

(No Model.)

J. F. GRANT.  
LAST.

No. 606,164.

Patented June 21, 1898.

Fig. 1.

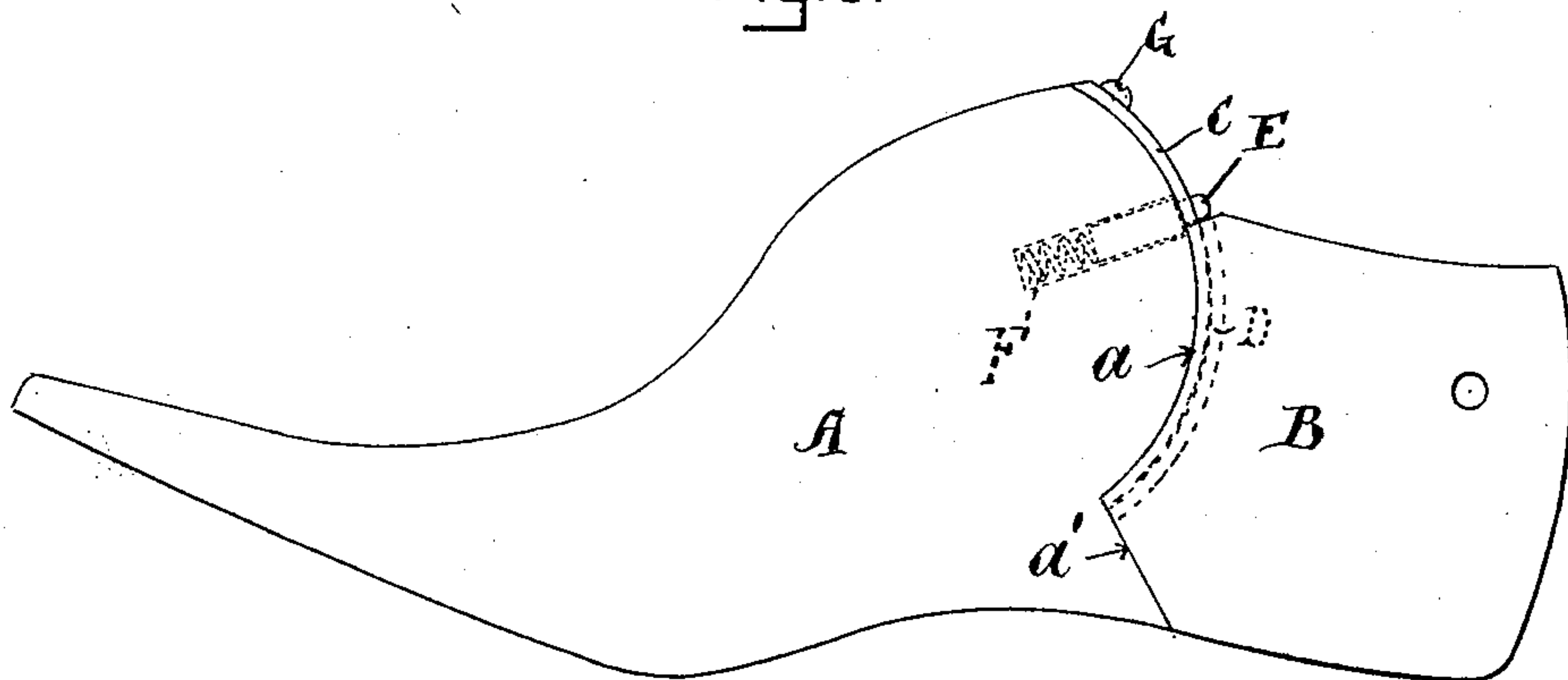


Fig. 2.

