

1,051,574.

E. B. GIBFORD.
 RAZOR STROPPING MACHINE.
 APPLICATION FILED APR. 8, 1912.

Patented Jan. 28, 1913.
 2 SHEETS—SHEET 1.

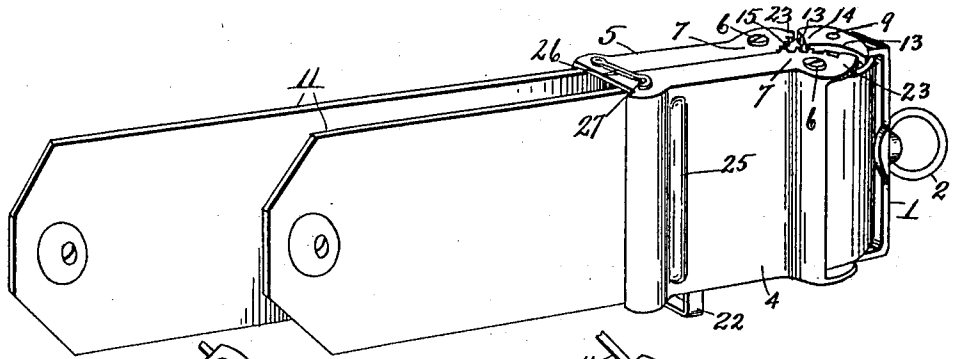


Fig. 1.

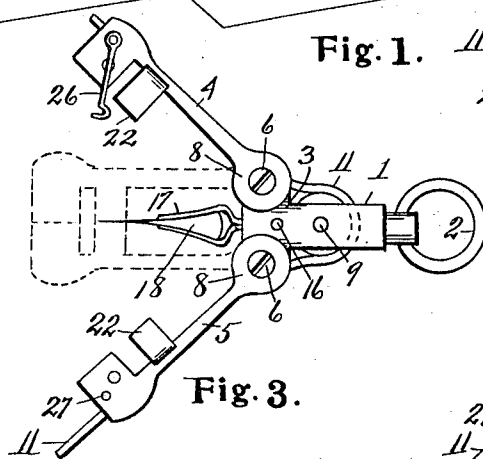


Fig. 3.

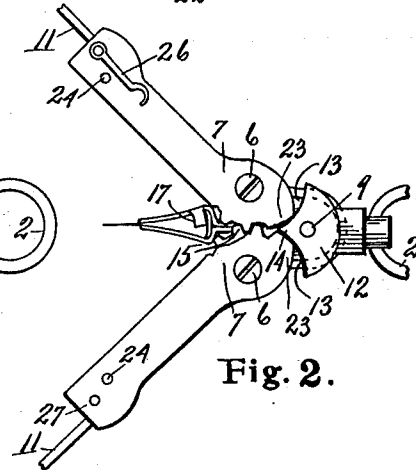


Fig. 2.

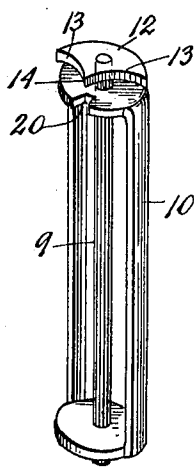


Fig. 5.

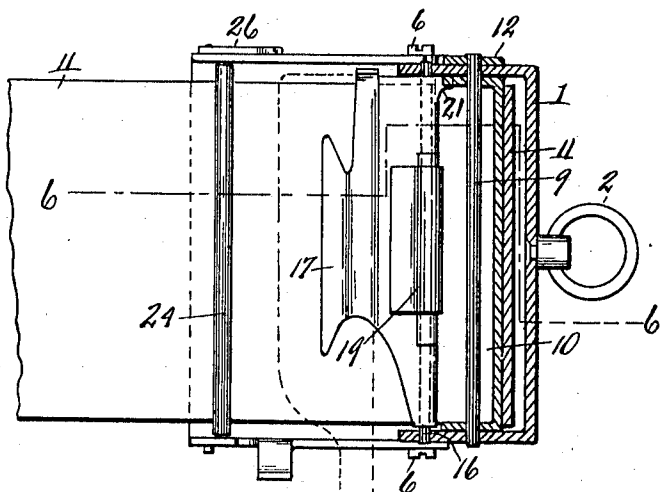


Fig. 4.

