

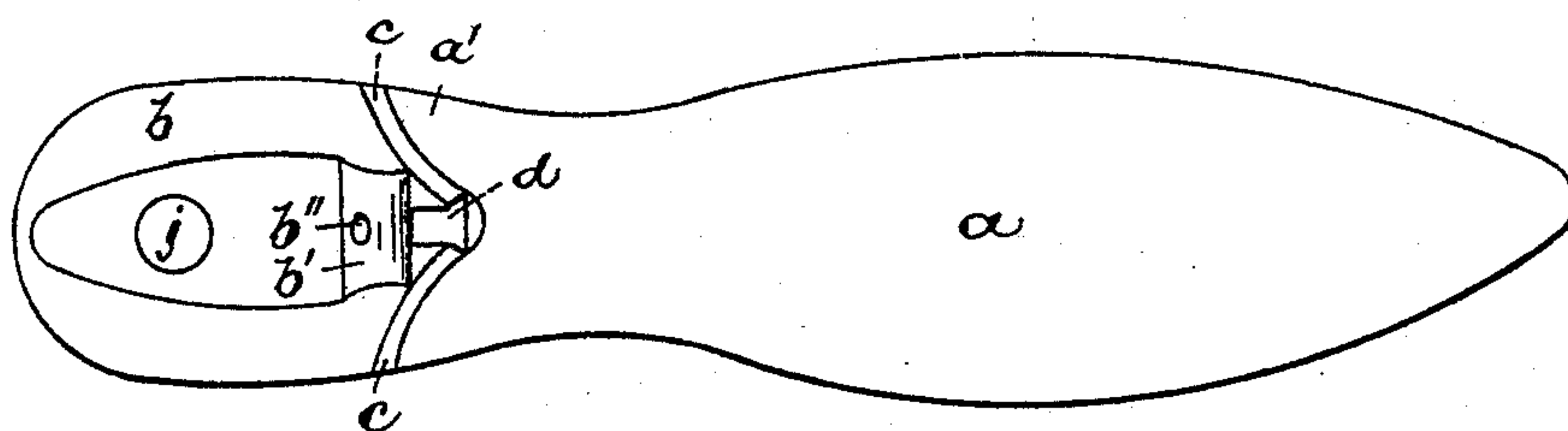
