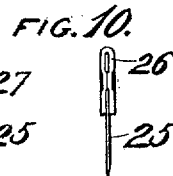
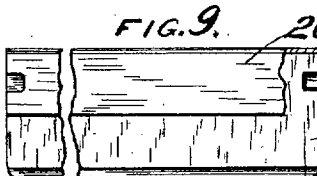
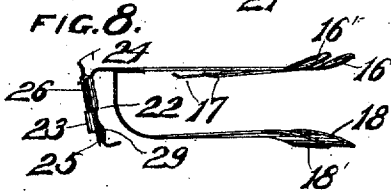
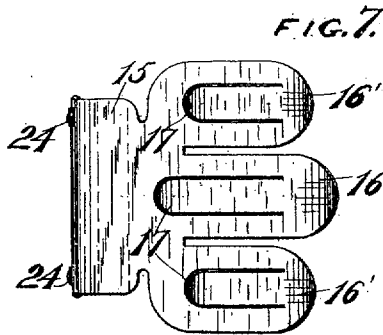
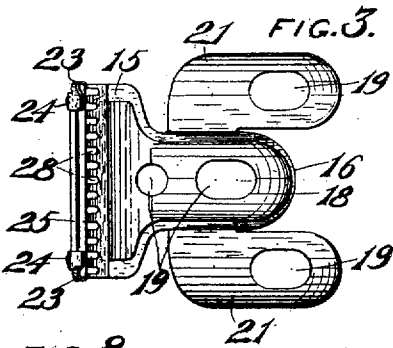
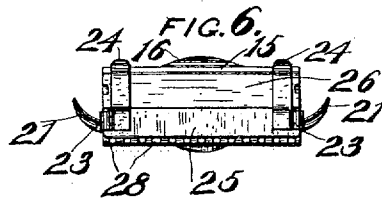
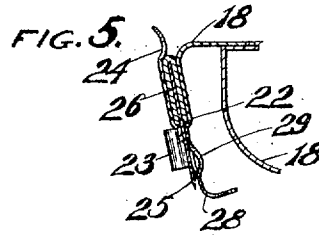
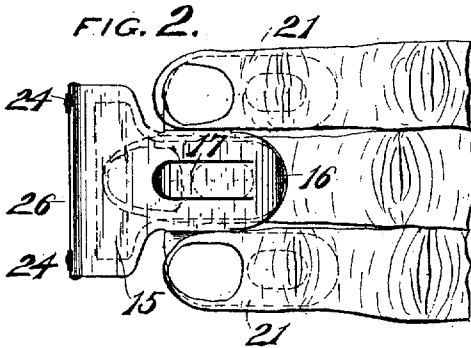
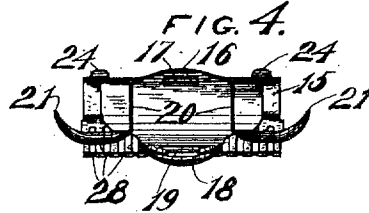
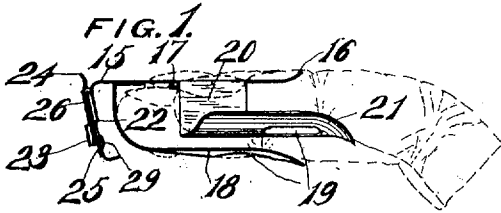


J. D. MILLAR.
SAFETY RAZOR.
APPLICATION FILED JUNE 28, 1909.

971,772.

Patented Oct. 4, 1910.



WITNESSES.

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UNITED STATES PATENT OFFICE.

JAMES D. MILLAR, OF MILWAUKEE, WISCONSIN.

SAFETY-RAZOR.

971,772.

Specification of Letters Patent.

Patented Oct. 4, 1910.

Application filed June 28, 1909. Serial No. 504,696.

To all whom it may concern:

Be it known that I, JAMES D. MILLAR, residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Safety-Razors, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention has for its object to provide a safety razor having pocket-like finger clips to fit upon the tips of the fingers of the user and clamp the razor in place thereon so as to avoid the necessity for being clasped by the hand thus permitting the razor to be manipulated by the finger and wrist movements as well as by the arm movements of the user; so as to effect its firm and steady travel in any direction and without jerky movements usual with razors grasped in the hand when moved in an inconvenient direction.

Another object of the invention is to provide such a safety razor which will be simple in its construction and durable and efficient in its use.

