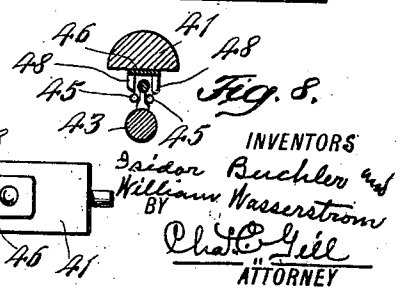
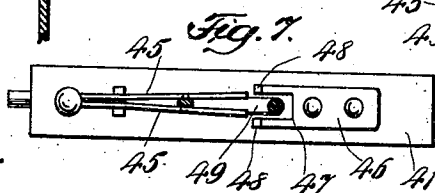
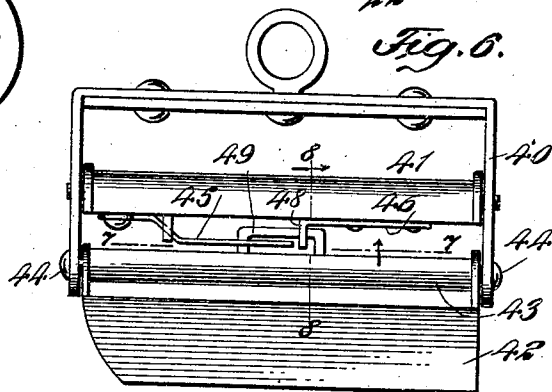
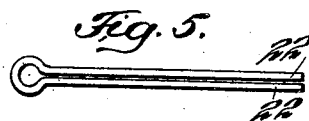
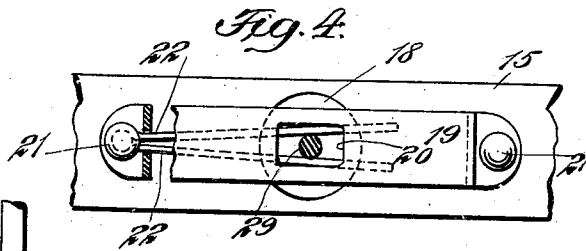
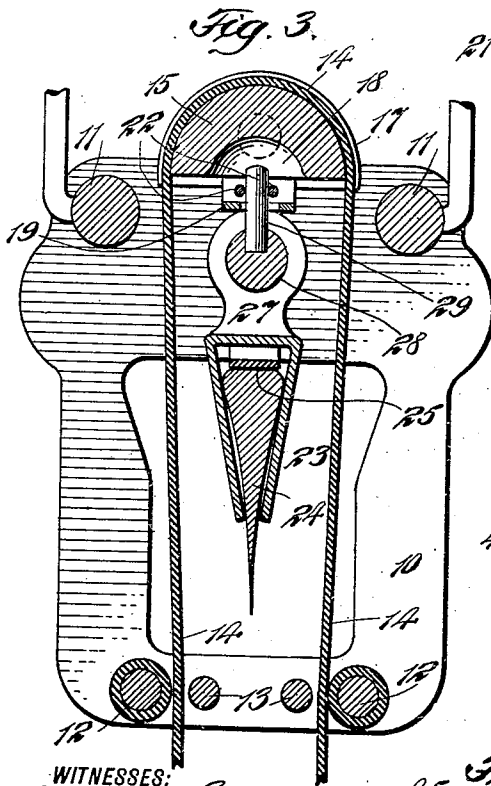
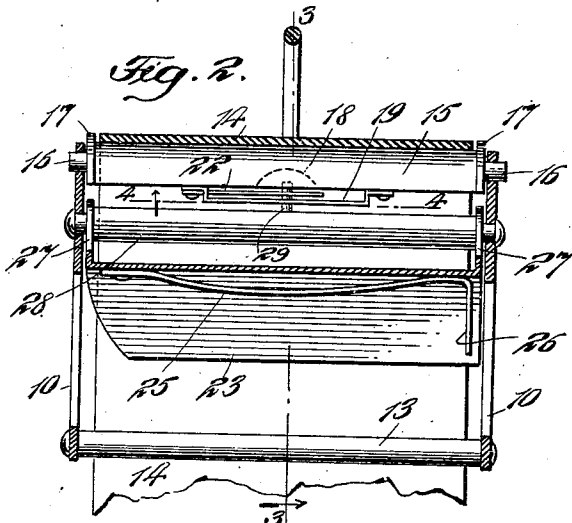
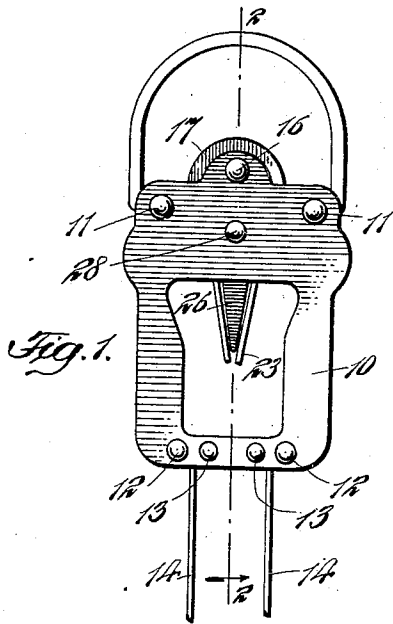


