No. 653,914. Patented July 17, 1900.

H. HERDER.

RAZOR STROPPING DEVICE.

(Application filed Feb. 23, 1900.)

(No Model.)

Fig. 1.

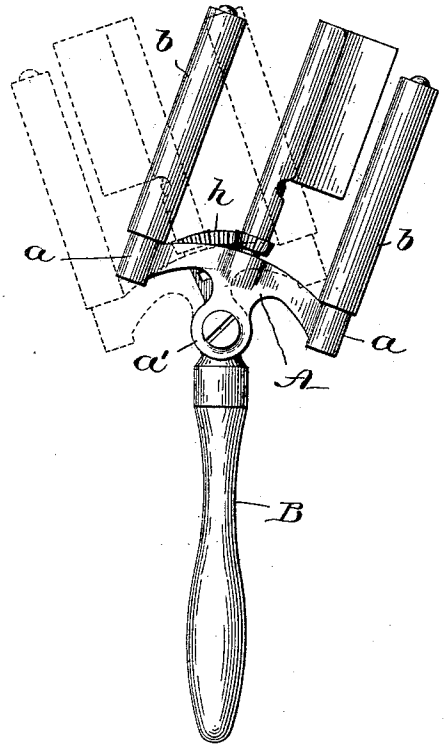


Fig. 2.

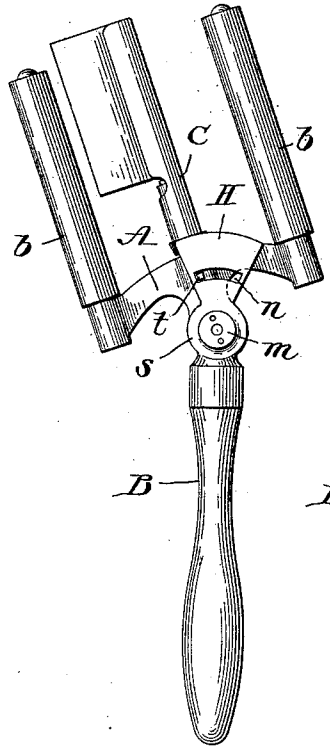


Fig. 3.

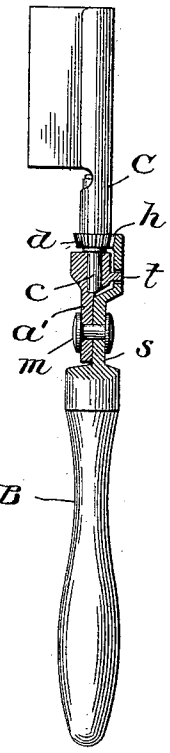
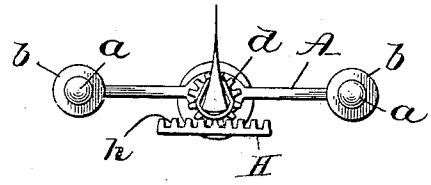


Fig. 4.



WITNESSES:

A. V. Groupe

C. E. Parker

INVENTOR

Herman Herder

BY

Wm. Hutton

ATTORNEY

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HERMAN HERDER, OF PHILADELPHIA, PENNSYLVANIA.

RAZOR-STROPPING DEVICE.

SPECIFICATION forming part of Letters Patent No. 653,914, dated July 17, 1900.

Application filed February 23, 1900. Serial No. 6,148. (No model.)

To all whom it may concern:

Be it known that I, HERMAN HERDER, a citizen of the United States, residing at Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Razor-Stropping Devices, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to razor-stropping devices, and has for its object the provision of means in a suitable device whereby the blade of a razor may be suitably supported on the strap while being honed, and whereby the cutting edge on each side alternately is automatically presented to the strap only when the device is moved in a direction away from the edge of the blade, and, finally, whereby the blade edge is automatically presented to the strap in a longitudinally-inclined direction in imitation of the manual movement of a razor-blade on a strap, so as thereby to present the whole blade edge to the strap at each stroke.

To these ends my invention consists in the rotatable blade-holding device hereinafter described, having gearing mounted upon its end, in combination with a pivotally-mounted handle, with means to limit the pivotal swing thereof, and a toothed gearing upon its swinging end meshing with the gearing on the rotatable blade-holding spindle.

