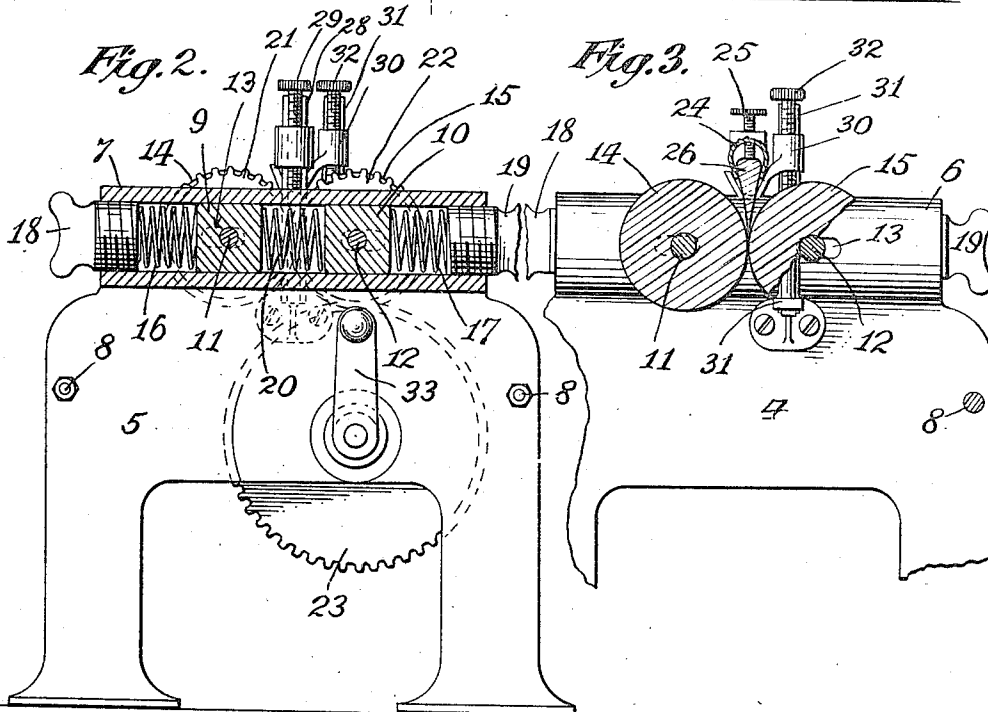
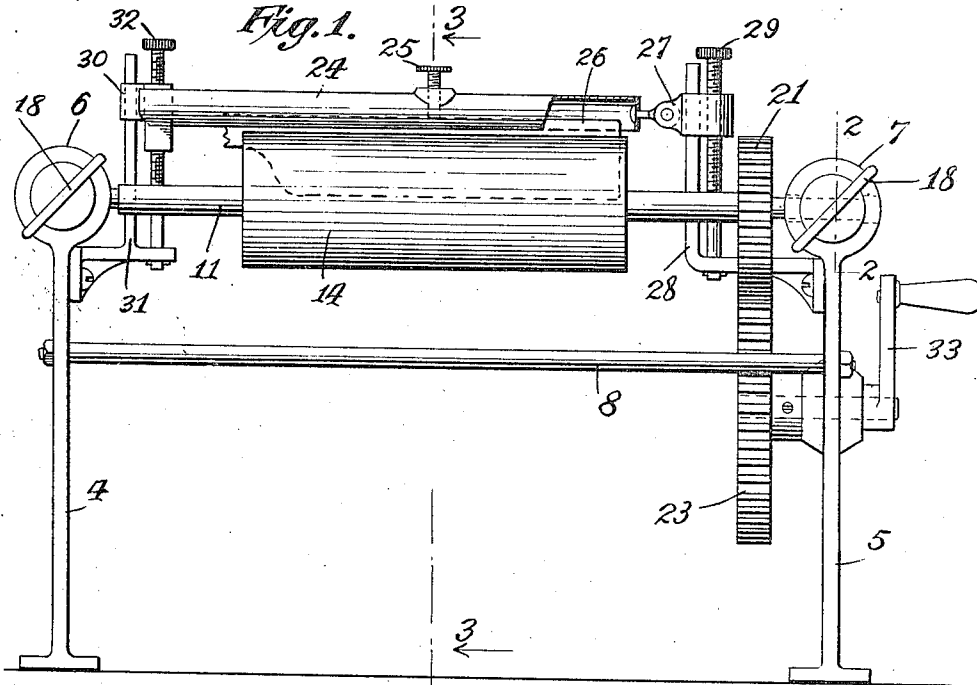


F. H. HAMMOND.
 RAZOR SHARPENER.
 APPLICATION FILED SEPT. 22, 1911.

1,034,616.

