

(No Model.)

O. E. WALLACE.

PROCESS OF AND APPARATUS FOR MAKING FELT BOOTS, SHOES,
AND STOCKINGS.

No. 342,943.

Patented June 1, 1886.

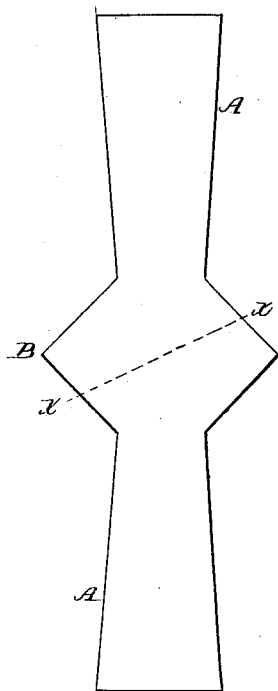


Fig. 1.

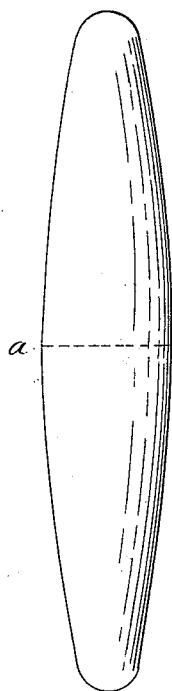


Fig. 2.



Fig. 5.

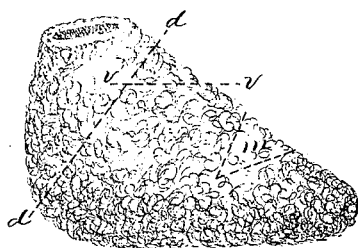


Fig. 3.

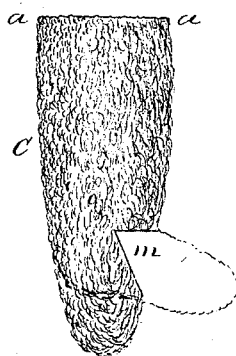


Fig. 4.

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UNITED STATES PATENT OFFICE.

OREN E. WALLACE, OF COLUMBUS, OHIO, ASSIGNOR TO THE MERINO SHOE COMPANY, OF KENNEBUNK, MAINE.

PROCESS OF AND APPARATUS FOR MAKING FELT BOOTS, SHOES, AND STOCKINGS.

SPECIFICATION forming part of Letters Patent No. 342,943, dated June 1, 1886.

Application filed September 20, 1882. Renewed February 16, 1886. Serial No. 192,167. (No model.)

To all whom it may concern:

Be it known that I, OREN E. WALLACE, of Columbus, in the county of Franklin, State of Ohio, have invented a certain new and useful
5 Improvement in the Process of and Apparatus for Making Felt Boots, Shoes, and Stockings, of which the following is a description sufficiently full, clear, and exact to enable
10 any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents the cone or former on
15 which felt boots, shoes, and stockings are usually made; Fig. 2, my improved cone or former; Fig. 3, a shoe as ordinarily made before it is lasted; Fig. 4, an unlasted or untreed boot or stocking made on the cone shown in Fig.
20 2 and having a gore cut out of the instep; and Fig. 5, a boot or stocking made by my improved process.

The nature and operation of my invention will be readily understood by all conversant
25 with such matters from the following explanation, its extreme simplicity rendering a more elaborate description unnecessary.

In the manufacture of felt boots, shoes, and stockings a former or cone, A, is usually employed, having at its center a lozenge-shaped
30 boss, B, two boots, shoes, or stockings being usually formed on the same at one time, and cut apart at the feet or on the line *x*, leaving the foot of each open on said line. This opening
35 has to be closed up by felting on or hermetically attaching a sole or sole-piece to the upper by a subsequent operation, requiring much labor and skill in its performance, and
40 which cannot be carried out satisfactorily by any of the ordinary methods of which I have any knowledge, or in such a manner as to leave all parts of the sole perfectly level and smooth and still have it firmly united to the
45 upper. There is also another imperfection in boots, shoes, and stockings made on a cone or former of the ordinary construction, in that they have a surplus of stock over or in the vicinity of the instep, rendering it difficult
50 permanently in proper shape.

My invention is designed to obviate these

difficulties and objections, and to that end I make use of an oblong cone or former, as shown in Fig. 2, and in the construction of the boot, shoe, or stocking I first completely
55 cover the cone with the felt or felting material, and then cut it apart on the line of the leg-opening *a a*, thus making two seamless blanks having no opening but the leg-opening, and from each of which I form or make a boot,
60 shoe, or stocking, C, by cutting out a gore, *m*, to remove the surplus stock at or in the vicinity of the instep, and then closing up the gore or opening thus made by felting or by the method usually employed to hermetically join
65 two felt fabrics edge to edge, after which it may be lasted, treed, or formed into proper shape, as shown in Fig. 5.

It will be understood that in making shoes by my improved process the body of the cone
70 or former shown in Fig. 2 should be shorter than for boots or stockings, or in accordance with the length of leg desired, this being the only change necessary.

Each half or section of the cone shown in
75 Fig. 2 may be made, if desired, of a shape conforming as nearly as possible with the shape of the leg, ankle, and foot of the wearer, thus aiding in the lasting or forming of the blanks after their removal from the cone. 80

Felt boot and shoe uppers or blanks which before lasting, are shaped about as shown in Fig. 3 are sometimes made by one or more of the ordinary processes and cut off on the line
85 *d d* to dispose of the surplus stock at the heel and shank of the same, the opening thus formed being closed up by felting in the usual manner, and a leg-opening made by cutting off the top of the blank on the line *v v*; but such
90 boot and shoe blanks possess the defect of having too much stock at the instep, an objection which I remedy by cutting out a gore and closing up the opening thus made by felting after the method described for Fig. 4.

As my improvement does not relate espe-
95 cially to the process of felting and hardening the fabric of which the boot, shoe, or stocking is made, or to covering the former or cone with the felt or felting material, it is not deemed essential to describe the same. 100

It will be obvious that instead of a regular gore a piece of any other proper shape to ef-

fect the same results may be removed from the instep of the blank without departing from the spirit of my improvement.

Having thus explained my invention, what I claim is—

1. The improved process of making a felt boot, shoe, or stocking described, the same consisting of forming the blank on the oblong cone shown in Fig. 2, cutting out the gore *m* to remove the surplus stock at or near the instep, hermetically closing up the opening formed by removing the gore, and lasting or treeing the same into proper shape, substantially as specified.

2. A felt boot, shoe, or stocking blank having a leg-opening on the line *a a* and a gore, *m*, cut from the same, substantially as and for the purpose set forth.

3. The felt blank shown in Fig. 3, having the gore *m* cut from the same, substantially as and for the purpose described.

4. A felt boot, shoe, or stocking from which the surplus stock at or in the vicinity of the instep has been removed by cutting a gore from the same, substantially as and for the purpose specified.

5. The oblong cone or former shown in Fig. 2 for making the blank shown in Fig. 4, substantially as set forth.

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Witnesses:

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