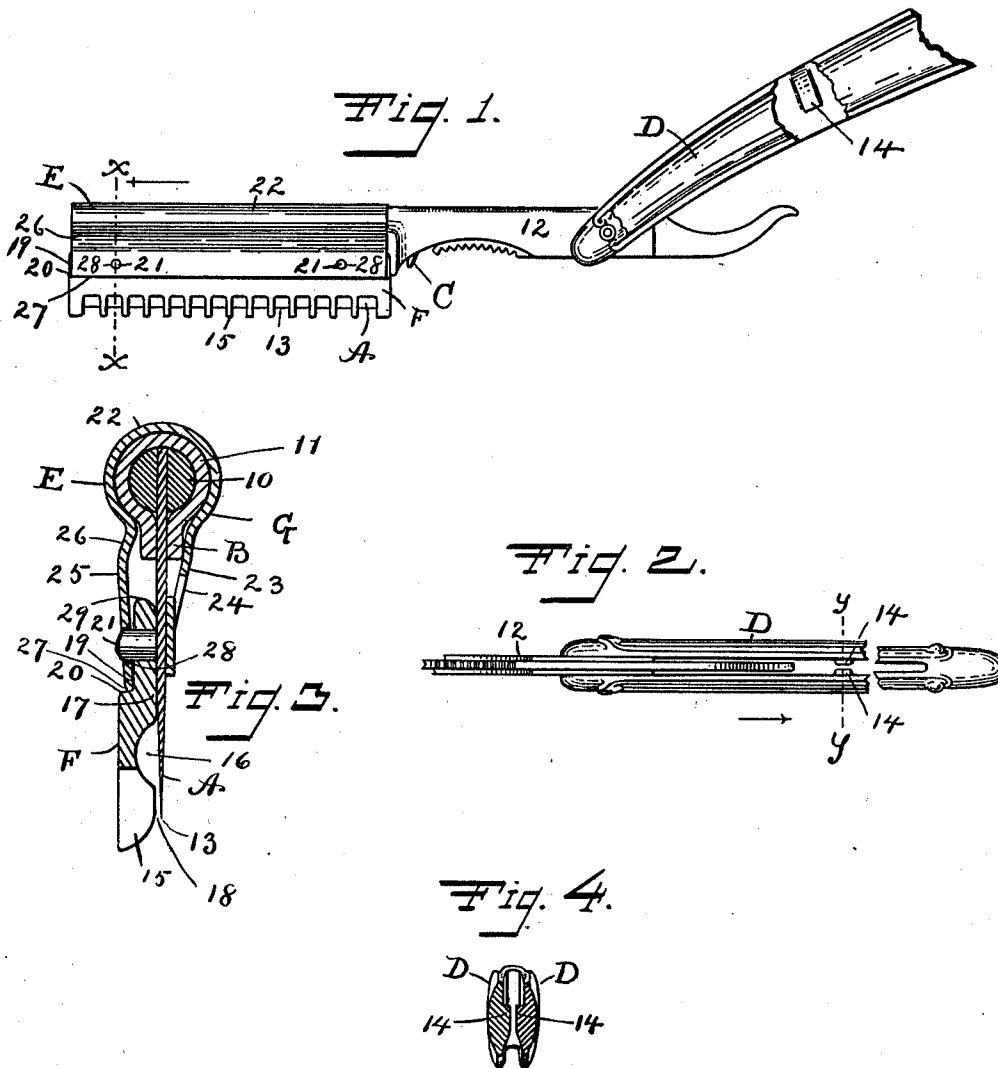


A. A. WARNER.
SAFETY RAZOR.
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993,132.

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Witnesses:

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SAFETY-RAZOR.

993,132.

Specification of Letters Patent.

Patented May 23, 1911.

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To all whom it may concern:

Be it known that I, ALONZO A. WARNER, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

My invention relates to improvements in safety razors, and the objects of my improvements are convenience and efficiency in use.

In the accompanying drawing—Figure 1 is a side elevation of my safety razor, the handle being in part broken out. Fig. 2 is an elevation of my safety razor turned 90 degrees from the position shown in Fig. 1, in part broken out. Fig. 3 is a sectional view on the line *x x* of Fig. 1, on an enlarged scale. Fig. 4 is a sectional view on the line *y y* of Fig. 2, on the same scale as Figs. 1 and 2.

My razor comprises a blade A of sheet metal which is removably held in a blade holder B by means of lugs 10 cast on the back edge of the blade, fitting and adapted to be received longitudinally in a tubular back 11 in the said blade holder and is held against longitudinal displacement by means of a latch C, adapted to engage with the inner end of the blade. The tang 12 extends inwardly from the said latch and is pivotally connected to a pair of scales D, between which the cutting edge 13 of the blade is received and housed when the razor is closed, quite in an ordinary manner. The said scales D however, are provided on their inward faces, intermediate their length, with inwardly projecting lugs 14, the purpose of which will be hereinafter described.

