

(No Model.)

J. W. HATCH & J. PITCHER.

LASTING MACHINE.

No. 378,506.

Patented Feb. 28, 1888.

Fig. 1.

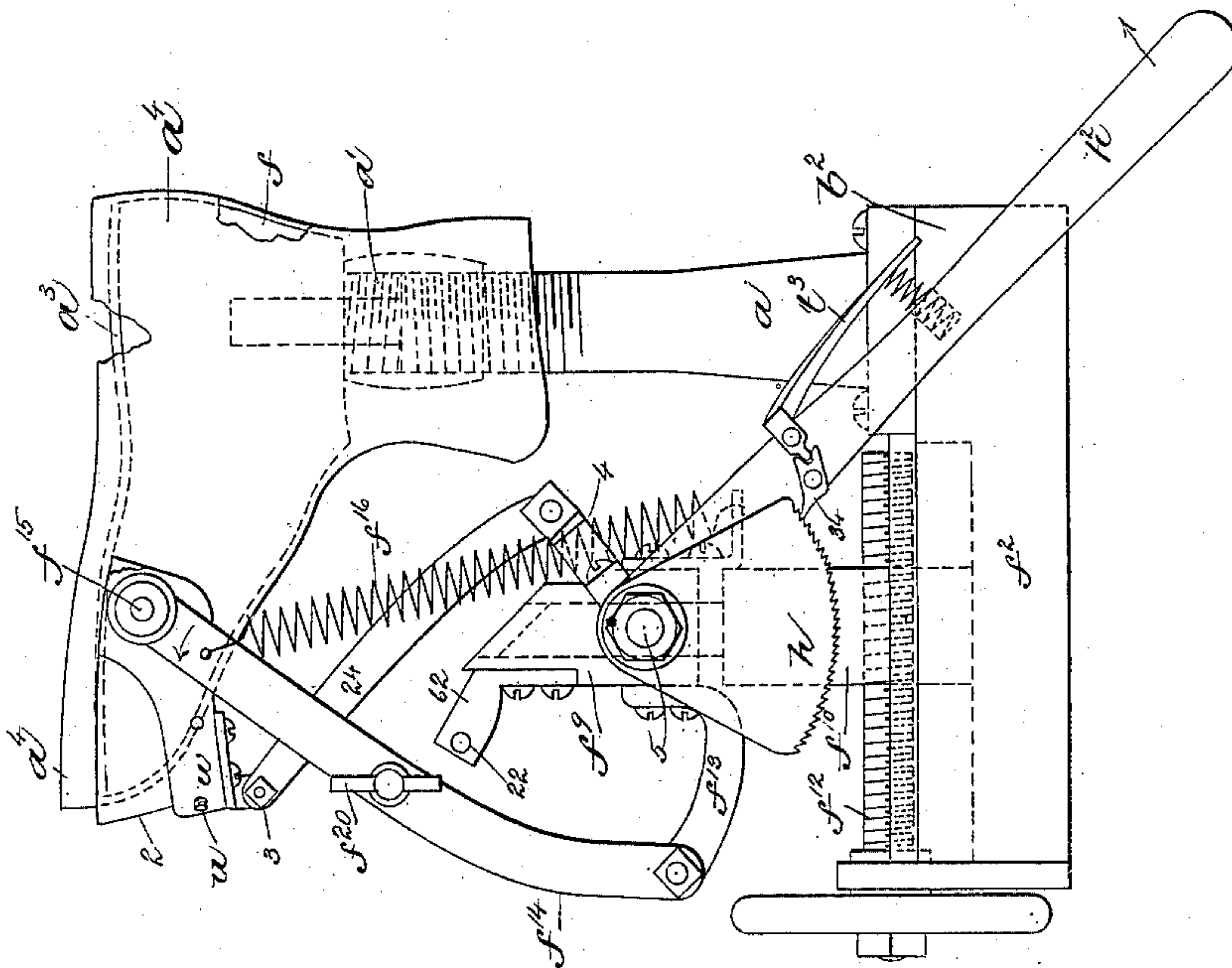
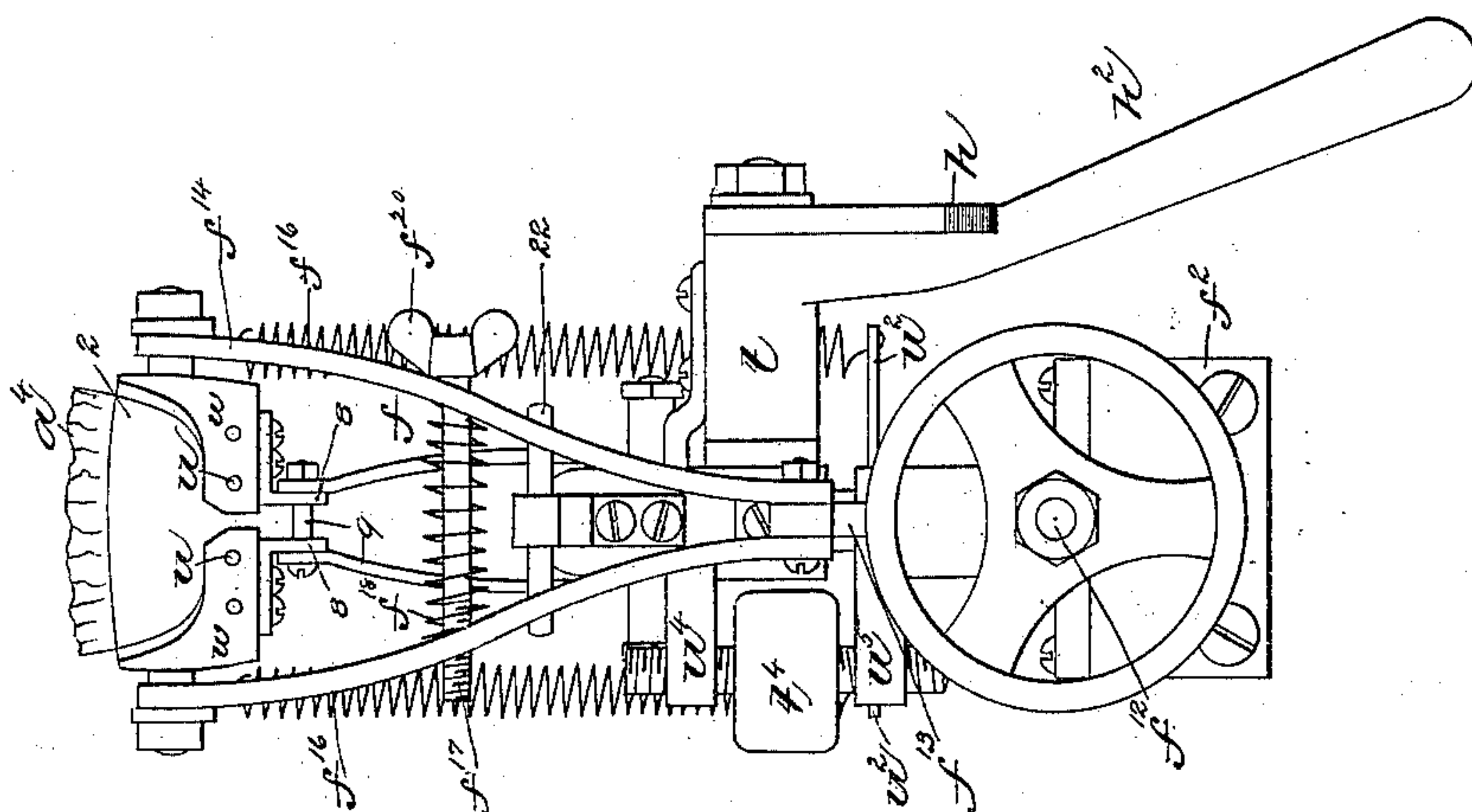


