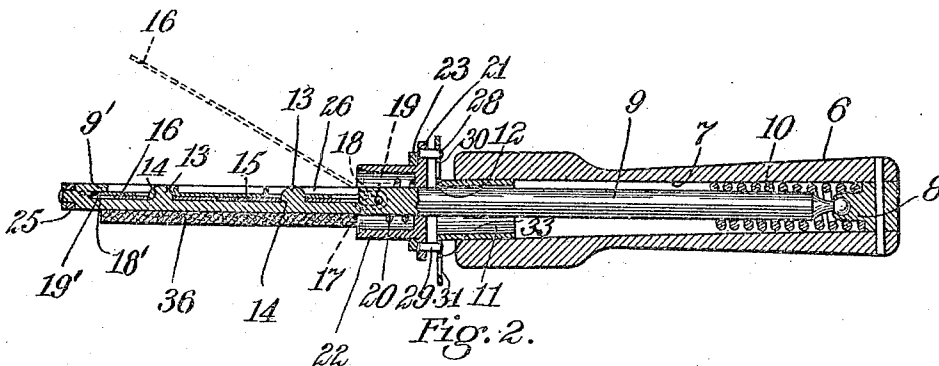
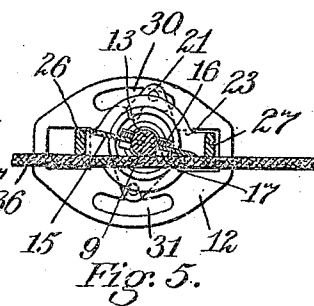
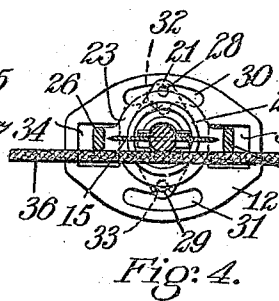
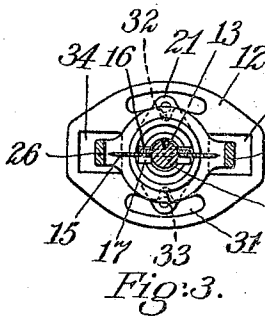
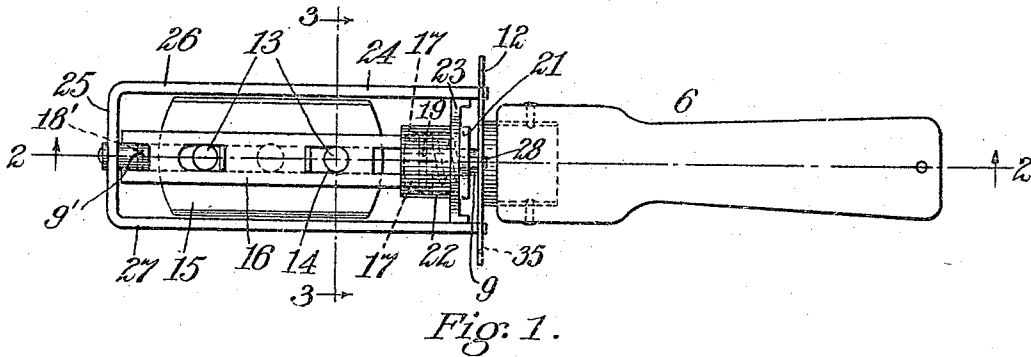


W. H. NICHOLLS.
 DEVICE FOR STROPPING RAZOR BLADES.
 APPLICATION FILED JAN. 9, 1909.

948,673.

Patented Feb. 8, 1910.



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UNITED STATES PATENT OFFICE.

WALTER H. NICHOLLS, OF BOSTON, MASSACHUSETTS.

DEVICE FOR STROPPING RAZOR-BLADES.

948,673.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed January 9, 1909. Serial No. 471,380.

To all whom it may concern:

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

This invention relates to an improved device for stropping razor blades such as are used in safety razors.

The object of the invention is to provide a convenient and durable device which will firmly hold the razor blade and which as the device is moved along in contact with the strop will automatically cause the razor blade to be turned first in one direction and then in the opposite direction to bring the opposite cutting edges of the razor blade in contact with the strop.

It is also the object of this invention to provide a device of the character set forth which is so arranged and constructed that after the razor blade has been stropped on one face thereof and upon its opposite edges the opposite edges of the other face of said razor blade may also be stropped in the same manner by simply reversing the device as a whole.

