

(No Model.)

A. D. TYLER, Jr.

BOOT TREE.

No. 317,476.

Patented May 5, 1885.

Fig. 1

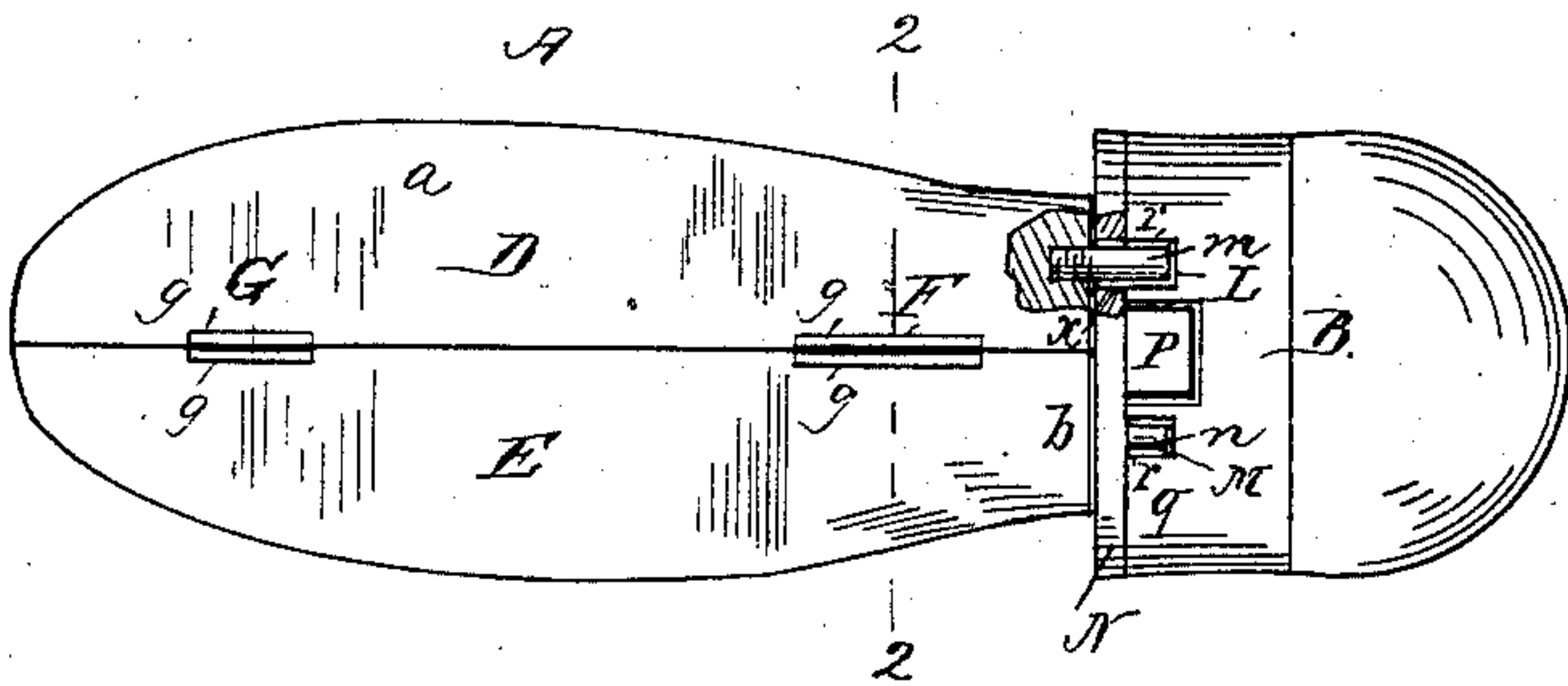


Fig. 2.

