Jan. 15, 1924. 1,480,771

W. H. LISH

SAFETY RAZOR STROPPER

Filed May 16, 1922

Fig. 1.

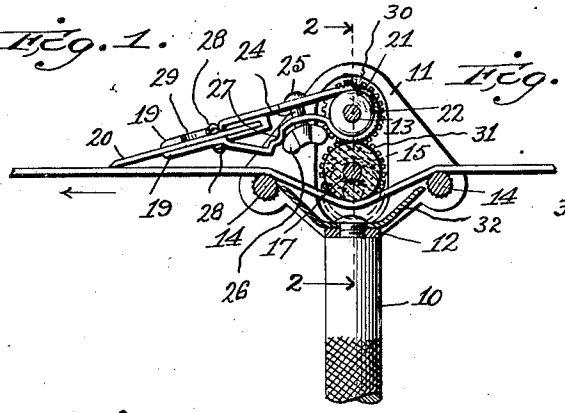


Fig. 2.

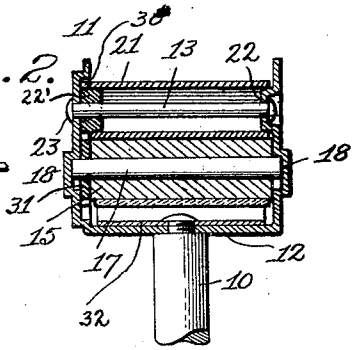


Fig. 3.

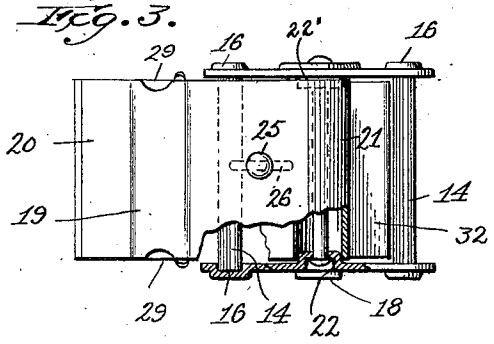


Fig. 4.

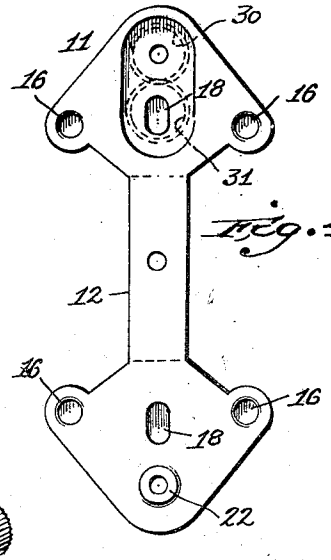
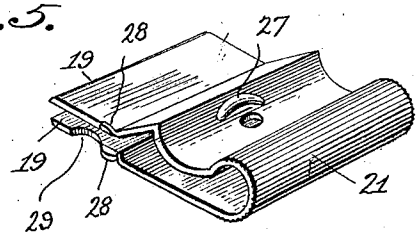


Fig. 5.



Inventor

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UNITED STATES PATENT OFFICE.

WILLIAM H. LISH, OF YORK, PENNSYLVANIA.

SAFETY-RAZOR STROPPER.

Application filed May 16, 1922. Serial No. 561,365.

To all whom it may concern:

Be it known that I, WILLIAM H. LISH, a citizen of the United States of America, and a resident of York, county of York, and State of Pennsylvania, have invented certain new and useful Improvements in Safety-Razor Stroppers, of which the following is a full and clear specification.

The object of this invention is to provide a simple and light device which may be made at a minimum manufacturing cost and which at the same time will avoid glazing the strop, as more fully hereinafter set forth.

In the drawing—

Fig. 1 is a longitudinal sectional view;

Fig. 2 is a transverse sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a top view partly broken away;

Fig. 4 is a plan view of the frame plate in the flat;

Fig. 5 is a perspective detail of the blade-holder.

In the drawing, 10 designates the usual handle, affixed to the upper end of which is a frame consisting of two side-plates 11 and a cross-bar 12, these parts being desirably struck up from a flat piece of sheet-metal, as shown in Fig. 4. The sides-plates 11 are rigidly connected, in addition to the bar 12, by a rivet-rod 13. The strop-guiding means consists of three rollers, two small ones 14 and one larger, central roller 15, these rollers being journaled in the side-plates 11.

The ends of the two smaller rollers 14 are journaled in pockets 16 formed in the side-plates, and the shaft 17 of the central roller is likewise journaled in pockets 18 formed in the side-plates, these pockets 16—18 being formed by outwardly cupping the metal of the side-plates. The pockets 18 are slightly elongated in the direction of the length of the handle 10, for the purpose hereinafter set forth.