I. BUCHLER & W. WASSERSTROM.
RAZOR STROPPING MACHINE.

APPLICATION FILED JAN. 25, 1910.

955,578.

Patented Apr. 19, 1910.



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ISIDOR BUCHLER, OF NEW YORK, AND WILLIAM WASSERSTROM, OF BROOKLYN,
NEW YORK.

RAZOR-STROPPING MACHINE.

955,578.

Specification of Letters Patent.

Patented Apr. 19, 1910.

Application filed January 25, 1910. Serial No. 539,968.

To all whom it may concern:

Be it known that we, ISIDOR BUCHLER, a subject of Hungary, and resident of New York city, in the county and State of New York, and WILLIAM WASSERSTROM, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have jointly invented certain new and useful Improvements in Razor-Stropping Machines, of which the following is a specification.

The invention relates to improvements in razor stropping machines of the class comprising a frame through which a strop is threaded and is to be alternately pulled at its ends, and a blade-holder located between the reaches of the strop and adapted to alternately carry the blade thereto as said reaches are alternately pulled outwardly, the blade moving to one reach as it is pulled outwardly and to the other reach when it is pulled outwardly, and said invention consists in the novel features hereinafter described, and particularly pointed out in the claims.

One object of the invention is to provide novel mechanism for automatically and instantly moving the blade from the strop when the pulling strain is relieved therefrom and to automatically retain the blade-holder in a central initial position ready to receive or release a blade.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which:

Figure 1 is an end view of a razor stropping machine constructed in accordance with and embodying the invention, a portion of the razor strop being broken away; Fig. 2 is a central vertical longitudinal section of the same on the dotted line 2—2 of Fig. 1; Fig. 3 is an enlarged central vertical transverse section of the same on the dotted line 3—3 of Fig. 2; Fig. 4 is an enlarged bottom view, partly broken away and partly in section, of the upper pivoted strop-actuated bar, with the means carried thereby for transmitting motion to the blade-holder and also for restoring said holder to its central initial position; Fig. 5 is a detached view of the springs connected with the actuating bar shown in Fig. 4 for moving the blade-holder from the strop to its central position; Fig. 6 is a side elevation of a modified form

of stropping device employing a strop-actuated bar, a blade-holder operated therefrom, and special spring means for restoring the blade-holder to its central position; Fig. 7 is a sectional view of a portion of the same on the dotted line 7—7 of Fig. 6, and Fig. 8 is a sectional view of the same on the dotted line 8—8 of Fig. 6.

In the drawings, referring to Figs. 1 to 5 inclusive, 10 designates suitable end frames connected at their upper corners by tie-rods 11 and at their lower corner portions by rods 12 having tubular rollers thereon. At suitable points between the rods 12 the lower portions of the ends 10 are connected by rods 13, between which and the rods 12 the reaches of the strop 14 pass.

Centrally between the upper portions of the end-frames 10 is pivotally mounted a semi-cylindrical bar 15 over which the strop 14 passes and which is actuated to turn in one direction or the other on its pivots or trunnions 16 by the pressure of the strop against it when the reaches of said strop are alternately pulled, as in the operation of sharpening a blade. At its end portions the bar 15 is formed with vertical flanges 17 serving to guide the strop 14 and retain it in proper position on the bar 15. The bar 15 is preferably a casting formed integrally with the end flanges 17 and trunnions 16, and said bar is mounted between the end frames 10 so as to be capable of free rocking movement on said trunnions.

