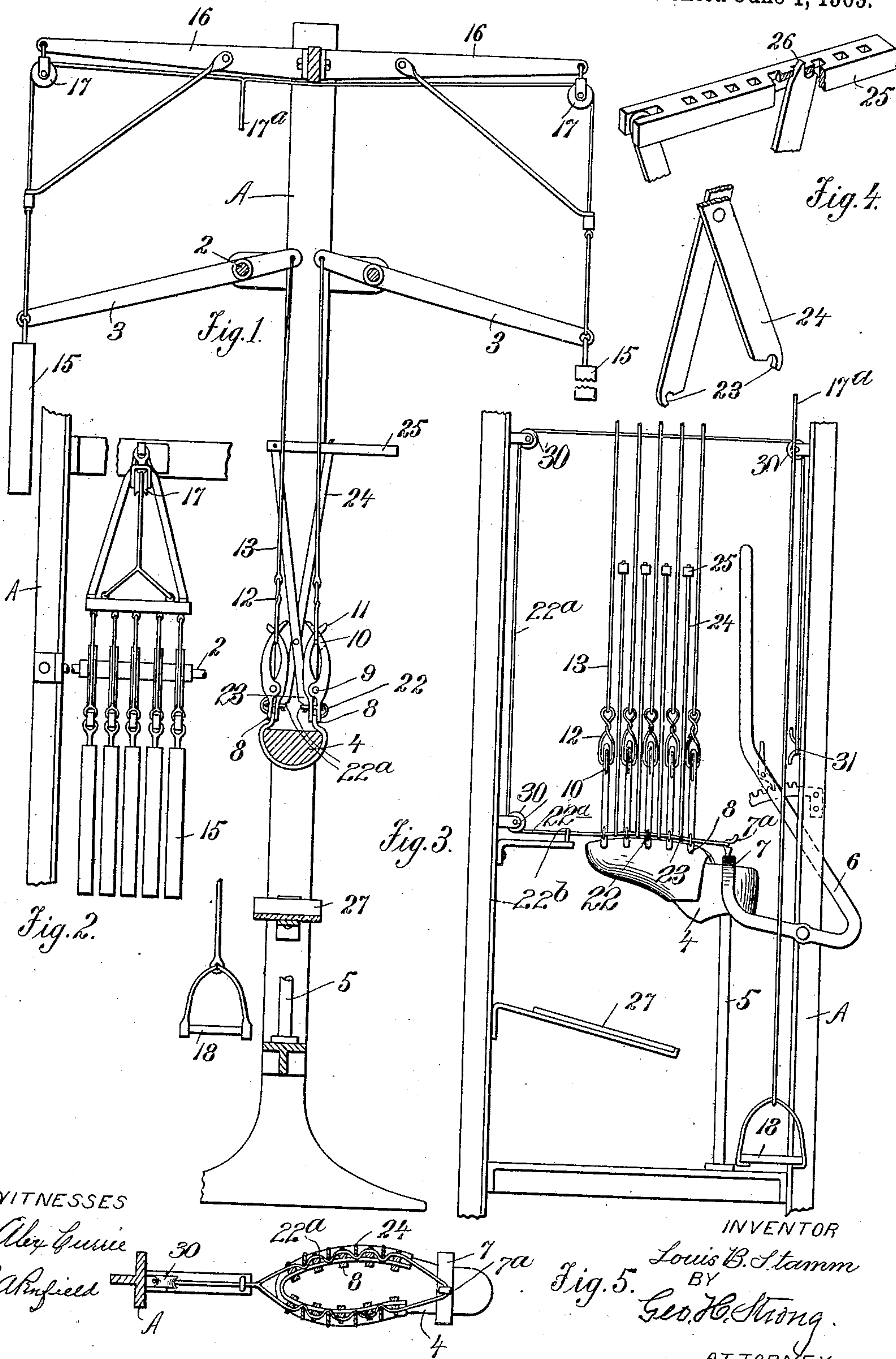


L. B. STAMM.
 BOOT AND SHOE LASTING MACHINE.
 APPLICATION FILED MAR. 10, 1908.

923,452.

Patented June 1, 1909.



WITNESSES

Alex. Guise
 Wm. Field

INVENTOR

Louis B. Stamm

BY

Geo. H. Strong

ATTORNEY

UNITED STATES PATENT OFFICE.

LOUIS B. STAMM, OF ANTIOCH, CALIFORNIA.

BOOT AND SHOE LASTING MACHINE.

No. 923,452.

Specification of Letters Patent.

Patented June 1, 1909.

Application filed March 10, 1908. Serial No. 420,125.

To all whom it may concern:

Be it known that I, LOUIS B. STAMM, citizen of the United States, residing at Antioch, in the county of Contra Costa and State of California, have invented new and useful Improvements in Boot and Shoe Lasting Machines, of which the following is a specification.

My invention relates to a machine for lasting boots and shoes.

It consists in the combination of clips adapted to engage and pull the upper leather smoothly over a properly supported last, and means by which said devices are actuated.

It also includes details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a transverse sectional view of the invention. Fig. 2 is a front view of the upper part. Fig. 3 is a similar view of the lower part. Fig. 4 is a perspective view of the device for drawing the leather inwardly; and Fig. 5 is a horizontal sectional view taken just above the last.

I have in the drawing shown a frame A upon which the various parts of the apparatus are supported. This frame may be of any suitable or desired construction.

