

(No Model.)

H. M. GOODHUE.

LAST.

No. 388,554.

Patented Aug. 28, 1888.

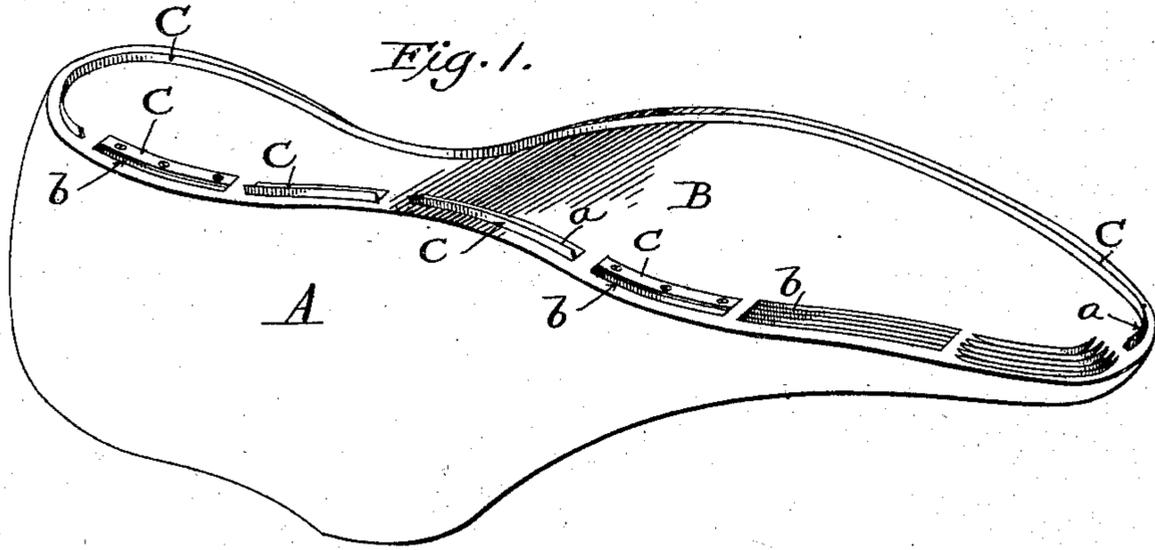


Fig. 2.

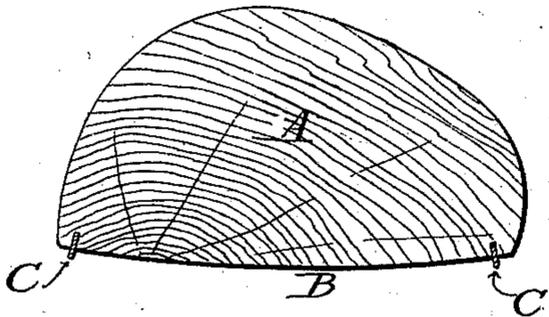


Fig. 3.

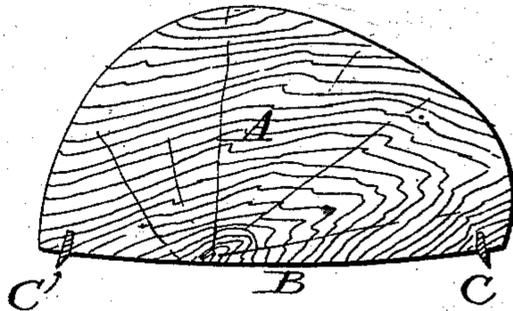


Fig. 4.

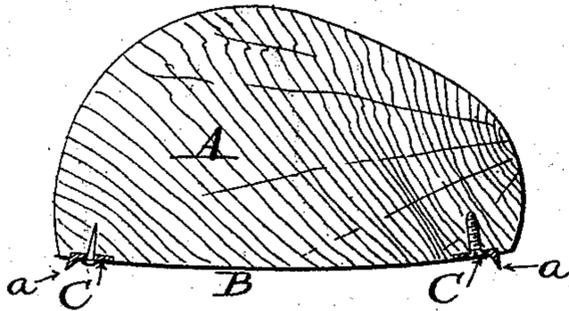


Fig. 5.

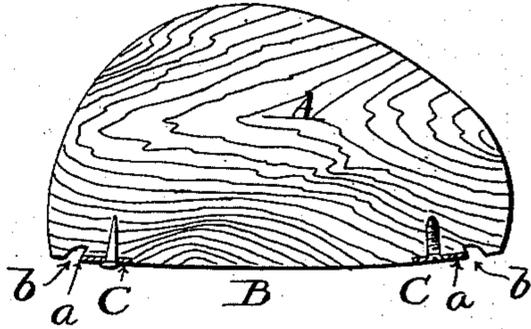


Fig. 6.

