W. J. BAUER.

RAZOR BLADE SHARPENER.

APPLICATION FILED AUG. 12, 1915.

1,168,047. Patented Jan. 11, 1916.

Fig. 1.

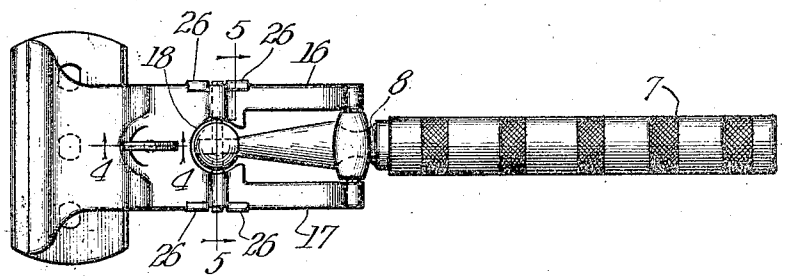



Fig. 2.

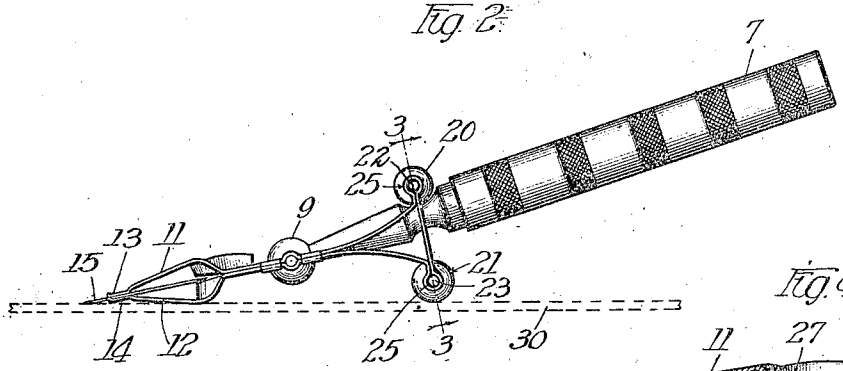



Fig. 4.

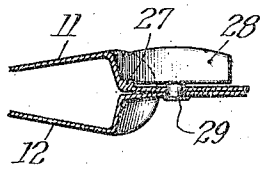



Fig. 3.

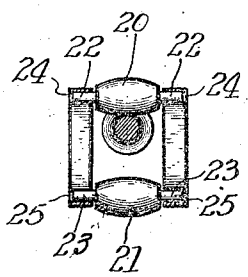



Fig. 5.

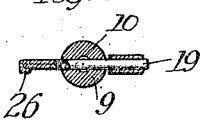
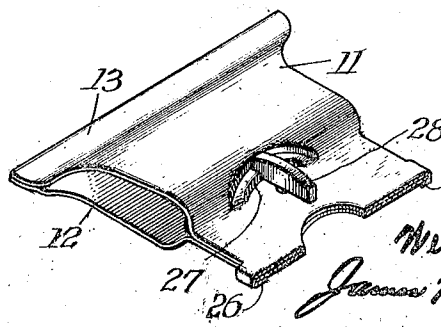



Fig. 6.




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# UNITED STATES PATENT OFFICE.

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## RAZOR-BLADE SHARPENER.

1,168,047. Specification of Letters Patent. Patented Jan. 11, 1916.

Application filed August 12, 1915. Serial No. 45,160.

*To all whom it may concern:*

Be it known that I, WILLIAM J. BAUER, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Razor-Blade Sharpeners, of which the following is a specification.

My invention relates to a device adapted to be used for sharpening the blades used in connection with safety razors and the principal object of the invention is to provide a device capable of performing its work in an efficient manner and which will always place the blade upon the hone or strop at the proper angle for sharpening.

Another object of my invention is to construct a device which will be light and yet sufficiently strong to withstand the constant use that such a device is subjected to without losing the alinement of any of its parts.

Further objects of the invention reside in the means for drawing the jaw members together in order to grip the razor blade and certain features of construction for decreasing the cost of manufacture.

