No. 646,829. Patented Apr. 3, 1900.

P. HÉBERT.

HEEL BREASTING MACHINE.

(Application filed Dec. 21, 1899.)

(No Model.)

FIG. 1.

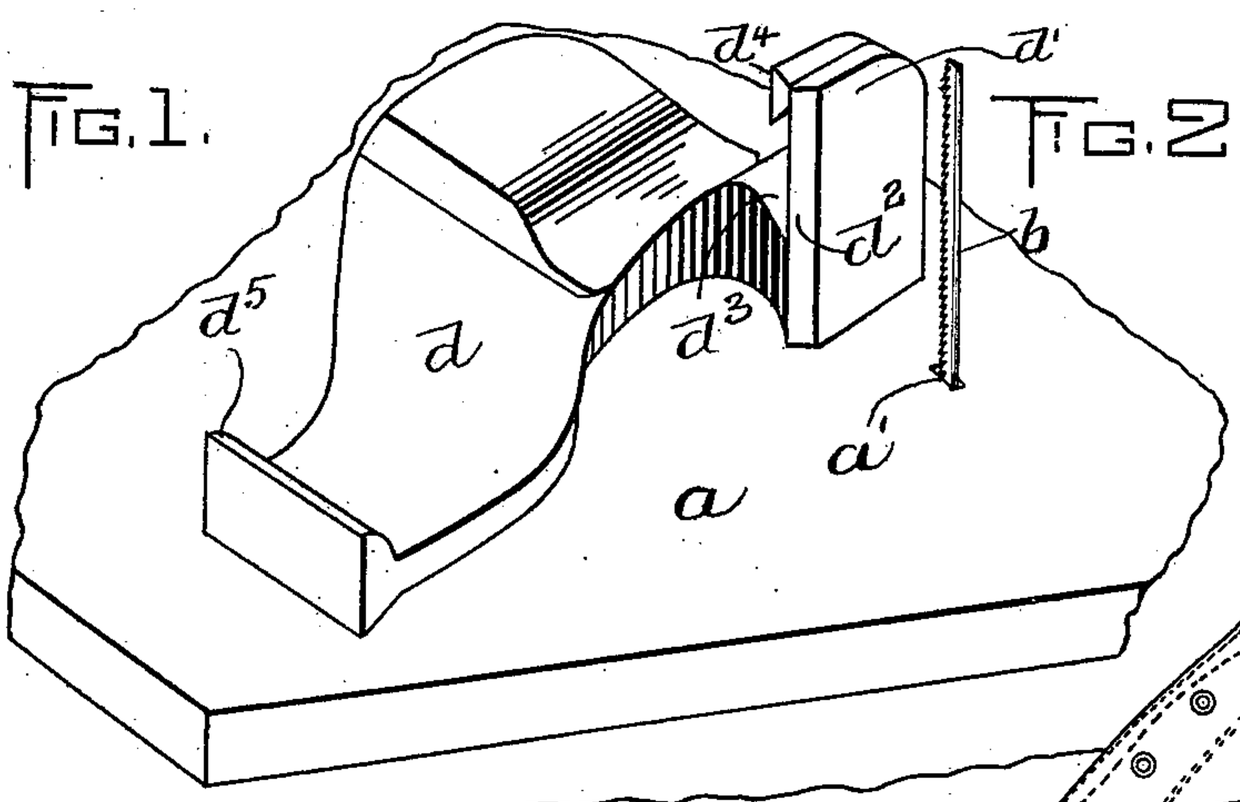

FIG. 2.

