

1,053,674.

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END LASTING MECHANISM.
APPLICATION FILED MAY 29, 1911.

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Patented Feb. 18, 1913.

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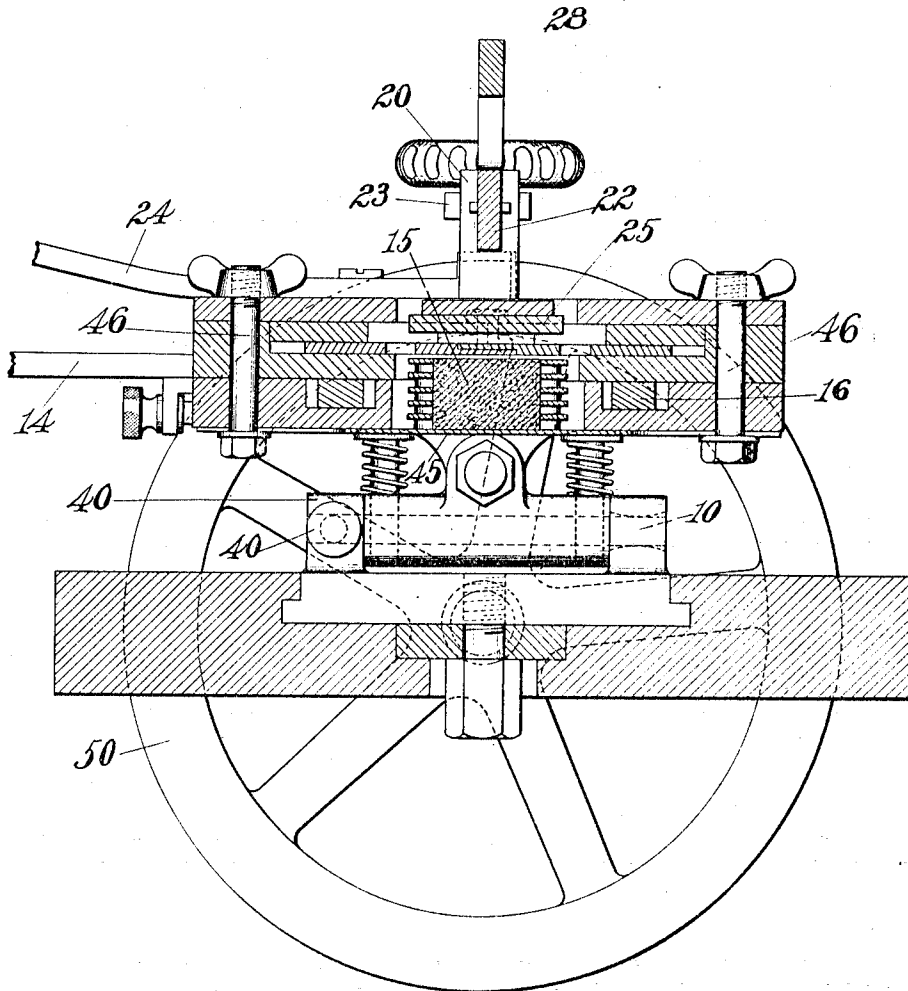


Fig. 2.