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

JESSE W. HATCH AND JOSEPH PITCHER, OF ROCHESTER, NEW YORK.

LASTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 378,506, dated February 28, 1888.

Application filed May 9, 1887. Serial No. 237,566. (No model.)

To all whom it may concern:

Be it known that we, JESSE W. HATCH and JOSEPH PITCHER, both of Rochester, in the county of Monroe and State of New York, have invented an Improvement in Boot and Shoe Lasting Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to provide a lasting-machine with mechanism for acting against the upper upon the last and to wipe, draw, and stretch the same from the instep toward and about the toe of the last preparatory to drawing the edges of the upper over upon and securing the same to an inner sole.

In accordance with this invention we employ a toe-wiper which has a rocking or tipping motion upon arms made movable longitudinally in the direction of the length of the last, the toe-wiper having connected to it other arms which govern the extent of the movement of the toe-wiper as it travels along the upper on the last.

Figure 1 in side elevation represents a sufficient portion of a lasting-machine to enable our invention to be understood, and Fig. 2 a right-hand end elevation of Fig. 1.

Referring to the drawings, f^2 represents a base, upon which is located a standard, a , which supports at its upper end the last f , a nut, as a' , on a screw-threaded portion of the said standard enabling the bottom of the last to be placed at the proper level. The base f^2 has a screw, f^{12} , which is free to rotate, but is restrained from moving longitudinally. This screw engages a threaded part of a slide, f^{10} , having a carriage, f^9 , provided with a lug or ear, f^{13} , upon which are pivoted two arms, f^{14} , the upper end of each of the said arms receiving loosely the pivots f^{15} of a toe-wiper composed of two metal plates or portions, $w w$, and a piece, as 2, of thick sole-leather or other suitable fibrous or flexible material, the sole-leather and metal parts being connected together by bolts or screws u . One of the arms f^{14} has screwed into it a screw, as f^{17} , which is surrounded by a spiral spring, f^{18} , placed between the arms, the rotation of the said screw (the operator engaging the thumb-piece f^{20}) causing the arms f^{14} to be more or less sepa-

rated one from the other to adapt the toe-wiper to lasts of different widths. The arms f^{14} have attached to them springs f^{16} , which are also connected to a suitable plate or projection, u^2 , fixed to the carriage f^9 , the said springs normally acting to hold the rear sides of the arms f^{14} against the stop 22, made as a pin, inserted through a lug, 62, attached to the said carriage. The carriage f^9 has a stud, upon which is mounted a sleeve, t , having a rearwardly-extended arm, 4, upon which are pivoted two arms, 24, the said arms being in turn pivoted at their upper ends by a bolt, 3, to two lugs secured to or forming part of the under sides of the metallic parts w of the toe-wiper. The sleeve t has secured to it a lever-handle, h^2 , carrying a pawl, 34, the said pawl engaging the ratchet-teeth of a ratchet-toothed sector, h , fast on the stud 5, movement of the handle h^2 in the direction of the arrow on it causing the sleeve and arms 24 to be moved in such direction as to throw the upper edge of the sole-leather part of the toe-wiper up against the upper a^4 of the shoe, the upper being upon the last. When the toe-wiper is first thrown up against the upper, the arms f^{14} usually rest against the stop 22, and as the lever-handle h^2 is moved to the right the toe-wiper travels along in contact with the vamp of the upper toward its toe, the friction of the toe-wiper upon the said vamp and the inclination of the last causing the lever f^{14} to be moved in the direction of the arrow on it in Fig. 1, until finally the upper edge of the portion 2 of the toe-wiper passes up to substantially the level of the last or the inner sole, a^3 , thereon, in which condition the upper above the toe-wiper is acted upon in usual or suitable manner to be laid over upon the said inner sole. The pawl 34 enables the lever-handle to be restrained in the position left by the operator until the shoe has been properly lasted, when the operator, by the lever t^3 , will move the pawl 34 to release it from the ratchet-toothed sector h .

The carriage f^9 is made in two parts, its upper part having a pin or shank, (shown by dotted lines, Fig. 1,) which enters a hole in the block f^{10} or lower part of the carriage, the upper and lower parts of the carriage at one side thereof having threaded ears $u^4 u^5$, (see Fig. 2,) which receive right and left hand threaded

ends of a bolt or screw having a central head or enlargement, t , rotation of the said screw adjusting one part of the carriage vertically with relation to the other.

5 We claim—

1. In a lasting-machine, a base and a heel pin or standard, combined with the toe-wiper, the movable arms f^{14} , upon which the toe-wiper is pivoted, and arms 24, also pivoted to
10 the toe-wiper, and means to actuate the arms 24, whereby it may be moved up against the upper and longitudinally with relation to the last, substantially as described.

2. The base and a heel pin or standard to
15 support the last, combined with the expansible toe-wiper, composed of the plates ww and the leather or non-fibrous center 2, and with the arms on which the toe-wiper is pivoted, substantially as described.

20 3. The base and heel pin or standard thereon to support a last, and the toe-wiper and the arms f^{14} and 24, on which it is jointed at front and rear, combined with the spring f^{16}

and means, substantially as described, to move the arms 24. 25

4. The base, a heel pin or standard, a carriage and arms f^{14} and 24, pivoted thereon, and a toe-wiper carried by the said arms, combined with means to operate the arms 24, substantially as described. 30

5. In a lasting-machine, the base f^2 , the heel pin or standard, the adjustable carriage mounted on the said base, shaft 5, arm 4, arms 24, and the toe-wiper pivoted thereon near its center, combined with the arms f^{14} ,
35 pivoted upon a projection of the carriage, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JESSE W. HATCH.
JOSEPH PITCHER.

Witnesses:

WILLIAM J. McNAB,
JOHN McKIE.