Patented Aug. 6, 1912



Attest:
Edgewood
McGinnis

Inventor:
 Frank H. Hammond
 by Garry P. Van Wye
 Atty

UNITED STATES PATENT OFFICE.

FRANK H. HAMMOND, OF NEW YORK, N. Y.

RAZOR-SHARPENER.

1,034,616.

Specification of Letters Patent.

Patented Aug. 6, 1912.

Application filed September 22, 1911. Serial No. 650,764.

To all whom it may concern:

Be it known that I, FRANK H. HAMMOND, a citizen of the United States, residing at New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Razor-Sharpener, of which the following is a specification.

This invention relates to razor sharpeners, and especially to that class designed to grind a razor blade; and the objects of the invention are: first, to provide grinding rolls adapted to engage both sides of the blade simultaneously whereby the edge can be ground without turning in either direction; second, to provide adjusting means so that razors of different widths can be sharpened in a satisfactory manner; third, to provide positive means to rotate these rolls in a rapid manner and in opposite directions, and, fourth, to provide adjustable means to hold the rolls elastically while in contact with a razor.

My invention is illustrated in the accompanying drawing, in which—

Figure 1, is a side elevation of a razor sharpener constructed according to my invention, a part being broken away; Fig. 2, is an end elevation thereof, and a sectional view on the line 2—2 of Fig. 1; and Fig. 3, is a sectional view on the line 3—3 of Fig. 1, with parts broken away.

In the accompanying drawings like numerals of reference refer to the same parts in each of the views.

In practice I provide a frame, preferably comprising two end pieces 4, and 5, which may carry respectively the cylindrical casings 6, and 7, in which are mounted the bearing blocks, as will be hereinafter described; and the two end pieces are held together in an upright position by stay rods 8, whereby a complete frame is formed, as will be understood.

As particularly shown in Fig. 2, I mount in each of the casings 6, and 7, two bearing blocks, as 9, and 10, in which are mounted respectively the ends of the shafts 11, and 12, which pass through longitudinal slots, as 13, to allow some longitudinal movement of the shafts along the respective cylindrical casings. The shafts 9, and 10, carry respectively the grinding rolls 14, and 15; and the shafts 9, and 10, are near enough together to allow the rolls 14, and 15, to contact with each other. These rolls are not

held rigidly, however, but the bearing blocks are movably held in the casings by the respective springs 16, and 17, which may be adjusted tensionally by the screw-threaded heads 18, and 19, as will be understood; and I may use a spring, as 20, between the blocks so that the grinding rolls will not bear against the razor under the full stress of the springs 16, and 17, but will be held lightly against the razor, and may be held against the razor with greater or less firmness, as may be desired, by adjusting the heads 18, and 19. In this way the razor may be touched very lightly with the grinding rolls, and a very fine edge may be produced. By placing one of the springs 20, between the bearing blocks at the end of the rolls where the power is applied there would be the additional advantage of preventing vibration through any irregularity of power, especially if the power was applied by hand.

On the shafts 11, and 12, are mounted respectively the gears 21, and 22, which are in mesh with each other so that the grinding rolls will rotate in opposite directions; and in order to rotate the rolls rapidly I may provide the large gear wheel 23, which is in mesh, preferably with the gear 22, whereby the adjacent sides of the rolls will move in a downward direction.

