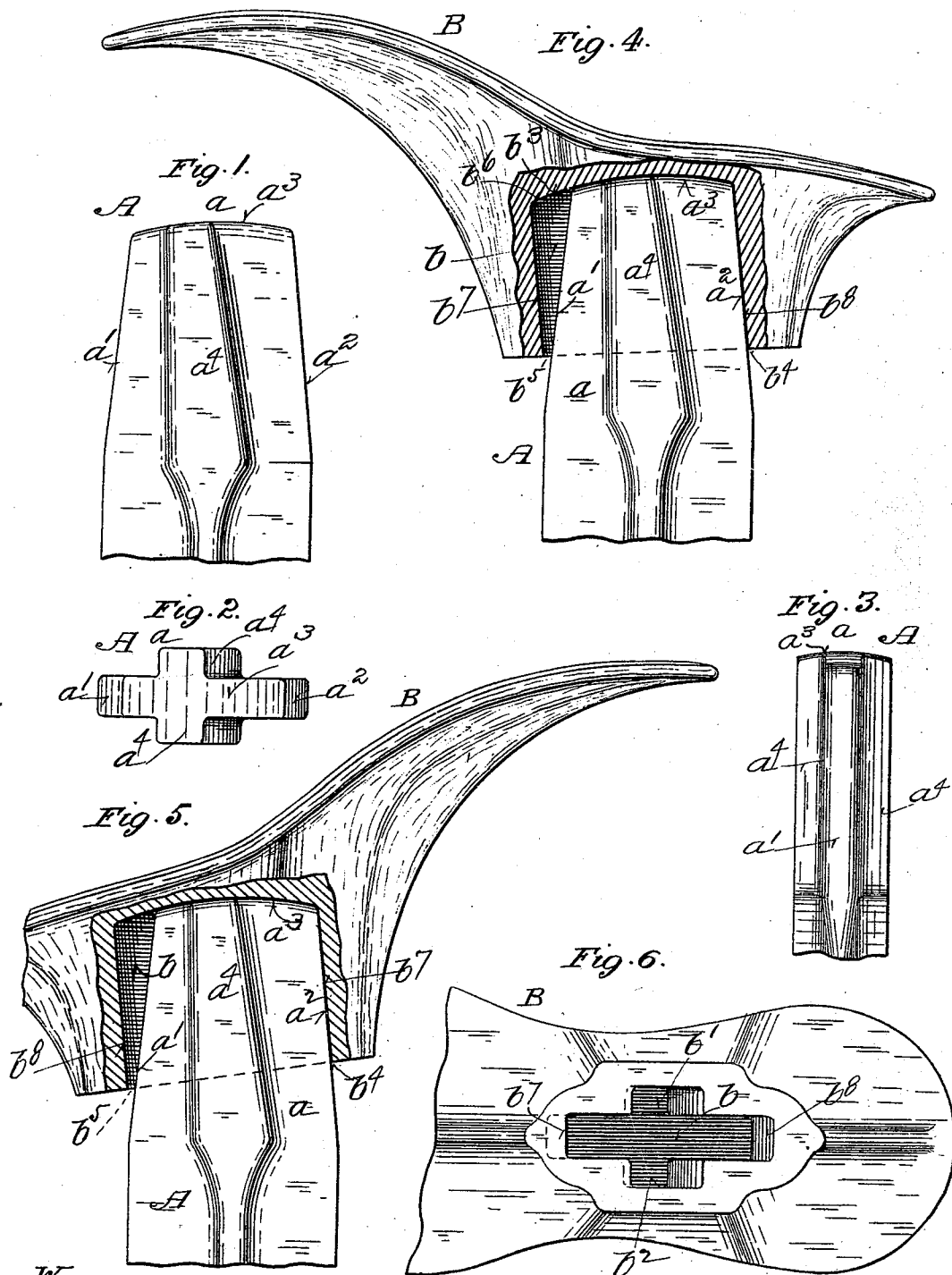


(No Model.)

J. C. KUPFERLE.
LAST.

No. 519,067.

Patented May 1, 1894.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN C. KUPFERLE, OF ST. LOUIS, MISSOURI.

LAST.

SPECIFICATION forming part of Letters Patent No. 519,067, dated May 1, 1894.

Application filed December 26, 1893. Serial No. 494,714. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. KUPFERLE, of St. Louis, Missouri, have made a new and useful Improvement in Boot and Shoe Lasts, of which the following is a full, clear, and exact description.

