W. H. NICHOLLS.

IMPLEMENT FOR STROPPING RAZOR BLADES.

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911,839. Patented Feb. 9, 1909.

Fig. 1.

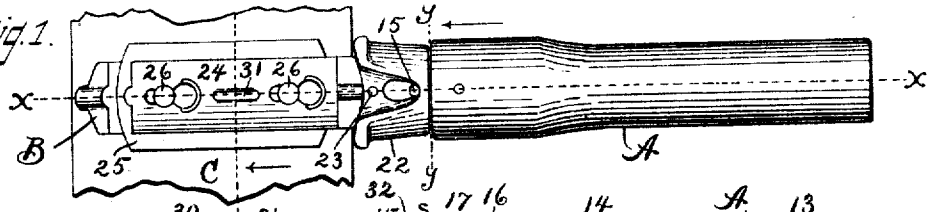


Fig. 2.

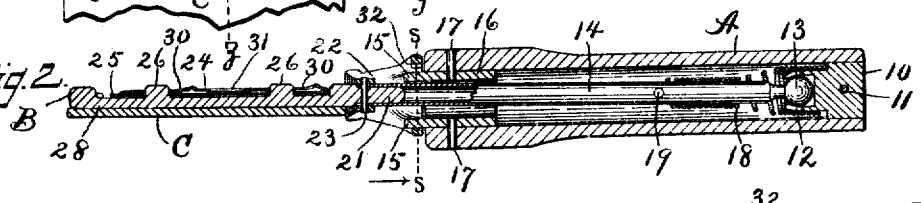


Fig. 3.

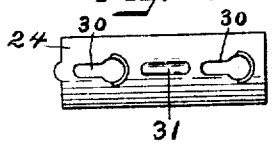


Fig. 4.

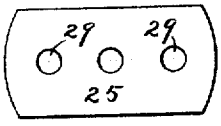


Fig. 5.

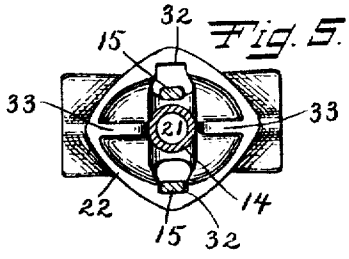


Fig. 7.

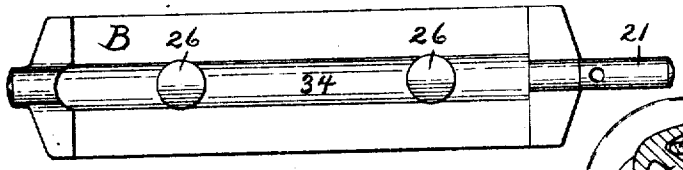


Fig. 6.

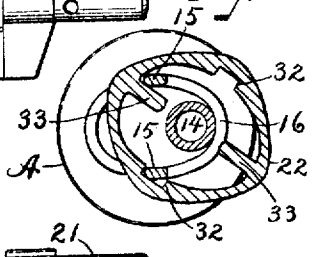


Fig. 8.

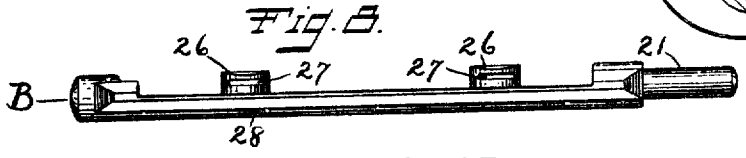


Fig. 9.

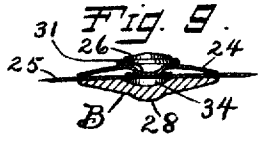
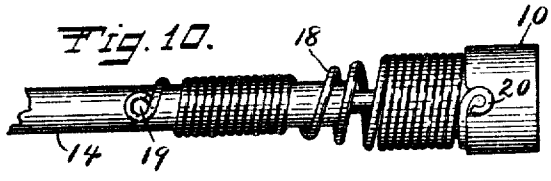


Fig. 10.



Witnesses.

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UNITED STATES PATENT OFFICE.

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IMPLEMENT FOR STROPPING RAZOR-BLADES.

No. 911,839. Specification of Letters Patent. Patented Feb. 9, 1909.

Application filed January 27, 1908. Serial No. 412,690.

To all whom it may concern:

Be it known that I, WALTER H. NICHOLLS, a citizen of the United States, residing at Charlestown, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Implements for Stropping Razor-Blades, of which the following is a specification.

