

985,494.

Patented Feb. 28, 1911.

Fig. 1.

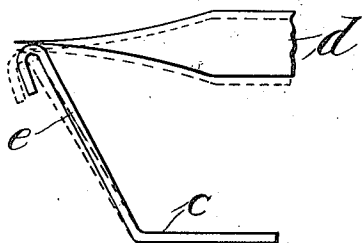


Fig. 3.

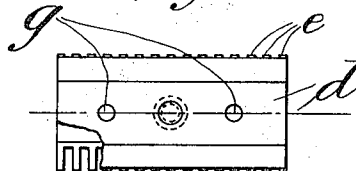


Fig. 2.

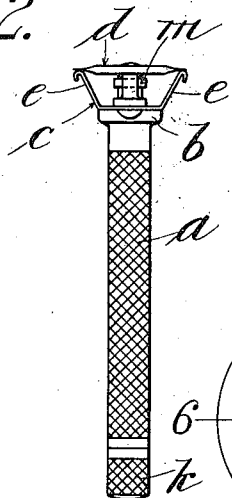


Fig. 4.

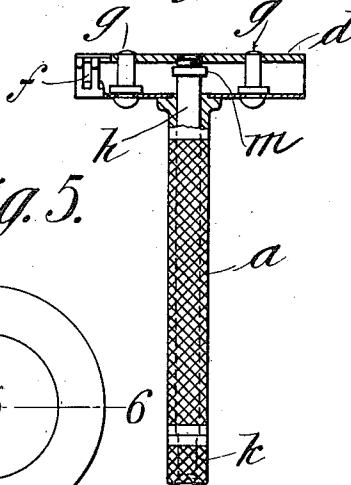


Fig. 5.

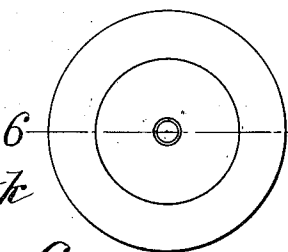
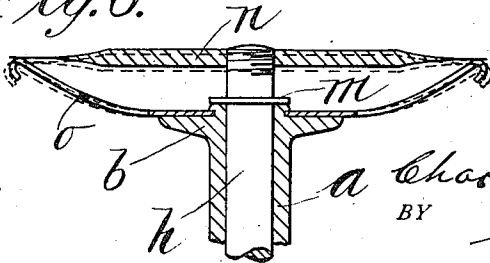


Fig. 6.



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CHARLES HENRY ATKINS, OF SPRINGFIELD, MASSACHUSETTS.

SAFETY-RAZOR.

985,494.

Specification of Letters Patent.

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Application filed August 11, 1908. Serial No. 447,969.

To all whom it may concern:

Be it known that I, CHARLES HENRY ATKINS, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Safety-Razors, of which the following is a specification.

This invention relates to improvements in safety razors and has for its object the construction of an implement of this character in which a rigid cutting blade may be adjusted relative to a yielding supporting guard to expose more or less of the cutting edges of the blade beyond the borders of the guard according to the requirements of the person using the implement.

The invention is clearly illustrated in the accompanying drawings, in which,—

Figure 1 is an end elevation of a part of a blade and its guard on a somewhat enlarged scale, the guard being shown in two positions,—one of which is in dotted lines. Fig. 2 is an end elevation on a smaller scale of the complete implement. Fig. 3 is a top plan view showing the blade in its relation to the supporting guard, and Fig. 4 is a side elevation, partly in section, showing the means for adjusting and guiding the blades. Fig. 5 is an end elevation of a modification showing a razor blade of circular form. Fig. 6 is a sectional view on line 6—6 of Fig. 5 on an enlarged scale of the modification.