The improvement relates to lasts that are attachable to a standard and reversible thereupon for the purpose of holding the last in different positions and at various angles, and it consists in the special relative construction of the last and standard, substantially as is hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, in which—

Figure 1 is a side elevation of the upper portion of the standard; Fig. 2 a top view of the same; Fig. 3 an edge elevation of the upper portion of the standard; Fig. 4 a view of the last attached to the standard, the standard being shown in side elevation and the last in sectional side elevation; Fig. 5 a view analogous to that of Fig. 4 but showing the last reversed upon the standard; and Fig. 6 a top view of the last; that is the bottom view of the last when applied to the standard.

The same letters of reference denote the same parts.

A represents the standard, and B the last. These parts, saving as modified by the improvement under consideration are constructed and used in the ordinary manner. The upper portion of the standard, or that portion with which the last immediately coacts is in the form of a tenon a tapered at its edges a' , a'' , rounded at its end a^3 , and upon each side of it having a rib a^4 inclined with reference to the vertical axis of the standard, and tapered, all substantially as shown. The last is mortised to enable it to be applied to the standard and to be reversed thereon. To this end the mortise b is, generally considered, cruciform in plan and horizontal section, and its side recesses b' , b'' , are respectively shaped to enable the tenon ribs a^4 , a^4 , to fit therein in either of the positions of the last. The bottom b^3 of the mortise is also rounded to fit the end a^3 of the standard in either of the positions of the last. But in the direction of its length; that is in the direction of the width of the standard-tenon, the mortise is longer than the width of the tenon and it is not tapered to correspond to the size of the tenon.

On the contrary the mortise at its outer end b^4 is slightly longer than is the width of the corresponding part of the tenon as indicated at b^5 in Figs. 4 and 5, and at its bottom or inner end b^6 the mortise is considerably longer than is the width of the end a^3 of the tenon. At the same time the ends b' , b'' , of the last are both shaped to fit the side edge a^2 of the tenon. By this means the last can be readily attached and readily detached from the standard, and can be reversed thereupon as indicated by its two positions shown respectively in Figs. 4 and 5, and in each of its positions be held firmly upon the standard. This, as far as the different inclinations of the last are concerned, is obtained by means of the inclination of the ribs upon the tenon in conjunction with the corresponding part of the last-mortise. The taper of the tenon-ribs is also useful in limiting the extent to which the last is passed onto the tenon. But in this respect, and also to obtain a better bearing upon the standard, I rely upon the rounded end of the tenon and the coacting part of the mortise. And to further improve the bearing of the last upon the standard in each of its positions both of the end walls of the mortise are adapted as described to interchangeably fit the side edge a of the tenon. And the easy withdrawal of the last from its standard is enabled by the fact of the mortise being in length slightly longer than the width of the tenon. It is possible to reverse the last and hold it firmly in either of its positions without the described bearing of the end wall of the mortise upon the side edge of the tenon. It is also possible to dispense with one of the tenon ribs. But it is better to employ all of the described features of the construction in conjunction as thereby a stronger and more reliable support is provided for the last.

Figs. 4 and 5 illustrate the use of the last: in the position of Fig. 4 the last is less inclined: in the position of Fig. 5 it is more inclined.

I claim—

1. The combination in a reversible boot and shoe last of the standard-tenon and the mortised last, said tenon being tapered at its side edges, rounded at its end, and provided at each side with a tapered inclined rib, and said

last-mortise being cruciform in horizontal section, having side recesses to receive the tenon ribs, and being longer than the width of the tenon, and rounded at the bottom, substantially as described.

2. The combination in a reversible boot and shoe last of the standard-tenon and the mortised last, said tenon being tapered at its side edges, rounded at its end, and provided at one of its sides with a tapered inclined rib, and said last-mortise being shaped in horizontal section to receive the tenon in each of its positions, and being rounded at its bottom, and longer than the width of the tenon, substantially as described.

3. The combination in a reversible boot and shoe last of the standard-tenon and the mortised last, said tenon being provided at one of its sides with an inclined rib, and said last-

mortise being shaped in horizontal section to receive the tenon in each of its positions, and in length being longer than the width of the tenon, substantially as described.

4. The combination in a reversible boot and shoe last, the standard-tenon, and the mortised last, said tenon being rounded at its end and provided at one of its sides with an inclined rib, and said last-mortise being shaped in horizontal section to receive the tenon in each of its positions, and being rounded at its bottom, and in length longer than the width of the tenon, substantially as described.

Witness my hand this 23d day of December, 1893.

JOHN C. KUPFERLE.

Witnesses:

C. D. MOODY,
A. BONVILLE.