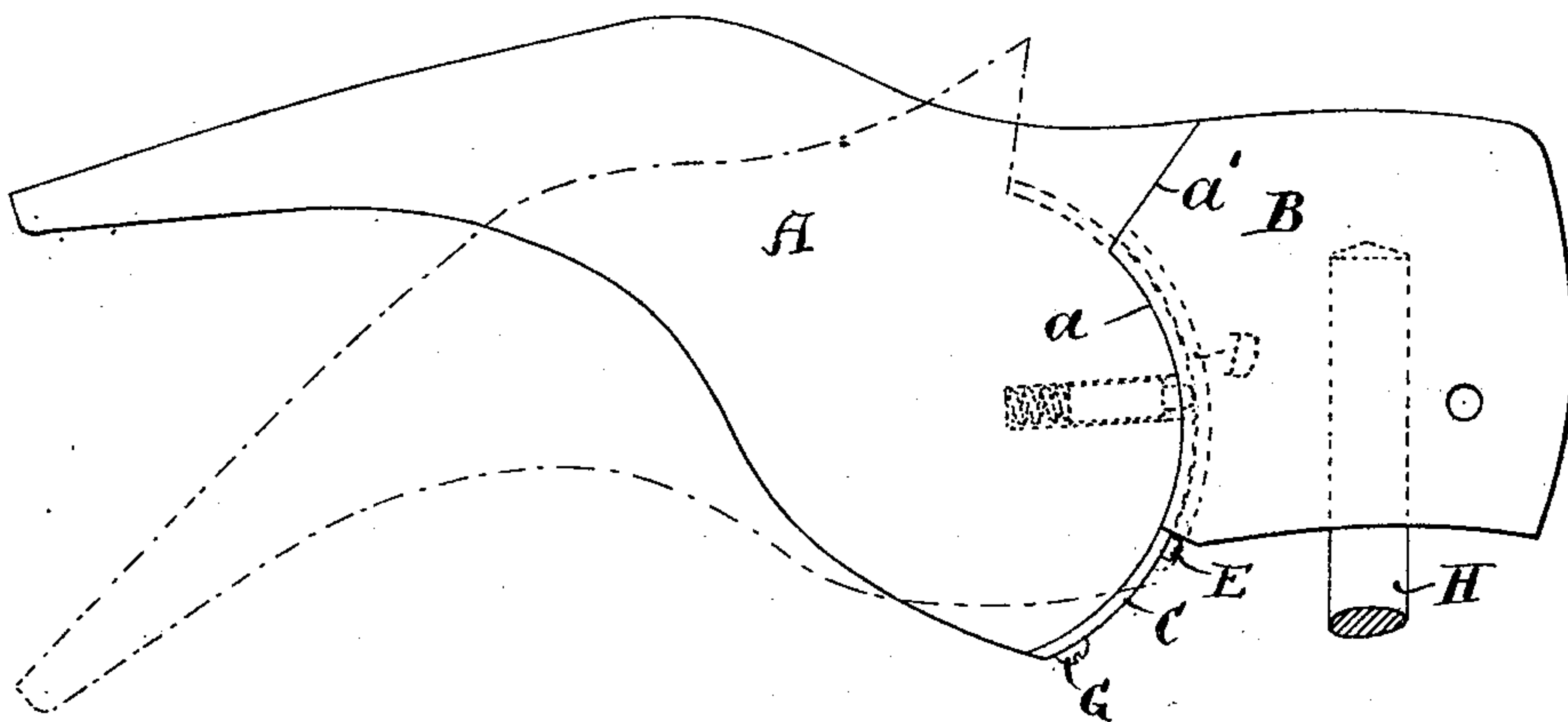


Fig. 3.