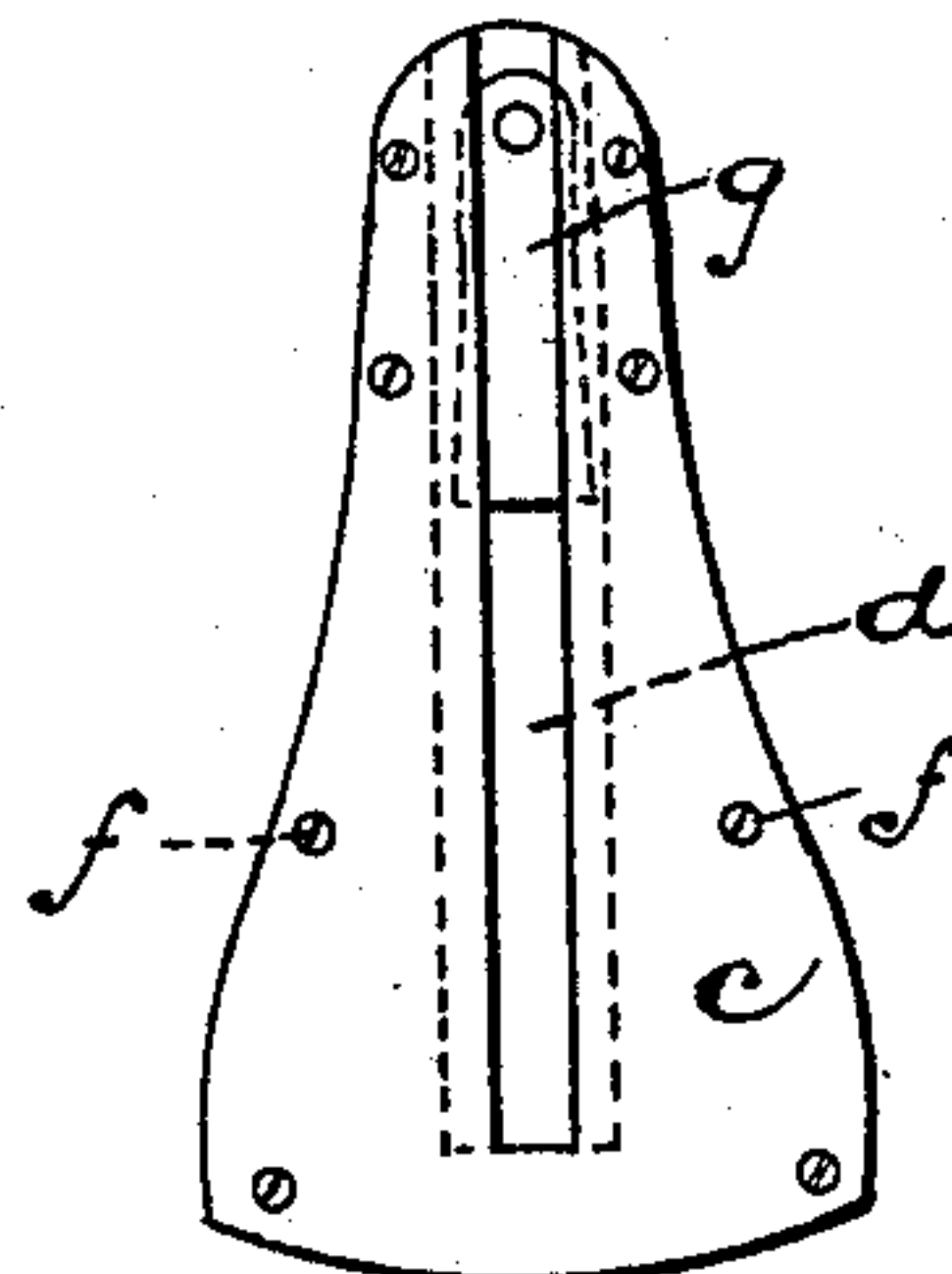
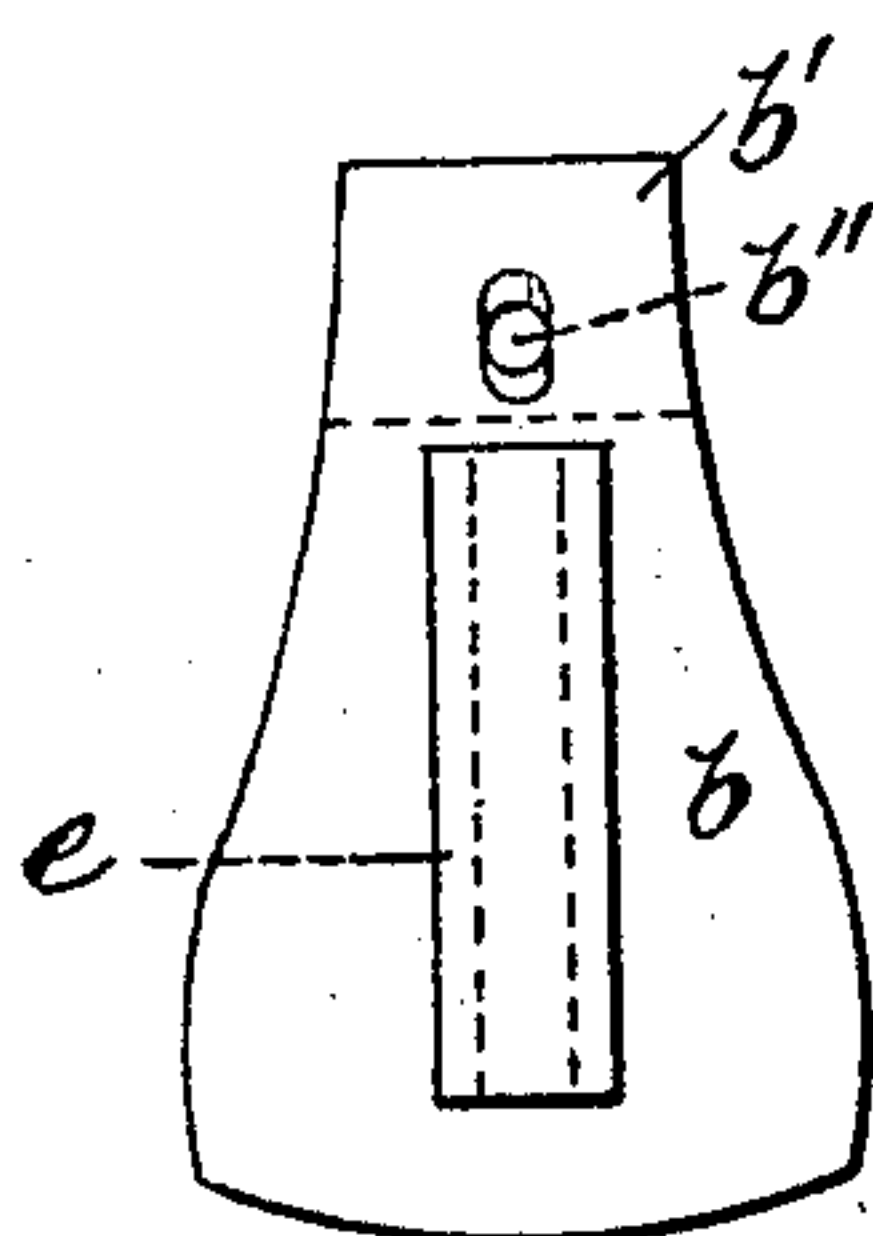
