

(No Model.)

G. E. SMITH.  
LAST.

No. 395,668.

Patented Jan. 1, 1889.

Fig. 1.

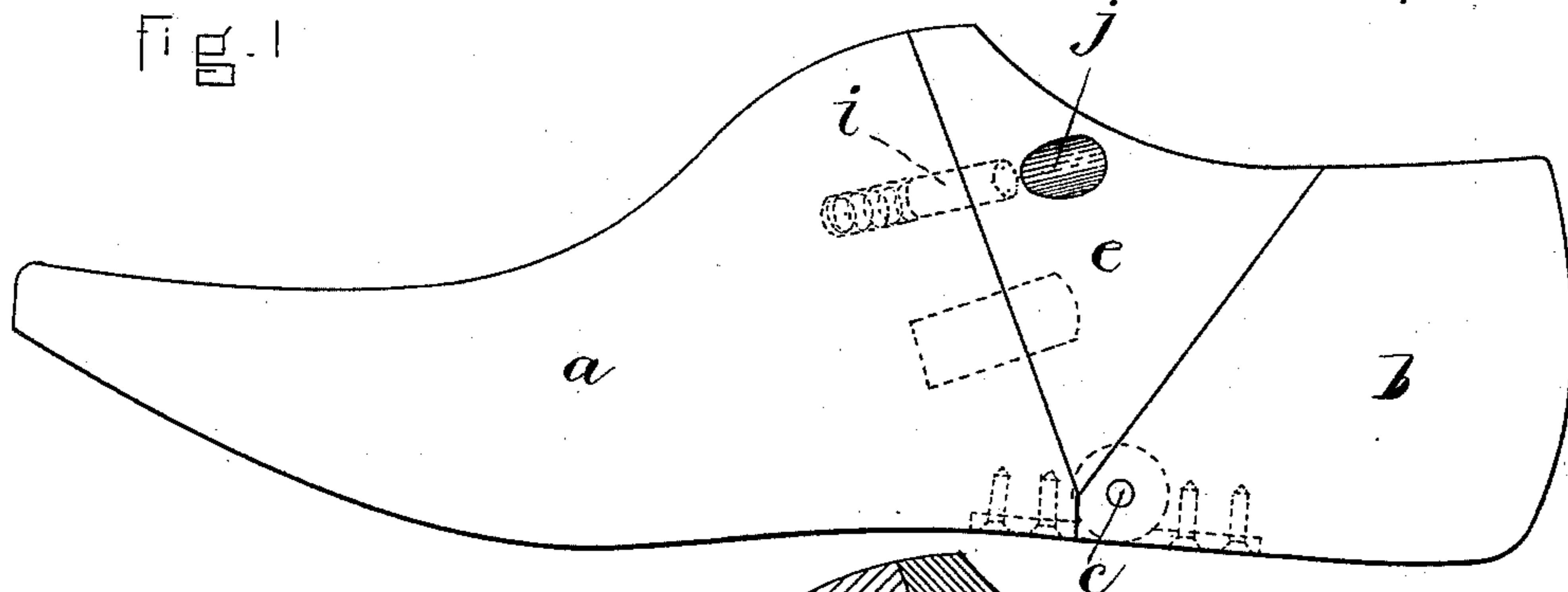


Fig. 2.

