

(No Model.)

J. H. WOOD & E. D. WOODS.
LASTING JACK.

No. 440,526.

Patented Nov. 11, 1890.

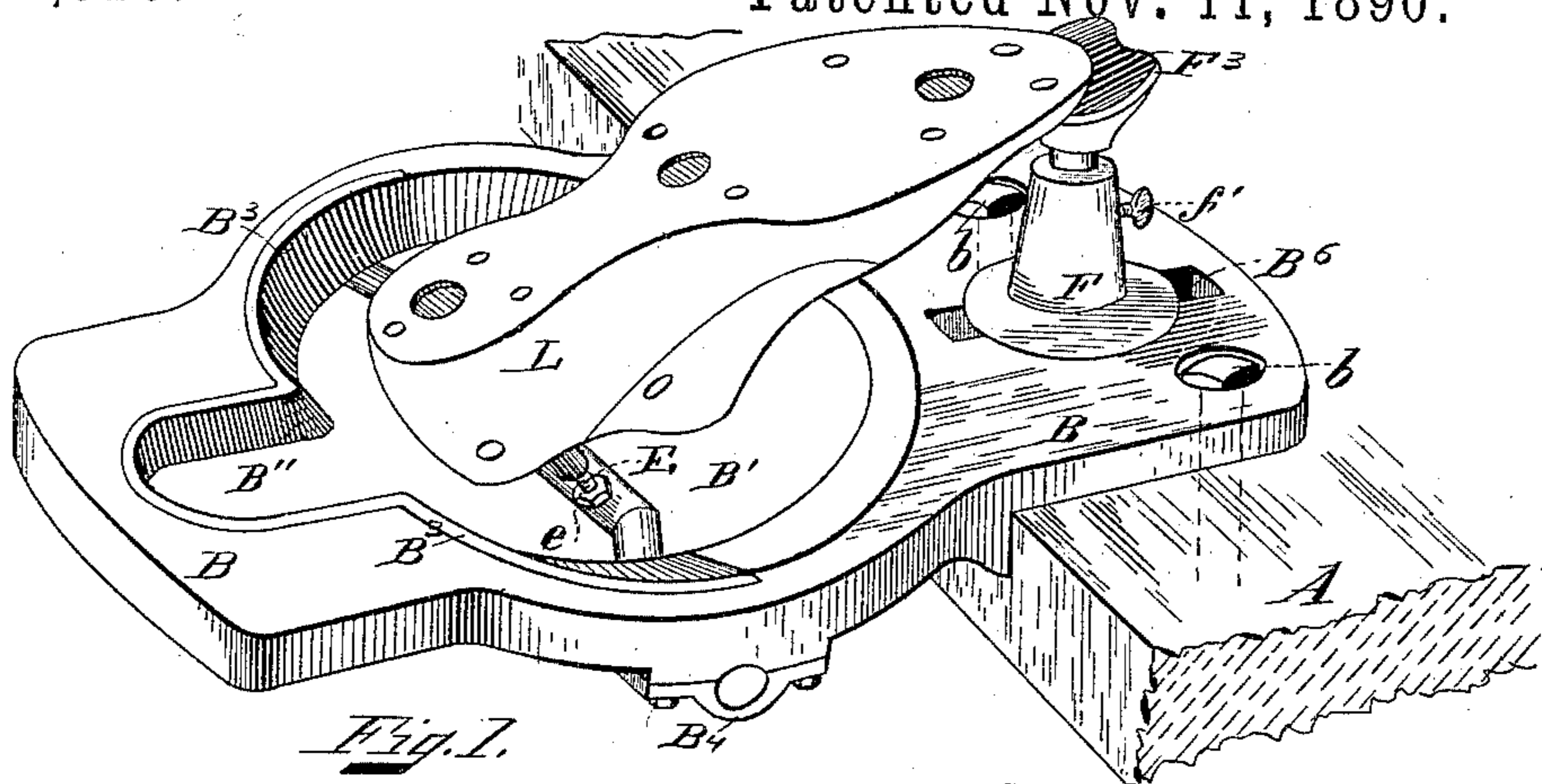


Fig. 1.

