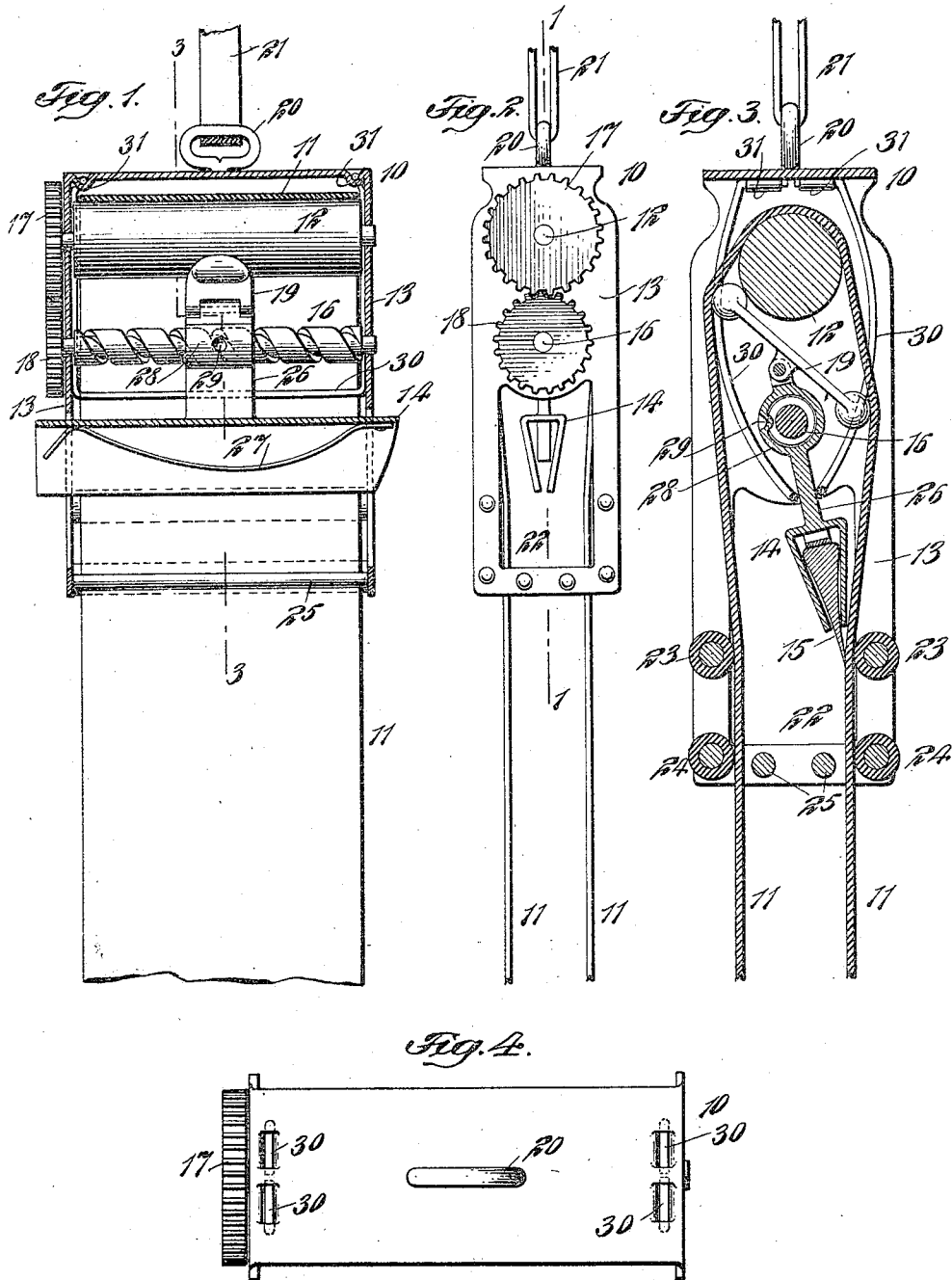


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 RAZOR STROPPING MACHINE.
 APPLICATION FILED MAY 31, 1911.

1,016,931.

Patented Feb. 13, 1912.



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UNITED STATES PATENT OFFICE.

ISIDOR BUCHLER, OF NEW YORK, N. Y.

RAZOR-STROPPING MACHINE.

1,016,931.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ISIDOR BUCHLER, a subject of Hungary, and a resident of New York city, in the county of New York and State of New York, have 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 in line with their length, 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.