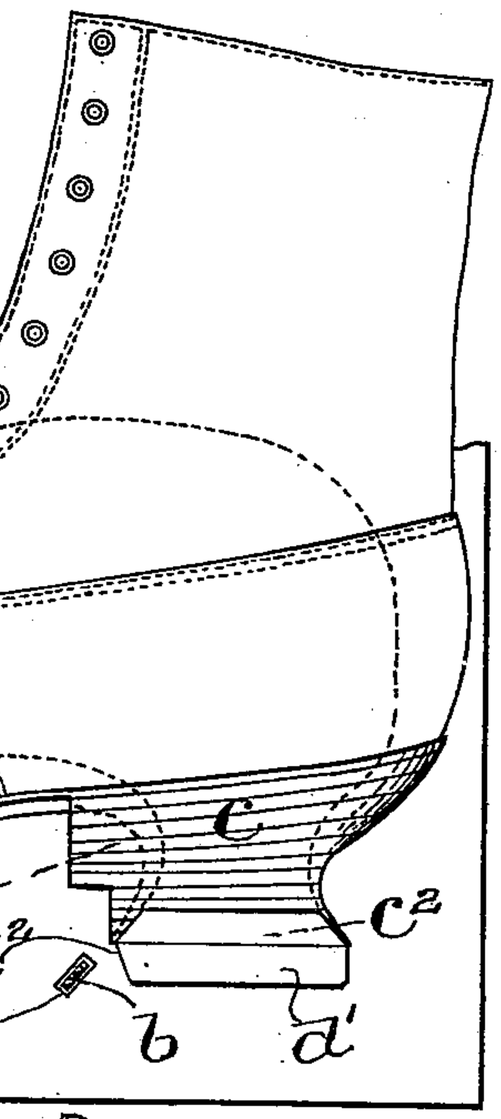

FIG. 5.

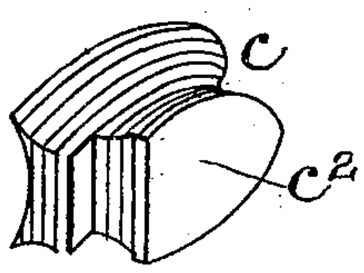

FIG. 6.

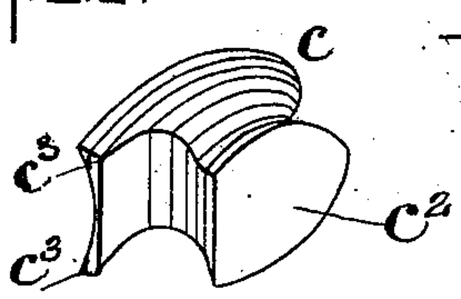

FIG. 3.