My razor is provided with a guard member or guard and means of support therefor E comprising a guard plate F and a plate support G. The said guard plate F comprises an essentially rectangular plate having along one edge the usual comb formation which constitutes the guard proper 15, and which is provided with means for being retained in proper relation to the said cutting edge 13 of the blade, as will be hereafter described. The said guard plate F is provided back from the said guard proper 15 and separated therefrom by a groove 16 with a flat bearing surface 17 of appreciable width and adapted to bear against the side of the blade A and located in a plane set inward from the said guard proper 15 so

that when in normal position in contact with the blade the said guard proper 15 will be adjacent the said edge 13 of the blade A and separated therefrom by a space 18 so as to provide clearance between the guard and the blade. The reverse or outward face of the said guard plate F relatively to the said bearing surface is in part cut away from the back edge 29 to form a shoulder 20 so as to provide a support receiving space 19 and at about the middle of the width is provided with two guide pins 21 projecting outwardly and adapted to engage with holes in the plate support as will be herewith described. The said plate support G comprises a tubular back 22, fitting the said tubular back 11 of the holder B, open longitudinally along the front and provided with two forwardly projecting clamping members 23 and 25 of essentially the same length, the guard supporting member 25 being longer and overhanging the blade supporting member 23. The blade member 23 may be slitted, as at 24. The guard member 25 is bent or bowed outwardly as at 26 adjacent the back and then extends forwardly so as to clear generally the said support receiving surface 19 and to bear by its forward edge 27 against the said surface adjacent the said shoulder 20, and forming with the said surface a rocking pivotal engagement, and is provided with holes 28 adapted to engage with the said guide pins 21 as described and by means of which the said guard plate and support are retained positively connected when the guard member and means of support therefor E is apart from the blade A and when being placed in position on the blade or being removed from such position, as well as when in normal position on the blade for use.

When the guard member and means of support therefor E is removed from the blade A my razor may be closed in an ordinary manner, as described, with the edge 13 inclosed between the scales D. With the guard member and support therefor E in position on the blade A however, any attempt to close the razor would result in the guard coming in contact with one of the lugs 14 on the scales D which would prevent all further attempt at such closing. Accordingly it is not possible to close my razor without removing the guard and support. As shown, the lugs 14 are integral with the scales D, which is the preferred form, and

they are shown as two in number, so that one of them will always be in the line of the guard and will be effective in preventing such closing as described, regardless as to the side of the blade on which the guard may be located.

As described when assembled in normal position on the blade the guard 15 of my safety razor is offset from the blade A by a predetermined amount which corresponds to the offset of the same relatively to the said bearing surface 17 of the guard plate F, and which on account of the rocking pivotal connection of the guard plate F and the plate support G is independent of the thicknesses of the blade A.

When removed from the blade A the guard member and means of support therefor E is self contained as described, the plate F and support G being retained against separation, and the said guard member is symmetrical and reversible and accordingly is adapted to be placed on the blade for either right hand or left hand use.

I claim as my invention:—

1. In a safety razor having a removable blade, a guard member comprising a guard plate and a plate support, the said guard plate comprising an essentially rectangular plate provided along one edge with a guard and adjacent the other edge on one side with a plane bearing surface of appreciable width and on the reverse side with a clamping wing receiving space having guide pins, the said plate support comprising a back fitting and adapted to be received over the back of said blade and a pair of clamping wings adapted to clamp said blade to said back with the bearing surface in contact with the blade, one of said clamping wings being in contact with the blade and the other provided with holes adapted to receive the said guide pins, and to make clamping contact by its edge with the said clamping wing receiving space along a line essentially intermediate the longitudinal edges of the said bearing surface.

2. In a safety razor comprising a blade and a guard, and a spring clamp removably securing the said guard to the side of the said blade, the said guard having one side

fitted to rest against one side of the said blade and its other side provided with a longitudinal shoulder, and the said spring clamp comprising a pair of clamping wings united by a tubular back, and having their edges opposed and separated by a space for receiving the blade and guard, one of the said wings being received against the side of the said guard, with its lower edge in contact therewith adjacent the said shoulder, and provided with a row of holes adjacent the said edge, the said side of the guard being provided with a set of pins in engagement with the said holes.

3. In a safety razor comprising a blade, a guard plate having a guard proper along one edge, a bearing surface for being seated against one side of the said blade, and a pair of outwardly projecting pins rigidly mounted on said guard plate, one near each end in a line to one side of the median line of the said guard plate and nearest that edge which is farthest from the guard proper, and a two winged spring clamp for holding the said guard against the said blade, one of the said wings being provided with perforations that receive the said pins, the edge of the said wing being extended toward the median line of the guard beyond the said perforations for bearing upon the said guard, the said pins being free to move out and in within the said perforations to permit the said guard to rock upon the said edge of the said wing to conform to that side of the said blade against which the said guard may be seated.

4. In a safety razor having a blade, a handle comprising scales pivotally connected to said blade, and adapted to receive said blade between said scales, and a guard adapted to be removably received on said blade, lugs on said scales, the said lugs located intermediate the length of said scales, on the inner faces of the same, and concealed and invisible from the exterior.

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Witnesses:

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