

L. B. STAMM.
LASTING MACHINE.
APPLICATION FILED SEPT. 2, 1909.

954,355.

Patented Apr. 5, 1910.

2 SHEETS—SHEET 1.

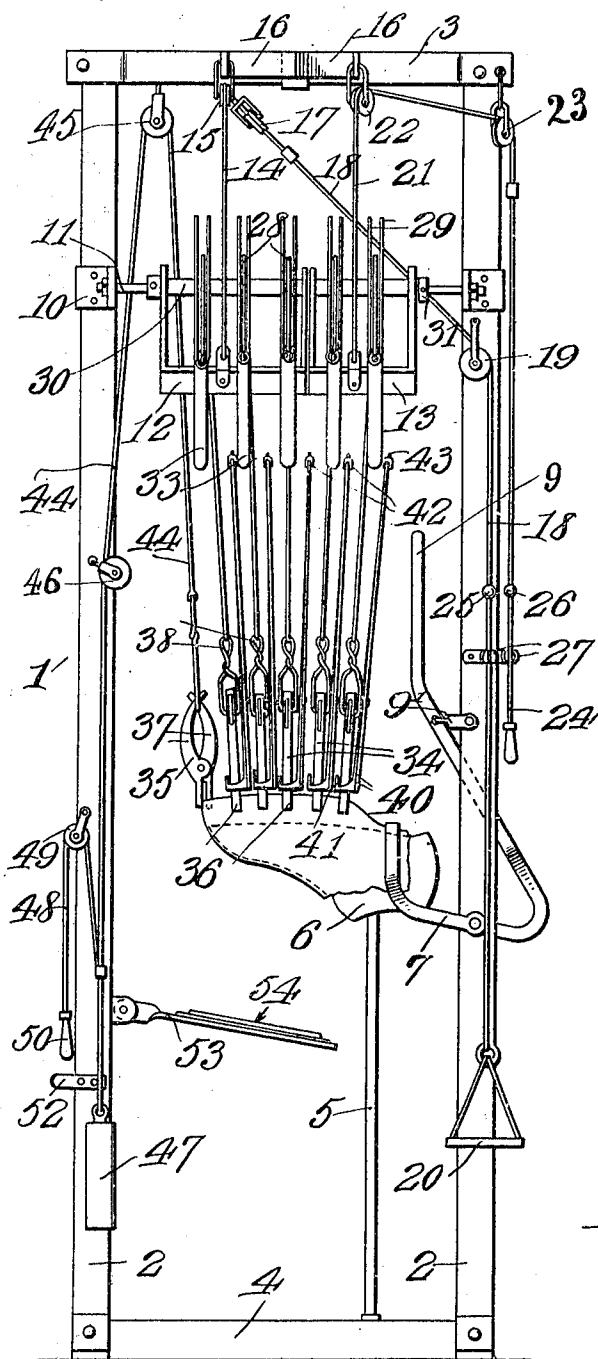


Fig. 1.

Witnesses
John C. Firmin
L. O. Kelton

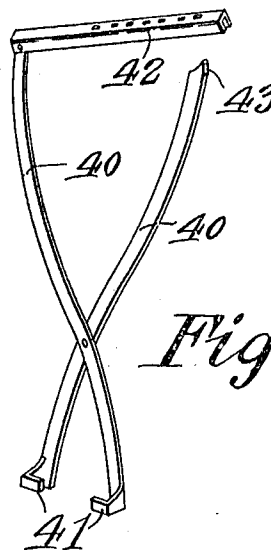


Fig. 5.

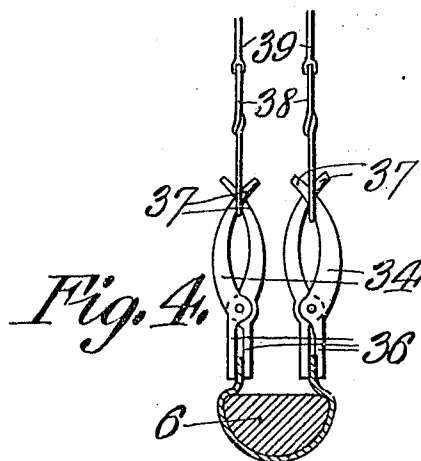


Fig. 4.

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2 SHEETS—SHEET 2.