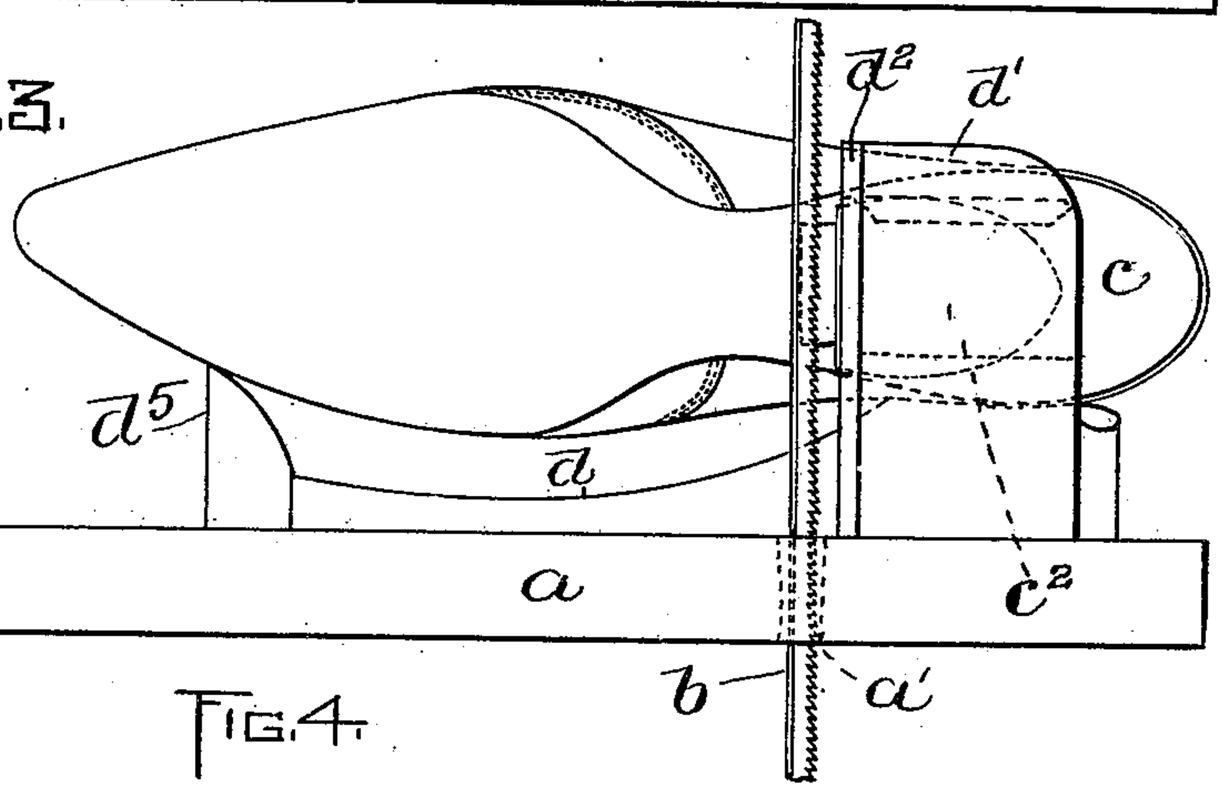

FIG. 7.

