

No. 608,396.

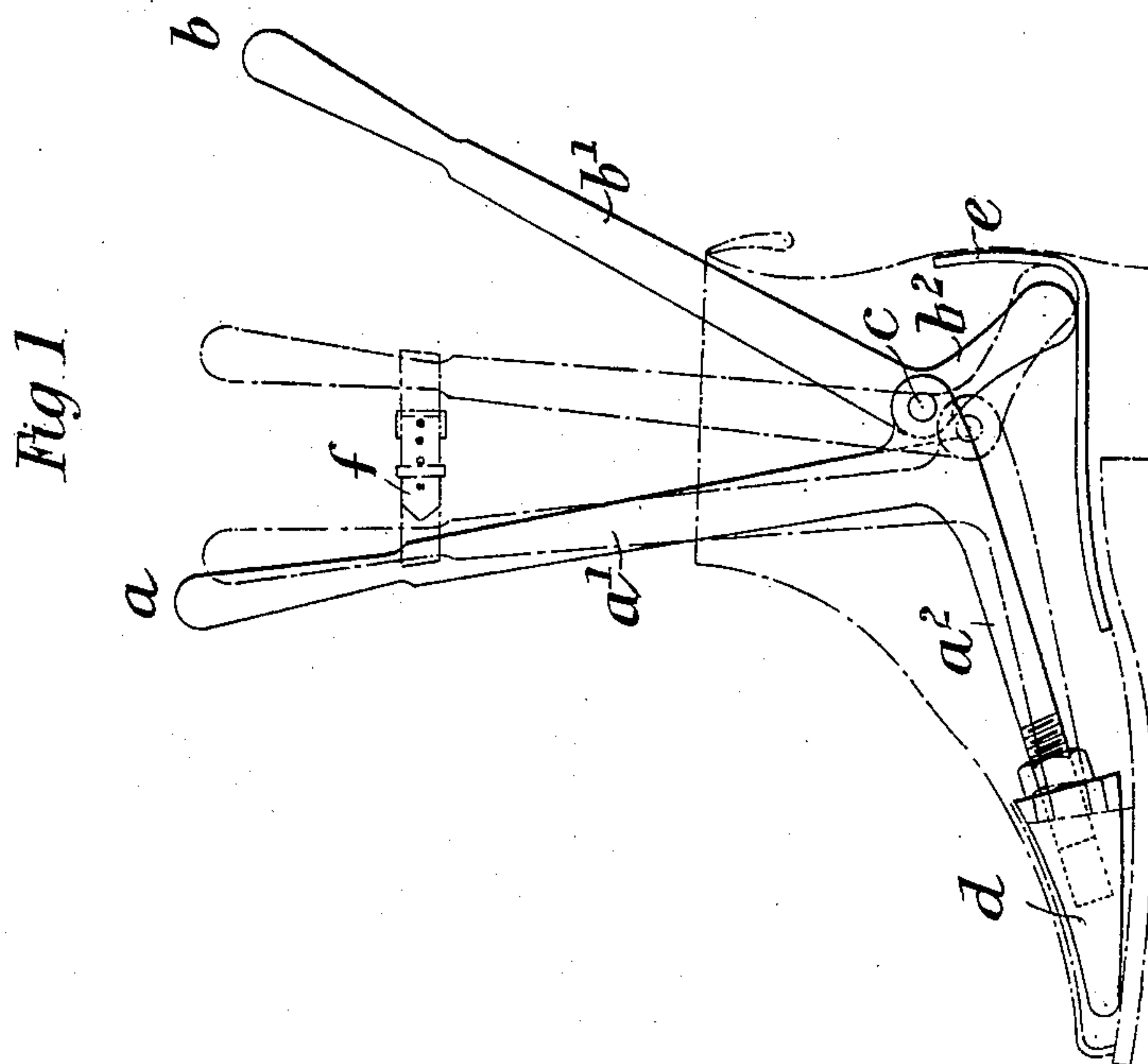
