

J. W. HATCH.
MACHINERY FOR LASTING THE UPPERS OF BOOTS AND SHOES.
No. 173,405. Patented Feb. 15, 1876.

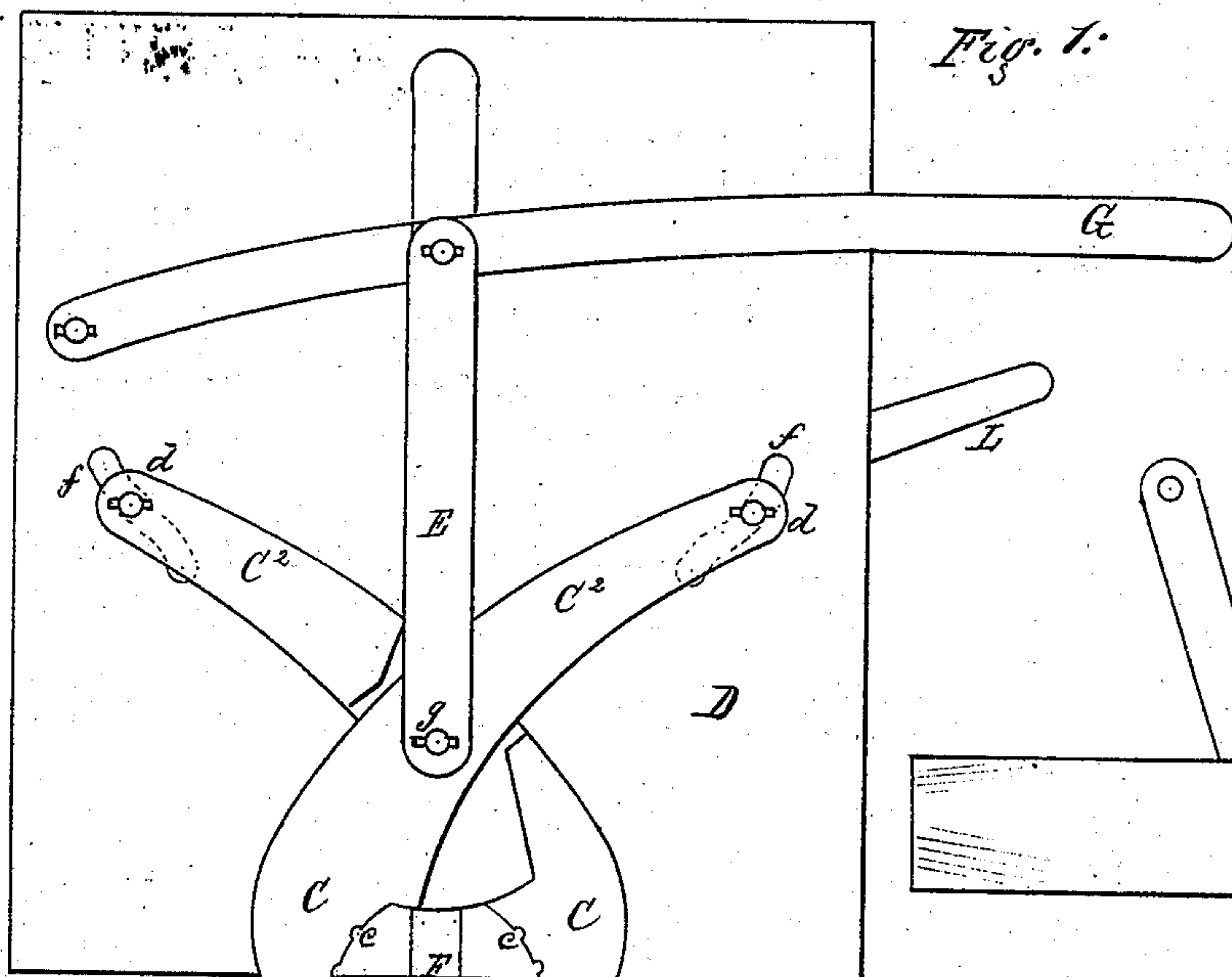


Fig. 1.