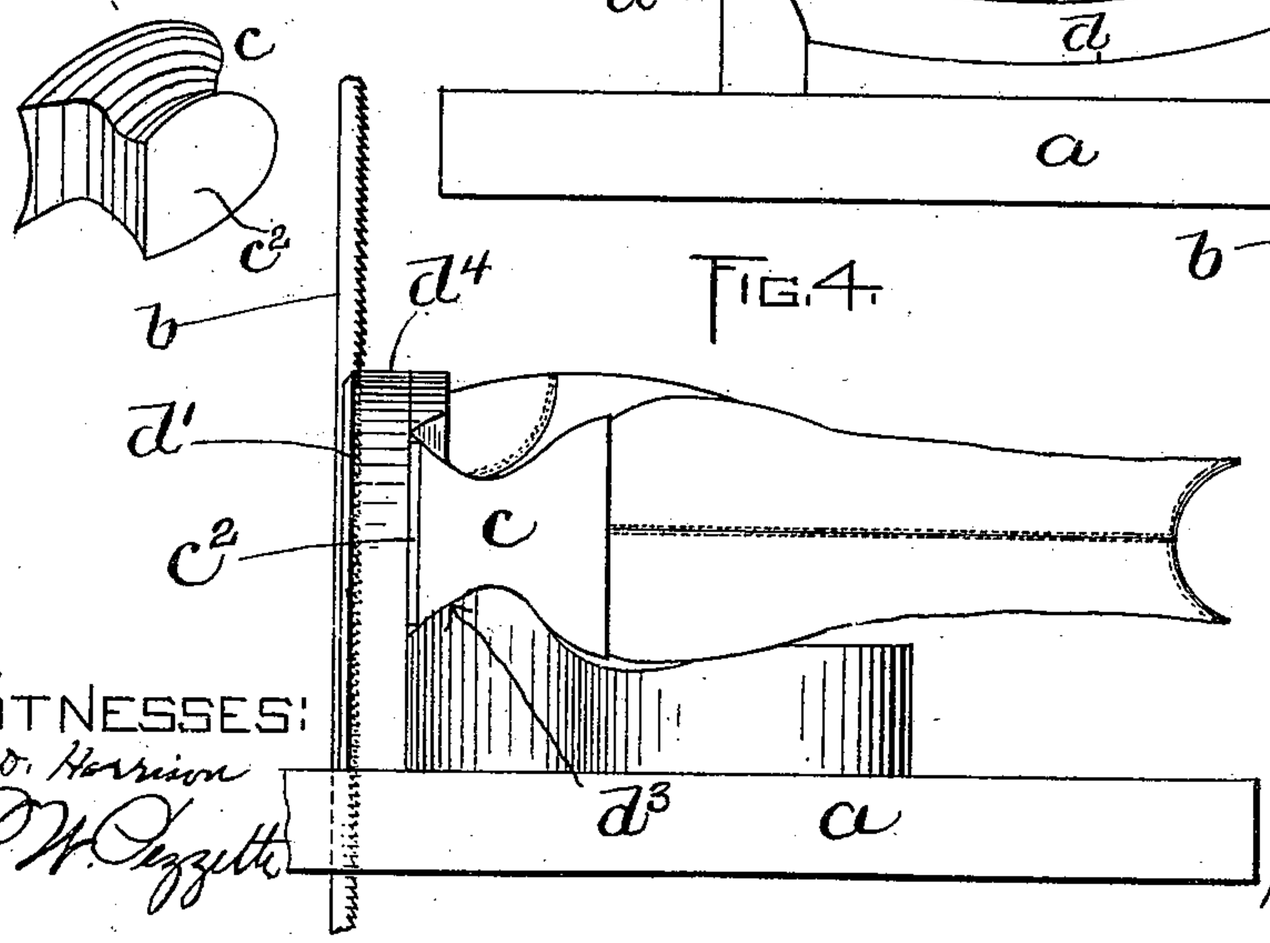

FIG. 4.

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UNITED STATES PATENT OFFICE.

PLACIDE HÉBERT, OF LYNN, MASSACHUSETTS, ASSIGNOR TO CUSHMAN & HÉBERT, OF SAME PLACE.

HEEL-BREASTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 646,829, dated April 3, 1900.

Application filed December 21, 1899. Serial No. 741,095. (No model.)

To all whom it may concern:

Be it known that I, PLACIDE HÉBERT, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Heel-Breasting Machines, of which the following is a specification.

This invention has for its object to provide simple and effective means for forming a curved breast on a French heel composed of leather lifts, the heel being nailed to the shoe before trimming and breasting, then trimmed to finish its side and rear portions, leaving the breast, rough and then breasted, the breast being curved rearwardly and downwardly from the shank portion of the sole to the top lift of the heel.

The invention consists in a heel-breasting machine comprising a narrow flexible saw, preferably a band-saw, a table or support substantially at right angles with the saw, and a slide or carrier adapted to move horizontally on the table and having an upper surface formed to support a boot or shoe placed sidewise or bearing at one side on the slide, the form of the slide being such that the operator can turn or adjust the shoe while it rests on the slide as may be required to bring the front edge of the top lift of the heel to a position substantially at right angles with the table and parallel with the operative portion of the saw, the said top lift being died out before application to the heel, so that its bottom surface has the desired contour, its front edge forming a guide by which to start the saw in the operation of forming the breast.

The invention also consists in certain improvements relating to the slide or carrier, all of which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of a heel-breasting machine embodying my invention. Fig. 2 represents a top view showing the rest with a lasted shoe supported thereon, the heel of the shoe being trimmed, but not breasted. Fig. 3 represents a side view of the rest with the shoe in place thereon. Fig. 4 represents an end view of the same. Fig. 5 represents a perspective view of the heel before the breasting operation. Fig. 6 represents a similar view after the heel has been acted on by the saw. Fig. 7 represents a view similar to Fig. 6, showing the breast after the corners shown in Fig. 6 have been trimmed off.

The same reference characters indicate the same parts in all the figures.

In the drawings, *a* represents a substantially-horizontal table or support, and *b* represents a band-saw which is movable at right angles with the table and preferably passes through a slot *a'* therein. The saw may be supported and operated by any suitable means.

The heel *c* to be breasted is composed of a series of lifts of leather or other suitable material assembled to form a blank heel having sufficient surplus material at the front end to enable the heel to be breasted by sawing it along the curved line *c'*. (Shown in Fig. 2.) The blank heel is nailed to the shoe, and a top lift c^2, which has been died out to the proper shape, is blind-nailed to the heel, and the heel is then trimmed to impart the desired form to its side and rear portions, leaving the front end or breast rough and projecting, as shown in Figs. 2 and 5. I utilize the front or breast end of the top lift as a guide in commencing the breasting operation by means of the saw *b*, and to enable me to do this to the best advantage I provide a rest composed of a substantially-flat body portion *d*, adapted to bear upon and be moved about freely upon the table *a*, said rest being adapted to support the shoe when the latter is turned upon its side or held sidewise and to permit the shoe to be turned or adjusted by the hands of the operator, as may be required to bring the front edge of the top lift c^2 to a vertical position or at right angles with the table *a*, so that it will stand parallel with the acting portion of the saw when properly presented thereto. In breasting the heel the slide is moved to the position shown in Fig. 2 relatively to the saw and is moved toward the latter and manipulated by the operator to cause the saw to cut through the heel on the curved line *c'*, thus forming a curved breast which joins the bottom of the shank of the shoe and forms a continuation thereof. The heel after being subjected to the action of the saw presents the appearance indicated

