

No. 721,443.

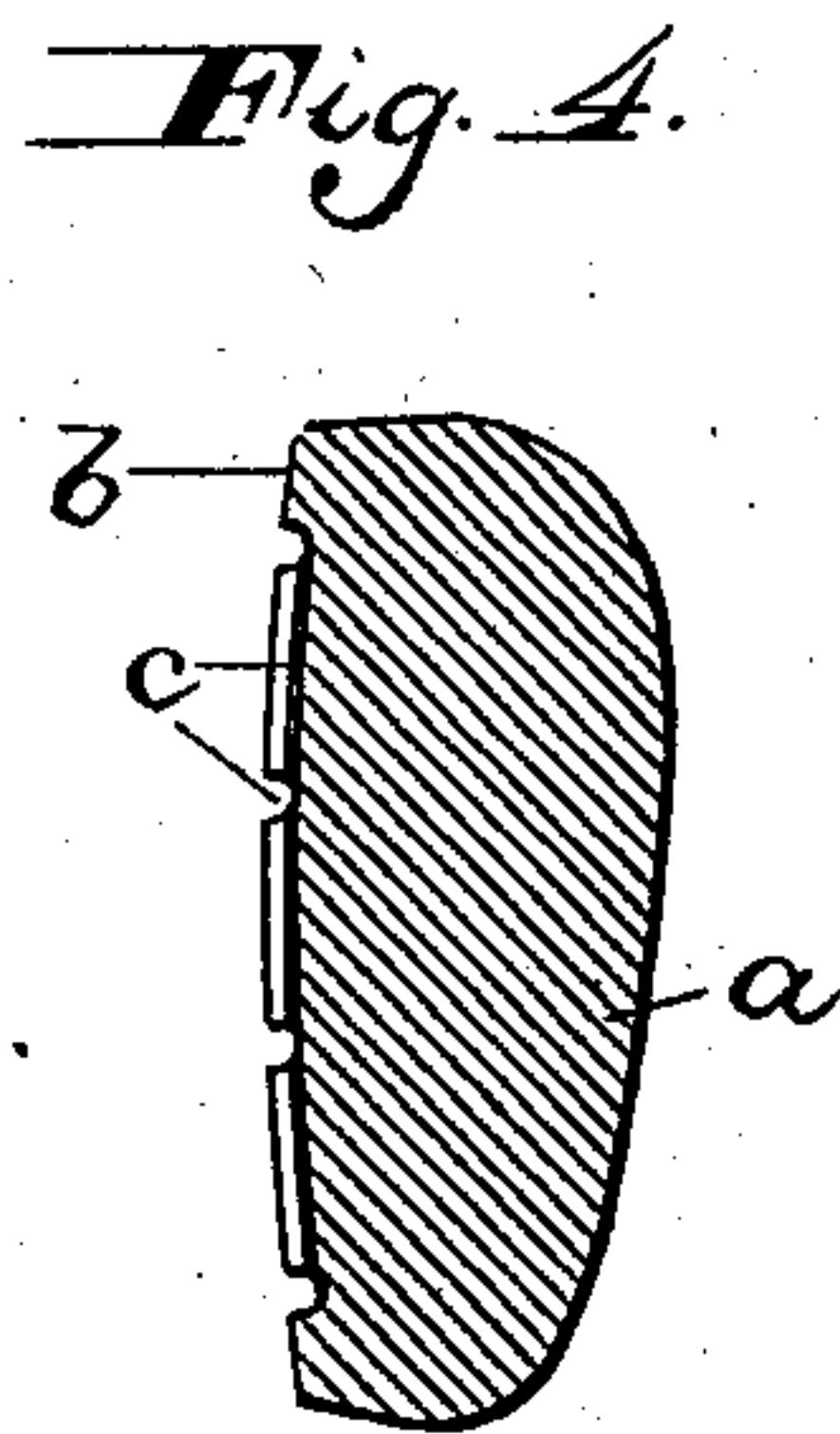