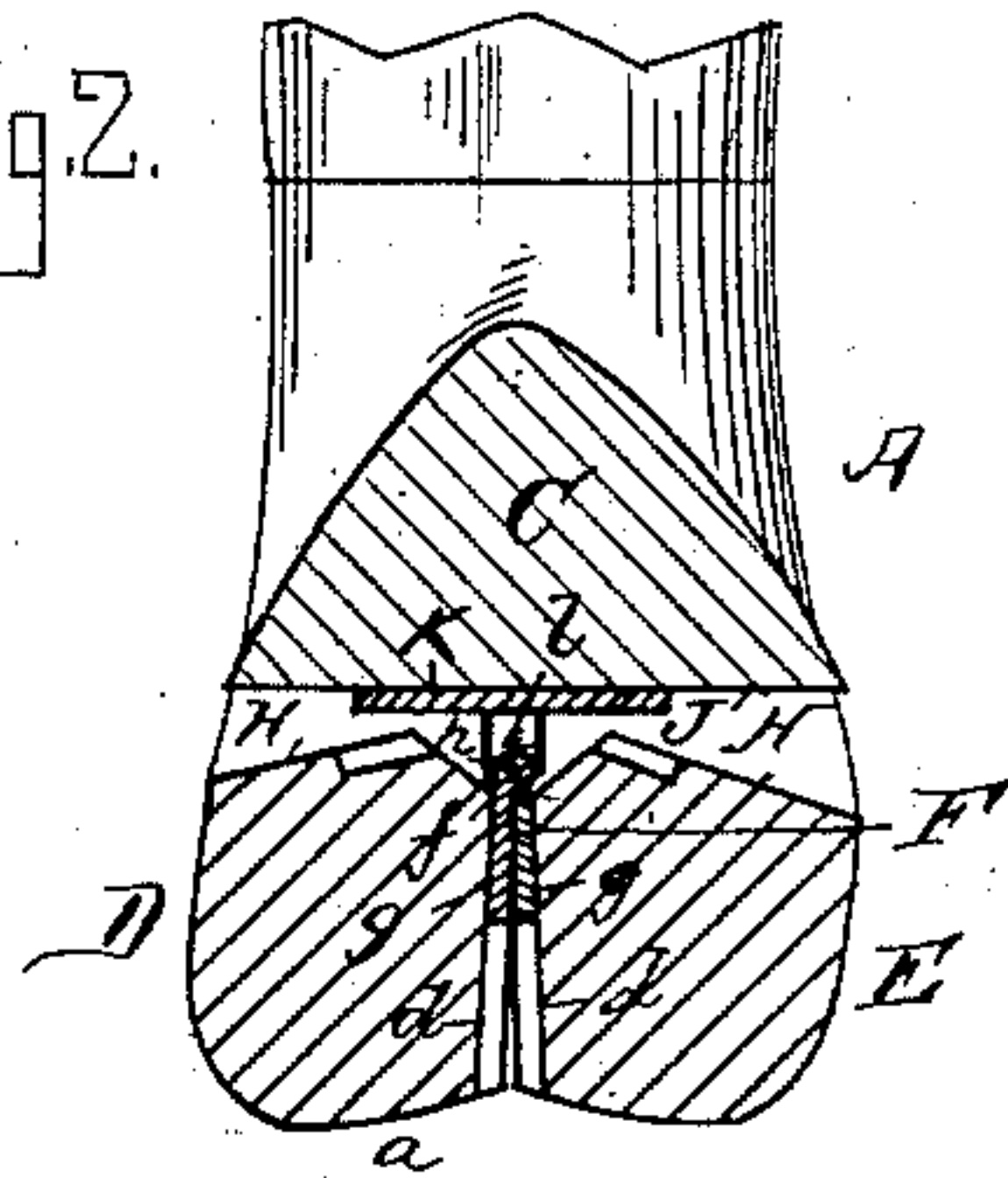


Fig. 3.

