

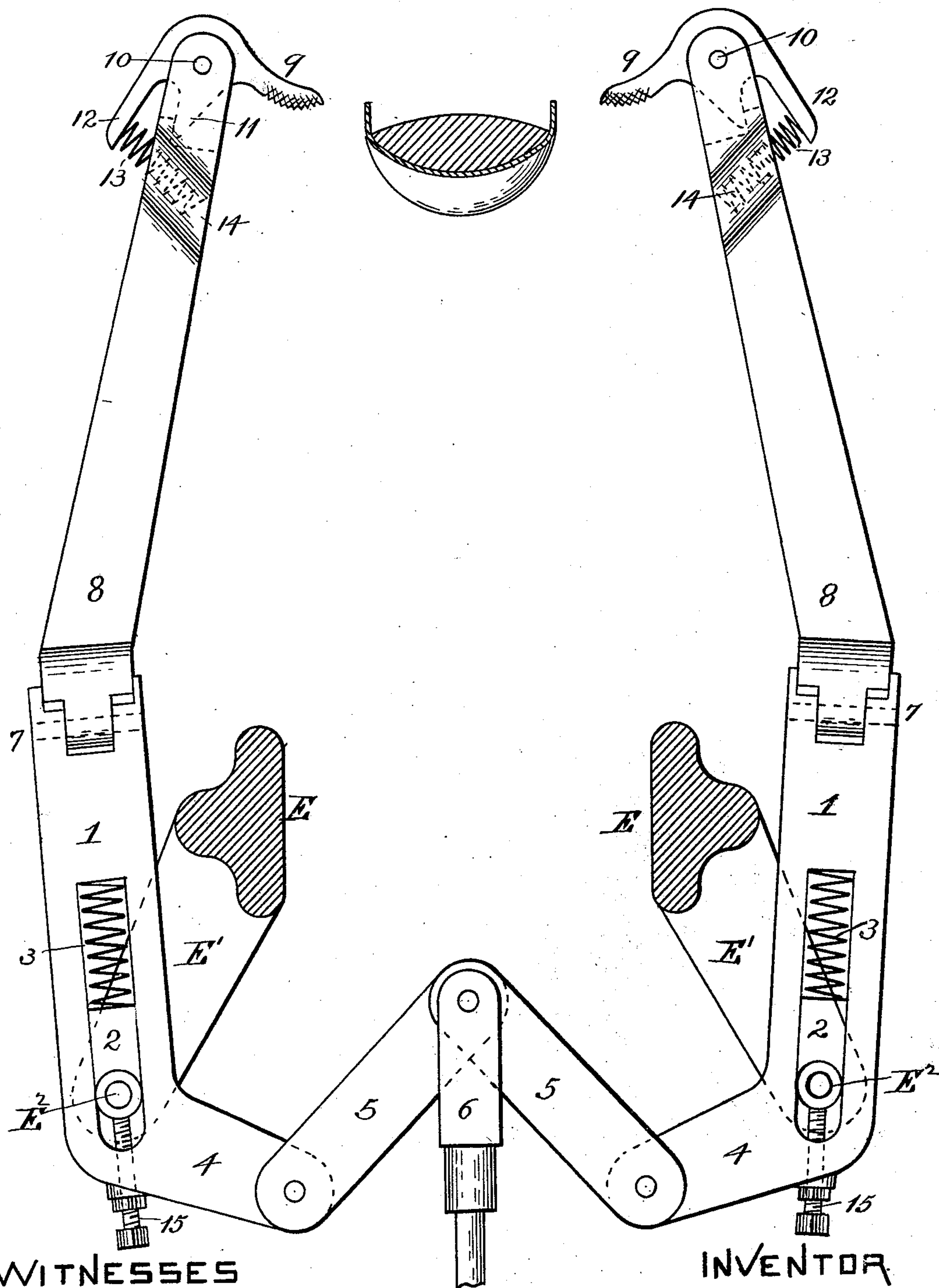
(No Model.)

3 Sheets—Sheet 1.

J. E. CRISP.
LASTING MACHINE.

No. 517,947.

Patented Apr. 10, 1894.



WITNESSES

Mary E. Woodburn.
John L. Roberts

Fig. 1.