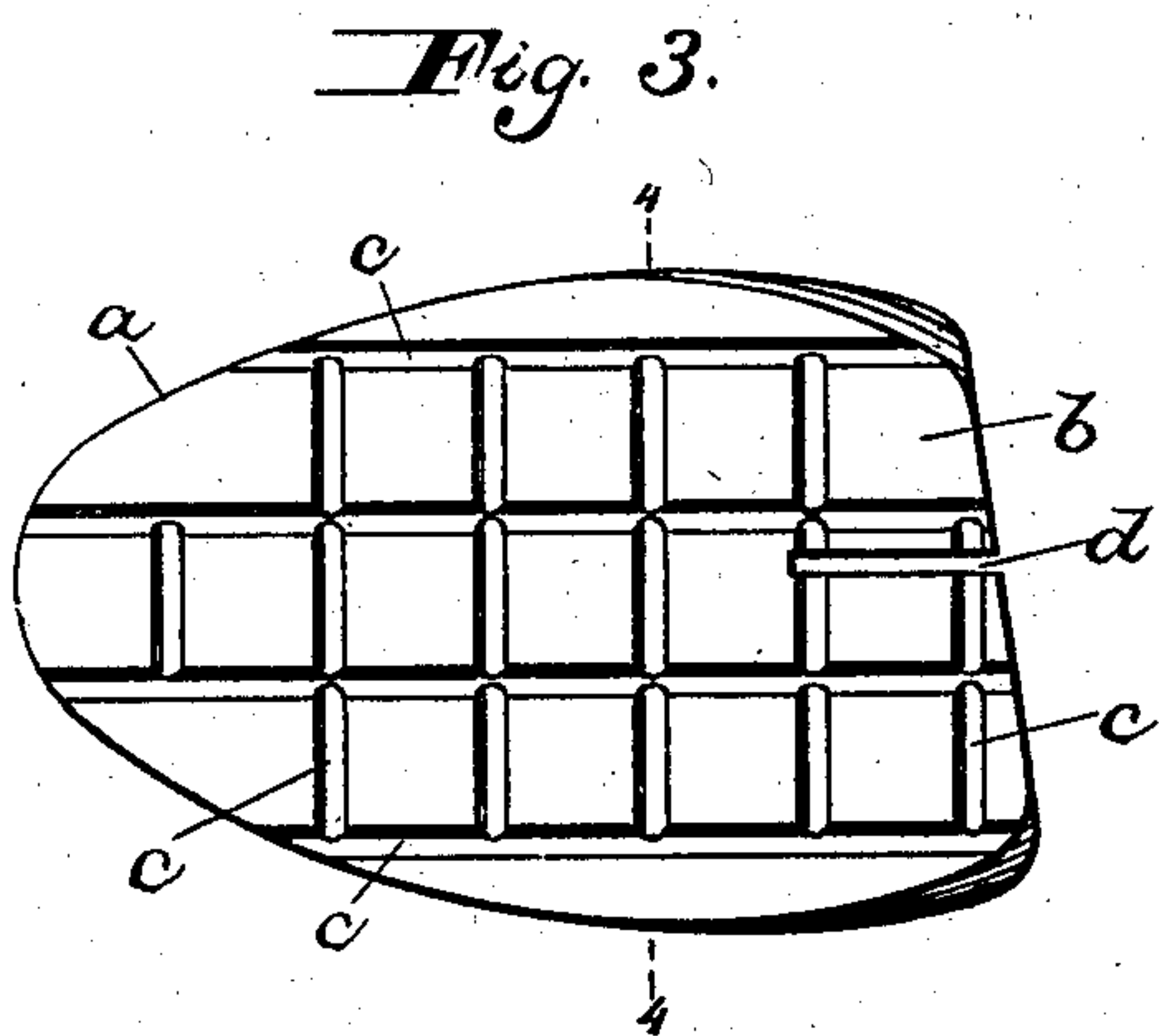
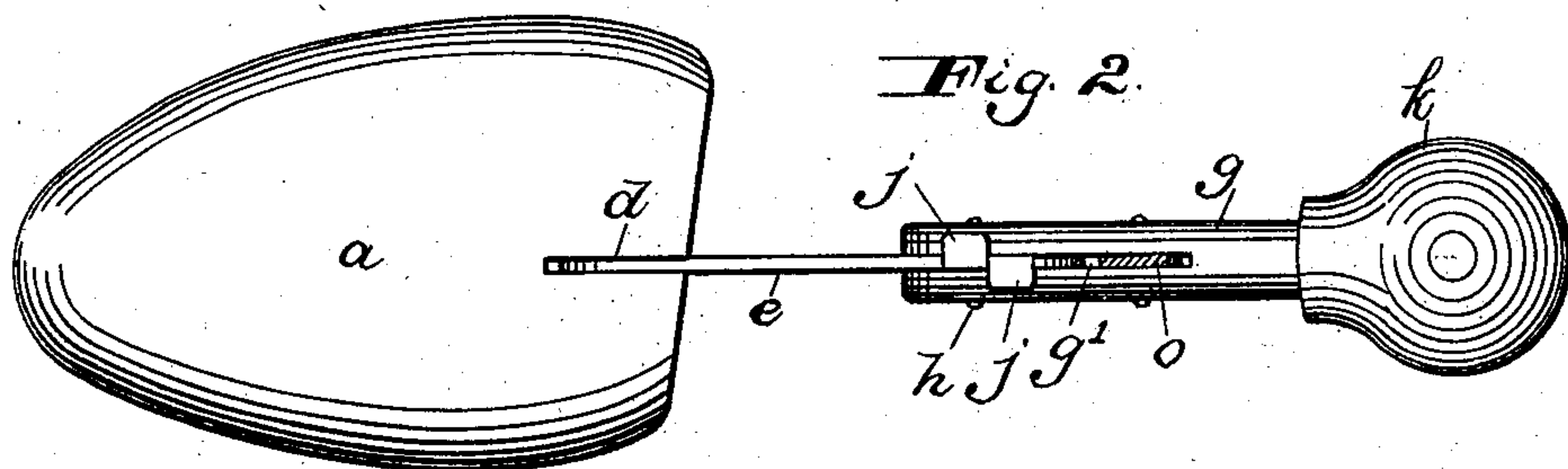