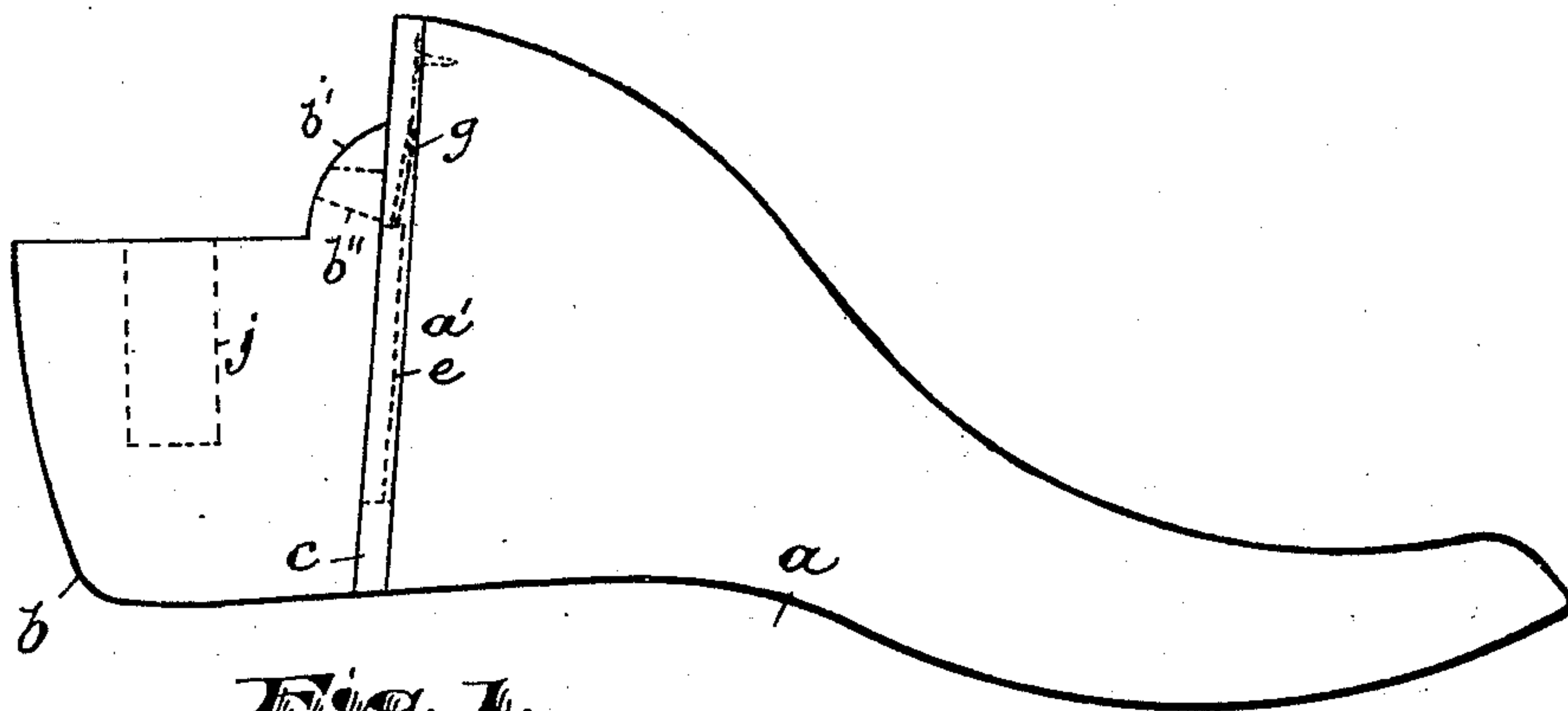
(No Model.)

