

J. E. WHEELER.
MANUFACTURE OF SHOES.

No. 179,145.

Patented June 27, 1876.



Fig. 1.

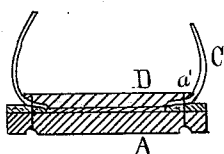


Fig. 5.

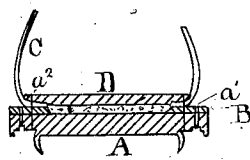


Fig. 6.

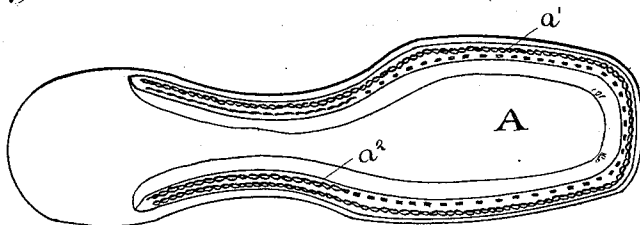


Fig. 2.

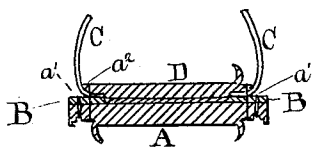


Fig. 3.

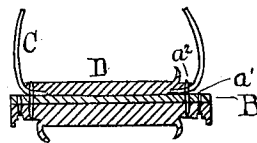


Fig. 4.

WITNESSES

Frankl. Parker
Geo. W. Copeland

INVENTOR

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UNITED STATES PATENT OFFICE.

JOHN E. WHEELER, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN THE MANUFACTURE OF SHOES.

Specification forming part of Letters Patent No. **179,145**, dated June 27, 1876; application filed April 24, 1876.

To all whom it may concern:

Be it known that I, JOHN E. WHEELER, of Lynn, in the county of Essex and State of Massachusetts, have invented an Improvement in the Manufacture of Shoes, of which the following is a specification:

Reference is had to the accompanying drawing in explaining the same, in which—

Figure 1 is a perspective of a finished shoe; Fig. 2, a plan of the outsole; and Figs. 3, 4, 5, and 6 are cross-sections.

In the construction of a boot or shoe by machinery, the outer soles are usually attached to the upper and insole by a seam which passes from the exterior of the outsole through the half-sole and upper, and into or through the insole. As a consequence such a seam must be placed at some distance from the sole-edge, particularly if the outsole is broad or provided with a "Scotch-edge." This construction renders the outsole extremely liable to separate from the welt or half-sole along its edge as the boot or shoe dries with age, and this tendency to crack is increased from the tension used in laying the seam, causing the outsole to spring away from the welt outside the line of the seam. It has also been impossible until lately to unite the projecting edges of half-sole or welt and outsole by any continuous seam placed at or near their edge, and extending completely around the shoe from heel to heel, by machinery, and for this reason the edges have never been united except by hand or the Ballou wax-thread sewing-machine, in using which it is necessary to especially prepare the boot or shoe for the sewing.

To remedy this defect, growing out of the necessary construction when the seam unites the outsole to the insole, I unite my welt or half-sole (or veneer, if preferred) B to the outsole A, before fastening to the insole D and upper C, by a seam placed along their outer edge. I prefer to use a wax-thread seam for

this purpose, although any of the customary sole-fastenings may be used, including cement, and place the stitch in a channel in the outsole, and display it on top the welt or half sole.

Having thus prepared my welt or welt-sole and outsole, I unite the same to the upper and insole by any desirable medium of union, preferring that the same shall not pass entirely through the insole, but into a channel on the upper surface thereof, which may be covered by the lip. Heretofore the welt or welt-sole has always been united to the upper and insole before the outsole is attached thereto.

The advantages of this construction consist in the ease and facility with which the edges of the outsole and welt or half-sole may be united, when the outsole is to be permanently united to the upper and insole without any especial preparation or machinery.

The appearance of the completed shoe is similar to that of one made by hand or by the Ballou process, and the practical result of the invention is like that obtained in a hand-made or Ballou shoe, it being the object of the invention to accomplish the uniting of the exposed edge of the welt or welt-sole to the outsole in a simple and practical way to prevent cracking, and at the same time to permit of a union by a fastening that passes through the outsole into or through the insole.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

The improvement in the process of manufacture of boots and shoes, consisting, first, in uniting the welt, welt-sole, half-sole, or veneer B to the outsole A, and then fastening them, as then prepared, to the upper and insole, substantially as and for the purpose set forth.

JOHN E. WHEELER.

Witnesses:

GEO. W. COPELAND,
F. F. RAYMOND.