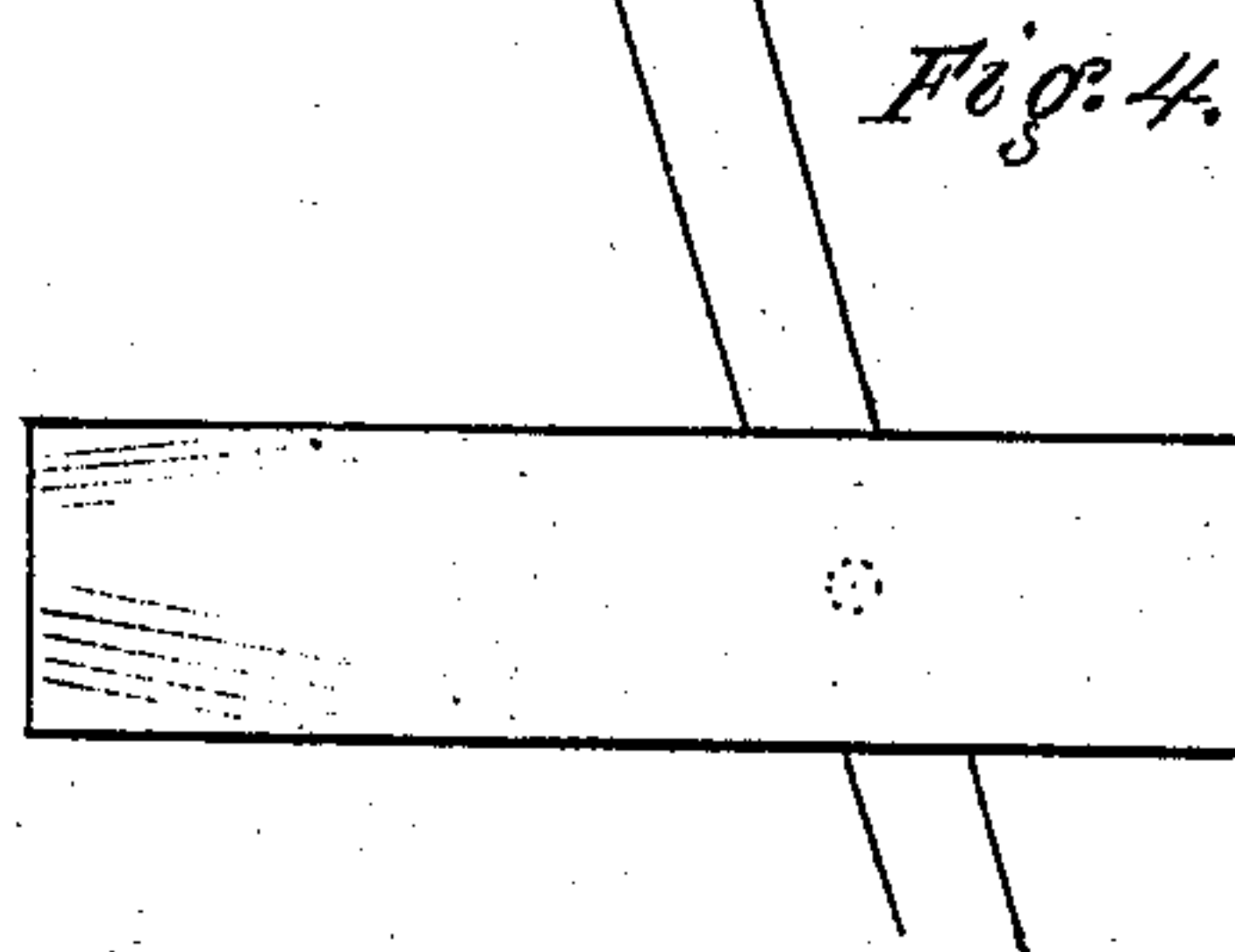


Fig. 4.

