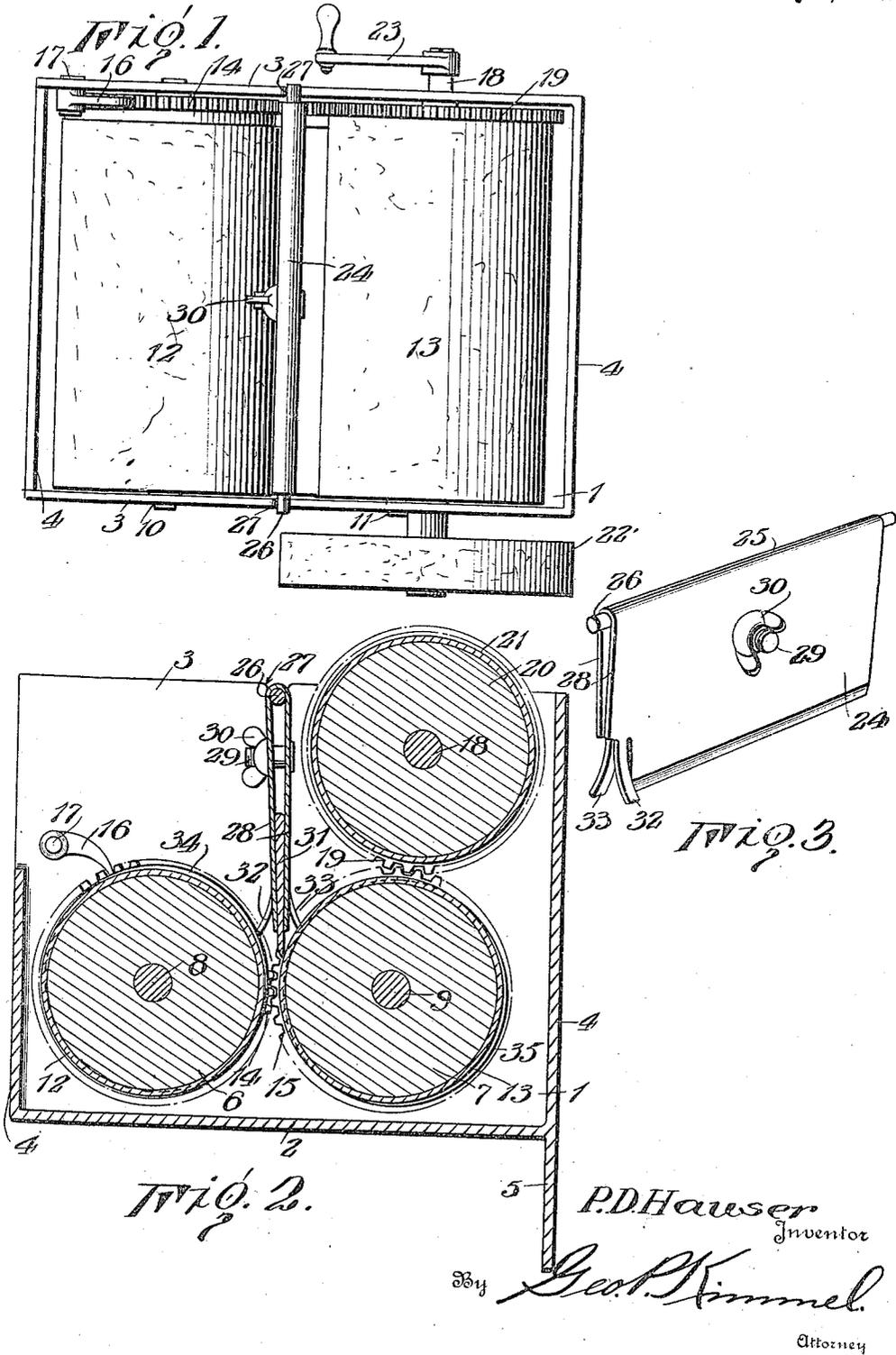


P. D. HAUSER.  
 SAFETY RAZOR BLADE SHARPENER.  
 APPLICATION FILED AUG. 10, 1916.

1,224,924.

Patented May 8, 1917.



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# UNITED STATES PATENT OFFICE.

PETER D. HAUSER, OF SAN ANTONIO, TEXAS.

SAFETY-RAZOR-BLADE SHARPENER.

1,224,924.

Specification of Letters Patent.

Patented May 8, 1917.

Application filed August 10, 1916. Serial No. 114,192.

*To all whom it may concern:*

Be it known that I, PETER D. HAUSER, a citizen of the United States, and resident of San Antonio, in the county of Bexar and State of Texas, have invented certain new and useful Improvements in Safety-Razor-Blade Sharpeners, of which the following is a specification.

The present invention relates to the art of grinding and polishing and has particular reference to new and useful improvements in safety razor blade sharpening machines.

The primary object of my invention is to provide a machine of the class described having a novel and improved arrangement of metal grinding elements, said elements revolving simultaneously adjacent each other for sharpening objects engaged therewith.

Another object of my invention is to provide a machine of the class described having a novel holder for blades of various types for bringing the blade into contact automatically alternately with each one of the grinding elements, and thereby to act upon both sides of the blade to produce a keen cutting edge.