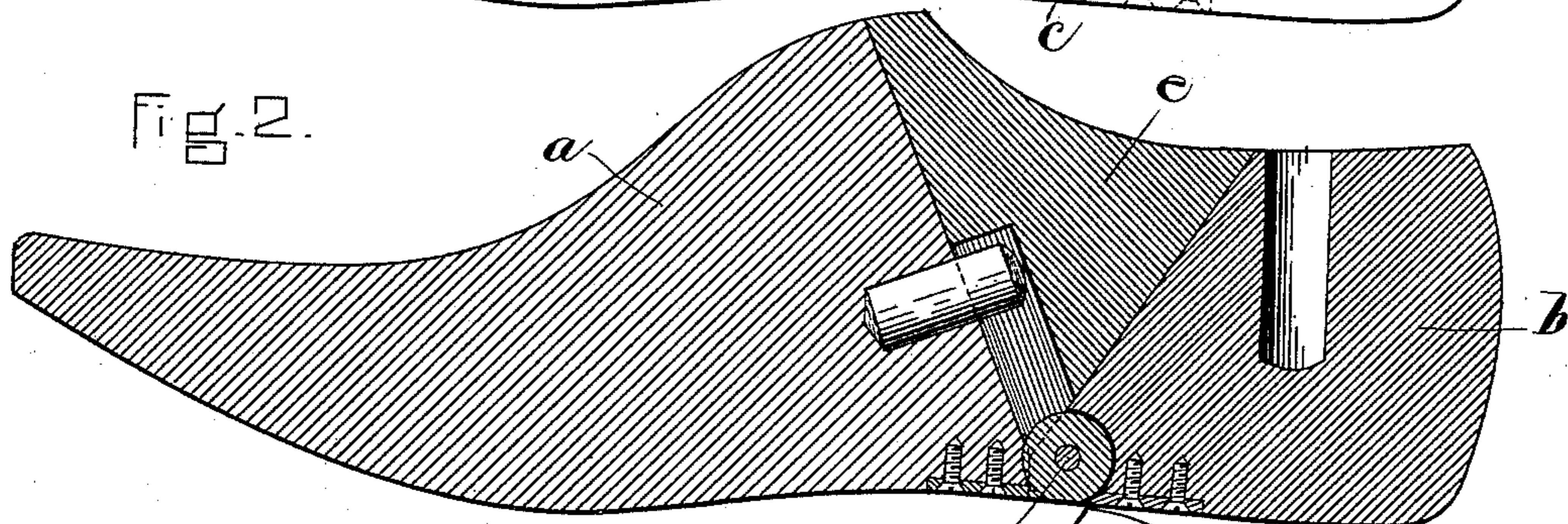


Fig. 3.