In the center of the lower side of the bar 15 is formed a recess or cavity 18, and extending longitudinally across and below said recess is a plate 19 having a central opening 20 and secured at its upwardly bent ends to the bar 15 by means of pins or rivets 21. Upon one pin 21 is secured the springs 22, which, in the present instance, are formed of a single rod of wire folded at its middle upon itself and at its middle portion being in the form of an eye through which passes the pin 21. The springs 22 extend longitudinally of and slightly below the bar 15 and above the opening 20 in the plate 19. The springs 22 are provided for returning the blade-holder 23 to or toward its central position shown in Figs. 1 and 2, and especially for moving the blade from a reach of the strop when the pulling strain on said reach is relieved.

The blade-holder 23 is of sheet metal and may be of any of the well-known forms affording opposite sides adapted to receive and hold between them a blade 24 requiring to be sharpened. The blade-holder 23 is, in the present instance, equipped with a spring 25 for yieldingly pressing the blade 24 into the narrower portion of the holder 23, and one end of the spring 25 is bent downwardly, as at 26, to form a stop for arresting the blade at a given point when said blade is pushed into the holder 23 from the open end thereof. The holder 23 is formed or provided with upwardly extending end ears 27 connected with the rod 28 which is pivotally mounted in the end-frames 10 so as to have a rocking or oscillatory motion. The rod 28 supports the holder 23 and is rigid therewith so that any movement imparted to the rod will be communicated to the holder. The rod 28 has at its upper side a finger 29, which projects upwardly through the opening 20 in the plate 19 and between the springs 22 and usually slightly into the cavity 18 formed in the bar 15, as shown in Fig. 3. The finger 29, plate 19 and springs 22 form a loose connection between the bar 15 and rod 28.

In the employment of the device hereinbefore described, the reaches of the strop 14 are alternately pulled, in a manner well known in this art, and as the strop slides under pressure over the bar 15 it turns the latter in the direction of the pull on the strop, said bar 15 turning in one direction when one reach of the strop is pulled and immediately turning in the opposite direction when the other reach of the strop is pulled. In this manner the bar 15 is caused to rock back and forth on its pivots or trunnions 16 and during its movements it imparts, through the springs 22 and plate 19, a simultaneous movement to the rod 28 and holder 23. When the bar 15 is turned downwardly and to the right, looking at Fig. 3, it will act through the finger 29 to turn the rod 28 and holder 23 upwardly and toward the right, and when the bar 15 is rocked toward the left it will turn the rod 28 and holder 23 toward the left, whereby the reach of the strop being pulled outwardly through the frame will be drawn against the edge of the razor blade 24 then held in position for that purpose. One of the main purposes of our invention is to provide for the efficient movement of the holder 23 and blade 24 toward the reach of a strop pulled outwardly and a like movement of the blade from said reach the moment said reach has concluded its movement and the other reach of the strop is to be pulled outwardly, so that the blade may not cut the strop, and this purpose is efficiently accomplished by

means of the plate 19, springs 22 and finger 29. When the stropping of a razor has ceased the springs 22 acting against the finger 29 restore the holder 23 to its central position and likewise return the bar 15 to its normal position. The tilting of the finger 29 places an additional tension on that member of the spring 22 against which it is turned and this added tension results in the spring being enabled to restore the holder 23 to its normal position when the bar 15 is relieved from the direct pressure of the strop 14.

