

F. VOOS.
SAFETY RAZOR.

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SAFETY-RAZOR.

SPECIFICATION forming part of Letters Patent No. 575,511, dated January 19, 1897.

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To all whom it may concern:

Be it known that I, FRANZ VOOS, of Solingen, Germany, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

This invention relates to a safety-razor of novel construction which is readily adjustable to compensate for wear and adapt itself to different thicknesses of the blade.

In the accompanying drawings, Figure 1 is an end view of my safety-razor. Fig. 2 is a similar view showing the blade in a different position; Fig. 3, a rear view of the razor; Fig. 4, a plan; Fig. 5, a plan of the clamp detached; Fig. 6, a plan of the guard detached; Fig. 7, an end view of the clamp; Fig. 8, a perspective view thereof; and Fig. 9, a cross-section on line 9 9, Fig. 3.

My improved safety-razor consists, essentially, of three parts, viz: the frame or guard, the clamp for holding the blade, and the blade itself. The guard and the clamp are made in separate pieces, which are connected by set-screws in such a manner that the clamp is longitudinally movable along the guard in order to raise and lower the blade and compensate for wear.

The letter *a* represents the guard or casing terminating in the toothed lower edge or comb *a'*, and provided with the tapped perforation *a''*, which is adapted to receive the end of the handle *b*. The body of the guard is slotted, as at *a'''*, to form a pair of guide-rails *a''''*. At its upper end the guard is bent at right angles to form a flange or a pair of lugs *a'''''*, which are centrally perforated, as at *a''''''*.

The clamp *c* is made of spring metal and is U-shaped in cross-section with converging sides, so as to fit the usual razor-back. The upper cross-bar of the clamp is provided with a contracted section or longitudinal bead *c'*, through which passes a transverse set-screw *d*. By tightening or loosening this screw the sides of the clamp may be drawn together or allowed to spread, in order to accommodate blades of different thicknesses or reduced in thickness by honing, as will be readily understood.

From one side of the clamp *c* there projects a pair of hooks *c''*, which extend through the slots *a'''* and engage the rails *a''''* of the guard *a*. These hooks connect the parts *a* *c* in such a manner that the clamp *c* is vertically movable along the guard *a*. Set-screws *e*, passing

loosely through the lugs *a''''*, engage tapped openings of the hooks *c''*, such hooks being preferably doubled, Fig. 8, to present an increased number of threads to the screws. The screws *e* are headed and carry the nuts *e'*, so that they are revoluble, but not vertically movable in the lugs *a''''*. By turning the screws the clamp *c* will therefore be raised or lowered to raise or lower the blade *f* and cause it to be adjusted in relation to the comb *a'*. Thus if the blade is reduced by wear or by honing, the proper relative position between its cutting edge and the guard can be readily reestablished.

The handle *b* is preferably provided with a notched end *b'*, adapted to engage the heads of the screws *d* and *e*, Fig. 2, and permit its use as a screw-driver.

It will be seen that by my invention the blade may be readily adjusted in a longitudinal direction without straining or bending any part of the guard, so that an accurate alinement of all the parts can be constantly maintained.

What I claim is—

1. The combination in a safety-razor, of a frame having a pair of guide-rails, a pair of rearwardly-extending lugs, and a toothed lower edge, with a clamp having rearwardly-extending hooks that engage the said rails, and with a pair of screws that adjustably connect the frame-lugs with the clamp-hooks, substantially as specified.

2. A safety-razor composed of a U-shaped clamp having a longitudinal bead *c'*, a set-screw passing transversely through said bead, a guard engaged by the clamp, and set-screws for adjustably connecting the guard with the clamp, substantially as specified.

3. The combination of a guard having guide-rails *a''''*, and perforated lugs *a'''''*, with a clamp having bead *c'*, and laterally-projecting hooks *c''*, that engage the guide-rails, a set-screw *d*, engaging the bead, and a pair of set-screws *e*, engaging the lugs *a'''''*, and the hooks *c''*, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

FRANZ VOOS.

Witnesses:

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OTTO KÖNIG.