in Fig. 6 and has corner portions c^3, which may be subsequently trimmed off by a hand-knife or by any other suitable means, as shown in Fig. 7.

The slide a is preferably provided with a guide or gage d', the vertical edge d^2 of which is adapted to coincide with the front edge of the top lift c^2 when the shoe is properly adjusted on the slide, said gage indicating to the operator the proper position of the heel to cause the saw to properly breast the heel. The slide is also provided with a side rest d^3, formed to bear on the under side of the heel, said rest being curved on its upper surface to conform to the curvature of the side of the heel, as shown in Fig. 4, the surface of the rest d^3 forming an acute angle with the inner side of the gage d', in which angle the bottom portion of the heel fits closely. I prefer to provide a top side-rest d^4, formed to coöperate with the gage d' in engaging the upper side of the heel, as shown in Fig. 4.

d^5 represents a rest formed to support the lower edge of the sole, as indicated in Fig. 3. If desired, the rest d^5 may be adjustable toward and from the gage d' to adapt the slide to shoes of different sizes, although in practice I have not found this necessary.

It will be seen that the shoe and its heel can be quickly applied to and removed from the rest and when in place on the rest is firmly supported in the proper position to receive the action of the breasting-saw. It is preferable to mark the heel, before breasting, along the curved line c', to guide the operator in presenting the heel to the saw.

The shoe is not rigidly clamped to the slide, but is free to be turned or adjusted thereon by the hands of the operator, so that the heels of shoes of different sizes and shapes can be breasted by the aid of one slide, the operator adjusting the shoe upon the slide until the front edge of the top lift is in the desired vertical position and then presenting it to the saw.

This improved breasting-machine is free from liability to injure the heel in the operation of breasting and is easily kept in working order.

I claim—

1. A heel-breasting machine comprising a saw, a table or support substantially at right angles with the saw, and a carrier movable horizontally on the table and having an upper surface which affords a support on which a boot or shoe, placed sidewise, is movable or adjustable by the hands of the operator, whereby a shoe of any size and shape supported by the slide may be adjusted to make the front edge of the top lift of its heel parallel with the operative portion of the saw.

2. A heel-breasting machine comprising a saw, a table or support substantially at right angles with the saw, and a carrier movable horizontally on the table and having an upper surface which affords a support on which a boot or shoe, placed sidewise, is movable or adjustable by the hands of the operator, and a vertical gage adapted to guide the operator in giving the front edge of the top lift a vertical position parallel with the operative portion of the saw.

3. A slide or carrier movable horizontally on a table and having an upper surface on which a boot or shoe, placed sidewise, is movable or adjustable by the hands of the operator, whereby a shoe of any size and shape supported by the slide may be adjusted to bring the front edge of the top lift to a predetermined position.

4. A slide or carrier movable horizontally on a table and having an upper surface on which a boot or shoe, placed sidewise, is movable or adjustable by the hands of the operator, and a vertical gage affixed to the slide and adapted to guide the operator in properly positioning the front edge of the top lift of a boot or shoe heel.

5. A slide or carrier movable horizontally on a table and having a tread-rest formed to bear on the tread-surface of a French heel when the latter is turned on its side, and a side-rest formed to bear on the under side of said heel.

6. A slide or carrier movable horizontally on a table and having a tread-rest formed to bear on the tread-surface of a French heel when the latter is turned on its side, and top and bottom side-rests formed to bear on the top and bottom sides of the heel.

In testimony whereof I have affixed my signature in presence of two witnesses.

PLACIDE HÉBERT.

Witnesses:
G. H. CUSHMAN,
L. A. ROWLEY.