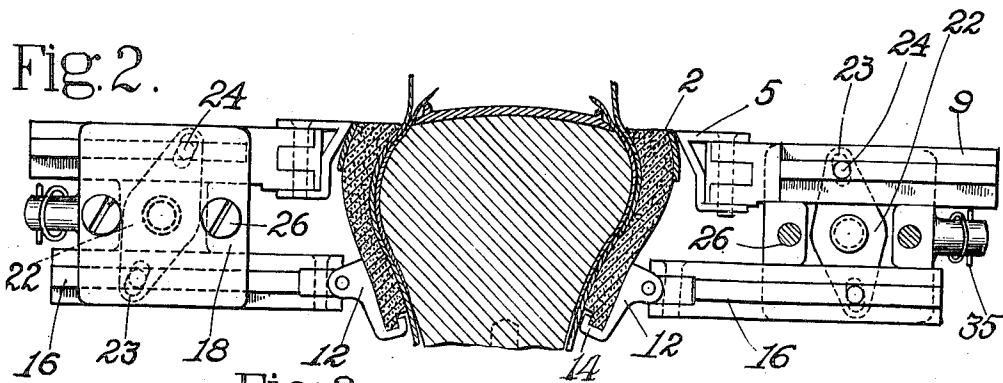
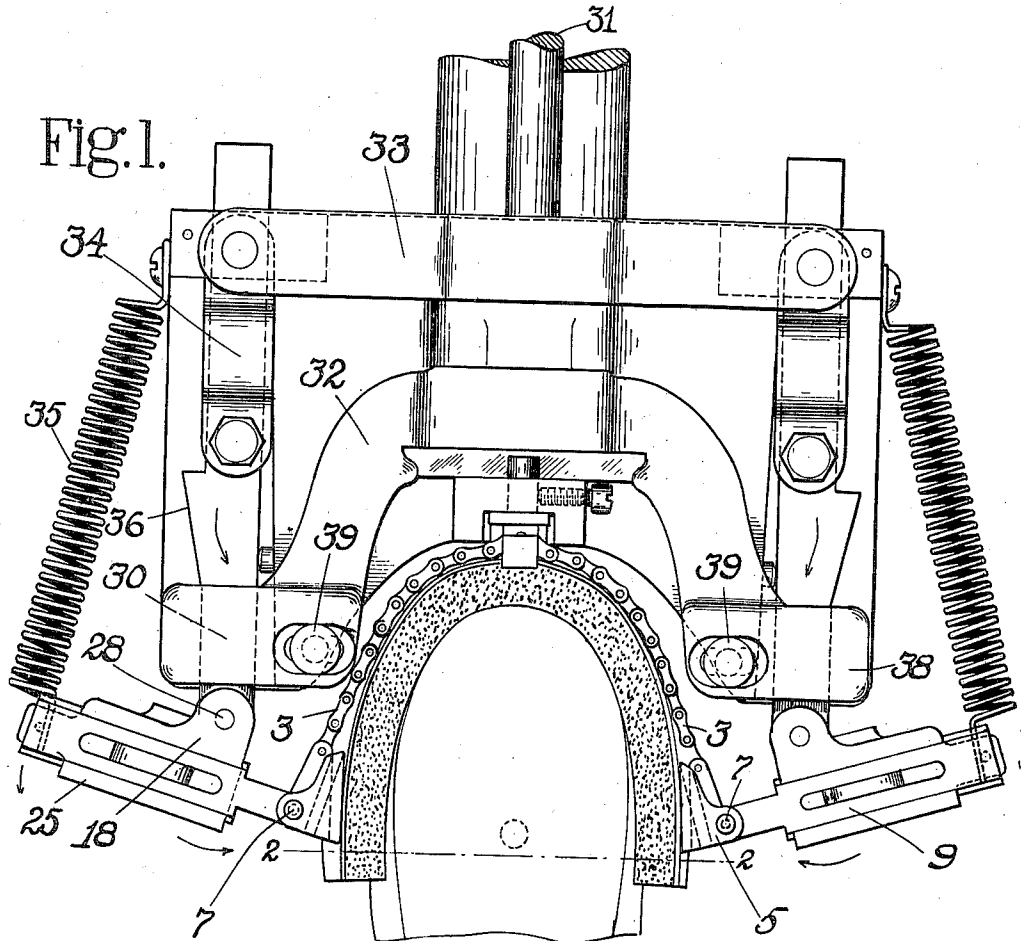