2 Sheets—Sheet 1.

M. A. LINFIELD.  
LAST AND TREE FOOT COMBINED.

No. 596,712.

Patented Jan. 4, 1898.



WITNESSES:

R. B. Bloomer  
C. B. Dittus

M. Adelbert Linfield, INVENTOR

BY W. A. K. S.

ATTORNEYS

(No Model.)

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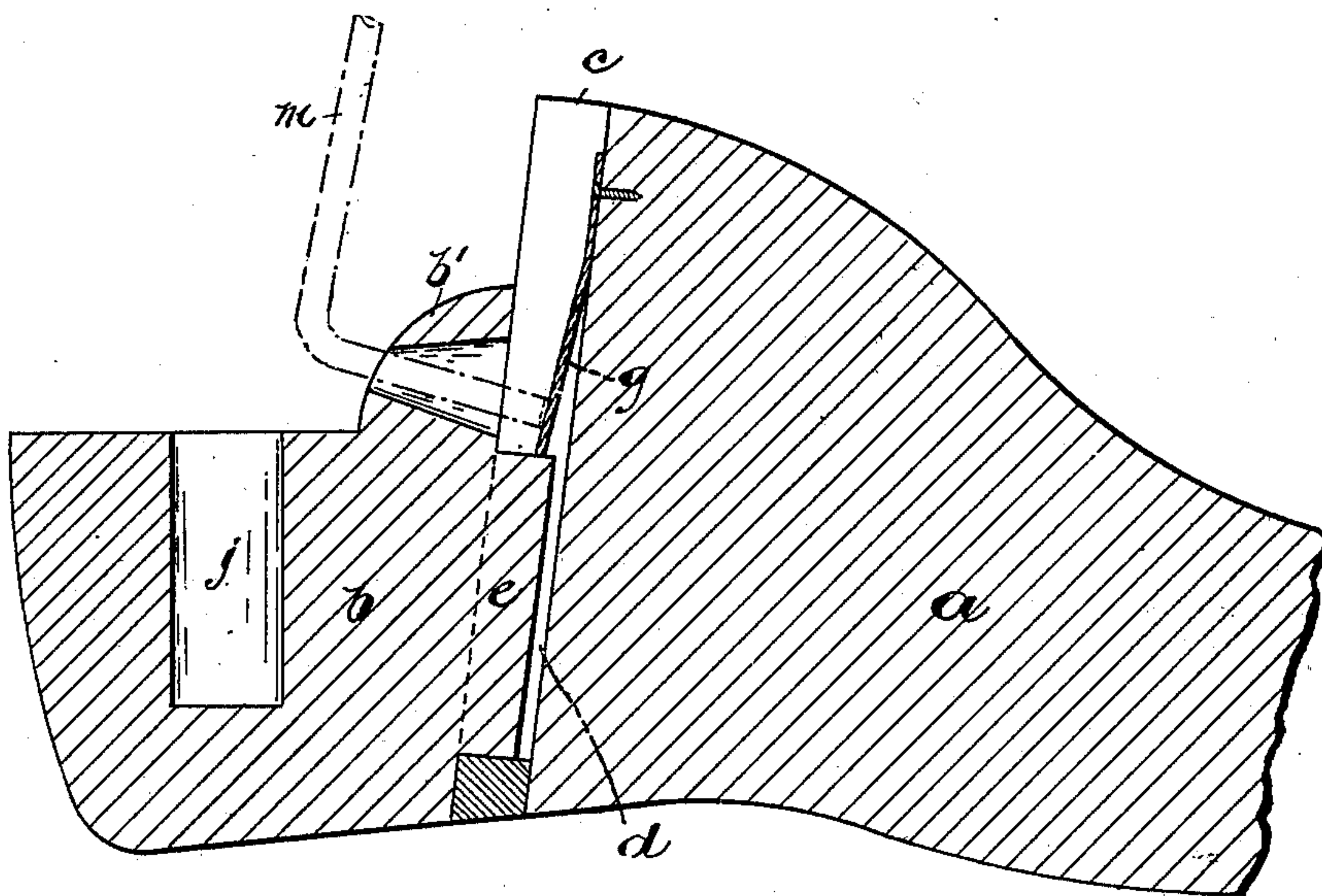


Fig. 5.

