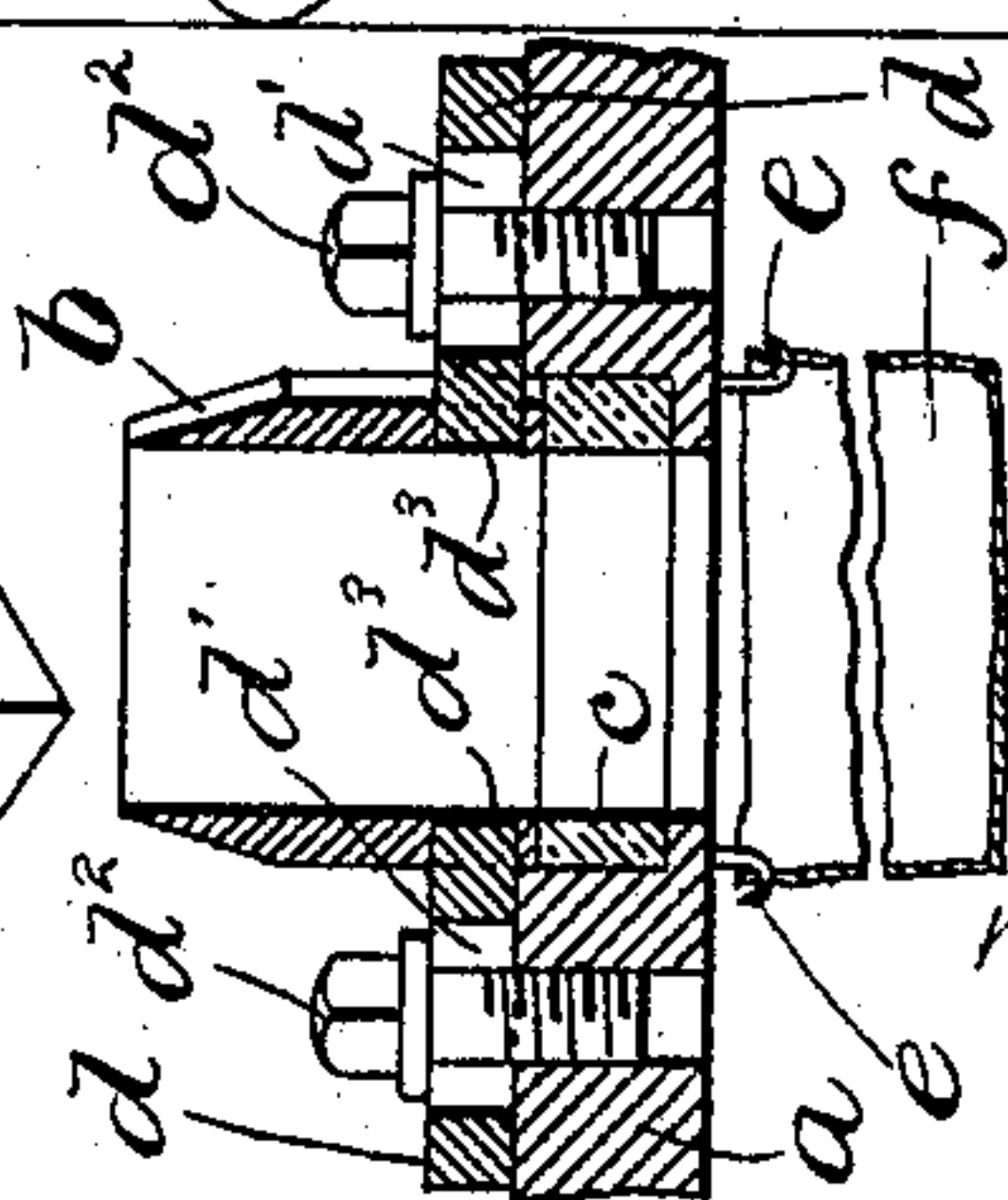
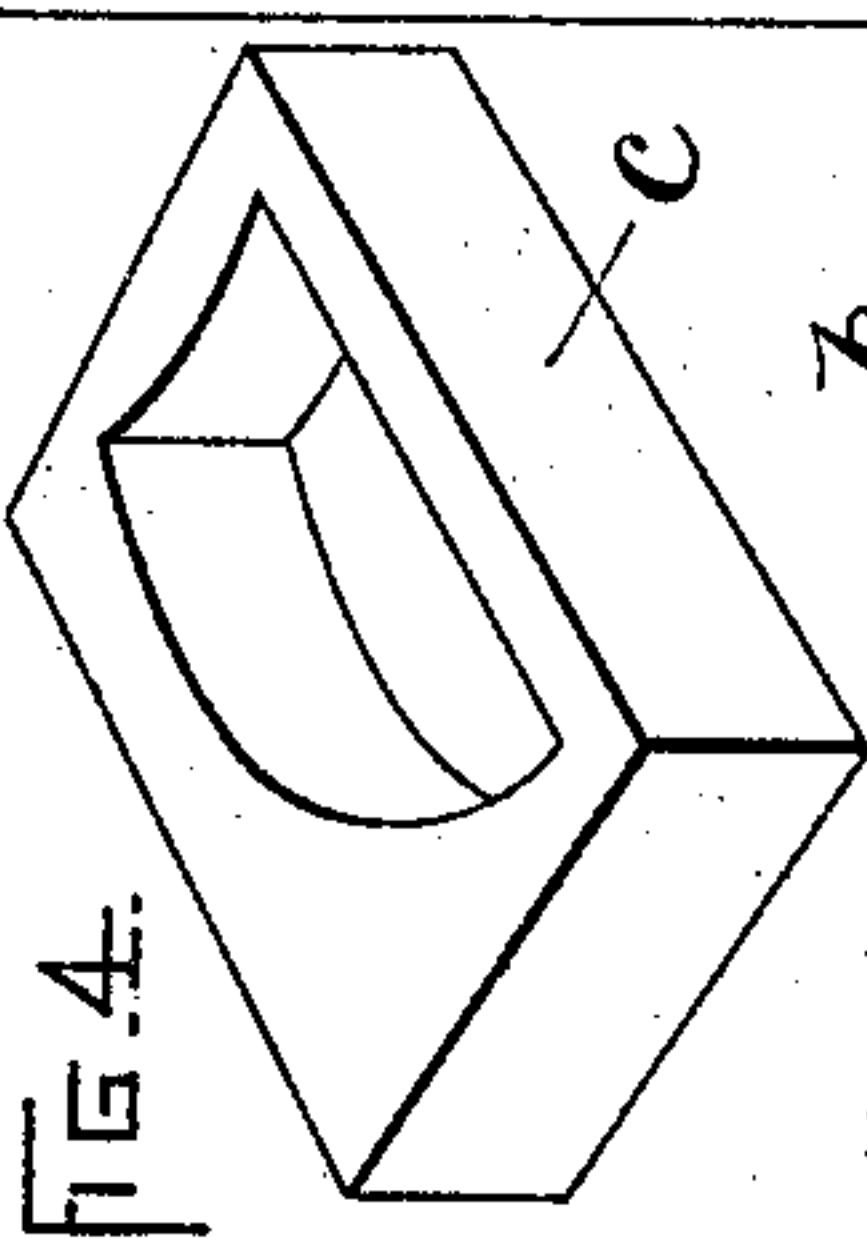