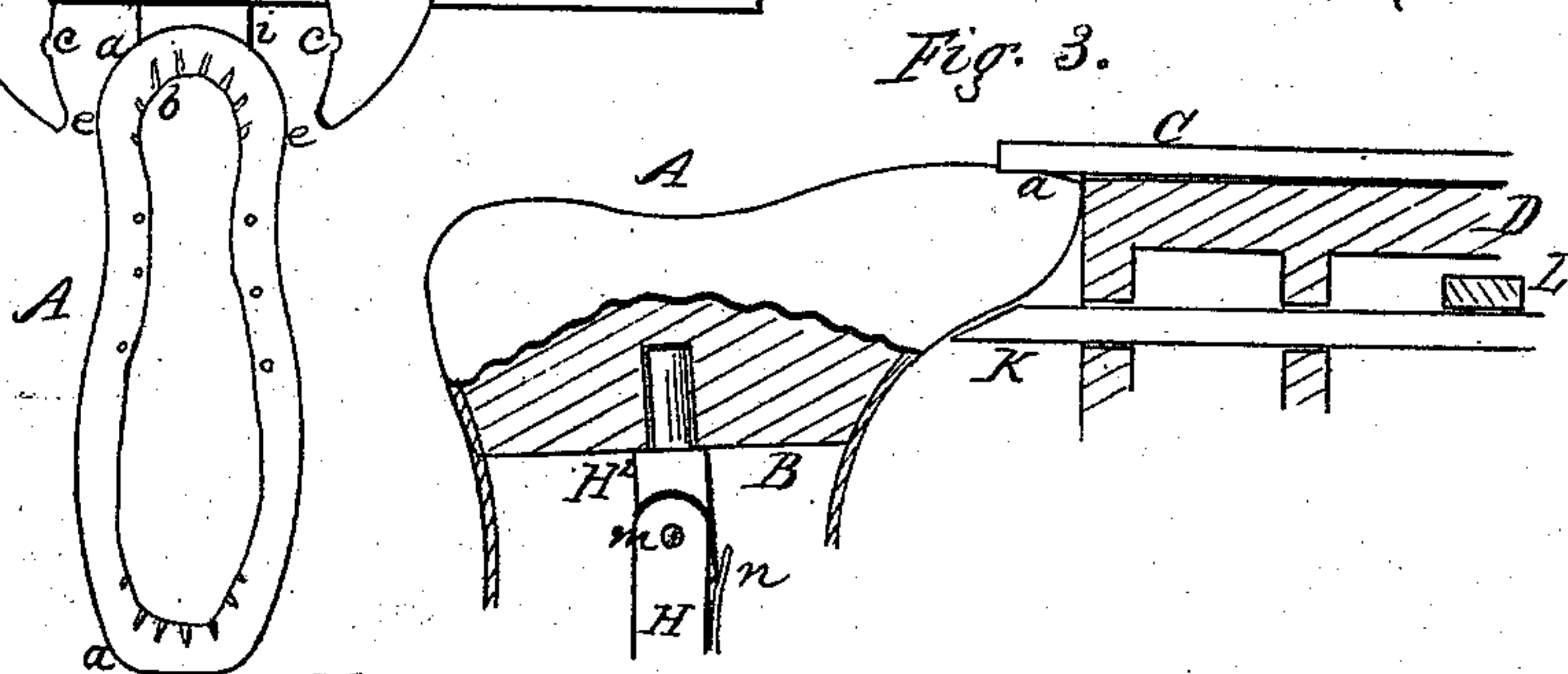


Fig. 3.

