(Model.)

F. & O. KAMPFE.

SAFETY RAZOR.

No. 344,114. Patented June 22, 1886.

Fig. 1.

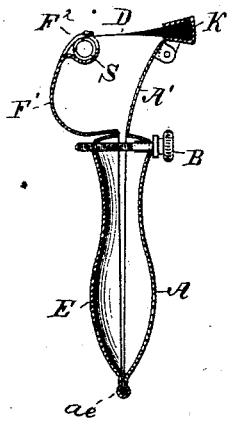


Fig. 2.

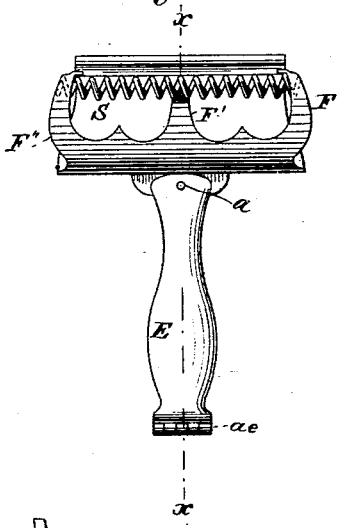


Fig. 3.

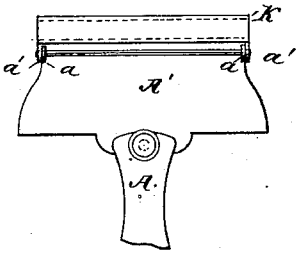


Fig. 4.

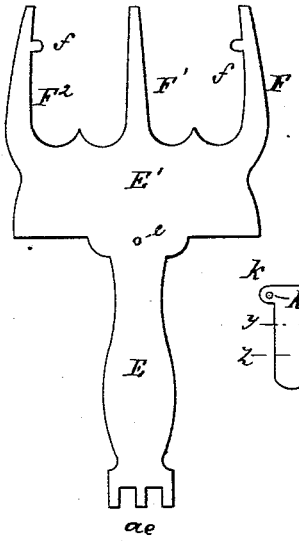


Fig. 5.

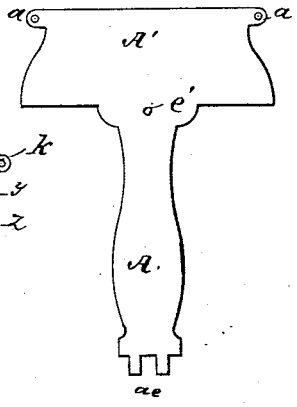


Fig. 7.

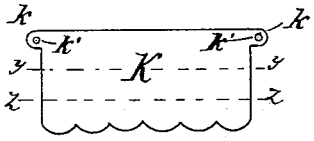
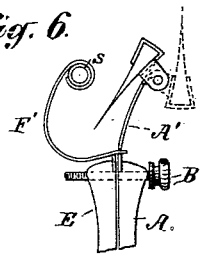


Fig. 6.



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UNITED STATES PATENT OFFICE.

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

SAFETY-RAZOR.

SPECIFICATION forming part of Letters Patent No. 344,114, dated June 22, 1886.

Application filed August 13, 1885. Serial No. 174,296. (Model.)

To all whom it may concern:

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

The object of our invention is to furnish an improved safety-razor having its several parts so arranged and adjusted that they may be more readily cleansed and the operation of the blade more readily controlled. A further object is to afford an improved device in lieu of either comb or teeth, as heretofore used, to avoid the liability of cutting the skin in the operation of shaving.

Our invention is fully illustrated in the accompanying drawings, in the several figures of which like letters indicate like parts.

Our invention consists of a handle in two sections, front and back, which are hinged together at the extreme end and respectively terminate in an extension having arms whose office is to carry our improved substitute for teeth or comb, and in an extension to which the blade-holder is hinged. The movement of the respective sections of the handle upon their hinge is controlled by a set-screw, as hereinafter more fully described.

Figure 1 is a sectional side view of our invention, showing the several parts as adjusted in position for use. This section is taken on the line indicated in Fig. 2 by the dotted line *x x*. Fig. 2 is a front view, and Fig. 3 a back view, of our invention. Figs. 4, 5, and 7 are respectively the blanks out of which the respective sections of the handle and the blade-holder are formed. Fig. 6 shows the manner of folding the blade between the sides when not in use. The dotted lines show how the blade-holder may be swung back to allow the blade to be removed.

A is the back section of the handle, having the extension A′, which is provided on either side, at its upper edge, with the lugs *a*, which form part of the hinges upon which the blade-holder is carried.

