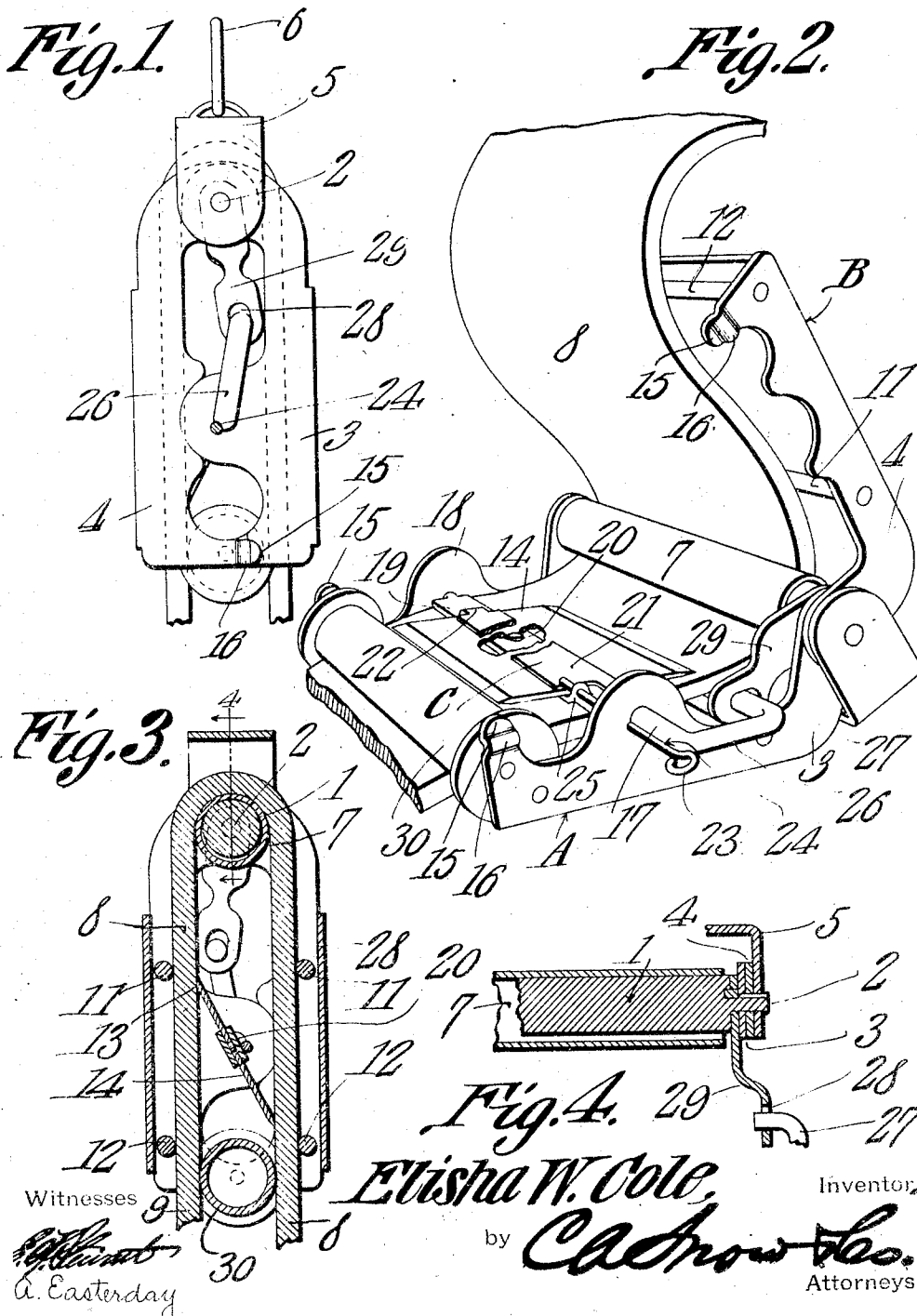


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 RAZOR AND BLADE STROPPER.
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UNITED STATES PATENT OFFICE.

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RAZOR AND BLADE STROPPER

1,025,963

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ELISHA W. COLE, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented a new and useful Razor and Blade Strop, of which the following is a specification.

This invention relates to razor and other blade stropping devices such as are used particularly for sharpening the blades of safety razors, although the device of the present invention may be used in other connections and with other types of blade if desired.

In automatic stropping machines as usually constructed, the relative movement between the strop and the frame in which the blade is mounted, is depended upon to rock the blade so as to bring the proper edge into position to be sharpened. The greatest difficulty experienced in the manufacture and use of razor stropers resides in this mechanism for rocking the blade holder. Unless this mechanism acts with absolute precision and with the necessary degree of rapidity, the blade is very apt to sever the strop.

With the foregoing considerations in view, the principal object of the present invention is to provide reliable, accurate and quick acting mechanism for operating the blade holder for either one edge or two edge blades, whereby to avoid the possibility of cutting the strop, and also to increase the efficiency of the device generally.

A further object of the invention is to arrange the blade holder in an improved manner and position so as to facilitate the operation of placing the blade in and removing the same from the stropping machine.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of the claim without departing from the spirit of the invention.