Referring to the drawings, *a* is the tubular handle of the razor provided with a flanged upper end *b* of sufficient width to provide a proper seat for the guard which, as a whole, is indicated by *c*. This guard is, as shown in Fig. 2, trough-shaped in cross section, its length being substantially the same as that of the blade *d*. The base of the guard rests upon the broadened upper end *b* of the handle and may be secured thereto in any suitable manner and the two sides *e* of the guard incline outwardly and upwardly from said base to such a degree that pressure thereon in the direction of the axis of the handle will cause the outwardly inclined sides *e* to spring still farther outward; and to insure an easy yielding movement to these sides they are slotted from the outer borders thereof toward the base, as shown at *f*, Fig. 4, and as indicated along the borders of the blade in Fig. 3. These dentilated borders curve outwardly and

downwardly to provide a smooth surface as this part of the guard bears on the face of the user.

The blade *d* is positioned relative to the sides of the guard *e* by means of two dowel pins *g* which are secured to the bottom part of the guard equi-distant from the center thereof on which pins the blade has a sliding movement vertically.

An adjusting rod *h* extends through the handle *a* and is provided at its lower end with a knurled head *k* and at the other end thereof with a screw-thread adapted to be screwed into a hole in the center of the blade between the dowels *g*.

Just below the screw-threaded portion of the stem a collar *m* is provided which determines the limit of adjustable movements of the blade toward the bottom of the guard. The space between the underside of the blade and the collar *m* is somewhat exaggerated in the drawings for the sake of clearness. By screwing the stem in or out, the blade is drawn toward or forced away from the turned-over borders of the guard.

Normally, the position of the blade relative to the edges of the guard is one of relatively light contact, that is to say such a degree of contact as will not deflect the sides *e* of the guard outwardly, but the blade is rigid enough, (as compared with the resistance to flexure of the sides *e* of the guard,) to cause these sides to spring outwardly when by the operation of the screw-threaded stem the blade is drawn toward the bottom of the guard. Assuming, therefore, that the normal position of the blade relative to the edge of the guard is that shown in Fig. 1, in full lines, it is clear that by the manipulation of the screw-threaded stem *h* the blade may be drawn down and thus force the border of the guard outwardly until only the thinnest edge of the blade will project beyond the guard thus giving the user a choice of any kind of an edge on the implement that he requires.

The rod or stem *h* has a very accurate fit in the handle *a* of the implement which fit effectively prevents the blade *d* from assuming an inclined or uneven position on the guard *e* should the pins *g* have a loose fit in the blade. The collar *m* on the rod *h* further prevents the rod from dropping out of the handle when assembling the blade and before the rod is screwed into the blade.

The blade *d* is rigid as distinguished from

a flexible one since the thickened center portion of the blade (as shown in Fig. 1) serves at all times to maintain the blade in its original shape without regard to pressure exerted thereon by the edge of the blade on the guard when in use. The cutting edge of the blade is produced by grinding, having the center portion of the blade its original thickness, whereby firmness and an even contact throughout is maintained between the cutting edge and guard.

Referring to the modification shown in Figs. 5 and 6, wherein a circular blade and guard are shown: The circular blade (designated by the letter *n*) and the guard (designated by the letter *o*) have their peripheries arranged concentrically with each other. The blade *n*, like the blade *d* is a rigid one with a thickened center portion, but is not provided with any centering pins, the rod *h* in this case serving to center the blade with relation to the edge of the guard. Both blades *d* and *n* are understood to be reversible if desired.

Some of the advantages of a circular blade are the lessened cost of manufacture and freedom of injury to the user and it also provides a maximum cutting edge over the forms now in use.

What I claim, is:—

1. In a razor, the combination with a threaded, perforated, rigid, one piece blade, a holder therefor, said holder including a flexible, dentilated guard and a handle, a threaded rod mounted in the handle and engaging the threaded perforated blade, means on the rod for rotating the same and drawing the blade into engagement with the guard, and pins mounted in the guard for engaging the perforated blade.

2. A razor having in combination, a rigid blade having a threaded perforated opening therethrough, a guard, pins on the guard for positioning the blade on said guard, a handle, a rotatable, clamping member mounted in the handle and provided with a collar portion and a threaded end, the threaded end of said rotatable member engaging said opening in the blade, whereby the rigid blade is bodily movable toward and away from the guard, the collar portion engaging the outer part of the handle, whereby the rotatable member is prevented from displacement from the handle when the blade is detached from the said rotatable member.

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