June 10, 1924. 1,497,590

MARIE-LOUIS RIVIÈRE

SAFETY RAZOR

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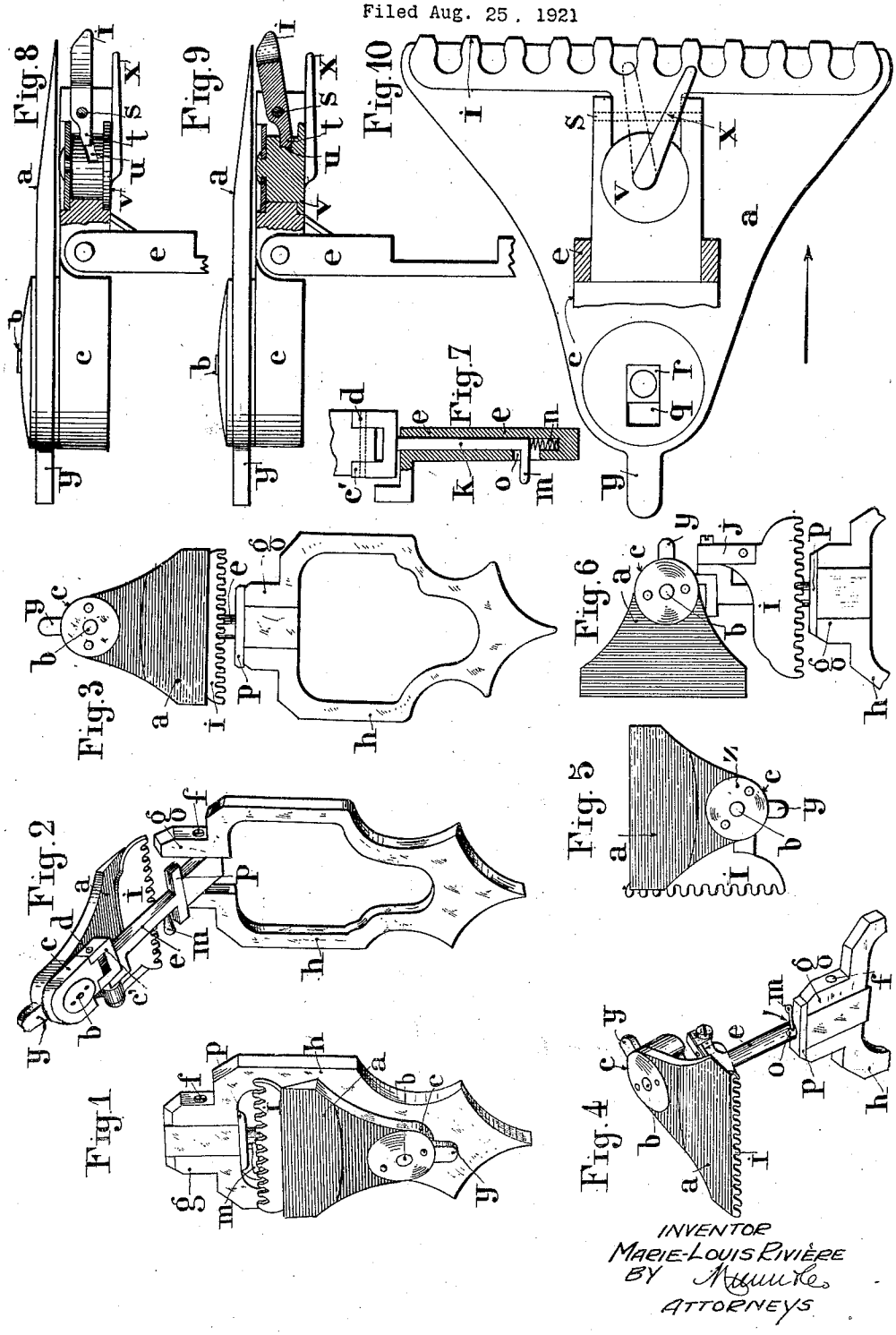

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SAFETY RAZOR.

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(GRANTED UNDER THE PROVISIONS OF THE ACT OF MARCH 3, 1921, 41 STAT L., 1313.)

To all whom it may concern:

Be it known that I, MARIE-LOUIS RIVIÈRE, a citizen of the French Republic, and residing in Paris, France, 16 Boulevard de Strasbourg, have invented certain new and useful Improvements in and Relating to Safety Razors (for which I have obtained patents in France, first patent of Addition No. 19,871, dated April 28, 1914, and second patent of Addition No. 20,048, July 8, 1914), of which the following is a complete specification.

This invention relates to a safety razor of the kind in which the blade can be pressed down into the plane of the handle so as to occupy as little a space as possible.

One object of the invention is to enable the blade to turn on its blade-carrier without necessitating the blade being seized by the fingers, thereby obviating all danger of being cut.

Another object is to enable the blade to turn without necessitating a complicated construction of the razor, and to mount the said blade upon its handle in such a way that the distance between the blade and the safety comb may be varied at will.

In the annexed drawings which show as an example a razor according to one embodiment of the invention,

Fig. 1 shows the razor closed.

Fig. 2 shows the razor in the opened position.

Fig. 3 shows the said razor in its completely unfolded position.

Fig. 4 is a perspective view showing the blade in position of use.

Figs. 5 and 6 represent the said blade in the positions for cleaning and stropping respectively.

Fig. 7 is a detail view.

Fig. 8 is a side view of a modified constructional form of the razor.

Fig. 9 is a vertical section of Fig. 8.

Fig. 10 is a plan of the blade and of its comb, viewed from the underside, the said Figs. 8 to 10 being drawn on an enlarged scale.

