

(No Model)

T. O'BOLGER.
LASTING MACHINE.

No. 388,577.

Patented Aug. 28, 1888.

Fig. 1.

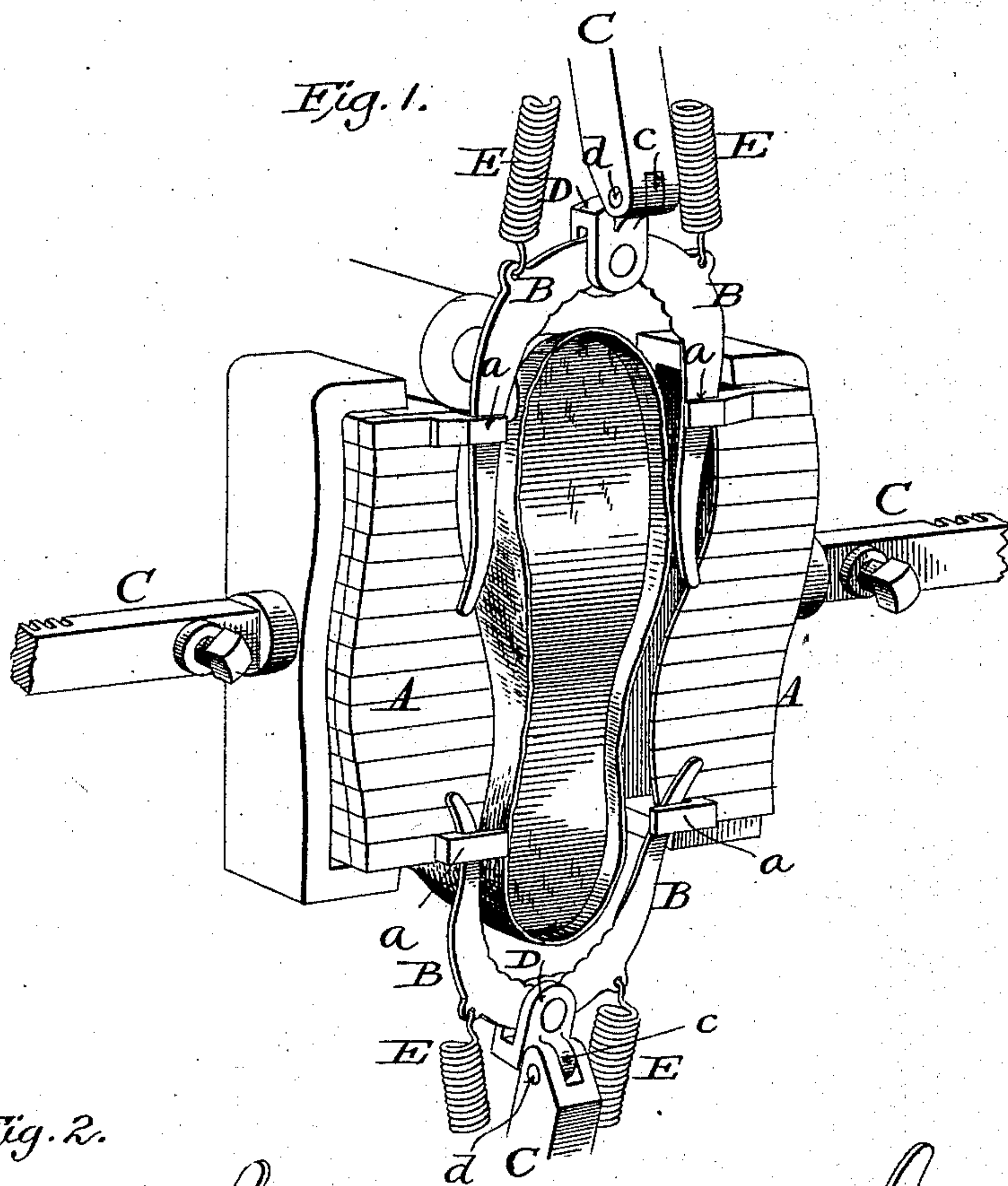


Fig. 2.