2 is a shaft or bearing bar supported transversely across the upper part of the frame, and upon this part are fulcrumed levers 3, the use of which will be described hereafter.

The last 4 is supported by a rod or standard 5 which passes through the hole in the rear portion of the last.

6 is a lever fulcrumed upon the frame and having a loop 7 which is adapted to pass over the heel of the last so that by moving the lever in the proper direction, this loop is moved into contact with the last, and in conjunction with the standard 5, holds the last steady.

The leather of which the upper is to be formed, having been properly shaped, is fitted over the forward part of the last as shown. The edges of the leather are then inserted in gripping jaws 8, these jaws being fulcrumed together as at 9. The upper end or handle portion of one of the jaws is slotted as shown at 10, and the other handle passes through the slot as shown at 11.

12 is a loop of suitable wire or other material which passes through the space between the curved handles, and engages with their

point of crossing, as plainly shown in Fig. 1, and a pull upwardly upon this wire or loop tends to separate the handles and correspondingly close the gripping portion 8 upon the edges of the leather. There may be as many of these gripping jaws as desired, as four or more upon each side.

From the loops 12, rods or cords 13 extend upwardly and connect with the shorter arms of the levers 3; the connections with the grips upon one side extending to the short arms of one set of levers, and the connections from the grips which hold the other side of the levers extending to the short arms of the other levers. In the present illustration, these levers are shown with the long arms projecting outwardly from the fulcrum points upon opposite sides of the machine, and they carry weights 15 which are sufficiently heavy to apply the necessary power, and pull upon the leather to draw it over the last; and the operation of smoothing and fitting is thus materially assisted; the pull upon the leather being constant, any modification in the shape of the leather in the process of lasting, will be constantly maintained.

16 are fixed arms or levers supported from the cross bar in the upper part of the frame, and these serve for the attachment of pulleys 17. Ropes pass over these pulleys and connect with the outer ends of the lever arms 3. The ropes lead together and join in a common rope 17^a, passing through suitable guides or leaders, and extends down to a point where it is within easy reach of the operator. If it is desired at any time to relieve the tension upon the lever, by pulling upon this rope, the outer ends of the levers and the weights may be lifted, thus relaxing the pull. The free end of this rope may be conveniently held in position by a weight as at 18. To further assist in stretching that portion of the leather between the points where the gripping jaws take hold of it, I have shown each of the jaws provided with flat loops 22, and a strap or cord 22^a, removably secured to hook 7^a on lever 6 is passed through these loops around the outside of the gripping jaws. This cord is then led through a contracting or guide member 22^b secured to the frame and passes over direction changing pulleys 30, and may be secured to a cleat 31, or otherwise. This flexible strap or cord is then engaged by the hook-shaped ends 23 of lever arms 24 which

are fulcrumed together as shown, and by closing the upper ends of these arms toward each other, the ends 23 of the levers will compress the straps from each side toward the center, above the last, and will thus draw the leather inwardly in addition to the upward pull which is effected by the jaws 8. The levers 24 are held in position to produce any desired tension by means of a rack bar 25 which may be pivoted to one of the levers 24, and the end of the other lever may have a hook or spur end as at 26 adapted to engage the teeth of the rack bar, thus holding the levers when any desired tension upon the leather has been attained.

A device thus constructed is capable of applying a steady and sufficient pull and tension upon all parts of the upper leather, leaving the hands of the operator free to manipulate it and bring it into the proper shape over the last.

The insoles being placed upon the sole of the last do not need to be secured to the last as the operation of the machine holds the insoles firmly in place, and when the upper has been properly shaped and turned over it can be tacked on and the last removed and another placed.

I have here shown for convenience a mirror 27 suspended below the last so that by looking into it, the operator can see the surface of the upper where it fits over that portion of the last which in the present structure is presented downwardly.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. In a lasting machine of the character described, the combination of jaws adapted to grip the edges of the leather upon each side, weighted levers with which the jaws are connected to exercise a constant pull, loops upon the jaws and a strap passing through the loops around the outside of the jaws, and compression levers by which the strap is forced inwardly between the jaws,

and a transverse tension upon the leather is effected.

2. In a lasting apparatus, a last-supporting standard, a lever having a metal loop at one end adapted to fit over the heel of the last and act in conjunction with the standard to lock it in place, jaws adapted to grip the edges of the leather and stretch it across and over the last and weighted levers with intermediate connections between said levers and the jaw.

3. In an apparatus of the character described, a supported last over which the leather is adapted to be fitted, jaws adapted to grip the edges of the leather, said jaws having crossed lever arms, a loop engaging the crossing of said arms and slidable thereon to close the jaws, fulcrumed weighted levers and connections between the said levers and the loops, guided straps passing around the exterior of the jaws and fulcrumed levers having short arms engaging the straps to close them inwardly and draw the leather across the sole of the last, and a locking device for holding said levers.

4. In a lasting machine of the character described, a frame, means for securing a last with relation to the frame, leather stretching devices consisting of jaws adapted to grip the edges of the leather, means for closing said jaws with a pressure in proportion to the tension, said means consisting of loops movable with relation to the inner ends of the levers, weighted fulcrumed levers and connections between said levers and the loops, and guided flexible cords connecting with the outer ends of the levers whereby said ends and weights may be raised to relieve the pull upon the leather.

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

LOUIS B. STAMM.

Witnesses:

FRED DAHNKEN,
F. STAMM.