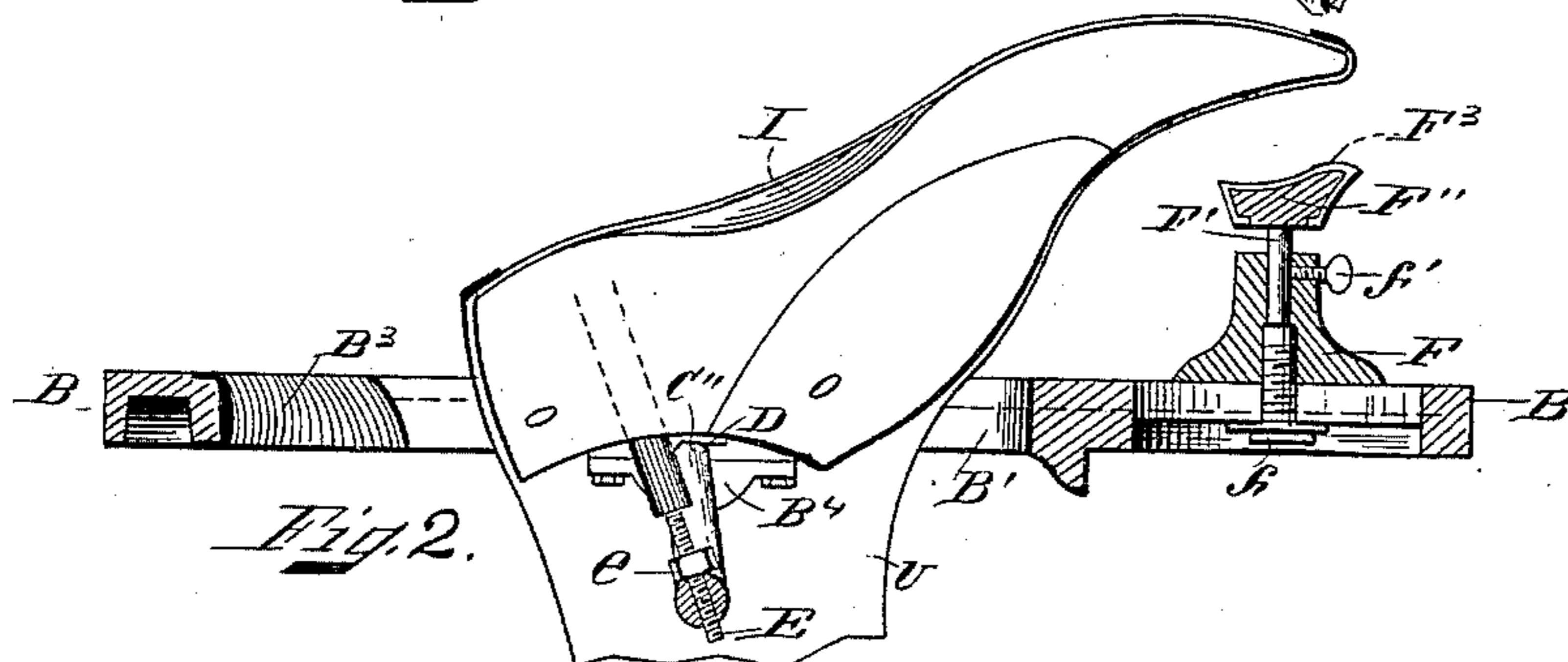


Fig. 2.

