W. J. BAUER.

SAFETY RAZOR.

APPLICATION FILED DEC. 17, 1912.

1,067,393. Patented July 15, 1913.

Fig. 1.

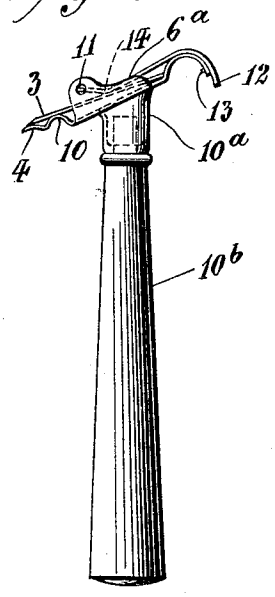


Fig. 2.

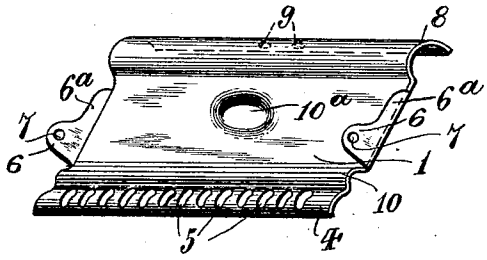
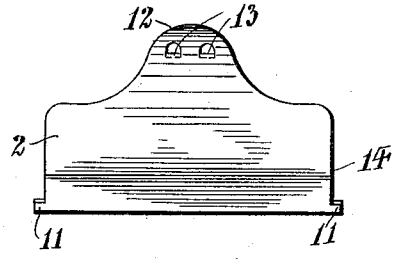


Fig. 3.



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SAFETY-RAZOR.

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To all whom it may concern:

Be it known that I, WILLIAM J. BAUER, a citizen of the United States, and a resident of New York city, borough of Manhattan, 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.

This invention relates to safety razors and the principal object of this invention is to provide a safety razor of inexpensive construction, the parts of which may be stamped out of sheet metal, the device as a whole, however, operating as efficiently as a safety razor of a more expensive and complicated construction.

A further object is to provide in a razor of this character, means for clamping the blade to its support, which means is firmly locked in place when the razor is clamped, but is readily unlocked to release the blade.

Further objects and advantages will appear from the detailed description and the novel features will be particularly pointed out in the claims.

In the drawings accompanying this specification, Figure 1 is a side elevation of a safety razor embodying my invention. Fig. 2 is a perspective view of the supporting and guard plate. Fig. 3 is a perspective view of the clamping plate.

The safety razor consists essentially of two plates 1 and 2 stamped out of sheet metal which clamp therebetween a blade 3. The latter is formed preferably of thin, spring steel which readily flexes under the pressure of the clamping plates and is thus firmly clamped in position. The plate 1 constituting the supporting and guard plate of the razor may be stamped out of sheet metal in one operation of a die. This plate is formed on one edge with a guard section 4 having the perforations 5 through which the stubble projects and assumes a position in which it may be readily attacked by the blade edge. These perforations may be formed in the same operation in which the rest of the plate is stamped. At each end of the plate is formed an upstanding ear 6 having an aperture 7 which is adapted to receive the pivot of the clamping plate. Extensions 6^a from the ears 6 present comparatively long surfaces which serve as guides for the ends of the blade and keep it in proper alinement. At the edge of the plate 1 opposite from the guard portion 4 is a raised curved portion 8 having perforations 9 therein adapted to receive the locking projections of the clamping plate hereinafter described. A raised ridge 10 is formed near the guard plate on which the blade rests as it is held down by the clamping plate. The blade is supported at two points, one adjacent to the junction of the raised portion 8 with the body of the plate, and the other along the ridge 10. The raised portion 8 forms a shoulder against which the back of the blade may be positioned so as to place it in proper relation with reference to the guard plate. A downwardly extending tubular socket 10^a is preferably stamped out and expanded out of the body of the metal of the plate and is adapted to be fastened in any suitable fashion to the usual handle 10^b. The clamping plate 2 is also formed of sheet metal which is stamped out in one operation. At one edge of this plate projecting pins 11 are formed which are adapted to be inserted in the apertures 7 of the ears 6 of the supporting plate. At the other edge of the clamping plate, a tongue 12 is formed which curves around to conform to the curvature of the raised portion 8 of the supporting plate. A pair of projections or teats 13 are stamped out of this tongue and are disposed so as to engage within the apertures 9 when the clamping plate is forced into locked position to clamp the blade as indicated in Fig. 1. A downwardly projecting ridge 14 is formed also upon the clamping plate which is adapted to bear upon the blade and clamp it against the supporting surfaces of the supporting plate.