INVENTOR

jos. C. briop

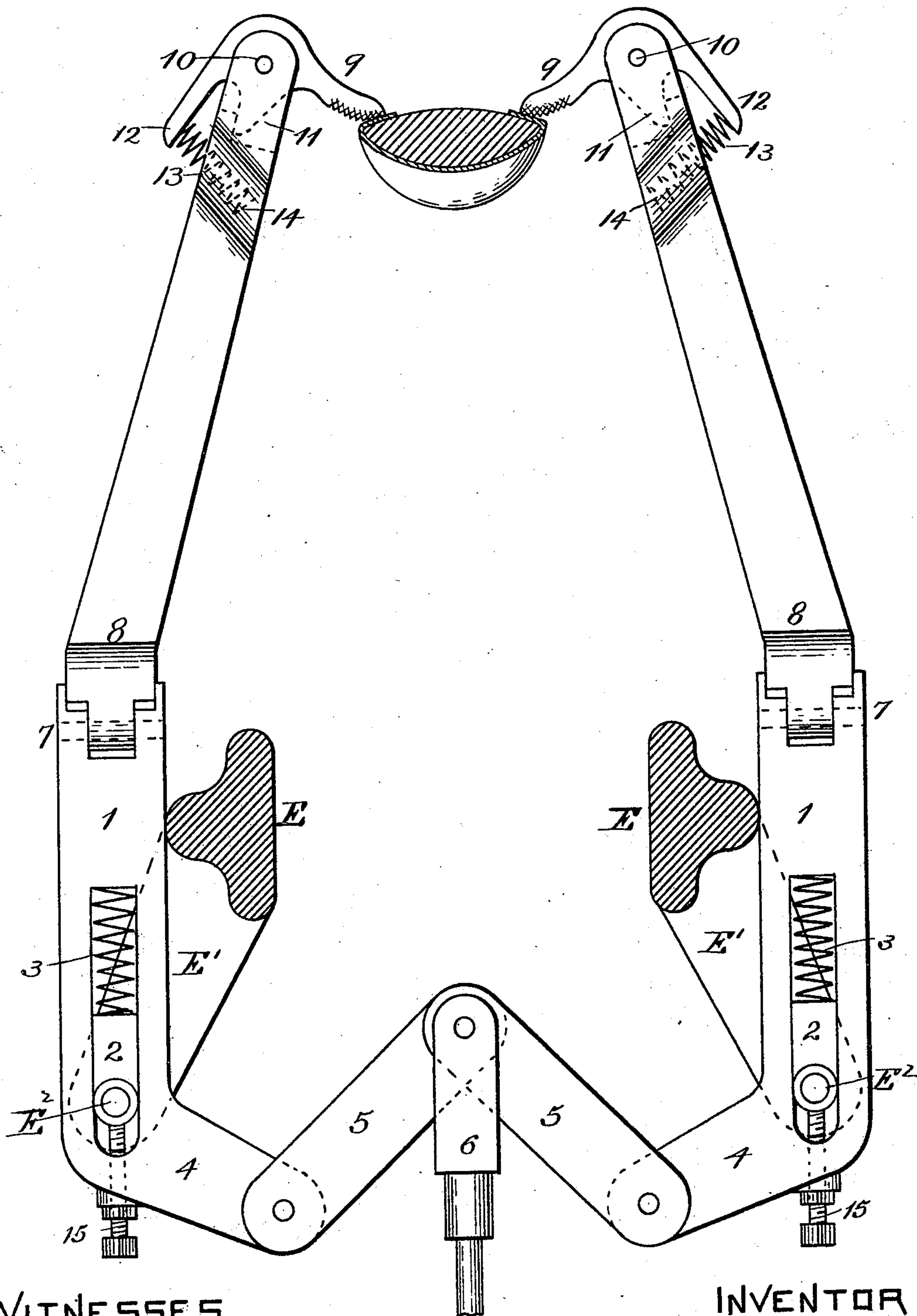
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Fig. 2.