It is very desirable that in a device of the character set forth the holder for the razor blade should clamp the blade firmly in position and also that said holder should be so constructed that the razor blades can easily be attached to or detached from the same.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings: Figure 1 is a plan view of my improved device for stropping razor blades with a two-edged razor blade in position therein. Fig. 2 is a sectional elevation taken on line 2—2 of Fig. 1. Fig. 3 is a transverse sectional elevation taken on line 3—3, Fig. 1, looking in the direction of the arrows on said line, the razor blade and its holder being located in their central position. Fig. 4 is a sectional elevation, similar to Fig. 3, showing the razor blade carrier frame pressed against the strop by the handle and its driver plate, the razor blade being in a horizontal position. Fig. 5 is a view similar to Fig. 4, with the razor blade tipped and one of its edges in contact with the strop.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 6 is the handle having a recess 7 extending longitudinally thereof. At one end of said handle is a universal bearing 8 in which is mounted the ball-shaped end of the razor blade holder 9. Said holder has a spiral spring 10 encircling the same together with a portion of the bearing 8, the object of said spring being to support the holder in a substantially central position within the handle 6 when said holder is in its normal position and when the carrier frame is not in contact with the strop. The holder 9 extends from its bearing 8 through the handle and through an elongated hole 11 in the driver plate 12. The holder 9 is reduced in diameter at its outer end and has two pins or projections 13, 13 thereon which project through holes 14, 14 in the razor blade 15.

The razor blade 15 is clamped to the holder 9 by a clamp plate 16 which at its right hand end, Figs. 1 and 2, is bifurcated, thus forming two ears 17, 17 located upon opposite sides, respectively, of the holder 9 and these ears 17, 17 each are provided with a slot 18 into which the opposite ends of a pivotal pin 19 project. Said pivotal pin is fast to and extends beyond the opposite sides of the holder 9. The other end of the clamp plate 16 is bifurcated to straddle a portion 9' of the holder 9 and said clamp plate also projects into a slot 18' formed in the holder 9. The end of the clamp plate 16 at 19' is beveled so as to aid in inserting said end into the slot 18'. It will be seen by this construction the clamp plate can be tipped upon the pivotal pin 19 when the end of said clamp plate is removed from the slot 18 and thus the razor blade can be very easily inserted or taken out of the holder. This is done as follows: Assuming the blade to be clamped in the holder, as illustrated in Figs. 1 and 2, the clamp plate is moved toward the right, Fig. 2, sliding on the pin 19 and sliding out of the slot 18' until the bifurcated end thereof clears the portion 9' of the holder 9. It is then tipped upwardly to the position indicated in dotted lines and the blade 15 removed by lifting the same off of the pins 13. A new blade is then placed upon the pins 13, the clamp plate dropped down to its horizontal position and pushed toward the left, Fig. 2, the left hand end of the plate passing into the slot 18' and

thus firmly clamping the razor blade to the holder.

To prevent the clamp from becoming accidentally moved toward the right, Fig. 2, a spiral spring 20 is provided which encircles the holder 9 and bears at one end against the clamp plate and at the other end against a rocker frame 21. The rocker frame 21 is fast to the holder 9, preferably by being forced thereon, and has a hub 22 which is adapted to rock in a cross piece 23 forming one of the end portions of the carrier frame 24. Said carrier frame consists of the two end portions 23 and 25 and the two side portions 26 and 27. The holder 9 is journaled to rock at one end thereof in the end 25 of the carrier frame 24 and said holder with the rocker frame 21 also rocks in the end piece 23. The rocker frame 21 has projections or pins 28 and 29 fast thereto and projecting, respectively, into slots 30 and 31 formed in the driver plate 12. The slots 30 and 31 are provided with notches 32 and 33, respectively, into which notches the pins 28 and 29 are adapted to enter alternately as herein-after described. The right hand ends, Fig. 1, of the carrier frame sides 26 and 27 also project into slots or openings 34 and 35, respectively, formed in the driver plate 12.

The general operation of the device hereinbefore specifically described is as follows: The sides of the carrier frame 24 are placed upon any suitable strop 36, as shown in Fig. 2, and by pressing downwardly upon the handle 6 the parts are brought into the relative positions illustrated in Fig. 4 with the upper edges of the sides 26 and 27 of the carrier frame nearly engaging the driver plate 12 at the upper sides of the slots 34 and 35, respectively. This depression of the handle relatively to the holder carries the pin 29 into the notch 33 and carries the pin 28 out of the notch 32 and into the main portion of the slot 30. Now when the user moves the handle toward the left from the position shown in Fig. 4, the parts will assume the relative positions illustrated in Fig. 5 and one edge of the razor blade will be brought into contact with the strop 36. Upon reversing the direction of movement of the handle, the opposite edge of the razor blade will be brought into contact with the strop and thus by moving the handle backward and forward the two edges will be stropped upon one face of the blade. To strop said edges on the opposite face of the blade it is only necessary to reverse the entire instrument and proceed as hereinbefore described.

It will be understood that when the instrument is reversed and the handle is pressed downwardly the pin 28 will move into the notch 32 and the pin 29 will move out of the notch 33 and into the main body portion of the slot 31 and then the rocker plate will be

free to rock at the end thereof to which the pin 29 is fastened and will be pivoted upon the pin 28 within the notch 32. Thus both edges of the blade will be stropped upon the opposite faces thereof.

