

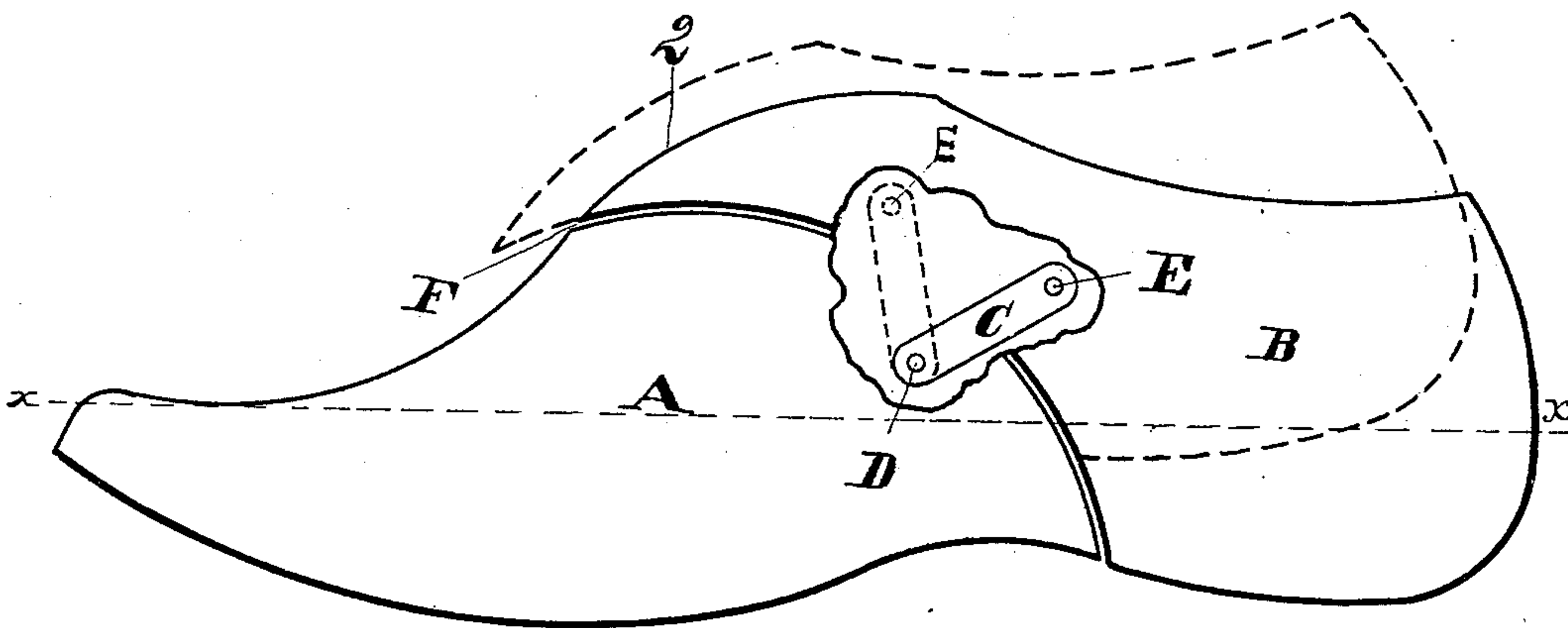
No. 638,736.

M. MITCHELL.
LAST.

Patented Dec. 12, 1899.

(Application filed Dec. 2, 1898.)

(No Model.)



Witnesses:

Marion Richards.
Walter F. Camp.

Inventor.

Michael Mitchell
by
Venice Clifford
his attorneys.

UNITED STATES PATENT OFFICE

MICHAEL MITCHELL, OF PORTLAND, MAINE, ASSIGNOR OF ONE-HALF TO
FRANK D. MARSHALL AND JOHN WELLS, OF SAME PLACE.

LAST.

SPECIFICATION forming part of Letters Patent No. 638,736, dated December 12, 1899.

Application filed December 2, 1898. Serial No. 698,053. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL MITCHELL, a citizen of the United States of America, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Lasts; 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.

My invention relates to improvements in lasts, and is designed to form a last which will be easily and readily taken out from the shoe. It belongs to that class of lasts particularly known as "divided" lasts; and my invention consists in the novel and peculiar way of dividing the fore and heel parts and in certain other details of construction which will be hereinafter more fully set forth and described.

In the drawing herewith accompanying and forming a part of this application the figure is an elevation of my improved last, a portion being broken away to show the manner of attaching the fore part to the heel part, the dotted lines showing the position of the heel part when the same has been moved upward over the fore part.