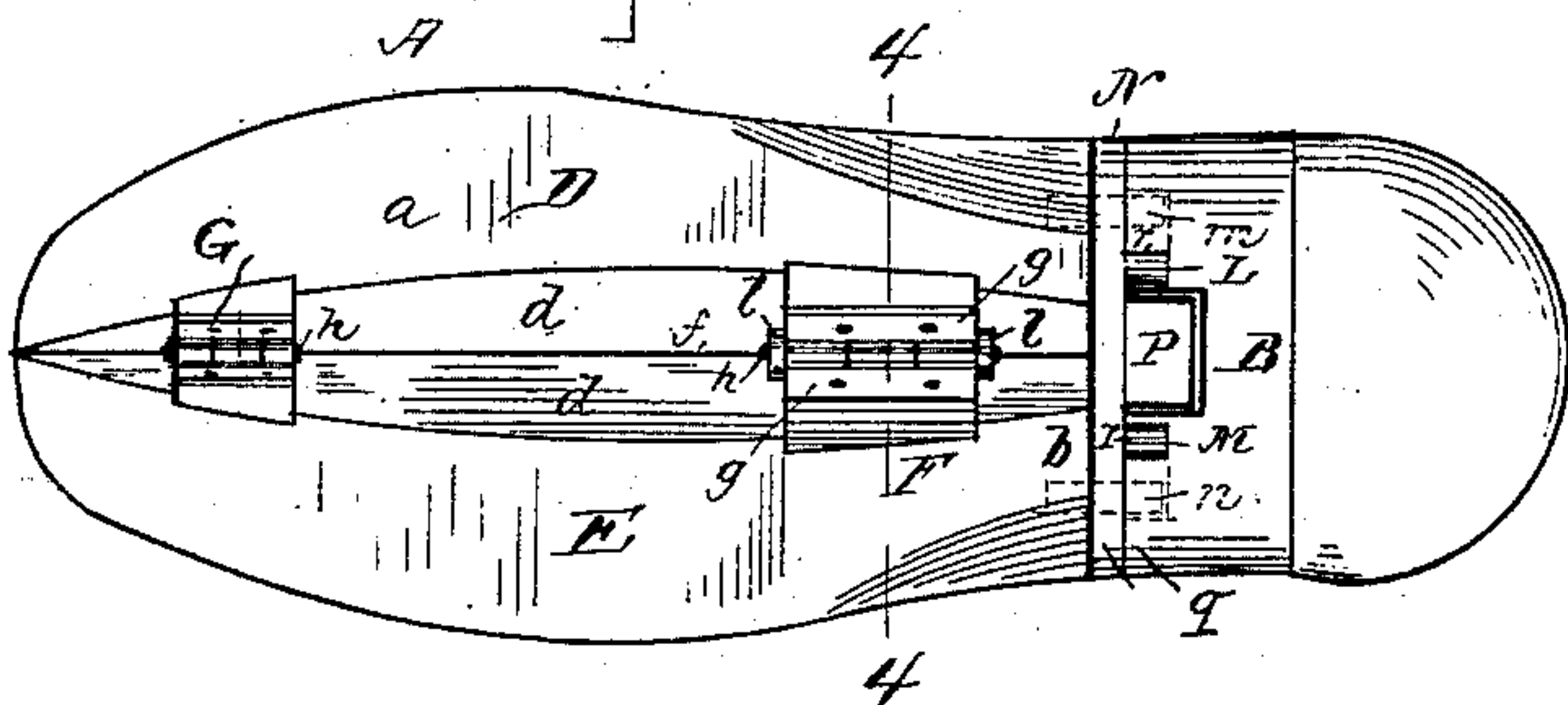


Fig. 4.

