(No Model.)

E. E. WORCESTER.

LASTING MACHINE.

No. 560,767. Patented May 26, 1896.

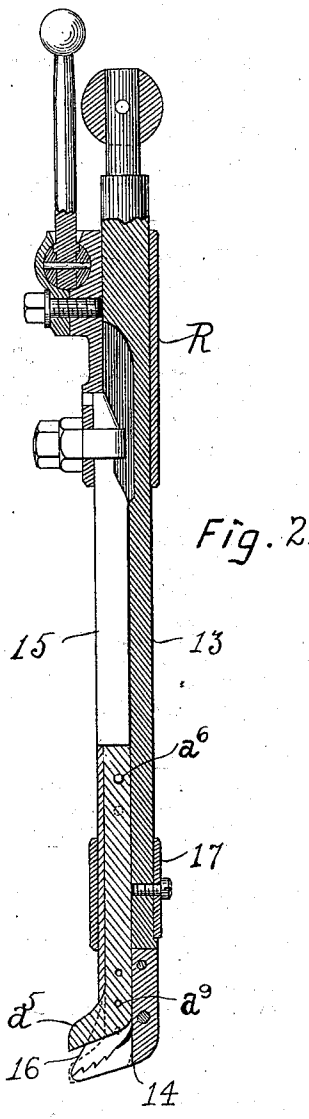


Fig. 2.

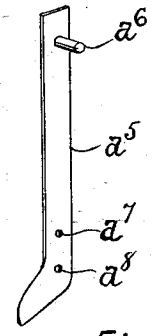
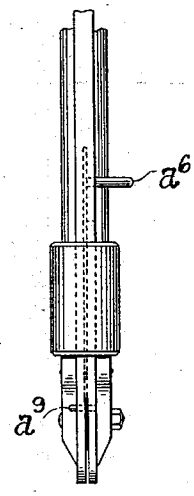


Fig. 1.

Fig. 3.



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UNITED STATES PATENT OFFICE.

EDGAR E. WORCESTER, OF EAST BRIDGEWATER, MASSACHUSETTS, ASSIGNOR TO THE CONSOLIDATED HAND METHOD LASTING MACHINE COMPANY, OF NASHUA, NEW HAMPSHIRE.

LASTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 560,767, dated May 26, 1896.

Application filed February 15, 1894. Serial No. 500,237. (No model.)

To all whom it may concern:

Be it known that I, EDGAR E. WORCESTER, a citizen of the United States, residing at East Bridgewater, in the Commonwealth of Massachusetts, have invented certain Improvements in Lasting-Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to mechanism for lasting boots and shoes, and particularly to that class of lasting-machines by the operation of which the boot or shoe upper is turned over the last progressively, different parts of the upper being acted upon at different times. This my invention is represented and will be described in the present instance as adapted for use in connection with the lasting-machine described originally in Letters Patent of the United States No. 423,922 and further modified as described in Letters Patent of the United States No. 374,554. In the present instance only so much of the machine is represented as is required to illustrate this my invention and its coöperation with said machine. The machine, it will be understood, comprises a pincers or gripping mechanism and actuating devices therefor, whereby in the operation of lasting the pincers are made to seize, stretch, and draw the upper over the last. A single pair of gripping devices is employed, and it will be understood that a section only of the upper is being acted upon by the lasting devices at one time and that to complete the lasting process the shoe is moved to bring such portions of the upper to the machine successively as the lasting process may require. In order that the shoe may be easily supported in position while the upper is being stretched over the last, a rest is provided, against which the last, having the inner sole thereupon, is pressed upwardly, and an edge-guide is also employed, against which the shoe is pressed laterally. Said rest and guide are in position so that when the shoe is held thereagainst the upper will be in position for the pincers to come forward and grip the edge thereof to turn, stretch, and otherwise manipulate it over the last. The last being held in the hands of the workman, or otherwise suitably supported, permits free movements for presenting different parts of the shoe-upper to the grippers at different times, conformable to the will of the operator. In lasting certain kinds of work, particularly if the material is thick, hard, or otherwise difficult to manipulate, it is found to be desirable to cut or slit the marginal edge of the upper, particularly at the toe or other places where the upper is forced to crowd or contract, to the end that the slitted parts may be lapped one above the other. It is to provide mechanism whereby this cutting or slitting of the upper is performed during the lasting operation that constitutes one object of this my present invention. Said invention further relates to means whereby the cutter mechanism is shiftable for discontinuing its cutting operations where cutting of the upper is to be omitted or begun where cutting of the upper is to be introduced.

Referring to the drawings, Figure 1 is a perspective view representing the cutter-knife detached. Fig. 2 is a sectional elevation showing the cutter-knife in combination with the gripper or pincers mechanism. Fig. 3 is a sectional front elevation of the cutter and gripper or pincers devices.

For a detailed description of the pincers mechanism reference is had to Letters Patent above referred to. Said mechanism comprises the pincers-shanks 13 15, which in the present instance are held in sliding contact with each other by collars 17 R. The gripper-jaw 14 is secured to the shank 13, and the gripper-jaw 16 is secured to the shank 15, said jaws being opened and closed by the shank 15 by reciprocating the shank 15 longitudinally. Said shank 15 is recessed to receive the cutter a^5, as shown in Fig. 2. Said cutter is provided with a handle a^6, that, projecting through a suitable slot in the shank 15, serves as a means for the operator to grasp in order to shift the cutter from a position of work relation to a position of disuse. It is further provided with holes a^7 a^8 to receive the pin a^9. Said pin a^9, being supported in the pincers-shank 15 and projecting through the cutter-blade, operates to secure the cutter-blade in position. The relation of parts is such that while the pin a^9 remains in the hole a^7 of the cutter said cut-

ter projects its cutter edge below the gripping-face of the gripper-jaw 16, so that when the gripper-jaws are forced together for gripping the upper interposed therebetween the cutter is first brought to contact with the upper, and as the grippers close together said cutter is forced to pass through the upper, its cutting edge being finally projected into a recess suitably formed in the cutter-jaw 14. While the cutter-blade is thus relatively positioned the upper is slitted by each successive operation of the gripper devices; but it is found desirable to operate the gripper devices at times without cutting the upper, especially at the side portions, and occasionally at other parts of the boot or shoe. To this end the operator removes the pin a^9 from hole a^7 of the cutter and lifts the cutter by means of handle a^6 to its uppermost position and causes the pin a^9 to enter hole a^8 of said cutter, in which position the cutter is supported with its cutting edge above the gripping-face of the gripper-jaw 16, Fig. 2, so that the gripper-jaws may be opened and closed for gripping the upper where cutting of the same is to be omitted.

For a description in detail of the machine as a whole, as also for a description of the pincers mechanism and the devices for reciprocating the pincers members to open and close the gripper-jaws, reference is had to the Letters Patent above referred to.

I claim and desire to secure by Letters Patent the following:

In a machine of the character indicated, in combination, the gripper members, movable one against the other, for gripping the upper therebetween, the cutter-blade on one of the gripper members to be actuated by the closing-together movement of the gripper members, for cutting or slitting the edge of the upper, and the blade-supporting connections arranged for movement by the workman to displace the cutter-blade, when cutting of the upper is to be omitted, substantially as described.

Signed at Lynn, Massachusetts, this 3d day of February, A. D. 1894.

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Witnesses:
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