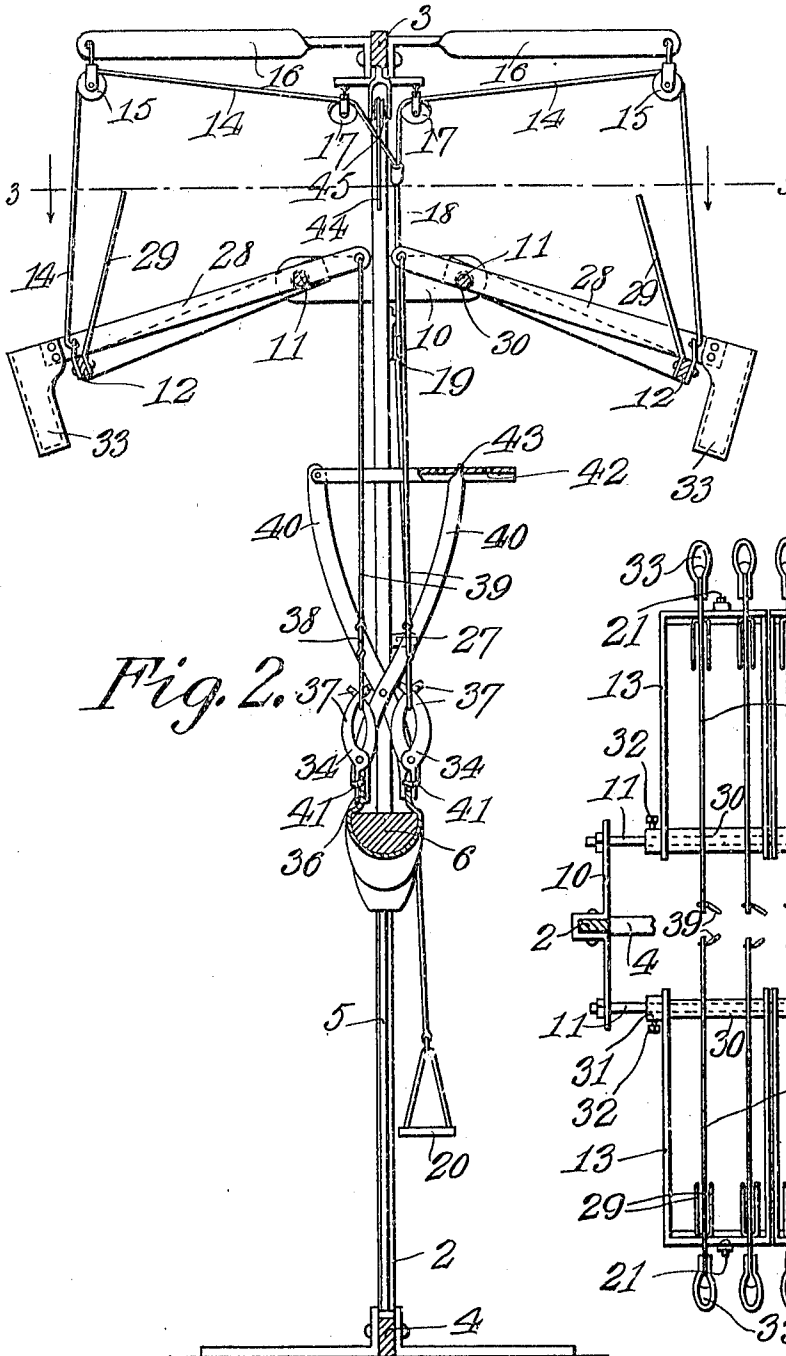


Fig. 2.

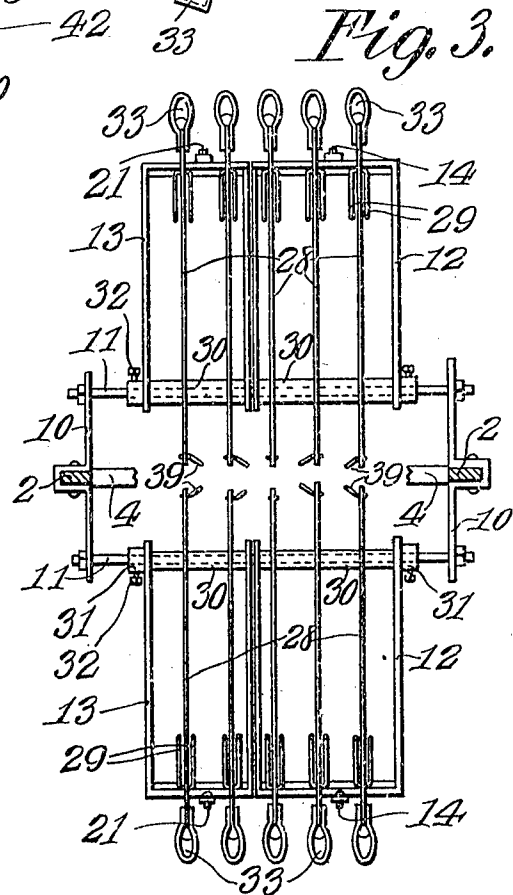


Fig. 3.

