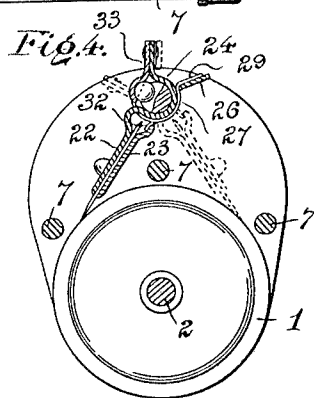
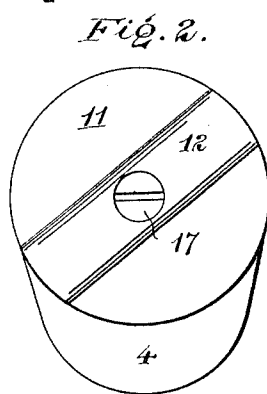
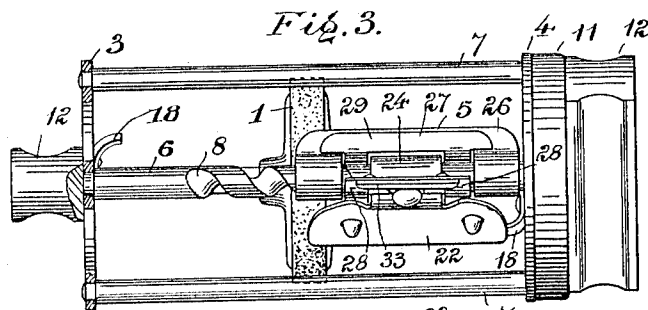
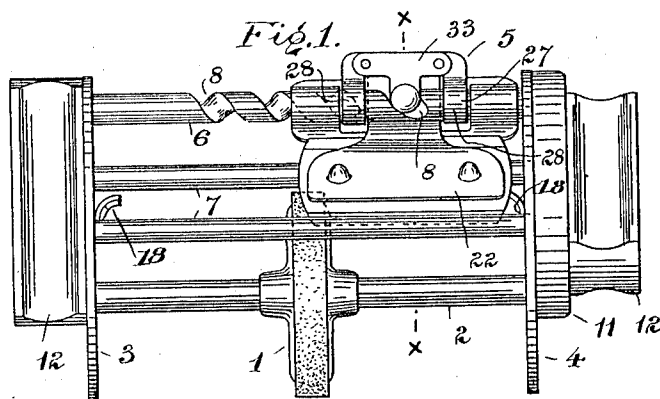


W. J. MYATT.
 DEVICE FOR STROPPING OR SHARPENING RAZOR BLADES OR THE LIKE.
 APPLICATION FILED NOV. 30, 1912.

1,061,772.

Patented May 13, 1913.
 2 SHEETS—SHEET 1.



Witnesses:
 L. H. Staaden.
 Anna Loyer.

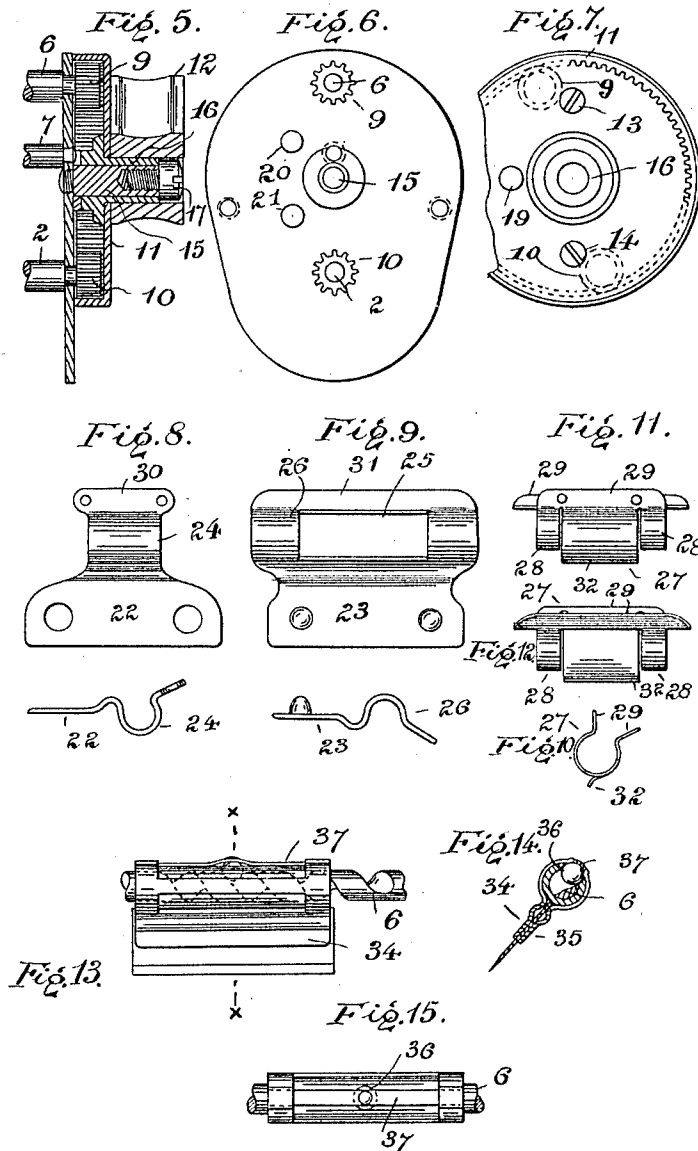
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 William James Myatt
 by *Arthur H. Myatt* atty.