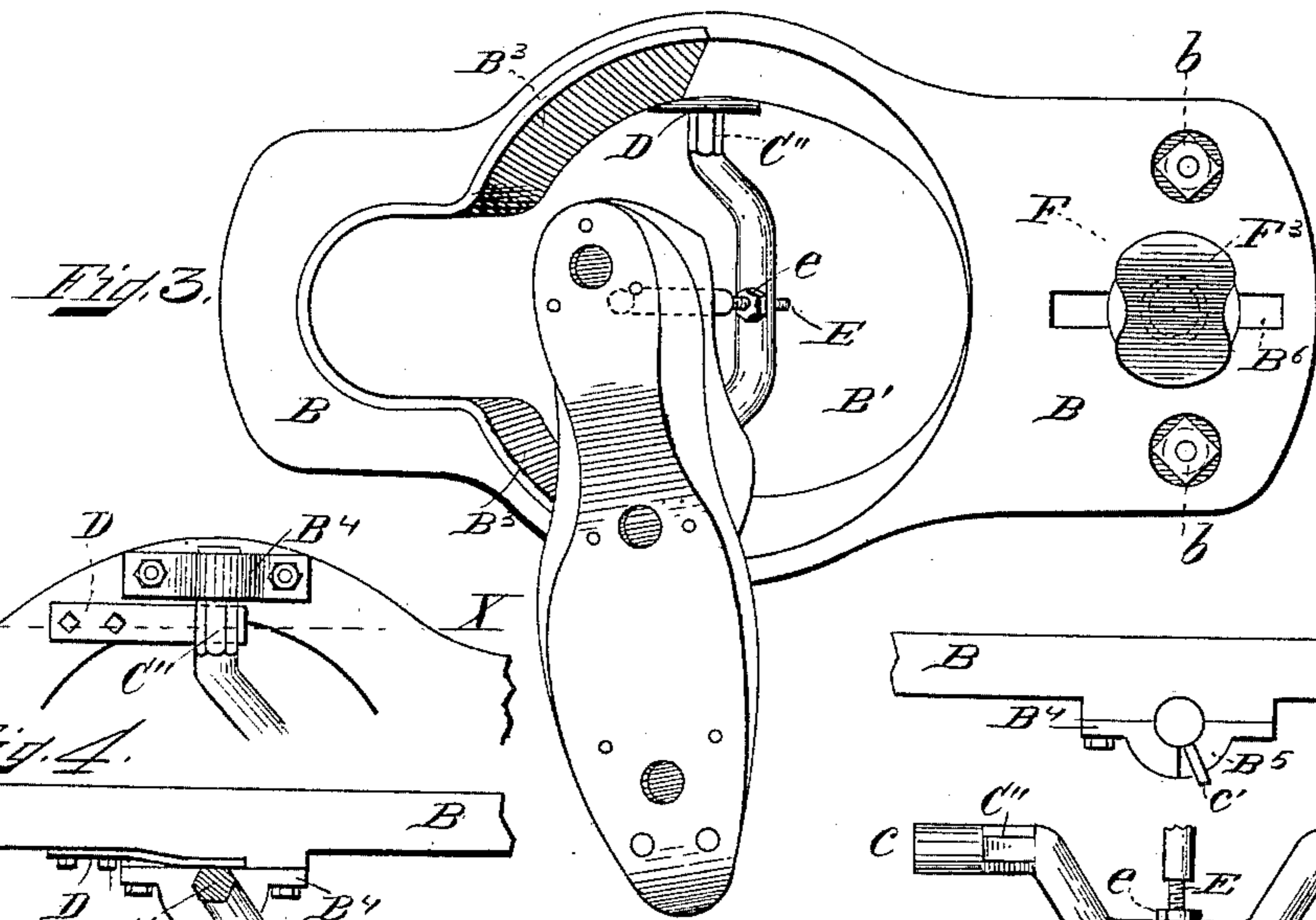


Fig. 3.

