May 22, 1923. 1,456,355

J. BARTON

SAFETY RAZOR BLADE SHARPENING DEVICE

Filed Feb. 9, 1923

Fig. 1.

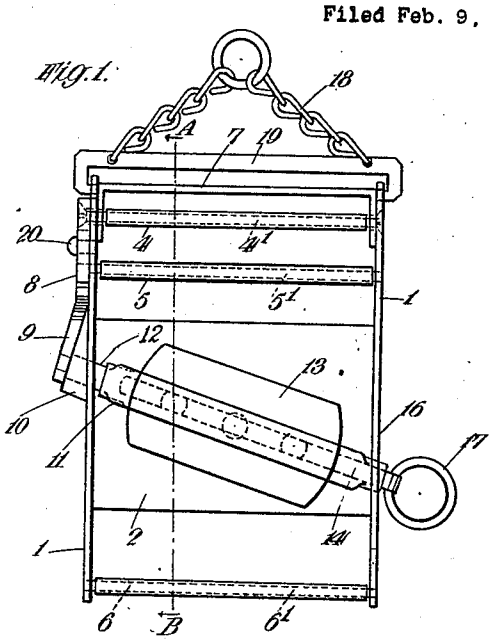



Fig. 2.

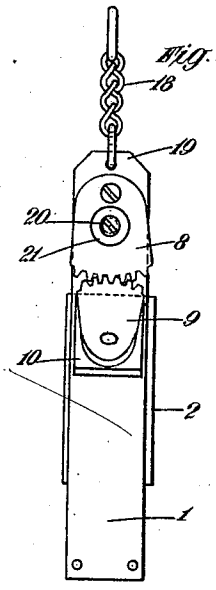



Fig. 5.

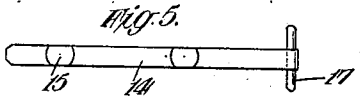



Fig. 6.

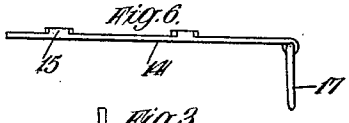



Fig. 3.

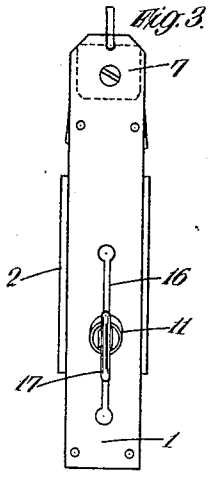
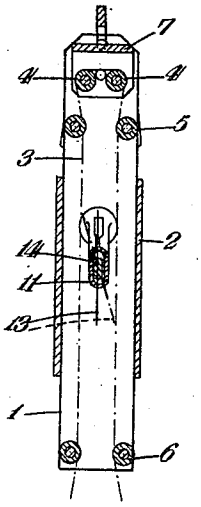



Fig. 4.




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# UNITED STATES PATENT OFFICE.

JACK BARTON, OF PARKMILL, NEAR SWANSEA, WALES.

## SAFETY-RAZOR-BLADE-SHARPENING DEVICE.

Application filed February 9, 1923. Serial No. 617,919½.

*To all whom it may concern:*

Be it known that I, JACK BARTON, a subject of the King of Great Britain, residing at Sandy Lane, Parkmill, near Swansea, in the county of Glamorgan, South Wales, have invented certain new and useful Improvements in or Relating to Safety-Razor-Blade-Sharpening Devices (for which I have filed application in Great Britain Sept. 30, 1921, No. 25,941), of which the following is a specification.

This invention relates to devices for sharpening the blades of safety razors and is of the kind in which the blade is held in a holder between the runs of a strop the frame of the holder being held stationary and the holder oscillated by the reciprocating movements of the strop to bring the edge of the blade into contact alternately with each run of the strop, and in the case of a two-edged blade such as a Gillette blade the two cutting edges of the blade being brought into contact with the strop upon each movement of the latter.