My invention relates to implements for stropping razor blades, and the objects of my improvement are convenience and efficiency, whereby the detachable blades of safety razors may be held for stropping and the proper tipping or rocking motion of the blade may be effected automatically by merely moving the implement, together with a blade held therein, back and forth upon a razor strop.

In the accompanying drawing:—Figure 1 is a plan view of my implement with a razor blade held therein, and a portion of a razor strop upon which the blade holder of the implement rests. Fig. 2 is a sectional view of the same on the line *x x* of Fig. 1, some of the parts being shown in elevation. Fig. 3 is a plan view of the blade holder cap. Fig. 4 is a plan view of a well known form of safety razor blade. Fig. 5 is an enlarged transverse section of the implement on the line *y y* of Fig. 1. Fig. 6 is a transverse section of the same on the line *s s* of Fig. 2, with the blade holder tipped to the full extent of its rocking movement. Fig. 7 is a detached plan view of the blade holder, less the cap and butt. Fig. 8 is a side elevation or edge view of the same. Fig. 9 is a transverse section of the blade holder and a blade held therein, the plane of section being on the line *z* of Fig. 1. Fig. 10 is a detached elevation of a portion of the holder shank, the socket to which the said shank is jointed, and the spring connected therewith.

A, designates the handle which is hollow for substantially its whole length. The butt end is closed by a plug 10 which may be held in place by a pin 11, and which plug is provided with a socket 12 for the ball 13 of the jointed shank 14. The other end of the handle is provided with two fixed fulcrum pins or lugs 15, which lugs, as shown, are formed on the outer end of an oval tube 16, that is secured within the handle by pins 17. A spiral spring 18 is secured by one end, as at 19, Figs. 2, and 10, to the jointed shank 14, and by its other end to the plug or socket, as at 20, Fig. 10, so that when the shank is partially rotated in either direction it will put the said spring under sufficient tension to return the said shank back again to its former position, as soon as the shank is released. The outer end of the jointed shank is tubular to receive the stem 21 of the blade holder B, while in turn the said end of the shank is received in the blade holder butt 22 and the two are rigidly secured to the said shank by the pin 23. That end of the blade holder butt 22 that lies next to the end of the handle A and in the plane of the fulcrum lugs 15, is hollow and provided with two inwardly facing recesses or notches 32 on its opposite sides for receiving one of the said lugs into one of the said notches when the other one of the said lugs is disengaged from its notch, as shown for the upper pin or lug and notch in Figs. 1, 5 and 6. Half way between the two notches the stops 33 are placed to limit the tipping or rocking movement of the blade holder relatively to the handle, and also to limit the rotary movement of the shank, so that it cannot be turned far enough to set the metal of the spring 18.

The main portion or body of the blade holder B is of a little less width than the blade 25 to be stropped, and long enough to receive a blade on one of its broad sides, which side serves as the blade seat and from which the studs 26 project, the said studs being slotted as at 27, Fig. 8. The other side of the blade holder may be provided with a central longitudinal rib 28 and the projection of the said rib should be about the same as the projection of the studs. The face or seat side of the holder 24 may be slightly depressed or hollowed out to form a longitudinal recess 34, Figs. 7 and 9, and then slant outwardly from the side edges of the said recess to the edges of the blade holder, so that the broad side of the blade as laid upon the holder without pressure, will be slightly elevated above the edges of the holder. The studs on the holder are of a size and so located as to pass through two of the usual holes 29, Fig. 4, of the blade 25. The cap 24 is provided with key hole slots 30 to receive the slotted studs 26, the said cap being first placed on the blade with the studs in the larger part of the key hole slots and then moved lengthwise towards the handle to bring the edges of the metal of the cap at the narrow part of the key hole slots into the slots 27 in the sides of the studs 26, as shown in Fig. 1, to clamp the blade firmly to the blade holder and with its two edges

