W. A. HAMMOND.

RAZOR HONING DEVICE.

APPLICATION FILED NOV. 26, 1909.

992,420. Patented May 16, 1911.

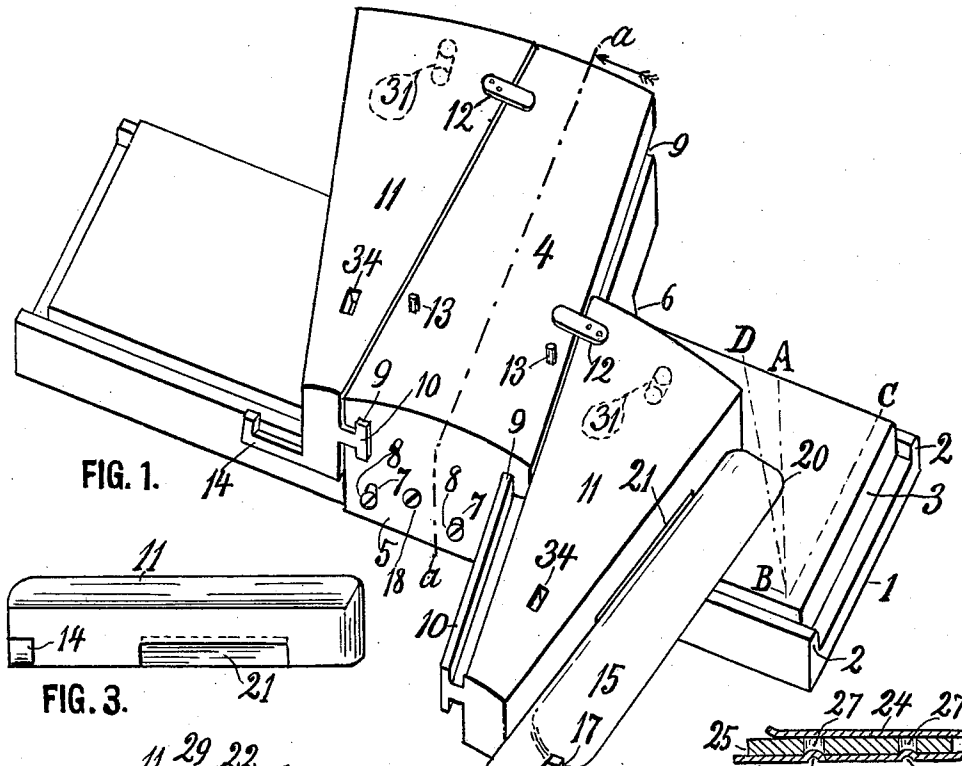


FIG. 1.

FIG. 3.

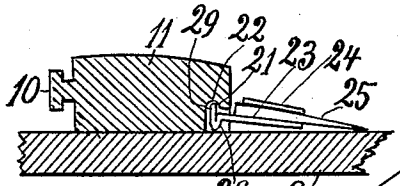


FIG. 5

FIG. 6.

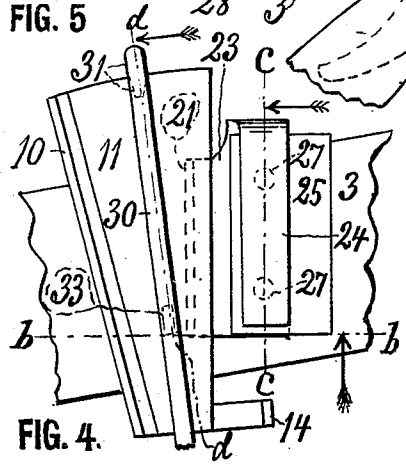


FIG. 4.

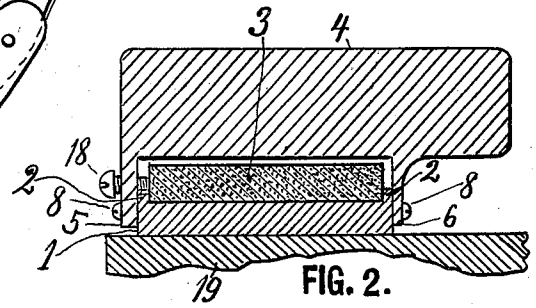


FIG. 2.