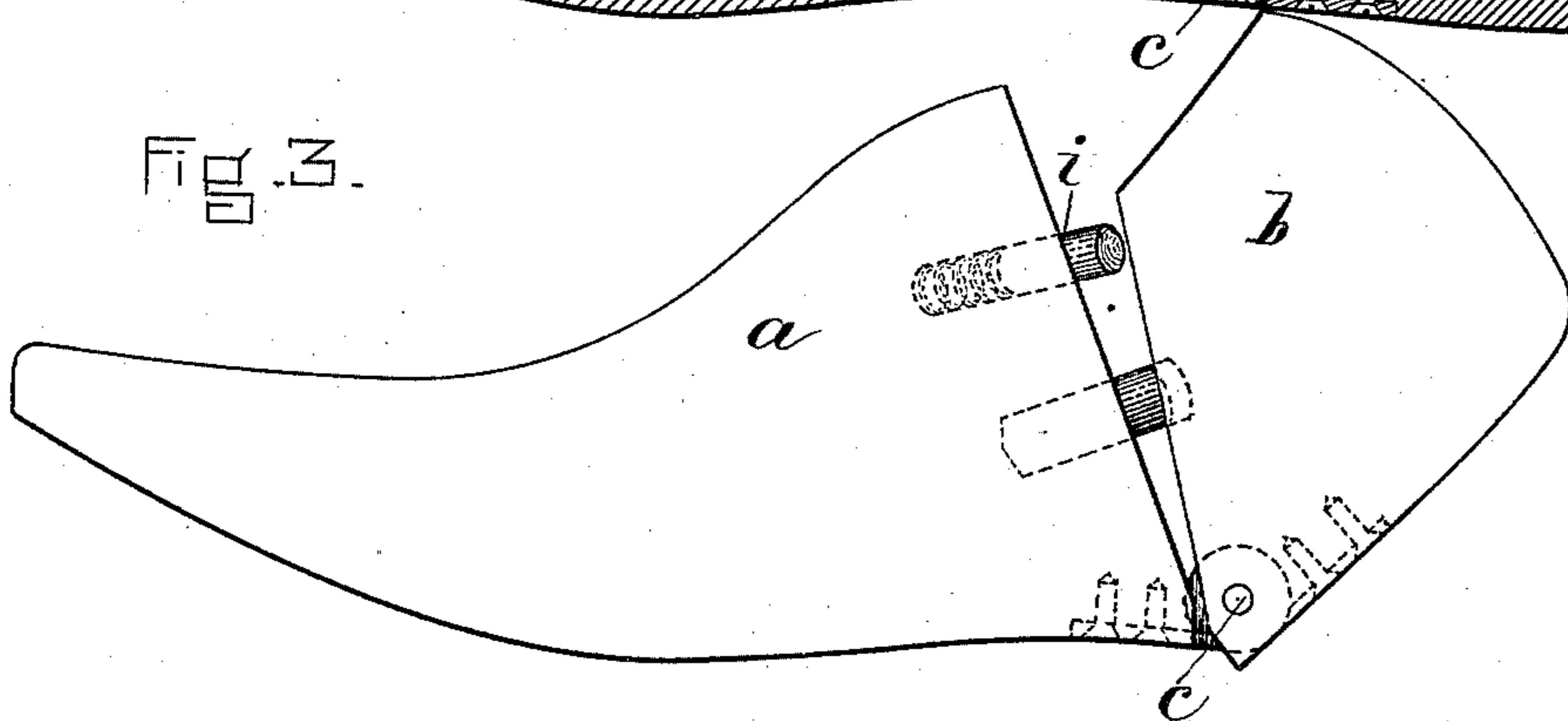
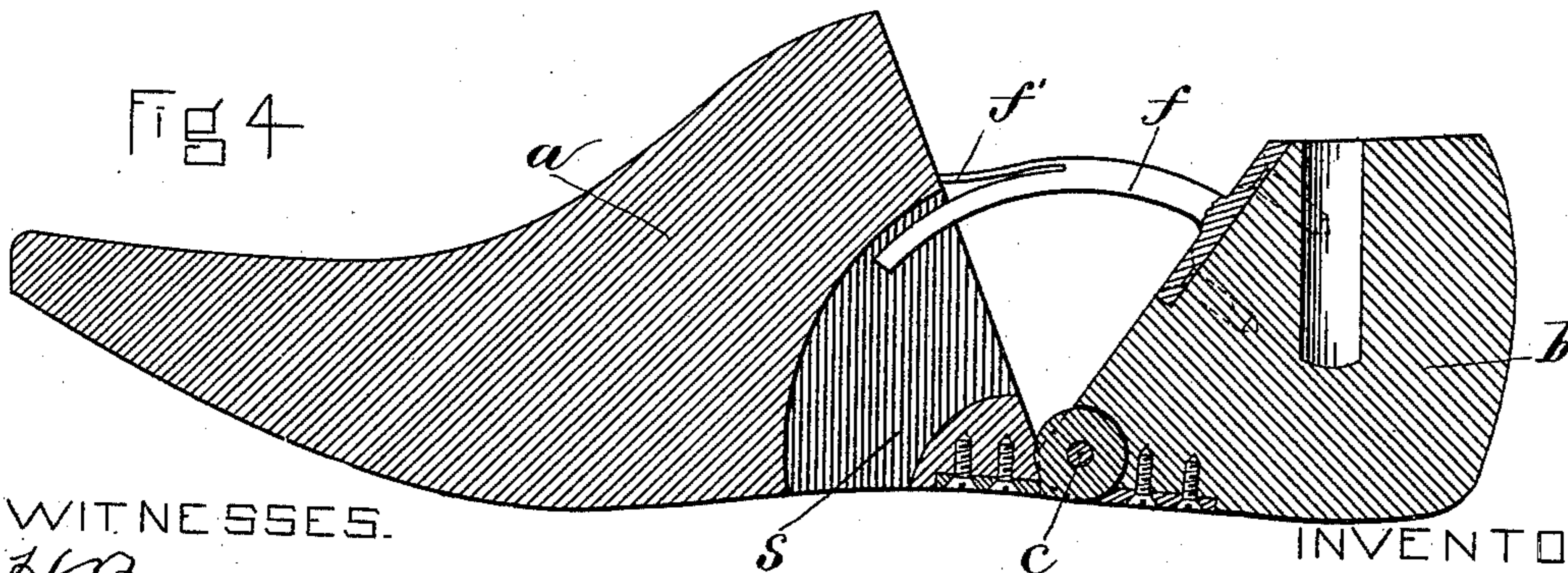


Fig. 4.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

GEORGE E. SMITH, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO WILLIAM A. KNIPE, OF SAME PLACE.