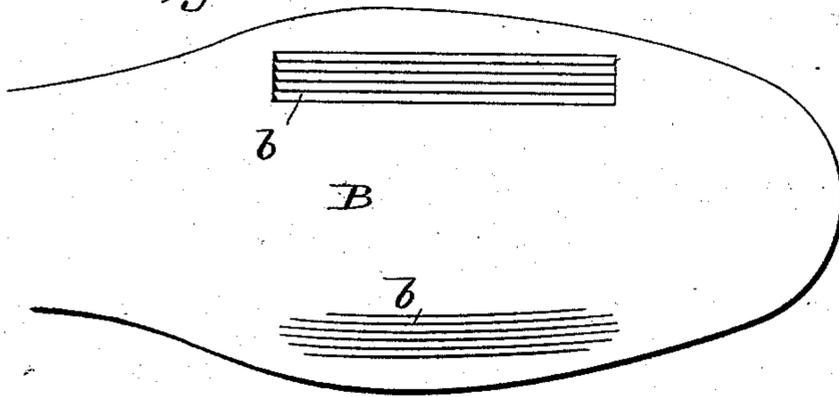
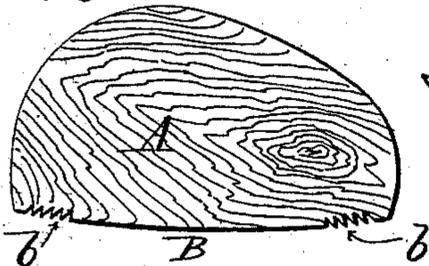


Fig. 7.



Witnesses:

James F. Sufhamel  
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Inventor:

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# UNITED STATES PATENT OFFICE.

HENRY M. GOODHUE, OF ROCHESTER, NEW YORK, ASSIGNOR TO WILLIAM S. KING, OF MINNEAPOLIS, MINNESOTA.

## LAST.

SPECIFICATION forming part of Letters Patent No. 388,554, dated August 28, 1888.

Application filed April 19, 1888. Serial No. 271,144. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY M. GOODHUE, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Lasts, of which the following is a specification.

My invention relates to lasts for use in lasting-machines; and it consists in providing the same with grooves or recesses having sharp angular edges formed integral with the last, or by metallic plates or strips applied thereto, turned toward the edges of the last, and serving to prevent the slipping or "creeping" of the insole under the action of the lasting jaws or wipers.

Referring to the accompanying drawings, Figure 1 is a perspective view of a last, showing the plates or strips applied in a variety of forms; Figs. 2, 3, 4, 5, and 7 cross sections of lasts, illustrating various forms of the plates or strips and different modes of applying them. Fig. 6 is a face view of a portion of the last-sole, grooved as in Fig. 7.

It is proper to say at the outset that I am aware that a patent has been granted for a last having a corrugated metallic sole-plate designed to turn the points of nails and effect a clinching thereof, and that a pegging-last has been provided with a roughened metallic sole-plate having grooves or recesses where the pegs are to be driven.

I make no claim to such constructions.

Referring now to the accompanying drawings, A indicates the body of a last; B, the sole thereof; and C, the metal plates or strips which I employ to prevent the slipping of the insole, which is likely to occur with a smooth last, owing to the pressure and the inward movement of the folding-blades or wipers of the lasting-machine. These plates C are of metal, preferably steel, and in every case have one or more sharp angular edges, shoulders, or teeth, *a*, turned toward the edge of the sole to resist or prevent an inward sliding of the insole.

In Fig. 1 I have represented one strip extending around the heel along one side and partially across the toe of the last, the strip in this case being driven or pressed edgewise into the last and allowed to project sufficiently to present its sharp outer edge, *a*, to the insole, as illustrated in Figs. 2 and 3. In the

same figure (1) I have shown shorter sections similarly applied and others secured by screws or tacks passing through the plate and into the last in the manner illustrated in Fig. 4.

In Fig. 5 the last is represented as formed with a groove or channel, *b*, in its sole-face, the plate or plates C being placed at the inner side of such groove or channel with their sharp edges forming a portion of the inner wall thereof.

In some cases a series of grooves or channels, *b*, may be formed parallel with the edges of the sole of the last, these grooves having one inclined and one upright or undercut wall, the latter turned toward the edge of the sole, as illustrated in Figs. 6 and 7. The edges, ribs, or teeth which cross the grain need not be faced with metal, nor is it absolutely necessary that others should if hard close-grained wood be used; but it is deemed advisable to employ the metal for those running parallel with the grain of the wood.

The gist of the invention consists in producing either a continuous wall or a series of sectional walls or teeth with a sharp angular edge turned toward the outer edge of the last, and this without cutting away the last at the edge of the sole-face.

It is important to preserve the outline of the last-sole, and hence the formation of a sharp edge by cutting inward from the boundaries of the sole-plate, as has been proposed, is objectionable, or at least is not so satisfactory as the plan herein proposed.

The last being constructed as above explained, the insole is laid upon it and is held by the angular edges of the plates, grooves, or teeth from being crowded inward under the action of the lasting jaws, blades, or wipers.

In practice, especially when the sole-face is grooved, I find it advisable to first moisten or soak the insole and to press or mold it upon the last until it becomes embedded into the grooves or against the upright faces of the ribs, plates, or teeth; but this is a matter that may be left to the judgment of the operator.

Having thus described my invention, what I claim is—

1. A last having its sole-face provided with metallic plates formed with sharp edges or teeth facing toward the outer edges of the last.

2. In combination with a last having a groove or grooves in its sole-face near its edges, a metallic plate or plates secured to the sole of the last within the line of said groove or grooves and presenting angular edges toward the edges of the last.
3. A last having its sole-face provided with a groove or grooves formed with sharp angular edges to their inner walls, substantially as set forth.

In witness whereof I hereunto set my hand in the presence of two witnesses.

HENRY M. GOODHUE.

Witnesses:

W. MARTIN JONES,

F. D. H. COBB.