

E. M. STORY.
SAFETY RAZOR.
APPLICATION FILED MAR. 11, 1911.

1,010,704.

Patented Dec. 5, 1911.

Fig. 1.

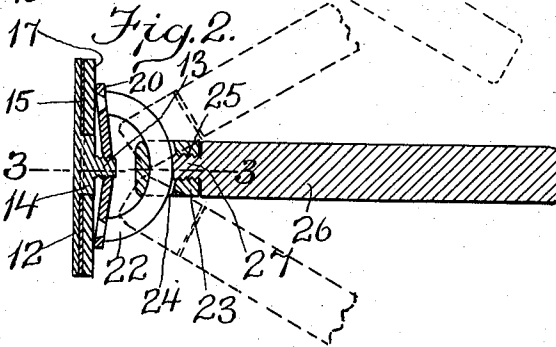
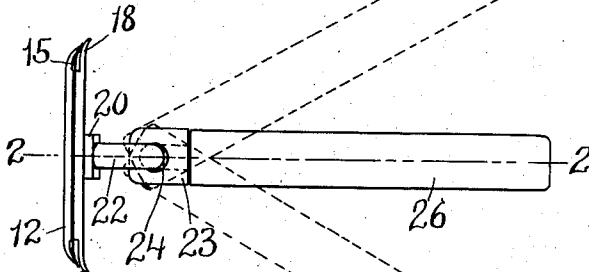


Fig. 3.

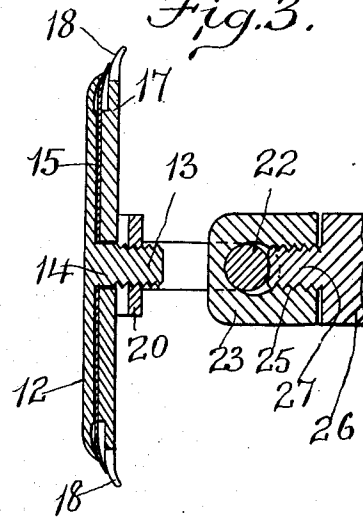


Fig. 4.

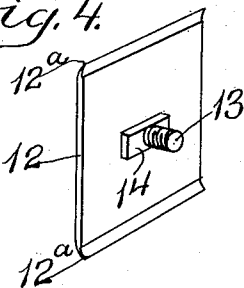


Fig. 5.

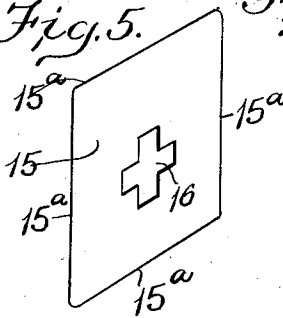


Fig. 6.

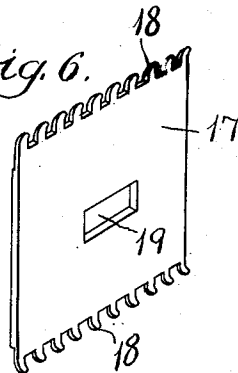
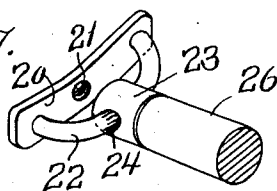


Fig. 7.



Witnesses:

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UNITED STATES PATENT OFFICE.

ELLIOTT M. STORY, OF WHITMAN, MASSACHUSETTS.

SAFETY-RAZOR.

1,010,704.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ELLIOTT M. STORY, of Whitman, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Safety-Razors, of which the following is a specification.

This invention relates to a safety razor in which a substantially flat blade is clamped between a blade rest formed as a runner to bear and move upon the face, and a guard plate having guard fingers which cooperate with the cutting edge or edges of the blade in a well known manner, a handle being provided which is adjustable relatively to the blade and its holder and is capable of being locked in various positions.