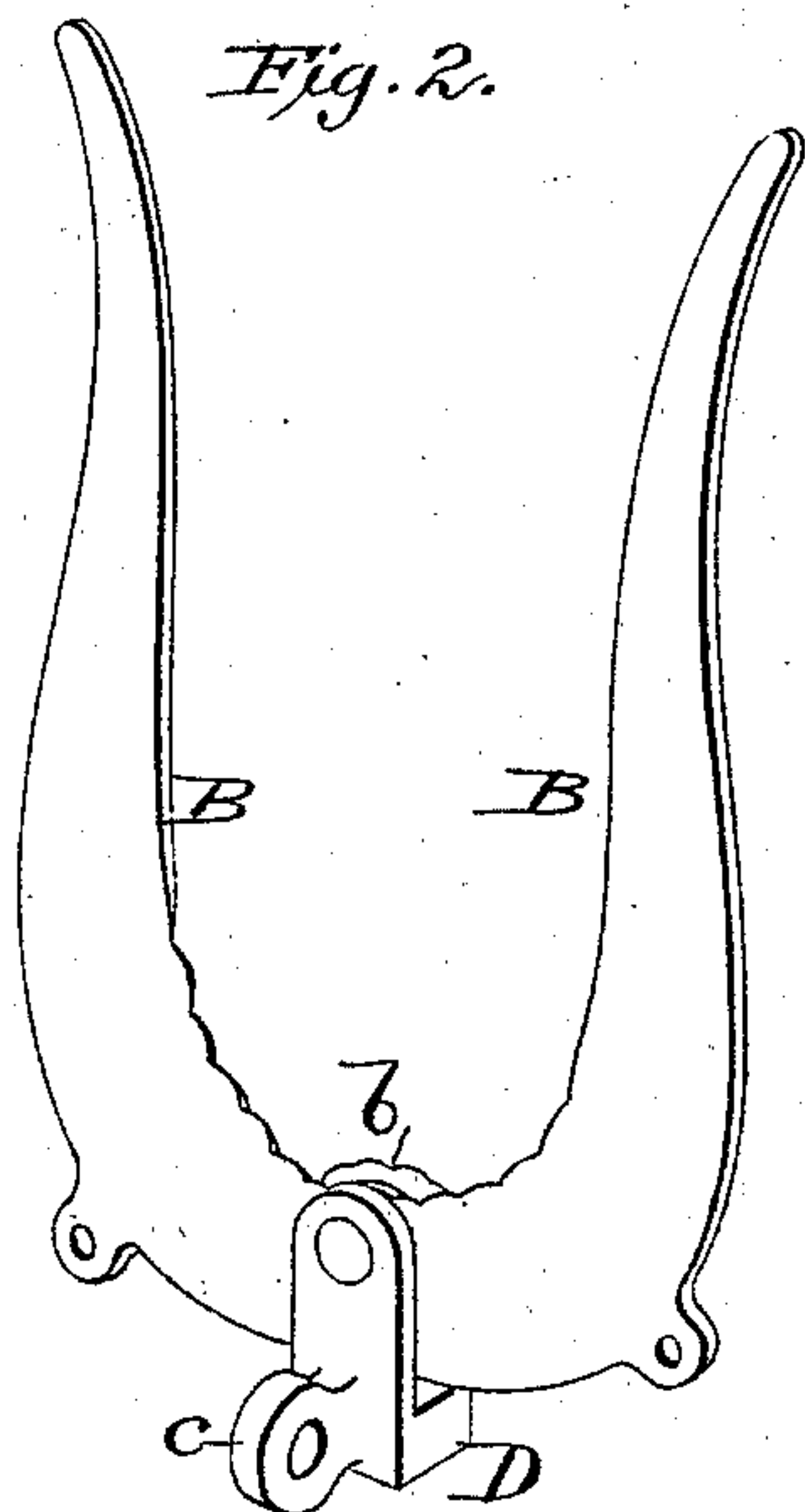
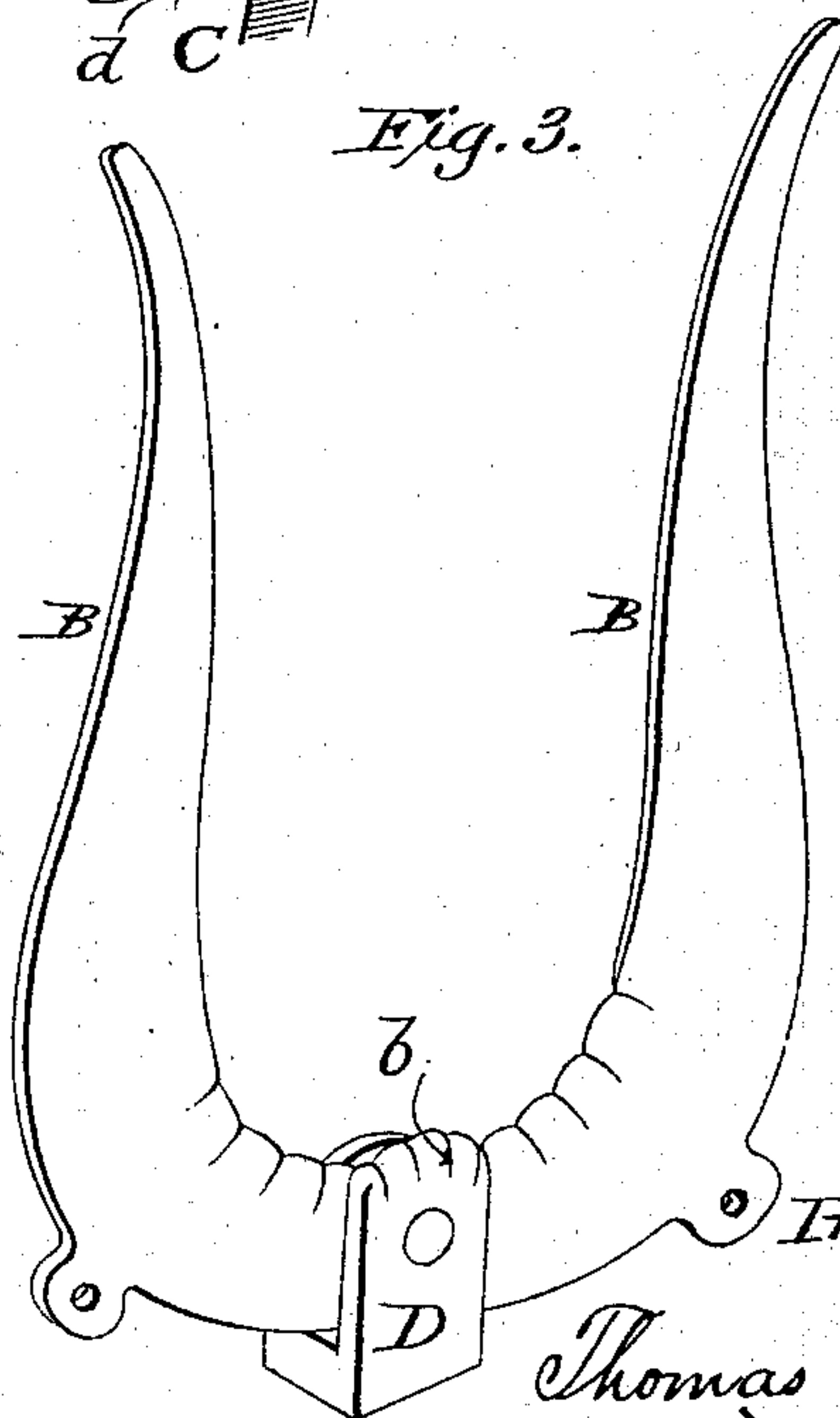


