Sept. 13, 1927. 1,642,338

J. HOLTZMAN

SAFETY RAZOR

Filed Nov. 7, 1925 2 Sheets-Sheet 1

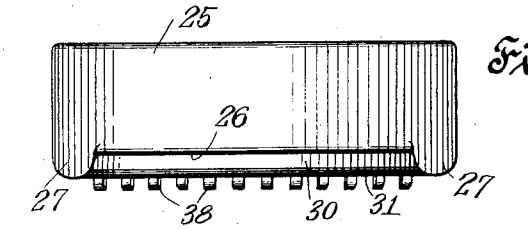


Fig.2.

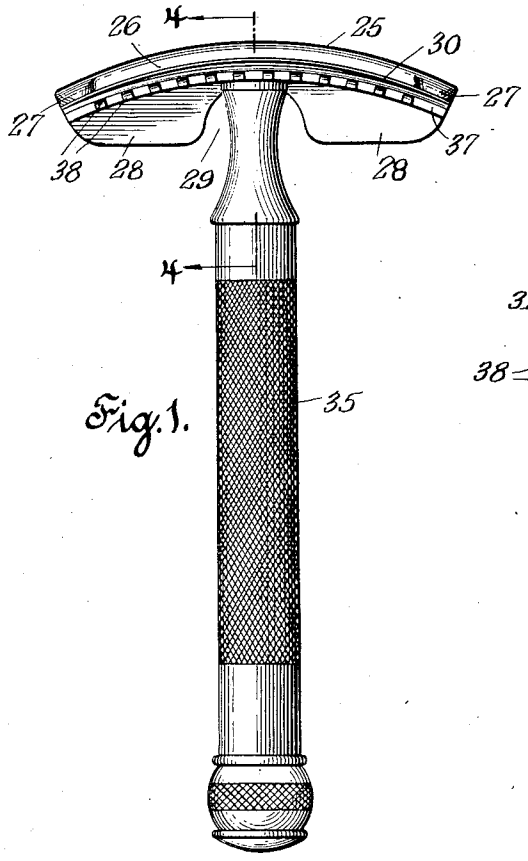


Fig.1.

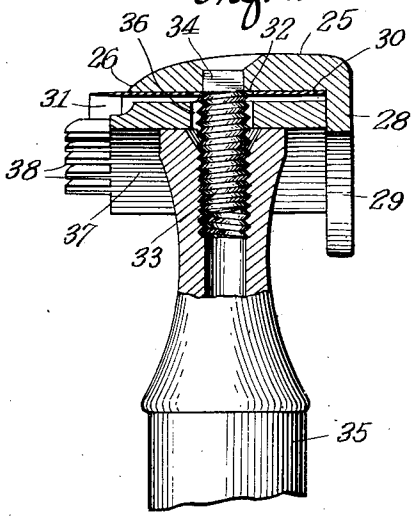


Fig.4.

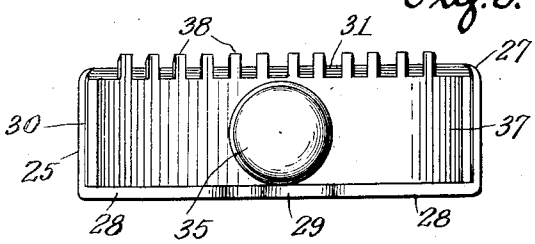


Fig.3.

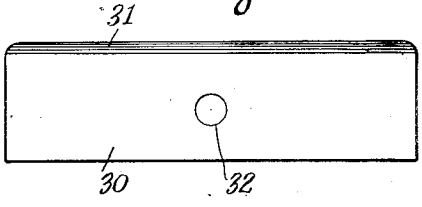


Fig.5.

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Fig. 6

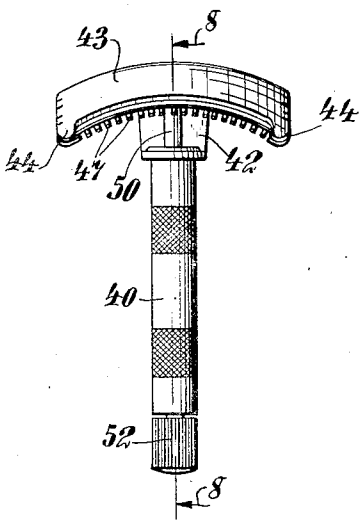


Fig. 7

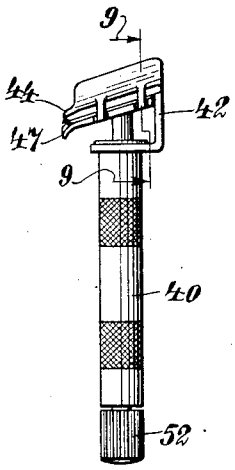


Fig. 8

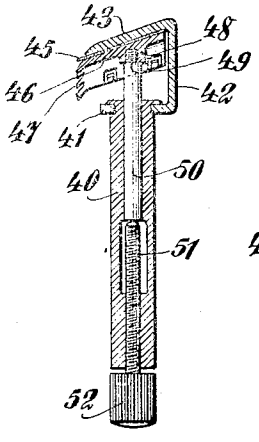


Fig. 9

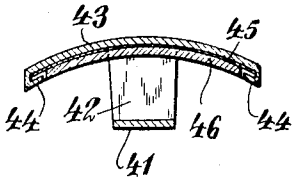
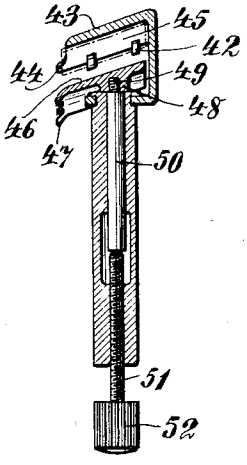


Fig. 10



INVENTOR

John Holtzman

Patented Sept. 13, 1927. 1,642,338

UNITED STATES PATENT OFFICE.