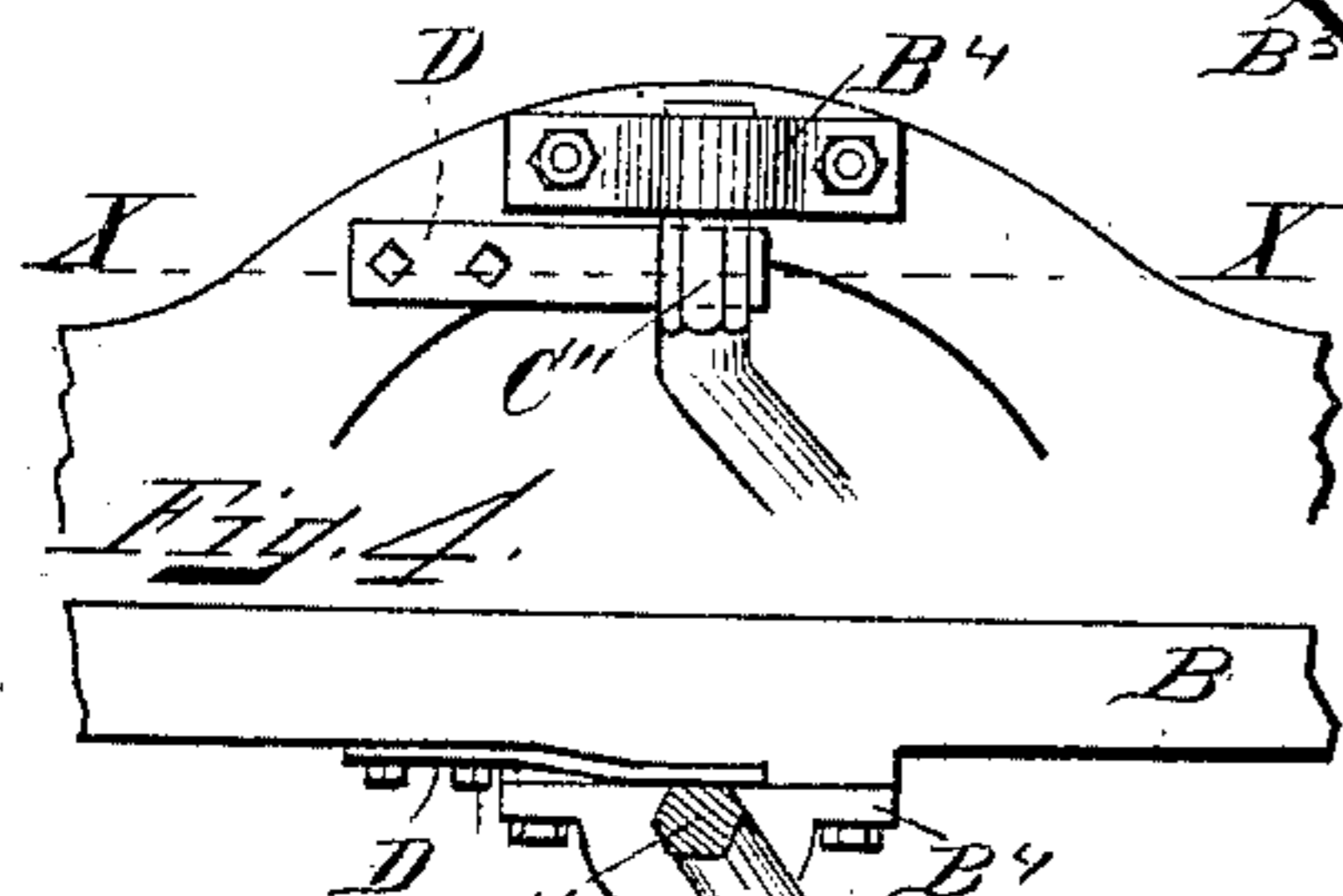


Fig. 4.

Fig. 5. Witnesses:
Alice A. Perkins.
Geo. W. White.