A. A. MACLEOD.
LASTING MECHANISM.
APPLICATION FILED NOV. 8, 1911.

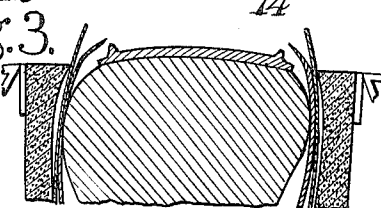
1,030,519.

Patented June 25, 1912.



WITNESSES

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UNITED STATES PATENT OFFICE.

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LASTING MECHANISM.

1,030,519.

Specification of Letters Patent.

Patented June 25, 1912.

Application filed November 8, 1911. Serial No. 659,181.

To all whom it may concern:

Be it known that I, ALBERT A. MACLEOD, a citizen of the United States, residing at Swampscott, in the county of Essex and State of Massachusetts, have invented certain Improvements in Lasting Mechanisms, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to lasting machinery of the "bed" type and is herein shown as embodied in the heel lasting mechanism of United States Letters Patent No. 1,002,818, granted September 12, 1911 on application of Matthias Brock.

The object of this invention is to secure more effective lasting, or conformation of the shoe stock to the contour of the last, of the sides of the shoe end and particularly of the heel end. The conformation of the shoe stock to the sides of the heel portion of the last is effected in the bed type of machine largely by the heel band.

By prior inventions the heel band has been actuated to clamp the upper materials snugly about the last at its upper edge to cooperate with the wipers or lasting plates that go over the shoe bottom to form the upper correctly at the edge of the shoe. As heretofore used these bands do not, however, adequately clamp the upper materials to the last below the edge of the shoe and along the upper edge of the heel stiffener. This portion of the stiffener, and the upper leather outside it, has therefore not been conformed closely to the last but has in many instances stood away from the last more or less and the completed shoe has not only been lacking in the shape or outline that its designer and the last maker intended it to have but it has failed to clasp or hug the heel portion of the wearer's foot as it should do and, if an "Oxford" shoe or a "pump," it has often slipped up and down on the heel in an objectionable way.

A feature of this invention is found in the provision of end band actuating mechanism which will cause a band to embrace the end portion of a shoe snugly at a distance removed from the edge of the shoe as, for example, which will cause a heel band to clamp the upper and stiffener against the

sides of the heel along the upper edge of the stiffener.

Another feature of this invention consists in the combination with end band closing mechanism, of additional means to force hard against the sides of the last the edge of the band which is remote from the sole face of the shoe.

A further feature of the invention consists in the combination with known band closing mechanism of devices arranged to be actuated therefrom and to force the lower edge of the band to clamp the underlying portions of the upper and heel stiffener to the sides of the heel portion of the last.

Advantageously, and as herein shown, the new clamping devices are connected by equalizers with the closing mechanism so that said devices and mechanism may adapt themselves automatically to different contours of last sides.

These and other features of the invention, including certain details of construction and combinations of parts will be hereinafter described and pointed out in the claims.

Figure 1 is a plan view, partially broken away, of the heel head of a lasting machine of the type referred to; Fig. 2 is a vertical section on the line 2—2 of Fig. 1 looking rearwardly after the band has been closed; and showing the cover plate removed on the right of said figure. Fig. 3 is a contrasting view before the band is closed.