UNITED STATES PATENT OFFICE.

WILLIAM JAMES MYATT, OF BIRMINGHAM, ENGLAND.

DEVICE FOR STROPPING OR SHARPENING RAZOR-BLADES OR THE LIKE.

1,061,772.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed November 30, 1912. Serial No. 734,322.

To all whom it may concern:

Be it known that I, WILLIAM JAMES MYATT, a subject of His Majesty the King of England, residing at Argent Works, Frederick street, Birmingham, in the county of Warwickshire, England, have invented certain new and useful Improvements in or Relating to Devices for Stropping or Sharpening Razor-Blades or the Like, of which the following is a specification.

This invention comprises certain improvements in or relating to devices for stropping or sharpening razor blades or the like especially safety razor blades, and it has for its object a device which shall be simple in construction and effective in operation.

The invention consists in the construction and combination of parts such as will be hereinafter described and pointed out in the appended claims.

In order that the invention may be more clearly understood and readily carried into effect reference may be had to the appended explanatory sheet of drawings on which:—

Figure 1 is a front elevation of a machine constructed according to the present invention. Fig. 2 is a side elevation. Fig. 3 is a plan. Fig. 4 is a transverse sectional view looking in the direction of the arrow *a*, the section being taken on line *x x* of Fig. 1. Fig. 5 is a detail view of the means for operating the stropping member and blade holder spindles. Fig. 6 is a view of the end plate shown in Fig. 5 with certain parts removed therefrom. Fig. 7 is an inside view of the member for operating the stropping member and blade holder spindles detached from the end plates shown by Fig. 6. Fig. 8 is respectively a face and edge view of one jaw of the blade holder shown in Figs. 1, 3, and 4. Fig. 9 is respectively a face and edge view of the other jaw. Fig. 10 is an edge view of the spring controlling the jaws shown in Figs. 8 and 9. Figs. 11 and 12 are respectively front and rear views of the spring shown in Fig. 10. Fig. 13 is a face view of a modified form of blade holder. Fig. 14 is a section on line *x x* of Fig. 13, and Fig. 15 is an edge view of the rear of the blade holder shown by Fig. 13.

In the convenient embodiment illustrated the stropping disk 1 is fixedly mounted upon the spindle 2 journaled in side plates 3, 4, such stropping member, having a strip of leather or other suitable material secured to

its periphery. The blade holder 5 which may be of any convenient type is mounted upon the spindle 6 also journaled in the side plates 3, 4, which latter are distanced and rigidly connected by cross bars 7. The blade holder 5 is mounted upon the spindle 6 in such manner that when the latter is rotated in one direction one side thereof is automatically presented to and pressed upon the stropping member and upon the continued rotation of such spindle is drawn transversely thereacross. The blade holder is also so mounted that when the direction of rotation of the said spindle is reversed the blade holder is turned over to present the other side of the blade to the opposite side of the stropping member so that it may be pressed thereon and drawn across the said member in the reversed direction. For this purpose the said spindle 6 is mounted centrally over the stropping member 1 and so that both sides of the said member may be presented thereto at the proper angle, and such spindle has formed therein a helical groove 8 with which engages a projection connected to the holder 5, whereby upon rotating the spindle the projection is moved along the helical groove to impart a transverse movement to the blade holder, the blade at the same time being pressed upon the stropping member 1. Furthermore a reversal of the direction of motion of the spindle 6 effects a reversal of the blade holder.