With the above and other objects in view the invention consists in the safety razor herein claimed; its parts and combinations of parts and all equivalents.

I desire it understood that this invention is not limited to any specific form or arrangement of parts except in so far as such limitations are specified in the claims.

Referring to the accompanying drawings in which like characters of reference indicate the same parts in the different views: Figure 1 is a side view of a safety razor constructed in accordance with this invention and showing the position of the fingers therein by dotted lines; Fig. 2 is a top view thereof with the fingers shown in full lines; Fig. 3 is a bottom view of the razor; Fig. 4 is a view of the razor looking toward the finger clip end thereof; Fig. 5 is a detail sectional view on an enlarged scale showing the razor blade and its holder; Fig. 6 is an end view of the razor looking toward the blade end thereof; Fig. 7 is a top view of a safety razor embodying a modified form of the invention; Fig. 8 is a side view thereof; Fig. 9 is a detail view of the razor blade forming part of the invention with a part broken away; and, Fig. 10 is an end view thereof.

In these drawings 15 indicates the frame or main portion of the razor which is preferably of sheet metal, as shown, and forms a blade holder at one end and a pocket-like finger clip at the other end to clasp the end of one or more of the fingers of the user; that form of the invention shown in Figs. 1 to 6 inclusive being designed to clasp one finger only and to provide a bearing for other fingers on either side of the finger clip, and that form of the invention shown in Figs. 7 and 8 being designed to clasp three fingers of the hand.

In the first form of the invention illustrated, the frame 15 has a central projection 16 forming the top of the finger clip with a tongue 17 cut therefrom and bent to bear with spring pressure on the finger nail while a finger strip 18 riveted or soldered or otherwise rigidly secured to the under side of the frame 15 extends downwardly and then rearwardly beneath the projection 16 to receive the finger between it and said projection. The finger strip 18 together with the projection 16 are curved laterally and the finger strip is further bent transversely to form a pocket-like finger clip and said finger strip 18 is provided with one or more openings 19 to permit the ball or cushion of the finger tip to be forced therein by the pressure of the spring tongue on the back of the finger and thus secure a firm clasping engagement which will prevent the razor slipping on the finger. To steady and guide the razor a bearing seat is provided for each of the fingers adjacent to the operating finger held in the finger clip, and this is preferably done by forming connecting strips 20 leading downwardly from the opposite side of the projection 16 and terminating in rearwardly and laterally extending finger seats 21. These finger seats as well as the projection 16 and the finger strip 18 are curved laterally to fit the cylindrical form of the fingers and are also slightly curved longitudinally at their rear ends to afford an easy entrance of the fingers. The transverse bend of finger strip 18 forms a seat or stop against which the end of the finger bears to permit of pressure being applied to the razor blade without danger of the finger slipping in the finger clip. The finger seats are provided with openings 19 similar to those of the finger strip 18 and for a like purpose, though the pressure of the finger thereon is relied upon

for the engagement as the finger seats 21 fit beneath the guide fingers without a part above corresponding to the projection 16 of the finger clip.

5 With that form of the invention shown in Figs. 7 and 8 the central projection 16' and its cooperating finger strip 18 are provided as before, but instead of the finger seats 21 there are similar finger clips 16' on both
10 sides of the central finger clip to positively engage the guide fingers in the same manner as the operating finger is engaged. These side finger clips are of the same construction as the central finger clip being formed of
15 rearwardly projecting parts of the frame 15 and the finger strip 18.

With either form of the invention the front or head end of the frame 15 is broadened to a suitable width for carrying the
20 razor blade and is bent downwardly and has its lower edge turned inwardly or rearwardly and terminating a short distance in advance of the finger strip 18 to form a guard for the razor blade. At about midway
25 of the downwardly extending portion of the head of frame 15 it is bent to form a shoulder 22 and directly beneath this shoulder its side edges have spring tongues 23 bent forwardly therefrom with upwardly extending
30 parts 24 at their ends which extend close to the upper edge of the said downwardly extending portion to form a guide between them for a razor blade 25. The razor blade,
35 as shown in Figs 9 and 10, consists of a thin strip of steel ribbon with one edge sharpened and the other edge incased within a sheet metal backing 26 which is bent around the edge of the blade and indented to lie
40 within notches 27 cut in the ends of the blade to prevent the backing from working loose. When the razor blade is entered through the guide above mentioned the edge of its backing 26 forms a shoulder to engage the shoulder 22 and fix the position for the blade, the
45 spring tongues 23 pressing the blade against the blade holder and their extensions 24 having their upper ends bent to engage the upper edge of the blade backing to lock the blade in place. The lower bend of the blade
50 holder is provided with a series of parallel slots 28 as usual and the strips between the openings are bent rearwardly as shown at 29 in Fig. 5, except at the ends of the blade holder, and this is to permit the free passage
55 of lather from behind the blade. The corners of the blade are preferably slightly rounded as shown in Fig. 9 to prevent the formation of sharp cutting points which might scratch the skin.

