M. CECIL.

SAFETY RAZOR.

APPLICATION FILED OCT. 9, 1916.

1,225,409.

Patented May 8, 1917.

2 SHEETS—SHEET 1.

Fig. 1

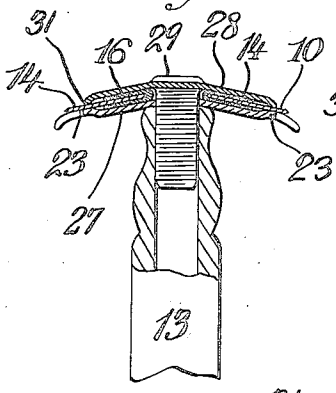


Fig. 2

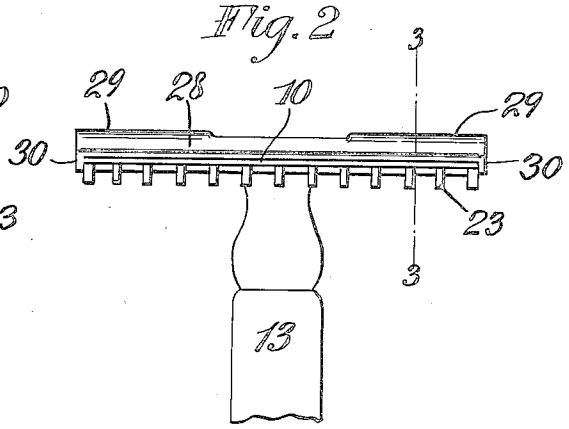


Fig. 6

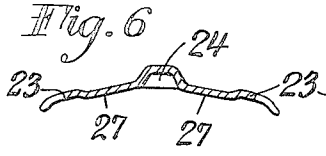


Fig. 3

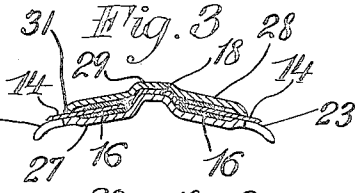


Fig. 8



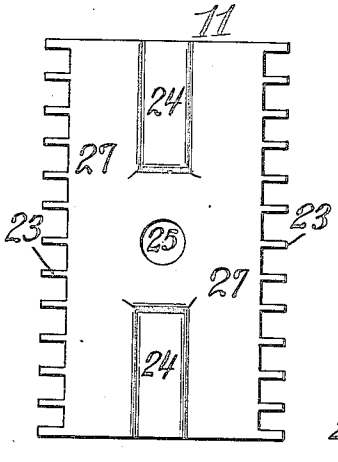


Fig. 7

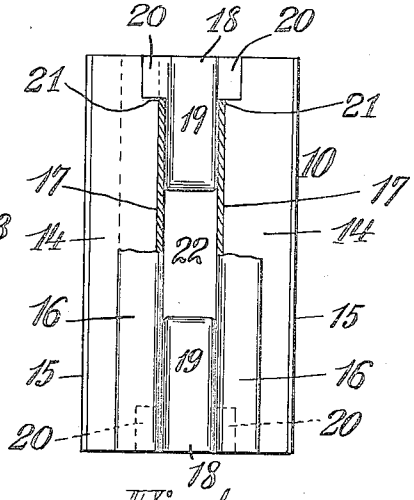


Fig. 4

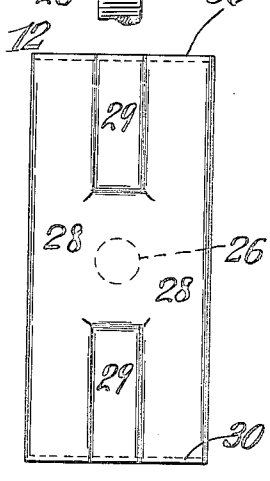


Fig. 9

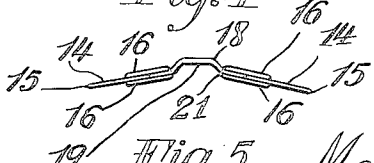


Fig. 5

INVENTOR

Morris Cecil

BY

Joan E. A. Konigsberg

ATTORNEY

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2 SHEETS—SHEET 2.