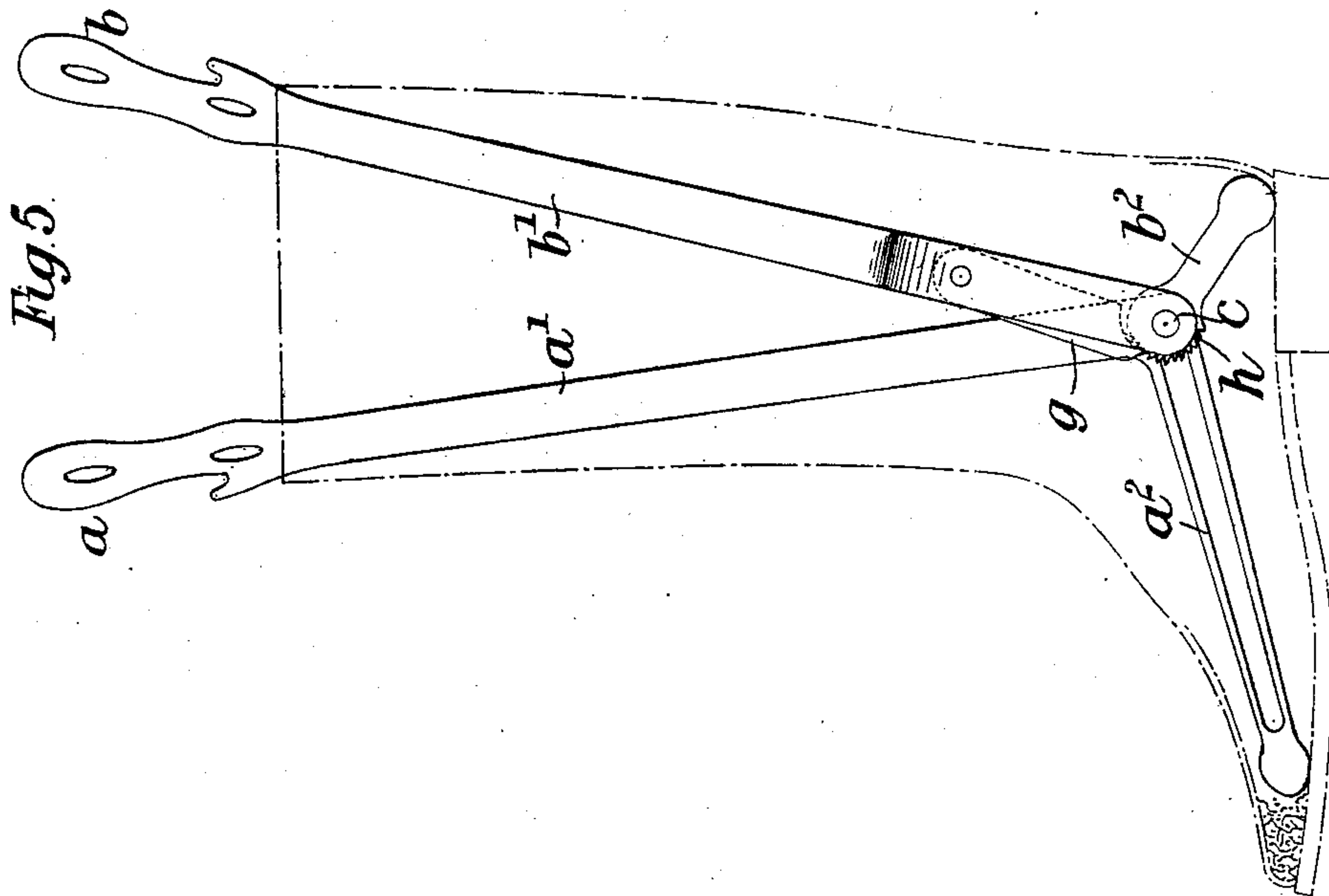
Patented Aug. 2, 1898.