INVENTOR

Jos. E. Crisp

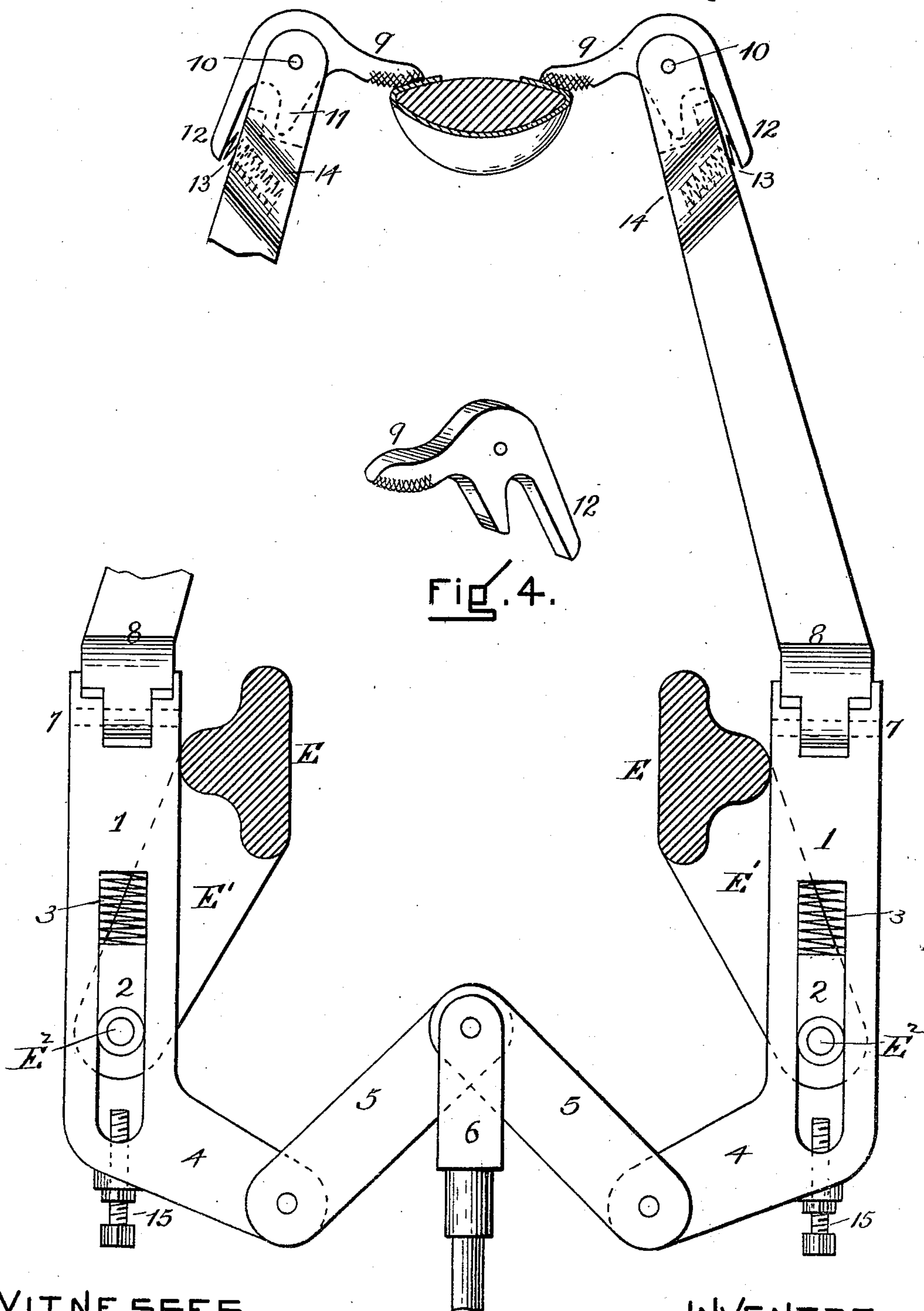
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Fig. 3.

INVENTOR

Jos E. Crisp

UNITED STATES PATENT OFFICE.

JOSEPH E. CRISP, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR TO THE
COPELAND RAPID LASTER MANUFACTURING COMPANY, OF PORT-
LAND, MAINE.

LASTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 517,947, dated April 10, 1894.

Application filed July 14, 1893. Serial No. 480,515. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH E. CRISP, a citizen of the United States, residing at Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Lasting-Machines, of which the following specification and accompanying drawings are such a full, clear, and exact description as will enable those skilled in the art to make and use the same.

This invention relates to improvements in the side holding devices of lasting machines; and the object of these improvements is to provide side holding devices which will turn down, draw over and hold the upper close to the inner sole, and at the same time present fewer obstacles to the after manipulation thereof than the side holding devices heretofore used.