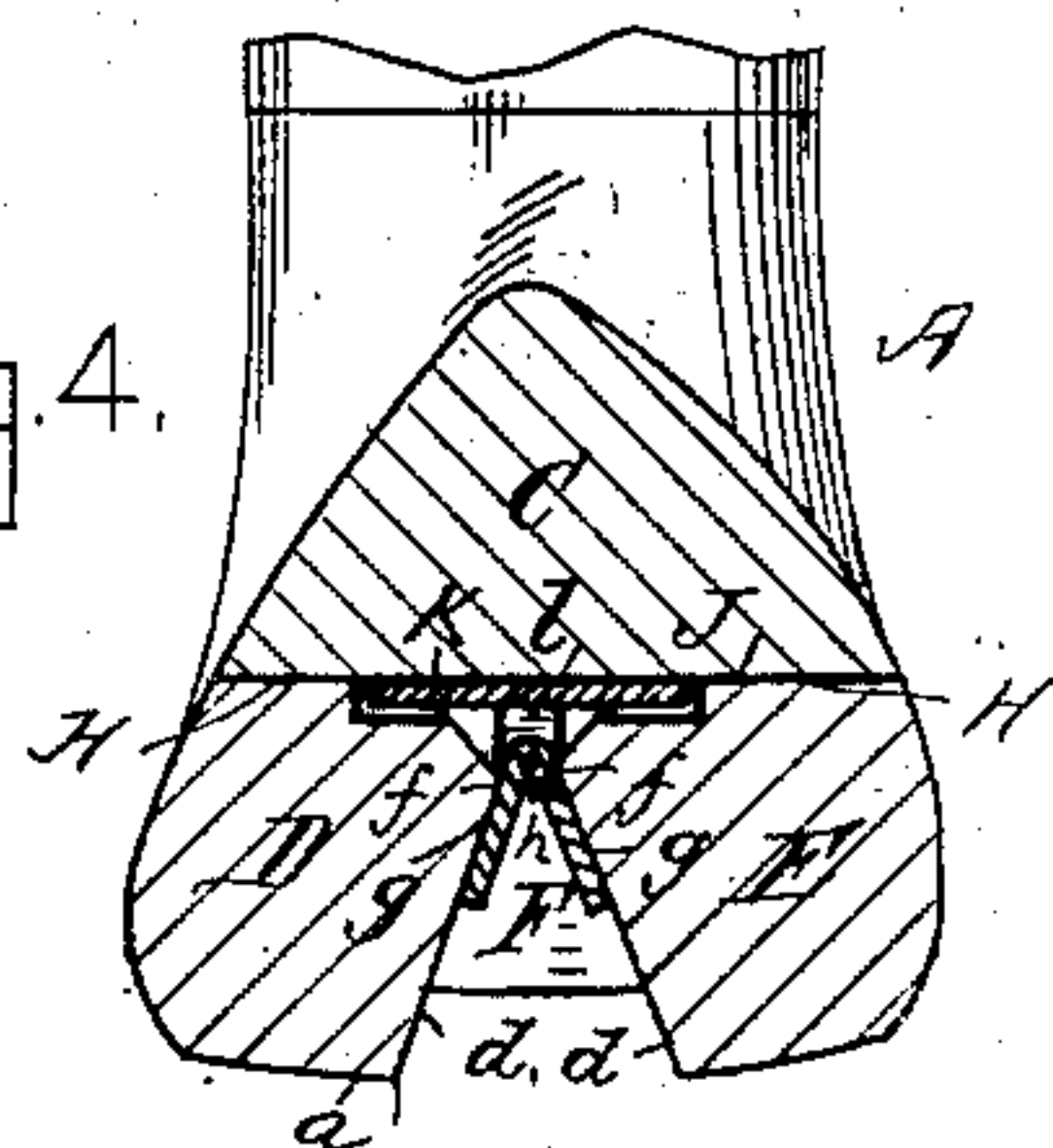


Fig. 5.

