

May 7, 1935.

M. TOLLINS

2,000,800

RAZOR BLADE SHARPENER

Filed May 1, 1933

Fig. 1.

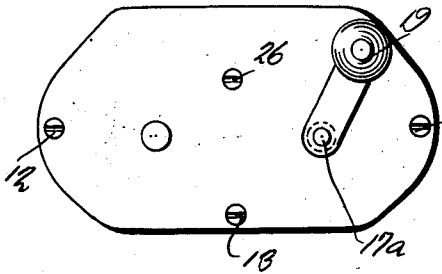


Fig. 4.

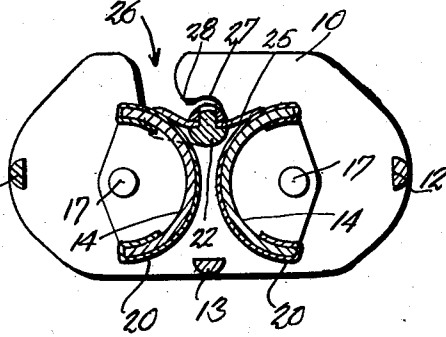


Fig. 2.

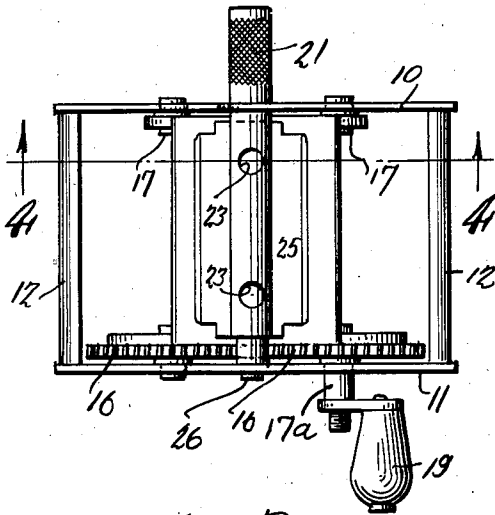


Fig. 5.

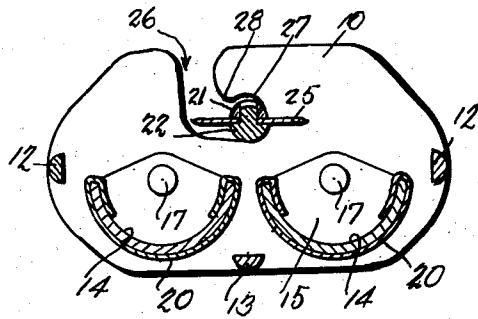


Fig. 3.

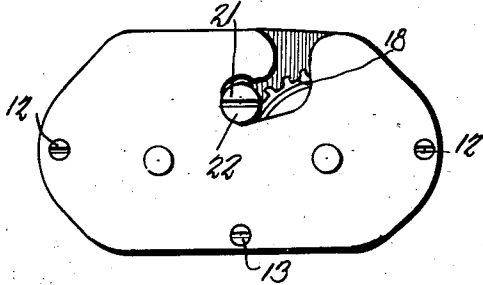


Fig. 6.

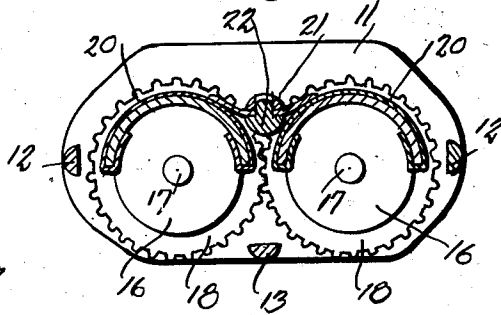
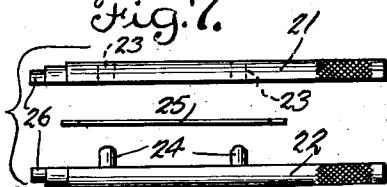


Fig. 7.



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UNITED STATES PATENT OFFICE

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RAZOR BLADE SHARPENER

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Application May 1, 1933, Serial No. 668,841

1 Claim. (Cl. 51—80)

This invention relates to certain new and useful improvements in razor blade sharpeners.

The primary object of the invention is to provide a razor blade sharpener of the hand operated or portable type wherein the blade holder removably supported in a frame may be manually reversed while remaining in the frame to present the opposite sides of the cutting edges of the razor blade to the sharpening or honing members.