The heel lasting mechanism in general and the known band closing mechanism in particular may be like that shown in said Brock patent where the heel band 2 is embraced by a chain 3 which is connected by end pieces 5 to chain arms 9 by pivot pins 7. The chain arms 9 are carried in blocks or levers 18 that are pivoted at 28 to slide bars 30, and have their outward extensions engaged by contractile springs 35 which tend to pull the band forwardly about pivots 28. The bars 30 are connected by links 34 to the cross head 33 of a plunger 31 from which power is applied to carry the chain arms bodily forward and, when the shoe resists further movement in that direction, to force the blocks 18 to turn about pivots 28 in the direction to press the band ends inwardly. This inward movement of the band ends is supplemented by wedge faces 36 on the slide bars 30 which, in the

forward movement of said bars, engage abutments 38 and wedge the band ends toward the shoe sides. The abutments 38 are formed on an equalizing yoke 32 which can slide transversely of the machine by slots and pins 39 to provide the same pressure on each side of differently shaped lasts.

With the aforesaid closing mechanism I have combined devices for clamping the lower edge of the band to the sides of the heel and for this purpose each block 18 is formed with a guideway in which the chain arm 9 can slide endwise. The block is also provided with a lower guideway in which a new arm 16, pivotally connected by a head piece 12 to the lower edge of the band, is also mounted to slide endwise. The block is recessed to receive the lever 22 which is fulcrumed to it and has in the ends of its upper and lower arms slots 23 by which it has engagement with studs 24 on the bars 9 and 16 for actuating both said bars. By reason of its fulcrum connection with the block 18 the lever actuates the two bars in proportion to the length of its arms and furthermore permits relative adjusting or self-adapting movements of the arms 9 and 16 for lasts of different shapes. The head piece 12 has a hook 14 by which it engages under the band and in a recess in the inner face of the band so that it can move the band edge outwardly as well as inwardly. A cover plate 25, secured by screws 26, confines the arms 9 and 16 and the equalizer lever 22 within the block 18.

In the use of the heel lasting mechanism equipped with the invention the band closing mechanism operates as described in said patent with this addition, that the band closing pressure is transmitted by the block 18 through the lever 22 and arm 16 to the lower portion of the band as well as to its upper edge portion and the lever acts as an equalizer to close the lower portion of the band about the narrow part of the heel and there to apply clamping pressure equally to both lower and upper portions of the band ends.

Having explained the invention and described how it may be used, I claim as new and desire to secure by Letters Patent of the United States:

1. An end lasting mechanism having, in combination, an end embracing band, closing mechanism having engagement with the end portions of the band near its upper edge, and additional closing devices having engagement with the end portions of the band near its lower edge.

2. An end lasting mechanism having, in

combination, an end embracing band, closing mechanism having engagement with the end portions of the band near its upper edge, and separate devices connected with said mechanism and with the end portions of the band near its lower edge to cause said band to clamp the heel stiffener to the last at its edge remote from the last bottom.

3. An end lasting mechanism having, in combination, an end embracing band, closing mechanism having engagement with the end portions of the band near its upper edge, a separate point of engagement with the band near its lower edge, and an equalizer through which force is applied to conform the band widthwise to the contour of the side of the last and clamp the shoe by both edges of the band.

4. An end lasting mechanism having, in combination, an end embracing band, closing mechanism having engagement with the end portions of the band near its upper edge, and comprising a chain arm connected with the upper edge of the band; a second arm connected with the lower edge of the band, a block in which the arms are guided to slide endwise, and an equalizer connecting said arms to each other and to the block.

5. An end lasting mechanism having, in combination, an end embracing band, closing devices connected with the upper and with the lower parts of the band ends, an actuator for said devices, and an equalizer connecting said devices together and to the actuator for the purpose described.

6. A heel lasting mechanism comprising a heel embracing band and closing mechanism therefor connected with the upper part of the band ends, in combination with means for applying band closing pressure to the lower parts of the band ends.

7. A heel lasting mechanism having, in combination, an end embracing band, a closing device arranged to press against the upper part of the band end, and a second closing device formed to hook under the lower edge of the band and up into the band for affording support and outward actuation to the band end, and means for applying closing pressure to the band end through both of said devices.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT A. MACLEOD.

Witnesses:

ARTHUR L. RUSSELL,
HEREBERT W. KENWAY.