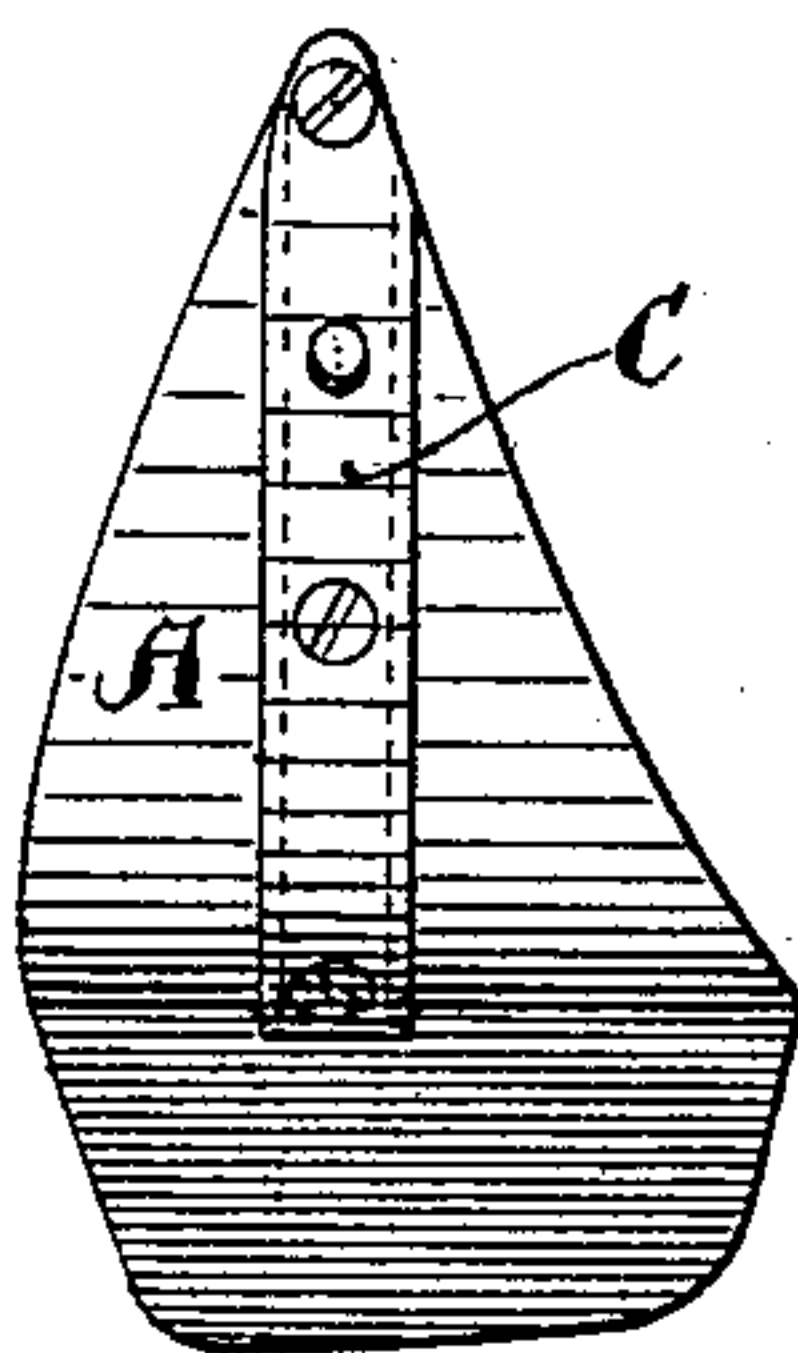
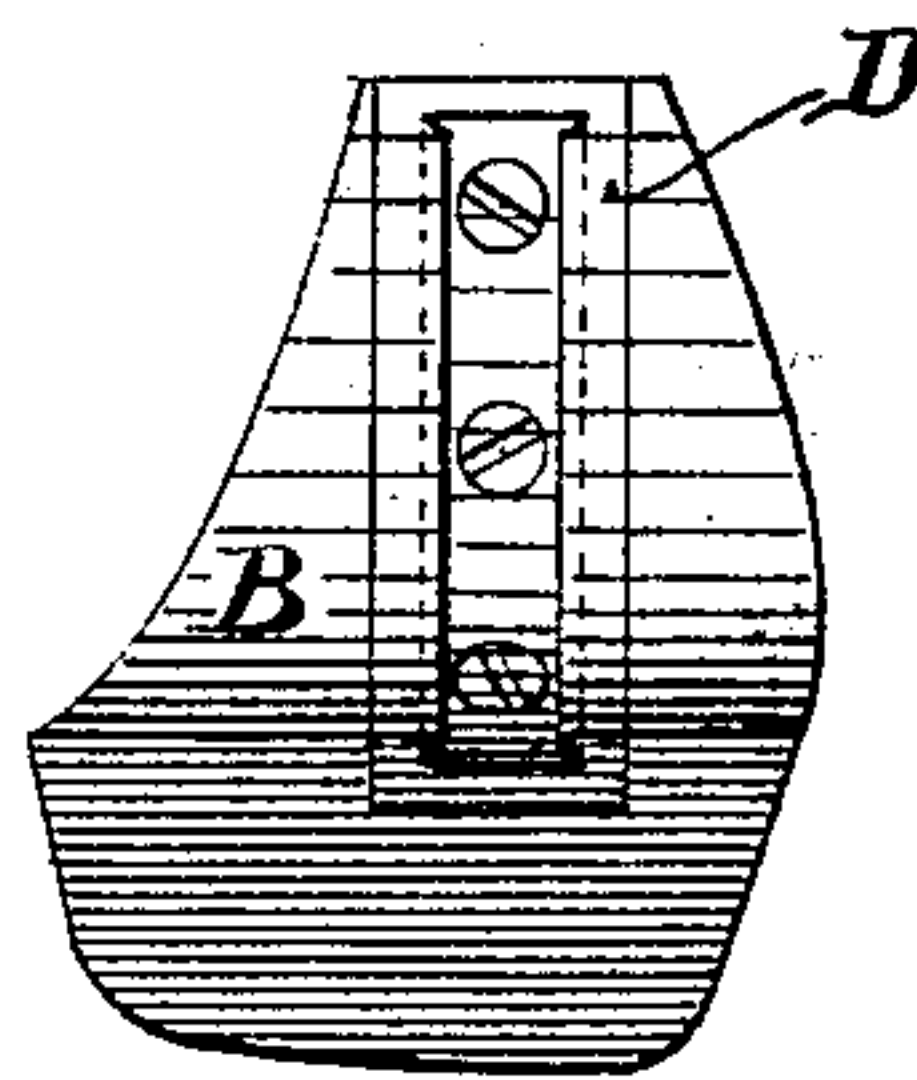


Fig. 4.



