

E. TESSMER.
 RAZOR SHARPENER.
 APPLICATION FILED MAR. 7, 1911.

1,018,382.

Patented Feb. 20, 1912.

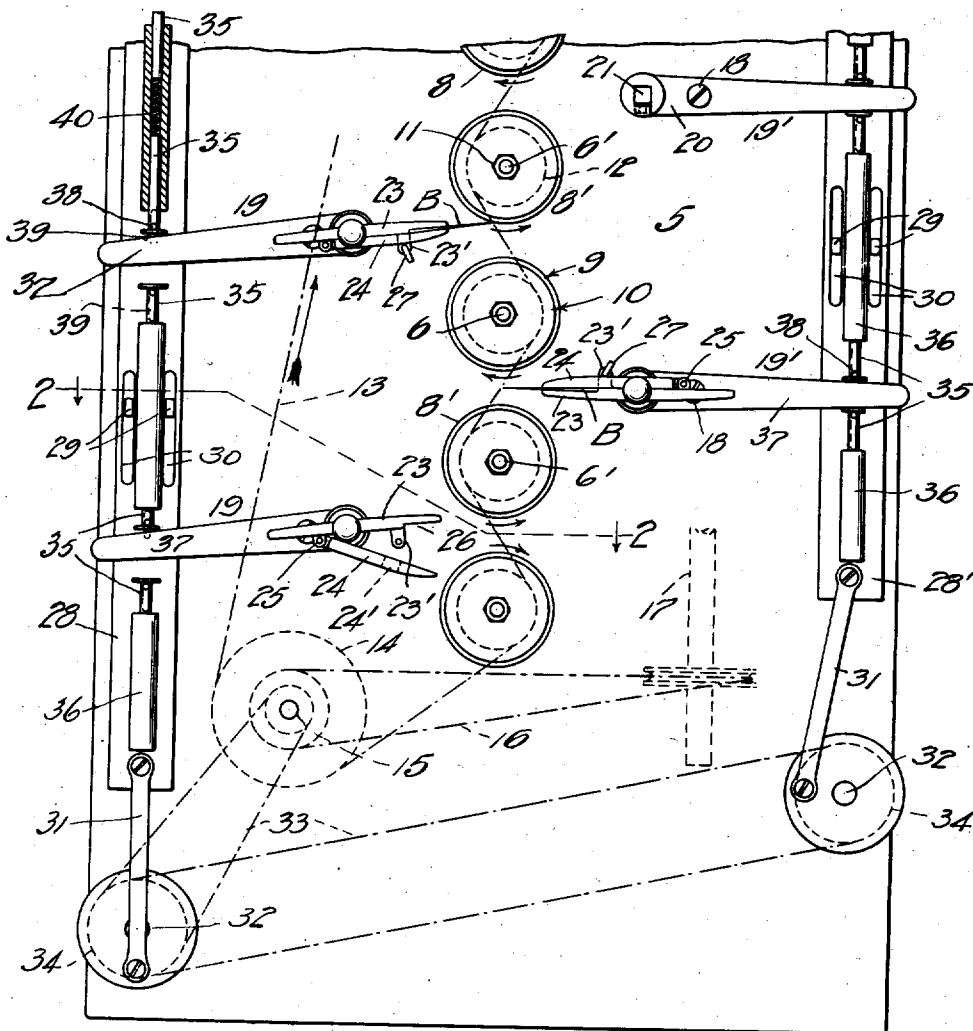


Fig. 1

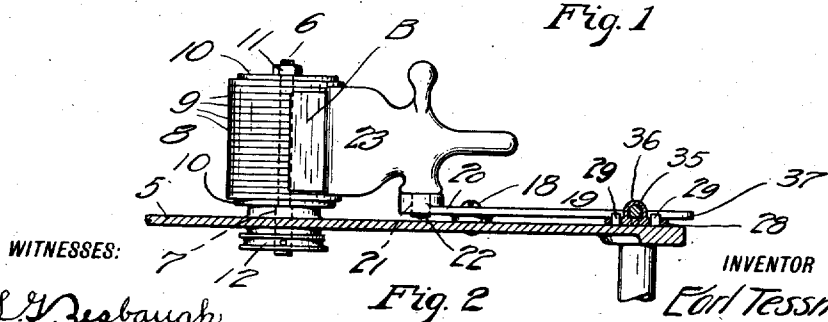


Fig. 2

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RAZOR-SHARPENER.