A further object of my invention is to provide in combination with a plurality of grinding elements means for bringing a blade to be sharpened alternately into engagement with said elements, said means being yieldable, that is, the blade being yieldably engaged with the grinding surface.

A still further object of my invention is to provide in combination with grinding elements a holder for an object to be ground which is adapted to firmly grasp the object to be ground and removably placed in the machine, said holder being readily inserted and removed from operative position while the machine is running or when the same is stationary.

Other objects and advantages to be derived from the use of my improved sharpening machine will appear from the following detailed description and the claims, taken with an inspection of the accompanying drawing, in which:

Figure 1 is a top plan view of a sharpening machine embodying the improvements of my invention;

Fig. 2 is a vertical longitudinal sectional view of the same; and

Fig. 3 is an enlarged detailed perspective view of the blade holder.

Referring more particularly to the drawing, wherein similar characters of reference designate like and corresponding parts throughout the various views, 1 designates in its entirety a housing for my improved sharpening mechanism, said housing preferably being rectangular and having a base portion 2, side walls 3 and end walls 4. An extension 5 is formed on the body 1 for connecting the body to a table or any other stationary object.

The grinding elements of my invention include rollers 6 and 7 arranged in parallel spaced relation and carried by shafts 8 and 9, said shafts having bearings 10 and 11 in the side walls 3 of the housing 1. The rollers 6 and 7 are provided with abrasive surfaces 12 and 13 for performing the sharpening process. The rollers 6 and 7 are provided with gears 14 and 15 at adjacent ends, said gears being in intermeshing engagement, so that movement of one of the rollers is attended by simultaneous movement of the other roller. A pawl 16 pivoted at 17 on one of the side walls 3 engages the gear 14 to prevent reverse rotation of the rollers.

Motion is imparted to the roller 7 and thence to the roller 6 by means of a shaft 18 having a gear 19 mounted thereon and rotatable therewith, said gear 19 being in meshing engagement with the gear 15 as best shown in Fig. 2. A roller 20 is mounted upon the shaft 18 and rotatable therewith, said roller having an abrasive covering 21 for sharpening knives and ordinary razor blades. An emery wheel 22 is mounted on the free end of the shaft 18 for an obvious purpose. A crank 23 is mounted on the opposite end of the shaft 18 for imparting motion thereto.

The work holder is designated 24 and is preferably formed of a sheet of metal bent at 25 and having a rod 26 extending there-through, said rod forming bearings for reception in recesses 27 formed in the upper marginal edges of the side walls 3 of the housing 1. The rod 26 is welded or otherwise permanently connected with the work holder 24. The work holder, as bent, is formed with gripping jaws 28, said gripping jaws being inherently resilient and maintained in gripping engagement with an object by means of a screw 29 extending there-through, said screw having a wing nut or

the like tightening element 30 on the free end thereof. The blade to be sharpened is shown in Fig. 2 engaged by the gripping jaws 28, said blade being designated 31.

5 In order to bring the blade 31 alternately into engagement with the abrasive surfaces of the rollers 6 and 7 a pair of spring tongues 32 and 33 are formed on the jaws 10 28 of the work holder 24. A pair of cam surfaces 34 and 35 are formed on the rollers 6 and 7, said cam surfaces being adapted to, at times, come into engagement with the spring tongues 32 and 33 to oscillate the work holder. The cams are arranged at different points on their respective rollers so as to alternately shift the work holder to bring the blade 31 into engagement with the abrasive surfaces of said rollers.

It will be seen that in the provision of my improved sharpening device I have afforded means for quickly and easily sharpening safety razor blades and the like. Of course, it is to be understood that while I have described my device as particularly adapted for use in sharpening safety razor blades I do not limit myself to this use of the device. I desire to lay particular stress upon the novel and improved means of oscillating the work holder, namely, the cams carried on the rollers 6 and 7.

From the above description taken in connection with the accompanying drawing, it is thought that a clear and comprehensive understanding of the construction, operation and advantages of my invention may be had, and while I have shown and described the device as embodying a specific structure, I desire that it be understood that such

changes may be made in said structure as do not depart from the spirit and scope of the invention as claimed. 40

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

1. In a sharpening machine the combination of a pair of rotatable sharpening elements, of a work holder composed of a single piece of metal bent at its medial line to form a pair of clamping jaws, a horizontal axis for said holder, an adjustable clamping element carried by said jaws, a pair of oppositely arranged integral spring tongues at one end of said jaws, a cam carried by said sharpening elements adapted to alternately contact with said spring tongues to oscillate the work holder. 45 50 55

2. A sharpening machine of the class described comprising a casing, a pair of closely spaced rotatable elements mounted therein, means for imparting motion to said elements simultaneously, a horizontal axis removably positioned in notches in the upper edge of said casing, a substantially rectangular piece of metal, bent at its medial line around said axis to form work holding jaws, an adjustable clamping element carried by said jaws, a pair of outwardly extending opposed integral spring tongues at one end of said jaws, and cams carried by said rotatable sharpening elements adapted to alternately contact with said spring tongues. 60 65 70

In testimony whereof, I affix my signature hereto.

PETER D. HAUSER.