projecting from the two edges of the blade holder, as shown. The cap is formed of thin sheet metal and may be resilient. It is provided with a central swaging or depression 31 to serve as a finger grasp for convenience in forcing the cap longitudinally into place and also to serve as a projection to assist in holding the blade. The cap is made a little concave on its under face so as to press upon the blade near its opposite edges with a tendency to slightly deflect the blade while the central depression 31 bears upon the blade at its middle portion as shown in Fig. 9, thereby more securely holding the blade in place. These blades are of thin metal and so resilient as to be easily deflected, and thus if the holder be constructed as described it is immaterial whether the cap is resilient or not. With a blade thus secured to the holder, the blade holder is placed upon a strop C, as shown in Figs. 1 and 2. The strop supports the blade holder B while the operator bears down on the handle A, thereby bringing the lower one of the fulcrum pins or lugs 15 into the lower fulcrum recess or notch 32 of the holder butt 22, while the upper fulcrum pin is freed from its notch or recess as shown in Figs. 2, 5 and 6. The jointed shank permits the blade holder to thus move up and down to engage and disengage the fulcrum pins at either side of the blade holder butt. The handle is then moved in the proper direction to move the holder and attached blade lengthwise of the strop. The friction of the strop on the holder will rock the holder on its fulcrum and tip the blade and holder from the position for the holder shown in Fig. 5, to approximately the position shown in Fig. 6, the rocking being towards one side or the other, according to the direction that the implement is moved on the strop. This will rock the blade so as to press its edge against the surface of the strop, thus putting the spring 18 under tension. This rocking motion of the holder and shank, as well as its up and down swinging movement, is permitted by reason of the universal or ball and socket joint. As soon as the movement of the implement over the strop surface is stopped, the spiral spring 18 immediately rocks the holder so as to raise the edge of the blade from the strop, preparatory to a return stroke which return stroke will tip the blade in the opposite direction to strop its opposite edge. By turning over the implement and presenting the opposite broad side to the strop, the other one of the fulcrum pins or lugs comes into action and the opposite side of the blade may be stropped at both edges in the manner before described. The tube 16 on the end of which the fulcrum pins or lugs 15 are formed, is made oval in order to give sufficient space for the shank 14 to operate in when the holder is thus rocked.

By my improvement a double edge blade of a razor may be conveniently held in the implement and when so held may be tipped or rocked automatically to bring its opposite edges alternately against the strop surface by merely moving the holder back and forth when resting upon the strop. The opposite edges of the other side of the blade may be stropped in the same manner by merely turning the implement over to change the fulcrum on which the implement rocks.

I claim as my invention:—

1. An implement for stropping razor blades, comprising a double faced blade holder, a handle in which the said blade holder is loosely mounted for rocking thereon, and duplicate fulcrum devices on opposite sides of the said holder and handle, the said fulcrum devices on one side operating to rock the holder when one of its faces is in frictional contact with the strop and those on the opposite side operating to rock the holder when its other face is in frictional contact with the strop.

2. An implement for stropping razor blades comprising a blade holder having a shank, a hollow blade holder butt rigidly mounted on the said shank and having an inwardly facing fulcrum recess, a handle within which the said shank is loosely mounted, a fulcrum lug rigidly fixed on the said handle for engaging the fulcrum recess of the said blade holder butt for rocking the said holder on the said fixed fulcrum lug of the handle.

3. In an implement for stropping razor blades, the combination of a handle with a blade holder, a shank for the said blade holder mounted within the said handle by means of a universal joint, fulcrum lugs fixed at the outer end of the said handle, and a holder butt mounted on the said shank by the outer end of the said handle, the said holder butt having fulcrum recesses each for receiving the adjacent one of the said fulcrum lugs while the other fulcrum lug is disengaged from its recess.

4. In an implement for stropping razor blades, the combination of a handle having a lug at its outer end with a rocking blade holder, a blade holder butt mounted on the blade holder opposite the said end of the said handle, the said butt having inwardly facing lug recesses on opposite sides for engaging the said end of the handle to rock the blade holder when laid either side up on the strop.

5. In an implement for stropping razor blades, the combination of a handle with a blade holder mounted within the said handle by an universal joint, a spring attached to the said shank and handle for returning the said shank and holder to a given position when rotated on the said shank in either direction, fulcrum lugs fixed at the outer end of the said handle, and a holder butt mounted on the said shank by the outer end of the

said handle, the said holder butt having inwardly facing fulcrum recesses on its opposite sides for engaging the said fulcrum lugs, one at a time.

6. In an implement for stropping razor blades, the combination of a handle with a blade holder mounted within the said handle by a universal joint, fulcrum pins fixed at the outer end of the said handle, and a holder butt mounted on the said blade holder by the outer end of the said handle, the said holder butt having fulcrum recesses, each for receiving the adjacent one of the said fulcrum pins while the other is disengaged from its recess, the said butt having also stops for the said lugs on opposite sides between the said recesses.

7. In an implement for stropping razor blades, the combination of a handle with a double faced blade holder mounted thereon for rocking on either side with a tipping motion in either direction, the said holder having a wide body portion with a central longitudinal rib on one side and a blade seat and slotted studs on the other side, and a cap having key hole slots for engaging the said slotted studs and clamping a blade on the said seat, the projection of the said longitudinal rib from the blade seat and that of the studs being nearly the same, whereby the blades will be presented to the strop at approximately the same angle whether the holder is rocked on the ends of the said studs or on the said longitudinal rib.

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Witnesses:
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