Witnesses.

Wm. G. Herwin.  
Lama E. Hayward

Inventor.

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by Edwin Blanta.  
Attorney.

# UNITED STATES PATENT OFFICE.

JOHN F. GRANT, OF LYNN, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO  
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## LAST.

SPECIFICATION forming part of Letters Patent No. 606,164, dated June 21, 1898.

Application filed June 16, 1897. Serial No. 640,998. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. GRANT, a citizen of the United States, and a resident of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Lasts, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of my invention is to produce a last so that a shoe can be easily placed thereon or removed therefrom in such manner that the shank will not be bent or broken, thus avoiding the shoes being injured and also saving time and labor.

The invention consists in the construction and combination of parts substantially as hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 represents a side view of a last embodying my invention. Fig. 2 is a similar view of a last embodying my invention when placed on a pintle, the dotted lines showing the fore part of the last pressed down for applying or removing a shoe. Fig. 3 is an end view of the fore part of the last having a flaring tenon. Fig. 4 is a view of the inner end of the rear or heel portion of the last, showing the mortise with receding sides into which the tenon fits.

A represents the fore part, and B the rear or heel portion, of a last, the last being divided transversely on the line  $a a'$ , the portion  $a'$  forming a stop, so that the fore and heel portions will abut properly together.

To the convex portion at the rear of the fore part of the last is secured a flaring tenon C, and in the concave face of the rear or heel portion of the last is let in a piece D, having a mortise with receding sides, so that when the two portions are placed together one is free to slide upon the other in an arc of a circle.

In the fore part A a hole is formed, in which is fitted a bolt E, that is held extended by a spiral or other spring F. (Shown in dotted lines in Fig. 1.) The object of this bolt is to lock the fore and heel portions together when in the position shown in Figs. 1 and 2, and also to allow said fore part to be depressed, as shown in dotted lines in Fig. 2, when said bolt E is pressed in so that its end rests upon

the face of the piece D, as indicated in dotted lines in Fig. 2.

In order that one part shall not be accidentally disconnected from the other, I prefer to employ a round-headed screw G to hold the upper end of the convex piece C in place. Thus the travel of the parts is limited and they cannot be separated.

With a last thus constructed when placed on a spindle H, as shown in Fig. 2, and it is desired to place a shoe thereon the bolt E is depressed and the fore part bent down, as shown in dotted lines. The shoe is then placed on the fore part, and said part, with the shoe, is raised, the heel portion of the shoe being easily guided over the heel portion B of the last, and when in place the bolt E springs out and retains the two portions of the last in place. When it is desired to remove the shoe from the last, the bolt E is pressed in and the fore portion of the last depressed, which operation draws the heel portion of the shoe off the heel of the last. Then the shoe can be easily slipped off the fore portion. Thus all bend of the shoe is obviated, and the shank is not bent or injured in any way.

What I claim is—

1. A last divided transversely into a fore and heel portion by being cut between the heel and shank portion on an angle for a short distance and then on an arc of a circle, so that the two parts will fit together, the angular portion being toward the rear from the curved portion and forming a stop, a circular flaring tenon secured to the circular portion of the fore part and a circular mortise with receding sides secured to the circular part of the heel portion and adapted to fit onto said tenon on the fore part, whereby the fore and heel portions are held in close contact but so that the fore portion is free to be depressed substantially as set forth.

2. A last consisting of a fore part the rear of which is cut on an angle at the rear of the shank for a short distance and then on an arc of a circle and a heel portion cut to correspond and fit thereon the angular portion being toward the rear from the curved portion and the two parts being held together by a dovetail joint whereby the forward portion



can be bent down to place a shoe upon or remove a shoe from the last and when raised the angular parts will come together and form a stop substantially as set forth.

- 5 3. In combination with a last divided transversely into a fore and heel portion connected together by means of a dovetail joint, a spring locking-bolt attached to the rear of the fore portion and projecting below the edge of the  
10 heel portion to hold the two portions in the closed position but capable of being depressed

so as to pass within the heel portion so that the fore part of the last can be pressed down substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 9th day of June, A. D. 1897.

JOHN F. GRANT.

Witnesses:

CALEB H. SWAN,  
EDWIN PLANTA.