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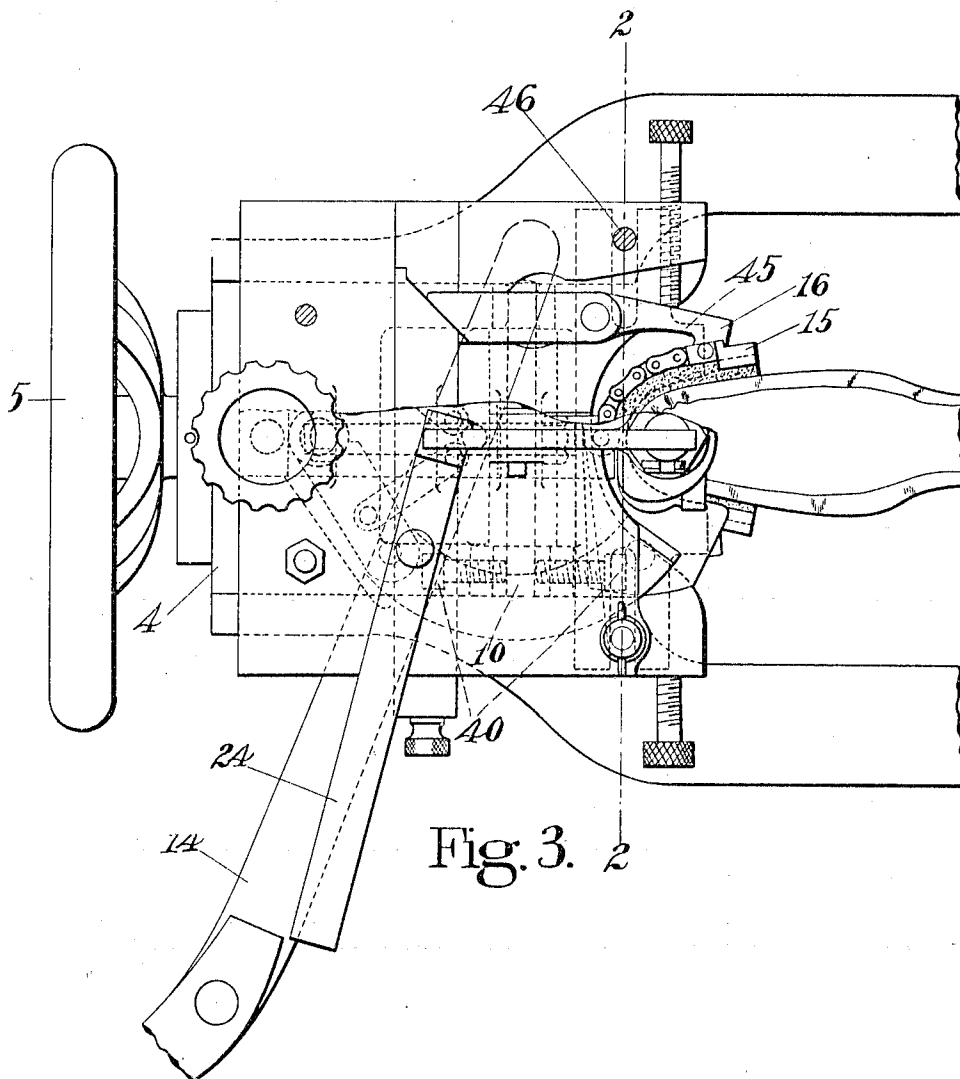


Fig. 3.

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UNITED STATES PATENT OFFICE.

BENJAMIN F. STUBER, OF GARDINER, MAINE, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

END-LASTING MECHANISM.

1,053,674.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed May 29, 1911. Serial No. 630,106.

To all whom it may concern:

Be it known that I, BENJAMIN F. STUBER, a citizen of the United States, residing at Gardiner, in the county of Kennebec and State of Maine, have invented certain Improvements in End-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 machines and is herein shown as embodied for the purpose of exemplification in end lasting mechanism of the type used in the well known "Chase" lasting machine and shown in United States Letters Patent No. 571,429, granted on November 17, 1896, on application of Frank Chase.

Objects of the invention are to improve the toe lasting mechanism for obtaining better fitting thereof to the toes of right or left crooked lasts and to improve the operation and increase the durability of the toe lasting pad or toe embracing band.

A feature of the invention consists in novel provision for adjustment of the toe lasting mechanism for right and left crooked lasts.

When the toe and the heel of a crooked last are supported respectively on the toe rest and the heel rest of the machine it is found that the median line of the forepart, and to a less degree of the heel part also, diverges from the median line of the machine in, or symmetrically with relation to, which the toe lasting wipers advance and close to overlay the upper upon the shoe insole. In the manufacture of welt shoes this is important because it renders difficult, if not impossible, uniform lasting up to the channel lip of the insole on the two sides of the toe. To overcome this difficulty, I have mounted the toe lasting mechanism, including the wipers and their operating means, and preferably also the toe pad or band, for lateral angular adjustment about a pivot that is located at one side of the median line of the machine. This pivot location is also preferably in front of the shoe. As a result of this location a small adjustment is sufficient to bring the median line of the toe lasting mechanism toward one side or the other of the machine into

alignment with the median line of the fore- 55
part of the right or left last that is to be operated upon.