The object of the invention is to provide an efficient stropping machine of the class referred to and more particularly a stropping machine possessing in addition to means for rocking the blade holder from one side to the other as the alternate reaches of the strop are pulled, novel mechanism for causing said holder to travel in line with its length while the blade is against the alternately outwardly moving reaches of the strop, thereby enabling the blade to receive substantially the same treatment as it would if stropped by hand.

The prime purpose of the invention is to provide a stropping machine of the character indicated which is durable, simple in construction, efficient in action and capable of manufacture at minimum expense.

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

Figure 1 is a substantially central vertical longitudinal section through a stropping machine embodying my invention, the strop being partly broken away and the section being on the dotted line 1—1 of Fig. 2; Fig. 2 is an end view of the same; Fig. 3 is an enlarged vertical transverse section of the same on the dotted line 3—3 of Fig. 1, and Fig. 4 is a top view of the same.

In the drawings, 10 designates the general frame of the machine, 11 the strop, 12 a rotary friction-roller journaled between the

sides 13 of said frame and over which the strop is folded, 14 a pivotally mounted blade-holder, 15 a blade shown as held by said holder, 16 a spirally grooved rotary shaft upon which the blade-holder is mounted and which is journaled between the sides of said frame parallel with and below said friction-roller, 17 a gear wheel on said friction roller and to be actuated thereby, 18 a gear wheel on said spirally grooved shaft to receive motion from said gear-wheel 17 and impart motion to said shaft, and 19 a centrally pivoted lever bar connected with the upper end of the blade-holder frame and extended transversely between the reaches of the strop and to be rocked thereby as the alternate reaches of the strop are pulled outwardly and thereby rock the said blade-holder frame.

The frame 10 has at its top an eye 20 to receive a loop 21, as usual, by which the machine may be suspended from or connected with a restraining hook or the like. The ends of the frame 10 are formed with openings 22 to permit the endwise travel of the blade-holder 14, and said frame 10 is provided with customary rollers 23, 24, 25 for guiding the reaches of the strop 11.

The friction-roller 12 is a plain smooth roller over which the strop 11 is folded and may rotate in either direction. The shaft 16 receives its rotary movement from the roller 12 through the gear wheels 17, 18 and its movement is always reverse to that of the roller 12. The shaft 16 performs two duties, one being to afford a pivotal support for the blade-holder 14, and the other being to cause said blade-holder to travel in line with its length during the rotary movements of said shaft, said blade-holder automatically traveling in one direction or the other according to the direction of rotation of said shaft.

The blade-holder 14 comprises a shank 26 carrying at its lower end a pair of converging jaws of known character to receive and hold a spring 27 and blade 15, as usual, and at its upper portion being formed with a sleeve 28 which snugly, though freely, encircles the shaft 16 and is provided with a stud or indentation 29 which enters and engages the spiral groove of said shaft and thereby enables said shaft to effect the endwise travel of the blade-holder and blade carried thereby. At its upper edge the sleeve 28 has an upwardly extending lug to which the lever-bar 19 is centrally pivoted.

The lever-bar 19 is a plain bar preferably having thickened and rounded outer ends and being of a length greater than the normal distance between the reaches of the strop 11 so as to somewhat bulge said reaches outwardly from each other at the points where they engage the ends of said bar. The bar 19 travels with the sleeve 28 and blade-holder 14 and its special function is, independently of any action of the shaft 16, to rock the said blade-holder to that reach of the strop being pulled outwardly and to maintain said holder in such position so long as said reach is moving outwardly and then to rock said holder to the other reach of the strop when it is pulled outwardly.

The blade-holder 14 is normally held in a central position between the reaches of the strop 11 by means of two oppositely disposed three-sided or stirrup-shaped springs 30, which are of wire and at their lower horizontal portions engage opposite sides of the shank 26 of the blade-holder and at their upper ends are held in loops 31 depressed from the top of the frame 10.