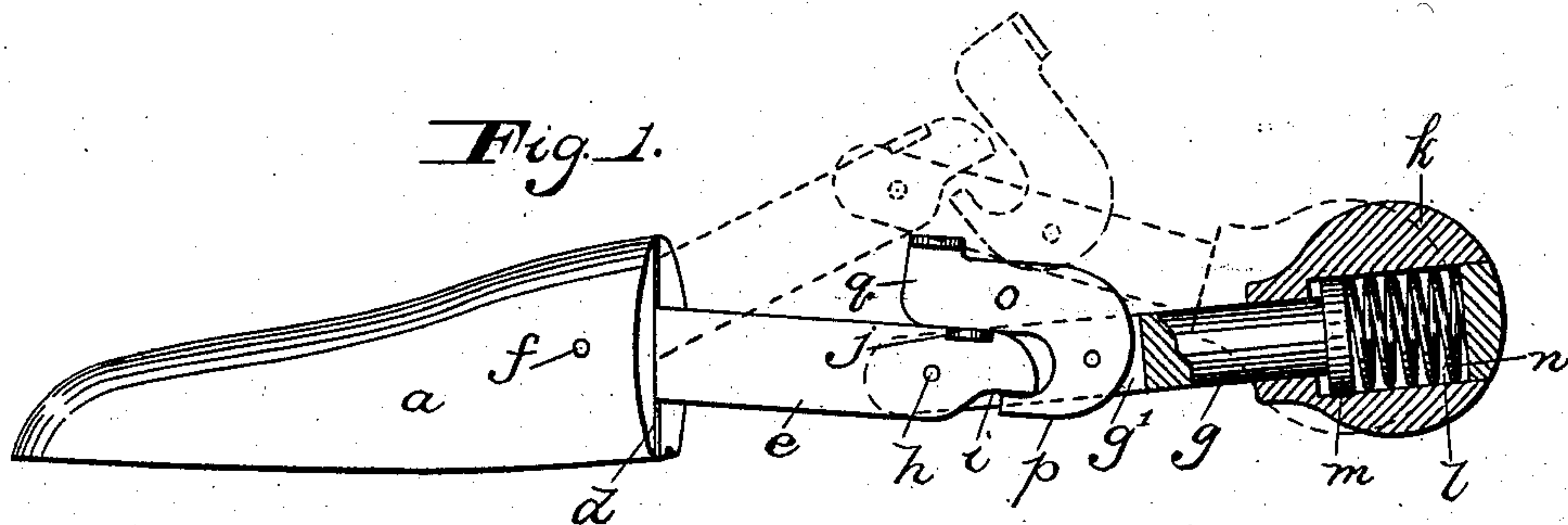
PATENTED FEB. 24, 1903.