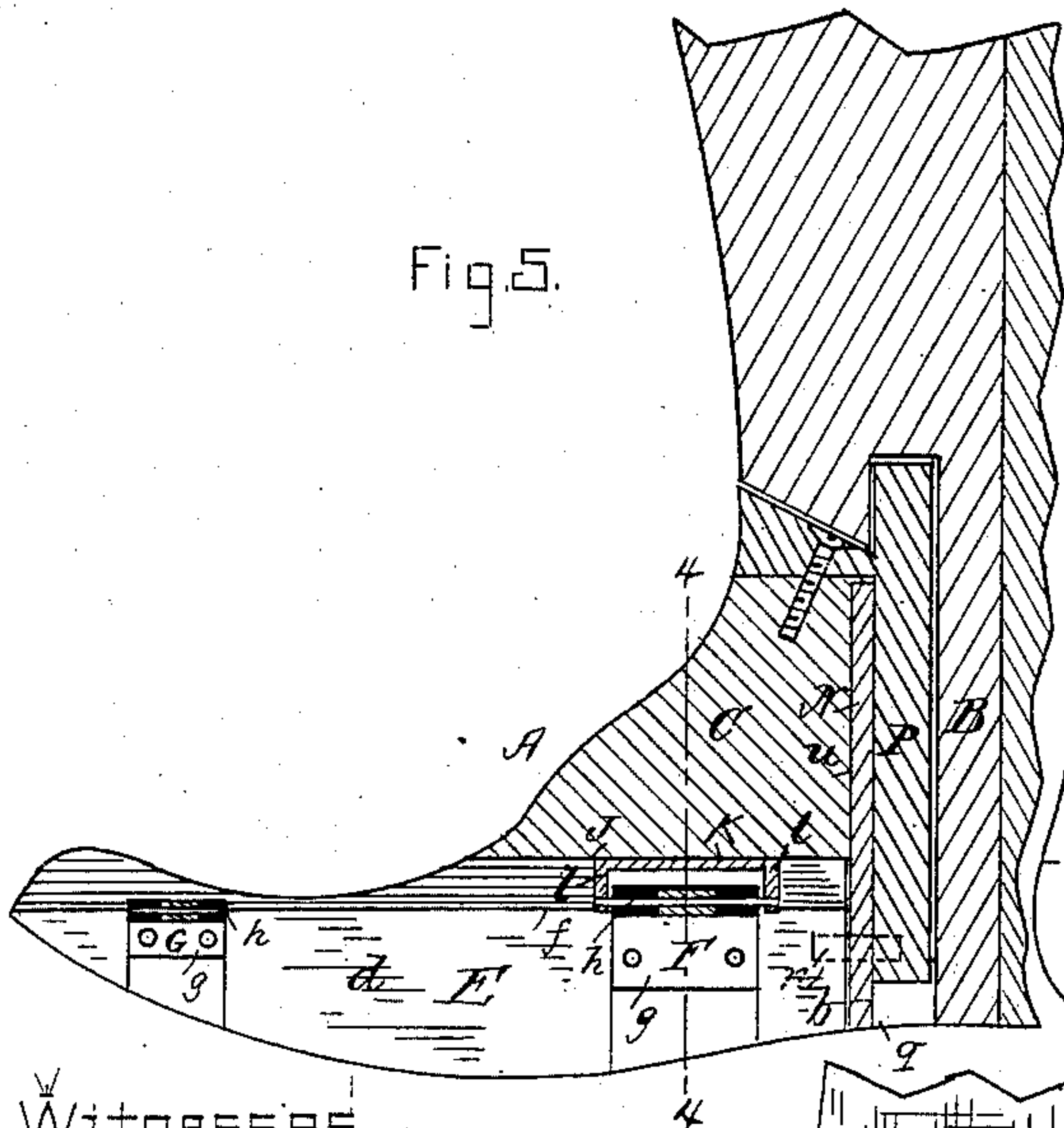


Fig. 7

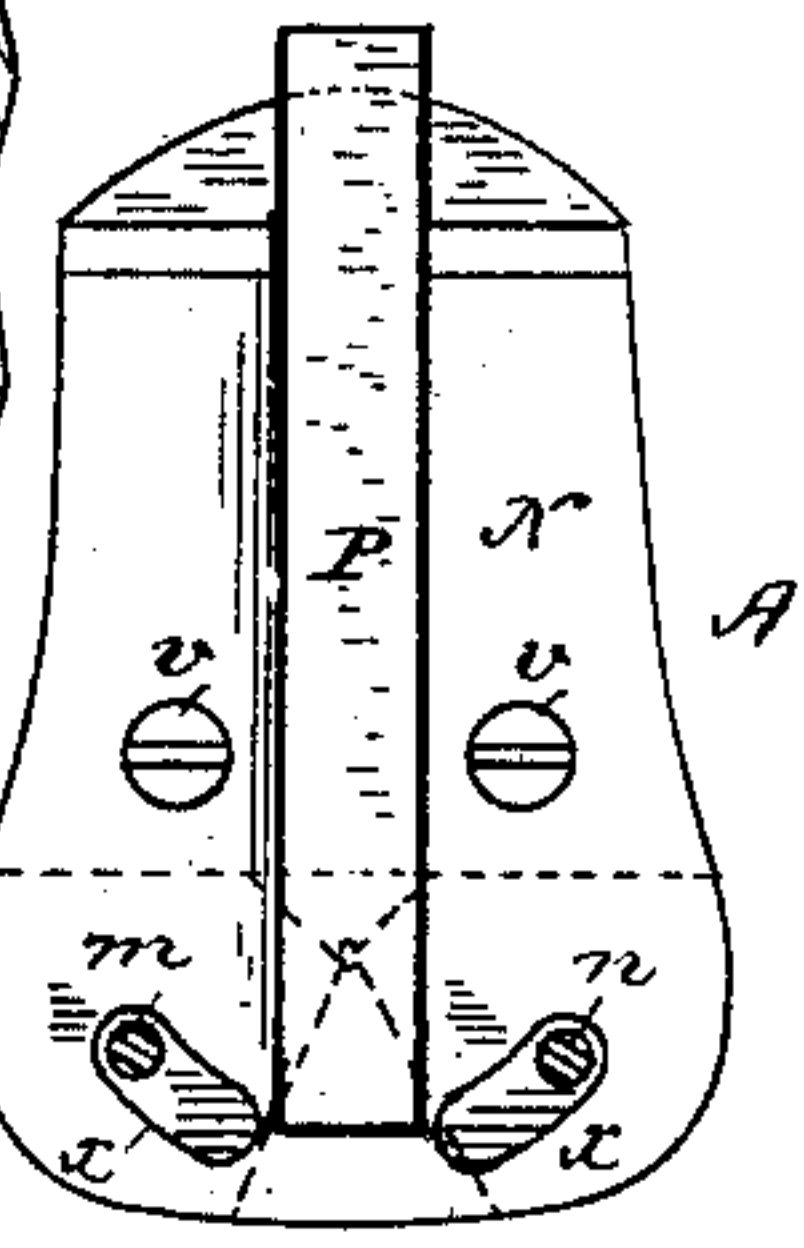
