V. LANDRY.

METHOD OF MANUFACTURING SHOES.

APPLICATION FILED NOV. 23, 1910.

998,700. Patented July 25, 1911.

Fig. 1.

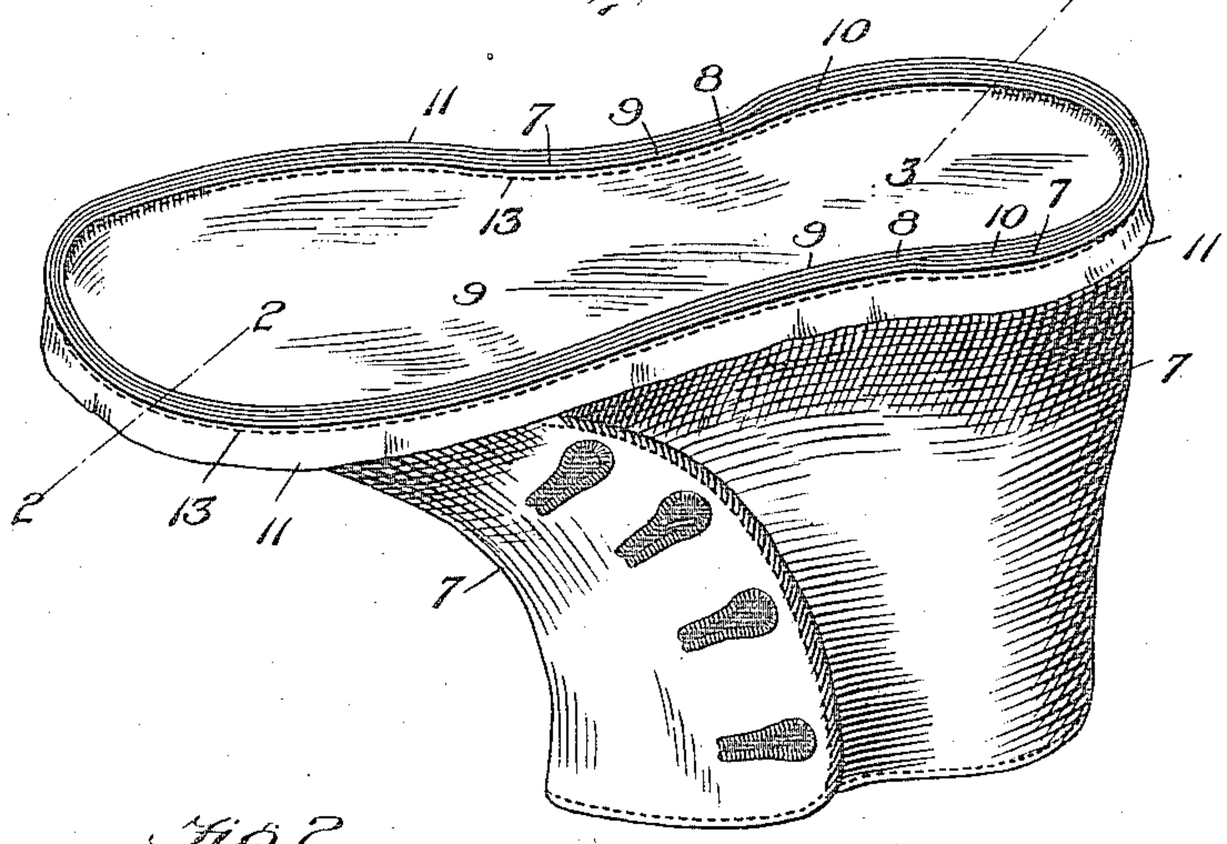
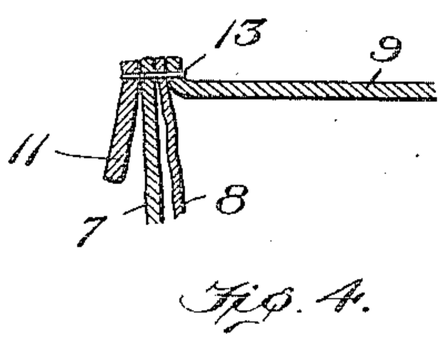


Fig. 2.

Fig. 3



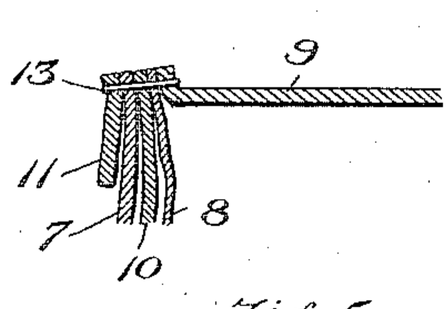


Fig. 4.

