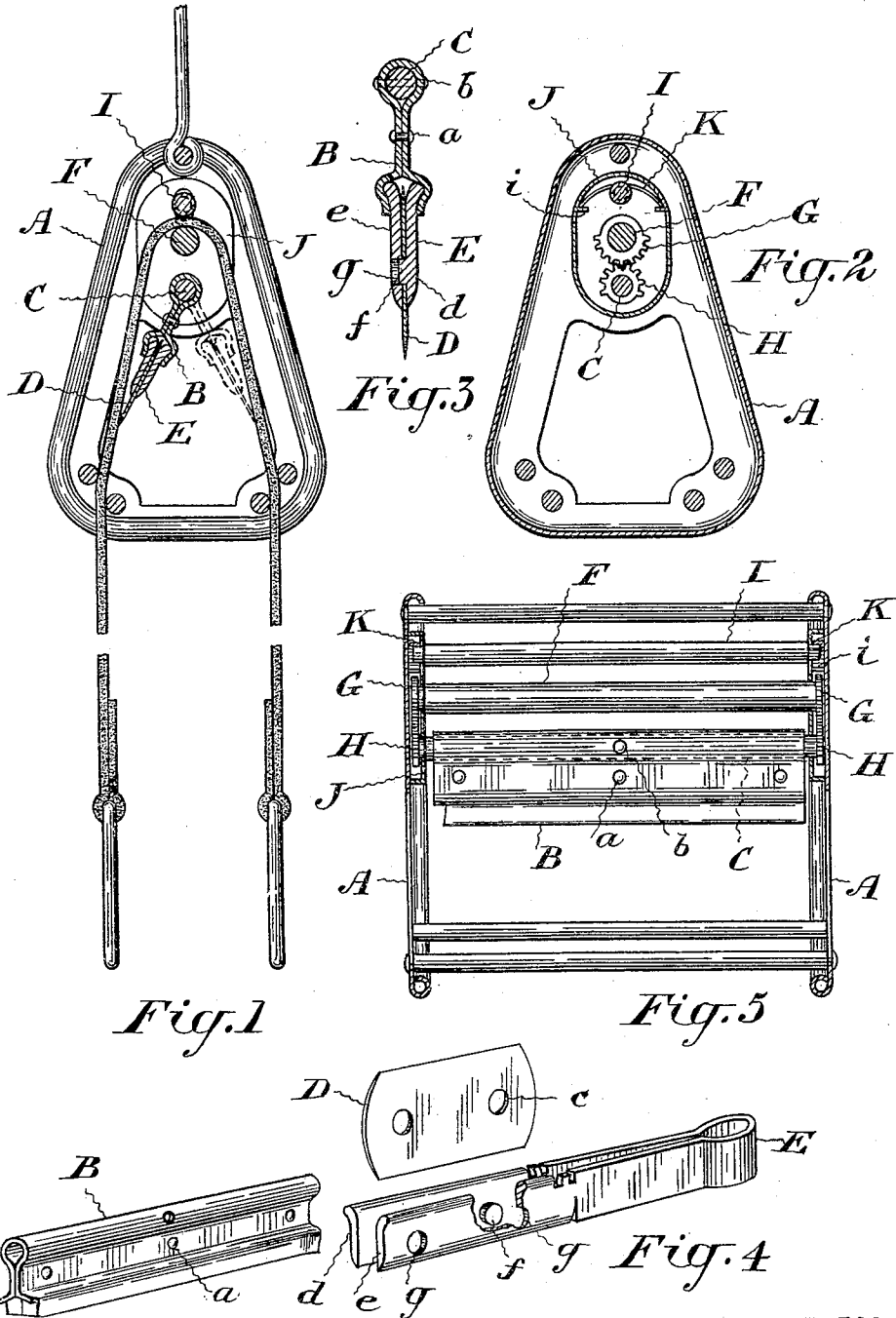


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 RAZOR STROPPING DEVICE.
 APPLICATION FILED AUG. 23, 1909.

961,105.

Patented June 14, 1910.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HERBERT E. CRANDALL, OF BRADFORD, PENNSYLVANIA.

RAZOR-STROPPING DEVICE.

961,105.

Specification of Letters Patent. Patented June 14, 1910.

Application filed August 23, 1909. Serial No. 514,242.

To all whom it may concern:

Be it known that I, HERBERT E. CRANDALL, of the city of Bradford, McKean county, in the State of Pennsylvania, one of the United States of America, have invented certain new and useful Improvements in Razor-Stropping Devices, of which the following is a specification.

