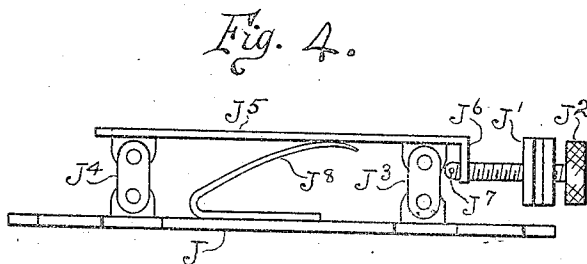
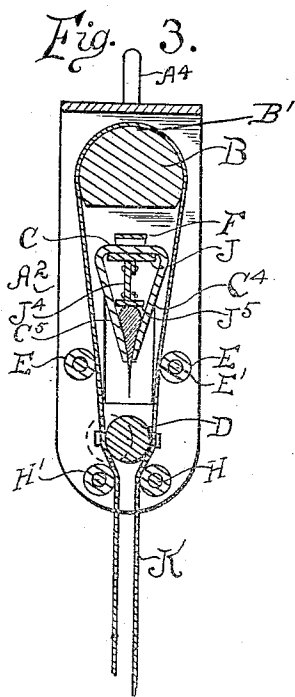
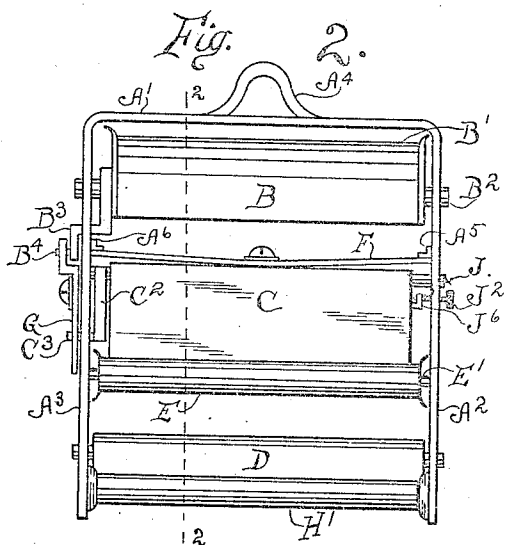
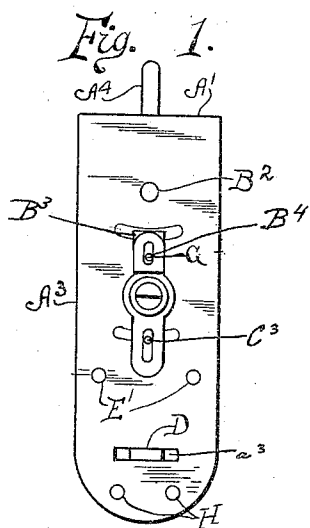


J. HEISSENBERGER.
 RAZOR STROPPING DEVICE.
 APPLICATION FILED OCT. 15, 1908.

936,127.

Patented Oct. 5, 1909.



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RAZOR-STROPPING DEVICE.

936,127.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed October 15, 1908. Serial No. 457,824.

To all whom it may concern:

Be it known that I, JOHN HEISSENBERGER, a citizen of the United States, residing in the borough of Bronx, city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Razor-Stropping Devices, of which the following is a specification.

It is well known, that it is desirable to occasionally apply a razor blade to a strap, of certain texture, with a reciprocating motion for the purpose of maintaining a keen cutting edge, and it has often been the practice to make this application by hand.

I have devised certain improvements in apparatus which allows, by very simple means, the most unskilled to treat a razor blade, or a number of razor blades, and obtain very satisfactory results.

It will be noticed, that in the apparatus which I have produced, great care has been taken to give the strap the proper movement relative to the razor blade, and to obviate all possibility of cutting, or otherwise injuring the strap by accidental presentation of the razor blade, to the strap, at any but the proper angle.

The following is what I consider the best means for carrying out this invention.

The accompanying drawings form a part of this specification.