P. J. PARMITER.  
BOOT TREE OR STRETCHER.

(Application filed Nov. 8, 1897.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses.

J. D. Kingsbury

& A. Pauberschmidt,

Philip Joseph Parmiter  
By Whitaker & Twest atty.

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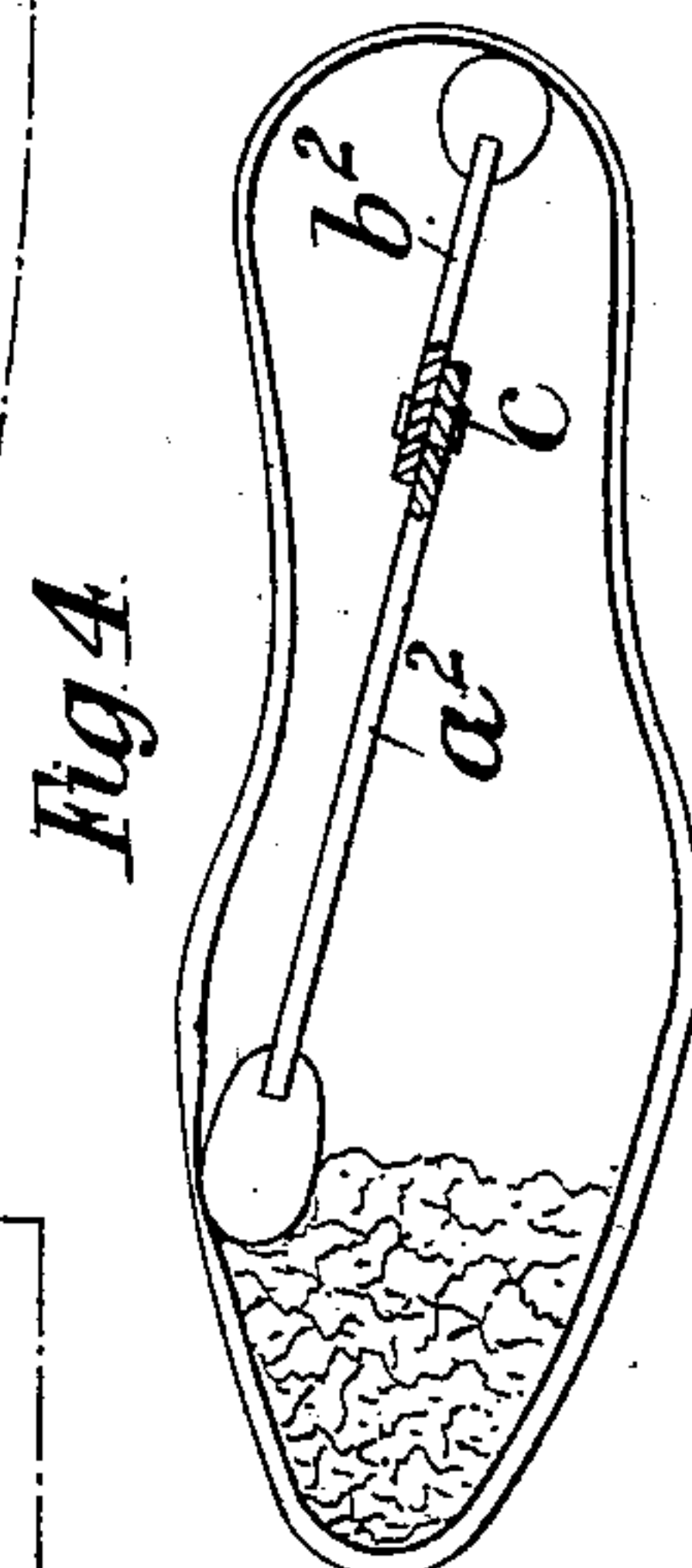
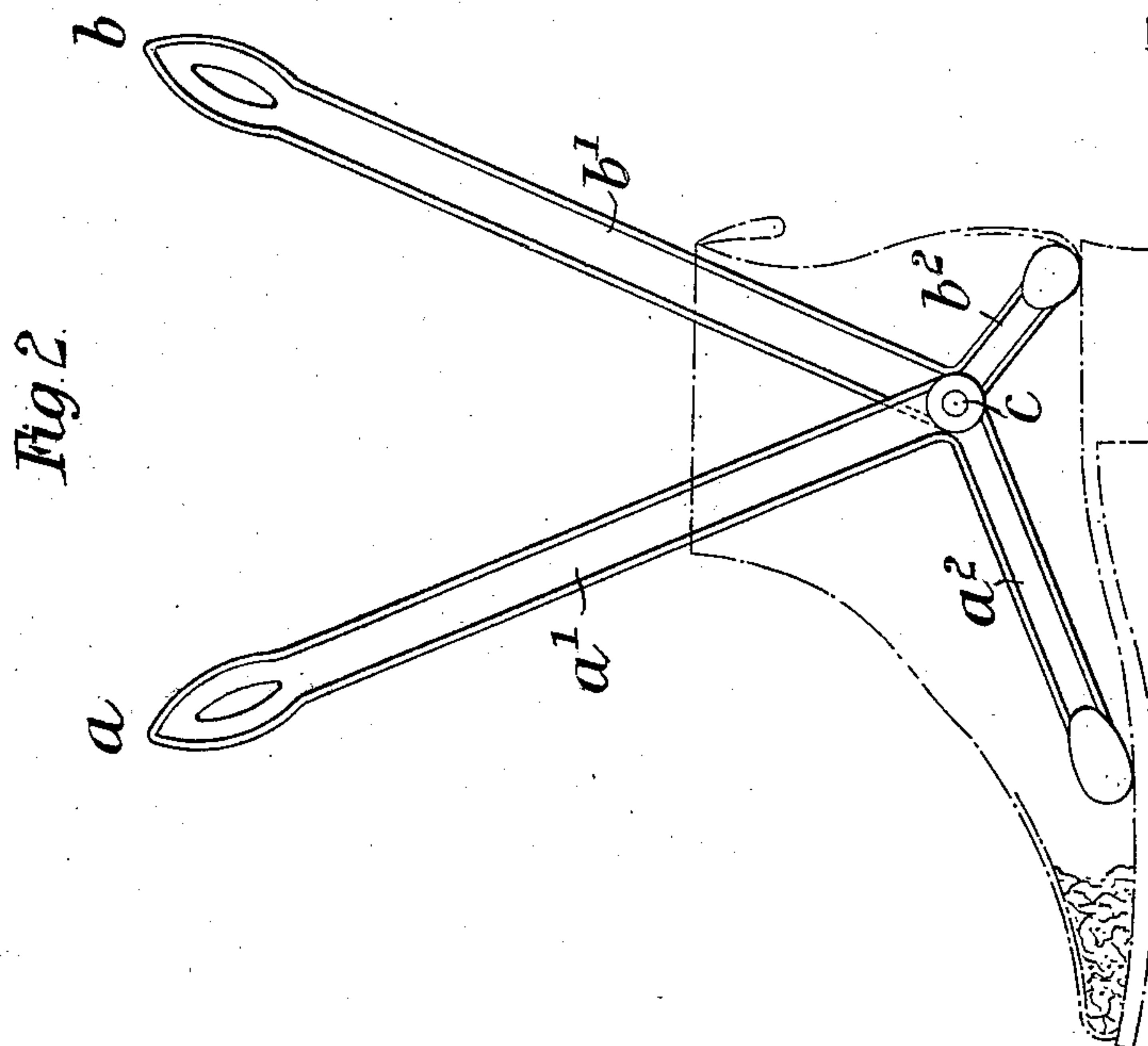
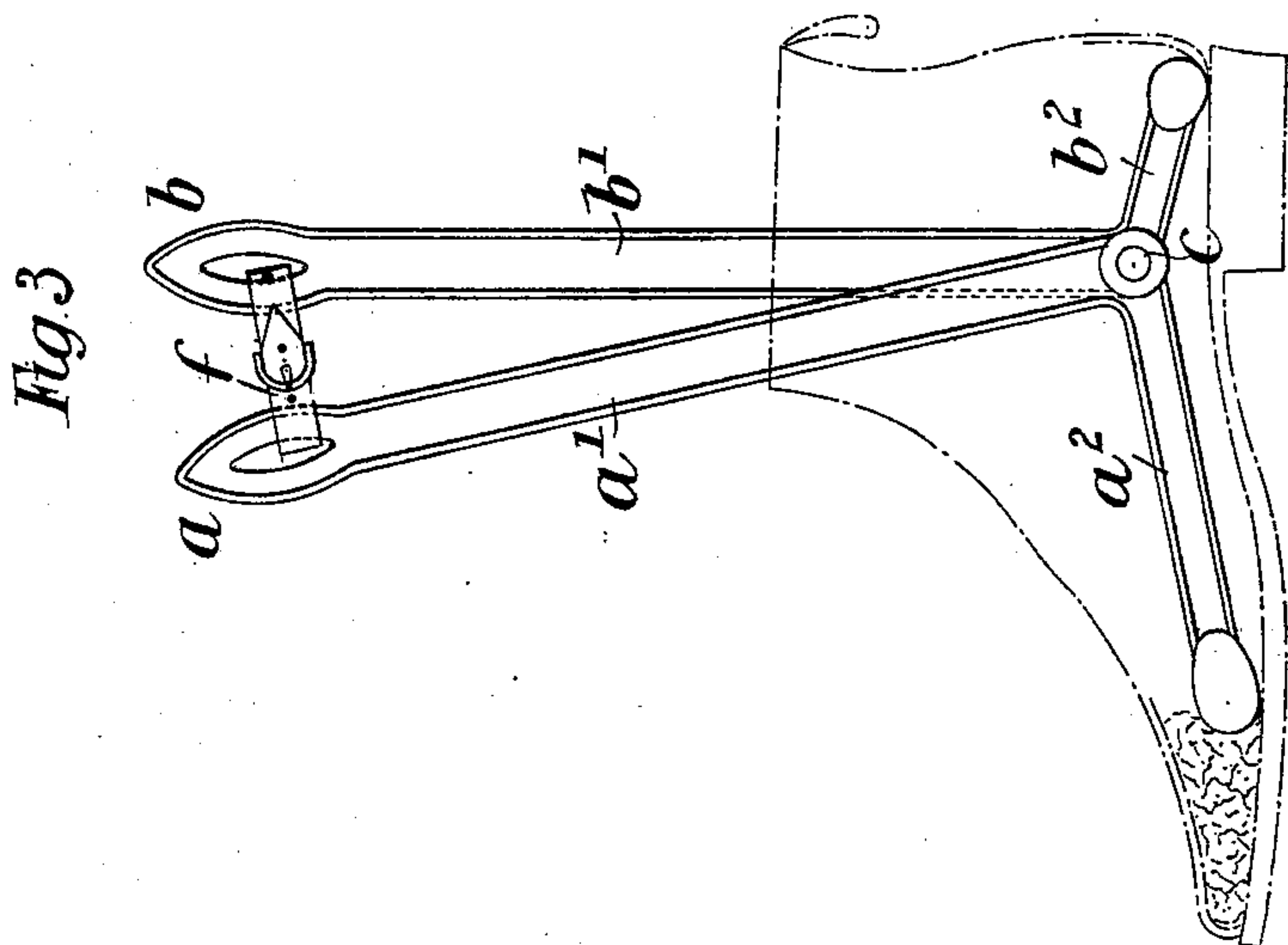
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# UNITED STATES PATENT OFFICE.