In the accompanying drawings, illustrating my invention, Figure 1 is an elevation of the device, the dotted lines showing the pivotal swing of the blade-holding spindle and its adjacent parts, in the cross portion of which it is journaled. Fig. 2 is an under view of the same. Fig. 3 is a side elevation, partly in section; and Fig. 4 is a top view looking down on the instrument in the position shown in Fig. 2.

Similar letters of reference in the several views refer to like parts.

The device consists of a holder (indicated at A) composed of a cross-bar carrying extension-arms *a a*, which may be longer or shorter, as may be necessary to get a firm rest upon the strap, and these arms are preferably covered with rubber tubing, as indicated at *b b*. The central portion of the cross-bar A is hollowed out to provide a sleeve-like bearing for the extreme end *c* of the blade-holder C, and said blade-holder is provided with annular gear-teeth. In the drawings blade-holder C is shown made in two parts; but this is not at all essential. It may be made in any usual way, as blade-holders in like instruments of this character are made.

The device has pivotally mounted upon the extension end *a'* of the cross-bar A a handle B, carrying a bearing-piece in the form shown in section in Fig. 3 and in rear elevation in Fig. 2. A portion thereof (marked *s*) which proceeds from the handle proper is flat and is secured to the cross-bar A of the blade-holder by a set-screw *m*, passing through the extension end *a'* of the cross-bar A, and terminates in a sector end H, having on its under face a toothed rack *h*, meshing with a gear *d* of the blade-holder, and said sector also has below it and in the same parallel curve with its teeth a slot *n*, into which projects an actuating-pin *t*, mounted upon the cross-bar A.

The operation of the device is as follows: The arms *a a* are laid upon the strap, which brings the edge of the blade in proximity to the strap, as shown in Fig. 2, or as shown in Fig. 1 in reverse position. Taking now Fig. 1, if the device is moved to the right over the strap it will be observed that the edge will bear upon the strap in a direction away from the curved back of the blade. The end of the stroke being reached, if the movement of the device is then to the left it will throw the blade over, as shown in Fig. 1, bringing the other side of the edge to the strap in a direction away from the edge of the blade. In other words, the device held in the hand in the position shown in Fig. 1 makes it impossible for the blade to be turned on the strap by its cutting edge, but always by its back edge; but the chief value of my invention is that the pivotal swing of the blade-holder frame in the handle always brings the blade on the strap at an angle, as shown in Fig. 1, and is an exact reproduction of the manual stropping of a razor-blade. Such an inclined drawing of the blade over the strap sharpens the whole length of the blade edge

at one stroke. No other stropping device heretofore constructed has ever accomplished that result.

I am aware that various razor-stropping devices have been devised to automatically throw the blade over by its back edge, (but none for inclined honing,) the nearest of which to mine for the first-named purpose being that shown in Patent No. 405,961, dated June 25, 1889; but that device requires that the arms *a a* should be rotating spindles and should carry gearing whereby the blade-holding spindle is rotated in an arc of a circle. In my device the arms *a a* simply support the apparatus upon the strap, and the rotation of the blade-holder in an arc of a circle is accomplished by its gearing actuated by the pivotally-mounted handle and its sector gearing suitably limited by the pin on the handle playing in the slot of said sector, and hence is a new and different mechanical construction having a new and different mode of operation.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a razor-stropping device, the combination with a frame carrying a pair of supporting-arms, adapted to rest upon a razor-strap, of a rotatable blade-holder centrally mounted in said frame and provided with peripheral cog-gearing and an extension end or spindle journaled in said frame, a handle pivotally connected with said supporting-frame and carrying a sector end provided with rack-gearing meshing with the annular gearing on the rotatable blade-holder, and with means to limit the arc of rotation relatively, of the supporting-frame and the pivotally-connected handle; substantially as described.

2. In a razor-stropping device the combination with the supporting-frame A carrying a pair of fixed arms *a*, *a* of a rotatable blade-holder carrying annular cog-gearing and having a spindle end *c* journaled in the frame, a handle B pivotally mounted in the cross-bar of the frame A and provided with a sector H having cog-gearing *h*, and slotted at *n* to receive a pin *t* mounted on the supporting-frame of the device; substantially as described.

In testimony whereof I have hereunto affixed my signature this 9th day of February, A. D. 1900.

HERMAN HERDER.

Witnesses:
WALTER C. PUSEY,
H. T. FENTON.