(Model.) 2 Sheets—Sheet 1.

F. DURAND, E. L. BOSSIN & J. J. BRARD.

Razor.

No. 237,174. **Patented Feb. 1, 1881.**

FIG. 1.

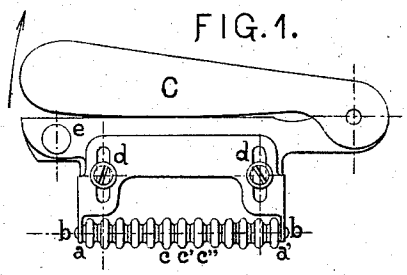


FIG. 2.

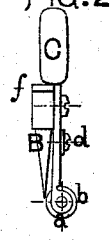


FIG. 3.

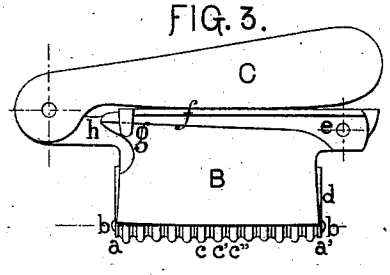


FIG. 4.

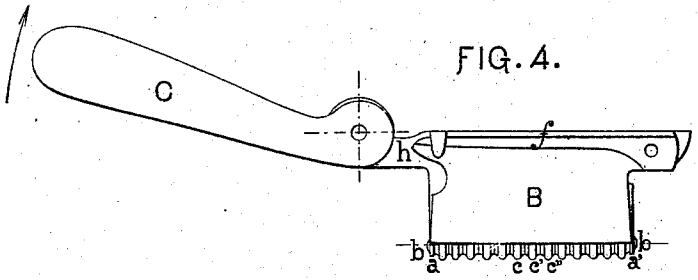


FIG. 6.

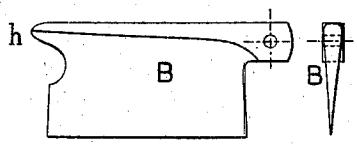


FIG. 5.

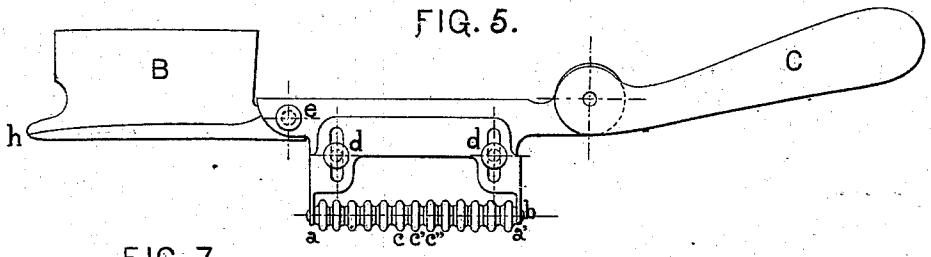


FIG. 7.

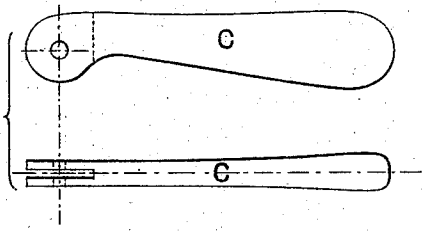


FIG. 8.

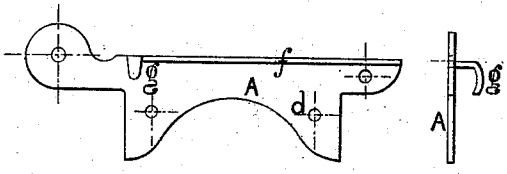
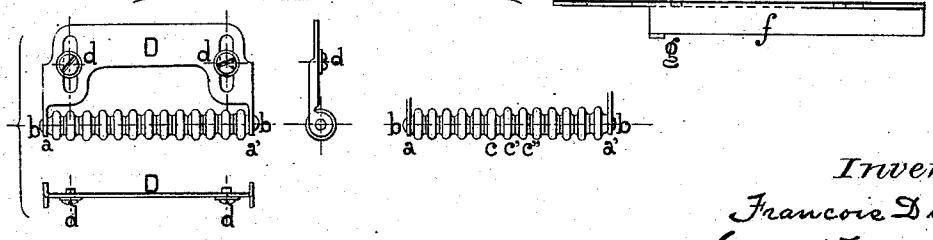


FIG. 9.



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(Model.) 2 Sheets—Sheet 2.

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Razor.

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FIG. 13.

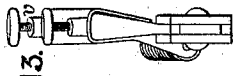


FIG. 12.

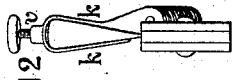


FIG. 15.

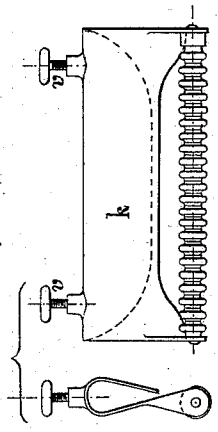


FIG. 16.