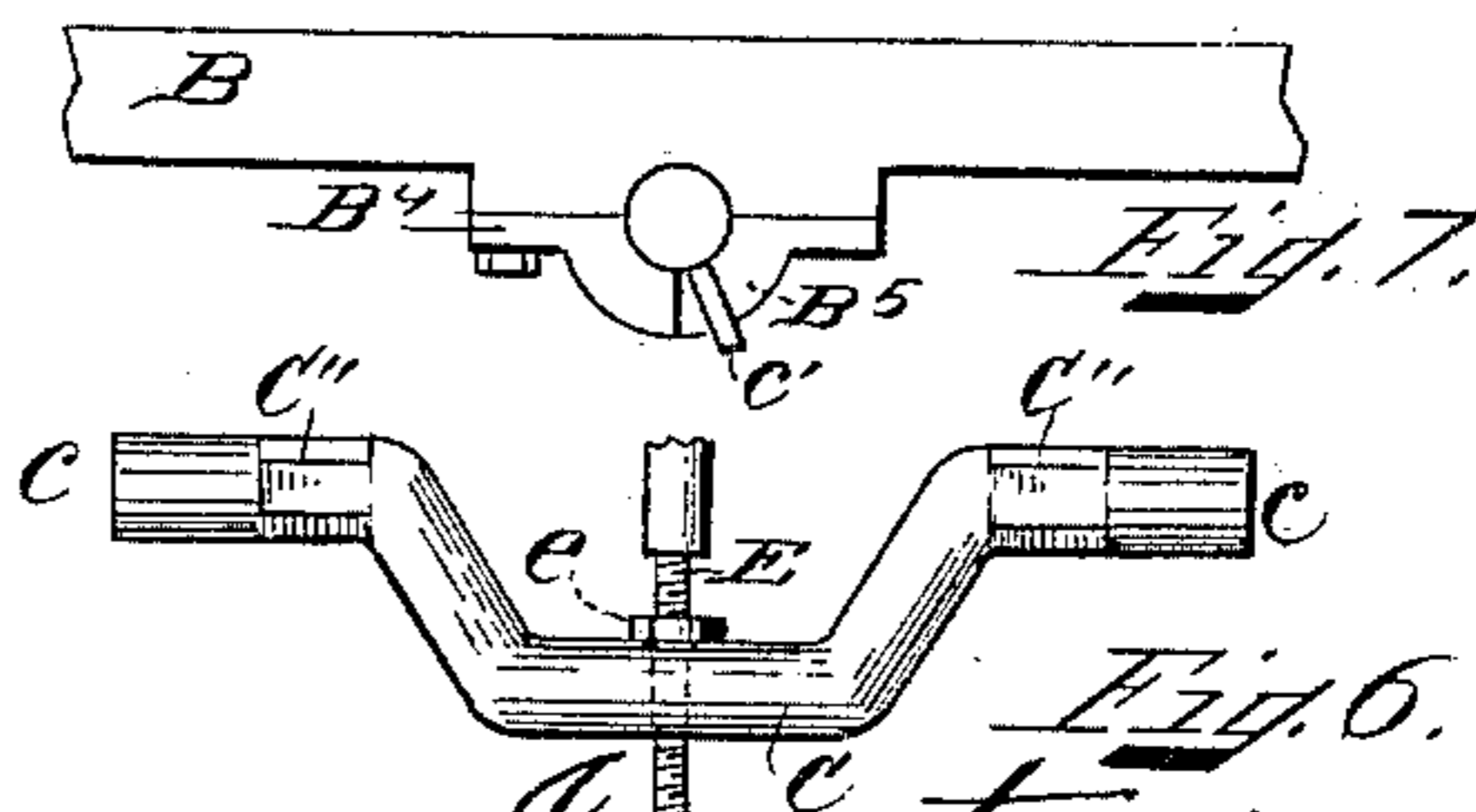


Fig. 6.