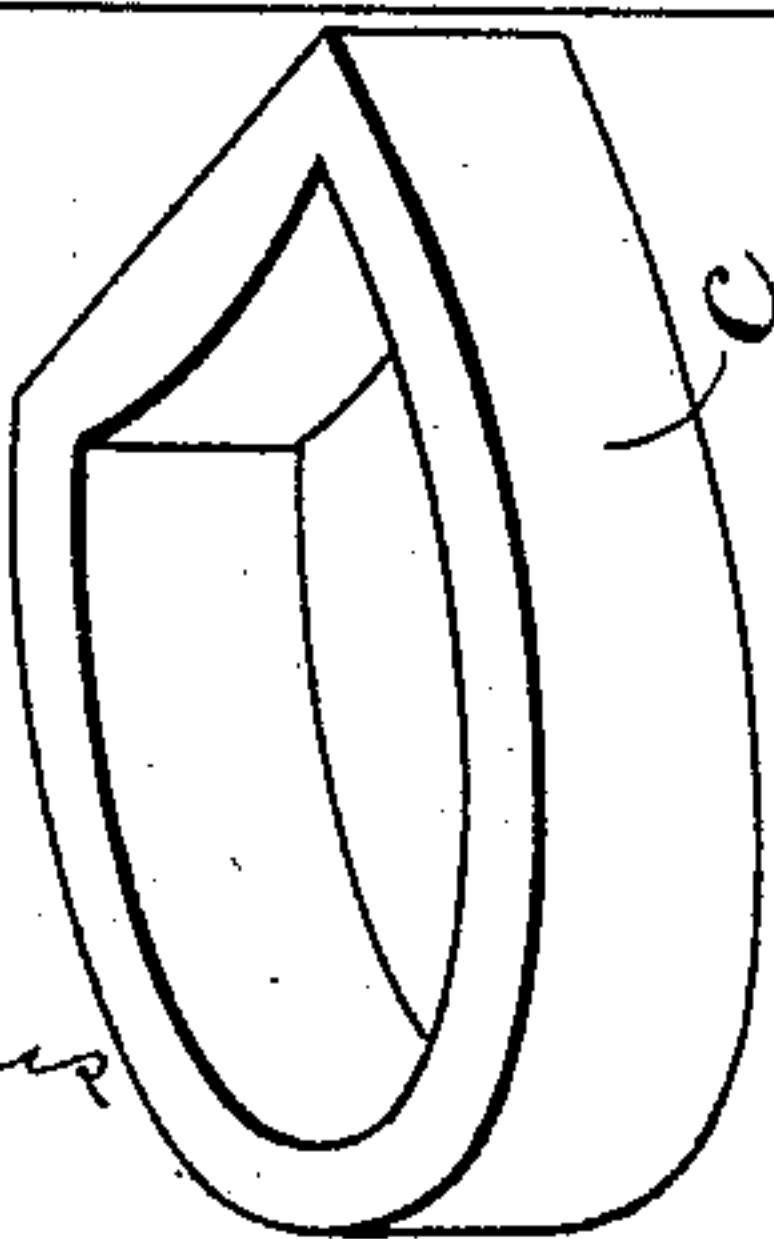