The blade-holder consists of a piece of sheet-metal bent upon itself to form a pair of spring-jaws 19 which are adapted to clamp the blade 20, the construction of these jaws being such that they will accommodate any of the well-known types of safety-razor blades now on the market. At the line of fold of this plate, it is formed into an open cylinder 21 which is journaled upon the side-plates 11 in any suitable manner, preferably by cupping one of the side-plates at 22 and by providing at the other side a bushing 22′ journaled on the rivet-rod 13. The plate 11 at this side is cupped outwardly to receive two gear-wheels 30 and 31, one being affixed to the cylinder 21 through the medium of the bushing 22′ and the other being affixed to the roller 15 or its shaft 17. The length of the journal-cups 18 is such that when the strop is passed under the roller 15 and drawn taut, the two gears 30—31 will be brought into mesh, so that the movement of the apparatus along the strop will cause the blade-holder to flop back and forth in the usual manner. When there is no force applied to the roller 15, it drops away from the cylinder 21 far enough to disengage the gear 31 from the gear 30, thus permitting the roller 15 to revolve independently and freely. In order to avoid polishing or glazing the surface of the strop, I make the roller 15 of raw hide or fibre, and I may for the same purpose roughen the rollers 14.

The two plates composing the blade-clamping jaws are separated from each other at a point between the blade-clamping parts and the cylindrical part 22 in order to provide a recess for the reception of the reenforced back edge of the blade and also in order to produce the necessary springiness in the plates to normally separate them when the clamping device, now to be described, is released. This clamping device consists of a rotatable pin 24 passed through the two plates and provided at one side with a rivet-head 25 and having affixed rigidly to its other end a thumb-piece 26 by which the pin 24 may be rotated. Adjacent to the thumb-piece 26 is an enlargement 27 so placed that when the thumb-piece is turned it will ride up on this enlargement and thus clamp the jaws upon the blade. When further rotated, the thumb-piece 26 slides off the enlargement and permits the blade-clamping-plates to spring apart to thus release the blade.

It will be seen that every time the strop is interlaced in the holder, a different part of the surface of the roller 15 will be brought into contact with the face of the strop, thereby preventing any particular part of the face of the roller 15 from becoming glazed by repeated use. It will be understood, of course, that as soon as the blade comes against the strop, the rotation of the roller 15 will cease and thereafter the strop will slide on the surface of the roller; hence

the desirability, as stated, of bringing a new or fresh part of the face of the roller 15 into use each time a stropping operation is performed.

It will be understood that the rollers 14 need not be rotatable; they may be rigidly affixed to the frame at their ends, if desired, but it is desirable that they shall be rotatable, as set forth, in order not only to avoid glazing the under-side of the strop, but also to facilitate the passage of the strop through the apparatus. To facilitate removal of the blades from the holder, I may provide one of the jaws with one or more notches 29; and to facilitate the insertion of the blade between the jaws I may provide the edges of the jaws with lips 28.

For the purpose of still further preventing the roller 15 from glazing the strop, I rib or otherwise roughen the face of the cylinder 21 so that while the stropper is in action and the roller 15 is in frictional engagement with the cylinder 21, the surface of said roller 15 will be slightly indented or roughened to thereby break up any glaze that might tend to form on its surface, it being understood that the roller 15 is to have a raw-hide, fibre or other yielding, non-glazing surface. For the purpose of assisting in guiding the strop when it is interlaced between the roller, I fasten to the inner face of the bar 12 a dished plate 32.

I do not desire to be understood as limiting myself to the precise details of construction and arrangement shown, as variations and modifications therefrom may be made without departing from the spirit and scope of my invention and improvements. I therefore reserve the right to all such variations and modifications as properly fall within the scope of my invention and improvements and as set forth in the terms of the following claims.

What I claim is:

1. In a safety-razor-blade stropper, a handle and a pair of side-plates, a flopping blade-holder journaled in the side-plates, a series of strop-guiding rollers journaled in the side-plates, the central one of which is bodily movable toward and from the journal of the blade-holder, a gear carried by the blade-holder, and a companion gear carried by said central roller, for the purpose set forth.

2. In a safety-razor-blade stropper, a handle carrying a frame, a flop-over razor-blade-holder journaled in the frame and having a roughened cylindrical surface around the axis of said journal, a strop-guiding means embodying a central roller journaled in the frame and bodily movable into contact with said cylindrical roughened surface during the stropping action, said roller having a surface of yielding material, for the purpose set forth.

3. In a safety-razor-blade stropper, a handle carrying a frame, a flop-over razor-blade-holder journaled in the frame and having a roughened cylindrical surface around the axis of said journal, a strop-guiding means embodying a central roller journaled in the frame and bodily movable into contact with said cylindrical roughened surface during the stropping action, said roller having a raw-hide surface.

In testimony whereof I hereunto affix my signature.

WILLIAM H. LISH.

Witnesses:
MARVIN D. THOMAS,
EDWARD C. HOFFMAN.