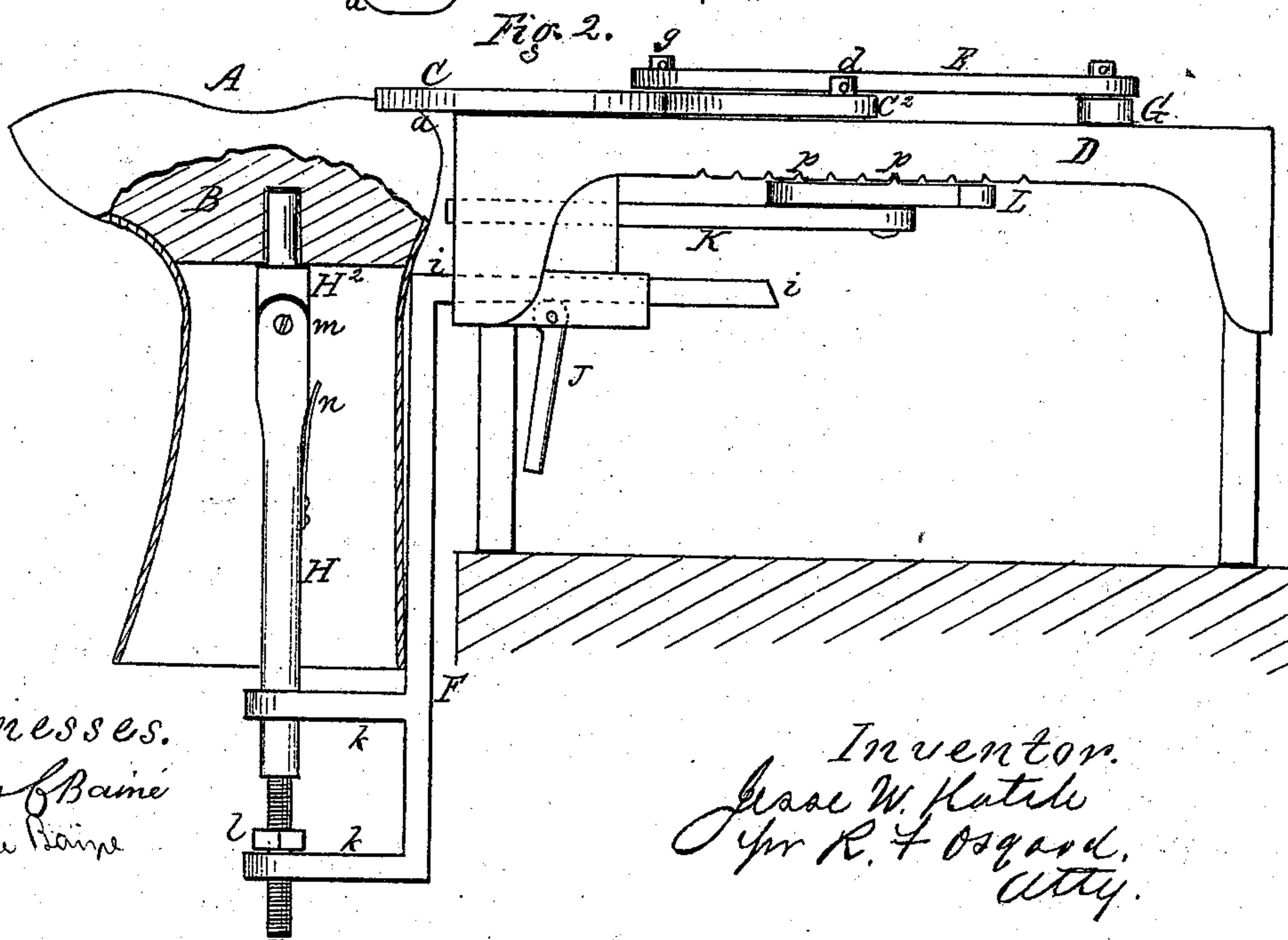


Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

JESSE W. HATCH, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN MACHINERY FOR LASTING THE UPPERS OF BOOTS AND SHOES.

Specification forming part of Letters Patent No. 173,405, dated February 15, 1876; application filed March 10, 1875.

To all whom it may concern:

Be it known that I, JESSE W. HATCH, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Lasting the Heels and Toes (either or both) of Boots and Shoes, and the apparatus for accomplishing the same, of which the following is a specification:

My invention consists of certain mechanism for lasting the heels and toes (either or both) of boots and shoes, whereby the crimps or gathers are carried to the inner margin of the upper over the inside, where they can be readily tacked, the effect being to form a better seat or bend to the upper for the fitting of the sole at the heel and toe, as will appear hereinafter.