The invention has for its object to provide certain improvements relating to means for confining the blade between the rest and guard plate, and to the means for adjusting the handle.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings which form a part of this specification,—Figure 1 represents a side view of a safety razor embodying my invention; Fig. 2 represents a section on line 2—2 of Fig. 1; Fig. 3 represents an enlarged section on line 3—3 of Fig. 2; Figs. 4, 5, and 6 represent perspective views showing respectively the blade rest, the blade and the guard plate; Fig. 7 represents a perspective view showing the clamp and the handle carried thereby.

Similar reference characters indicate the same or similar parts in all the figures.

In the drawings, 12 represents the blade rest which is a substantially flat plate preferably of rectangular form and preferably slightly curved backwardly at its edges, whether on one side or more, preferably two, as indicated at 12^a of Fig. 4. Two curved edges are here shown but the number of said edges may be one or more. The outer side of the rest 12 is adapted to bear and slide on the face during the shaving operation, the blade rest therefore constituting a runner.

13 represents a screw-threaded shank which is rigidly attached to the rest 12 and projects over the central portion of its inner side.

14 represents a polygonal shouldered projection on the inner side of the rest 12, said

projection constituting the base of the shank 13.

15 represents the blade which is a thin substantially flat plate of steel sharpened to form one or more cutting edges 15^a. I prefer to make the blade of rectangular form and to sharpen each of its edges although it is obvious that one or more sharpened edges may be provided. The proportions of the blade are such that when it is in place on the rest its cutting edge or edges will project from the corresponding edges of the rest, as indicated by Figs. 1 and 3. The blade is provided with a polygonal orifice 16 formed to fit and bear upon the margin of the projection 14 so that the latter prevents rotary movement of the blade relatively to the rest 12. In case the blade has four cutting edges the orifice 16 is preferably cruciform so that it may be engaged with the projection 14 in different positions, or with either pair of the cutting edges in operative position. By "pair" I mean two opposite edges.

17 represents the guard plate preferably of rectangular form and substantially flat. The guard plate is formed to bear on the inner side of the blade 15, the guard plate having one or more, preferably two, of its opposite edges serrated to form guard fingers 18 which are preferably curved, as indicated by Figs. 1 and 3, the guard fingers projecting outwardly from the acting edges of the blade. The guard plate is provided with a polygonal orifice 19 which coincides with the blade orifice 16 and engages the projection 14 to prevent rotary movements of the guard plate relatively to the blade rest and blade. When the rest, blade and guard plate are assembled, the projection 14 enters the orifices 16 and 19 and the shank 13 projects outwardly from the outer side from the guard plate.

20 represents a clamp which bears on the outer side of the guard plate and has a central screw-threaded socket 21 engaged with the shank 13, so that when the clamp is rotated on the shank it acts as a nut and presses the guard plate against the blade and the blade against the rest. The clamp is preferably a resilient metal plate which is bent or curved so that its central portion containing the threaded socket 21 is offset from the corresponding portion of the guard plate, the pressure of the clamp being therefore concentrated on portions of the guard

plate between the center and the margin of the latter, and the clamp being adapted to more effectively confine the guard plate and blade against movement outwardly from the rest. The clamp is removable from the shank 13 to release the blade and guard plate, and when turned inwardly on the shank to confine the blade and guard plate, its bearing portions slide on the outer surface of the guard plate in a circular path.

The clamp 20 carries a handle which as here shown includes an inner member rigidly attached to the clamp, and an outer member movably engaged with the inner member and adapted to be adjusted to different positions relatively to the latter, means being provided for locking the outer member in any position to which it may be adjusted. In the embodiment of my invention, here shown, the inner handle member is a curved bar 22 of semi-circular form attached rigidly at its ends to the clamp 20 and projecting outwardly therefrom, said bar having a concave inner side and a convex outer side and being substantially circular in cross section. The outer handle member is composed of a terminal portion 23 having a transverse eye 24 which loosely surrounds the bar 22, and a longitudinal screw-threaded socket 25 which communicates with said eye. The outer member also includes a grip portion 26 on one end of which is formed a screw-threaded stem 27 engaging the threaded socket 25 and adapted to bear as a set screw on the bar 22. A backward rotation of the grip portion 26 and stem 27 releases the hold of said stem on the bar 22 so that the outer handle member is free to move upon said bar lengthwise of the latter and stand at the different angles indicated by full and dotted lines in Fig. 2, and is also adapted to swing crosswise of the plane of the bar 22 and assume the different angles shown by full and dotted lines in Fig. 1. When the outer member has been adjusted, it may be locked in its adjusted position by turning the grip portion 26 to set the outer end of the stem 27 against one side of the bar 22. This operation drawing the outer side of the eye 24 against the opposite side of the bar. The outer side of the eye and the outer end of the stem constitute clamping jaws which are adapted to firmly grasp the bar 22 and lock the outer handle member in any of the various positions indicated in the drawings.