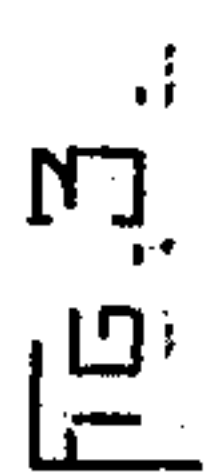
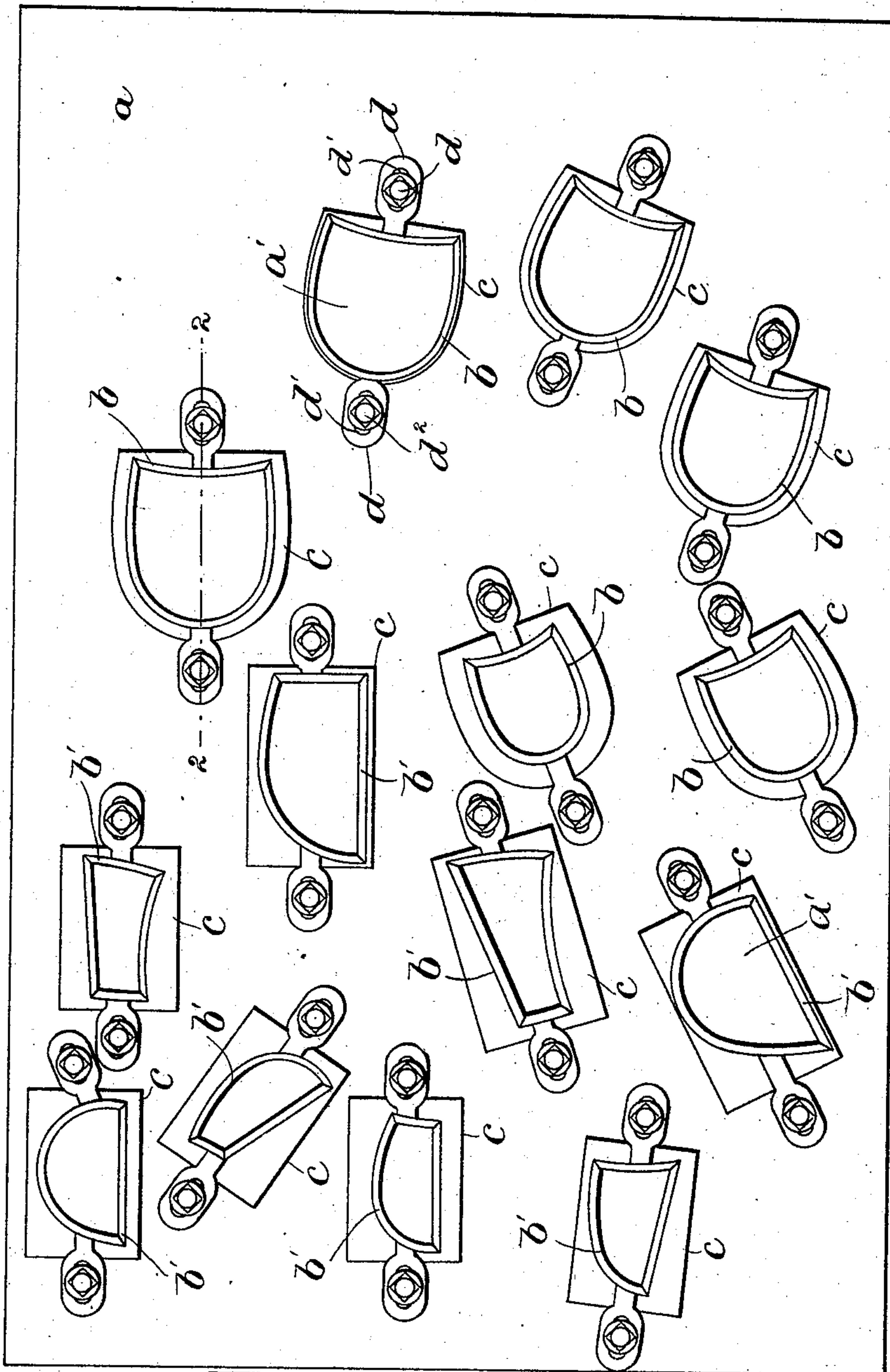


