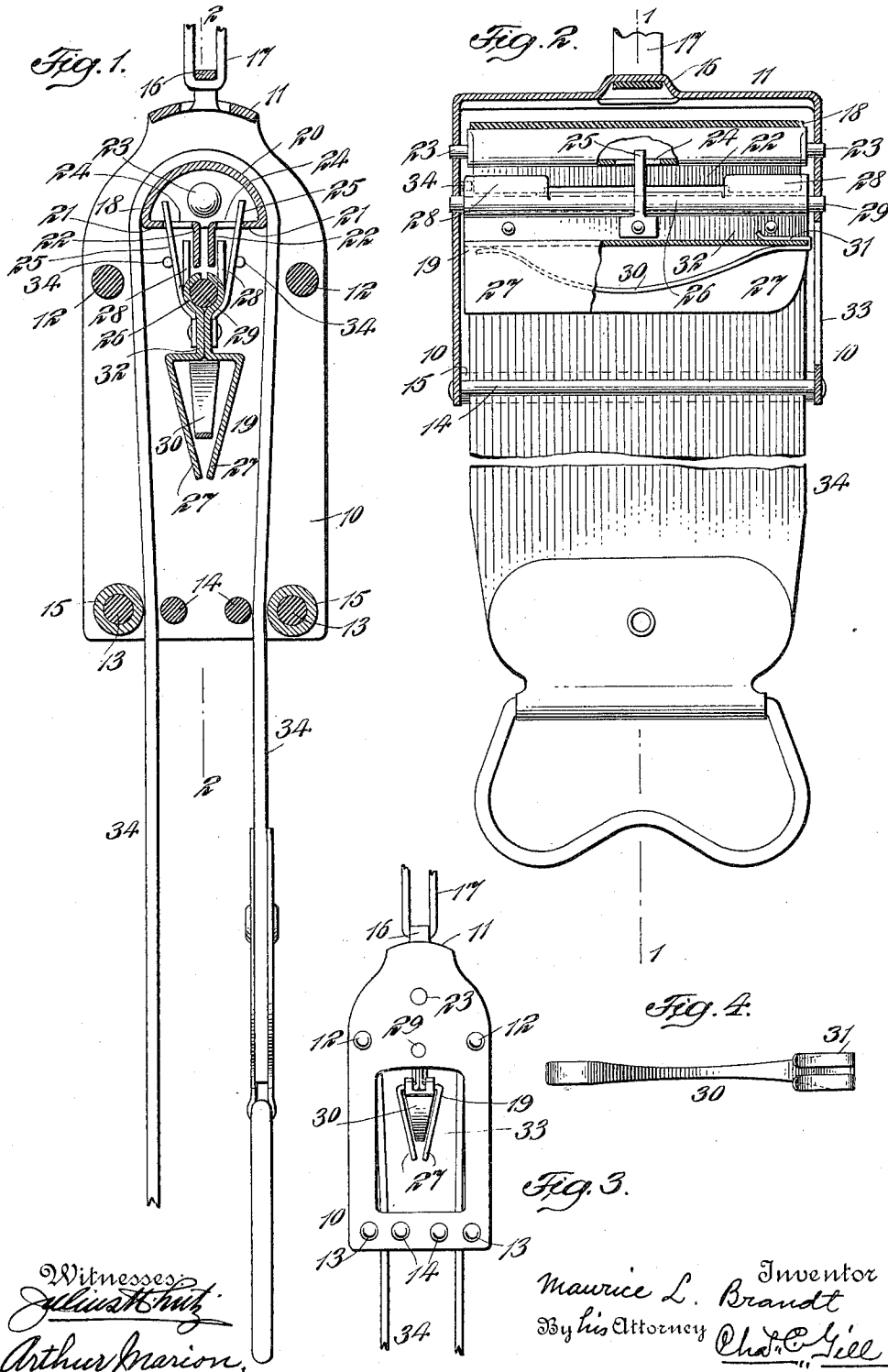


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 RAZOR STROPPING MACHINE.
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1,032,586.

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UNITED STATES PATENT OFFICE.

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RAZOR-STROPPING MACHINE.

1,032,586.

Specification of Letters Patent.

Patented July 16, 1912.

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To all whom it may concern:

Be it known that I, MAURICE L. BRANDT, a citizen of the United States, and a resident of Brooklyn, in the county of Kings 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 assaid 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.

One object of the invention is to provide novel mechanism for automatically 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.

A further object of the invention is to provide a razor stropping machine composed of but few parts and very durable.

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

Figure 1 is a vertical transverse section through 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 through the same, taken on the dotted line 2—2 of Fig. 1; Fig. 3 is a detached end view, on a reduced scale, of the same, the loop by which the machine is suspended and the strop used in the machine being partly broken away; and Fig. 4 is a detached top view, on the scale of Figs. 1 and 2, of the detachable cushioning and tension spring for the blade holder.