K is the blade-holder, which is in the form of an open tube, covering the back of the blade and lapping over into its upper and under faces, and is provided at either end with the lugs *k*, which form the other portion of the respective hinges. A pin or loose rivet is used to secure the lugs.

E is the front section of the handle, having the extension E′, which is provided with the arms F F′ F², which serve as supports for our substitute S for teeth or comb. The outer arms, F F², are respectively bent around to form rings to receive S, as shown in Fig. 6. These arms are respectively provided near their ends with lugs *f f*, which as the arms are bent around from above to form the rings which receive the attachment S are raised slightly and fall over the face of the attachment S and form a groove to receive the blades. The middle arm, F, is bent at the end to support S in the middle on its under side.

The extensions A′ E′ serve as a body to hold the lather and cuttings. A′ is solid up to the under side of the blade, while E′ is sufficiently open at the top to afford free ingress for the lather and cuttings, and is closed at the bottom, so as to retain the lather, &c.

The respective sections, A E, are joined by a hinge, *ae*. The set-screw B engages threaded openings in the portions A′ E′, and serves to hold them together or release them, as may be required.

S is our improved device for protecting the skin against being cut by the blade, and consists of a spiral coil of wire, upon which the cutting edge rests, and which is supported at either end and in the middle, as above described.

D is the blade.

The sections of the handle, the blade-holder, and the supports for the safety attachment are formed by providing blanks (shown in Figs. 4, 5, and 7) having the respective parts, E having the projections *ae*, extension E′ having the arms F F′ F², A having the projections *ae*, the extension A′ having the lugs *a*, and K having the lugs *k*. By the aid of suitable dies they are struck up into the shape shown in Figs. 1, 2, 3, and 6. The respective portions *ae*, *a*, and *k* are bent around to form hinges and put together as above described. The lugs *a* and *k* are perforated at *a′* and *k′* to receive the pins. The portions A′ E′ are punched to form the openings *e e′*, the former of which is threaded to engage the set-screw B.

The arms F F^2 are bent, as described, to form rings to receive the device S, which we will call our "safety attachment," and the arm F′ is also bent to support the same in the manner described. The device S is now passed through the rings and onto the support, and secured by a drop of solder or otherwise.

The advantages of our safety attachment S are that the wire may be finer than teeth can be made, practically, and consequently afford more bearing-points, while the interstices are correspondingly more numerous and proportionately greater, and thus a closer shave may be had with increased safety against cutting. Another advantage is that it is free of contact with the frame, except at the three joints indicated, so that the entire front may be open to receive the lather and cuttings.

The advantage of having the handle and its extensions in hinged sections secured by a set-screw is that they may be thrown open and free access had to all inside parts for the purpose of cleansing after use.

The advantage of our improved blade holder is that it may be swung up, as shown by the dotted lines in Fig. 6, so that the blade may be more readily removed without danger of contact with any part of the frame, and when not in use the blade may be swung within the sides, so as to avoid all danger from contact of the cutting-edge.

The advantage of controlling the sectional handle by the set-screw B is that as the sections are opened and closed the cutting-edge is carried forward and back on the face of the safety attachment, and the cutting-edge may readily be placed and held to the precise line at which it is to perform its office.

Having fully described our invention, what we claim is—

1. The within-described razor-handle and blade-holder and supports for the safety attachment, consisting of a plate having the portion A, provided with the projections *ae*, the portion A′ having the opening *e′* and the perforated lugs *a*, a plate having the portion E, provided with the projections *ae*, the portion E′, having the threaded opening *e*, arm F′, and arms F F^2, a plate, K, having the perforated lugs *k*, in combination with devices for pivoting and adjustably securing said parts together, substantially as set forth.

2. An improved support for a razor-blade holder and safety attachment, having a handle in hinged sections, which are held together by a set-screw, which engages suitable openings in the respective sections of the handle, said respective sections being respectively integral with the portion which supports the blade-holder proper and the portion which supports the safety attachment.

3. The section A, having the extension A′ and threaded opening *e′*, in combination with the section E, having the extension E′, provided with the threaded opening *e* and arm F′ and arms F F^2, provided with the lugs *f*, the sections A E being united by the hinge *ae*, and set-screw B, all combined substantially as and for the purpose set forth.

4. The combination, with a razor-blade, of a safety device consisting of a spiral coil of wire supported in advance of said blade, substantially as described.

5. The blade-holder K, having the hinge portion *k*, in combination with the extension A′, having the hinged portion *a*, substantially as and for the purpose set forth.

Signed at New York, in the county of New York and State of New York, this 31st day of July, A. D. 1885.

FREDERICK KAMPFE.
OTTO KAMPFE.

Witnesses:
G. H. WETJEN,
RUDOLPH KAMPFE.