Sept. 25, 1923. 1,469,147

P. E. BIRD

RAZOR SHARPENER

Filed Feb. 14, 1922

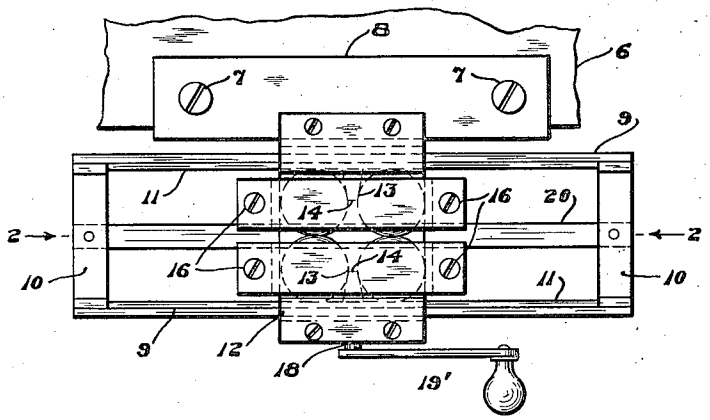


Fig. 1.

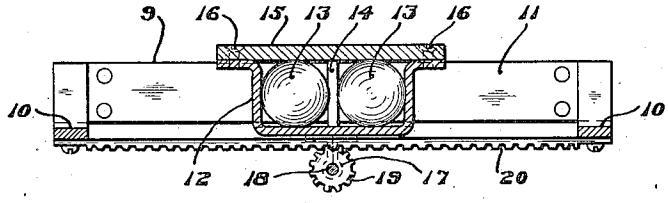


Fig. 2.

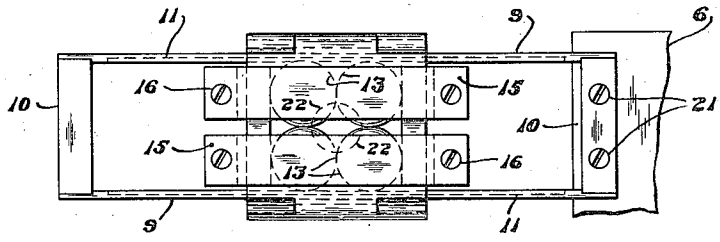


Fig. 3.

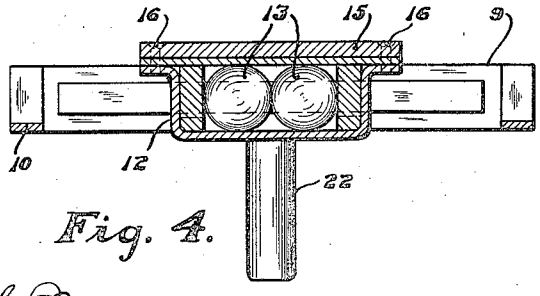


Fig. 4.

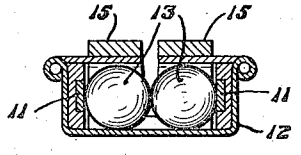


Fig. 5.

Peter E. Bird.
INVENTOR

BY Victor J. Evans
ATTORNEY

WITNESS:

Patented Sept. 25, 1923. 1,469,147

UNITED STATES PATENT OFFICE.

PETER E. BIRD, OF JENKINTOWN, PENNSYLVANIA.

RAZOR SHARPENER.

Application filed February 14, 1922. Serial No. 536,600.

To all whom it may concern:

Be it known that I, PETER E. BIRD, a citizen of the United States, residing at Jenkintown, in the county of Montgomery and State of Pennsylvania, have invented new and useful Improvements in Razor Sharpeners, of which the following is a specification.

This invention relates to razor sharpeners and it has more particular reference to that type or form of device having an opening or slot in one side thereof which is adapted to receive a blade, means being provided in the device for refinishing or re-setting the edge of the blade in a quick and expeditious manner. As a result of much experiment with razor blades I have discovered that the main reason why the edges thereof become dull is due to the fact that the so called small teeth which are formed on the cutting edge get turned out of line with each other with the result that the razor blade becomes more or less unfit for use and needs frequent re-stropping in order to ensure a smooth and clean shave.

Now, the primary object of my invention is to provide a novel form of device by the use of which a razor blade can be easily re-trued or re-set to conform to its natural or original keen edge whereby its utility and serviceability can be prolonged indefinitely.

Another object of this invention is the production of a razor sharpener of extreme simplicity in construction, the same being cheap to manufacture and of a nature to effectively and expeditiously sharpen or true up the cutting edge of a razor with the minimum expenditure of time and labor.

With the foregoing and other objects in view my invention essentially consists in the application of rolling hardened surfaces in such a manner as to completely rehabilitate every portion of the cutting edge of a razor so that it conforms strictly to its original or natural alignment without necessitating frequent stropping or re-setting. My invention further consists in the novel construction, combinations and arrangements of parts hereinafter fully described and more specifically defined by the subjoined claims.