In the drawings I illustrate the main frame of the machine as comprising ends 10, and a top connecting bar 11 in one integral piece of sheet metal, said ends 10 being connected by rods 12, 13 and 14, and the rods 12 being suitably near the upper end of

said frame and the rods 13, 14 at the lower end thereof. Upon the rods 13 I provide rotary sleeves 15, as usual in this art. The upper transverse bar 11 of the frame has slit and stamped up from its central portion a loop 16 to receive a strap or the like 17 by which the stropping machine may be suspended from a hook or other support in a customary manner. The exterior frame of the machine comprising the ends 10, top bar 11, and loop 16 is in one integral piece.

Between the upper portions of the ends 10 is pivotally mounted a hollow rockable frame 18 and a blade holder 19, each being of sheet metal and said frame 18 having a convex or curved upper surface 20, a horizontal base portion 21 and depending central longitudinal flanges 22, the whole being formed out of sheet metal bent at its middle portion to form the convex surface 20 and having its end portions turned inwardly on horizontal lines to form the base portion 21 and then downwardly on parallel lines to form the flanges 22, as may be understood by reference to Fig. 1. The frame 18 is pivotally secured to the ends 10 of the main frame by rivets or pins 23 which extend through the ends of said frame 18 and also through suitable openings formed in the ends 10 of the main frame and operate as trunnions. The base-portion 21 of the frame 18 is formed in its central part, at opposite sides of the flanges 22, with vertical openings 24, which freely receive the upper portions of bar springs 25, which are secured at their lower ends to opposite sides of the blade holder frame 19, as shown more particularly in Fig. 1. The springs 25 are free of positive connection with the frame 18, but extend upwardly and outwardly on diverging lines and engage or press against said frame 18 at the outer edges of the openings 24 and serve to initially retain the holder 19 and frame 18 in their normal central position and relation and also to return said holder and frame to such position after the machine has been put into use and it is desired that said holder again come to a position of rest.

The blade holder 19 is preferably formed of two corresponding pieces of sheet metal riveted together and bent to form a tubular intermediate member 26, a lower blade-receiving member comprising corresponding downwardly converging jaws 27 and an upper member formed of upwardly extend-

ing separated parallel flanges 28 which extend upwardly along the outer faces of the flanges 22 and with reasonable freedom receive said flanges 22 between them. The tubular member 26 of the blade holding frame 19 is provided to inclose the shaft 29 extending between the ends 10 of the main frame and affording means for pivotally mounting the blade holder between said ends. The tubular member 26 closely encompasses the lower side of the shaft 29 from end to end of the main frame, but at its middle portion is formed by bending inwardly the upper central portions of the two plates comprising the blade holding frame 19, as shown in Fig. 2, leaving the end portions of the upper parts of said plates to project upwardly and form the flanges 28 at each end of the blade holding frame 19. The jaws 27 of the blade holding frame 19 are adapted to receive between them a razor-blade (not shown) either alone or when held within an auxiliary blade-holder in a manner customary in this art, and within the space formed between said jaws 27 I provide the bowed spring 30 adapted, as is customary, to hold a razor-blade applied between the jaws firmly with its cutting edge exposed below the same. A desirable feature of the spring 30 resides in the fact that it is detachable and formed at one end with a folded over portion 31 constituting a spring clip to engage the upper horizontal parts or the top of the jaws 27, said spring clip being bifurcated, as shown in Fig. 4, so that in applying it to position within the blade holder, said clip may straddle the narrow portion 32 of the blade holding frame and hold the body of the spring firmly within the space between the jaws 27, as may be understood by reference to Fig. 2. The end of the main frame of the machine is open, as at 33, in line with the end of the jaws 27 and spring 30, so as to expose the said jaws to receive and release the razor blade and also enable the withdrawal and re-insertion of the spring 30 or the withdrawal of a broken spring and the ready substitution therefor of a new spring 30.

The strop 34 is folded at its middle portion over the frame 18 and its reaches extend between the rollers 13, 14, as shown in Fig. 1. In the employment of the machine, a blade having been introduced between the jaws 27, the reaches of the strop are alternately pulled, in a manner well known in this art, and as the strop slides under pressure over the frame 18 it turns the latter in the direction of the pull on the strop, said frame 18 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 frame 18 is caused to rock back and forth on its pivots 23 and during this

movement it imparts through the springs 25 and flanges 22 a simultaneous movement to the blade holder frame 19, causing the latter to have a rocking movement between the reaches of the strop 34. When the frame 18 is turned downwardly and to the right, looking at Fig. 1, it will act through the left hand flange 22 to turn the blade holding frame 19 at its lower portion, toward the right, thereby causing the edge of the blade to be engaged by the reach of the strop then being pulled outwardly, and when the frame 18 is turned to the left by a pull on the left hand reach on the strop, it will act through the right hand flange 22 to reversely rock the blade holder 19 and cause it to carry the blade toward the left and against the left hand reach of the strop then being pulled outwardly. When the stropping of a razor has ceased the springs 25 acting against the frame 18 and returning to their normal position, shown in Fig. 1, restore the blade holding frame 19 to its central position and likewise return the frame 18 to its normal position, said springs 25 being under tension when out of their normal position. When the blade holding frame 19 is actuated from the frame 18 it is started in movement by one or the other of the springs 25 and finally acted upon by one of the flanges 22, which moving against one of the flanges 28 will firmly move the blade holding frame.