Fig. 3.



Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

THOMAS O'BOLGER, OF ROCHESTER, NEW YORK, ASSIGNOR TO WILLIAM S. KING, OF MINNEAPOLIS, MINNESOTA.

LASTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 388,577, dated August 28, 1888.

Application filed April 23, 1888. Serial No. 271,528. (No model.)

To all whom it may concern:

Be it known that I, THOMAS O'BOLGER, of Rochester, in the county of Monroe and State of New York, have invented certain new and
5 useful Improvements in Lasting-Machines, of which the following is a specification.

My invention consists in a novel form or construction of jaws or wipers for folding the leather of an upper over and upon the insole
10 of a shoe in a lasting-machine. The general construction of the lasting-machine may vary, or, in other words, the improved jaws or wipers may be employed in different styles of lasting-machine, though designed more par-
15 ticularly for a machine for which application for patent was made in the joint names of Paine, Gray, and Pettee on the 12th day of November, 1887, Serial No. 254,997.

Referring to the accompanying drawings,
20 Figure 1 is a perspective view of so much of a lasting-machine as is necessary to a clear understanding of my present invention; Fig. 2, a perspective view of jaws on a larger scale, and Fig. 3 a perspective view of said jaws
25 turned with their under faces upward.

The improved jaws are designed to act upon the leather at the toe or heel, or at both toe and heel, of a shoe, and their purpose is to smoothly fold said upper over upon the in-
30 sole, acting first at the middle, then at each side thereof, gathering the leather in narrow folds or "pipings," drawing it taut, and finally ironing or smoothing out the folds or pipings flatly and evenly.

The drawings show the side lasting or fold-
35 ing jaws, A A, of a lasting-machine provided with overhanging lugs or lips *a*, which latter serve as bearings and as guides for the heel and toe jaws B B, the said side jaws and the
40 heel and toe jaws being each independently carried by a supporting-bar, C, preferably in the form of a toothed rack, to be advanced and receded by a similarly-toothed sector or pinion, in a manner that will be readily un-
45 derstood and is fully explained in the application above referred to. As such mechanism forms no part of the present invention, it need not be further described or referred to herein.

The jaws B B are pivoted to an intermedi-
50 ate block or plate, D, which, when the jaws are opened away from each other, projects some-

what in advance of or beyond their inner bear-
ing edges or faces, as shown in Fig. 3, and the forward edge of this plate D is rounded or beveled on the lower side and furnished with
55 notches *b*, which extend backward some distance along the under face of the plate, all the edges being rounded off to prevent marring or injury of the upper leather. The jaws B B are similarly notched or corrugated, the notches
60 in the several parts gradually lessening in depth until they terminate or merge into the plane under faces of said parts.