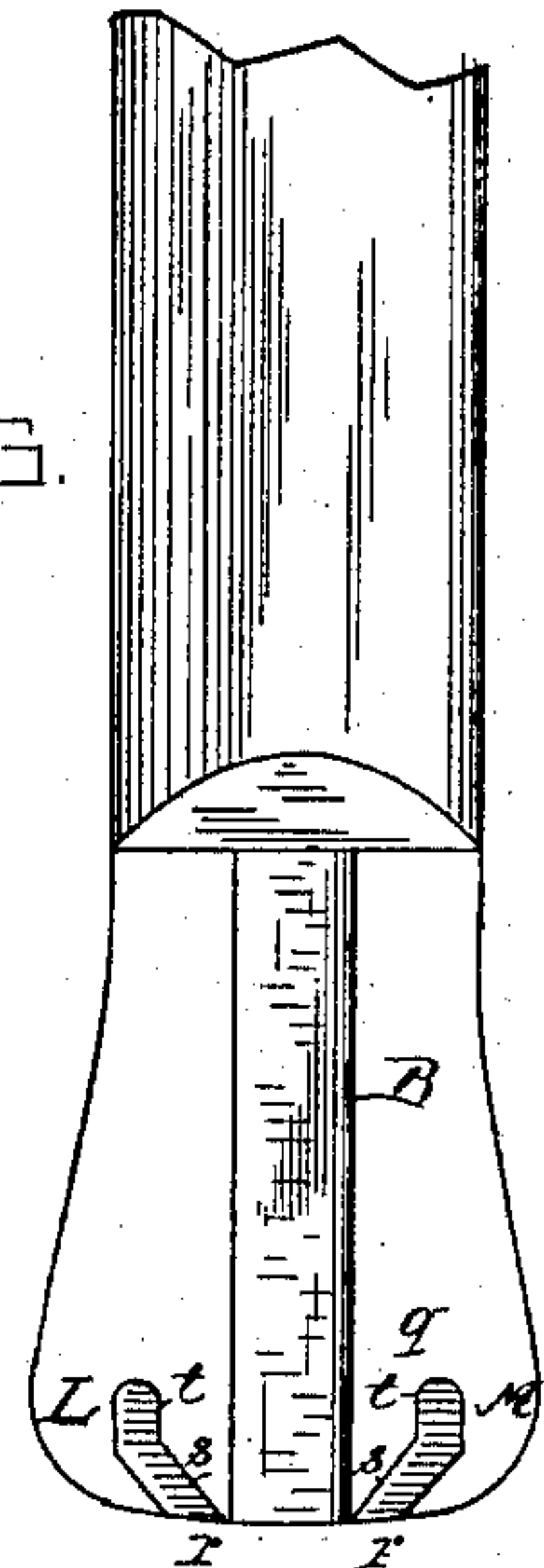
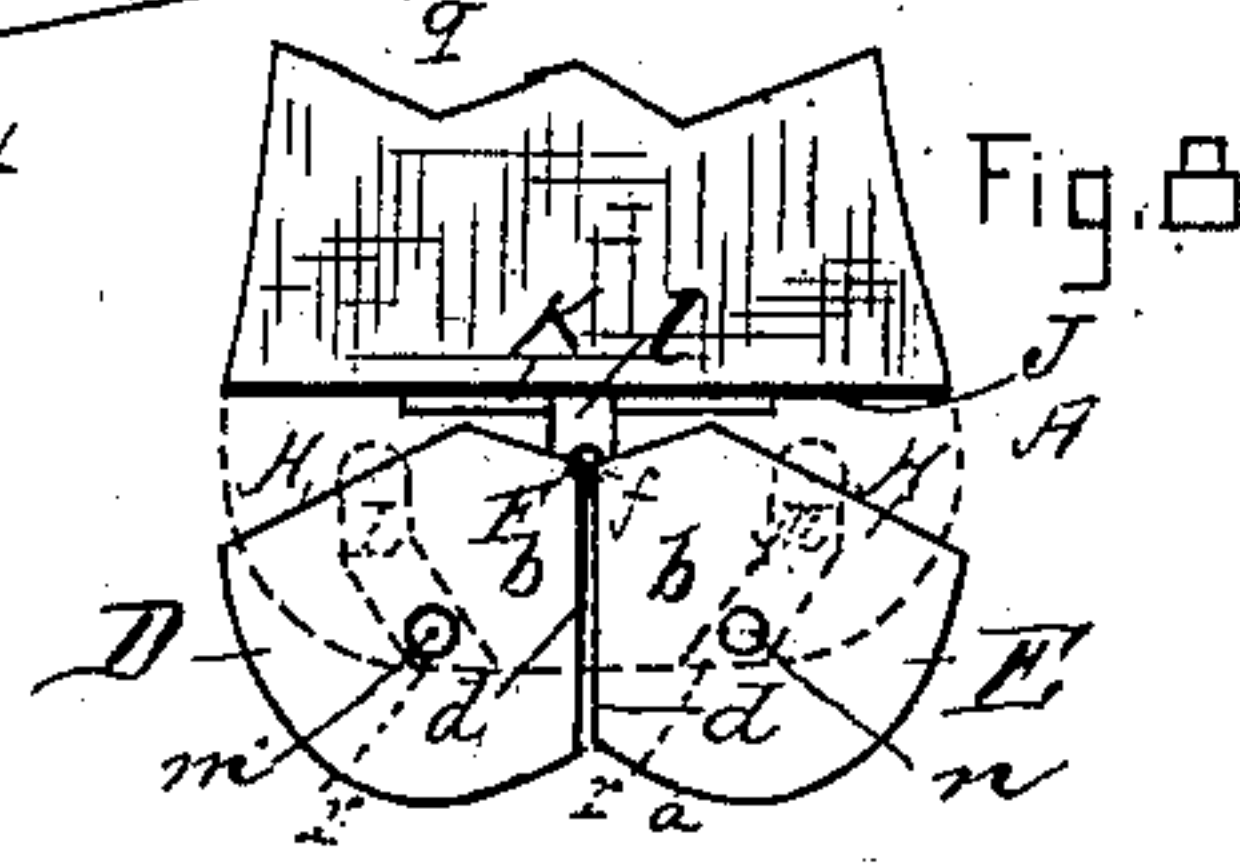


