Oct. 27, 1931. J. B. RHODES 1,829,061

SHARPENING DEVICE FOR RAZOR BLADES

Filed Feb. 4, 1929

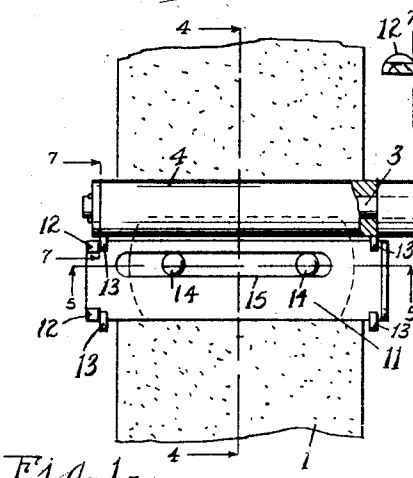


Fig. 1.

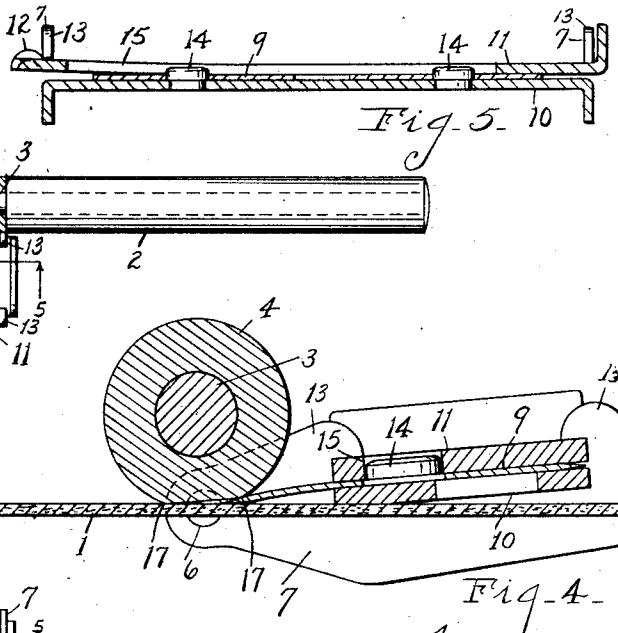


Fig. 5.

Fig. 4.

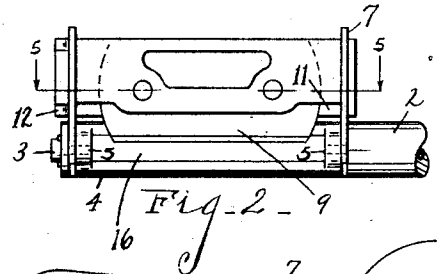


Fig. 2.

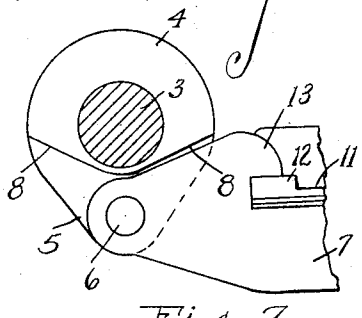


Fig. 7.

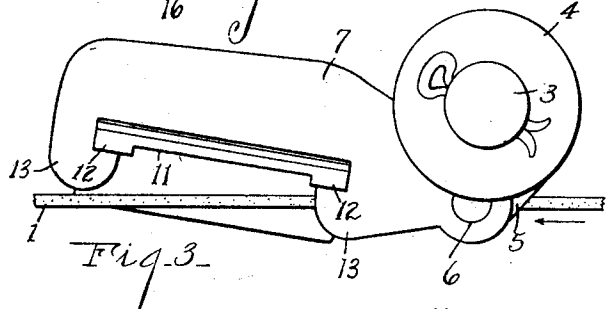


Fig. 3.

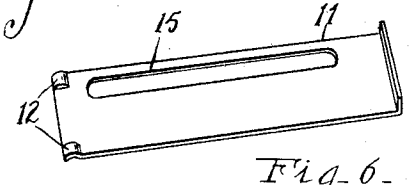


Fig. 6.

INVENTOR
Jay B. Rhodes
BY Chappell & Earl
ATTORNEYS

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UNITED STATES PATENT OFFICE

JAY B. RHODES, OF KALAMAZOO, MICHIGAN

SHARPENING DEVICE FOR RAZOR BLADES

Application filed February 4, 1929. Serial No. 337,327.

The main objects of this invention are:

First, to provide a sharpening device for razor blades and the like which is highly efficient and at the same time capable of easy manipulation.

Second, to provide a sharpening device in which the blade is held in proper relation to various kinds of sharpening elements, that is, flexible straps such as razor straps or sharpening elements presenting non-flexible surfaces.

Third, to provide a sharpening device having these advantages which is very simple and economical in its parts and at the same time strong and durable in use.

Objects pertaining to details and economies of my invention will definitely appear from the description to follow. The invention is defined in the claims.

A structure which embodies the features of my invention is clearly illustrated in the accompanying drawings, in which:

Fig. 1 is a plan view of my improved sharpening device in operative relation to a strap, portions being broken away to show structural details.

