L. DAROZIR.

Last.

No. 199,272. Patented Jan. 15, 1878.

Fig. 1.

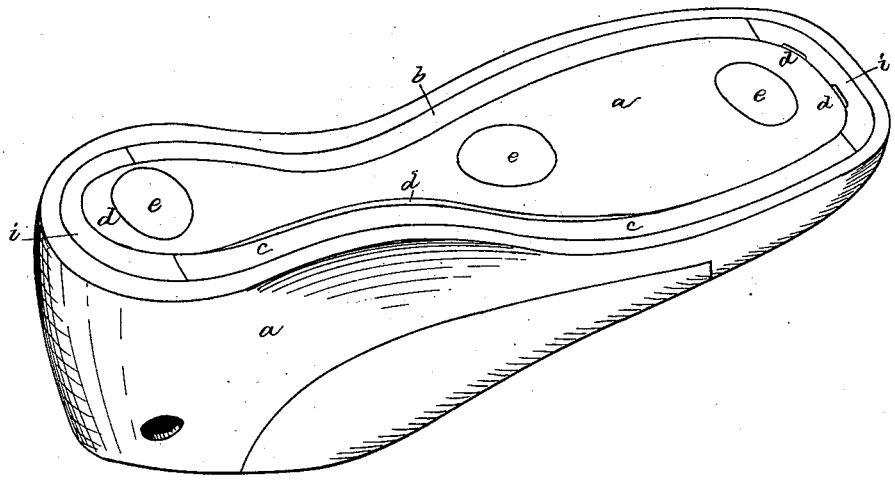
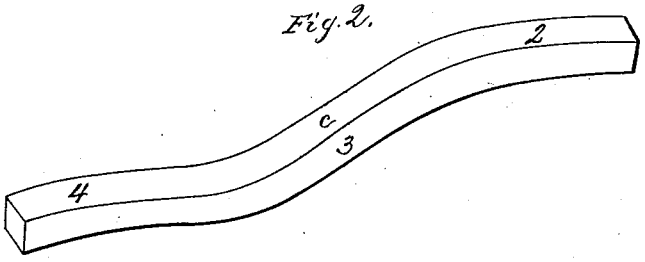


Fig. 2.



Witnesses.

L. H. Latimer.

C. C. Perkins.

Inventor

Levi Darozir

per Crosby & Gregory Attys.

UNITED STATES PATENT OFFICE.

LEVI DAROZIR, OF NATICK, MASSACHUSETTS.

IMPROVEMENT IN LASTS.

Specification forming part of Letters Patent No. **199,272**, dated January 15, 1878; application filed May 15, 1877.

To all whom it may concern:

Be it known that I, LEVI DAROZIR, of Natick, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Lasts, of which the following is a specification:

This invention relates to improvements in lasts made of wood; and consists in the application to such lasts of pieces of wood cut, steamed, and pressed into shape, the pieces being fitted, grain end uppermost, in grooves in the bottom of such wooden lasts, and being confined therein, substantially as hereinafter described.

It is a well-known fact that wooden lasts are very rapidly destroyed in the manufacture of pegged work, the awls and pegs operating to cut a channel in the bottoms of the lasts made of hard wood, soon rendering them useless. The loss occasioned by the wearing out in this way of lasts is very considerable, and many attempts have been made to counteract it by placing different materials in grooves made in the last-bottom at the points where the awl and pegs penetrate it. Leather and wood and other materials have been used for this purpose.

In practice I have found that the wooden peg-receiving strips introduced into the last bottom must present the grain of the wood uppermost in the line of the movement of the awl and peg into it, and that the pieces so inserted must be of a kind of wood softer than the wood of which the last is composed, for then the peg holds less firmly into the wood and permits the shoe to be readily removed from the last.

Figure 1 represents one of my improved wooden lasts in bottom view, and Fig. 2 a wooden peg-receiving strip or piece shaped to be inserted therein at the bottom next the side of the last.

The last *a*, of any usual form common to wooden lasts, has grooves *b* cut into its bottom about its edge at sides and heel and toe, to receive a pegging-strip of wood, *c*, of proper size to enter such grooves.

In Fig. 1 the groove at one side of the last is not filled, but is left open so as to show the groove. This peg-receiving strip of wood, preferably white wood, and softer than the wood of the last, is steamed and bent, set or shaped, as at Fig. 2, to fit the groove from end to end of the last, and other pieces of wood, *i*, are properly bent and shaped to fit the groove at the heel and toe of the last.

The peg-receiving strip shown in Fig. 2 is shaped at 2 to enter the groove at the ball of the last, then curved inward and downward, as at 3, to fit the shank of the last, and then curved again outward to extend about the curved side of the heel. This peg-receiving strip is first sawed out, then steamed and pressed into the form shown, and such pieces so prepared may be easily placed in the grooves in the last when required.

These pieces of bent wood set in the grooves in the last are held therein by means of glue, and wedges may be driven between the sides of the pieces and the last, as at *d*. These wedges may be more or less in number, as may be required to hold the pieces firmly in place in the grooves. These pieces, into which the awls and pegs will enter, are preferably made to contain considerable oil, whereby the awls and pegs are made to stick less closely into such pieces, and from which they may, therefore, be withdrawn more easily. The center pieces *e e* are also oiled. All these pieces of wood, to receive the puncture of the awl and peg, are so placed that the grain of the wood stands substantially in vertical position, and the awl and pegs driven therein are easily withdrawn. When the wooden pieces are broken up by long use, they may be removed to be replaced by other pieces.

The pegging strips or pieces to enter the grooves at the side and at the heel and toe of the last may be each in one or more lengths. The portion of the strip at the bottom of the groove will preferably be made broader than that portion of the strip which comes flush with the bottom of the last.

New or old lasts may be provided with these prepared wooden peg-receiving strips. In practice I find that a larger number of shoes may be pegged on a last provided with these wooden strips than upon an ordinary wooden last not provided with them.

An iron last provided with wooden strips would not serve the purpose of this wooden

last, because such a last would be too heavy to be handled rapidly and easily, and because it would be too expensive.

The strip inserted into the groove in the last bottom is preferably of a class of wood less close in texture and softer than the wood of which the last is made, and is straighter grained, and yields more readily than would the wood of the main part of the last if the awl and peg punctured it. The pegging-pieces being oiled are much more durable.

I claim—

1. As an improved article of manufacture, a wooden last grooved near its edges as described, and filled with peg-receiving strips of wood *c*, cut, steamed, and pressed into shape, as described, and shown at 2 3 4, to fit the groove in the last, the grain of the strip *c* being uppermost, all substantially as described.

2. The wooden last provided with a grooved bottom, in combination with pieces of wood bent and shaped to fit such grooves, saturated with oil, and secured in such grooves, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEVI DAROZIR.

Witnesses:
E. P. TRAVIS,
A. I. TRAVIS.