W. J. MOORE.

SAFETY RAZOR.

APPLICATION FILED MAY 26, 1908.

915,989. Patented Mar. 23, 1909.

Fig. 1.

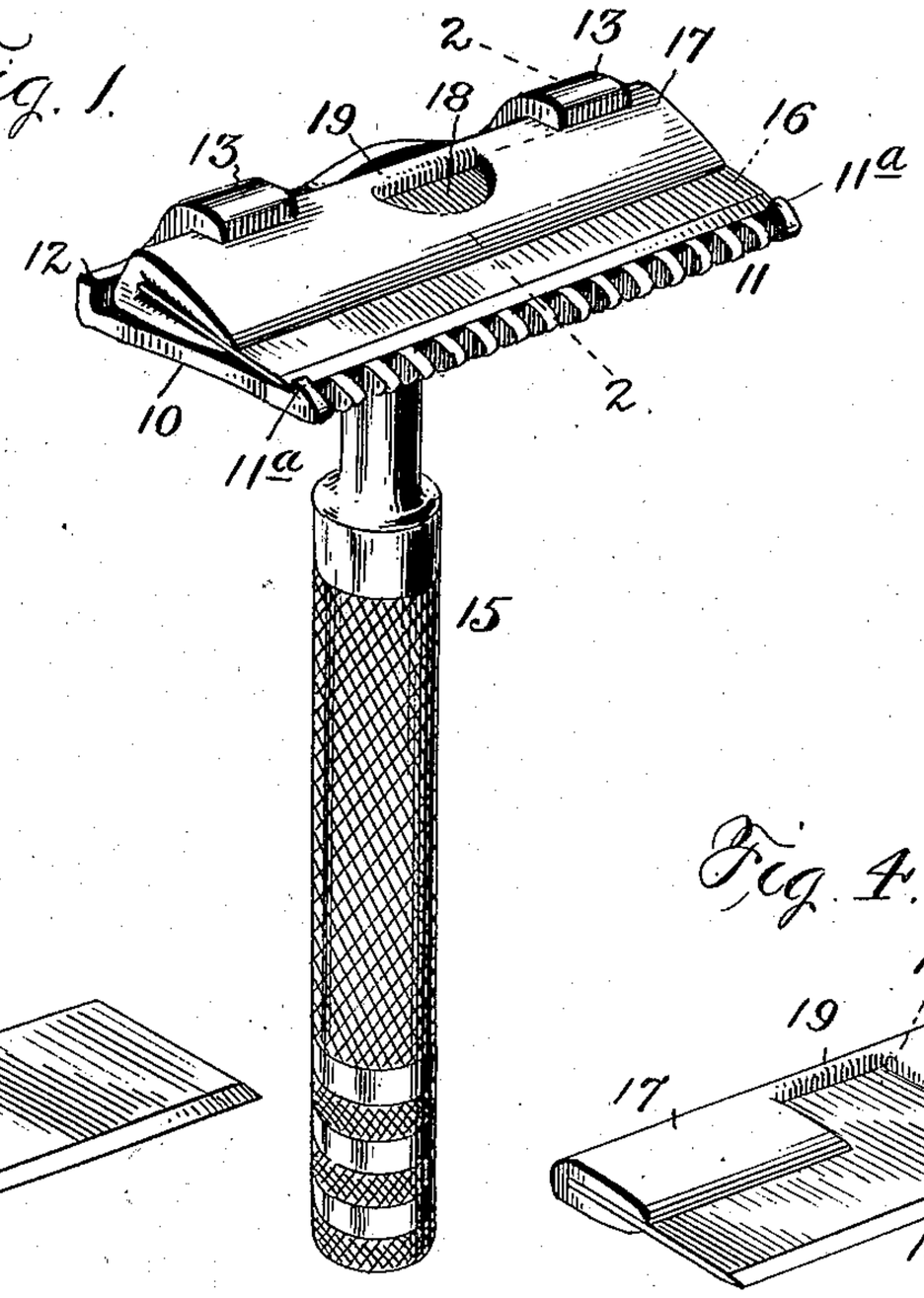


Fig. 3.

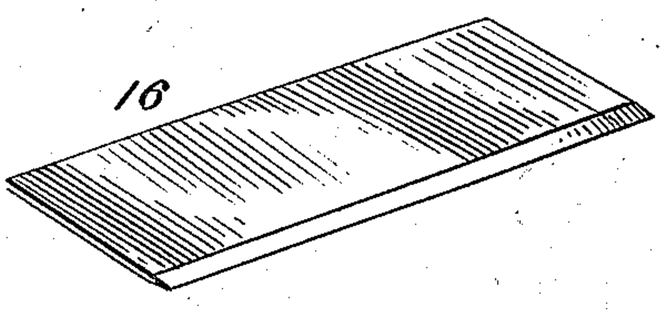


Fig. 4.

Fig. 2.