In the drawings, Figure 1 is a plan of a boot with its heel presented to the crimping-jaws for lasting, showing also the machine; Fig. 2, a side elevation of the same; Fig. 3, a similar view to Fig. 2, but showing the toe of the boot presented to the jaws instead of the heel; Fig. 4, a plan of the toe-rest and its lever removed from place.

A represents a boot or shoe with the upper applied upon the last B in condition for crimping the heel or toe, to allow the outer sole to be fitted.

The upper is first drawn over the last in the ordinary way by hand, and the edges tacked to the insole at the sides by two or three tacks, to secure the parts together. The last is then placed on a suitable support, and the heel or toe presented in proper position to the action of the crimping-jaws C C, or equivalent devices, which slide closely over the edges of the upper, and turn them down and crimp them in place closely to the insole, so that they may be secured by tacks. The jaws or equivalent are so arranged as to draw in upon all sides, thereby leaving the seat *a* or the rounded portion of the upper where the outer sole joins perfectly smooth, the wrinkles or crimps all being drawn into the inner edge, as shown at *b*.

The jaws may be provided with notches or holes *c c* at their inner edges for the reception of the tacks, that pass through into the leather.

In the drawing, D is a table or bed, on top of which the crimping-jaws C C are mounted.

The jaws have shanks *C² C²*, with pivots *d d* at their ends, which rest in slots *f f* of the table, having such curvation as will cause the jaws to close properly upon the leather as they are thrown forward. The central pivot *g* of the jaws is connected with a pitman, E, which may receive its motion from a hand-lever, G, or from any automatic power desired. As this lever is drawn forward the jaws close upon the leather properly.

F is a vertical support, having a horizontal arm, *i*, which passes through a bearing in the bed, so as to be moved out or in, and it is secured in any position by a cam, J, or equivalent. At its lower end the support has two horizontal bearings, *k k*, through which passes the standard H, that supports the last. The lower end of the standard is cut with a screw-thread, and is provided with a nut, *l*, by which the standard is adjusted higher or lower, to enable either the heel or the toe of the boot to be presented to the crimping-jaws by reversing it.

The upper end of the standard has a joint-piece, *H²*, pivoted at *m*, and kept stiff by a spring, *n*. This is for the purpose of allowing the last to be turned or inclined back, as in Fig. 3, when the toe is presented to the crimping-jaws, so that the toe will lie flat or in line for the jaws to pass over. The last is simply swiveled on the end of the joint-piece, so that it can swing around, and it is held firmly by the hand of the operator while the crimping action is performed.

K is a toe-rest, which slides in and out horizontally, being operated by means of a lever, L, which is held in any position by means of a lug and notches, *p p*, or any equivalent arrangement. This toe-rest is used only when the toe of the boot or shoe is being lasted, in which case it is thrown out, as shown in Fig. 3, and supports the front of the last under the pressure of the crimping-jaws. When the heel is being crimped it is thrown back, as shown in Fig. 2.

From the above description the operation of the machine will be obvious. The last is placed upon the swivel-standard with the line of the boot or shoe in position to receive the crimping-jaws. The passage and closing in of the jaws will last the heel in shape, and the edges

of the upper are then tacked. If desired, several strokes may be given to the jaws, which may be necessary in very thick or heavy leather or leather-board. Any desired number of the heels may be crimped in this way in succession, and the machine may then be set to crimp the toes. To do this, the support F is drawn out to enable the last to be applied, as in Fig. 3. The joint-piece H² is of importance for this purpose, as it bends back to bring the surface of the toe in line with the crimping-jaws.

It is obvious that the heels and toes may be lasted alternately in the same manner, and the whole finished without removing the boot or shoe from the standard till complete.

In large manufactories it may be desirable

to use separate machines for lasting the heels and toes.

What I claim, and desire to secure by Letters Patent, is—

1. The crimping-jaws C C, having shanks C² C², with pivots *d*, in combination with the pitman E, lever G, and table D, having slots *f f*, substantially as described, for the purpose specified.

2. I claim the combination, with the crimping-jaws C C and the standard H, of the toe-rest K, operating as and for the purpose specified.

J. W. HATCH.

Witnesses:

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W. F. BIRCH.