In the drawings:—Figure 1 is an elevation of a pair of the holding devices and their supporting and operating mechanism in their normal position of rest. Fig. 2 is an elevation of the same pair of holding devices in the position they are after they have turned down the upper upon the inner sole. Fig. 3 is an elevation of the same pair of holding devices in the position they assume after they have drawn the upper over the inner sole and are holding it in position to be secured thereto. Fig. 4 is a perspective elevation of one of the side holding fingers.

In the drawings, these side holding devices are shown as being attached to the lasting machine, the subject matter of Patent No. 465,073, granted December 15, 1891, to Copeland, Crisp and Grandy, but they can be used to advantage for side holding devices upon lasting machines of other designs.

In combination with the machine above mentioned, these improved side lasting devices are constructed, mounted and operated as follows:

E represents the parallel ties, E', the dependent arms from the parallel ties, and E² the pivot pins mounted in the lower ends of the dependent arms of said machine. Around the pivot pins, E², the lower part, 1, of the swinging arms, which carry the holding fingers, 9, swings upon the bearing formed in the sliding block, 2, which is fitted to slide in a suitable slot formed in the part, 1, and the

spring, 3, acts to hold the part 1 at its highest elevation, when at rest, as shown by Fig. 1. On the lower inner sides of the parts 1, there are formed the projecting arms 4, to which are pivoted the toggle links 5, which the connection 6, connects to a suitable spring raised foot treadle, not shown; the treadle spring holding the parts in the position shown by Fig. 1. The springs, 3, are made of such strength that depression of the foot treadle will first swing the parts 1 inward, by the action of the toggles, until their inner sides contact with the sides of the parallel ties E, as shown by Fig. 2, and then draw them vertically downward until the treadle is locked at the desired height, as shown by Fig. 3. On the upper ends of the parts 1, there is formed the joint 7, to which the upper parts 8, of the swinging arms are connected so that they can be swung lengthwise of the machine by the operator as desired. On the upper ends of the parts, 8, there are pivoted the turning and holding fingers, 9, which are fitted to move freely in the joint 10, and are provided with the stop 11, which limits their downward motion, and the arms 12, upon which the springs 13, carried in the pockets 14, act to press the holding fingers downward.

The turning and holding fingers, 9, are made quite narrow and their working surfaces are curved, rounded and serrated as shown, so that they will always present substantially the same surface to the upper, regardless of the side inclinations, or the curves of the lasts lengthwise.

The turning fingers shown in the drawings are represented as operating upon the fore part of the last, the fingers which operate upon the shank are the same in construction and operation and are made of sufficient length and curve to insure their operation upon right and left shanks without lateral adjustment of the swinging arms, 1 and 8, which carry them. The turning fingers are adjusted vertically to conform to varying curves of last bottom lengthwise by the adjusting screws 15.

The operation of this improved side lasting and holding mechanism is somewhat different from those heretofore used and is as follows: After the last with the upper properly

mounted thereon is properly secured in the machine between the toe and heel lasting mechanism, the operator adjusts the projecting edges of the upper with his fingers and
5 then preferably moves the whole group of lasting fingers over and then carries their supporting arms down by one motion of a common foot treadle. The result of this operation is to first fold over the upper upon the
10 inner sole and then to press or move the turned over edges toward the center of the last, by reason of the swinging of the fingers in the joints, 10, which causes their operating ends to move inward horizontally as the sup-
15 porting arms are moved vertically down.

Should the operator find any part of the upper was not drawn sufficiently tight around the last, he uses the lasting pinchers and draws that part as desired and the serrated
20 surface of the fingers will hold whatever he gains.

It is obvious that the opposing pairs of fingers may be operated as desired, singly, in groups, or together, as described, without de-
25 parting from the spirit of the invention.

Having thus described my invention, its construction, and mode of operation, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a lasting machine side lasting mechanism consisting of turning and holding fin- 30
gers substantially as described, elastically mounted upon the tops of horizontal swinging and vertically reciprocating carrying arms, springs to elevate said arms, and toggle and 35
treadle mechanism to swing and depress said arms, substantially as shown and described.

2. In a lasting machine, side lasting mechanism, consisting of turning and holding fin- 40
gers, elastically pivoted upon the tops of carrying arms, the working ends of said fingers when at rest being below the horizontal level of said pivots, and treadle and spring mechanism to vertically reciprocate said arms, sub-
stantially as described, and for the purpose 45
set forth.

JOS. E. CRISP.

Witnesses:

MARY E. WOODBURN,
JOHN L. S. ROBERTS.