Having now described the general nature and objects of the invention I will proceed to describe the device in detail and in the accompanying drawing—

Figure 1 is a plan view of my improved device. Fig. 2 is a side elevational view of Fig. 1. Fig. 3 is a section on the line 3—3 of Fig. 2. Fig. 4 is a section on the line 4—4 of Fig. 1. Fig. 5 is a section on the line 5—5 of Fig. 1. Fig. 6 is an enlarged perspective view of the blade holding member.

Referring now more particularly to the drawing the device comprises a handle 7 that is provided with a circumferential groove 8 near one end and a head 9 that is provided with a transverse aperture 10. The blade holding member is in the form of a pair of jaws 11 and 12, the outer ends of which are flattened so as to provide two blade gripping surfaces 13 and 14 adapted to hold a razor blade 15 therebetween. Formed integral with the jaws are two angle determining members 16 and 17. These members are triangular in form so as to provide a truss structure and are so spaced that the handle 7 may enter between the same; the head 9 fitting within the circular opening 18 and the handle being connected to the blade holding member by a pivot pin 19. The pivot pin is confined between the two overlying sections of the blade holding member.

Mounted upon the rear ends of the angle determining members 16 and 17 are a pair of rollers 20 and 21. These rollers are provided with axles 22 and 23 respectively. The adjacent ends of the angle determining members upon one side of the handle are formed with openings 24 to receive the axle 22 of the roller 20 and similarly shaped openings 25 are formed in the angle determining members upon the opposite side of the handle to receive the axle 23 of the roller 21.

In the preferred form of construction the blade holding member and the angle determining members are formed from a single piece of material that is suitably bent upon itself and held together by means of a plurality of lugs 26 that are formed integral with the blade holding member and bent to overlie the adjacent section of such member. The blade holding member is constructed of spring material and has a sufficient spring grip to normally hold the razor blade between the jaws but as an additional securing means I form a wedge shaped surface or shoulder 27 upon one side of the blade holding member and connect to the blade holding member a wedge block 28 which has a pivot pin 29 extending through the two sections of the blade holding member and which is suitably headed to allow for its pivotal movement but preventing its withdrawal.

The operation of the device is as follows: By turning the wedge block 28, so that it will not engage the wedge surface 27, the razor blade may be inserted between the gripping sections 13 and 14 of the blade holding member and when properly positioned the wedge block is turned upon its pivot and thus draws the two blade holding members together. The device is then brought into proper position upon a hone or strop 30, allowing the roller 21 to first strike the hone whereupon the blade holding member moves upon its pivot whereby the blade gradually approaches the hone. When the blade strikes the hone the device is moved along the hone until one side of the blade has been ground sufficiently, whereupon, by partially rotating the handle, so as to bring the roller 21 on top, the weight of the rollers is sufficient to over-

balance the blade holding member whereupon the roller 21 rests within the groove 8 of the handle and the roller 20 is below the handle. The honing operation is then repeated and by turning the handle to bring alternate surfaces of the razor blade in contact with the hone the razor blade may be readily sharpened. In a device of this character there must be a certain angular relation between the rollers and the outer end of the jaws in order to bring the razor blade in proper position relative to the hone. There must also be sufficient movement allowed for the handle so that it may have a partial vertical movement around its pivot and yet not come in contact with the rollers. The function of the annular groove 8 therefore is to allow for the pivotal movement of the handle.

Having now described my invention, I claim:

1. A safety razor blade sharpener comprising a handle, a blade holding member pivoted to said handle, angle determining members secured to said blade holding member and arranged upon opposite sides of said handle and rollers connected to said angle determining members and positioned upon opposite sides of said handle.

2. A safety razor blade sharpener comprising a handle, a blade holding member pivotally connected to said handle, angle determining members secured to said blade holding member and longitudinally disposed relative to said handle and a pair of rollers pivotally connected to said angle determining members and arranged upon opposite sides of said handle.

3. A safety razor blade sharpener comprising a blade holding member, angle determining members connected to said blade holding member, rollers connected to said angle determining members and spaced from each other and a handle extending between said rollers and angle determining members and pivotally connected to said blade holding member centrally thereof.

4. A safety razor blade sharpening device comprising a pair of jaw members, a pair of angle determining members formed from a single piece of material, a handle connected to said jaw members centrally thereof and a pair of rollers connected to said angle determining members and disposed upon opposite sides of said handle.

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