Inventors:
James H. Wood and
Edward D. Woods
by Alban Andrieu, their atty.

UNITED STATES PATENT OFFICE.

JAMES H. WOOD AND EDWARD D. WOODS, OF LEBANON, NEW HAMPSHIRE,
ASSIGNORS TO SAID JAMES H. WOOD, TRUSTEE.

LASTING-JACK.

SPECIFICATION forming part of Letters Patent No. 440,526, dated November 11, 1890.

Application filed June 13, 1890. Serial No. 355,331. (No model.)

To all whom it may concern:

Be it known that we, JAMES H. WOOD and EDWARD D. WOODS, citizens of the United States, and residents of Lebanon, in the county of Grafton and State of New Hampshire, have jointly invented new and useful Improvements in Shoe-Lasting Devices, of which the following, taken in connection with the accompanying drawings, is a specification.

10 This invention relates to improvements in boot and shoe lasting devices; and it has for its object to enable an operator to last a boot or shoe more conveniently and rapidly than heretofore has been done, or for the purpose of temporarily tacking the upper to the last preparatory to lasting the same on a boot or shoe lasting machine, and it is carried out as follows, reference being had to the accompanying drawings, wherein—

20 Figure 1 represents a perspective view of the invention, showing a last in position thereon. Fig. 2 represents a longitudinal section of the device, showing the boot or shoe upper in position on the last during the lasting operation. Fig. 3 represents a plan view of the device, showing the last as swung to one side for the purpose of tacking or lasting one of the ball sides of the upper. Fig. 4 represents a detail bottom view of a portion of the frame, showing a portion of the rocking carrier and spring for holding it in an adjusted position relative to the said frame. Fig. 5 represents a cross-section on the line X X, shown in Fig. 4. Fig. 6 represents a detail side elevation of the rocking carrier, and Fig. 7 represents a detail sectional view of one of the bearings in which it is journaled.

40 Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In Fig. 1, A represents a bench or table to which the improved lasting device is secured.

50 B represents the frame, which may be made of wood or metal, said frame being preferably secured to the bench or table A by fastening-bolts *b b* or equivalent means. The frame B has a perforation *B'*, adapted to receive the lower part of the last, so as to permit it and the upper held thereon to be turned freely on the jack-spindle without coming in

contact with the interior wall of such perforation. The frame B has at its forward end a cut-away portion *B''*, communicating with the main perforation *B'*, for the purpose of receiving the instep or toe portion of the last and its upper while tacking or lasting the heel portion thereof.

The interior surface of the cut-away portion *B''*, as well as a part of the interior surface of the perforation *B'*, is covered with an elastic packing or cushion *B³*, preferably made of india-rubber, molded to the interior surfaces of said parts and secured thereto by suitable adhesive substance or in any other practical or convenient manner.

C represents the last-carrier, having cylindrical ends or trunnions *c c*, journaled in bearings *B⁴ B⁴*, attached to or forming a part of the frame B. One (or both) of the trunnions *c* is provided with a stop-pin *c'*, going through a slotted perforation *B⁵* in the bearing *B⁴*, for the purpose of limiting the forward rocking motion of the carrier C and the last held upon the spindle thereof.

75 We do not confine ourselves, however, to the particular stop shown for limiting the rocking motion of the last-carrier.

The last-carrier C is preferably made with a downwardly-projecting bend or crank *C'* at its midway portion to permit the last to be placed low enough on the last-spindle so as to enable it to be manipulated freely in all necessary directions during the tacking or lasting operation and without causing injury to the top or ankle part of the upper while it is being tacked or lasted.