Figure 1 is a side elevation, or end view. Fig. 2 shows a front elevation of the completed device the strap omitted, for the purpose of exposing to view the details of the invention. Fig. 3 is a section on the line 2—2 in Fig. 2. Fig. 4 shows in detail, and on a larger scale, an adjusting device.

Similar letters of reference indicate like parts in all figures where they appear.

A is a frame, it may be made of any sufficiently stout material, and is constructed so as to have a top A^1 and sides or ends A^2 , A^3 . To the center of the top I have attached a hook A^4 , useful in supporting the device, when in use, on any convenient hook or nail.

B is a bar of hard rubber, or metal semi-cylindrical in cross section, the top face, B^1 is nicely rounded. It is provided with a shaft B^2 , which is inserted in holes provided for it in the sides of A^2 , A^3 of the frame A. This bar is also provided with a crank, B^3 and crank-pin B^4 .

C is the blade holder, it is formed of metal bent so as to produce projecting blades C^1 ,

C^5 , which are wide at the top and brought nearly together at the base. This blade holder C is permanently attached to a bar J, which has also bearings in the side frames A^2 , A^3 . Attached to this bar J is a second crank C^2 , which carries a crank pin C^3 , and performs useful functions, and will be more fully described farther on.

On the uppermost side of the bar J, I have attached a spring F, which may be of any of the well known shapes, but I prefer to make it a flat spring, it is attached to the bar at one point only, its center. The outer ends of this spring are loosely held by the blocks A^5 , A^6 , and work in conjunction with the spring F and bar J, to keep the blade holder always in a perfectly vertical position.

The crank pins B^4 and C^3 are connected by a link G slotted at either end for the reception of the pins B^4 and C^3 . This link is pivoted in its center and serves to transmit to the blade holder C, but in the opposite direction the semirotary motion that is produced in the crossbar B by the action of the strap on the upper face of this crossbar when it is pulled back and forward by the operator.

Rollers E of hard rubber, or other suitable material are provided with shafts E^1 , and are rotatably mounted in bearing in the ends A^2 , A^3 of the frame A. The rods H are placed in the lower ends of the sides A^2 , A^3 , and carry rollers H^1 , of any suitable material. They are shown as riveted firmly into place and perform the double function of supports for the rollers, under which the strap passes, and stout braces for the lower ends of the side pieces A^2 , A^3 .

Fig. 4 shows in detail a part J, adapted to be adjustably fitted in the blade holder C. It protrudes from between the two sides of the blade holder, and is provided with a block J^1 , which slides in the hole in the side frame A^2 through which the razor blade passes. This block has a slot in its vertical center, and carries a screw J^2 with freedom for motion. Two links J^3 , J^4 loosely connect the base with a flat plate J^5 . This flat plate J^6 has one end bent sharply downward so as to form the lip J^6 . A screw threaded hole centrally located in this lip receives the screw J^2 . A pin J^7 is tightly driven into a hole provided for it, near the end of the screw J^2 , after its passage through the lip J^6 of the flat plate J^5 . When it is desired to insert a razor blade, of the ordi-

nary width in the blade holder C, the screw J² is withdrawn to its fullest extent, this depresses the flat plate J⁵ by folding the links J³ and J⁴. A spring J⁸, which is between the base and the flat plate J⁵ of the adjustable piece J, tends to keep the plate J⁵ in its uppermost position with the links J³ and J⁴ extended to their full length, and it is obvious that if the screw J² is released even to a small extent, the flat plate J⁵ will be raised to a corresponding extent.

In describing this apparatus, I have referred to a strap which is shown at K, it may be the ordinary long approved razor strap, somewhat lengthened for the greater convenience in handling. It is inserted in this device by being passed over the cross-bar B with its smoothest face, the operating face resting upon the uppermost side of the bar. The ends are then passed down, one on each side of the blade holder, then they are passed inside of the rubber rollers E, and together are inserted between the rods H. The long ends, which project are now convenient to be grasped one in either hand. A razor blade is inserted through the aperture into the blade holder C. The hook A¹ is placed on any convenient nail, and the apparatus is ready to be operated by pulling first one end of the strap and then the other.

