(Model.)

F., R. & O. KAMPFE.

SAFETY RAZOR.

No. 387,359. Patented Aug. 7, 1888.

Fig. 1.

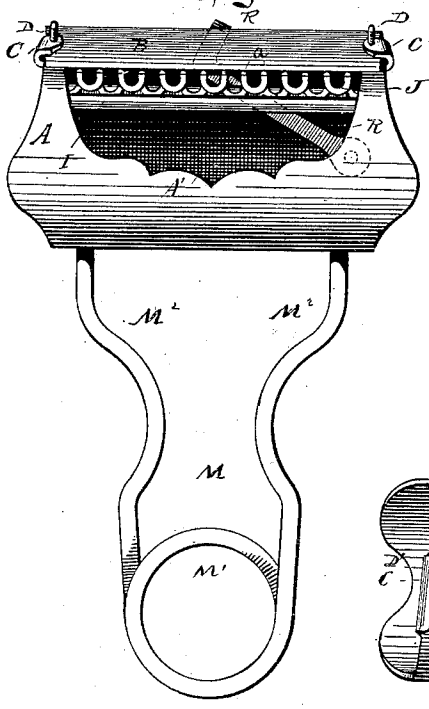


Fig. 2.

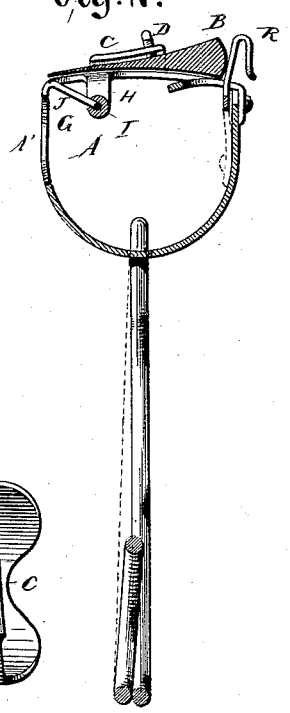


Fig. 3.

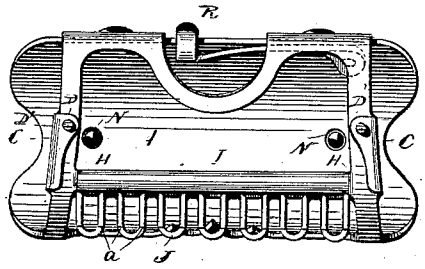


Fig. 5.

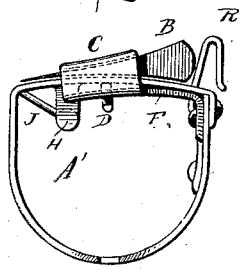


Fig. 4.

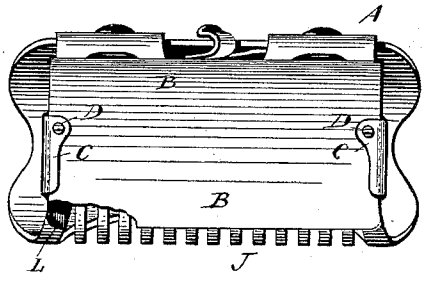


Fig. 6.

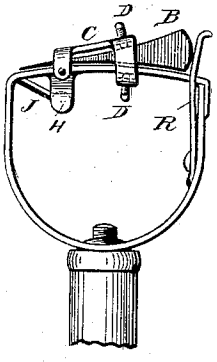


Fig. 7.



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UNITED STATES PATENT OFFICE.

FREDERICK KAMPFE, RICHARD KAMPFE, AND OTTO KAMPFE, OF BROOKLYN, NEW YORK.

SAFETY-RAZOR.

SPECIFICATION forming part of Letters Patent No. 387,359, dated August 7, 1888.

Application filed February 6, 1888. Serial No. 263,138. (Model.)

To all whom it may concern:

Be it known that we, FREDERICK KAMPFE, RICHARD KAMPFE, and OTTO KAMPFE, all of Brooklyn, Kings county, State of New York, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

This invention relates to certain new and useful improvements in that class of razors known as "safety-razors;" and the object of our invention is to provide a new and improved razor in which the blade can readily be adjusted in relation to the guard.

The further objects of our invention are to provide an improved guard, handle, and other parts of a safety-razor.

The invention consists in a safety-razor having its blade-holder provided at each end of the top with an angular clip for retaining the blade, a screw being provided in each clip for adjusting the blade in relation to the guard.

The invention further consists in a guard composed of a rod and a series of U-shaped teeth projecting from said rod.

The invention also consists in the construction and combination of parts and details, as will be fully described and set forth hereinafter, and finally be pointed out in the claims.

In the accompanying drawings, Figure 1 is a face view of our improved safety-razor. Fig. 2 is a vertical transverse sectional view of the same. Fig. 3 is a top view of the same, the blade being removed. Fig. 4 is a top view of the same, showing the improved stops for the cutting-edge of the blade, parts of the blade being broken out. Figs. 5 and 6 are end views of the safety-razor, showing different constructions of the blade holding and adjusting clips. Fig. 7 is a longitudinal sectional view of the handle-piece having the key formed in its end.

Similar letters of reference indicate corresponding parts.