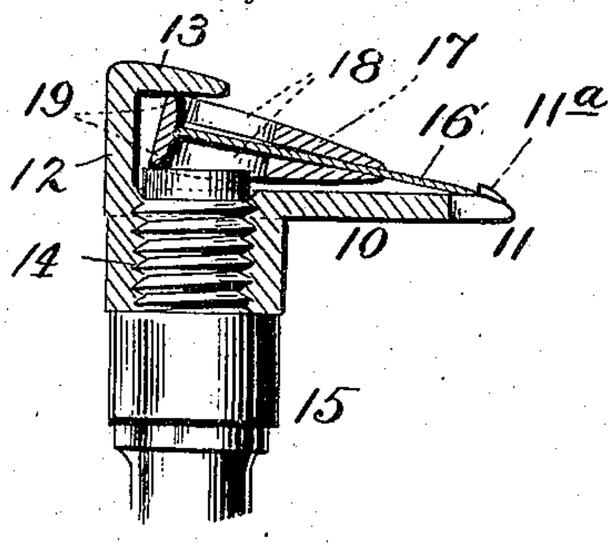
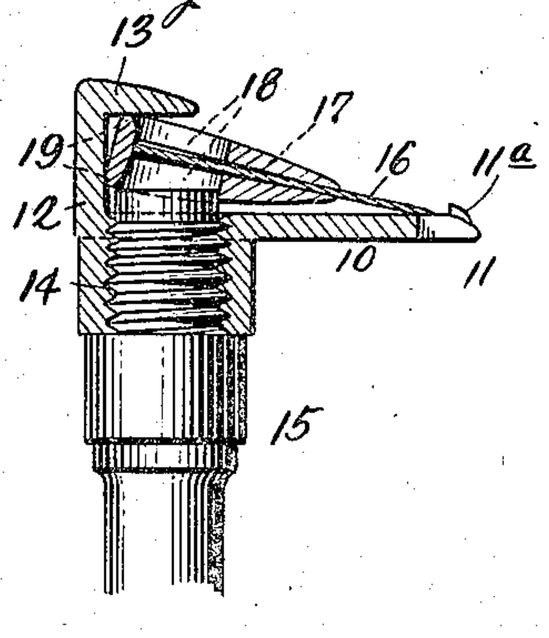


Fig. 2a.



Witnesses

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SAFETY-RAZOR.

No. 915,989. Specification of Letters Patent. Patented March 23, 1909.

Application filed May 26, 1908. Serial No. 435,044.

To all whom it may concern:

Be it known that I, WILLIAM J. MOORE, of Washington, in the District of Columbia, have invented a certain new and useful Improvement in Safety-Razors, and do hereby declare that the following is a full, clear, and exact description thereof.

Figure 1 is a perspective view of a safety razor embodying my invention; Fig. 2 a section on the line 2—2 of Fig. 1; Fig. 2ª a similar view showing a different position of the blade; Fig. 3 a perspective view of the blade-forming strip alone; and Fig. 4 a similar view of an embodiment of my invention, wherein the blade and its back are permanently joined together.

The object of my invention is to provide a safety razor in which can be used a blade of thin or sheet steel, which may be secured to the handle or holder by the impingement of the end of a screw upon the inner or under side of the blade structure so as to secure the engagement or contact of the cutting edge of the blade with the surface of the guard by a rocking or lever-like action, a safety razor of this type being of very simple construction, and the blade while susceptible of all required adjustment, is firmly held. The use of sheet steel for the razor blade is desirable, because of the cheapness of the blades thus made, and it is for that reason that I have made this invention to enable blades made of sheet steel to be used in safety razors of the type I have just described.

As I prefer to construct a safety razor embodying my invention, I employ a holder that consists of a plate 10, having at one edge a series of teeth or fingers 11, of the usual form in safety razors, and having at the opposite edge a flange 12, preferably perpendicular to the plate 10, from which flange one or more lugs or lips 13 project forward over the plate 10, substantially parallel therewith, between which and the plate 10 a sufficient space exists to receive the back portion of the blade and admit of the rocking of the latter to press and hold the cutting edge against the guard teeth or fingers, by pressure applied to the under side of the back of the blade by means of the end of a screw 14 on the upper end of a handle 15, which screw passes through a threaded opening in the plate 10.