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UNITED STATES PATENT OFFICE.

LOUIS B. STAMM, OF ANTIOCH, CALIFORNIA.

LASTING-MACHINE.

954,355.

Specification of Letters Patent.

Patented Apr. 5, 1910.

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To all whom it may concern:

Be it known that I, LOUIS B. STAMM, a citizen of the United States, residing at Antioch, in the county of Contra Costa and State of California, have invented certain new and useful Improvements in Lasting-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in lasting machines.

The object of the invention is to provide a machine of this character by means of which the fitting and smoothing of the leather over the last may be accomplished more readily and effectually than by hand or by other machines of this character now in use.

With the foregoing and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a side view of a lasting machine embodying my improvements; Fig. 2, is a vertical cross-sectional view of the same; Fig. 3, is a horizontal section on the line 3-3, of Fig. 2. Fig. 4, is an enlarged vertical section of the last showing the manner in which the leather gripping devices are arranged and operated; Fig. 5, is a detail perspective view of one of the lever tongs for drawing the leather gripping pincers inwardly to stretch the leather over the last.

In the embodiment of the invention, I provide a supporting frame 1, comprising standards 2, connected at their upper ends by cross bars 3, and at their lower ends, the standards are secured to a suitable base 4. Also secured to the base 4, is a last supporting rod or standard 5, on the upper end of which is secured a last 6, over which the leather is to be stretched and fitted.

Pivotally secured to one of the standards 2, is a last holding lever 7, having a loop shaped lower end 8, which is adapted to be engaged with the heel portion of the last approximately in line with the standard 5, thereby aiding the standard in holding the last firmly and steadily in position, while the upper is being fitted thereon. The lever 7 is bent inwardly at an angle and thence

curved upwardly to form a handle portion 9, by means of which the looped end of the lever is brought into forcible engagement with the last. When the lever has thus been brought into operative engagement with the last, the lever is locked or firmly secured by means of a latch 9', which is pivotally mounted on one of the standards 2, adjacent to the lower portion of the lever, and is adapted to be swung downwardly or upwardly into or out of engagement with the lever, as clearly shown in Fig. 1 of the drawings.

Rigidly secured to the standards 2, adjacent to their upper ends, are right angular laterally projecting supporting arms or brackets 10, in the outer ends of which are arranged pivot bolts or rods 11, on each of which is pivotally mounted yoke-shaped supporting frames 12 and 13. The frames 12, project beyond each side of the machine and are adapted to support a series of operating devices hereinafter described. The frames 12, are supported at their outer ends by cables 14, which extend upwardly and pass through guide pulleys 15, which are arranged on one of the outer ends of forked pulley supporting brackets 16, secured to the upper cross bars 3, of the frame 1. After passing through the pulleys 15, the cables 14, extend inwardly toward the frame, and pass through guide pulleys 17, secured to the cross bars 3, as shown. After passing through the pulleys 17, the cables 14, are united and secured to a single operating cable 18, which is extended across the frame and passes downwardly through a guide pulley 19, secured to one of the standards 2. The cable 18, after passing through the pulley 19, extends to near the lower end of the frame and is attached to a foot piece or treadle 20, which is adapted to be engaged by the foot of the operator and when pressed down will cause the cables 18 and 19 to swing the outer portions of the frames 12 upwardly for a purpose hereinafter described. The frames 13, are supported at their outer ends by cables 21, which extend upwardly and are passed through pulleys 22, on the opposite forked end of the brackets 16, and from said brackets, the cables 21, are passed through guide pulleys 23, secured to the cross bar 3, adjacent to its connection with one of the standards 2. After passing through the pulleys 23, the ends of the cables 21 are united and are connected to the

upper end of a single operating cable 24, which extends downwardly in position to be grasped by the hand of the operator to raise and lower the outer ends of the frames 13.