The spindles 2 and 6 are simultaneously rotated in the same direction conveniently by the toothed wheels 9 and 10, which are mounted respectively on the said spindles on the outside of the side plate 4, these toothed wheels engaging with the internally toothed periphery of the driving member 11, which is rotatively secured to the side plate 4.

A hand grip 12 is conveniently secured to the member 11 by means of the screws 13, 14, and a hand grip may also be secured to the side plate 3, whereby the machine may be entirely supported and actuated by the hands of the operator. These hand grips cause a driving couple to be exerted about the axis of the driving member 11 whereby the reaction of the driving force is very conveniently taken by the hands so that the actuation of the device is effected without undue strain upon the hands.

The driving member 11 is conveniently rotatably mounted on the side plate 4 by means of the projection 15 (Figs. 5 and 6) screwed onto the plate 4 which projection
 5 forms a bearing for the sleeve 16 fitted to the driving member 11, the screw 17 abutting against the projection 15 to prevent endwise movement of the driving member.

In order that the blade edge shall not
 10 damage the periphery of the stropping member 1 when reversing the direction of rotation of the stropping member and when reversing the blade holder, it is insured that the spindle 6 shall be operated in advance
 15 of the spindle 2, and this may conveniently be effected by providing lost motion between the toothed wheel 10 and the internal teeth of the member 11 whereby the wheel 9 is operated in advance of said wheel 10,
 20 for this purpose the teeth of the wheel 9 are deeper in mesh with the driving member 11 than the teeth of the wheel 10. Stops 18 may also be provided to prevent the blade striking the stropping member with too
 25 great a force when effecting the reversal of the blade holder, such stops being adapted to engage with the blade holder. A stop 19 is also secured to the member 11 and is adapted to engage with stops 20, 21 on the side
 30 plate 4 to prevent further rotation of such member 11 when the blade has traversed across the stropping disk 1, the arcuate movement of the stops 19 between the stops 20, and 21 of the member 11 enabling rotation of the spindle 6 to an extent which
 35 traverses the blade across the stropping member 1 a distance equal to the length of the blade.

In operation, a blade having been placed
 40 within the holder, the device is held in the hands by the hand grips 12 and the driving member 11 rotated by means of the hand grip secured thereto, whereupon the blade is presented to the stropping member 1,
 45 which member is then rotated and the blade drawn transversely thereacross. When the blade has completely traversed across the stropping member the stop 19 moves against one of the stops 20, 21 which prevents
 50 further rotation of the driving member 11. The driving member is then turned in the reverse direction which causes the blade holder to move to the other side of the stropping member, as shown in dotted lines
 55 by Fig. 4, when it traverses thereacross in the reverse direction, the rotation of the stropping member being also reversed. The reversal of the blade holder from one side of the disk to the other is effected by the
 60 frictional engagement of the holder with the shaft or spindle. In the form of holder depicted, the tail portions 24, 26 of the jaws 22, 23 which pass around the spindle 6 are yieldingly pressed against the spindle with
 65 a desired amount of pressure to cause the

blade holder to swing over to the other side of the disk when the rotation of the spindle is reversed.