The blade of my razor consists of a piece or strip 16 of sheet metal, having one edge ground or sharpened, and a back 17 consisting of a bar or strip of metal provided with a slot or slit of such extent as to receive preferably a large portion of the piece or strip 16 so as to overlap the latter on both sides. In order to secure the lever-like or rocking action of the blade, which is necessary to bring and hold its cutting edge close against the outer surface of the guard fingers, it is essential that the point of contact of the screw end with the back of the blade be in rear of the point of contact of the back of the blade with the fulcrum-forming surface that the overhanging lug or lugs 13 afford, and to provide this condition, I form a cavity or recess 18 in the blade back, which leaves at the rear of the blade back a thin wall or rib 19 that is wholly in rear of that portion of the opposite or outer side of the blade back that engages the fulcrum-forming lug or lugs, so that when any portion of the top of the screw bears against the edge of said rib or wall, it will infallibly rock or swing the cutting edge of the blade in contact with the surfaces of the guard fingers. The screw-end engaging edge of said rib is preferably convexly rounded to constitute simply a line of contact, and the end of the screw is flat, so as to admit of ample shifting of the blade for the purpose of adjusting its cutting edge with reference to the guard fingers, and yet at all points of its adjustment, an adequate bearing of the screw may be had. When the back of the blade is against the flange 12, the razor is adjusted for a medium shave, the flange 12 thus constituting a stop or gage for this adjustment, while to form a stop or gage to fix the adjustment of the blade for a close shave, a shoulder 11ª is formed on the upper side of the end guard fingers or teeth 11. By providing stops or gages, the matter of the adjustment of the blade for a medium or a close shave requires no special attention on the part of the user. Of course, if the user desire, the cutting edge of the blade may be adjusted to points intermediate those fixed by the stops, and whatever be the point of adjustment, the blade will be properly and firmly held by reason of the form of the engaging surfaces of the blade and screw end.

In the form of my invention illustrated in Figs. 1 to 3, the strip portion 16 of the blade is detachably connected to the back 17 so that one strip after another may be used

with the same holder, and in such a case as this the strip-engaging lips of the back 17 are slightly elastic or springy, and the slit or slot widens from the outer edges of the lips inward. This insures a close contact of the lips and the strip, and besides facilitates the insertion of the strip in the slot which is done by an endwise movement of the strip, for the strip being substantially thinner than the wider portions of the slit, the entrance of the strip can easily be effected by first inserting a corner thereof in the wider portions of the slit, and preferably the walls of the slit at the end are outwardly flared to still further facilitate the insertion of the strip. When the strip and holder are detachable, preferably both edges of the strip are ground to form a cutting edge, so as to make it inconsequential which side of the strip is uppermost when inserted in the back.

In the form of my invention illustrated in Fig. 4, where the blade back and strip are permanently united, this may be accomplished merely by tightly pinching the lips of the back upon the strip, and in this case the strip may be ground only on one side to form the cutting edge, if preferred.

It may be desirable in both forms of blade illustrated to render them applicable to the holder either side up, and in this case a screw-engaging wall or rib 19 will be formed on both sides of the back, by recessing or cutting away the adjacent metal. By providing both sides of the back with the screw-engaging wall or rib, all liability of an inexperienced person getting the blade in the holder wrong side up, which would result in the improper placing of the cutting edge, is obviated. I, however, do not limit myself to this construction only.

The back 17 may be easily and inexpensively formed by folding over a strip of metal, and preferably the outer sides of the lips are beveled or chamfered off, especially in the case of the form of my invention illustrated in Figs. 1 and 2 not only to enhance the appearance of the blade, but to render the lips elastic or springy as I have before explained.

The recess or cavity to form the rib 19, is most economically formed by wholly punching out the metal in advance of the rib.

Having thus described my invention, what I claim is—

1. A blade for safety razors, composed of a piece or strip of sheet metal, and a back having a blade-receiving slit, said back having on one side a fulcrum-engaging surface, and on the opposite side in rear of the fulcrum-engaging surface a screw-engaging rib, a recess being formed in advance of said rib.

2. In a safety razor, the combination of a blade holder consisting of a plate forming a guard for the blade and an overhanging projection, a blade composed of a strip of sheet metal and a back overlapping opposite sides of the strip, said back having a recess or cut away portion on one side, forming a rib at the rear of the back, and on its other side a projection-engaging surface, and a screw engaging a threaded opening in said plate and having its end impinging on said rib in rear of said projection-engaged surface, said blade being shiftable in a direction crosswise of the screw.

3. In a safety razor, the combination of a blade holder consisting of a plate forming a guard for the blade and an overhanging projection, a blade composed of a strip of sheet metal and a back overlapping opposite sides of the strip, said back having a recess or cut away portion on both sides, forming on each side a rib at the rear of the back, and having on each side a projection-engaging surface, and a screw engaging a threaded opening in said plate and having its end impinging on that one of said ribs, which is contiguous to the plate, and at a point in rear of said projection-engaged surface, said blade being shiftable in a direction crosswise of the screw.

4. In a safety razor, the combination of a blade holder, a blade, stops to fix the position of the cutting edge of the blade at different positions with reference to the guard according to the degree of closeness of the shave desired the blade being shiftable forward and backward between said stops, and means to hold the blade in either of its said positions.

5. In a safety razor, the combination of a blade holder, a blade, stops to fix the position of the cutting edge of the blade at different positions with reference to the guard according to the degree of closeness of the shave desired, said stops consisting of a blade-engaging flange on the holder, and projections on the guard, the blade being shiftable between said stops so that it may be moved from engagement with one to engagement with the other, and means to hold the blade in its said two positions.

In testimony that I claim the foregoing I have hereunto set my hand.

WILLIAM J. MOORE.

Witnesses:
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