It is a further object to simplify the construction of a portable razor blade sharpener to embody comparatively few parts resulting in a reduction in the cost of manufacture and being of a character to accomplish the efficient sharpening or honing of the opposite cutting edges of a razor blade.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing:—

Figure 1 is an end elevational view of the razor blade sharpener illustrating the hand operated crank handle for rotating the sharpening or honing members;

Figure 2 is a top plan view of the device showing the skeleton construction thereof with a razor blade carried by a holder supported in the frame;

Figure 3 is an opposite end elevational view showing the slotted bearing for the removable support of one end of the razor blade holder;

Figure 4 is a cross-sectional view taken on line 4—4 of Figure 2, showing the semi-cylindrical sharpening or honing members with the edges of a razor blade engaged thereby during the sharpening or honing operation;

Figure 5 is a cross-sectional view, similar to Figure 4, with the sharpening or honing members rotated to positions spaced from the blade holder and blade to permit manual rotation of the latter to present opposite sides of the cutting edges of the blades to the honing members;

Figure 6 is a cross-sectional view similar to Figures 4 and 5, looking in the opposite direction and showing the meshing gears carried respectively by the rotary sharpening or honing members; and

Figure 7 shows the two-part blade holder separated with a razor blade therebetween to be interlockingly associated with the blade holder.

Referring more in detail to the accompanying drawing, there is illustrated a portable hand operated razor blade sharpener comprising a skele-

tonized frame having side walls 10 and 11 connected by end cross bars 12 and an intermediate cross-bar 13 adjacent the lower edges of the side walls 10 and 11 as clearly shown in Figures 4 to 6.

A pair of co-acting substantially semi-circular sharpening cylinders 14 are journaled in the side walls 10 and 11, each sharpening cylinder including an end wall 15 and 16, the end wall 15 being of semi-circular form while the end wall 16 is of disk or circular form. The end walls 15 and 16 of each grinding cylinder carries a bearing pin 17 respectively journaled in the side walls 10 and 11. The two grinding cylinders are journaled in the side walls 10 and 11 in a manner to cause the convex sides thereof to move in proximity adjacent the transverse median line of the frame and cooperating movement of the grinding cylinders present the open sides thereof toward the upper sides of the frame when in one position for purposes presently to appear. The two grinding cylinders are simultaneously operated through the medium of meshing gears 18, respectively secured to the end disks 16 and one of said bearing pins 17 for a semi-circular grinding cylinder projects outwardly of the side wall 11 as at 17a for the attachment of a crank handle 19. Each semi-circular grinding cylinder 14 carries upon its convex side a sharpening or honing cover 20 presented to opposite cutting edges of a safety razor blade having rotary movement thereof.

A holder for a safety razor blade is adapted to be supported in the side walls 10 and 11 of the frame in a manner to present opposite cutting edges thereof to the sharpening surfaces 20 of the sharpening cylinders, the holder as shown in detail in Figure 7 comprising a cylindrical rod formed of two sections 21 and 22, the section 21 having spaced cross-openings 23 therein to receive the lateral pins 24 projecting from the holder rod section 22, the razor blade 25 having openings therein for the passage of the pins 24 with the razor blade 25 clamped between the holder rod sections 21 and 22. The side wall 11 of the frame is provided with an opening therein disposed centrally and above the longitudinal axis of the wall to receive the reduced end 26 of the blade holder while the other wall 10 of the frame is provided with an upper edge opening angle slot 26 to receive the other end of the blade holder, the upper edge wall of the slot 26 being indented as at 27 to provide an overhang 28 acting to prevent accidental disengagement of the blade holder from the sharpening frame. The blade and

holder are inserted in the frame, finding a support in the side walls 10 and 11 and a semi-circular sharpening cylinder 14 are simultaneously rotated by the crank handle 19 to successively present the outer sharpening convex surfaces of the cylinders 14 to opposite edges of the razor blade 25 as will at once be understood from an inspection of Figure 4, the blade holder being so positioned with respect to the sharpening cylinders as to cause flexing movement of the blade as shown in Figure 4 for the more effective sharpening of the cutting edges of the blade. When the semi-circular sharpening cylinders are in the position shown in Figure 5, the open sides thereof are directed toward the blade holder and when so disposed, the blade holder is capable of being manually rotated in its bearing supports in the side walls 10 and 11 to a reversed position for presenting opposite sides of the cutting edges of the razor blade to the action of the sharpening cylinders 14.

From the above detailed description of the invention, it is believed that the construction and operation thereof will at once be apparent and while there is herein shown and described the preferred embodiment of the invention, it is nevertheless to be understood that minor changes may be made therein without departing from

the spirit and scope of the invention as claimed.

I claim:—

In a safety razor blade sharpener, a frame comprising side walls and connecting bars, a pair of cooperating semi-circular sharpening cylinders journaled in the walls and a razor blade holder removably supported in the walls to present the cutting edges of a blade to the action of the convex sides of the sharpening cylinders and capable of rotation while in the frame when the open sides of the cylinders are directed toward the holder to present the opposite sides of the cutting edges to the action of the sharpening cylinders, one of the walls having a bearing opening therein for the blade holder and the other wall having an angular slot forming a bearing for the other end of the holder, the angular slot including a vertical portion opening at the upper edge of the side wall and a horizontal portion extending longitudinally of the side wall with the upper edge of the wall forming the horizontal slot having an indenture therein providing a depending part overhanging at the entrance to the horizontal slot to prevent accidental disengagement of the holder from the frame, each grinding cylinder having an end wall and bearing pin journaled in the side walls and meshing gears respectively carried by corresponding ends of the cylinders.

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