In the employment of the machine, the razor blade will be inserted endwise between the jaws of the holder 14, according to usual custom, and thereupon the reaches of the strop 11 will be alternately pulled to effect the stropping of the blade. A pull downwardly on the right hand reach of the strop 11, looking at Fig. 3, will cause the opposite reach of the strop to move upwardly and over the roller 12 and thereby rotate the same and through the gear wheels 17, 18 also rotate the spiral shaft 16, and at the same time the movement of the strop 11 will cause the pivoted bar 19 to take the position shown in Fig. 3 and rock the blade-holder 14 to carry and hold the blade 15 against said right hand reach of the strop, the pressure of the blade against said reach of the strop being governed by the force of the pull on said reach and therefore controllable by the operator. During the downward pull on the right-hand reach of the strop against the edge of the blade 15 and the rotation of the roller 12 and spiral shaft 16, said shaft acting against the stud 29 of the sleeve 28 will cause the blade-holder and blade to travel endwise, thereby enabling the strop to effectually act on the blade. When the pull on the right hand reach of the strop is released, the right hand spring 30 will instantly move the blade-holder to withdraw the blade from said reach, and thereupon when the left hand reach of the strop, looking at Fig. 3, is pulled downwardly, the roller 12 and shaft 16 will be given a reverse rotation thereby and the bar 19 will be, by the action of the strop, reversed in position or turned from its inclination downwardly toward the right

shown in Fig. 3 to a position in which it will incline downwardly toward the left, and in its said movement said bar 19 will cause the blade-holder to carry the blade to said left hand reach of the strop being pulled downwardly. During the reverse rotation of the roller 12 and shaft 16 while the left hand reach of the strop 11 is being pulled downwardly, said shaft causes the blade-holder to travel endwise in a reverse direction to that effected during the downward movement of the right hand reach of the strop. Thus as the alternate reaches of the strop are pulled, the bar 19 is turned to move the blade-holder to that reach of the strop moving outwardly and the shaft 16 is rotated to effect the endwise travel of said holder and the blade carried thereby, said holder being turned to one side and then the other and said blade holder being caused to travel in one direction and then the other as the reaches of the strop are alternately pulled outwardly.

I have shown and described in detail the best form of the invention known to me but I do not of course limit my invention to all of the details presented, since I am aware that such details may be modified in many respects without departing from my invention.

What I claim as my invention and desire to secure by Letters-Patent, is:

1. A razor stropping machine comprising a main frame, a spirally grooved shaft journaled at its ends in said frame and having on one end a gear wheel, a friction roller journaled at its ends in said frame and having on one end a gear wheel operatively connected with the gear wheel on said shaft, a blade holder pivotally mounted on said shaft and having a stud engaged in the spiral groove thereof to effect endwise travel of said holder during the rotation of said shaft, a strop folded over said roller, shaft and holder and guided in said frame, and means to be actuated by the strop for turning the blade-holder to the reach of the strop pulled outwardly; substantially as set forth.

2. A razor stropping machine comprising a main frame, a spirally grooved shaft journaled at its ends in said frame and having on one end a gear wheel, a friction roller journaled at its ends in said frame and having on one end a gear wheel operatively connected with the gear wheel on said shaft, a blade holder having a shank portion provided with a sleeve encompassing said shaft and having a stud engaged in the spiral groove thereof to effect endwise travel of said holder during the rotation of said shaft, a strop folded over said roller, shaft and holder and guided in said frame, and a transverse bar centrally pivoted at the upper side of said sleeve and somewhat greater

in length than the normal distance between the reaches of said strop to be actuated by the strop for turning the blade-holder to the reach of the strop pulled outwardly; substantially as set forth.

3. A razor stropping machine comprising a main frame, a spirally grooved rotary but otherwise stationary shaft journaled therein, a rotary but otherwise stationary friction roller journaled in said frame, an endwise movable pivotally mounted blade-holder having a part engaged in the spiral groove of said shaft to effect endwise movement of said holder during the rotation of said shaft, a strop folded over said roller, shaft and holder and guided in said frame, means connecting said roller and shaft for transmitting rotary motion from the roller to the shaft during the alternate outward movements of the reaches of the strop actuating said roller, and means for turning the blade holder to the reach of the strop moved in a direction to strop the blade; substantially as set forth.

4. A razor stropping machine comprising a main frame, a spirally grooved rotary but otherwise stationary shaft journaled there-

in, a rotary but otherwise stationary friction roller journaled in said frame, an endwise movable pivotally mounted blade-holder having a part engaged in the spiral groove of said shaft to effect endwise movement of said holder during the rotation of said shaft, a strop folded over said roller, shaft and holder and guided in said frame, means connecting said roller and shaft for transmitting rotary motion from the roller to the shaft during the alternate outward movements of the reaches of the strop actuating said roller, and a transverse centrally pivoted bar somewhat greater in length than the normal distance between the reaches of said strop to be actuated by the strop for turning the blade-holder to the reach of the strop moved in a direction to strop the blade; substantially as set forth.

Signed at New York city, in the county of New York and State of New York, this 27th day of May A. D. 1911.

ISIDOR BUCHLER.

Witnesses:

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CHAS. C. GILL.