Fig. 6.



Witnesses.
Mrs. J. R. Brown
H. P. Fellows



A. D. Tyler, Jr.,
Inventor,
By Brown Bros.
Attorneys.

UNITED STATES PATENT OFFICE.

ABEL D. TYLER, JR., OF BROCKTON, MASSACHUSETTS.

BOOT-TREE.

SPECIFICATION forming part of Letters Patent No. 317,476, dated May 5, 1885.

Application filed March 24, 1884. (No model.)

To all whom it may concern:

Be it known that I, ABEL D. TYLER, JR., of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain
5 new and useful Improvements in Boot-Trees, of which the following is a full, clear, and exact description.

This invention relates particularly to the foot-pieces of boot or shoe trees, and its object
10 is to construct a foot-piece that can easily be inserted in a boot or shoe, and when therein properly fit the same for the purpose of treeing it, and can then as easily be removed from the boot or shoe; and it consists in construct-
15 ing and arranging the body or ball and toe portion of the foot-piece for it to be contracted and expanded laterally, or in a line at right angles to its length, so that contracted it can easily be inserted in the boot or shoe, and when
20 therein expanded to properly fill the same, and to be as easily removed from the boot or shoe by again contracting it, all substantially as hereinafter fully described and shown.

In the accompanying plate of drawings is
25 illustrated a foot-piece to a boot or shoe tree constructed according to this invention.

Figures 1 and 3 represent plan views of the under side or bottom of a foot-piece constructed according to this invention, attached
30 to the body portion of the boot or shoe tree, Fig. 1 showing it as contracted laterally or across its width, and Fig. 3 as in its expanded condition. Figs. 2 and 4 are cross-sections on lines 2-2 and 4-4, respectively, of Figs. 1
35 and 3. Fig. 5 shows a detail vertical section of the lower part or body portion of a boot or shoe tree having the foot-piece attached thereto, which is in central longitudinal vertical section; Fig. 6, a back view in detail of the
40 body portion of the lower end of the boot-tree where the foot-piece is attached to it; Fig. 7, a view of the back of the foot piece; and Fig. 8, a back view of the foot-piece contracted, and showing in dotted lines the lower end of the
45 body portion shown in Fig 6.

In the drawings A represents a foot-piece, and B the lower end of the body portion of the boot-tree to which it is to be attached. The foot-piece A consists of three parts, C the
50 instep or upper portion, and D and E the body and toe portions, secured together by hinges F and G, their outer surfaces, *a*, being of the shape and outline desired for the foot-piece as

desired. The part D is on one side and the part E on the other side of a central vertical
55 longitudinal line of the foot-piece, their rear portions extending under the part C, and having their upper surfaces, H, flat to fit closely the under flat surface, J, of the part C. The
60 contiguous sides *d* of the parts D and E are cut under or angularly in cross-section in relation to their flat surfaces H, as shown in
Figs. 2 and 4 more particularly, and at the
65 edges *f* of such sides *d* are connected each one to a separate leaf, *g*, of the hinges F G, respectively, the pivots *h* of which hinges are in the same horizontal axial line. The pivot
70 *h* of the hinge F is secured to ear-pieces *l* of a plate, K, attached in any suitable manner to the under surface, J, of the part C.