(No Model.)

W. P. BOSWORTH.  
HEEL LIFT CUTTING APPARATUS.

No. 576,023.

Patented Jan. 26, 1897.



INVENTOR:  
W. P. Bosworth  
By *James L. Lundy*  
Attys.

WITNESSES:  
A. D. Harrison.  
A. D. Adams



# UNITED STATES PATENT OFFICE.

WENDELL PHILLIPS BOSWORTH, OF BROCKTON, MASSACHUSETTS.

## HEEL-LIFT-CUTTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 576,023, dated January 26, 1897.

Application filed January 25, 1896. Serial No. 576,753. (No model.)

*To all whom it may concern:*

Be it known that I, WENDELL PHILLIPS BOSWORTH, of Brockton, in the county of Plymouth and State of Massachusetts, have  
5 invented certain new and useful Improvements in Heel-Lift-Cutting Apparatus, of which the following is a specification.

This invention relates to apparatus for cutting heel-lifts and parts of lifts from pieces of  
10 sole-leather by the use of cutting-dies, upon which the leather is forced by means of a mallet or other instrument capable of pressing the latter down upon the cutting edge of the die, the latter being affixed to a bed or table, with  
15 its cutting edge projecting upwardly therefrom.

The invention has for its object to provide improved means for detachably connecting the dies with the table, so that different dies  
20 may be used interchangeably at the same point on the table or at different points.

The invention consists in the several improvements which I will now proceed to describe and claim.

25 Of the accompanying drawings, forming a part of this specification, Figure 1 represents a top plan view of a lift-cutting apparatus embodying my invention. Fig. 2 represents a section on line 2 2 of Fig. 1. Figs. 3 and 4  
30 represent perspective views of two of the die-beds shown in Fig. 1.

The same letters of reference indicate the same parts in all the figures.