Fig. 2 is an inverted view of the device with the handle partially broken away.

Fig. 3 is a side view of the device in operative relation to a strap and illustrating the position of the parts when a stroke is being made toward the left.

Fig. 4 is a sectional view on line 4—4 of Fig. 1.

Fig. 5 is a detail view illustrating details of the blade holder on line 5—5 of Figs. 1 and 2.

Fig. 6 is a perspective view of one of the blade holder members.

Fig. 7 is a detail section on line 7—7 of Fig. 1.

In the accompanying drawings 1 represents a sharpening element of the flexible or razor strap type. The embodiment of my invention illustrated consists of a handle 2 having a spindle 3, the handle being disposed axially of the spindle.

On this spindle I mount a roller 4 having radially projecting pivot ears 5, these pivot ears carrying the pivots 6 which are disposed eccentrically relative to the axis of the roller or are substantially spaced from the axis of the roller. On these pivots I mount a carrier 7, stop shoulders 8 being provided on the roller for limiting the swinging movement of the carrier.

The carrier is provided with a holder for a blade such as 9, which consists of a cross member 10 and a blade clamping member 11 which is slidably mounted on the carrier and provided with keepers 12 engaging with lugs 13 on the carrier. The member 10 is provided with studs 14 while the clamping member 11 is longitudinally slotted at 15 to receive these lugs. The lugs are adapted to engage the openings commonly found in certain types of safety razor blades.

With the parts thus arranged the carrier and roller are supported for limited relative pivoted and swinging movement. The roller has a recess or flattened portion 16 between the pivots 6 and adapted to provide blade engaging shoulders 17. These shoulders swing downwardly upon the edge of the blade as indicated in Fig. 4 and hold it in engagement with the strap.

In use the device is pressed upon the sharpening element and reciprocated back and forth thereon. Assuming that it is laid upon the strap or other sharpening element with the carrier in advance of the roller or in the direction of the first stroke, the initial movement will cause the roller to swing up to the position shown in Fig. 4 holding the blade firmly and in proper relation to the strap. On reversing the stroke the carrier is swung over the roller and the parts assume the opposite position, that is, the carrier is swung into a position in advance of the roller and the opposite shoulder 17 of the roller engages the blade. On the initial reversing movement the roller releases the blade which springs away from the strap so that there is no likelihood of the strap being cut or mutilated. The reversal is automatic, it only being necessary for the operator to reciprocate the device.

The blades are supported so that proper bevel is maintained, even though the strap be loosely or slackly held so that there is a substantial curve or bend therein.

My improved sharpening device is economical in its parts, is very convenient to use and is highly efficient. I have not attempted to illustrate or describe certain modifications or adaptations as it is believed that this disclosure will enable those skilled in the art to embody or adapt my improvements as may be desired.

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

1. In a sharpening device, the combination with a handle, of a roller rotatably mounted on said handle and provided with radially projecting ears and having a recess in its periphery between said ears, and a blade carrier pivotally mounted on said ears, said roller being provided with stops limiting the swinging movement of said blade carrier, said carrier being adapted to support a blade with the edge thereof to be sharpened adjacent the roller and positioned to be engaged by one edge of said recess.

2. In a sharpening device, the combination with a handle, of a roller rotatably mounted on said handle, and a blade carrier pivotally mounted on said roller, the axis of the carrier being radially spaced relative to the axis of the roller, spaced stops on said roller coacting with said carrier, said roller being provided with a flattened portion between the pivots of the carrier, said carrier being adapted to support a blade with its edge to be sharpened in position to be engaged by the flattened portion of the roller.

3. In a sharpening device, the combination with a handle, of a roller rotatably mounted on said handle, and a blade carrier pivotally mounted on said roller, the axis of the carrier being radially spaced from the axis of the holder, the carrier being provided with a blade holder adapted to support a blade with its edge to be sharpened adjacent the roller, the roller having peripherally spaced blade engaging shoulders.

4. In a sharpening device, the combination with a holder, of a roller rotatably mounted on said handle and provided with radially projecting ears and peripherally flattened between said ears, and a blade carrier pivotally mounted on said ears, said roller being provided with stops limiting the swinging movement of said blade carrier, said carrier being adapted to support a blade with the edge thereof to be sharpened adjacent the roller and positioned to be engaged by the edge of the flattened portion of the roller.

5. In a sharpening device, the combination with a handle, of a roller rotatably mounted on said holder, and a blade carrier pivotally mounted on said roller, the axis of the carrier being radially spaced relative to the axis of the roller, said roller being provided with a flattened blade engaging portion between the pivots of the carrier, said carrier being adapted to support a blade with its edge to be sharpened in position to be engaged by the flattened portion of the roller to be deflected and supported thereby against a sharpening element.

6. In a sharpening device, the combination with a handle, a roller rotatably mounted on said handle, and a blade carrier pivotally mounted on said roller, the axis of the carrier being spaced radially from the axis of the roller, stops limiting the relative movement of the roller and carrier, the carrier being adapted to support a blade with its edge to be sharpened adjacent the roller and the roller having spaced blade engaging parts.

In witness whereof I have hereunto set my hand.

JAY B. RHODES.