In the accompanying drawing forming part of this specification:—Figure 1 is an end elevation of a stropping machine constructed in accordance with the present invention. Fig. 2 is a perspective view of the

device showing the two frames thereof in open or separated position, whereby the blade holder which is mounted on one of said frames and is entirely out of connection with the other of said frames, is in readily accessible position so as to permit the operation of placing the blade in, or removing the same from the device to be expeditiously performed. Fig. 3 is a horizontal section taken through the stropping machine. Fig. 4 is a section on the line 4—4 of Fig. 3.

Like reference numerals indicate corresponding parts in the different figures of the drawings.

Generally outlined, the machine of the present invention comprises a main roller with which are pivotally connected a pair of guide frames adapted to be closed in substantially the manner of an ordinary pocket-book. One of these frames carries a rocking blade holder which is operated by said main roller and is entirely exposed when said frames are open. Loosely surrounding the main roller is an ordinary metal sleeve, and the strop which is guided by said frames, is looped around this loose sleeve. When the strop is pulled in one direction or the other, the frictional engagement between the interior or bore of the loose sleeve and the exterior or periphery of the main roller imparts sufficient movement to said main roller to cause it to rock the blade holder into position to cause both edges of the blade held thereby to engage the oppositely moving portions of the strop, so as to effect simultaneous sharpening of the two edges of the blade. After the loose sleeve by its frictional engagement with the main roller has rocked the blade holder to proper position, the continued movement of the strop in the same direction is permitted either by the strop sliding loosely around the sleeve, or by the sleeve rotating loosely on the main roller.

The reference numeral 1 indicates the main roller which is provided at its ends with trunnions or extensions 2 upon which are pivotally mounted the arms 3 and 4 of the swinging frames A and B. Likewise pivotally connected with the trunnions or extensions 2 is a bracket 5 which is provided with a suitable ring or fastening device 6 by means of which the strop may be anchored or connected with a wall or other support.

Loosely surrounding the main roller 1 is a metal sleeve 7 which is preferably of a slightly larger diameter than the roller 1 so as to avoid the possibility of the sleeve sticking to and positively rotating with the roller, and yet produce sufficient frictional engagement between the sleeve and the roller to cause the sleeve to rotate the roller when necessary. Looped around the sleeve 7 is the razor strop 8 which serves to produce the oppositely movable stropping surfaces 9 and 10.

Each of the frames A and B preferably is provided with two loosely mounted or idle rollers 11 and 12 which lie on the outer sides of the strop as shown in Fig. 3, and are located opposite the cutting edges 13 of the blade 14 so as to hold the razor strop against displacement at the points thereof which are engaged by the edges of the razor blade. The two frames A and B are adapted to be locked securely together at their free ends in the position shown in Figs. 1 and 3, by means such as the spring catches 15, each of said catches being bent as indicated at 16 whereby said catches will grip each other securely when the frame members A and B are moved together.

The blade holder, which is indicated generally by the reference letter C is pivotally connected with the frame A and consists preferably of a shaft 17 journaled at its opposite ends in lugs 18 formed on the frame A. The shaft 17 is provided, intermediate the sides of the frame A with a flattened blade receiving portion 19 on which are mounted a plurality of positioning pins 20, which are adapted to fit through the perforations in the double edged blade so as to position the same properly upon the blade holder. The blade is held in engagement with the positioning pins 20 and the blade receiving portion 19 by means such as the bar 21 which is pivotally connected at 22 with the portion 19. The means for locking the bar 21 in engagement with the portion 19 preferably consists of a longitudinally movable rod 23 which is mounted in a groove 24 formed in the shaft 17. At its inner end the longitudinally movable rod 23 extends through an ear or guide 25 and engages the free end of the bar 21 so as to hold the same locked in engagement with the blade 14 so long as the bar 23 is pushed inward. It will be noted from Fig. 2 that when the frames A and B are open, the blade holder C is entirely exposed, and by manipulating

the rod 23 the blade can be easily and quickly placed in position.

The means for rocking the blade holder C preferably consists of the crank arm 26 which is formed integral with the shaft 17 and at its outer end is bent as indicated at 27 so as to fit into a slot 28 formed in the outer end of a crank arm 29 which is rigidly connected in any suitable manner with the main roller 1.

In order to hold the strop in proper relation to the blade holder, the frame A in addition to the idle rollers 11 and 12 is provided with an enlarged idle roller 30 which is disposed on the opposite side of the strop from the rollers 11 and 12.

The operation of the device is believed to be obvious from the foregoing description taken in connection with the drawing. When the blade is in position and the frames A and B are locked together, a movement of the strop 8 in either direction is transmitted through the loose sleeve 7 to the main roller 1 from which it is transmitted through the rigid arm 29 to the crank 26, connected with the blade holder C, thus causing the opposite edges of the blade to be moved into engagement with the oppositely moving surfaces 9 and 10 of the strop 8 and thus simultaneously sharpened.

The stropping machine of the present invention is strong, simple, durable and inexpensive in construction as well as thoroughly efficient and practical in use.

What is claimed is:—

A stropping machine for double edge blades comprising a main roller having end extensions, a pair of frames pivotally connected with said end extensions, an anchoring bracket connected with said extensions, a sleeve loosely surrounding said main roller, an arm rigidly connected with one end of said main roller and having a slot in its outer end, a blade holder having a shaft formed with a crank extension engaging said slot, interlocking spring catches for locking said frames in closed position, and a razor strop extending through said frames and around said loose sleeve.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ELISHA W. COLE.

Witnesses:

J. P. CAMPBELL,
GEO. B. PITTS.