60 In use the razor is merely slipped onto the ends of the fingers as shown in Figs. 1 and 2 and is then drawn over the face either by arm or wrist movements or by movements of the fingers and at all times the
65 angular position of the cutting blade with

relation to the skin is controlled by bending the fingers more or less, and the angular position of the blade with relation to the direction of the stroke is controlled by the relative degree of bending of the fingers, the
70 straightening of one guide finger and bending of the other guide finger serving to affect this angularity, while a further or rocking adjustment is accomplished by pressing on the finger seat more with one guide finger
75 than with the other so as to cause the razor to swing on the operating finger as a fulcrum. Whenever it is desired to shave upwardly this may be done with the razor on the fingers in the position shown or it may
80 be inverted so that the cutting stroke is performed by the straightening movement of the fingers instead of the bending movement thereof.

The operation with the modified form of
85 the invention is the same as with the other form, the only difference being that the guide fingers are firmly held in finger clips as well as the operating finger.

When it is desired to remove the blade it is
90 only necessary to engage the thumb nail with the shoulder formed by the outer edge of the backing 26 and draw it upwardly, the combined spring action of the blade itself and of the fingers 24 permitting the backing
95 to pass the locking shoulders of said fingers 24. When the blade is in position for use it is securely locked against accidental displacement and the parts are so proportioned that it then presents the proper exposure
100 of its edge.

What I claim as new and desire to secure by Letters Patent is:

1. A safety razor, comprising a blade holder, a pocket-like finger clip on the
105 blade holder for claspng a finger of the user, and a finger seat carried by the blade holder at the side of the finger clip to be engaged by another finger of the user for guiding the blade holder.
110

2. A safety razor, comprising a blade holder, a pocket-like finger clip adapted to clasp a finger of the user, and a finger seat on either side of the clip to be engaged by the adjacent fingers of the user for guiding
115 the blade holder.

3. A safety razor, comprising a blade holder, a finger clip on the blade holder comprising members spaced apart to receive
120 a finger between them, there being an opening in one member through which the pad of the finger may project, and a spring on the other member for pressing the finger toward said opening.

4. A safety razor, comprising a blade
125 holder, a finger clip therefor consisting of a pair of spaced sheet metal members to receive the finger of the user between them, there being an opening in one of the members into which the pad of the finger may
130

enter, and a spring tongue cut from the other member for pressing the finger against said opening.

5 5. A safety razor, comprising a blade holder, a projection extending therefrom, a finger strip secured to the projection and forming a finger clip therewith said projection and the finger strip being laterally curved and one of them being transversely bent, and a lateral projection from the finger clip forming a finger seat.

10 6. A safety razor, comprising a blade holder, a projection extending therefrom, a finger strip secured to the projection and forming a finger clip therewith said projection and the finger strip being laterally curved and one of them being transversely bent, and lateral extensions on the projection forming finger seats on either side of the finger clip.

20 7. A safety razor, comprising a blade holder, a projection extending therefrom, a finger strip secured to the projection forming a finger clip therewith, a downward ex-

tension on the sides of the projection carrying lateral finger seats, there being openings in the finger strip and the finger seats, and a spring on the projection for forcing the finger held by the finger clip into the opening of the finger strip.

30 8. A safety razor, comprising a finger clip for clasping the finger of the user, and a blade holder carried thereby comprising a sheet metal frame bent to form a shoulder and a slotted guard, tongues bent from the sides of the frame and extending toward the upper edge thereof to form a latch therewith, and a razor blade having a backing forming a shoulder to engage the shoulder of the frame and adapted to have its upper edge engaged by the tongues to lock it in place.

In testimony whereof, I affix my signature, in presence of two witnesses.

JAMES D. MILLAR.

Witnesses:

R. S. C. CALDWELL,

ANNA F. SCHMIDTBAUER.