Witnesses

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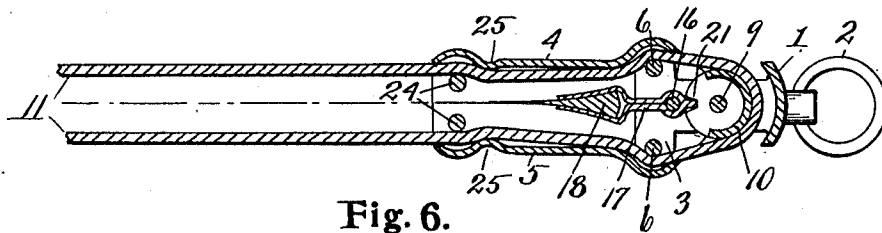


Fig. 6.

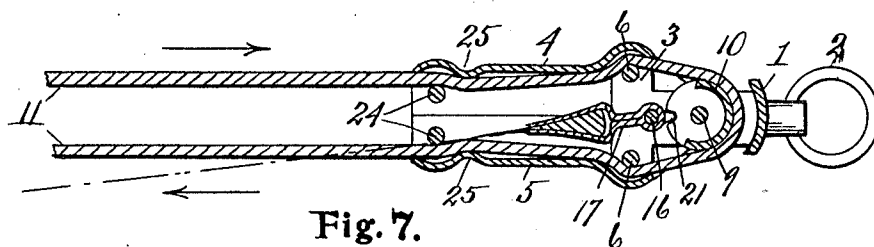


Fig. 7.

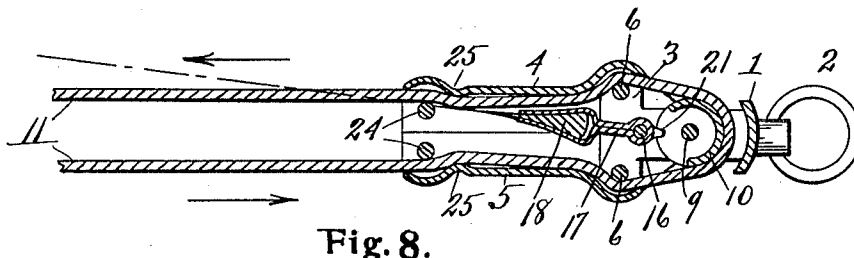


Fig. 8.

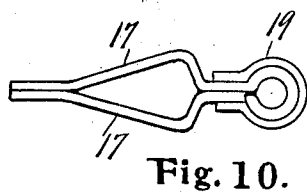


Fig. 10.

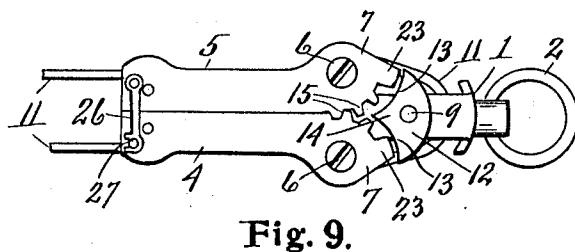


Fig. 9.

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UNITED STATES PATENT OFFICE.

EDWARD B. GIBFORD, OF ADRIAN, MICHIGAN.

RAZOR-STROPPING MACHINE.

1,051,574.

Specification of Letters Patent.

Patented Jan. 28, 1913.

Application filed April 8, 1912. Serial No. 689,145.

To all whom it may concern:

Be it known that I, EDWARD B. GIBFORD, a citizen of the United States, residing at Adrian, in the county of Lenawee, State of Michigan, have invented certain new and useful Improvements in Razor-Stropping Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to a razor stropping machine, and consists in the construction and arrangement of parts hereinafter more fully set forth and pointed out particularly in the claims.

The objects of the invention are to provide a stropping machine in which razor blades may be stropped in an efficient manner, and wherein provision is made for stropping safety razor blades as well as the blades of ordinary razors; to provide for locking the blade holder centrally of the frame when said frame is opened to admit a blade to said holder, so as to obviate cutting the strop; to provide means for preventing the insertion of a blade into the holder or the withdrawal of a blade therefrom, without first opening the hinged members of the frame, so as to carry the sides of the strop away from the holder, and obviate the possibility of cutting the strop, and to provide for exerting a strong pressure upon the blade holder to urge the blade against the strop as said strop is reciprocated.