M. S. HESS.

SHOE TREE.

APPLICATION FILED MAR. 24, 1902.

NO MODEL.



Witnesses.
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UNITED STATES PATENT OFFICE.

MEYER S. HESS, OF BALTIMORE, MARYLAND.

SHOE-TREE.

SPECIFICATION forming part of Letters Patent No. 721,443, dated February 24, 1903.

Application filed March 24, 1902. Serial No. 99,562. (No model.)

To all whom it may concern:

Be it known that I, MEYER S. HESS, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Shoe-Trees, of which the following is a specification.

This invention relates to improvements in shoe-trees designed to be inserted in shoes when they are taken off, so as to keep the shoes in proper shape.

One of the objects of the invention is to provide an improved device of this character in which the pressure exerted on the shoe is regulated by spring action and requires no adjustment on the part of the person using it; and another object is to provide a construction of shoe-tree which will automatically hold itself locked in the shoe.

The invention consists of certain constructions and combinations of the parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved shoe-tree with its heel-block in section and illustrates in full lines the relative position the parts assume in a shoe and in dotted lines the relative position said parts assume preparatory to inserting the device in or removing the device from the shoe. Fig. 2 is a top plan view of the shoe-tree. Fig. 3 is a bottom plan view of the toe-block of the tree. Fig. 4 is a transverse sectional view of said toe-block, taken approximately on the line 4-4 of Fig. 3.

Referring to the drawings, the letter *a* designates the toe-block of the shoe-tree, which toe-block is shaped to conform to the toe portion of the shoe into which it is intended to be inserted and is provided with a slightly-convex lower face *b*, in which longitudinal and transverse grooves *c* are formed, so that when said lower face rests on the sole of the shoe said grooves make provision for the free circulation of air to dry up the moisture resulting from the perspiration of the foot. Said toe-block *a* is also provided at its rear edge with a vertical slot *d*, in which the forward end of a link *e* is pivoted to rock vertically on a pin *f*, and the other or rear end of said link is mounted within a longitudinal

slot *g'* in a rod *g* and is jointed to said rod by means of a transverse pin *h*. The rear end of the said link *e* also has rearward of or beyond its point of juncture with said rod a downwardly-facing shoulder *i* and two ears *j*, extending laterally in opposite directions from its upper edge, as shown best in Fig. 2, for a purpose presently described.

The rod *g* just mentioned is movable longitudinally in a knob-like heel-block *k*, which is counterbored, as shown at *l*, Fig. 1, to receive a head *m* on the rear extremity of said rod, and within said counterbore and back of said head is a coil expansion-spring *n*, which tends to press the heel-block outwardly away from the toe-block *a*. Fulcrumed to rock vertically in the slot *g'* of the said rod *g* is a lever *o*, provided below its fulcrum with a forwardly-extending tongue *p*, adapted to take under the shoulder *i* of the link *e*, whereby to pull upon the link, and also provided above its fulcrum with a forwardly-extending arm *q*, adapted to extend over the upper edge of the said link, whereby to press downwardly on the latter.