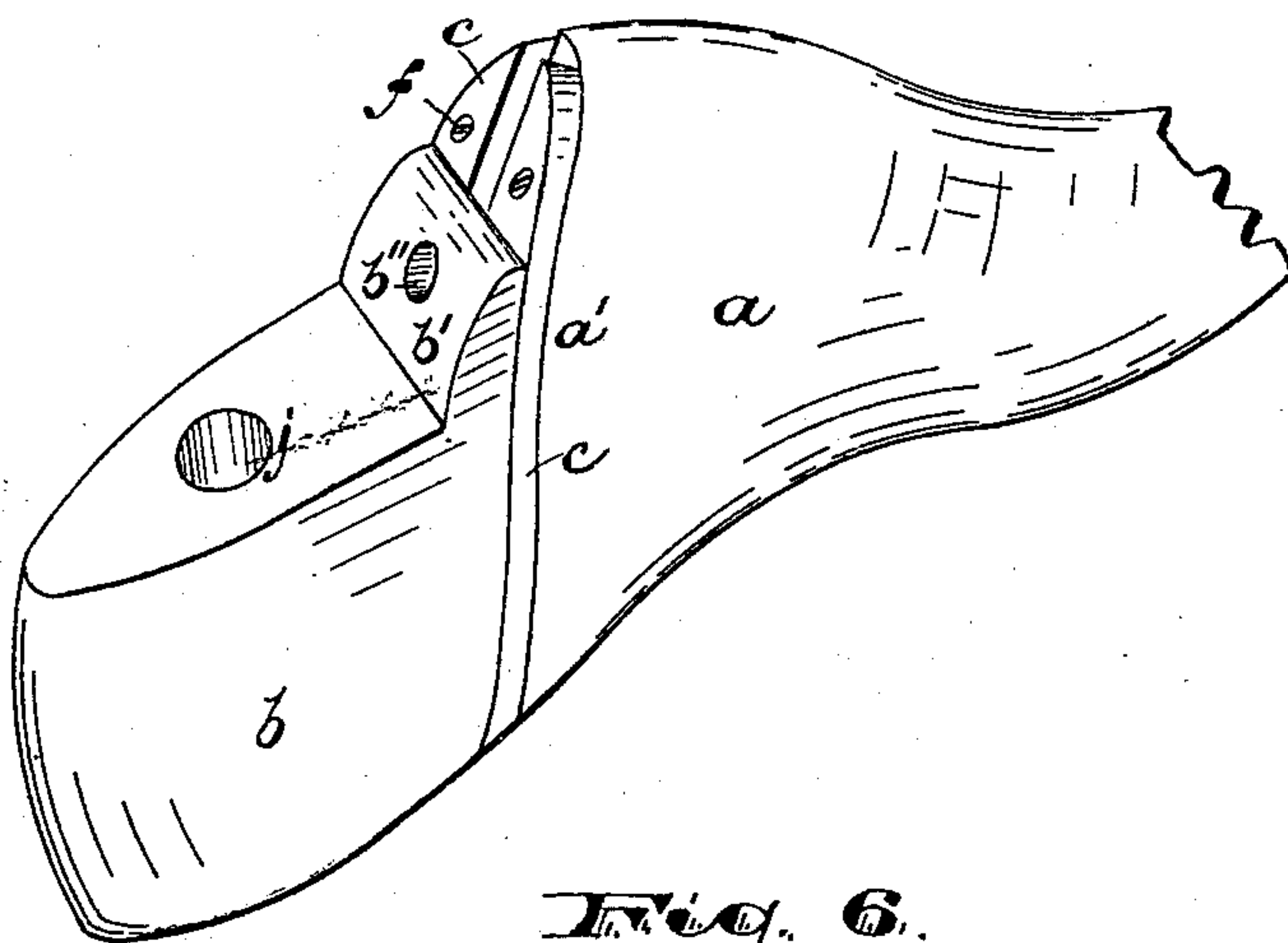


Fig. 6.

WITNESSES:  
*R. B. Blomfield*  
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*M. Adelbert Linfield*, INVENTOR.

BY *Doane & Co.*

ATTORNEYS



# UNITED STATES PATENT OFFICE.

MOSES ADELBERT LINFIELD, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE INTERCHANGEABLE LAST AND TREE COMPANY, OF NEW JERSEY.

## LAST AND TREE-FOOT COMBINED.

SPECIFICATION forming part of Letters Patent No. 596,712, dated January 4, 1898.

Application filed July 28, 1896. Serial No. 600,806. (No model.)

*To all whom it may concern:*

Be it known that I, MOSES ADELBERT LINFIELD, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in a Last and Tree-Foot Combined; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to reduce the cost of manufacturing shoes; to provide a method of interchanging last parts whereby the costs of the lasts to the manufacturer will be greatly reduced and the manufacture of shoes facilitated; to enable a single last fore part to be employed during all the operations of lasting and finishing the shoe; to provide a last-heel part which can be removed during the later shoe-finishing operations and can thus be used immediately in connection with other fore parts and which will sustain the great strain and be strong and durable under the heeling and leveling operations; to enable an interchange of heel parts to be easily and quickly accomplished, and to secure other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the combination last and tree-foot and in the arrangements and combinations of parts, all substantially as will be hereinafter set forth, and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the views, Figure 1 is a side elevation of the improved last and tree-foot combined. Figs. 2 and 3 are end views of the meeting faces of the heel portion and fore part, respectively; and Fig. 4 is a plan of said combined last and tree-foot. Fig. 5 is a detail longitudinal section on an enlarged scale, and Fig. 6 is a perspective view showing the relations of parts more clearly.