It will be seen from the foregoing that my invention provides a simple and effective safety razor of relatively inexpensive construction and comprising a relatively small number of parts, with provision for adjusting the handle at any desired angle relatively to the cutting edge or edges of the blade.

The bases of the guard fingers 18 are

preferably offset from the inner face of the plate 17, the latter being provided with one or more shoulders 17^b which cooperate with the portions 15^a of the blade rest in springing the blade, as indicated by Fig. 3.

I claim:—

1. A safety razor comprising a blade rest, a guard plate, a blade interposed between said rest and plate, a clamp bearing on the outer side of the guard plate, means for adjustably connecting the clamp with the blade rest and causing the clamp to exert blade-clamping pressure on the rest and guard plate, an inner handle member formed as a curved bar rigidly attached at its ends to the clamp and projecting outwardly therefrom in a plane substantially at right angles with the guard plate, said bar having a concave inner side and a convex outer side and being substantially circular in cross section, and an outer handle member adapted both to slide lengthwise of the curved bar and to swing crosswise thereof, and provided with means for rigidly securing it to the bar in any position to which it may be moved thereon.

2. A safety razor comprising a blade rest provided on its back with an outwardly projecting screw-threaded shank, a blade bearing on the back of the rest, a guard plate bearing on the outer side of the blade, the guard plate and blade being provided with coinciding orifices through which said shank extends, a clamp bearing on the outer side of the guard plate and having a threaded socket engaging the shank, an inner handle member formed as a curved bar rigidly attached at its end to the clamp and projecting outwardly therefrom in a plane substantially at right angles with the guard plate, said bar having a concave inner side and a convex outer side and being substantially circular in cross section, and an outer handle member adapted to slide lengthwise of the curved bar, and to swing crosswise thereof, and provided with means for rigidly securing it to the bar in any position to which it may be moved thereon.

3. A safety razor comprising a blade rest, a guard plate, a blade interposed between said rest and plate, a clamp bearing on the outer side of the guard plate, means for adjustably connecting the clamp with the blade rest and causing the clamp to exert blade-clamping pressure on the rest and guard plate, an inner handle member formed as a curved bar rigidly attached at its ends to the clamp and projecting outwardly therefrom in a plane substantially at right angles with the guard plate, said bar having a concave inner side and a convex outer side and being substantially circular in cross section, and an outer handle member adapted both to slide lengthwise of the curved bar and to swing crosswise thereof, said

outer handle member being composed of a terminal portion having an eye loosely surrounding said bar, one side of the eye bearing as a clamping jaw on the concave side of the bar, and a threaded socket communicating with the eye, and a grip portion having a threaded stem engaged with said socket and adapted to bear as a clamping jaw on the convex side of the bar, the stem being rotatable in the socket to cause the said jaws to grasp the bar and rigidly secure the outer handle member to the bar in any position to which said member may be moved thereon.

4. A safety razor comprising a blade rest provided on its back with an outwardly projecting screw-threaded shank, a blade bearing on the back of the rest, a guard plate bearing on the outer side of the blade, the guard plate and blade being provided

with coinciding orifices through which the said shank extends, and means being provided to prevent rotary movements of the blade and guard plate on the shank, a clamp composed of a resilient plate bearing on the guard plate and having a central portion offset from the guard plate and provided with a threaded socket engaged with said shank, and a handle comprising a curved bar attached at its ends to said clamp, and a grip portion adjustably secured to said bar.

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

ELLIOTT M. STORY.

Witnesses:

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CHARLES D. TYLER.