





# UNITED STATES PATENT OFFICE.

JOHN F. TEEHAN, OF WORCESTER, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO J. HERBERT SHEDD, OF PROVIDENCE, RHODE ISLAND.

## LAST.

SPECIFICATION forming part of Letters Patent No. 609,244, dated August 16, 1898.

Application filed April 13, 1896. Serial No. 587,258. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. TEEHAN, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Lasts, of which the following is a specification.

My invention relates to lasts for shoes, and to that class of lasts which are transversely divided or made in two parts—the fore-part section and the heel-section—the heel-section being attached to the fore-part section in such a manner that it may be moved independently thereof to facilitate the removal of the last from the shoe.

The object of my invention is to improve upon the construction of lasts of the class above referred to and to provide a last of simple and inexpensive construction and strong and practicable.

My invention consists in certain novel features of construction of my last, as will be hereinafter fully described.

Referring to the drawings, Figure 1 is a partial side elevation and partial section of a last embodying my improvements. The broken lines show the heel-section in its raised position. Fig. 2 is a section on line 2-2, Fig. 1, looking in the direction of arrow *a*, same figure. Fig. 3 is a section on line 3-3, Fig. 1, looking in the direction of arrow *b*, same figure; and Fig. 4 is a perspective view of the attaching bar and plate removed.

In the accompanying drawings, 1 is the fore-part section, and 2 the heel-section, of a last transversely divided and to be made in any desired shape.

The contiguous surfaces of the sections 1 and 2 are made curved, as shown in Fig. 1, and in practice the last may be made first in one part and then sawed through transversely on a curve to divide the heel-section 2 from the fore-part section 1.

The fore-part section 1 has a convex face at its rear end and the heel-section 2 has a concave face at its front end to fit onto said convex face when the two sections are in normal position. The heel-section 2 is pivotally attached to the fore-part section 1 in such a manner that the upward movement of

the heel-section, as shown by dotted lines, Fig. 1, will cause its concave face to move away from the convex face of the fore-part section and not come in contact therewith and bind thereon. In this instance a bar or rod 3 is used to pivotally attach the heel-section to the fore-part section. Said bar extends at one end into a slot or recess 6, cut in the fore-part section 1, at the rear part thereof, and is pivotally secured in said recess by a transverse pin 4, which extends through a hole 5 in said bar.

The rear end of the bar 3 is preferably provided with a plate 3', as shown in Fig. 1, which extends into a slot or recess cut in the heel-section 2 and is secured therein in this instance by a pin 7, extending through the last from the top to the bottom and through a hole 13 in the plate 3', and by two shorter pins 8, extending up from the bottom of the last through holes 14 in the plate 3'. (See Fig. 3.)

In order to secure the plate 3' on the bar 3 more rigidly to the heel-section 2, additional pins may be used, which may pass through additional holes 15 in the plate 3'. (Shown by broken lines, Fig. 4.)

A larger hole or opening 9 is made in the plate 3' for the jack-pin socket to extend through, said socket extending into a hole 10, made in the heel-section of the last.

The recess 6 in the fore-part section 1 preferably has a metal plate 11 at the lower part thereof to prevent any wear of the wood from contact with the metal bar 3, which has a bearing on the bottom of the recess 6 the full depth of said recess from the fulcrum-pin 4 to the rear end of the fore-part section. The upper part of the recess 6 is made inclined and acts as a stop to limit the raising of the heel-section.

I prefer to use a flat spring 12, which extends over the bar 3, with its free end bearing on the bar and its other end secured to the fore-part section 1—in this instance by extending into a slot therein. (See Fig. 1.) The spring 12 acts to keep the two sections of the last in their normal position, except at the moment when the shoe is drawn off the last, when it tends to withdraw the fore-part



section and facilitate the removal of the shoe. The spring 12 also serves to preserve the last from accident when not in use.

In order to cause the heel-section 2 to move away from the rear end of the fore-part section 1, as above stated and as shown in Fig. 1, and not bind thereon when said heel-section is raised, I make the curved line, dividing the last into two parts, so that each point of said line in a central vertical section lengthwise through the last from the top of the line downward is at a greater distance from the fulcrum or pivot-point of the bar 3, secured to the heel-section, than its immediately-preceding point, or I make the curved dividing-line the arc of a circle and have the fulcrum or pivot-point of the bar 3 above the center of said arc, the result being the same in each case. By either of these methods of construction the downward motion of the heel-section is limited at the proper point by the engagement of the contiguous faces of the fore-part and heel section.

The advantages of my last will be readily appreciated by those skilled in the art. It is of very simple construction and strong and durable, and the heel-section is so attached to the fore-part section that there is a free movement of the heel-section without any friction or binding of the contiguous surfaces. The spring serves to keep the two parts of the last in their normal position, with the heel-section held in place on the fore-part section.

It will be understood that the details of construction of my last may be varied somewhat, if desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A transversely-divided last, comprising a fore-part section with a convex face at its rear end, and a heel-section with a concave face at its front end, and a rod or bar secured to the heel-section, and extending in a slot or recess in the rear part of the fore-part section, and having a bearing on the bottom of said recess for the full depth thereof, and pivotally attached in said recess at a point

above the center of the circle of which the rear curved face of the fore-part section is an arc, so that said arc will not be concentric with the arc of the circle described by the movement of the heel-section, substantially as described.

2. A transversely-divided last, comprising a fore-part section with a convex face at its rear end, and a heel-section with a concave face at its front end, and a rod or bar secured to the heel-section, and extending in a slot or recess in the rear part of the fore-part section, and pivotally attached in said recess at a point above the center of the circle of which the rear curved face of the fore-part section is an arc, so that said arc will not be concentric with the arc of the circle described by the movement of the heel-section, and a spring within said recess, to engage said bar and act to hold the heel and fore-part sections in their normal position, substantially as described.

3. A last transversely divided into two parts by a curved line, and one part pivotally attached to the other part, so that each point of said line, in a central vertical section lengthwise through the last, from the top of the line downward, is at a greater distance from the fulcrum or pivot-point of the rod or bar connecting the two parts than its immediately-preceding point, said rod or bar extending and pivoted in a recess, and a spring within said recess, to engage said bar and act to hold the heel and fore-part sections in their normal position, substantially as described.

4. In a transversely-divided last, the combination with the heel-section, having one end of a bar or rod rigidly attached thereto, the other end of said bar or rod extending into and pivotally secured in a recess in the fore-part section, of the fore-part section, and a spring secured at one end to said fore-part section, with its free end bearing on said bar or rod, substantially as shown and described.

JOHN F. TEEHAN.

Witnesses:

J. C. DEWEY,  
M. J. GALVIN.