The holder or casing A, on the top of which the blade B is held, is provided with the usual front opening, A'. At each end it is provided on its top with an angle-clip, C, the top flanges of said angle-clips being short distances above the top of the holder and projecting toward each other.

R is a spring-latch pivoted to the casing and serving to press the blade toward the guard. At their inner ends the top flanges of said clips are enlarged and in the enlargement of each flange a screw, D, is mounted to turn, each screw being provided on its upper end with a head, D', that is preferably squared. As shown in Fig. 6, said clips may have flanges at the top and bottom, one flange of each clip projecting over the upper surface of the top of the holder and the other flange projecting under the bottom surface of the top of the holder, and in each flange a screw, D, is held. The inner end of the screw in the upper flange can bear against the upper beveled face of the blade B, and the inner end of the screw in the lower flange can bear against the under side of the top of the holder. In this construction the clips are hinged on the ends of the casing.

As shown in Fig. 5, the clips C are provided with top and bottom flanges and the screws are held in the bottom flanges, and the clips C are secured to spring angle-pieces F, riveted to the inner surface of the back of the holder A.

The guard G (shown in Figs. 1, 2, 3, 5, and 6) is composed of the rod I, held at its ends between the two clips or lugs H, projecting downward from the top of the holder, the rod being parallel with the longitudinal axis of the holder, and from said rod a series of U-shaped teeth, J, project upward and outward, the closed ends of the said U-shaped teeth or prongs being at the top. The said upper closed ends of the teeth are bent or turned downward at the cutting-edge of the blade. As shown in Fig. 4, each side piece of the top of the holder is provided at the front end with a quadrant recess, L, for receiving the rounded front corners of the blade, so as to prevent the blade being moved too far over the guard, said recesses thus forming stops for the blade.

The handle M is composed of a spring-wire having the loop or coil M' and the two shanks or prongs M^2, the ends of which prongs are passed into the apertures N in the bottom of the casing, where they are held in place by the spring-tension in said prongs.

To turn the screws, we provide a tubular piece having the squared slot P in its end, thus forming a key.

In case the holder is provided with a tubular handle, the tube O can form part of said handle.

The blade B is of the usual construction, having a preferably rounded back and its side tapered from said back to the cutting edge. The blade B is placed upon the top of the holder, the end parts of the blade being passed in between the top of the holder and the clips C, and then the spring R is raised to exert pressure against the back of the blade. Said spring presses the beveled top of the blade against the inner or lower ends of the screws D, Figs. 1 and 2. By turning said screws in such a manner that they are moved inward they press on said beveled top of the blade and thereby force the blade in the direction toward the back of the holder, and thus the cutting-edge is moved from the guard. By turning the screws in such a manner that they move outward the spring R is permitted to press the blade toward the front of the holder, and thus the cutting-edge of the blade is moved toward the front of the guard. By means of the screws D the blade can thus be adjusted very readily, so that its cutting-edge will be on the gage-line *a a* on the guard.

In case the width of the blade is too great, the screws D must be moved inward, so as to move the edge of the blade farther from the guard, and if a blade of less width, or a blade that has been ground down, is placed on the holder the screws must be screwed outward so as to permit the spring R to press the blade farther toward the front.

In the construction shown in Fig. 6 the clips C can be adjusted by means of the bottom screws so as to be a less distance from the top of the holder, and thus prevent the blade from being moved toward the front farther than is necessary. The blade can then also be further adjusted by means of the top screws D, in the manner set forth.

In the construction shown in Fig. 5 the bottom screws D are used to adjust the clips C nearer the top of the holder, so as to prevent the spring R pushing the blade farther to the front than is necessary. The stop-recesses L prevent the edge of the blade being adjusted too far beyond the guard.

The guard G is very stiff and strong. It permits the lather to pass freely and leaves the greater part of the edge of the blade clear for shaving.

The handle M can be removed very easily and rapidly, and affords a firm and rigid hold on the razor.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A safety-razor having angular blade-retaining clips on the top of the holder at the ends of said top, and screws in said clips, substantially as herein shown and described, and for the purpose of adjusting the blade in relation to the guard, as set forth.

2. In a safety-razor, the combination, with a blade-holder, of movable angle-clips on said holder at the ends of the top of the holder, screws in said clips, and a spring pressing on the blade toward the guard, substantially as herein shown and described, and for the purpose of adjusting the blade in relation to the guard, as set forth.

3. In a safety-razor, the combination, with a blade-holder, of movable angle-clips at the ends of the top of the holder, which clips have flanges projecting over the top and bottom surfaces of the top of the holder, a screw in each flange of each clip, and a spring pressing the blade toward the guard, substantially as herein shown and described.

4. In a safety-razor, a guard composed of a rod and a series of U-shaped wire teeth secured in and projecting upward and outward from said rod, the closed ends of the U-shaped teeth being at the outside, substantially as shown and described.

5. In a safety-razor, the combination, with a holder having two apertures in its bottom, of the U-shaped spring-handle M, provided with the coil or loop M′, the ends of the shanks of the handle being passed into the apertures in the bottom of the holder, substantially as herein shown and described.

In testimony that we claim the foregoing as our invention we have signed our names in presence of two subscribing witnesses.

FREDERICK KAMPFE.
RICHARD KAMPFE.
OTTO KAMPFE.

Witnesses:
JOHN A. STRALEY,
CARL KARP.