In the further disclosure of the invention reference is to be had to the accompanying sheet of drawings constituting a part of this specification and in which like characters of reference designate the same or corresponding parts in all the views.

Figure 1 is a top plan view of one practical embodiment of my invention.

Figure 2 is a longitudinal section of the same taken substantially on the line 2—2 in the preceding figure.

Figure 3 is a top plan view of a slightly modified form of the invention.

Figure 4 is a longitudinal section of the same; and,

Figure 5 is a transverse section thereof.

Referring more particularly to the views the numeral 6 designates a fragmentary portion of a table or other convenient article of furniture to which my novel device may be attached by means of a pair of wood screws 7 passed through a lateral flange 8 appropriately connected to one side of the device, as illustrated in Figures 1 and 2 more particularly. Referring more particularly to Figures 1 to 4 it will be clearly seen that my novel sharpening or razor resetting device comprises a frame including spaced longitudinal members 9, 9 appropriately connected at their ends by cross members 10. Secured within the aforesaid longitudinal members 9, 9 are lining members 11 of leather or other suitable material and slidably adapted to traverse therebetween is a substantially U-shaped frame 12 in which are rotatably housed opposed anti-friction balls 13 of hard steel or the like which are separated longitudinally relative to the device by lateral spacing fingers 14, appropriate covering plates or strips 15 being secured on the U-shaped frame by set screws 16. It is also to be noted that the balls 13, in so far as they are arranged laterally, have frictional contact with each other as well as with the lining strips or members 11 so that when traversed longitudinally of the frame they have a rolling contact as between each other as later on explained.

Appropriately mounted beneath the U-shaped frame 12 is a hanger or bracket 17 in which is journaled a stub axle or spindle 18 on which is mounted a pinion 19 in mesh with a longitudinally supported rack bar 20 whereby the frame may be traversed by a handle 19′ longitudinally relative to the U-shaped frame 12 in order to effect the re-setting or stropping of a razor blade held longitudinally in the frame with its cutting edge between the balls 13.

In the form of the device shown more particularly by Figures 3 to 5 it will be seen that the frame is supported at its one

end by wood screws or the like 21—Figure 3—on a table or other suitable article of furniture 6 and that the U-shaped frame 12 is provided with a depending handle 22—Figures 3 and 4—whereby it may be slid longitudinally of the frame or in other words the movement of the device is reversed in that the frame in this case is held stationary whereas the U-shaped frame 12 is caused to be traversed relative thereto.

From the foregoing description it will be readily seen that an old style hollow or otherwise ground razor, or a safety razor blade can be easily re-edged or set by simply holding the cutting edge thereof between the balls 13 and traversing the frame or carriage or 12 backwards or forwards. Still further it is to be particularly noted that the liners 11 of leather, fiber or other appropriate material press the anti-friction balls 13 together so that they hold together firmly so that they will rotate or roll over the edge of the blade and thereby promptly restore its keen edge.

Whilst I have shown and described practical embodiments of my invention the same are not to be conservatively construed or interpreted as it will be perfectly obvious that the same is susceptible of many detail changes or variations, and it is hereby intended to include all such reasonable changes as fairly lie within the scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A device of the character hereinbefore described for effecting the re-setting of a cutting edge comprising relatively movable frames one of said frames being adapted for stationary fixture and one of said frames housing anti-friction balls which are adapted to have a rolling contact at all times, means for reciprocating the movable frame relative to the fixed frame, and means for maintaining said anti-friction balls constantly in rolling contact.

2. A device of the character hereinbefore described for effecting the re-setting of a cutting edge comprising relatively movable frames one of said frames being adapted for stationary fixture and one of said frames housing opposed anti-friction balls which are adapted to have a rolling contact at all times, means for reciprocating the movable frame relative to the fixed frame, and means for maintaining said anti-friction balls constantly in rolling contact.

3. A device of the character hereinbefore described for effecting the re-setting of a cutting edge comprising relatively movable frames one of said frames being adapted for stationary fixture and one of said frames housing opposed anti-friction balls which are adapted to have a rolling contact at all times, rack and pinion mechanism for traversing the one frame relative to the other, and means for maintaining said anti-friction balls constantly in rolling contact.

4. A device of the character hereinbefore described for effecting the re-setting of a cutting edge comprising relatively movable frames one of said frames being adapted for stationary fixture and one of said frames housing opposed anti-friction balls which are adapted to have a rolling contact at all times, rack and pinion mechanism for traversing the one frame relative to the other, and appropriate liners over which the anti-friction balls are traversed to effect their rotation in order to re-set the cutting edge of a razor blade or the like.

In testimony whereof I affix my signature.

PETER E. BIRD.