1,018,382.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed March 7, 1911. Serial No. 612,969.

To all whom it may concern:

Be it known that I, EARL TESSMER, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Razor-Sharpener, of which the following is a specification.

This invention relates to razor sharpening machines; and its object is the improvement in devices of this class whereby the work is facilitated, and performed with a uniformly high degree of excellence.

The invention consists in the novel construction and combination of devices, as will be hereinafter described with reference to the accompanying drawings, wherein—

Figure 1 is a plan view of a machine embodying my invention, with the driving pulleys and belts indicated diagrammatically. Fig. 2 is a detail sectional view taken through 2—2 of Fig. 1.

The reference numeral 5 designates the table of a machine which is mounted upon a suitable frame work or support, not illustrated. Disposed in a vertical plane intermediate the width of said table are the axes of a plurality of upright shafts 6, 6' which are journaled in bearings 7 formed or provided in the table. These shafts respectively have mounted thereon above the surface of the table, wheels 8 and 8' which are each comprised of a series of disks 9, of leather, desirably, interposed between metal disks 10 and firmly held in place by a clamping nut 11 engaging screw threads provided on the respective shaft. Underneath the table each shaft carries a pulley 12 for an endless driving belt 13 which receives motion from a pulley 14 upon a counter shaft 15 which, in turn, is driven by a belt 16 from a power shaft 17.

It is to be noted that the alternate wheels 8 and 8' are to be rotated in opposite directions which is most conveniently accomplished by having the belt 13 engage the adjacent pulleys 14 at opposite sides of the aforementioned plane in which the shaft axes are located. Positioned at opposite sides of the plane of the wheels, and medially of the adjacent pairs of wheels are pivotal supports 18 for levers 19 and 19'. In the inwardly directed arms 20 of each of said levers is a rectangular shaped hole 21 to serve as a socket for a correspondingly shaped tang 22 on a razor holding attach-

ment. Each attachment comprises companion jaws 23 and 24 hingedly connected at 25. One of the jaws, 23, is provided with a recess 26 to accommodate the thick part, or back, of a safety razor blade B, which is firmly held in such recess through the instrumentality of the other jaw 24 when the two jaws are locked in operative condition through any suitable means. Such means desirably consists of an apertured lug 23' extending from the inner face of jaw 23 and through a hole 24' provided in the jaw 24 and to a distance beyond the outer face of the latter for the reception of a locking pin 27 within the aperture of the lug and in juxtaposition with a jaw 24.

In operation, the referred to levers are actuated to swing the razor blades carried thereby into contact alternately with the peripheries of the wheels 8 and 8' which are associated with the particular levers so as to intermittently present the respective blades to the wheels from opposite sides for sharpening the razors regularly. To actuate the levers for the accomplishment of the above noted result, I provide reciprocating bars 28 and 28' for the respective rows of levers, that is to say, a bar for the levers upon the one side of the wheels and a second bar for those at the opposite side. These bars are guided by studs 29 projecting upwardly from the table into slots 30 provided longitudinally in the respective bars. As illustrated, there is a pair of such slots and co-operating lugs near one end of a bar, but in practice I use similar devices (not shown) adjacent to the other ends. These bars have reciprocating motion imparted thereto through the instrumentality of connecting rods 31 and crank-shafts 32 which are driven from the counter shaft 15, preferably, by suitably arranged belt and pulley connections, as indicated by broken lines 33 and 34 in Fig. 1.