PHILIP JOSEPH PARMITER, OF ANSTY, ENGLAND.

## BOOT TREE OR STRETCHER.

SPECIFICATION forming part of Letters Patent No. 608,396, dated August 2, 1898.

Application filed November 8, 1897. Serial No. 657,864. (No model.) Patented in England May 14, 1896, No. 10,367.

*To all whom it may concern:*

Be it known that I, PHILIP JOSEPH PARMITER, a subject of the Queen of Great Britain, residing at Ansty, England, have invented  
5 new and useful Improvements in Boot Trees or Stretchers, (for which I have obtained a patent in Great Britain, No. 10,367, dated May 14, 1896,) of which the following is a specification.

10 My invention relates to trees or stretchers for boots and shoes.

A boot tree or stretcher constructed according to my invention comprises two levers of angle or L shape, which are placed back to  
15 back in such a manner that when the tree or stretcher is inserted in a boot with one arm of one lever in the toe of the boot and one arm of the other lever in the heel of the boot and the other two arms are pulled toward  
20 one another the desired stretching will be effected.

To enable my invention to be fully understood, I will describe the same by reference to the accompanying drawings, in which—

25 Figure 1 is an elevation of my improved boot tree or stretcher arranged in conjunction with a boot, which is indicated by dotted lines. Figs. 2 and 3 are side elevations of a slightly-modified construction of stretcher,  
30 the said two figures respectively illustrating the positions of the parts before and after the stretching pressure is applied; and Fig. 4 is a plan view. Fig. 5 is an elevation illustrating a further modification which is especially  
35 adapted for use in connection with jack-boots.

Similar letters of reference indicate corresponding parts in the several figures.

$a$   $b$  are the two levers, the former of which has two arms  $a'$   $a^2$ , substantially at right angles to each other, and the latter two arms  
40  $b'$   $b^2$ , also disposed substantially at right angles to each other. These two levers are pivoted together at  $c$  in such a manner that when the arms  $a'$   $b'$  are close together the  
45 arms  $a^2$   $b^2$  will be more or less in alinement, and the arms of each lever extend on the same side of a vertical line drawn through their point of pivoting. The arms  $a'$   $b'$  at their free ends are shaped to form handles,  
50 and the arm  $a^2$  of the lever  $a$  is shaped to enter the toe of the boot or has a toe-piece  $d$

fixed upon it, while the arm  $b^2$  of the lever  $b$  is adapted to bear against the heel of the boot.

The toe-piece  $d$  is detachably fitted onto 55 the end of the arm  $a^2$  to permit of removing it and replacing it by others of different size.

In order to prevent the arm  $b^2$  from bearing too much upon one part of the boot, I advantageously use in conjunction with my  
60 boot-stretcher a loose plate of metal  $e$ , which fits more or less around the heel and is put into the boot before the stretcher is applied.