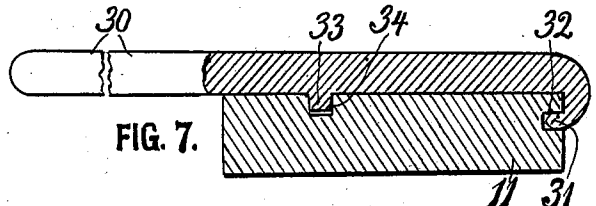


FIG. 7.

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RAZOR-HONING DEVICE.

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To all whom it may concern:

Be it known that I, WILLIAM A. HAMMOND, a citizen of the United States, residing at Oil City, in the county of Venango and State of Pennsylvania, have invented a new and useful Razor-Honing Device, of which the following is a specification.

My invention relates to devices for sharpening razors by honing; and the principal object of the invention is to provide a honing device which will enable even an inexperienced operator to move the razor simultaneously in a combined transverse and longitudinal direction of its blade at the point of contact with the hone. This and other objects I attain by the novel construction and arrangement of parts illustrated in the accompanying drawing, in which—

Figure 1, is a perspective view of the complete device with a razor in position to be honed by it. Fig. 2, is a cross section on the line or plane *a*—*a* in Fig. 1, with a supporting table added. Fig. 3 is a side elevation of the slide 11 in Fig. 1. Fig. 4, is a top view of the right hand slide and adjacent portion of the hone in Fig. 1, with a handle added for moving the slide, and also a clasp carried by the slide for holding blades of safety razors when such blades are to be sharpened. Fig. 5 is a section on the line *b*—*b* in Fig. 4. Fig. 6, is a section on line *c*—*c* in Fig. 4, through the safety razor blade and the clasp holding it. Fig. 7, is a section on line *d*—*d* in Fig. 4 with the hone omitted.

Referring to the drawing by reference numerals, 1 designates a base having upstanding longitudinal edge flanges 2, between which the hone 3 rests upon the base and projects above the flanges. Across the middle of the base, a short distance above the hone, is provided a bridge 4, which is widest at its front end and tapered toward its rear end, as clearly shown in Fig. 1. Said bridge extends rearwardly for some distance beyond the base so as to be of sufficient length, and it may be secured to the base in any suitable manner, but in the present instance I have shown it as provided with flat legs 5 and 6, having slotted holes 7 for screws 8, which are threaded into the base, so that when the hone wears down in thickness the bridge may be adjusted downward on the said screws.

In each side of the bridge is provided a longitudinal groove 9, which is T-shaped in cross section, and in each of said grooves slides a similarly shaped tongue 10 of a forwardly tapered sliding block or slide 11. This arrangement being the same at each side of the bridge only that at one side needs to be described. The forward movement of each slide 11 is limited by a finger 12 fixed on the slide and stopping against a pin 13 fixed in the bridge. The hone may be held by a set screw 18. The outer front corner of each slide is provided with a rigid lateral hook 14.

In the operation of the device, the device may possibly be held in one hand and the razor in the other hand, but the device is preferably placed on a table or other support, as 19 in Fig. 2. If an ordinary razor, like 15, is to be honed, it is placed with its shank 16 in the hook 14, in such position that the heel 17 engages the rear side of the hook and the blade rests flat upon the hone. The shank 16 is then grasped between the operator's thumb and first two fingers and while held in such a manner that either the thumb or forefinger contacts with the front end of the slide the slide and the razor are moved together back and forth over the hone while the blade is sufficiently pressed against the hone by the fingers holding the shank of the blade, and in addition the points of one or more fingers of the other hand may press downward on the blade itself. After thus honing one side of the blade, the blade is placed with the other side down upon the opposite end of the hone with its shank resting in the hook 14 of the other slide 11 and the operation repeated; each operation should preferably be finished by a forward movement of the slide toward the operator; the blade is then brought back to the slide in which the honing was started, and by a few gentle movements upon the hone brought to a dead fine edge.