The operative connection between the various levers and the bars 28 and 28' is by means of longitudinal push rods 35 extending from tubular casings 36 at opposite sides of the lever arms 37. These push rods have endwise movements relatively to the bars to which they are connected and which movements are limited, as by the provision of a pin 38 in each push-rod having its end inserted in appropriate slots 39 provided in the respective bars. A spring, such as 40,

is utilized for each of the push rods to yieldingly hold the blades B against the wheels in the work of sharpening same.

The operation may be briefly explained as follows: With the blades B carried in their respective holders and when longitudinal movements are imparted to the bars 28 and 28' the respective blades will alternately be brought against the wheels 8 and 8' and thereby be treated from opposite sides. The wheels comprised of leather disks may be used for stropping razors, or by making the wheels of an abrasive material, they may be employed for honing or grinding. By reason of the pair of wheels for each razor blade being rotated in opposite directions and from the office rendered by the springs 40 to yieldingly present a blade against a wheel, the most delicate of razor blades may be ground, honed or stropped without danger of same being injured.

What I claim, is—

1. A razor sharpener comprising a lever pivoted intermediate its ends, means for detachably connecting a razor blade to the inner arm of said lever, a pair of rotatable abrading wheels, a reciprocatory bar, a pair of tubular casings mounted upon said bar and opposing each other, spring controlled push rods projecting from said casings having their projecting ends opposing each other, the outer end of said lever extending between the opposing ends of said rods, and means for reciprocating the bar causing thereby said rods to yieldingly engage with the outer arm of said lever for alternately swinging the razor blade against the abrading wheels.

2. A razor sharpener comprising a lever pivoted intermediate its ends, means for detachably connecting a razor blade to the inner arm of said lever, a pair of rotatable abrading wheels, a reciprocatory bar, a pair of tubular casings mounted upon said bar and opposing each other, spring controlled push rods projecting from said casings having their projecting ends opposing each other, the outer end of said lever extending between the opposing ends of said rods, means for reciprocating the bar causing thereby said rods to yieldingly engage with the outer arm of said lever for alternately swinging the razor blade against the abrading wheels, said rods having the outer ends thereof slotted, and means carried by the bar and extending through said slots for limiting the movement in either direction of said rods.

3. A razor sharpener comprising a table,

a series of vertically disposed rotatable shafts supported by and depending above and below said table, an abrading element carried by and rotating with each of said shafts, a reciprocatory bar arranged at each side of said table, levers pivotally connected to said table and disposed in a plane between each pair of abrading elements, means for detachably securing a razor blade to the inner arm of each of said levers, tubular casings carried by each of said bars and opposing each other, spring controlled rods projecting from said casings and opposing each other, the outer arms of said levers extending between the opposing ends of said rods, means for reciprocating said bars causing the rods to engage in the outer arms of the levers and alternately shift the razor blade into engagement with the abrading elements, driving means arranged below the table, an operative connection between said driving means and said shafts for rotating them, and an operative connection between the operating means for said bars and said driving means.

4. A razor sharpener comprising a table, a series of vertically disposed rotatable shafts supported by and depending above and below said table, an abrading element carried by and rotating with each of said shafts, a reciprocatory bar arranged at each side of said table, levers pivotally connected to said table and disposed in a plane between each pair of abrading elements, means for detachably securing a razor blade to the inner arm of each of said levers, tubular casings carried by each of said bars and opposing each other, spring controlled rods projecting from said casings and opposing each other, the outer arms of said levers extending between the opposing ends of said rods, means for reciprocating said bars causing the rods to engage in the outer arms of the levers and alternately shift the razor blade into engagement with the abrading elements, driving means arranged below the table, an operative connection between said driving means and said shafts for rotating them, an operative connection between the operating means for said bars and said driving means, said rods having their projecting ends provided with slots, and means carried by the bars and extending through the slots for limiting the movement in either direction of said rods.

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Witnesses:

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