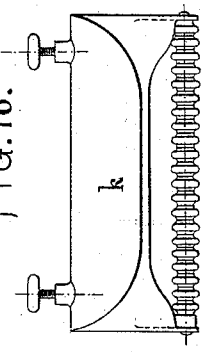


FIG. 10.

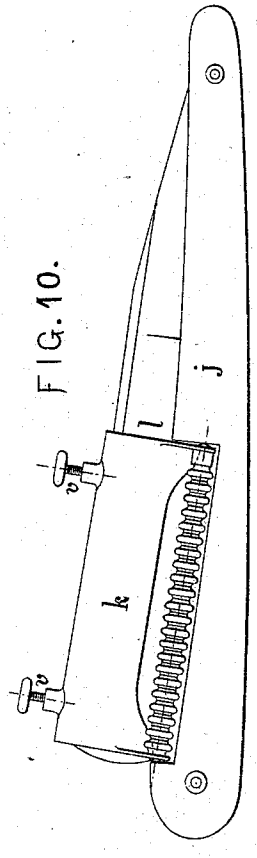


FIG. 11.

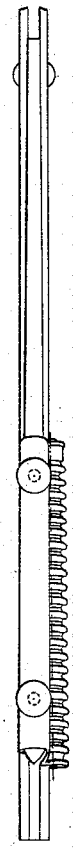
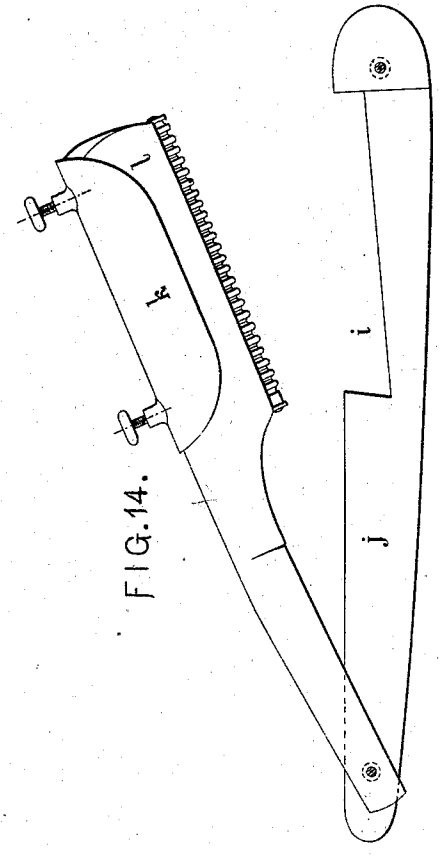


FIG. 14.



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UNITED STATES PATENT OFFICE.

FRANÇOIS DURAND, EUGENE L. BOSSIN, AND JEAN J. BRARD, OF PARIS, FRANCE.

RAZOR.

SPECIFICATION forming part of Letters Patent No. 237,174, dated February 1, 1881.

Application filed July 22, 1880. (Model.) Patented in France December 3, 1879.

To all whom it may concern:

Be it known that we, FRANÇOIS DURAND, EUGENE LOUIS BOSSIN, and JEAN JULES BRARD, all of Paris, in the Republic of France, have invented a new and useful Improvement in Razors, of which improvement the following specification is a full description.

The invention consists in the construction of razors in three principal parts, jointed to each other at the ends, so as to be folded, and thus occupy only a small space, or to be extended for use; and it further consists in the combination, with the blade of a razor or similar cutting-instrument, of a number of rollers supported by a suitable frame a slight distance beyond the edge; and also in an attachment for razors of the ordinary form or of the improved construction, constituting the first part of this invention, or of other suitable construction, and in the particular combination of parts, as hereinafter more fully set forth. When the three-part razor is extended for use the handle is of the usual long approved pattern. The three parts consist of a body or central section, a handle jointed thereto at one end, and a blade connected with the other end by a pivot.

In applying the rollers to this kind of razor they are attached to and carried by the body of the instrument. With razors of the ordinary construction the roller-frame is detachably connected with the blade, and it will be obvious that an attachment of this description could be applied also to the blade of a razor made in three parts, as indicated above. Means for adjusting the distance of the rollers from the edge of the blade are provided. The object of these rollers is to prevent the penetration of the blade into the flesh, and they also serve to keep the cutting-edge clear.

In order that the invention and the manner of carrying the same into effect may be fully understood, the same will now be more particularly described, in connection with the accompanying drawings, which form a part of this specification.

Sheet 1 illustrates the construction of a razor embodying the invention, Figure 1 being a side view of the razor closed or folded; Fig. 2, an end view of the same, and Fig. 3 a view on the side opposite Fig. 1; Fig. 4, a view, on the same side as Fig. 3, of the razor open for use; Fig. 5, a view, corresponding to Fig. 1, of the razor completely extended for sharpening, cleaning, or use without the rollers, and Figs. 6, 7, 8, and 9 detail views of various parts, namely: Fig. 6, of the blade in elevation and end view; Fig. 7, of the handle in elevation and plan; Fig. 8, of the body or central section in elevation, end view, and plan; and Fig. 9 of the rollers and frame in elevation and end view, besides a top view of the frame and separate elevation of the rollers.