A further feature of this invention consists in novel provision for holding the toe pad or band in position to cooperate with 60
the toe wipers in forming a square or well defined edge line at the edge of the shoe bottom.

In machines of this type the last and the toe lasting means are relatively moved vertically with the lasting means in rubbing 65
engagement with the upper on the side faces of the toe to shape the upper progressively toward the edge over which the wipers lay it. In this operation, which in this machine is effected by depressing the last, the 70
downward rubbing of the upper leather on the toe pad tends to cause the pad to sag, particularly at the corners of the toe between the points of connection of its operating means with it. When the pad or any 75
portion of it sags down it fails to reach up to the edge of the shoe and fit snugly against the wipers as it should do and a portion of the edge of the shoe is not shaped by it. 80
The shoes then come from the machine with a more or less rounded and irregularly shaped edge instead of the well defined angular edge that it is desirable to produce, particularly on welt shoes the toes of 85
which cannot be pounded up and blocked as are the toes of McKay shoes. In the embodiment of this feature of the invention herein shown a pad supporting plate having a U-shaped recess is provided which 90
furnishes an underlying substantially uninterrupted pad support engaging the pad throughout the length of the portion of the pad which is liable to sag. The recess in this plate may be large enough to provide 95
for some spread of the pad for larger sizes of shoes and the plate may be supported for ready removal and replacement for such variations in shape and size of shoes as require the usual changes in the wipers. Preferably the plate is supported for adjustment laterally to accommodate right and 100
left toes, as for example by pin and slot connections and is also supported so that it can be made to press pads of different depths 105
firmly up against the lower face of the wipers.

The invention will more fully appear in

connection with the following description of the illustrated machine and will then be pointed out in the claims.

Figure 1 is a side elevation partially in section through the toe of the last, the pad and the wipers; Fig. 2 is a section on line 2--2 of Figs. 1 and 3; Fig. 3 is a plan view.

The frame of the machine furnishes support for the shoe sustaining means, including the toe rest 2 and a heel post, not shown, and for the toe lasting head 4 which as a whole is adjustable lengthwise of the machine by the hand wheel 5 connected by a screw to the frame and the head. The head 4 supports a carriage 6 that can be tipped adjustably by the screw 8, the lower end of which rests unattached upon the head, about a transverse pivot bolt 10 that connects the carriage 6 to the head 4. This adjustment adapts the plane of the wipers 12 to the spring or lengthwise curvature or inclination of the last bottom as is well understood. A hand lever 14 and connections serve to advance and close the wipers over the shoe bottom. The pad 15, including a chain and a non-abrasive lining is supported at its ends by the guide bars 16, Fig. 2, and at its middle by the bar 17, Fig. 1. The carriage sustains a bracket 20 in which is pivoted and slides the last depressor and retarder bar 22. This bar is caused by a cam lever 24 to fulcrum about the pin 23 that connects it to the bracket and thereby to clamp the retarder 25 down upon the upper which has been outspread upon the top of the wipers as in Fig. 1. A hollow post on the end of the bar 22 carries a last depressor stem 26 and a handled eccentric 28 by which the stem and the attached depressor foot 30 are actuated to force the last downwardly into the upper which is held between the vertically stationary wipers and the retarder. When the last has been depressed until the feather of the insole is below the wipers the wipers are advanced to overlay the upper. During this depression of the last the upper about the toe is embraced by the pad 15 and shaped by it to the contour of the side faces of the last, there being more or less rubbing action as the shoe is depressed relatively to the pad.

The machine as thus far described may be substantially as in the commercial type of this machine except as to the last depressor foot which embodies an invention that is claimed in a co-pending application.