In cutting out heel-lifts from pieces of sole-leather the operator has to select from a miscellaneous assortment of pieces of various sizes and shapes such pieces as will cut to advantage in forming entire lifts and other pieces which will cut to advantage in forming  
40 parts of lifts, a number of dies being employed, some of which are shaped to cut whole lifts of various sizes, while others are formed to cut parts of lifts of various sizes. The dies are commonly placed upon a suitable support,  
45 the cutting edge projecting upwardly, and the operator with his left hand selects a piece of leather, holds it over one of the dies, and forces the leather down on the die with a mallet held in his right hand.

50 I prefer to arrange all the dies upon a single plate or table *a*, and I distribute or locate the dies so that the larger dies, which cut the

whole lifts, are arranged at the right-hand end of the table, or farthest from the point where the accumulation of pieces is located, 55 this being naturally at the left-hand end in order that they may be conveniently selected by the left hand of the operator, the smaller dies, which cut the parts of lifts, being located at the left-hand end of the table near the pile 60 of pieces.

The preferred arrangement of dies is shown in Fig. 1, in which *b b b* represent the series or groups of dies which are formed to cut whole lifts of different sizes, there being a 65 separate die *b* for each size. The greater number of these dies are arranged in a curved row or line extending from a point near the front edge of the table across the same and to a point near the rear edge, one of the said dies 70 being here shown as located within the curve of the row formed by the other dies, the entire group occupying the right-hand portion of the table.

*b' b' b'* represent the lift-section-cutting dies, 75 each being formed to cut a part of a complete lift, said dies *b'* being arranged in pairs, the sections cut by each pair constituting a complete lift. The dies *b* are arranged to occupy the left-hand portion of the table, so that they 80 are nearer the accumulation of pieces, which, as above stated, are invariably placed at the operator's left, than the dies *b*.

A space is provided at the left of each cutting-die sufficient to enable the operator's 85 hand to occupy the desired position in presenting a piece of leather to the die without coming in contact with adjacent dies.

The plate or table *a* is provided with a series of orifices formed to permit the passage 90 through the table of the lifts cut by the several dies, there being an orifice *a'* for each die. In each orifice *a'* I place a die-bed *c*, which is formed to support one of the cutting-dies, the die-bed having an orifice corresponding to the shape of the interior of the die. 95 The die-plates are loosely inserted in the orifices in the plate or table. The dies rest loosely upon the die-beds and are detachably secured to the plate or table by independent 100 means, such as lugs *d d*, having slots *d' d'*, and attached to the table by bolts *d<sup>2</sup>*, passing through said slots into tapped holes in the table, the lugs being formed to enter orifices *d<sup>3</sup>*,



formed in the sides of the dies. When the bolts  $d^2$  are loosened, the lugs  $d$  may be moved endwise to withdraw them from the orifices in the dies, thus releasing the latter. I am thus enabled to readily remove and replace the dies, and by the employment of the removable die-beds I am enabled to use interchangeably dies of different sizes at the same part of the bed, the die-beds being interchangeable with the dies.

Referring to Fig. 2, it will be readily understood that by substituting for the die-bed shown one having a smaller opening a smaller die can be supported on said bed, although its walls may be no thicker than that shown in said figure.

The die-beds  $c$ , which support the whole-lift-cutting dies  $b$ , are preferably heel-shaped, corresponding to the general form of the said dies, as shown in Fig. 3, while the beds which support the dies  $b'$  are preferably rectangular in their external shape, their orifices corresponding to the shape of the interior of the dies. (See Fig. 4.)

The bottom of the table is provided with hooks  $e e$ , arranged in pairs under the die-openings to support bags  $f$  or other recepta-

cles to catch the pieces cut out by the dies, the product of each die being thereby kept separated from the others and in condition for ready removal from the machine.

I claim—

1. A heel-lift-cutting apparatus comprising a plate or table having a series of orifices, die-beds removably inserted in said orifices, dies resting on said beds, and means for detachably securing the dies in position above the beds.

2. A heel-lift-cutting apparatus comprising a plate or table having a series of orifices, die-beds removably inserted in said orifices, dies resting on said beds and provided with orifices, and lugs having slotted shanks attached to the plate by bolts on which said shanks are movable, the lugs being formed to enter the orifices in the dies.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 18th day of January, A. D. 1896.

WENDELL PHILLIPS BOSWORTH.

Witnesses:

ARTHUR C. KENDALL,  
GEORGE W. FOLSOM, Jr.