When the blade is properly positioned upon the supporting plate, which is determined by the back of the same abutting the junction of the overturned portion 8 and the body of the supporting plate, the clamping plate is grasped by the tongue 12 and forced over the raised portion 8 until the projections 13 lodge in the recesses 9. The spring of the sheet metal itself is sufficient to give rise to the necessary pressure upon the blade for clamping the same firmly and also permits the yielding of the tongue 12 and the raised portion 8 to allow the projections 13 to ride over said raised portion 8 until they are lodged in locked position within the apertures 9. The tongue projects past the edge

of the supporting plate sufficiently so that it may be readily grasped and sprung outward to disengage the projections 13 to release the blade from the support. It will be noted that the line of contact of the razor upon the flat portion adjacent the shoulder and the crests of the ridge 10 and the guard member are substantially in the same plane, and when the blade abuts the shoulder, as it normally does, it occupies this plane and is in the position of finest adjustment, that is, gives the coarsest shave.

When it is desired to adjust the razor for a closer shave, the blade may be moved slightly away from the shoulder against which the back of it abuts, thus moving the cutting edge forward into a position to come into closer contact with the surface to be shaved. It will be noted that the supporting plate is inclined from the ridge 10 to the shoulder, and thus when the back of the blade is moved away from the shoulder, the edge is raised somewhat and thus helps in obtaining the desired adjustment with a comparatively slight movement of the blade away from the shoulder.

It will be thus seen that I have provided a safety razor of extremely cheap construction which is so formed, however, that it will properly hold the blade and retain it firmly in position. This construction, although inexpensive, is as efficient and reliable as more expensive and complicated constructions.

Having thus described my invention, I claim as new:

1. A safety razor comprising two members between which a blade is adapted to be clamped, one of said members constituting a support having an overturned portion on one side, two parallel ridges on the other side, the outer ridge having perforations along its entire length and serving as a guard, and a flat inclined table between said ridges and overturned portion, and the other member constituting a clamp having a depending portion to press upon the blade, an overturned tongue extending over said overturned portion of the support and a projection adapted to spring into and interlock in a recess in said overturned portion, said tongue projecting beyond the edge of the support so as to be readily grasped to disengage the same.

2. A safety razor comprising a supporting member, said member being formed with a ridge having spaced perforations therein and serving as a guard, a second continuous ridge adjacent thereto, an inclined flat portion adjacent said second mentioned ridge, the normal line of contact of the blade at the flat portion and the uppermost points of the two first mentioned ridges being in the same plane, ears formed on the opposite lateral ends of the supporting member, said supporting member being adapted to receive the back of a razor blade on its inclined flat portion, a portion near the cutting edge of the blade on the continuous ridge, and the portion immediately adjacent the cutting edge on the guard ridge, said edge being advanced and raised by movement of the back of the blade down the inclined portion, and receded and lowered by movement of the blade up the inclined flat portion, and a clamping member pivoted within the said ears of the supporting member, said clamping member having means for interlocking with said supporting member to clamp the blade in its adjusted position.

3. A safety razor comprising a supporting member integral throughout, provided with two parallel ridges adjacent each other, the outer ridge having spaced slots throughout its length and adapted to serve as a guard, a flat inclined portion adjacent said parallel ridges, and an enlarged ridge forming a shoulder on the other side of said flat portion and parallel to the first mentioned ridges, the junction of the shoulder and the flat inclined portion being in the same plane with the uppermost points of the two first mentioned ridges, said plane being the extreme position of adjustment in one direction of the razor blade, a razor blade movable upon said supporting member in a direction down or up the inclined plane for advancing and raising the blade or receding and lowering the same, an ear having an elongated base formed on each lateral edge of said supporting member, said elongated bases serving to prevent lateral movement of the blade, a clamping member pivoted in said ears having a depending ridge contacting the blade and an overturned portion having means for interlocking with the shoulder of the supporting member to hold the blade in adjusted position.

Signed at New York city, in the county of New York and State of New York, this 13th day of December, A. D. 1912.

WILLIAM J. BAUER.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."