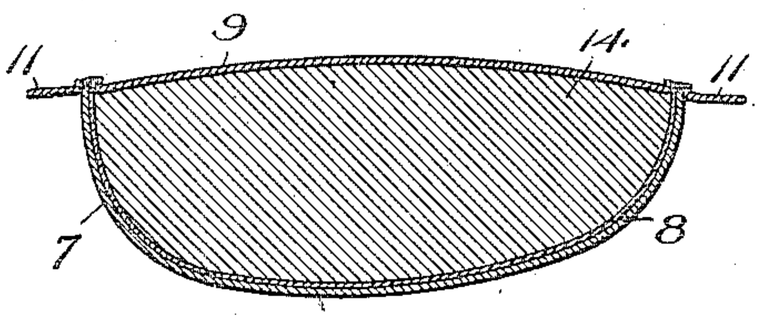
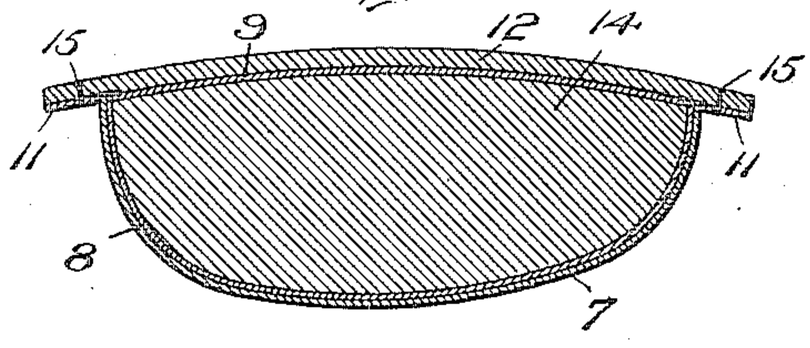


Fig. 5.



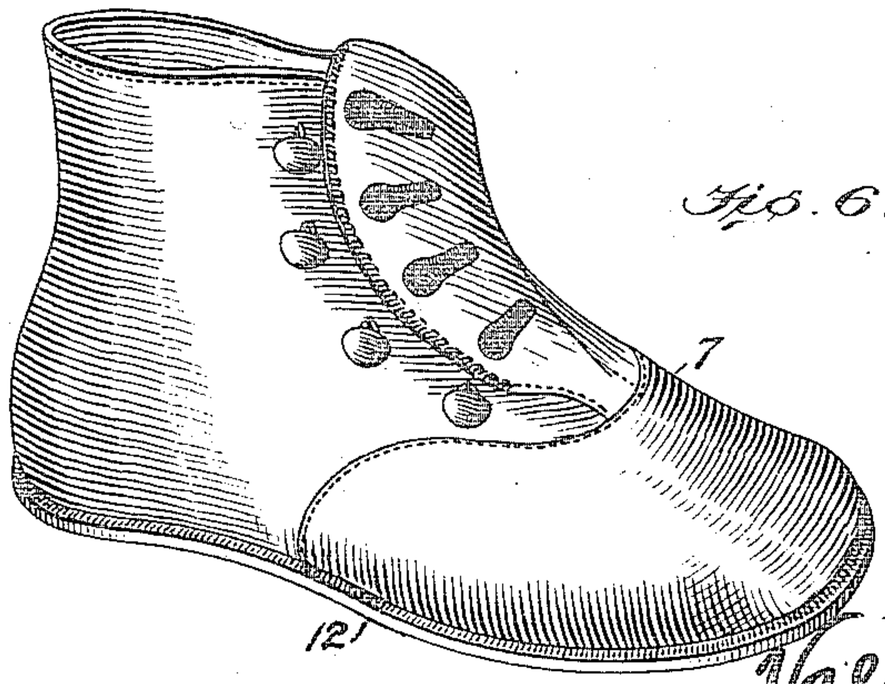


Fig. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

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METHOD OF MANUFACTURING SHOES.

998,700. Specification of Letters Patent. Patented July 25, 1911.

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To all whom it may concern:

Be it known that I, VALÈRE LANDRY, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Methods of Manufacturing Shoes; 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.

My invention comprises a novel and practical method of manufacturing shoes, and has among other objects that of producing an improved article of foot-wear which is particularly flexible, durable and well adapted for infants', children's and misses' use; it contemplates also a method of operation whereby, in comparison with other methods of manufacturing shoes, the cost of production is materially decreased, time, labor and materials economized, all unnecessary temporary process steps avoided, and the necessity of employing special sewing machines obviated.

With the aforesaid and other objects and advantages in view therefore, the present invention and successive method steps will be hereinafter particularly pointed out and set forth in the claims following.

In the accompanying drawings which form part of this application for Letters Patent, and whereon like numerals refer to corresponding parts in the several views: Figure 1 is an inverted perspective view of a shoe in its first stages of manufacture under my improved method; Figs. 2 and 3 are fragmentary sectional views taken on the lines 2—2 and 3—3 respectively, of Fig. 1; Fig. 4 is a transverse sectional view through the toe of a shoe in its second important stage of manufacture, after lasting but before the addition of an outer sole; Fig. 5 is a view similar to Fig. 4 with an outer sole added, thus illustrating the third important method step; and Fig. 6 is a perspective view of the finished product after the finishing operations have been performed.