Fig. 10

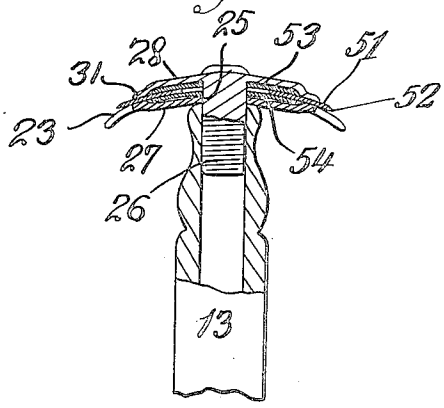


Fig. 13

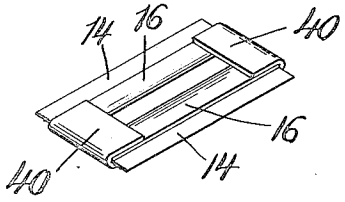


Fig. 11

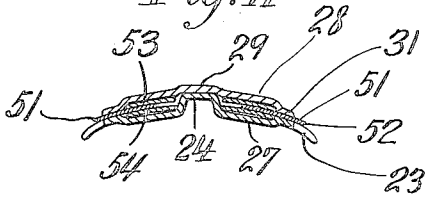
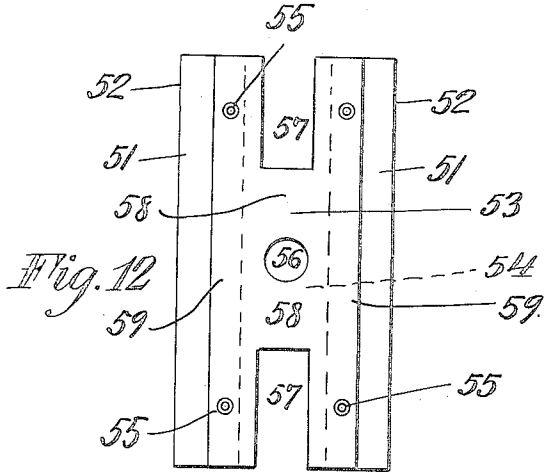


Fig. 12



Inventor

Morris Cecil

By his Attorney

Ivan E. A. Konigsberg.

UNITED STATES PATENT OFFICE.

MORRIS CECIL, OF NEW YORK, N. Y.

SAFETY-RAZOR.

1,225,409. Specification of Letters Patent. Patented May 8, 1917.

Application filed October 9, 1916. Serial No. 124,719.

To all whom it may concern:

Be it known that I, MORRIS CECIL, a Russian subject, and a resident of New York city, in the county of New York 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 my invention is to provide a generally improved safety razor having a double or two edged blade constructed in a novel manner and containing other novel features designed with a view of producing an efficient and improved safety razor at a reasonably low cost of manufacture.

Accordingly my invention comprises such features and arrangements of parts and elements as are hereinafter described while reference is had to the accompanying drawings in which—

Figure 1 is a central transverse sectional view of a safety razor embodying my invention.

Fig. 2 is a side view of the razor.

Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a plan view of the blade.

Fig. 5 is an end view of the blade.

Fig. 6 is a transverse sectional view of the guard plate.

Fig. 7 is a plan view of the latter.

Fig. 8 is an end view of the backing plate.

Fig. 9 is a plan view of the latter.

Fig. 10 is a view similar to Fig. 1 but showing a different kind of blade.

Fig. 11 is a view similar to Fig. 3 but showing the blade illustrated in Fig. 10.

Fig. 12 is a plan view of the blade shown in Figs. 10 and 11; and

Fig. 13 is a perspective view of still another form of blade.

My improved safety razor comprises four main parts. The blade 10, the guard plate 11, the backing plate 12 and the handle 13. The blade 10 consists of two blade sections each of which comprises the blade 14, having a cutting edge 15, and a stiffening member 16 in the form of a clip which is folded over the inner edge 17 of the blade and overlaps the latter on both sides. The blades are joined by blade holding members 18, 18, each of which has a socket portion 19 and two holding portions or wings 20. The latter are inserted between the folds 16 of the stiffening member and lie flush with the blade between said folds, the blades having their corners cut away to make room for the wings 20 as shown in Figs. 4 and 5. The member 16 is cut out at 21, 21 to permit the wings 20 to be inserted between the folds 16, where said wings are secured in any suitable manner, by welding for instance. The result is a rectangular blade with two cutting edges 15 held together at an obtuse angle and in which there is formed an open space 22 in the center.

The guard plate 11 is as long as the blade but wider and provided with the raised guards 23. 24, 24 are sockets or punched up portions adapted to fit within the sockets 19 of the blade. 25 is a central aperture through which passes the stem 26 of the backing plate 12. Both the latter and the guard plate are formed with two straight portions 27, 27 and 28, 28 respectively. In addition the backing plate is provided with socket portions 29, 29 corresponding to the sockets 19 and 24 aforesaid. 30, 30 are depending closed ends of the backing plate and 31, 31 are blade holding edges thereon.