According to this invention the blade holder is adapted to hold a safety razor blade and comprises two strips of metal constituting a clamp for the blade the said strips being shaped at their ends to form tubular portions, the said blade holder being pivotally mounted between and at an inclination to longitudinal frame members of the device. The tubular portion at one end of the holder extends through one of the longitudinal frame members of the device and the tubular portion at the other end of the blade holder is arranged on a spindle which is mounted in the other longitudinal frame member and is connected with a toothed segment meshing with a second toothed segment mounted on the device, the second mentioned toothed segment being carried by a member adapted to be rocked by the reciprocating movements of the strop so that the blade clamped in the blade holder is oscillated, alternately into contact with each run of the strop, means preferably being provided to limit the extent of the oscillating movement to prevent excessive pressure being brought to bear by the blade on the strop. In one embodiment of the invention, applicable particularly to the sharpening of double edged blades such as Gillette blades, the blade is supported upon a removable strip having projections fitting in the holes in the blade, the strip being then inserted in the said holder, one of the said longitudinal frame members being slotted to permit the blade to pass therethrough. The blade is thus resiliently clamped in position and may be readily imparted into and withdrawn from the device.

In order that the said invention may be clearly understood and readily carried into effect, the same will now be described more fully with reference to the accompanying drawings, in which:—

Figure 1 is a front elevation showing a blade in stropping position.

Figure 2 is an edge view showing the toothed segments.

Figure 3 is another edge view showing the slot through which the blade is passed.

Figure 4 is a section on the line A—B of Figure 1.

Figure 5 is a plan and

Figure 6 is an edge view of the removable blade carrying strip.

1 are the longitudinal frame members connected by metal plates 2 welded or otherwise secured thereto. As shown in Figure 4 the strop 3 passes over a pair of rollers 4 loosely mounted upon rods 4′ and passes between two other pairs of rollers 5, 6 which are loosely mounted upon rods 5′, 6′ arranged transversely of the frame members 1. These four guide rollers, two on each side of the blade, are for the important purpose of presenting the strop to the blade at the correct angle irrespective of any angularity being given to the strop by the operator. The rollers 4 are carried by a member 7 which is pivoted to the longitudinal members 1 the member 7 at the end carrying the toothed segment 8 which is in mesh with the toothed segment 9 which is maintained at an angle relatively to the segment 8 by the block 10 formed on or carried by one of the frame members 1. The segment 9 is carried by the blade holder 11 the spindle 12 of which passes through orifices in the frame member 1 and the said block 10, the other end of the blade holder 11 extending through an orifice in the other frame member 1 as best seen in Figure 3. The blade holder 11 comprises two strips of metal forming between them a resilient clamp, the two strips being shaped

at their ends to form together tubular portions, that at one end receiving the spindle 12. The blade 13 to be sharpened is carried by the flexible strip 14 having projections 15 which fit into the usual holes in the blade. The frame member 1 on the side opposite the segment 9 is provided with a slot 16 so that the blade supported on the strip 14 can be inserted into the holder 11 the strip 14 having a finger ring 17 to facilitate manipulation thereof. The device is adapted to be suspended by a chain, strap or the like 18 fastened to the yoke 19 and as will be obvious from the drawing by pulling alternately upon each end of the strop 3 the blade holder will be oscillated and two edges of the blade brought into contact with the strop upon movement of the strop in each direction, the arrangement of the blade holder at an inclination resulting in the blade being given the "heel and toe" stropping which is requisite for satisfactory sharpening. In order to limit the extent of the oscillatory movement of the blade holder and thus to prevent excessive pressure of the blade upon the strop a screw or stud 20 is provided passing through an orifice or slot 21 in the toothed segment 8.

What I claim and desire to secure by Letters Patent of the United States, is:—

A sharpening device of the class described comprising a frame having side members connected by transverse plates, a pair of guide rollers journalled in each of the opposite ends of said side members, a substantially inverted U-shaped bar having a pair of rollers loosely mounted in its depending arms and pivotally secured to the side members, a toothed segment carried by said bar, a corresponding segment attached to one of the side members, means for positioning said last mentioned segment at an angle to the other segment with which it meshes, a blade holder operatively connected to the second mentioned segment, a strop passing over the rollers journalled in said bar down into engagement with the inner surfaces of the guide rollers in the frame and through an opening in the bottom of the said frame, the axis of said blade holder being at an oblique angle to the direction of movement of said strop, and a stud projecting through an opening in the upper segment for regulating the extent of oscillating movement imparted to the blade holder.

JACK BARTON.