5 The cables 18 and 24 are provided at suitable positions in their length with adjustable stops 25 and 26, which, when the cables are drawn downwardly to elevate the frames 12 and 13, are adapted to be engaged with a
10 suitable clip 27, secured to the standards, as shown. The clip 27 is preferably of double form, as shown, and is adapted to receive the cables which are engaged therewith above the stops 25 and 26 and when so engaged,
15 the stops will be caught by the clip and the cables thus secured in operative position to support the frames 12 and 13 in the manner described.

Pivotally mounted and detachably engaged with the pivot rods or bolts 11 are a series of operating levers 28, said levers being provided near their inner ends with notches which fit over the rods or bolts 11, thereby pivotally and detachably supporting the inner ends of the levers on said rods.
25 There are preferably five of the levers 28, arranged on each side of the frame 1, three levers on each side being arranged in the frames 12, and the other two levers on each side being arranged in the frames 13. When thus arranged, the outer ends of the levers are engaged with and supported by the frames 12 and 13, and by said frames are swung upwardly or downwardly to inoperative and operative positions. On the outer bars of the frames 12 and 13 are preferably arranged a series of upwardly projecting inclined guide rods 29, between each pair of which, the outer end of one of the levers is engaged, said rods holding the outer end of the lever in proper position. The inner ends of the levers are spaced apart and held in position on the rods or bolts 11, by suitable spacing sleeves 30, which are preferably in
45 the form of sections of hose pipe arranged on the rods or bolts 11, as shown. On the rods or bolts 11, adjacent to the outer side of each outer end lever, is arranged a stop collar 31, said collars being secured in adjusted position on the shaft by a set screw 32. The collars 31, together with the sleeves 30, hold the inner portions of the levers in operative position on the rods or bolts 11. Secured to the outer ends of the levers 28, are
55 weight holding pockets 33, in which are adapted to be placed weights whereby pressure is applied to the levers 28, to operate the same when disengaged from the supporting frames 12 and 13. By providing a
60 greater or less number of weights in the pockets 33, the pressure of the levers may be regulated.

Adapted to be engaged with the edges of the leather to draw the leather over the last, is a series of side pincers 34, and a toe pincer

35. The side pincers 34 are adapted to grip the edges of the leather along the sides of the sole and said pincers comprise gripping jaws 36, having pivotally connected handles 37, the outer ends of which are curved inwardly and cross each other, as clearly shown in Fig. 4, of the drawings. With the crossed ends of the handles are engaged jaw operating links 38, which are secured to the lower ends of operating rods 39, the upper
70 ends of which are secured to the inner ends of the levers 28, as shown, whereby when said levers are actuated by the weights in the pockets 33, the jaws of the pincers will be drawn in to tight engagement with the
80 edges of the leather.

In order to draw the edges of the leather inwardly over the last, after the pincers 34, have been engaged therewith, I provide a series of lever tongs 40, the lower ends or
85 jaws of which are provided with pincer engaging hooks 41, which are adapted to be engaged with the lower portions of the opposite pairs of pincers, whereby when the upper ends or handles of the lever tongs
90 are brought together, the pincers will be drawn inwardly, thus stretching the leather over the last. In order to hold the lever tongs in operative engagement with the pincers, I provide the same with suitable
95 rack bars 42, one end of which is pivotally secured to the upper end of one of the lever tong handles while the other handle is provided with a pawl or rack engaging finger 43, which is adapted to be engaged with
100 the notches or teeth of the rack, thereby securing the handles of the lever tongs and holding the jaws of the same in operative engagement with the opposite pairs of pincers, which in turn hold the edges of the
105 leather until the latter is tacked to the insole.

The toe pincer 35, is provided in addition to the side pincers 34, to draw the leather over the toe of the last. The toe pincer is constructed in the same manner as the side
110 pincers, but is provided with a separate and independent operating mechanism comprising a cable 44, which is secured to the handle engaging link 38, of the pincers and extends upwardly to the top of the frame 1,
115 and passes through a guide pulley 45, secured to the cross bar 3, of the frame and from thence, said cable extends downwardly and passes over a guide pulley 46, on one of the standards 2, and has connected to its
120 lower end a pincer operating weight 47. Connected to the cable 44, adjacent to its lower end is a releasing cable 48, which passes around a guide pulley 49, and is provided with handle 50, which also forms a
125 stop. When it is desired to release the toe pincer 35, the branch cable 48, is pulled downwardly over the pulley 49 and the pressure of the weight thus taken off from the cable 44. When the branch cable is
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thus drawn downwardly, the handle 50 is engaged with a clip 52, secured to the adjacent standard 2, thereby forming a stop and supporting the weight 47, the pressure of which is thus removed from the cable 44, and the pincers 35, thus released.