## LAST.

SPECIFICATION forming part of Letters Patent No. 395,668, dated January 1, 1889.

Application filed May 7, 1888. Serial No. 273,077. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE E. SMITH, of Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Lasts, of which the following is a specification.

This invention has for its object to provide a sectional last which, while rigid and adapted to fully fill and support a boot or shoe upper when in operative condition, is adapted to be readily contracted, so that it can be removed from the upper without straining the same.

The invention consists in a last divided transversely at or near the shank into two sections, which are hinged together, and are formed so that the rear section, which includes the heels, can be swung upward and forward, and thus virtually shorten the last so that it can be readily removed from the boot or shoe, a locking or holding device being provided which holds the heel-section rigidly in its operative relation to the fore part section when the last is in use, as I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of a last embodying my invention. Fig. 2 represents a longitudinal section of the same. Fig. 3 represents a side elevation with the locking or holding device of the heel-section removed and the heel raised. Fig. 4 represents a longitudinal section showing a modification of the heel locking or holding device.

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

In carrying out my invention I make a last in two sections, *a* and *b*, the section *a* including the fore part and the section *b* the heel of the last. Said sections are formed by dividing a solid last of the usual form transversely, the division extending through and across the bottom of the last, and cutting away enough of the material between said sections to enable the heel-section when hinged to the fore part section to tip upward and forward, as shown in Fig. 3.

I prefer to cut out a wedge-shaped block, *e*, between the two sections, the wide end of said block being at the top of the last and its apex near the bottom, thus forming a V-shaped

opening between the two sections when the block is removed and enabling the heel-section to tip upwardly, said block being utilized as the means for holding the heel-section in operative position when the last is in use.

The two sections are permanently connected by a hinge, *c*, of any suitable construction, arranged to permit the described swinging movement of the heel-section.

It will be seen that when the block *e* is in place, as shown in Fig. 1, the last is practically rigid, and is adapted to subserve its usual function; but when said block is removed the heel-section may be tipped upward and forward, as shown in Fig. 3, thus instantly relieving its pressure on the counter of the boot or shoe and depriving the last of all longitudinal strain on the boot or shoe, so that the last may be easily withdrawn. The block *e* may be locked to the section *a* (or, if preferred, to the section *b*) by a spring-bolt, *i*, arranged diagonally in a socket in the last section and adapted to spring into engagement with a hole, *j*, in the block, the bolt being pressed in by a suitable tool inserted in the hole *j* when the block is to be removed. This locking device is not of my invention, but is used in locking the ordinary last-block to the ordinary last. Any other suitable device may be used to secure the block *e*. I do not limit myself, however, to the use of the block *e* as the means for holding the heel-section. I have shown a modification in Fig. 4, in which the block *e* is dispensed with, and a segmental tongue, *f*, is attached to the section *b* and adapted to slide in a slot, *s*, in the section *a*. Said tongue is provided with a spring-catch, *f'*, which normally springs out and bears on the inner end of the section *a*, and thus causes the tongue *f* to serve as a brace to hold the heel-section in place.

I claim—

1. In a last, the combination of the sections *a* and *b*, connected by a hinge, *c*, and separated above said hinge by a V-shaped space, a block, *e*, formed to fill said space, and a locking device, whereby said block may be detachably secured to one of the sections, as set forth.

2. A last divided transversely through its body and bottom into two sections, each having a solid bottom, said sections being con-

ected by a hinge at or near the bottom portion of the last, whereby the rear section is enabled to swing upward and forward, as set forth.

- 5 3. In a last, the sections *a* and *b*, connected by a hinge or pivot located at or near the bottom of the last, whereby the section *b* is enabled to swing forward and upward, as shown, combined with a holder, whereby the section  
10 *b* may be rigidly secured in operative relation to the section *a*, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 30th day of April, A. D. 1888.

GEORGE E. SMITH.

Witnesses:

JOSEPH H. INGHAM,  
ALICE INGHAM.