Swinging the two parts D and E in one direction—that is, to bring their sides *d* together,
75 as shown in Fig. 2, in cross-section—places the foot-piece in its contracted position, and swinging them in the opposite direction or
from each other brings their surfaces H in contact with the under surface, J, of the part C, as shown in Fig. 4 in cross-section, the foot-
80 piece then being expanded.

With the foot-piece in its contracted position, as shown in Fig. 2, it can easily be inserted in a boot or shoe, and when therein
85 expanded to properly fit the same, when treeing the boot or shoe, and it can be as easily removed from the boot or shoe by again contracting it, as is obvious.

In practice this contraction and expansion of the foot-piece is to be accomplished by the
90 body portion of the boot-tree when attaching the parts together, as will now be described.

m and *n* are two pins, one in each part D and E, respectively, and projecting longitudinally from their rear ends, *b*.

In the lower end, *q*, of the body portion of the boot or shoe tree, and in that portion of it
95 against which the rear end, *b*, of the foot-piece abuts when attached to it, are two slots L, and M, opening at *r* to the lower outside end, *q*, of the body portion B, and from thence extending upwardly and diverging from each other,
100 as at *s*, and ending in vertical parallel portions, as shown more particularly in Fig. 6.

The open ends *r* of the slots L M are of a distance apart corresponding to the distance
105 the two pins *m n* are from each other when the foot-piece is in its contracted position, and

the distance the vertical portions *t* of said slots are apart corresponds to the distance the pins *m n* are from each other when the foot-piece is expanded to the width desired.

5 Insert the foot-piece A in its contracted position in the boot or shoe to be treed. Then place the boot or shoe over the end of the body and back portion of the boot-tree, and press it thereon to its seat in the usual manner. In
10 such movement the pins *m n* enter the open ends *r* of the slots L M, as shown in Fig. 8, and in the continued movement of the foot-piece to its seat on the boot-tree the said pins *m n* will each travel up their respective slots
15 *r*, and in such travel the foot-piece will be expanded, and when the foot-piece is secured in place in the body portion of the tree the pins *m n* will have entered the vertical portions *t* of the slots, the foot-piece will be expanded
20 fully, and thus held so long as it is attached to the body portion.

In removing the foot-piece from the boot-tree the pins move through their slots L M in a reverse direction and contracting the foot-piece laterally so that it can be easily removed
25 from the boot or shoe.

A plate, N, is secured to the rear end, *u*, of the part C by screws *v*, which has the usual bar, P, secured to it in any suitable manner for
30 attaching the foot-piece to the body portion, and in this plate N are slots *x*, through which the pins *m n* project, and they are of a size sufficient to allow of the free movement of the pins *m n* in the contracting and expanding of
35 the foot-piece.

The vertical portions *t* of the slots L M can be dispensed with and can diverge their whole length instead, but it is preferable to have the vertical portions as described, as it limits the
40 expansion of the foot-piece, preventing undue strain of the parts.

A foot-piece for a boot or shoe tree constructed and arranged for operation as herein described, has many advantages. It enables
45 the foot-piece to be easily and conveniently inserted in the boot or shoe, and as easily re-

moved therefrom, and when therein to be expanded to fit the boot or shoe properly for the purpose of treeing it. The contracting of the foot-piece allows it to be removed from the
50 boot or shoe without straining the upper to injure its shape, as is apt to be the case where the foot-piece is solid and fitting the boot or shoe closely.

Having thus described my invention, what
55 I claim and desire to secure by Letters Patent, is—

1. A foot-piece for a boot or shoe tree, composed of parts C, D, and E, and hinged together substantially as and for the purpose
60 specified.

2. A foot-piece for a boot or shoe tree, composed of parts C, D, and E, constructed and arranged in combination with mechanism, substantially as described, operated upon by the
65 body portion of the boot or shoe tree to expand and contract laterally, substantially as and for the purpose specified.

3. A foot-piece for a boot or shoe tree, composed of parts C, D, and E, two—DE—of which
70 parts have pins *m n*, in combination with the body portion A of the boot or shoe tree, provided with slots L M, substantially as and for the purpose specified.

4. A foot-piece for a boot or shoe tree, composed of parts C, D, and E, secured together
75 by hinges, one of which is composed of part K, and leaves *g g*, all substantially as and for the purpose specified.

5. A foot-piece for a boot or shoe, composed of parts C, D, and E, pivoted together
80 for the parts D and E to move in a downward circular direction for lateral contraction of the foot-piece, for the purpose specified.

In testimony whereof I have hereunto set
85 my hand in the presence of two subscribing witnesses.

ABEL D. TYLER, JR.

Witnesses:

EDWIN W. BROWN,
WM. S. BELLOWS.