicated by the broken line 19 in Figure 5.

In Figure 6 a modified form of spring retainer is indicated by the numeral 20, the body which is here indicated by the numeral 1^a being the same as that indicated by the numeral 1 and previously described. In this form of spring retainer there is provided a single leaf spring which comprises an intermediate arch portion 21 having the angularly bent terminal portions 22 each of which is under cut upon each edge and adjacent its free end as indicated at 23, to form the leg portions 24 and these have integrally formed therewith the outwardly directed feet 25. These feet and legs engage in the apertures 5 of the body the same as the legs and feet 14—15 previously described.

In Figure 8 a modified form of body is illustrated. The body is here indicated as a whole by the numeral 1^b and is like the bodies 1 and 1^a in all respects except in the fact that instead of having openings formed transversely therethrough inwardly of the ends, the openings are formed in the end edges of the body as indicated at 26 and the spring blade retainer, which is here indicated generally by the numeral 27, is made along the same lines as the retainer 20 except for the fact that the feet 28 are turned inwardly in opposed relation instead of outwardly in oppositely directed relation as in the spring 20.

From the foregoing it will be readily seen that the device herein described will hold a double edge safety razor blade in the proper position to bring a beveled side of each edge flat against the surface of a hone and therefore upon moving the holder and blade back and forth longitudinally, or using a rotating motion or across at right angles on the hone the edges can be worked down to the desired sharpness.

Having thus described the invention, what is claimed is:—

1. A safety razor blade holder, comprising a body having a transversely arched under surface and a flat surface extending along each side of said arched surface, said flat surfaces being in the same plane, said body further having a pair of openings formed therein on the longitudinal center thereof, and a blade holding element comprising a resilient body and leg elements extending from remote points of said body for extension through said openings and terminating in angularly extending feet adapted to position before said arched surface and to pass through apertures in and engage and secure a blade in position against the arched surface, the said body being of a width relative to the blade whereby the edge formed between the arched surface and each of the flat surfaces will contact a beveled surface forming one ground side of an edge of the blade.

2. A safety razor blade holder of the character described, comprising an elongated body having a transversely arched under surface and flat narrow areas extending longitudinally on either side of said arched surface, said body being of a width slightly greater than the width of a razor blade and having a dove-tail shaped channel formed longitudinally in its back surface and a pair of openings extending through from said channel to said arched surface, an elongated body disposed upon the back of the first body and comprising a pair of transversely extending plates each having a dove-tail shaped tongue disposed in said groove, a leg extending from said tongue through an adjacent aperture, a lateral foot integral with said leg and having a portion overlying said arched surface, said foot of each plate extending through an aperture in and engaging a blade, and a resilient connection between said plates tending to rock the same to maintain said feet in contact with a blade disposed against said arched surface.

3. A razor blade holder of the character described, comprising an elongated body having a transversely arched under surface and a flat surface extending along each side of the arched surface, said flat surfaces being in the same plane and having an edge of a double edged razor blade overlying the same when the blade is secured to the body, said body further having a pair of apertures therethrough, and a blade retainer comprising an arcuate leaf spring having terminal leg portions each adapted to pass through an opening in the body and each terminating in an angularly extending foot, a portion of which opposes said arched surface and engages a razor blade through an opening of which the adjacent leg extends.

4. A razor blade holder comprising an elongated body having a transversely arched under surface and having a recess in each end edge, and means for securing a double edged razor blade in flexed condition against said arched surface comprising an elongated longitudinally arched leaf spring having a leg terminal at each end and an angularly extending foot at the end

of each leg, said legs being designed for engagement in end edge recesses in the body to position portions of the adjacent foot in opposition to the arched bottom surface of the body, the foot of each leg being shifted upon depression of the arched spring to permit insertion of the ends of a blade between the foot and the said body bottom surface.

5. A safety razor blade holder, comprising an elongated body having a transversely arched undersurface against which a safety razor blade positions, said body having passageways cut therethrough at two spaced points, a pair of elongated members each extending through a passage and each having at the end adjacent the arched surface an angularly extending foot which is of a width greater than the width of the passage, a pair of shoulders carried by each of said elongated members and oscillatably engaging the top of the body at the sides of the passage through which the members pass, and a resilient connection between said members which constantly tends to rock the members on the shoulders in a direction to move the angular extensions toward the arcuate surface of the body.

6. A razor blade holder, comprising an elongated body having a transversely arcuate undersurface against which a safety razor blade positions, said body having a pair of passages extending therethrough, a pair of members each having a reduced extension adapted to pass through a passage and terminating in an angularly directed foot which is of a width greater than the width of the passage, the said reduced extension of said member forming therewith a pair of side shoulders which are oscillatably in contact with the top of the body, a flat spring, and means connecting the spring between the said members and maintaining the spring under tension whereby the members are normally urged to rock in a direction to move the foot extensions toward said arcuate surface.

7. A safety razor blade holder, comprising an elongated body having a transversely arcuate undersurface against which a safety razor blade is adapted to position, said body having a pair of openings therethrough, a normally substantially upright member adjacent each opening and having a reduced extension passing through the adjacent opening and terminating in an angularly directed foot which is of a width greater than the adjacent opening, the said foot being in opposition to the arcuate undersurface of the body each of said members being formed to provide a sleeve, and an arcuate flat spring connection between the members with each end in a sleeve, the said reduced extension of each member forming therewith side shoulders which rockably position upon the top of the body and said spring member being flexed and under tension and tending constantly to rock the first members in a direction to move the foot of each toward the said arcuate surface.

JAMES C. CHALMERS.