The above objects are attained by the structure illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of a stropping machine embodying my invention. Fig. 2 is an end elevation of the machine with the hinged members thereof in the open position, and illustrating the manner of centering the blade holder and locking it in said position. Fig. 3 is a similar view showing the opposite end of the machine. Fig. 4 is a central longitudinal section through the machine. Fig. 5 is a perspective view of the oscillatory blade actuating member over which the strop passes. Fig. 6 is a longitudinal section through the machine with the blade holder having a blade therein centrally disposed between the sides

of the frame or case, as on line 6—6 of Fig. 4. Fig. 7 is a similar view showing the blade holder actuated to swing the edge of the blade into engagement with the strop at one side. Fig. 8 is a view like Fig. 7, showing the blade swung into contact with the strop at the opposite side. Fig. 9 is an end elevation with the hinged members of the case or frame closed. Fig. 10 is an end elevation of the blade holder having the spring jaws which clamp and hold the blade therein.

Referring to the drawings, by the characters of reference marked thereon, 1 designates a yoke having a swiveled ring 2 therein, to enable the stropper to be attached to a hook during the operation of stropping. The ends of the yoke 1 have lateral projections 3. To these lateral projections the sides 4 and 5 of the case or frame are pivoted upon transverse screw bolts or rods 6, which pass through the lateral extensions of the ends of the yoke and through the flanged ends 7 and 8 respectively of said side members. This arrangement allows the sides of the case or frame to swing, to permit the case to be opened as shown in Figs. 2 and 3.

Pivoted between the ends of the yoke 1 is a shaft 9. Secured to said shaft to lie between the ends of said yoke is a rocking or oscillatory member 10, semi-cylindrical in form, over which the strop 11 is adapted to pass. One end of the shaft 9 which extends through the end of the yoke is provided with a sector 12, having the curved faces 13, terminating in a point 14. The inner edges of the end flange 7 of the sides are provided with teeth 15, which mesh like the teeth of gears, and cause the hinged sides of the frame to swing in unison when actuated upon their hinges. Journaled at its ends in the end portions of the yoke 1 is a rock-shaft 16. Mounted upon said shaft to swing therewith are hinged jaws 17 forming a blade holder, which are of the proper shape to receive a razor blade 18 of an ordinary razor, and between which an auxiliary blade holder for safety razor blades may be inserted, as will be well understood in the art. To give the proper tension to the jaws of the blade holder, the hinge portion thereof is embraced by a stiff spring 19, as clearly shown in Fig. 10.

To effect a driving connection between the semi-cylindrical rocking member 10 and the blade holder, one end of said rocking member is provided with a notch 20, as clearly

shown in Fig. 5, which engages a tooth or projection 21, extending rearwardly from the blade holder, as shown in Figs. 6 to 8, inclusive. By this arrangement, as the member 10 is swung or rocked by a reciprocatory movement of the strop, the blade holder 17 will be swung on its pivot in an opposite direction to carry the edge of the blade 18 into contact with the face of the strop, as said strop is drawn longitudinally to effect the proper abrasive action thereon, as will be well understood in the art and as illustrated in Figs. 7 and 8, in which views the arrows indicate the direction of travel of the strop.

The side members of the case are so formed that when the case is closed, as shown in Fig. 9, in operative position for stropping, no opening is presented for the introduction of the blade, which must be introduced at the opposite end. To avoid the possibility of a razor blade being introduced into the blade holder of the stropper before the sides have been opened to carry the strop away from the blade holder so as to prevent cutting the strop as the blade is introduced into the holder, there are provided inwardly extending stops or lugs 22, which extend from the hinged sides, as clearly shown in Fig. 3, and which, when the sides are closed, meet to form an obstruction which will prevent a blade being introduced into the blade holder, as shown by dotted lines in said last mentioned figure. These lugs also serve to prevent a withdrawal of the blade after the operation of stropping, until the sides of the case or frame shall have been opened.