JOHN HOLTZMAN, OF NEW YORK, N. Y.

SAFETY RAZOR.

Application filed November 7, 1925. Serial No. 67,485.

This invention relates to safety razors and has as one of its objects to provide a razor having a curved blade permitting its use on concave or hollow portions of the body in a particularly convenient manner.

Another object is to provide means for resiliently clamping a razor blade to its holder by a new and effective device.

These and minor other objects are achieved by the characteristic construction and arrangement of elements hereinafter recited and delineated in the associated drawings, constituting an essential part of this disclosure, and in which:—

Figure 1 is a front elevational view of one embodiment of the invention.

Figure 2 is an end view thereof showing the curved head.

Figure 3 is a view looking from the handle end.

Figure 4 is an enlarged fragmentary sectional view taken on line 4—4 of Figure 1.

Figure 5 is a plan view of the razor blade in detail.

Figure 6 is a front elevational view of a modified form of curved razor blade.

Figure 7 is a side view thereof.

Figure 8 is a longitudinal sectional view taken on line 8—8 of Figure 6.

Figure 9 is a fragmentary sectional view of the holder, taken in a plane at right angle to Figure 8 on line 9—9 of Figure 7.

Figure 10 is a sectional view in all respects similar to Figure 8, but showing the parts in blade released position.

In Figures 1 to 5 is shown a type of safety razor having a clamp head 25 curved in the direction of its length; the same being rounded at its front edge 26, except for end portions 27 and provided at the rear with right angled guiding flanges 28 presenting between them a space 29.

A blade 30, having a single cutting edge 31, is provided with a central opening 32 to permit passage of a screw 33, its head 34 being riveted into the clamp 25 as shown in Figure 4.

This screw engages in an opening in the end of a handle 35, of any approved shape, the outer end of the opening being countersunk to permit ready entrance of the screw, which passes through an opening 36 in the inner clamp or seat member 37, curved to conform with the outer clamp with the flanges 28 of which it engages at the back.

Extending outwardly from the reduced front edge of the member 37 is a comb-like formation, its teeth 38 acting as guards for the edge 31 of the razor blade, extending in advance closely adjacent to its lower side.

In operation the blade is placed on the holder 37, the clamp cap applied with its long screw extending through the blade and holder to engage the handle, whereupon rotating the handle to cause the screw to move therein will obviously force the blade into a curved position between the elements 25 and 37.

Figures 6 to 10 show a different form of construction of a similar type of razor having a handle 40 at one end of which is an annular or groove to receive the edge of an opening formed in a plate arm 41 to become rigidly united therewith.

A right angular extension 42 of the arm 41 is integrally connected with a cap 43, curved longitudinally and bent downward to constitute a rigid cap having reentrantly projecting lugs 44 at its end edges, adapted to engage a blade 45, the blade being sprung to closely engage as best seen in Figure 9.

A clamp member 46, provided with guard teeth 47, is shaped in accordance with the cap and formed on the lower side of the clamp is a boss 48 in which is fixed the screw-threaded end 99 of a rod slidable in a bored opening in the handle 40.

A screw 51, provided with a knurled head 52 is engaged in the opposite, outer end of the handle, the point of the screw being adapted to make contact with the inner end of the rod, pressing it, together with the clamp 46 against the under surface of the blade and eventually tightening it firmly against the cap in operative position.

Although I have described my improvements with considerable detail and with respect to certain particular forms of my invention, I do not desire to be limited to such details since many changes and modifications may well be made without departing from the spirit and scope of my invention in its broadest aspect.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a safety razor, the combination of a flexible single edged, singly apertured blade, a holder plate curved in the direction of its length for said blade, a guiding flange integral with said holder, flat arcuate projections on said flange, a guard plate corre-

sponding in curvature to said holder having a single central aperture, a stud extending radially from said holder, and a handle engaging said stud to clamp said blade intermediate said holder and guard, said guard being guided by direct contact with the flange of said holder while said blade is gradually flexed to its operative position.

2. In a safety razor, the combination of a flexible single edged, singly apertured blade, a holder plate curved in the direction of its length for said blade, a guiding flange integral with said holder, flat arcuate lugs extending out from each end of said holder to protect the corners of said blade, a centrally apertured guard plate corresponding in curvature with said holder, a threaded stud extending radially from said holder, and a handle receptive of said stud to clamp said blade between said holder and guard, said guard being directly guided by contact with said flange and stud while said blade is gradually flexed to its operative position.

3. A safety razor comprising a handle, a clamp member adjustably engaged therein, a flange on said member disposed at a right angle thereto, said flange presenting two spaced arcuately curved portions, a single edged centrally apertured razor blade, a seat element for said blade intermediate the handle and clamp, said seat and clamp being arcuately curved toward said handle, said seat being guided by direct contact with the clamp flanges, guard teeth on said seat element, and means on said clamp member to protect the forward corners of said blade.

4. A safety razor comprising a handle, a guard frame fixed thereto, said frame having an inclined outer wall arcuately curved in the direction of its length, a razor blade, clips on said frame to engage the ends and rear edge of the blade, a clamp member complementary to the outer wall of said frame, a rod set in said clamp member to slidably engage in said handle, a screw operatively engaged in said handle to press said clamp firmly against the inner wall of said frame to clamp the blade therebetween, and guard teeth on the forward edge of said clamp member.

In testimony whereof I have signed my name to this application.

JOHN HOLTZMAN.