Reference being had to the drawings and numerals thereon, 7 indicates a shoe-upper which may, of course, vary indefinitely in size, shape, material and style of manufacture; the numeral 8 indicates a lining for the upper aforesaid, by preference consisting of light-weight canvas, drilling, soft pliable leather or like materials; 9 indicates a flexible insole preferably of soft leather and of approved outline; 10 is a relatively stiff counter such as ordinarily employed at the heel of shoes between the upper 7 and its lining 8; 11 is the welt, which, as best shown by Fig. 1, completely surrounds all of the members 7, 8, 9, 10 and 11 aforesaid; while the numeral 12 indicates a channelless outer sole as shown by Figs. 5 and 6.

In practicing my improved method an operator assembles one upper 7, its lining 8, insole 9, welt 11 and heel counter 10—when the latter is employed—in the relative positions indicated by Fig. 3 of the drawings, holding these parts in this position they are next passed continuously under the needle, which in effect thus travels completely around the shoe structure joining the several parts aforesaid by a continuous line of stitches 13, as fully shown by Fig. 1, and in fragmentary sections by Figs. 2 and 3 of the drawings. In accomplishing this method step, or the "welting" operation, it will be observed that an ordinary straight needle may be employed, and that the resulting seam is an outside seam, this step being performed with the shoe in an unturned condition; and moreover, it will be noted, that because of such outside seam arrangement the necessity of an inside filler such as ordinarily employed between the edges of an inturned welt is obviated, thus materially contributing to the ease and general flexibility of the shoe.

At this stage the partially constructed shoe is lasted by the insertion of a suitable last 14, as clearly illustrated by Fig. 4 of the drawings, the seam hereinbefore mentioned is practically flattened upon last 14, and the outer-sole 12 thereupon secured to the outer surface of the insole 9, preferably by cement just prior to the sole stitching operation, as clearly represented by Fig. 5 of the drawings. By the present method it will be particularly noted that the outer sole is channelless, a fact which materially contributes to the flexibility and comfort of the completed shoe in that a relatively thin piece of sole leather may be employed without sacrificing strength and durability as compared with soles which have been weakened by a channel cut, and stiffened by a turned welt partially embedded therein. In

this position (see Fig. 5) sole 12 is firmly secured to the out-turned welt 11 by a line of stitches 15, such as ordinarily employed in sole stitching operations, except that the present method contemplates and provides for extending said stitches continuously around the entire shoe structure from starting point to starting point.

The foregoing method steps having been performed substantially as set forth it remains only to finish the shoe by the ordinary and well known operations of edge trimming, setting, and finally polishing. And it will be particularly noted that by the method hereinbefore set forth the welt 11, upper 7 and lining 8 are connected together in an unfolded condition by a line of stitches extending continuously around the shoe and passing transversely through the elements aforesaid, as indicated by Figs. 2 and 3 of the drawings. This accomplished the welt 11, as will be noted, is turned outwardly into the same plane with that occupied by the insole 9, prior to securing to said continuous welt an outer sole such as 12. As a consequence of the welt 11 and insole 9 lying in the same plane no filler is required whatever, and owing to the fact that it is unnecessary to fold upon itself the welt, the upper, the lining or the insole, a softer and more pliable shoe is produced than could possibly be the case with one employing a filler below the insole, and upper members having the usual overlapping fold in their lower edges.

Having thus set forth the leading and characteristic features of my invention, its purposes and objects, it should be understood that I do not confine myself to the precise order and number of process steps described, but

What I do claim and desire to secure by Letters Patent is:

1. The method of making a shoe which consists in first uniting the welt the upper and the insole at their extreme marginal edges the welt being secured entirely around the edge of the shoe, thereafter folding the welt outward into a plane coincident with that of the insole, and finally uniting an outer sole to the welt.

2. The method of making a shoe which consists in first uniting the welt the upper and the insole at their extreme marginal edges entirely around the shoe in an unlasted condition, thereafter folding the welt outward into a plane coincident with that of the insole, and finally uniting an outer sole to the welt.

3. The method of making a shoe which consists in first uniting the welt the upper and the insole at their extreme marginal edges entirely around the shoe in an unlasted condition, thereafter folding the welt outward into a plane coincident with that of the insole, lasting the shoe, and finally uniting an outer sole to the welt.

4. The method of making a shoe which consists in first uniting the welt the upper and a soft flexible insole at their extreme marginal edges entirely around the shoe, thereafter folding the welt outward into a plane coincident with that of the insole, and finally uniting an outer sole to the welt.

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

VALÈRE LANDRY.

Witnesses:
B. F. MOYER,
JOHN W. JARDINE.