From the above described construction and operation it will be understood that the diagonal movement of the edge of the blade, so desirable in honing razors, is easily and fully attained by this device; thus the point 20 of the blade, (which represents any other point or part of the blade), while crossing the hone on the diagrammatic line from A to B in Fig. 1, is also by the tapered shape of the bridge moved in longitudinal direction of the hone as far as from A to C; and owing to the tapered form of the slide 11, with which the back of the blade 15 is in contact, the direction of friction by the hone relative

to the edge of the razor blade is that represented by the line D B, or an angle of about 45 degrees to the edge of the blade. This direction of motion is the same in honing blades of safety razors by my device, but for the latter purpose I employ a certain attachment which will now be described.

Each slide 11 is formed in its lower outer edge with a longitudinal recess 21, (best shown in Figs. 3 and 5) which may preferably have an upper groove 22. Into this recess is slipped an enlarged edge 28—29 of a plate 23, which extends out from the side of the slide and is formed with a spring-arm 24, between which arm and the plate the blade 25 of a safety razor is held while being honed. In Fig. 6 is best shown how the plate is formed with upward bulges or projections 26 adapted to engage in the regular screw holes 27 of the blade and thus help to hold the blade firmly in the clasp. In Fig. 5 it will be seen that the enlarged edge of the plate is formed with a downward flange 28 which rests on the hone and causes the plate to slope downward at its outer edge, and opposite to said flange may be an upward flange 29 to engage in the groove 22, so as to prevent accidental disengagement of the plate or clasp from the slide. Said flange 29 thus acts like a bread hook which is engaged and disengaged by raising the clasp upward from the hone and moving it toward or away from the slide as the case may be. It is evident that one or more pins may answer the purpose of the flange 29, and that the attachment may also be operated without the groove 22 and anything to engage in it. When said attachment or clasp is in use the slide 11 is operated by a handle 30, (see Figs. 4 and 7) which is provided with a hook 31 engaging in a cavity 32 in the rear end of the slide and a downward teat 33 engaging in a cavity 34 in the top of the slide. The blade-holding clasp and the handle 30 may thus be removed or replaced almost in an instant.

It is obvious that not only razors but also scissors, table knives and other knives may be honed by a device constructed according to the principles of my invention.

Having thus described my invention what I claim is;—

1. In a honing device, the combination of a base, an elongated honing element supported on the base, a bridge supported on the base and crossing near above the middle of the hone, said bridge being narrower at one end than at the other, a block at each edge of the bridge and having slidable connection therewith, means on the sliding blocks and on the bridge for limiting the sliding movement, and means on the sliding blocks for engaging the blade or article to be honed.

2. In a honing device, the combination of a base, an elongated honing element supported on the base, a bridge supported on the base and crossing near above the middle of the hone, said bridge being narrower at one end than the other, a block at each edge of the bridge and having slidable connection therewith, means on the sliding blocks and on the bridge for limiting the sliding movement, and means on the sliding blocks for engaging the blade or article to be honed, said sliding blocks being each tapered in opposite directions to the taper of the bridge, and blade holding means arranged to hold the blade in line with the edge or side of the block farthest away from the bridge.

3. In a razor honing device, the combination with a base and a honing element mounted thereon, of a bridge secured to the base and crossing the hone near above it, said bridge being tapered so as to be narrower at one end than at the other, two blocks slidably connected with the bridge to move one along each edge thereof, said slides having each a recess in its outer side near the honing element, and an attachment adapted to hold blades of safety razors and having an extension adapted for detachable engagement in said recess, so as to make the attachment move with the slide.

4. In a razor honing device, the combination with a base and a honing element mounted thereon, of a bridge secured to the base and crossing the hone near above it, said bridge being narrower at one end than at the other, two blocks slidingly connected one with each edge of the bridge, and means on the blocks for holding razor blades thereto, said bridge being adjustable on the base toward and away from the top of the honing element.

5. In a razor honing device, the combination of a base, a hone mounted thereon, a frame mounted on the base and crossing near above the face of the hone, and having a guide in a plane parallel to the face of the hone and crossing the same at an angle to the side thereof; a razor carrier mounted to slide on the frame and move the razor upon the face of the hone; said carrier being so guided that the razor blade moves on the hone simultaneously in a longitudinal and a transverse direction of the blade.

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

WILLIAM A. HAMMOND.

Witnesses:
T. J. KELLOGG,
O. A. NICHOLS.

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