The end of the transverse pivot rod 10 which is at the back side of the machine, farthest from the usual position of the operator, stands in a recess in the head 4 the walls of which recess are rounded out to permit some play and the end of this pivot rod which is the nearer to the operator is located between the tips of opposed screws 40 which are adjustable in the head 4 and

by which the front end of the rod can be shifted forwardly or backwardly. The rod extends without lost motion through a bearing in the carrier 6 and by the described adjustment the carriage is shifted angularly about a center which is at or near the rear end of the rod 10. This location, it will be seen from Fig. 3, is in front of the toe of the shoe and at one side of the shoe. By reason of this location a slight adjustment of the rod 10 is sufficient to shift the toe lasting carriage for positioning its median line in the median line of the forepart of a right or left crooked last. It is to be noted that by the described adjustment not only are the wipers shifted but their actuating mechanism as well so that when they are advanced they move symmetrically with relation to the median line of the forepart of the shoe for which the adjustment has been made. It is also to be noted that the toe pad is adjusted by the described arrangement about a center located as above mentioned.

Immediately below the toe pad 15, as shown in Figs. 1 and 2, is located the pad supporting plate 45 the contour of which in plan is shown by dotted lines in Fig. 3. From this latter figure it will be seen that the plate has a U-shaped opening in its front edge corresponding in general outline to the shape of the toe portion of the shoe. The plate underlies the chain, and it may be a portion of the pad lining, throughout substantially the entire length of the pad. The plate is supported by rods 46 the headed lower ends of which extend through outwardly opening slots in end extensions of the plate. The rods extend through a portion of the head 6 and their upper ends are threaded and receive nuts by which the plate 45 may be either clamped in endwise adjusted position or may be supported with enough freedom to permit it to move transversely of the machine for adapting its position to the work. The plate serves to prevent the pad from sagging and to maintain its upper edge in contact or substantially in contact with the lower face of the wipers so that when the wipers are closed the inner faces of the pad and the lower faces of the wipers form an angle in which the edge of the shoe is shaped.

The use of the invention has been sufficiently pointed out in the foregoing description.

Having explained the nature of this invention, I claim as new and desire to secure by Letters Patent of the United States:—

1. A lasting machine having, in combination, toe lasting mechanism including toe lasting wipers and actuating mechanism therefor, and means for effecting lateral adjustment of the toe lasting head about a center located at one side of the median line of the machine.

2. A lasting machine having, in combination, toe lasting mechanism including wipers and actuating devices therefor, and a support upon which said lasting mechanism is mounted for adjustment laterally about a vertical axis located in front of the shoe and at one side of the median line of the machine.

3. A lasting machine having, in combination, a lasting head 4, a carriage 6 mounted thereon and supporting toe lasting devices, a transverse pivot rod 10 about which the carriage is adjustable for the spring of the last, and means for adjusting one end of the pivot rod forwardly and backwardly to align the median line of the lasting mechanism with the median line of the forepart of a right or left crooked last.

4. A lasting machine having, in combination, a toe embracing pad, a support for the pad, and means permitting adjustment of the pad support about a vertical axis located in front of the shoe and at one side of the median line of the machine.

5. A lasting machine having, in combination, an end embracing pad and a plate underlying the pad and forming a substantially continuous support therefor to prevent it from sagging, and vertically adjustable

means for sustaining the plate substantially as described.

6. A lasting machine having, in combination, end lasting wipers, an end embracing pad and means affording substantially uninterrupted support for the lower edge of the pad and adjustable vertically to maintain the upper edge of the pad in operative relation to the lower face of the wipers for forming the edge of the shoe around the end of the last.

7. A lasting machine having, in combination, toe lasting wipers, the toe embracing pad 15, the guide bars 16, 17 therefor, and the plate 45 having a U-shaped opening the edge of which is located under the pad, and means connected with the ends of the plate for vertically upholding it and maintaining the upper edge of the pad parallel with the lower face of the wipers, substantially as and for the purpose described.

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

BENJAMIN F. STUBER.

Witnesses:

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