In order to hold the razor in proper contact with both grinding rolls, I provide an adjustable holding device comprising a tubular, or semi-tubular holder 24, where an ordinary razor is to be ground; and a set screw, as 25, may be used to hold the razor, as 26, firmly in the holder with the blade projecting through the bottom thereof, as clearly shown in Fig. 3. The holder 24, is hinged to a head 27, which is slidably mounted on a standard 28, and which may be moved up and down said standard by an adjusting screw 29. The opposite end of the holder 24, may rest in a bracket receptacle 30, of a form particularly shown in Fig. 3, said bracket having a head which is slidably mounted on a standard 31, and which may be moved up and down said standard by the adjusting screw 32.

The operation will be readily understood from the foregoing description taken in connection with the accompanying drawing. A razor may be inserted in the holder 24, by raising said holder on its hinge and sliding the razor in from the opposite end, when

the razor may be clamped in place by the screw 25, thereby providing secure means for holding razors of different widths, as will be understood. When the razor is in place, the free end of the holder is lowered until it rests in the bracket 30, when by means of the adjusting screws 29, and 32, the razor may be raised, or lowered until the edge is in proper contact with both grinding rolls; then by rotating the rolls through the crank 33, or in any desired manner, the razor will be quickly ground, as will be readily understood.

It will be understood that if a safety razor blade is to be ground a different kind of holder would have to be used, but similar adjusting means should be employed in order to insure proper contact between the blade and the grinding rolls.

It will be understood that while I have specified that the rolls are grinding rolls, other material may be substituted for the grinding rolls thereby making the device a stropping device. This would not change the desirability of the adjustable feature of the holder, nor of the tension springs for the bearing blocks.

By the device here shown both edges of a razor can be ground at the same time thereby preventing the turning of the edge, as is the case where a razor is applied to a hone, or grinding surface one side at a time. Further, by providing the adjusting means a razor can be brought into just the right engagement for proper grinding; and a perfect edge can be produced.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is—

1. In a razor sharpener, two rolls mounted adjacent to each other, means to hold a razor blade in contact with both of said rolls simultaneously, and means to adjust the pressure of said rolls against said blade comprising movable bearing blocks in which said rolls are mounted, springs adapted to force the adjacent blocks toward each other, and opposing springs adapted to force the same blocks apart, and means to adjust the tension of said springs.

2. In a razor sharpener, two spring controlled rolls mounted adjacent to each other, means to hold a razor blade in contact with both of said rolls simultaneously, means to adjust said holder relative to said rolls, and means to adjust the pressure of

said rolls against said blade comprising springs adapted to force said rolls together and opposing springs adapted to force them apart, and means to adjust the tension of said springs.

3. In a razor sharpener, two grinding rolls mounted adjacent to each other, means to rotate the rolls in opposite directions, means to hold a razor blade in contact with both of said rolls simultaneously, means to adjust said holder relative to said rolls, and means to regulate the pressure of said rolls against the razor blade comprising bearing blocks in which said rolls are mounted, springs controlling the movement of said blocks in both directions, and means to regulate the tension of said springs.

4. In a razor sharpener, a razor holder comprising a semi-tubular holder, a set screw adapted to clamp a razor therein, a support at each end of said holder, and adjusting screws adapted to move said supports, said holder being hinged to one of said supports and the other support carrying a bracket in which the other end of the holder is adapted to rest, for the purpose set forth.

5. The herein described razor sharpener comprising two standards having a tubular casing in each, two bearing blocks mounted in each tubular part, a spring between each set of bearing blocks and a spring at each end of said casing, means to adjust the tension of said springs, grinding rolls mounted in said bearing blocks, gears adapted to rotate said rolls in opposite directions, and a holder mounted above said rolls and adapted to hold a razor blade in contact with both rolls simultaneously, said holder being supported at each end by a head slidably mounted, and adjusting screws adapted to move said supporting heads relative to said rolls, for the purpose set forth.

6. In a razor sharpener, two grinding rolls adapted to contact with a razor blade simultaneously, slidable bearing blocks in which said rolls are mounted, a spring mounted between each set of blocks, a spring on the outside of each block, and means to adjust the tension of said springs, for the purpose set forth.

Dated 20th of September, 1911.

FRANK H. HAMMOND.

Witnesses:

E. A. WEST,
VERNON LEE.