The modified construction shown in Figs. 6, 7 and 8 accomplish the same movements of the blade-holder hereinbefore explained with reference to Figs. 1 to 5 inclusive. Referring to Figs. 6, 7 and 8, 40 denotes the general frame of the device, 41 the rocking bar over which the strop is pulled and corresponding with the bar 15 of Fig. 2, 42 the blade-holder, and 43 the rod from which the holder 42 is suspended and with which it is rigidly connected so as to have oscillatory motion when the rod 43 is turned angularly on its trunnions or pivots 44. Upon the lower side of the bar 41 we provide two spring members 45 held at one end and free to be flexed at their other ends, and a plate 46 having an opening 47 therein and formed with two downwardly bent ends 48, said plate 46 and springs 45 serving the purposes of the plate 19 and springs 22 of Fig. 4. Upon the upper side of the rod 43 is provided a D-shaped finger or bar 49, one end portion of which is between the end-members 48 of the plate 46 and the other end portion of which is recessed in its opposite sides, as indicated in Fig. 7, and between the springs 45. In the employment of the construction shown in Figs. 6, 7 and 8 the bar 41 is caused to rock under the action of the strop in the manner described with respect to the bar 15 in Figs. 1 to 4 inclusive, and when turning in one direction will through one of the end-members 48 and one of the springs 45 impart a reverse rotary movement through the bar 49 to the rod 43 and holder 42, and when the bar 41 is turned in the other direction it will through the other member 48 and spring 45, acting on the bar 49, turn the rod 43 and holder 42 to the opposite side of the frame 40. The plate 46 of Fig. 6 as does the plate 19 of Fig. 4, assure a positive movement of the blade-holder, while the springs 45 act correspondingly with the springs 22 of Fig. 4 and serve to quickly move the holder toward its initial central position the moment the pulling strain is relieved from a reach of the strop with which the blade is engaged, said springs instantly moving the razor blade from such reach so that when the other reach of the strop is pulled the blade may not cut the strop.

Considerable difficulty has been experienced in razor stropping devices of the class referred to in the blade cutting the strop, and the purpose of our invention is to provide simple and adequate means for assuring the movement of the blade from the strop the moment the strain is relieved from the latter. The plates 19, 46, positively move the blade-holder toward the reach of the strop pulled outwardly but the moment the pulling strain on said reach is relieved the wire spring acts quickly to move the blade from its engagement with said reach.

What we claim as our invention and desire to secure by Letters-Patent, is:

1. A stropping machine comprising a pivotally mounted bar, a strop folded over and adapted when pulled at either end to actuate the same, a pivotally mounted blade-holder having an outwardly projecting finger, means connected with said bar for engaging said finger and through it imparting positive movement to the blade-holder, and horizontally disposed springs extending along the lower side of said bar and straddling said finger; substantially as set forth.

2. A stropping machine comprising a pivotally mounted bar, a strop folded over and adapted when pulled at either end to actuate the same, a pivotally mounted blade-holder having an outwardly projecting finger, a plate secured to said bar and having an open part straddling said finger, and horizontally disposed springs extending along the lower side of said bar and straddling said finger; substantially as set forth.

3. A stropping machine comprising a pivotally mounted bar, a strop folded over and adapted when pulled at either end to actuate the same, a pivotally mounted blade-holder having an outwardly projecting finger, means connecting said bar with said blade-holder for oscillating said holder from said bar, and wire springs extending

along said bar and straddling said finger; substantially as set forth.

4. A stropping machine comprising a pivotally mounted bar, a strop folded over and adapted when pulled at either end to actuate the same, a pivotally mounted blade-holder having an outwardly projecting finger, means connected with said bar for engaging said finger and through it imparting positive movement to the blade-holder, and horizontally disposed springs extending along the lower side of said bar and straddling said finger, said springs being formed of a rod of wire doubled on itself and held at its folded end on a pin connected with said bar; substantially as set forth.

5. A stropping machine comprising a pivotally mounted bar, a strop folded over and adapted when pulled at either end to actuate the same, a pivotally mounted blade-holder having an outwardly projecting finger, a plate 19 secured to said bar and having an opening 20 therein receiving said finger, and springs 22 extending along said bar and straddling said finger; substantially as set forth.

6. A stropping machine comprising a pivotally mounted bar, a strop folded over and adapted when pulled at either end to actuate the same, a pivotally mounted blade-holder having an outwardly projecting finger, a plate 19 having upwardly bent ends secured to said bar and also having an opening 20 receiving said finger, and springs 22 secured at one end and extending between said bar and plate and straddling said finger; substantially as set forth.

Signed at New York city, in the county and State of New York, this 24th day of January, 1910.

ISIDOR BUCHLER.

WILLIAM WASSERSTROM.

Witnesses:

ARTHUR MARION,

CHAS. C. GILL.