A very important member, which I have not before mentioned is a movable bar D. This bar is one of the most important steps in my improvement. It is situated centrally just above the rods H in a groove a² which has been provided for it in the sides A², A³ of the frame. When one end of the strap is tightened the blade is moved toward and against that side of the strap, and the tightening causes the bar D to be pushed against the opposite side of the strap, which forces that side of the strap out of straight line from the rollers E to the roller H¹. In this movement the bar D takes up whatever slack there may be in the strap by forming a short bend between the rollers E and the rollers H¹. This bending tends to retard the upward movement of the strap and causes it to pull more tightly over the lead friction bar B and it will more surely rotate the friction bar to the allowable extent, which bar will transmit this positive motion to the blade holder and cause the blade to bear with a stronger pressure on the strap. When the other end of the strap is pulled with a corresponding relaxation of the first end, the bar D is at once forced in the opposite direction and forces the now loosened side of the strap out and away from the razor edge before that side of the strap commences its upward movement. It will be seen that this quick movement of the strap horizontally and before it commences its upward movement obviates the possibility of cutting or chipping the strap, when the direction of the

drawing motion caused by the operator is quickly changed.

Modification may be made within the scope of the appended claims without departing from the principle or sacrificing the advantages of this invention. The sides of the blade holder C may be made narrower if it is found desirable. The adjusting part J may be entirely dispensed with for some classes of work. The rod D may be also of lead if desired.

I claim as my invention:

1. A razor stropping device, having a frame, a friction bar pivoted in such frame, a blade holder pivoted in such frame, and loosely connected with said friction bar, in combination with a link connected adjusting device within said blade holder and thumb-screw and block for operating said adjusting device arranged to serve as herein specified.

2. A razor stropping device having a frame, a friction bar pivoted in such frame, a blade holder capable of rocking motions loosely connected with said friction bar, and a strap, in combination with a movable bar D, loosely mounted between the two parts of said strap, and arranged to maintain that part of the strap adjacent to the blade holder, in a flat condition.

3. A razor stropping device, having a frame, a friction bar located in such frame, a crank pin attached to said friction bar, a blade holder, and a crank and crank pin carried by said blade holder, a vertical link slotted and centrally pivoted, arranged to transmit motion from the friction bar to the blade holder.

4. A razor stropping device, having a frame, a friction bar located in such frame, a crank pin attached to said friction bar, a blade holder, and a crank and crank pin carried by said blade holder, a vertical link slotted and centrally pivoted, arranged to transmit motion from the friction bar to the blade holder, and a strap, in combination with a bar D mounted between the two inner sides of said strap and moved thereby.

5. A razor stropping device having a frame, a friction bar located in such frame, a crank and crank pin attached to said friction bar, a blade holder, and a crank and crank pin carried by said blade holder, a vertical link slotted and centrally pivoted, arranged to transmit motion from the friction bar to the blade holder, in combination with a bowed spring F permanently attached to said blade holder having its ends lightly held by the blocks A⁵, A⁶, adapted to restore the blade holder to a vertical position.

6. In a device, of the character described, the combination of a frame, a friction bar, and a blade holder loosely mounted in such frame, a strap, and a movable bar between

the inner sides of said strap, and rollers pivoted in such frame, providing means for the easy operation of said strap.

7. In a device of the character described
5 the combination of a frame, a friction bar pivotally mounted in such frame, carrying a crank and a crank pin, a blade holder loosely mounted in said frame provided with an adjustable blade back and carrying a
10 crank and crank pin, a link slotted and pivoted, connecting the friction bar and the

blade holder, a strap, and a movable bar between the parts of the strap, and rods to assist in the freedom of motion of the strap, substantially as herein specified.

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

15

JOHN HEISSENBERGER.

Witnesses:

F. A. CHUCKERING,

ARTHUR PHELPS MARR.