In said drawings, *a* indicates the fore part, and *b* the heel portion. The former is of wood

ordinarily and serves both the purposes of an ordinary tree-foot and when in connection with the heel a last complete, the fore part remaining in place during the whole process of making and finishing the shoe. The heel portion consists of a piece of cast metal of appropriate shape and a pattern-plate *c*, adapted to be applied to the fore part, the said plate being provided with a vertical slideway *d*, in which a tongue *e*, cast upon the heel portion, enters and is held in any suitable manner. The metal heel portion is provided with a jack-hole to receive the spindle in any usual manner.

I am well aware that heretofore lasts have been made in sections, but the sections were of uniform material, both being of wood, and when under the great strain of two thousand pounds, more or less, the heeling-machine was brought to bear thereon the heel portion soon gave way and became inoperative. In my construction and system I employ a metal heel capable of sustaining this great strain, and which will conformably coincide with the fore part and form a perfect last with any one of a series of differently-styled fore parts, and thus I am enabled to do away with many lines of heels, a single line of sizes of heels being interchangeable with several lines of fore parts, a feature not common to the lasts heretofore provided.

The plate *c* extends to the sides and bottom of the fore part and is of the standard outline or pattern by which all lasts of various styles in the system are made, the outlines of the plate being carried out or continued upon the body of the fore part, as at *a'*, so that the last-maker, or maker of the fore part, will be enabled to fasten the plate to a model and use the plate as a pattern in shaping the fore part quickly and easily.

The plate *c* may be fastened to the fore part by screws or nails *f* or in any other convenient manner.

The heel-plate is fastened to the fore part by a spring-catch *g* or other suitable lock, so that the parts cannot slide one on the other, nor become disconnected or thrown out of proper relation when being handled in the lasting process. The upper part of the heel portion is provided with a tongue *b'*, which is



perforated, as at *b''*, provided with an opening to the spring, so that a tool, such as a hook *m*, may be pressed against said spring to unlock the heel when said heel is to be drawn off by  
5 said tool, as will be understood.

By the construction described the heel portion can be readily unlocked and removed at any point in the process of making the shoe, and be replaced by a wooden form, and the  
10 metallic heel portion can then be reemployed in a lasting and heeling operation in connection with another fore part of the same or of a different shape or style from that first used.

Having thus described the invention, what  
15 I claim as new is—

1. The combination with the fore and heel parts of a last, one of which is separable from the other and provided with a slideway and tongue, *e* and positively-locking spring-catch  
20 adapted to positively lock the parts together while in the shoe, the catch being exposed at the top of the last to permit access of an unlocking implement whereby said implement may be employed in pressing back the spring-  
25 catch from its positively-locking position preliminary to withdrawing the heel part from the shoe, substantially as set forth.

2. The improved last, comprising the heel portion and fore part and an intermediate  
30 pattern-plate and means for holding said parts together, substantially as set forth.

3. As an article of manufacture, a heel portion having a tongue and a fore-part pattern-plate having a groove to receive said tongue,

said pattern-plate being adapted to be fastened upon said fore part and serve in shaping the same, substantially as set forth. 35

4. The improved last herein described comprising a metallic heel portion having a tongue cast thereon, a pattern-plate having  
40 a groove to receive said tongue, a locking device and a fore part fastened to said pattern-plate, said parts being arranged and combined, substantially as set forth.

5. The combination with a pattern-plate  
45 shaped to conform to a last fore part and having a groove or way *d*, of a metallic last-heel part having a jack-hole and tongue *b'*, perforated as *b''*, the plate and meeting face of the heel part corresponding in outline, sub-  
50 stantially as set forth.

6. The combination of the heel and fore parts, one of which parts is grooved or provided with a slideway and spring-catch *g*, and the other with a tongue *e*, arranged in  
55 said slideway and a tongue *b'*, having a perforation *b''*, adapted to permit access of a hook to said spring-catch whereby said hook may be employed in pressing back said spring-  
60 catch and in drawing out the heel part, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of June, 1896.

M. ADELBERT LINFIELD.

Witnesses:

CHARLES H. PELL,  
C. B. PITNEY.