The blade of the razor is mounted by means of a spindle b upon a head c, which is in two parts c, c', assembled by a pivot around which the part c can swing in order to take up the positions shown in Figs. 2 and 4. A spring suitably arranged, and not shown on the drawings retains the part c firmly in the two positions.

The head c, c' is mounted upon a support e provided at its base with trunnions f supported at the extremities of arms g provided at one end of the hollow handle h of the razor. The hollow formed in this handle is of such form that for the folded position of the device shown in Fig. 1 the head c is accommodated entirely within the handle thereby reducing the amount of space taken up by the whole.

A safety comb i is pivoted upon the support e and is provided with a spring j intended to retain it in closed position (Figs. 1 to 3 and 6) and in position for use (Fig. 4).

The head c c' is mounted upon a spindle k (Fig. 7) mounted in a chamber in the support e, and which is terminated at its free extremity in a press-button m. A spring n tends constantly to urge the button m into notches o formed in the wall of the support e and corresponding to the positions of use and of cleaning of the blade respectively.

For using the razor when it is in the folded position shown in Fig. 1, the head c is pushed in such a manner as to make the whole of the head and support e pivot around the trunnions f (Fig. 2.) When the support e is in the plane of the handle h, it can be maintained in position not only by the elasticity of the arms g but also by an abutment p which may, for example, abut against inclined surfaces provided upon the extremities of the arms g.

To strop the blade before use, the members occupying the position shown in Fig. 3, the blade is swung around its pivot b to the position shown in Fig. 6. It is then possible to sharpen the blade on the strop or any other material without having to take it out, the safety comb i remaining held down on the support e.

In order to be used, the blade is brought back into the axis of the support e as shown in Fig. 3; then the part c of the head is revolved round the pivot d, the safety comb i also being turned. These two members then occupy the position as shown in Fig. 4. The razor is now ready to be used. When after use, it is required to clear away the lather,

in order to facilitate the cleaning (as the lather sticks rather closely to the blade and comb), the blade is turned round into the position shown in Fig. 5 by simply pushing the button m in the direction of the arrow in Fig. 4. After cleaning the blade and wiping it sufficiently, the members are brought back into the position shown in Fig. 1, and the razor can then be shut up in a case taking up a very small amount of room.

The blade can be fitted in any suitable manner on the head c c' which could be revolved by means of a spring or in any other convenient manner. The whole of the blade and of its support, instead of being drawn aside by depression effected perpendicularly to the plane of the handle, could pivot in the plane of the handle in order to fit onto the latter.

The movable head c (Figs. 8 to 10) pivoted upon the arm e carries the pivot b of the blade a. The said blade is provided, as shown in Fig. 10 with an opening q, rectangular in shape, which is fitted without any clearance in the transverse direction, upon a lateral projection r of the same shape of the head c constituting the pivot of the blade. The said projection r is of a length less than the opening q of the blade, which thus allows the blade to be displaced in the direction of the length of the said opening, thus compensating the wear of the blade caused by the several strop-pings.

In the constructional form of Figs. 8 to 10, the safety comb, instead of being solid with the head c, is mounted upon a spindle s upon which it is able to oscillate, and it is provided, on its rear part, with a pin t fitting into a helicoidal groove u of a circular body v provided with a controlling lever x, and carried in the head c in which it is able to pivot, without, however, being allowed to be displaced laterally.

Owing to the said arrangement, when the razor is used with a view to shave oneself very closely, the lever x is acted upon in order to rotate in the convenient direction the body v. The groove u of the said body on rotating in front of the pin t of the comb i causes the said pin to be raised or lowered, which corresponds to a displacement of the comb itself, either away from the blade, or towards the said blade. It is thus easy, before using the razor, to control the distance between the blade and the comb, according that one desires to be shaved more or less closely.

Should the blade, after having been stropped several times, have become shorter, the nut z which retains the blade in its position is first loosened, then the said blade is displaced into the direction of the arrow in Fig. 10, in order to conveniently determine the distance between the extreme edge of the comb and the edge of the blade.

For cleaning the razor after use, the lather may be washed away after having brought the said blade into the position shown in Fig. 5, by depressing the tail y of the blade. The blade is then brought back to its normal position by simply pressing the tail y with the thumb. The blade may be at will rotated towards the right or towards the left.

It is obvious that the shape of the several parts of the razor may be varied at will. The displacements of the comb could be obtained by inversing the arrangement of the corresponding parts, the pin t being helicoidal in shape and being guided between ribs forming a guiding way for the projection of the comb.

What I claim is:

1. In a razor, a blade, a handle comprising a substantially open frame, and mounting means connected to the blade and to the handle and adapted to be extended from the handle to position the blade for operation or to be folded into the space within the handle with the blade folded thereagainst.

2. In a razor, a blade, a handle comprising a substantially open frame, and mounting means connected to the blade and to the handle and adapted to be extended from the handle to position the blade for operation or to be folded into the space within the handle with the blade folded thereagainst, said mounting means comprising a support pivotally connected to the frame, a head having a part carried by the support and a swingable part pivotally connected to the part carried by the head and means for rotatably mounting the blade on the swingable part of the head.

3. In a razor, a blade, mounting means for the blade including a head, the blade being mounted for longitudinal adjustment on the head, a swingable guard cooperable with the blade, and means for swinging said guard toward or away from the frame.

4. In a razor, a blade, mounting means for the blade including a head, a swingable guard cooperable with the blade, and means for swinging said guard toward or away from the frame, and comprising a circular body having an operating handle and provided with a helicoidal groove, said guard having a pin operatively received in the helicoidal groove.

In testimony I have hereunto set my hand at Paris, France, this 10th day of August, 1921.

MARIE-LOUIS RIVIÈRE.