This invention relates to improvements in razor stropping devices in which a razor blade is suspended in an oscillatable clamp and brought into contact with the strop by the action of the strop running over a rock shaft to which the clamping device is connected, or geared, and my object is to provide means whereby a device of this kind adapted for use with ordinary razors may also be adapted for use with the wafer like blades employed in many safety razors. I attain my object by providing a blade holder adapted to hold a safety razor blade, which holder is itself adapted to be inserted in the oscillatable clamp, hereinbefore referred to.

A further object is to provide means to prevent the cutting of the razor strop which was liable to occur if the user failed to keep a tension on both ends of the strop. I attain this object by providing the device with a tension roller adapted to hold the strop in contact with the rock shaft so that the latter is promptly rocked to swing the oscillatable clamp whenever the direction of movement of the strop is changed.

Figure 1 is a vertical section through the strop and stropping device. Fig. 2 is an enlarged sectional detail partly broken away, showing particularly the gearing for rocking the oscillatable clamp. Fig. 3 is an enlarged vertical section through the blade holder and the oscillatable clamp. Fig. 4 is a perspective detail showing the oscillatable clamp and blade holder separate. Fig. 5 is a longitudinal vertical section of the strop.

In the drawings like letters of reference indicate corresponding parts in the different figures.

A is a frame in which is journaled the oscillatable clamp B. This clamp is preferably formed from a single piece of spring metal bent around a shaft C and riveted below the shaft by means of rivets *a*. A pin *b* passing through the clamp and shaft hold the two securely together.

The edges of the clamp are bent to con-

form to the shape of the back of an ordinary razor blade and having a spring action they will securely hold such a razor in place by frictional engagement therewith. This clamp will securely hold ordinary razors, but is, of course, not adapted to safety razor blades D of the type shown. These blades are of wafer-like material and are commonly provided with a pair of holes *c*. To hold these blades I provide the holder E. This is preferably formed of spring metal bent upon itself to form the two spring jaws *d e*. The jaw *d* has two short pins *f* formed on or connected thereto, which are adapted to fit in the holes *g* formed in the jaw *e*.

When a blade D is placed between the jaws of the holder the pins *f* project through the holes in the blade and enter the holes *g*. The blade will thus be securely held as long as the jaws *d e* are pressed together. It will be noted that the upper edges of these bend outwardly so that the holder will fit within the clamp B. When this holder is removed from the clamp the jaws spring apart as shown and the blade is readily removed. When the strop is in use, as shown particularly in Fig. 2, it will be seen that the blade is brought almost flat against the side of the strop as the latter is pulled outwardly, which is the proper position to obtain the most effective stropping action.

While I prefer the jaws to be spring connected, as shown in Fig. 4, it is obvious, of course, that other methods of connecting the jaws might be devised which would fall within the scope of my invention.

While the clamp B may be operated in any desired manner I prefer to employ the following means: A rock shaft F is journaled in the frame and carries a gear wheel G meshing with a similar gear wheel H on the end of the shaft C of the clamp. The razor strop renders over this roller F and the gear wheels are thus actuated to rock the clamp B to cause the blade to engage the razor strop at one side or the other according to the direction in which the razor strop is being moved.

Above the rock shaft F a roller I is located. This roller has its ends journaled in the gear cases J suitably journaled on the vertical slots in the gear cases J. The gear cases have lugs *i* formed thereon, which retain in position the bent springs K which bear down on the pivots of the roller I and

thus tend to press it toward the rock shaft F. The razor strop has thus a suitable contact with the rock shaft F, so that the slightest reverse movement of the strop, even
5 though both ends be not under tension, will swing the clamp away from the strop and thus prevent a possibility of the latter being cut by the razor held in the clamp.

What I claim as my invention is:—

- 10 1. In a razor stropping device the combination of opposite end pieces, one of which has an opening therein to permit the insertion and removal of the razor; tie rods connecting the end frames; a rock shaft jour-
15 naled in the end pieces; a razor clamp journaled in the end pieces; means for imparting the movements of the rock shaft to the razor clamp; a razor strop engaging the rock shaft; a vertically movable tension
20 roller journaled in the frame above the rock

shaft; and spring means pressing said roller toward the rock shaft.

2. In a razor stropping device the combination of opposite end pieces, one of which
25 has an opening therein to permit the insertion and removal of the razor; tie rods connecting the end frames; a rock shaft journaled in the end pieces; a razor clamp journaled in the end pieces; gearing between the
30 rock shaft and the razor clamp; a razor strop engaging the rock shaft; a vertically movable tension roller journaled in the frame above the rock shaft; and spring
35 means passing said roller toward the rock shaft.

Bradford, this 26 day of July 1909.

HERBERT E. CRANDALL.

Signed in the presence of—

DANIEL F. SWAN,

M. BRYMAN.