

No. 646,144.

Patented Mar. 27, 1900.

E. W. GERRISH.  
LAST.

(Application filed Dec. 16, 1899.)

(No Model.)

Fig. 1.

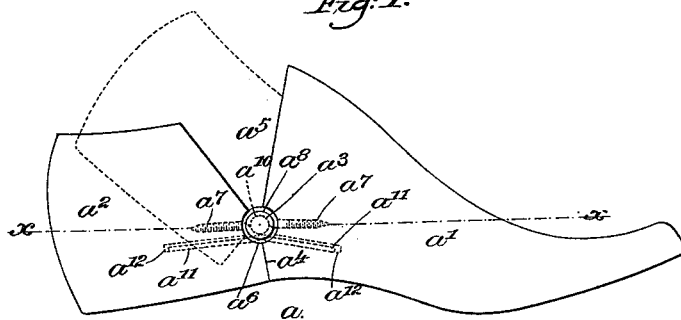
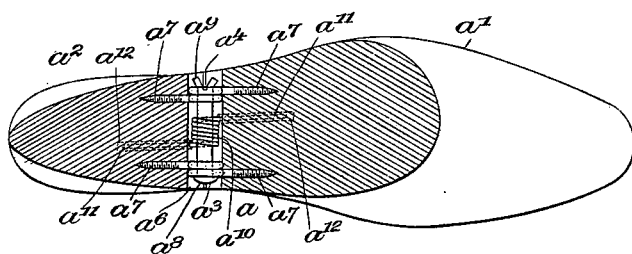


Fig. 2.



Witnesses:

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Edward W. Gerrish,  
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# UNITED STATES PATENT OFFICE.

EDWARD W. GERRISH, OF LYNN, MASSACHUSETTS, ASSIGNOR OF ONE-  
THIRD TO THOMAS W. GARDINER, OF SAME PLACE.

LAST.

SPECIFICATION forming part of Letters Patent No. 646,144, dated March 27, 1900.

Application filed December 16, 1899. Serial No. 740,536. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD W. GERRISH, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, 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.

The present invention relates to lasts for boots and shoes, and more particularly to certain improvements in sectional hinged lasts designed to simplify the construction of such lasts and to provide a novel spring arrangement to cause the sections of which the last is composed to maintain their operative relation to each other.

To the above ends the present invention consists of the improved last which will be hereinafter described.

The present invention is shown in the accompanying drawings, in which—

Figure 1 shows the last in side elevation, showing in dotted lines the operation thereof. Fig. 2 shows a horizontal sectional view taken on line *x x*, Fig. 1.

Similar letters of reference will be employed throughout the specification and drawings to designate corresponding parts.

In the drawings, *a* represents the last, which, as shown, preferably comprises but two sections—a fore-part section *a'* and a heel-section *a''*—said sections being hinged together at *a<sup>3</sup>* and preferably having the meeting faces *a<sup>4</sup>* below the pivotal point and the substantially V-shaped opening *a<sup>5</sup>* above such point, the arrangement being such that the heel-section *a''* may be turned up, as shown in dotted lines in Fig. 1, when inserting the last into or removing it from a shoe.

In uniting the sections of hinged lasts of the prior art it has been deemed necessary to employ quite complicated and expensive constructions, which were difficult to insert in the last and added quite materially to the cost of producing such lasts. I have provided a novel union or hinge for uniting the sections of the last, which while quite as effective as the hinges of the prior art is much simpler in

construction and easily applied, rendering the manufacture of hinged lasts much less expensive. I have also provided a spring which by reason of the construction of hinge employed may be readily inserted in the last and acts to maintain the sections in operative relation to each other while in the shoe, with the abutting faces *a<sup>4</sup>* in contact with each other, thus preventing the accidental turning up of the heel-section.

My improved hinge or union is formed by forming semicylindrical grooves or recesses *a<sup>6</sup>* along the meeting ends of the sections *a'* and *a''*, into which are screwed the screw-eyes *a<sup>7</sup>*, the said screw-eyes being screwed into the sections with the heads standing vertically and the openings therein in horizontal alignment, as shown, and the eyes of each section so disposed that when the sections *a'* and *a''* are brought together, as shown, the pairs of eyes at opposite sides of the last will be closely adjacent to each other. When the sections *a'* and *a''* are placed so that the pairs of screw-eyes are in register with each other, as shown, a headed bolt *a<sup>8</sup>* is passed through the said screw-eyes, as shown, and is suitably upset at its opposite end, as by cutting and spreading, as shown at *a<sup>9</sup>*. This couples the sections of the last together in a simple manner and permits the heel-section to be turned up, as shown in dotted lines, Fig. 1.

For the purpose of holding the heel-section down and preventing the accidental displacement thereof a coiled spring *a<sup>10</sup>* is employed, the coil of which surrounds the bolt *a<sup>8</sup>*, it being of somewhat longer diameter than the bolt, so as not to pinch or bind said bolt when the heel-section of the last is turned up, and the opposite ends or legs *a<sup>11</sup>* of said spring are disposed in seats or bearings *a<sup>12</sup>*, formed in the opposite faces of the sections *a'* and *a''*.

It will be noted that in assembling the parts of my last it is simply required to place the sections in the position shown in the drawings, first introducing the legs *a<sup>11</sup>* of the hinge in the bearings *a<sup>12</sup>*, after which the bolt *a<sup>8</sup>* is introduced through the screw-eyes *a<sup>7</sup>* and the spring *a<sup>10</sup>* and upset in any suitable manner.

Having described the construction and mode of operation of my improved last, I

claim as new and desire to protect by Letters Patent of the United States—

A last comprising a fore-part section and a heel-section, the said sections being provided  
5 at their meeting faces with complementary pairs of screw-eyes, a coupling-bolt passed through said eyes, and a coiled spring surrounding said bolt and having oppositely-

disposed legs arranged in seats in the sections, substantially as described. 10

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD W. GERRISH.

Witnesses:

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T. HART ANDERSON.