As may be seen on reference to Fig. 1, the flanges 22 are located between the flanges 28 of the blade holding frame, and when the frame 18 is rocked it will through the flanges 22 actuate the frame 19. When the frame 18 is rocked, the first portion of its movement is against one or the other of the springs 25, and this is followed up by the exertion of pressure through one of the flanges 22 against one of the flanges 28. The extent to which the blade holding frame 19 may be rocked is limited by means of two stop pins 34 provided at one end of the main frame of the machine and against which the adjacent flanges 28 of the blade holder may strike when said holder has reached the ends of its movements.

The springs 25 arranged as shown are important features of my invention, since they are not only of durable character but so disposed that one rivet secures both of them and that they are exposed so that they may be readily renewed without disassembling the entire machine. In addition the springs 25 being central and vertical and engaged with the frame 18 at their upper ends are sensitive and capable of performing their duties in an efficient manner. The lower ends of the springs 25 are riveted to the narrow portion 32 of the blade holding frame and the rivet securing them aids in securing the two parts of said frame together but since

said parts are secured together by additional rivets, as shown in Fig. 2, the removal and renewal of the springs 25 will not require the disassembling of the parts of the blade holding frame 19 or any disturbance of the frame 18.

The flanges 28 of the blade-holding frame 19 are normally slightly separated from the flanges 22 of the frame 18, as shown in Fig. 1, while at the same time the upper ends of the springs 25 are against the outer edges of the openings 24 in said frame 18, and hence on the movement of said frame 18 in one direction or the other one or the other of the springs 25 is first flexed to start the frame 19 in motion and on the conclusion of the movement of the frame 18 said flexed spring is in condition to at once reverse the movement of the frame 19 to instantly withdraw the razor-blade from that reach of the strop which inaugurated the movement of said frame 18. One of the essential features in razor stropping machines of the class to which my invention pertains, is to secure the instant release of the razor blade from the strop the moment the pull on the latter has relaxed, so as to avoid injuring the strop and the edge of the razor, and the attainment of this result is one of the objects accomplished by my invention. A further very desirable purpose, which my invention attains, is to so construct razor stropping machines that they may be durable and lasting but that if repairs should be necessary they may be confined to few parts, such as springs only, and made readily and at slight expense.

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

1. A stropping machine, comprising a pivotally mounted rockable frame (18) having a base part containing openings (24) at opposite sides of its center and at its longitudinal center having a downwardly extending member, a strop folded over and adapted when pulled at either end to actuate said frame, a pivotally mounted blade-holder having an upper member in operative engagement with the downwardly extending member of said rockable frame, and springs (25) secured to said blade-holder and extending upwardly into said openings of said rockable frame; substantially as set forth.

2. A stropping machine comprising a pivotally mounted rockable frame (18) of sheet metal bent to form a convex upper part, a base portion (21) containing openings (24) at opposite sides of its center and downwardly extending flanges (22) form-

ing a central downwardly extending longitudinal member, a strop folded over and adapted when pulled at either end to actuate said frame, a pivotally mounted blade-holder having an upper member in operative engagement with the downwardly extending member of said rockable frame, and springs (25) secured to said blade-holder and extending upwardly into said openings of said rockable frame; substantially as set forth.

3. A stropping machine comprising a pivotally mounted rockable frame (18) having a base-portion (21) containing openings (24) at opposite sides of its center and at its longitudinal center having a downwardly extending member, a strop folded over and adapted when pulled at either end to actuate said frame, a blade holder pivotally mounted on a shaft (29) and comprising a tubular part encompassing said shaft, an upper member in operative engagement with said downwardly extending member of the rockable frame and a downwardly extending blade-receiving member, and springs (25) secured to said blade holder below said shaft and extending upwardly into said openings of said rockable frame, said blade holder at its upper end having its middle portion conformed to said shaft to form said tubular part and its end portions extended upwardly to form said upper member; substantially as set forth.

4. A stropping machine comprising a pivotally mounted rockable frame (18) of sheet metal bent to form a convex upper part, a base portion (21) containing openings (24) at opposite sides of its center and downwardly extending flanges (22) forming a central downwardly extending longitudinal member, a strop folded over and adapted when pulled at either end to actuate said frame, a blade holder pivotally mounted, on a shaft (29) and comprising a tubular part encompassing said shaft, upwardly extending flanges (28) straddling said downwardly extending member of the rockable frame and a downwardly extending blade-receiving member, and springs (25) secured to said blade-holder and extending into said openings of said rockable frame; substantially as set forth.

Signed at New York city, in the county of New York and State of New York, this 11th day of January A. D. 1911.

MAURICE L. BRANDT.

Witnesses:

ARTHUR MARION,
CHAS. C. GILL.