E E are two coiled wire springs, each of which has one end attached to one of the jaws
65 B, and its other end attached to the bar C, by which the jaws are carried, or to other convenient support, the springs being so located and arranged as to exert a constant tendency to open the jaws away from each other, as in-
70 dicated.

To permit the adjustment of the jaws to any desired plane according to the form of the last, the plate or block D is furnished with a per-
75 forated lug, *c*, which enters a slot in the end of bar C, and is connected with said bar by a pin or bolt, *d*, passing through the bar and through lug *c*, though obviously other forms of joint may be adopted, if preferred.

The size, number, and arrangement of the
80 notches or corrugations of the jaws and of plate D may be varied as desired, being controlled in a measure by the character of the upper to be lasted. I contemplate in some cases arranging them in groups and in others
85 employing a continuous series, while for very light and soft leather it may be advantageous to omit them entirely. The inner or operative edges of the jaws are preferably made straight, or nearly so, from their inner ends to near
90 their outer ends, where they preferably curve outward, as indicated; but the outer edges curve considerably, giving to the inner ends of the jaws a greater width than is possessed by the outer ends. This widening of the jaws
95 near their pivots gives due strength and stiffness, and also determines the rate of movement of the jaws toward each other when the end jaws, the side jaws, or both the end and the side jaws are advanced, their approach
100 being due to their riding between the guide-lugs *a*, or by the pressure of said lugs against

the jaws B B when the jaws A A are advanced toward each other, or by the joint movement of the jaws A and B.

In practice the jaws A and B are sometimes simultaneously advanced or receded and sometimes successively actuated; hence the foregoing explanation.

The action of the jaws B B and plate D is as follows, whether the jaws A and B be simultaneously or successively actuated: The last, with the upper leather and insole in position upon it, is placed in the lasting-machine and the upper is preferably, though not of necessity, stretched by special stretching mechanism independent of the jaws A and B; but in either case the edges of the upper project past the outer face of the insole, as in Fig. 1, at the same time that the jaws B begin their operation. The bar C, to which plate D is attached, then advances, and, bearing upon the upper at the toe of the last, carries it forward over the insole, the notches or corrugations causing the leather to be creased or folded in the form of pipings or flutings, thus taking up the slack leather at that point and distributing the surplus evenly throughout the width of plate D. This occurs before the jaws B begin to act upon the upper, owing to the projection of the plate D beyond the inner edges of said jaws, and when the slack is thus fairly gathered the jaws B begin to act upon the upper at the corners of the toe or at each side of the portion acted upon by plate D, performing a like operation at said points. As the plate D advances, its flat under face rides upon and over the pipings or flutings formed by its notched edge and irons or smooths them down flatly and evenly, and the jaws B B, swinging inward, perform a like office. In this way and by this means I am enabled to take up the slack or surplus leather at the toe and to lay it smoothly and evenly upon the insole with ease and certainty. The heel-jaws act in the same manner, and hence a separate description of their operation is unnecessary.

If it be deemed unnecessary to provide for varying the plane of action of the jaws B B,

the plate D may be formed upon or as an integral part of the supporting and actuating bar C, by which the jaws B B are carried; but the construction above set forth is preferred.

The jaws B may move between stationary guides similar to the lugs *a*, and may be used independently of any side jaws whatsoever.

Having thus described my invention, what I claim is—

1. In a lasting machine, the combination, with side jaws provided with lugs or guides, of end jaws consisting of two independent blades or wipers, B, movable between the lugs or guides, and an intermediate plate or block, D, projecting beyond the inner edges of the blades or wipers B, substantially as and for the purpose set forth.

2. In combination with a movable supporting-bar, plate or block D, carried thereby, jaws B B, pivotally attached to said plate or block, and guides arranged at the outer edges of the jaws, substantially as described and shown.

3. In combination with a supporting-bar, plate D, and jaws B B, carried by said bar, and springs extending from the jaws to the bar and serving to draw the jaws apart.

4. In combination with bar C, plate D, pivotally connected with said bar, jaws B B, pivotally secured to said plate, and springs E E, attached to said jaws and serving to draw them away from each other.

5. In a lasting-machine, in combination with plate D, having its forward edge provided with notches, jaws B B, having their inner edges likewise provided with notches.

6. The combination of jaws A A, provided with lugs *a a*, bar C, plate D, carried by said bar, jaws B B, pivotally attached to plate D, and springs E E, extending from bar C to jaws B B and serving to hold the latter in contact with the lugs *a a*.

In witness whereof I hereunto set my hand in the presence of two witnesses.

THOMAS O'BOLGER.

Witnesses:

HENRY M. GOODHUE,
HENRY S. REDFIELD.