In practice the shoe-tree is inserted into the shoe with the parts in the relative positions illustrated in dotted lines, Fig. 1. The toe-block *a* is first forced up well into the toe of the shoe, the lever *o* is then pressed downwardly on the link *e* until the heel-block *k* comes in contact with the counter of the shoe, and then said lever is further pressed downwardly on the said link, which action moves the rod *g* against the tension of the spring *n* until the point of juncture (pin *h*) of the link and rod passes beyond the center line—that is, beyond a straight line drawn between the pivot-pin *f* of the link and the point of resistance of the counter of the shoe on the heel-block *k*, whereupon the tension of the spring will automatically hold the shoe-tree in the shoe, and the said tree will exert sufficient pressure on the toe portion of the shoe to keep the same in proper shape. To withdraw the tree from the shoe, it is only necessary to rock the lever *o* backwardly, which will cause its tongue *p* to pull up on the link *e* until the point of juncture before mentioned passes beyond the other side of the center line, whereupon the action of the spring *n* will automatically move the parts to the po-

sition shown in dotted lines, Fig. 1, and the tree can be readily removed from the shoe.

The two lateral ears *j* on the upper edge of the rear end of the link *e* afford an extended bearing-surface for the presser-arm *q* of the lever *o* and prevent the lever from wedging down between the link *e* and either wall of the slot *g'*, and the rear wall of said slot forms a stop for said lever when it is moved upwardly and backwardly and prevents the lever from moving out of proper relation to the link.

It is to be noted that by my construction of shoe-tree there is no danger of bursting a shoe, because the tree adjusts itself, and the person using it does not have to adjust it longitudinally, and thereby avoids the danger of stretching the shoe too much, and even if the tree is somewhat longer than the proper length required for a certain-size shoe it will yield in a longitudinal direction and will not exert an undue pressure on the shoe. The point of juncture between the link *e* and rod *g* is never changed, but is always at about the middle of the tree, which enables the joint to be easily broken, the strain being evenly divided between the link and the rod.

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

1. A shoe-tree, comprising a toe-block; a link pivotally connected to said toe-block; a rod jointed to said link; a spring-pressed heel-block mounted to move on said rod; and a lever, *o*, fulcrumed to said rod and provided with a tongue, *p*, and an arm, *q*, embracing the lower and upper edges of the link at the rear end of the latter, as set forth.

2. A shoe-tree, comprising a toe-block; a

link pivotally connected at its forward end to said toe-block and provided at its rear end with lateral oppositely-extending ears; a rod provided with a longitudinally-extending slot receiving the rear end of said link and said rod jointed to said link; a spring-pressed heel-block slidable longitudinally on said rod; and a lever fulcrumed in the slot of said rod and provided with a forwardly-extending tongue and a forwardly-extending arm taking over the lower and upper edges of the said link, as set forth.

3. A shoe-tree, comprising a toe-block; a link pivotally connected at one end to said toe-block; a rod jointed to said link near the other end of the latter; a heel-block carried by said rod; and a lever fulcrumed to said rod and provided with a tongue and arm embracing the lower and upper edges of said link between the fulcrum-point of the lever, and the point of juncture of the link and the rod, as and for the purpose set forth.

4. A shoe-tree, comprising a toe-block; a link pivotally connected at one end to said toe-block; a rod jointed to said link near the other end of the latter; and a knob-like heel-block slidable on the rear end of said rod and spring-pressed rearwardly whereby the tree will automatically lock itself in a shoe when the joint between said link and rod is moved past the center line as and for the purpose set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

MEYER S. HESS.

Witnesses:

CHARLES L. VIETSCH,
FREDERICK S. STITT.