85 Inside of the trunnions *c c* the last-holder C is made with polygonal portions *C'' C''*, against which the free ends of springs *D D* are brought to bear for the purpose of adjusting the position of the last-holder and its last and to retain said parts temporarily in any desired position after being adjusted. One of said springs is fully shown in Figs. 4 and 5. To the last-holder C is adjustably secured the last-spindle E, which is preferably made screw-threaded in its lower end and screwed through a screw-threaded lateral perforation in the shaft or holder C and provided with a check-nut *e* or equivalent device for securing the spindle E to the last-holder

after it has been adjusted. By having the spindle E adjustable, as described, the device is made equally useful for large and small lasts. The rear top portion of the last L has a cylindrical recess adapted to receive the upper end of the spindle E, on which the last is supported, and on which it may be freely turned in either direction.

In connection with this improved lasting device I use a longitudinally and laterally adjustable toe-support, which is constructed and arranged as follows: It consists of a post F, located on the rear top portion of the frame B, which post has in its lower end a screw-threaded recess adapted to receive the upper end of a headed screw-threaded bolt *f*, which passes through and is adjustable in a slotted perforation B⁶ in the frame B without being allowed to turn around its axis. The upper end of the post F has a perforation or recess, in which is adjustably secured the shank F' of the toe piece or rest F'', which shank is preferably secured to the post F by means of a set-screw *f'* or equivalent device after being adjusted thereto.

F³ is a leather or india-rubber cushion secured in a suitable manner to the toe-rest F'', so as to prevent the toe portion of the upper from injury or abrasion while resting on the toe-supporting device.

In using the device we proceed as follows: The fitted upper U is first put over the spindle E and the last L placed on the said spindle, as shown in Fig. 2. The inner sole I is tacked on the last while its toe portion is preferably resting on the toe-support F'', as shown in Fig. 1. The last is then swung toward the operator, so that its toe portion is free from the said toe-support F'', as shown in Fig. 2. The upper is then fitted to the last and drawn over the toe part and there tacked, after which the last is rocked forward and swung about half a revolution on its spindle to enable the heel portion of the upper to be centered and tacked. The last is then swung to one side about one-quarter of a revolution on the spindle E, as shown in Fig. 3, and caused to rest against the cushion B³ on one of the cheeks of the frame B, when one of the ball sides is tacked. The last is then swung to a diametrically-opposite position against the opposite cheek and its cushion, when the other ball portion of the upper is tacked and the corresponding shank portion lasted, after which the last is again swung to the position shown in Fig. 3 and the remaining shank

portion is lasted. The shoe-upper and last are then swung to a central position and the toe portion lasted, after which the last is swung forward and turned about one-half of a revolution on its spindle E to permit the heel portion to be lasted. The whole of such tacking or lasting operation is done without removing the last and upper from the spindle E.

The device may also be used in connection with a lasting-machine, in which case the upper is merely temporarily tacked in position on the last and afterward lasted in a lasting-machine, if so desired.

What we wish to secure by Letters Patent, and claim, is—

1. In a lasting device, the combination, with a hollow frame having cushions, of a last-support journaled in bearings on said frame and having a rocking adjustment in said bearings, a vertically-adjustable spindle carried by said support, a last circularly adjustable thereon, and a toe-support having independent vertical and horizontal adjustments, substantially as described.

2. In a lasting device, the combination, with a hollow cushioned frame and a last-support having a rocking adjustment in said frame, of a stop device for limiting the rocking motion of the last-support, a spring device for holding the last-support in its adjusted position, and a toe-support having independent vertical and horizontal adjustments, substantially as described.

3. A lasting device consisting of the frame provided with a cushioned recess B', having a cut-away portion B'', a last-support C, journaled and having a rocking adjustment in said frame, a stop to limit the rocking movement of said support and a spring to retain the same in its various adjusted positions, a spindle vertically adjustable on said support, a last on said spindle, a toe-support, means for vertically adjusting said toe-support, and means independent thereof for horizontally adjusting the same, substantially as described.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, on this 7th day of June, A. D. 1890.

JAMES H. WOOD.
EDWARD D. WOODS.

Witnesses:

WILLIAM A. CHURCHILL,
WILLIAM S. CARTER.