According to a convenient form of blade holder as illustrated in Figs. 1, 3, 4, and
 70 Figs. 8 to 12, such blade holder is adapted to receive a safety razor blade having two perforations, and comprises two jaws 22, 23, the jaw 22 being provided with a grooved tail portion 24 which passing through the
 75 aperture 25 of the grooved tail portion 26 of the jaw 23, lies around the underside of the spindle 6. The said grooved tail portion 26 is adapted to pass around the upper side of the spindle 6. A spring 27 having side
 80 strips 28 also passes around the spindle 6, the side strips 28 fitting between the ends of the tail piece 24 and the sides of the groove 25, and the bent rear ends 29 of this spring are adapted to abut against the
 85 rear ends 30, 31 of the jaws to normally press the forward portions together to grip the blade. The spring 27 is also formed with a central portion 32 which engages the inner face at a point beyond the groove 25 of
 90 the jaw 23 as shown by Fig. 4. Riveted to the rear portion 30 of the jaw 22 is a fitting 33 (Fig. 4) which has at its forward end a projection having a cup shaped recess within which fits a ball which engages the heli-
 95 cal groove 8 in the spindle 6 to thereby impart a transverse movement to the holder by the rotation of the spindle. The jaw 23 is provided with projections which engage the perforations in the blade to be sharpened and the jaw 22 is perforated to accom-
 100 modate the said projections when the jaws are closed. To remove or fit a blade within this holder the rear jaws 30 and 31 are pressed together against the force of the
 105 spring 27 to open the jaws which allows the blade to be removed therefrom or placed therein.

Any other form of blade holder may be used to suit any particular type of blade
 110 and according to a further example as shown by Fig. 13 the blade which may be comparatively rigid, is adapted to be sprung between the jaws 34, 35 and be frictionally retained therein by the grip of the jaws.
 115 The said jaws are connected to or formed integral with a sleeve which is a sliding fit upon the spindle 6 and to impart an endwise movement thereon a ball is passed through an aperture 36 in the sleeve and projects into
 120 the helical groove into which it is pressed by means of the leaf spring 37.

Having thus described my invention what I claim and desire to secure by Letters Patent of the United States of America is:—
 125

1. A device for stropping or sharpening razor blades or the like, comprising means to which the blade is presented for stropping or sharpening the edge thereof, a spindle, a holder for the blade mounted
 130

thereon, an internally driving member common to the said stropping or sharpening means and the spindle for actuating said stropping or sharpening means and said spindle, a helical groove in the spindle with which groove the blade holder co-acts so that by the rotation of the spindle the blade is pressed upon and moved transversely across the stropping means and so that upon reversing the direction of rotation of the spindle the side of the blade presented to the stropping means is also reversed.

2. A device for stropping or sharpening razor blades or the like, comprising means to which the blade is presented for stropping or sharpening the edge thereof, a spindle having a helical groove therein; an internally driving member common to the said stropping or sharpening means and the spindle for actuating said stropping or sharpening means and said spindle, a holder for the blade mounted thereon, such holder having a spring pressed member engaging with the helical groove, so that by the rotation of the spindle the blade is pressed upon and moved transversely across the stropping surface and so that upon reversing the direction of rotation of the spindle the side of the blade presented to the stropping surface is also reversed.

3. A device for stropping or sharpening razor blades or the like comprising a stropping or sharpening member having a peripheral stropping or sharpening surface which is effective on the blade edge by a rotary motion, a spindle upon which said member is mounted, a blade holder, a spindle upon which such holder is mounted, an internally toothed wheel for simultaneously rotating the said spindles a hand grip rigid with the internally toothed wheel, means whereby the opposite edges of the blade fitted in the

holder are alternately presented automatically to and pressed upon said stropping member, and means whereby an alternate reversal of the direction of rotation of the stropping member is effected.

4. A device for stropping or sharpening razor blades or the like, comprising a stropping member which is effective on the blade edge by a rotary motion, a blade holder, means whereby the opposite sides of the blade edge are alternately presented to and pressed upon the stropping member, means whereby an alternate reversal of the direction of rotation of the stropping member is effected, a driving member, side frames in which are journaled the spindles carrying the stropping member and blade holder and hand grips carried one by the side frame and one by the driving member, whereby the device may be operated and held in the hands each of which hand grips produces a couple about the axis of the driving member.

5. A device for stropping or sharpening razor blades or the like, comprising a stropping or sharpening disk, a spindle upon which such disk is mounted, a blade holder, a spindle having a helical groove therein with which helical groove the blade holder coacts, side frames in which the said spindles are journaled, toothed wheels on said spindles and an internally driving toothed wheel for simultaneously rotating the spindles, and grips carried by a side frame and said driving wheel for holding and actuating the device, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM JAMES MYATT.

Witnesses:

HEN. CON. HEIDE,
A. G. BARNES.