Arranged on one of the supporting standards 2, of the frame 1, is a mirror supporting bracket 53, on the outer end of which is arranged a mirror 54, in which the lower side of the last and the leather over the same is reflected, thus enabling the operator to ascertain whether the leather is in proper position on the last.

In the operation of the device, the leather is placed over the last and the side and toe pincers engaged with the edges of the leather, after which the lever supporting frames 12 and 13 are lowered to permit the weighted levers 28 to draw upwardly on the pincers, thereby drawing the leather over the last. The branch cable 48, is also released at this time to allow the weight 47, to operate the toe pincers through the cable 44, thus drawing the leather around the toe of the last. With the parts in this position, the lever tongs are operated in the manner described to draw the side pincers inwardly, thus stretching the leather around the last and holding the edges in position until tacked. After the edges of the leather have been secured, the lever tongs are released from the pincers and the frames 12 and 13 are swung upwardly by their operating cables, thus raising the weighted outer ends of the levers 28 and swinging the inner ends of said levers downwardly, thus releasing the pincers and permitting the same to be disengaged from the leather.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention, as defined in the appended claims.

Having thus described my invention, what I claim is:

1. In a lasting machine for boots and shoes, a last support, a series of leather gripping devices adapted to draw the leather over said last, a series of pivotally mounted operating levers, means to connect the inner ends of said levers with said gripping devices, weight receiving pockets secured to the outer ends of said levers, lever supporting frames to hold the weighted ends of said levers in inoperative positions, means to raise and lower said supporting frames, and means to hold said levers in position

frame, a series of leather gripping devices, a series of operating levers pivotally mounted in said frame, means to operatively connect the inner ends of said levers with said leather gripping devices, weight receiving pockets secured to the outer ends of said levers to receive lever operating weights, whereby said levers are operated, means to support and hold said levers in an inoperative position, a series of lever tongs adapted to be engaged with said gripping devices to draw the same inwardly and thereby stretch the leather around the last.

3. In a lasting machine, a main supporting frame, pivot rods arranged in said frame, a series of operating levers pivotally and detachably engaged with said rods, weight receiving pockets arranged on the outer ends of said levers, operating cables connected to said frames whereby the latter are raised and lowered, means to secure said cables in an operative position to support said frames in an elevated position, thereby holding said levers in an inoperative position, a series of spacing sleeves and stop collars arranged on said rods, to hold said levers in spaced relation thereon, a series of side leather gripping devices operatively connected to the inner ends of said levers, a toe leather gripping device adapted to be operated independently of said side leather gripping devices whereby the leather is drawn over the last, and means to draw said side leather gripping devices inwardly to stretch the leather around the last.

4. In a lasting machine, a main supporting frame, supporting brackets secured to said frame, pivot rods arranged in the opposite ends of said brackets and extending across the opposite sides of the frame, a series of operating levers pivotally and detachably secured to said rods, means to secure said levers in position on the rods, independently operated lever supporting frames pivotally mounted on said rods and adapted to hold and support said levers in inoperative positions, raising and lowering cables connected to said frames, guide pulleys to receive and direct the movement of said cables, adjustable stops arranged on said cables, holding clips adapted to be engaged by the stops of the cables to hold said frames in an elevated position, a series of leather gripping devices, means to operatively connect said devices with the inner ends of said levers whereby said devices are operated to draw the leather over the sides of the last, and means whereby the leather is drawn over the toe of the last.

5. In a lasting machine for boots and shoes, a series of side leather gripping pincers, means to operate said pincers, to hold the leather in position on the last, a series of lever tongs, said tongs having hook shaped pincer engaging jaws adapted to be

2. In a lasting machine, a supporting

operatively engaged with the pincers, gripping the edges of the leather whereby said pincers are drawn inwardly to stretch the leather around the last, toe leather gripping
5 pincer adapted to draw the leather around the toe of the last, and means whereby said toe leather pincer is operated independently of said side leather pincers.

In testimony whereof I have hereunto set my hand in presence of two subscribing 10 witnesses.

LOUIS B. STAMM.

Witnesses:

DON E. HAWLEY,

MARCUS WESLEY DUNNIGAN.