When the device is in the position illustrated in Fig. 4, it will be seen that the upper edges of the sides 26 and 27 nearly touch against the upper sides of the openings 34 and 35 and when the device as a whole is reversed, as hereinbefore described, then the opposite edges of the sides 26 and 27 will nearly touch against the opposite sides of said openings 34 and 35 and in either position it will be seen that when the lower edges of the sides of the carrier are pressed against the strop 36 the handle cannot be rotated.

The device hereinbefore described is in some respects similar to a device for the same purpose for which I have made application for Letters Patent, Serial No. 412,690, filed January 27, 1908, "Implement for stropping razor blades."

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

1. A device for stropping a razor blade, having in combination, a holder for a razor blade, projections on said holder adapted to project through holes in said razor blade, and a clamp plate pivotally mounted and adapted to slide on said holder, said clamp plate adapted to interlock with said holder when slid in one direction and vice versa.

2. A device for stropping a razor blade, having in combination, a holder for a razor blade, projections on said holder adapted to project through holes in said razor blade, and a clamp plate pivotally mounted and adapted to slide on said holder, said clamp plate adapted to enter a slot in said holder when slid in one direction and vice versa.

3. A device for stropping a razor blade, having in combination, a holder for a razor blade, projections on said holder adapted to project through holes in said razor blade, and a clamp plate pivotally mounted and adapted to slide on said holder, said clamp plate bifurcated at one end to straddle a portion of said handle and adapted to enter a slot in said holder when slid in one direction and to be moved out of said slot when slid in the opposite direction.

4. A device for stropping a razor blade, having in combination, a holder for a razor blade, projections on said holder adapted to project through holes in said razor blade, a clamp plate, a pivotal pin fast to said holder and projecting at its opposite ends into slots in said clamp plate, whereby said clamp plate is pivotally and slidably mounted on said holder, and a fixed means on said holder to normally prevent swinging movement of said clamp plate thereon.

5. A device for stropping a razor blade, having in combination, a handle, a driver plate fast to said handle, a carrier frame, a holder for said razor blade rotatably mounted on said carrier frame and handle and pivotally mounted at one end thereof in said handle, and a rocker frame fast to said holder, said rocker frame adapted to engage said driver plate.
6. A device for stropping a razor blade, having in combination, a handle, a driver plate fast to said handle, a carrier frame, a holder for said razor blade rotatably mounted on said carrier frame and handle and pivotally mounted at one end thereof in said handle, and a rocker frame fast to said holder, said rocker frame adapted to engage said driver plate alternately on opposite sides of said holder.
7. A device for stropping a razor blade, having in combination, a handle, a driver plate fast to said handle, a carrier frame, a holder for said razor blade rotatably mounted on said carrier frame and handle and pivotally mounted at one end thereof in said handle, and a rocker frame fast to said holder, said rocker frame and carrier frame adapted to engage said driver plate.
8. A device for stropping a razor blade, having in combination, a handle, a driver plate fast to said handle, a carrier frame, a holder for said razor blade rotatably mounted on said carrier frame and handle and pivotally mounted at one end thereof in said handle, a rocker frame fast to said holder, said carrier frame projecting into slots provided in said driver plate, and two projections on said rocker frame projecting into slots in said driver plate upon opposite sides, respectively, of said holder.
9. A device for stropping a razor blade, having in combination, a handle, a driver plate fast to said handle, a carrier frame, a holder for said razor blade rotatably mounted on said carrier frame and handle and pivotally mounted at one end thereof in said handle, a rocker frame fast to said holder, said carrier frame projecting into slots provided in said driver plate, and two projections on said rocker frame projecting into slots in said driver plate upon opposite sides, respectively, of said holder, said last-named slots so formed and arranged that one of said projections is adapted to engage with said driver plate, while the other projection is free to move in its respective slot and vice versa.
10. A device for stropping a razor blade, having in combination, a holder for a razor blade, projections on said holder adapted to project through holes in said razor blade, a clamp plate pivotally mounted and adapted to slide on said holder to lock said blade thereto, and means to hold said clamp plate against sliding movement relatively to said holder.
11. A device for sharpening a razor blade on a strop, having in combination, a handle, a holder for said razor blade rotatably mounted upon said handle, a carrier frame upon which said holder is adapted to rotate, and means interposed between said carrier frame and handle, whereby said handle is prevented from rotating when the carrier frame is in contact with said strop.
12. A device for stropping a razor blade, having in combination, a handle, a holder for said razor blade, a universal joint within said handle upon which said holder is mounted, and a spring attached to said holder and handle and adapted to return said holder to a given position after said holder has been moved out of said position.
- In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.
- WALTER H. NICHOLLS.
- Witnesses:
 CHARLES S. GOODING,
 LOUIS A. JONES.