In said drawing, A represents the fore part of a last, B the heel part, and C a tongue pivotally mounted at a point, as D, in the fore part and at a point, as E, in the heel part, the line of division between the two parts beginning at the point F, which is just before the rise or crown of the instep. The cut then takes the direction of a perfect curve, starting from said point to the bottom of the last, the advantage of this cut being that the heel portion when moved upon the fore part begins to retreat, or, in other words, to lessen the length of the base-line of the last at once.

In lasts as previously constructed when the heel part is moved on the fore part the base-line of the last is at first increased. This must necessarily be so from the direction of the cut and position of the hinges. This makes it much harder to withdraw the last from the shoe and subjects the counter of the

shoe to unnecessary strain and very often causes the same to be drawn out of shape.

In my improved last as the heel part travels over the fore part the instep portion instead of being forced upwardly, as it would were the last divided on a diagonal line, is caused to travel forwardly and downwardly toward the front of the last, causing in such journey very little increase in the vertical distance between the top of the instep and the base of the last. In order to keep the two parts together, I insert a tongue pivoted in each portion. The pivot-point in the fore part is placed on one of the radii of the circle forming the divisional cut between the fore and heel parts of the last, the pivot E in the heel part being without and below said line when continued into the heel part and when the two parts are in their normal position. To more exactly indicate the point in the fore part, the pivot is placed at a point above the center of the fore part, considering as the altitude the vertical distance from the top or the highest point of the fore part to the bottom of said fore part. By placing the pivot as described I accomplish the sliding movement of up and over the fore part without increasing the base-line. Should the pivot in the fore part be placed below the center, a movement to allow a sufficient shortening of the base-line could not be accomplished, and, furthermore, the heel part would tend when forced back into its normal position to fall below the base-line of the last. If the pivot in the fore part was placed higher up, the heel would swing too far forward and would not return sufficiently to make the base-line symmetrical, and, further, the pivot E in the heel part is placed in line with the pivot D, but above the same in relation to a horizontal line drawn through the center of the last and indicated by xx in the drawing. By placing the pivot in the heel part at a point as above indicated when the heel part is moved on the fore part the tongue will not tend to cause the last to lengthen as regards its base-line, but causes the same to be shortened. A small increase takes place in the altitude, but of not such an amount as to interfere with the successful working of the device. By mak-

ing the curve a long gradual one the heel part moves more easily on the fore part and prevents the excessive tipping up of the heel part, and, furthermore, allows the instep portion 2 to move forwardly and downwardly over the fore part—an important essential in the working of my improved last. By this immediate retreating of the heel part from its retaining-counter it is evident that the last 10 may be withdrawn from the shoe with less effort than when the heel part increases.

By making my last cut, as shown, it obviates and does away with the sharp angle which must necessarily be on the heel portion when 15 a cut is made either vertically or diagonally. These sharp edges when the last is drawn from the shoe tend to catch in the lining and tear the same; also, when the last is being used on the jack or otherwise no strain comes 20 upon the tongue, as it would in the case of lasts divided transversely or vertically, the cut on my last being so arranged as to distribute the whole force of the blow throughout the whole last with the same effect as if 25 the last were not divided.

The advantages of my improved last are that it is simple, easy to construct, and presents the advantage of a uniform last, with the addition that the same may easily and 30 readily be removed or placed in the shoe.

Having thus described my invention and its use, I claim—

1. In a divided last, a fore part, a heel part, said parts being divided on a curved line, the 35 arc of a true circle, the line of division beginning at a point in front of the rise of the instep and continuing therefrom to the base of the last, substantially as and for the purposes set forth.

40 2. In a last divided on a curved line, the line of division beginning at a point in front

of the rise of the instep and continuing therefrom to the base of the last and a tongue pivotally mounted in fore and heel parts respectively whereby said heel portion is allowed to 45 move over said fore part shortening, at the moment movement begins, the base-line of the last, substantially as and for the purposes set forth.

3. In a last divided on a curved line, a fore 50 part, a heel part, the line of division beginning at a point in front of the rise of the instep and continuing therefrom to the base of the last, a tongue pivotally mounted in the fore and heel parts respectively, the pivot in 55 the fore part being placed at a point above the center of the fore part, the pivot in the heel part being above the pivot in the fore part, substantially as and for the purposes set forth. 60

4. In a divided last, a fore part, a heel part, the line of division between said parts beginning at a point in front of the rise of the instep portion extending therefrom in a curved line to the base of the last, a tongue pivotally 65 mounted in the fore and heel parts respectively, the pivot in the fore part being on one of the radii of the curved line dividing the fore and heel parts, the pivot in the heel part, when the said fore and heel parts are in their 70 normal positions, being without and below said radial line when continued into the heel part, substantially as and for the purposes set forth.

In testimony whereof I affix my signature, 75 in presence of two witnesses, this 29th day of November, 1898.

MICHAEL MITCHELL.

Witnesses:

MARION RICHARDS,
NATHAN CLIFFORD.