In assembling the razor the blade is placed upon the guard plate. Thereafter the backing plate is put on with the stem 26 passing down through the space 22 in the blade and the aperture 25 in the guard. Then the handle 13 is screwed on the stem, whereby the blade is firmly clamped between the raised guards 23 and the holding edges 31 of the backing plate.

The blade, guard and backing plate register automatically because of the socket portions 19, 24 and 29 respectively which will slide within each other as the handle is screwed on and whereby the blade will be properly positioned in the razor. The ends 30 of the backing plate will lie outside of the blade and guard as seen in Fig. 2 and will greatly enhance the appearance of the razor.

It will be noted from the foregoing that the blade is rigid and firmly held between the two outer members, the opposed portions 27 and 28 of which form a socket or space within which the stiffening members 16 of the blade are received. The manner in which the blade is made provides a very strong construction and the several parts thereof are easily made and assembled.

Fig. 13 shows a blade consisting of two blade sections constructed of the parts 14 and 16 as in Fig. 4. The holding plates are in this instance in the form of clips 40, 40 which are secured to the blade sec-

tions in any suitable manner, as by clenching, and of course, in this case the blade sections are not cut as described above. With this form of blade there will be provided cut out portions (not shown) in the guard and backing plate to receive the clips 40 as will be understood by those skilled in the art.

In Figs. 10, 11 and 12 the razor blade consists of a plurality of blade sections 51, 51. Each section is preferably rectangular with a cutting edge 52. The blade sections are assembled to form a blade by means of holding plates 53 and 54 which are symmetrical and between which the blade sections are secured in any suitable manner as for instance by upsetting or eyeleting as at 55 in Fig. 12. The blade sections are cut from a band of safety razor steel, positioned between the blade holding plates and thereafter the assembled blade is given its final form which is concavo-convex as shown. The result is a blade consisting of permanently shaped holding plates between which the blade sections are secured and whereby the latter are given a slight transverse curve, while the blade sections are rigid and straight longitudinally.

The blade is apertured at 56 and cut out at 57, 57 for the purpose hereinafter set forth. Sufficient metal will be left in the blade at the points 58, 58 to enable one to make and use the blade without fear of breaking or bending it. If, in clamping the blade in the holder, it should buckle or spring, it will be seen that the bending moments will occur diagonally of the portions 58, but no buckling of the two portions 59, 59 will occur so that the rigidity and straight planes of the cutting edges will not be disturbed and the blade as such is a rigid blade.

The guard and the backing plate are similar to those described above and are lettered correspondingly.

In assembling the razor shown in Fig. 10, the blade is placed upon the guard as before and the cut out portions 57 will naturally register with the sockets 24 on the guard and whereby the apertures 25 and 56 are alined. Thereafter the backing plate is positioned with its stem through the said apertures and the handle 13 is screwed on the stem to clamp the parts together. The blade holding plates 53 and 54 lie in the space provided between the straight portions of the guard and backing plates, while the blade sections are firmly clamped between the holding edges 31 and the raised guards. The sockets in the backing plate might be omitted and the plate cut out as is the blade, but I prefer to have a solid backing plate as it is stronger.

The razor is shown very much enlarged in the drawing. In reality the blade holding plates will be very thin so as to occupy but little space and the razor when assembled will hardly be any thicker than other two edged razors in the art.

The construction as described and illustrated possesses several advantages. There is a saving in blade material by using a narrow blade band from which to cut the blade sections. And by shaping the guard and backing plates as described and shown I obtain very strong plates and can at the same time make them rather thin. The invention is not limited to the precise forms shown and described, but may be changed withing the scope of the appended claim.

I claim:—

In a safety razor the combination of a guard plate having oppositely disposed punched up registering portions, a razor blade comprising two blade sections spaced in parallel position, each of said blade sections consisting of a blade and a stiffening member folded over the inner edge of the blade, the inner corners of the said blades being cut away between the folds of the stiffening member, holding members having portions extending into said cut away portions of the blades between the folds of the stiffening member for joining the two blade sections to form a safety razor blade, said holding members being further provided with socket portions extending inwardly a distance between the said blade sections and adapted to receive the punched up registering portions of the guard plate aforesaid to register the blade on the guard, a backing plate having sockets for receiving the holding member sockets aforesaid and means for clamping the blade between the said guard and backing plate.

Signed at New York in the county of New York and State of New York this 5th day of Oct. A. D. 1916.

MORRIS CECIL.