It will be obvious that when my improved stretcher is placed in a boot—for instance, as  
65 shown in full lines in Fig. 1—and the arms  $a'$   $b'$  of the levers are drawn together—say to the position shown by the dotted lines in the said figure—the arm  $b^2$ , through the medium of the plate  $e$ , will bear against the  
70 heel of the boot and the toe-piece will be pushed tightly into the toe of the boot, thereby thoroughly stretching the same.

When the arms  $a'$   $a^2$  are drawn together, the effect is to lower the point of pivoting  
75 until it is substantially in the horizontal plane of the ends of the arms  $a^2$   $b^2$ , so that the said arms  $a^2$   $b^2$  act like a toggle-lever, and the strain of said arms is in a substantially straight line from the end of one arm through the pivot  
80 to the other arm. This produces a very powerful device in which a high degree of power can be exerted to stretch the boot with but a very small exertion of the operator and without any danger of straining the parts. 85

Suitable means are provided for holding the arms in any position to which they may be moved in stretching a boot. For instance, a strap  $f$  may be used, as shown in the drawings, or a bolt fixed to one arm, say the arm  
90  $a'$ , and passing through a hole in the other arm  $b'$  and provided with a thumb-nut may be used, or a link or ring sliding upon the arms  $a'$   $b'$  may be used for the purpose.

In the modification of my invention shown 95 in Figs. 2 and 3 the construction is substantially the same as that hereinbefore described except that the lever  $a$  instead of having a toe-piece  $d$  upon it is formed with a rounded end, so that by pushing a plug of, say, paper 100 into the toe of the boot pressure may be applied at any desired point—for instance, as



shown in Fig. 4—in order to stretch the boot in such a manner as to obviate pressure upon a corn or bunion.

In using a stretching device constructed as hereinbefore described with a high-top boot difficulty would be experienced in introducing the apparatus into the boot. I therefore modify the construction of the stretcher, as shown in Fig. 5. In this figure it will be seen that the arms  $b'$   $b$  of the lever  $b$  instead of being rigid relatively with one another are made independent, so that the arm  $b'$  may lie against the arm  $a'$ , while at the same time the arm  $b^2$  can assume a position in alinement with the arms  $a'$   $b'$  when the latter are placed together.

The connection between the arms  $b'$   $b^2$  to permit of the latter being moved by the former is effected by means of a pawl  $g$ , pivoted to the arm  $b'$  and adapted to engage with ratchet-teeth  $h$  formed at the rear end of the arm  $b^2$  near to the pivot  $e$ . With this arrangement after the stretcher has been introduced into a boot with the parts in the relative positions hereinbefore indicated—that is to say, with the arms  $a'$   $b'$  lying against one another and the arm  $b^2$  in line with them—the arm  $b'$  can be moved away from the arm  $a'$ , so that the pawl will slip over the teeth  $h$ , and then as the levers  $a$   $b$  are pulled together the stretching will take place in the manner hereinbefore described.

It will be obvious that when introducing the stretcher into the boot the arm  $b^2$  when it touches the bottom of the boot, being quite independent of the arm  $b'$ , will move on its pivot, so that it goes into the heel of the boot ready to be acted upon by the arm  $b'$  in the manner indicated.

Having now particularly described and as-

certained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A boot-tree comprising two members pivotally connected, each member having a vertically-disposed arm and a horizontally-disposed arm substantially at right angles to the vertical arm, the arms of each member extending on the same side of a vertical line passing through their pivotal connection whereby, by drawing the vertical arms together, the said pivotal connection will be brought substantially into the horizontal plane of the ends of said horizontal arms, substantially as described.

2. A boot-tree comprising two members pivotally connected together, each member having a vertically-disposed arm and a horizontally-disposed arm, the arms of each member extending on the same side of a vertical line passing through the said pivotal connection, the arms of one of said members being formed separate from each other and adjustably connected together, substantially as described.

3. A boot-tree comprising two members pivotally connected together, each member being provided with a vertically-disposed arm and a horizontally-disposed arm, the arms of each member extending on the same side of a vertical line passing through said pivotal connection, the arms of one member being formed separately, one of said arms being provided with a ratchet portion and the other with a pawl for engaging said ratchet portion, substantially as described.

PHILIP JOSEPH PARMITER.

Witnesses:

ARCHD. BUCHANAN,  
J. W. HARTWELL.