Sheet 2 illustrates an attachment with rollers for use in connection with ordinary razors and the manner of securing it in position thereon, Fig. 10 being a view, in side elevation, of a razor provided with the attachment; Fig. 11, a plan of the same, and Figs. 12 and 13 views from opposite ends; Fig. 14, a view, on the side opposite to that shown in Fig. 10, of the razor partly opened and with one side of the handle removed; Fig. 15, an elevation and end view of the attachment removed; and Fig. 16 a view, in elevation, of the attachment on the side opposite to that shown in Fig. 15.

The same letters indicate like parts where they occur on all the figures.

Referring to Sheet 1, A represents the body of the instrument with opposite ends, to which the razor-blade B and the handle C are connected.

D is an adjustable plate, constituting the roller-frame, secured against the exterior face of the body of the instrument. At the bottom it is provided with eyes *a a'*, obtained by bending the metal of the plate or in any other suitable way. Through and between these eyes passes a small rod or shaft, *b*, on which the rollers *c c' c''* are placed side by side. The shaft is fastened by striking up the end projecting beyond the eyes, or by means of a screw and nut, or otherwise, as may be deemed suitable. The rollers are rounded on their periphery, and are free to revolve on the shaft. The plate or frame D is secured to the body C by small screws *d*, which pass through slots in said plate, and thereby permit its adjustment.

At *e* is the screw or rivet for connecting the blade with the body of the instrument. It passes through the heel of the blade and serves as an axis for the latter to turn upon. The

heel of the blade is squared, and the two corners pass successively under a spring, *f*, attached to or formed in one piece with the body A. This spring retains the blade closed or open, in whichever position it may be placed, and it also forms the back of the body A. When the blade is shut the end *h* fits under a downwardly-projecting piece, *g*, which assists the spring *f* in retaining the blade in that position.

Referring to Sheet 2, it will be seen that the side of the handle *j* adjacent to the rollers is cut away at *i*, so as to receive said rollers. The frame for carrying the rollers is represented by *k*, and consists of a bent plate, which fits over the back of the blade *l*, and is adjusted by the screws *v*. The turned-over portion of plate or frame *k* is bent inward, as shown in the end views, Figs. 12 and 15, and fits as closely as required the blade of the razor.

A razor constructed as shown in Sheet 1 can be folded into a very small space, (see Figs. 1 and 3,) and can be carried in a case provided with a hone and strop. The handle C can be made to inclose a comb pivoted at its outer end or held in any suitable way.

By opening the handle, as shown in Fig. 4, the razor is ready for shaving purposes. The form is like that of the ordinary razor, which long experience has proved, and is therefore preferable. No addition of a piece or pieces is required.

By opening both blade and handle, as in Fig. 5, the instrument can be readily cleaned or the blade sharpened. In this condition, also, the handle is of the ordinary form, and it can be used like a common razor. This is often desirable when there are rough places or buttons on a person's face.

The rollers carried by the adjustable frame, as on both sheets, prevent the cutting of the flesh, and in consequence of the rotation of the rollers and of the direction of this rotation the cut hairs and the lather of the soap are constantly carried off. The space between the rollers and the edge of the blade can never, therefore, become obstructed or clogged. In this respect the rollers are essentially different from a fixed plate or even a coil, as these do not facilitate the discharge of the matters referred to. The back of the razor-blade is rounded, and the faces hollowed slightly to aid the sharpening operation.

It will be seen that the roller-frame is adjustable, while the other parts are permanently connected.

In applying the attachment with rollers to an ordinary razor all that is necessary is to place the frame on the razor-blade and to cut away a portion of one of the sides of the handle.

Having now explained our said invention, and the manner in which the same is or may be carried into effect, what we claim, and desire to secure by Letters Patent, is—

1. A razor constructed in three principal parts—to wit: a blade, a handle, and a body or central section, to which said blade and handle are hinged or jointed at the ends, substantially as described.

2. The combination, with the blade of a razor, of a series of rollers secured close to and slightly in advance of said blade by means of a supporting plate or frame of substantially the form shown and described.

3. An attachment for use in connection with the blade of a razor, consisting of a plate or frame of substantially the form shown, partly cut away, and having depending arms or projections, a shaft carrying a series of rollers, and supported by said plate or frame, and means, as set forth, whereby the said frame can be adjustably attached to the razor-blade, so that said rollers can be brought close to and slightly in advance of the cutting-edge, substantially as described.

4. The combination of a body or central section with a blade and handle jointed to said body or section, and a plate or frame carrying rollers adjustably secured thereto, substantially as described.

5. The combination, with the body or central section, handle, and blade of a three-part razor, of the spring and retaining-piece operating in connection with said blade, substantially as described.

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