Upon the flanged end 7 of each of the hinged sides is a terminal projection 23. These projections, as said sides are opened, move into engagement with the curved faces 13 of the sector 12, and serve to center the oscillatory member 10 and hold it against movement, as clearly shown in Fig. 2, at the same time centering the blade holder between the hinged sides and locking it against movement, whereby the blade holder is prevented from swinging in either direction while the case is open, and the blade from coming in contact with the strop in a manner to cause injury thereto when being inserted into or withdrawn from the blade holder.

The central portion of the strop is looped over the rocking member 10, and the side portions thereof pass between the screw bolts or rods 6 and the sides of the case. At the point where the sides of the strop pass from the case, they are held separated by the rods or rollers 24, behind which they pass, and which serve to cause the sides of the strop to swing with the sides of the case as they are opened and closed. In order to present the strop properly to the edge of

the blade as it is swung from side to side in the operation of stropping, each of the side members is provided with an inwardly extending rib 25, which is struck therein and over which the side portions of the strop pass as it is reciprocated longitudinally.

To lock the hinged sides together after a blade has been placed in the holder so that said sides may be held securely in place during the operation of stropping, hooks 26 are employed which are pivoted to the end portion of one side and engage suitably disposed pins 27 on the end of the other side, as shown in Fig. 9.

When a blade is in position in the blade holder and the strop is drawn longitudinally through the machine by successively pulling upon the terminals thereof, a movement of the strop over the rocker or oscillatory member 10 will actuate it to swing the blade holder and cause the edge of the blade to pass forcibly into contact with the face of the strop, as said strop is running out of the case, the blade swinging from side to side as the direction of travel of the strop is changed, thereby effecting a proper stropping of the edge of the blade, the friction created by the passage of the strop over the semi-cylindrical rocker being sufficient to urge the blade against the face of the strop with such force as to obtain the desired results.

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

1. In a stropping device, hinged side members through which a strop is adapted to pass, a rocking member over which the strop is looped, a pivotally mounted blade holder, a driving connection between said rocking member and said blade holder to cause said blade holder to swing as the strop is reciprocated, and means for automatically locking the rocking member against movement on its pivot actuable to hold the blade holder centrally of the case when the sides are opened.

2. In a stropping device, hinged side members, an oscillatory actuating member, a pivoted blade holder, a connection between the actuating member and blade holder to impart movement from the former to the latter, a centering sector on said oscillatory member, engaging terminals on the hinged sides cooperating therewith to lock the actuating member when said sides are open to hold the blade holder centrally therebetween, and a strop looped over the oscillatory member and lying on each side of the blade holder.

3. In a stropping device, hinged side members through which a strop is adapted to pass, said members having meshing teeth which cause them to swing in unison, an oscillatory actuating member, a pivoted

blade holder connected to said actuating member, a cam-faced sector carried by said actuating member, members on the pivoted sides coöperating therewith to lock the oscillatory member against movement when the sides are open, and a strop looped over the oscillatory member and passing through the hinged side members.

4. A stropping device comprising a case composed of hinged side members, having end flanges which close the opening between them at one end when said sides are in the closed position, the other end of the case being open to allow of the introduction of a razor, a pivoted blade holder in the case, stop lugs projecting from the end of the case to prevent the introduction of a blade into said holder when the sides are closed, a blade holder actuating device, and a strop passing over said actuating device and lying on each side of the blade holder within the sides of the case.

5. A stropping device comprising a case formed of hinged side members which close the sides of the case, a pivoted blade holder lying between said side members, an oscillatory member connected to the blade holder

to impart movement thereto, a strop looped over said oscillatory member and lying within the sides of the case on each side of the blade holder, the sides of the case having transverse ribs struck inwardly from the wall thereof over which the strop is adapted to pass, and rods mounted in the ends of the case and coöperating with the ribs in said sides for confining the strop against said ribs.

6. In a stropping device, hinged side members, an oscillatory actuating member, a pivoted blade holder, a connection between the actuating member and blade holder to impart movement from the former to the latter, centering means upon the oscillatory member, and engaging parts on the hinged sides coöperating therewith to lock the actuating member when the sides are open to hold the blade holder centrally therebetween.

In testimony whereof, I sign this specification in the presence of two witnesses.

EDWARD B. GIBFORD.

Witnesses:

LELAND F. BEAN,
ALICE B. MARVIN.