(No Model.)

N. MOULTON.

PROCESS OF MAKING SEAMLESS OPEN BOTTOM UPPERS FOR SHOES.

No. 278,305. Patented May 22, 1883.

Fig. 1.

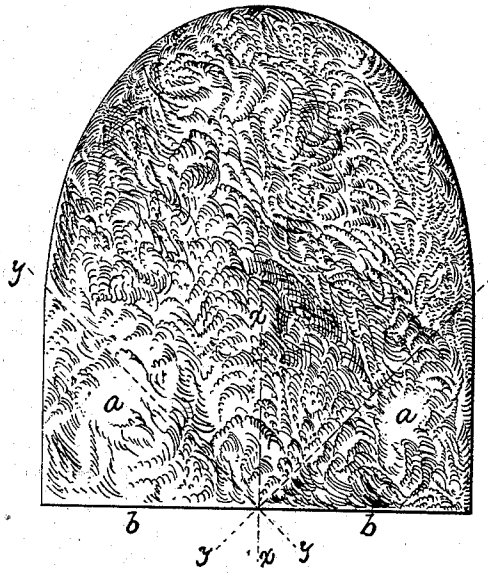


Fig. 2.

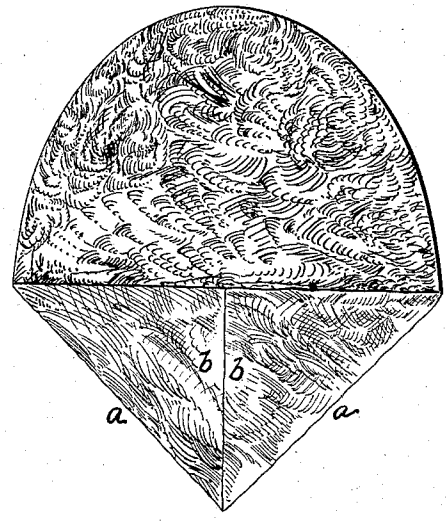


Fig. 4.

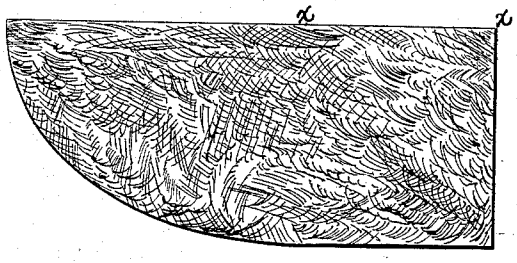


Fig. 3.

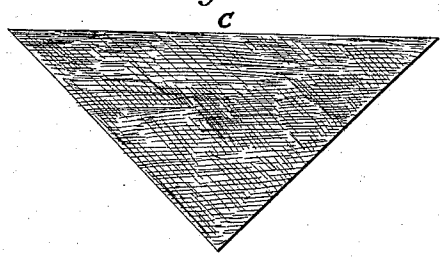
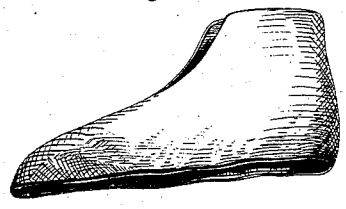


Fig. 5.



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UNITED STATES PATENT OFFICE.

NEWLAND MOULTON, OF BALTIMORE, MARYLAND.

PROCESS OF MAKING SEAMLESS OPEN-BOTTOM UPPERS FOR SHOES.

SPECIFICATION forming part of Letters Patent No. 278,305, dated May 22, 1883.

Application filed March 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, NEWLAND MOULTON, of Baltimore, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in a Process of Making Seamless Open-Bottom Uppers of Felt or Felting Material for Shoes or Slippers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 represents an upper-blank cut from a bat; Fig. 2, the same with the heel-corners folded over; Fig. 3, the inlayer or cloth; Fig. 4, the blank after the overlapping edges of the corners have been hardened together; Fig. 5, the seamless open-bottom upper.

This invention relates to a new and improved process of making seamless open-bottom uppers of felt or felting material for shoes or slippers, such as is shown in my United States Patent No. 275,250. The object is to cheapen and simplify the method of making such articles.

The invention consists in the process hereinafter set forth.

In carrying out this process the wool or felting material is passed through the carding-machine, the web coming therefrom being wound to any desired thickness about a drum or cylinder, which is a part of the machine. The web thus wound is cut on a straight line with the major axis of the cylinder and opened, forming a flat bat. Before proceeding further it is found advisable in practice to harden this bat slightly; but this is not essential. By the aid of suitable patterns this bat is cut up into upper-blanks such as shown in Fig. 1. In this blank a slit may be made on the line *x x* for the ankle-opening; but this is not essential, as the opening can be made as the upper is finished. In practice the edges *b b* of the corners *a a* are to be thinned down, so as to be adapted to the hardening process, and these corners are folded on the lines *y y*, bringing their edges *b b* so as to overlap on the longitudinal median line of the blank, as shown in Fig. 2, and along what is commonly known as the "heel" or "back seam." Between these folded corners *a a* and the main or instep portion of the blank is placed an inlayer or cloth, *c*, Fig. 3, to prevent the back and front from hardening together. As thus folded and arranged, the blank is then put through the usual hardening process, the lapping edges *b b* being firmly and neatly joined together without any ridge. At the same time the whole upper is hardened and the article has the same appearance at all points, the opening being closed up equally as strong and even as any other part of the upper. This produces the shape shown in Fig. 4. It is now in proper form to be lasted for a shoe or slipper, only it is of a larger size, and is placed in the felting-mill and properly felted and shrunk to the required size. Then it is drawn upon a last and dried, which causes it to retain its shape. Afterward it is surfaced or sandpapered, taken from the last, and the ankle-opening properly cut, forming the seamless open-bottom upper, shown in Fig. 5, which is the article sought to be made by this process.

Having thus described my invention, what I claim is—

The process of forming seamless open-bottom uppers of felt or felting material for shoes or slippers, which consists in cutting from a suitable bat the blank shown, folding the heel-corners, as described, hardening the meeting edges *b b* together, and then felting the article thus formed, as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

NEWLAND MOULTON.

Witnesses:
JNO. T. MADDOX,
ANTHONY SALMON.