Feb. 12, 1946. V. W. ROTHWEILER 2,394,718

SHOE

Filed May 18, 1942

Fig. 1.

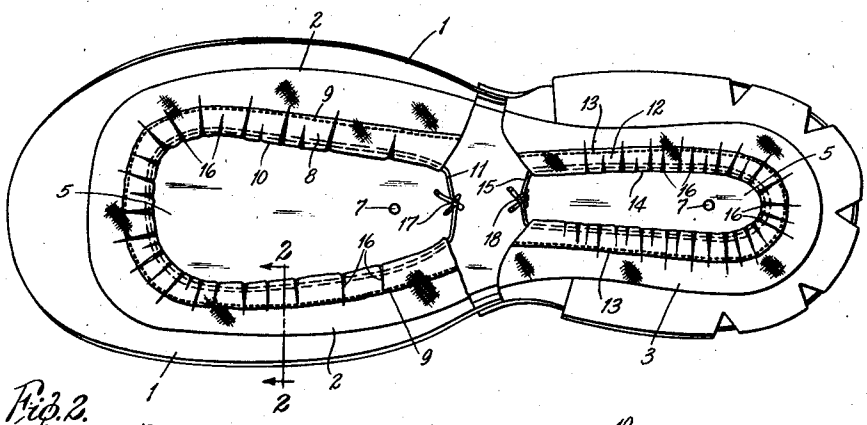


Fig. 2.

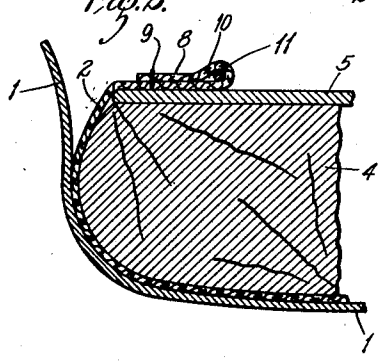


Fig. 3.

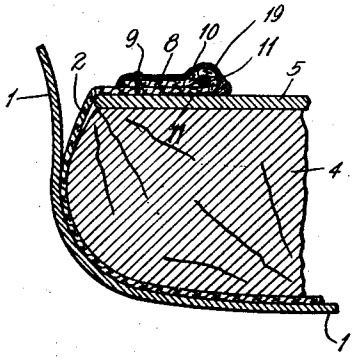
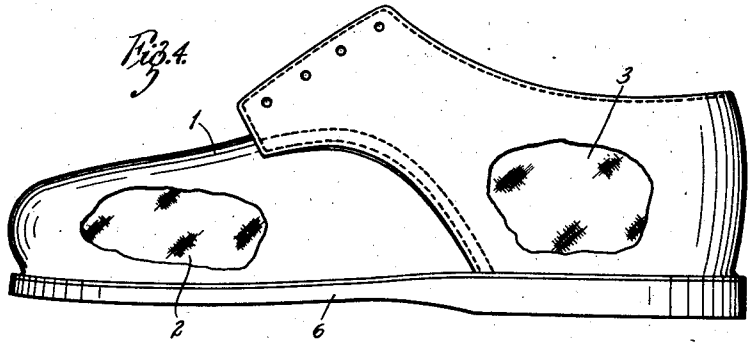


Fig. 4.



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SHOE

Valentine W. Rothweiler, Greenup, Ill.

Application May 18, 1942, Serial No. 443,350

1 Claim. (Cl. 36—16)

This invention relates to the manufacture of stitchdown shoes; and has special reference to means for laying and stretching the lining smoothly and evenly around the shoe last, and leaving the upper, particularly the vamp portion of the upper, free for attachment to the outsole.

In the manufacture of stitchdown shoes, it is sometimes difficult to lay and stretch the lining evenly and smoothly against and around the last to prevent the formation of creases or other irregularities in the lining beyond the edge of the insole, within the shoe. This difficulty is met irrespective of the manner in which the margin of the lining is attached to the insole and outsole of the shoe. In the manufacture of stitchdown shoes, the practice of laying and stretching or extending the lining around and against the sides of the last, and placing the margin of the lining upon or against the margin of the insole merely by manipulation, which is to say, by use of the fingers only and without any mechanical device or element, does not always prevent the lining from forming wrinkles or other irregularities beyond the edge of the insole, within the shoe. As a consequence, quantities of the stitchdown shoes are imperfectly made because creases or other irregularities exist in the linings of the shoes, causing discomfort to the wearers.

Another object of the invention is to provide means for laying and stretching the lining for the forepart of a stitchdown shoe and holding this lining part stretched uniformly and smoothly preparatory for and during subsequent attachment of the vamp portion of the upper to the outsole so that, when the shoe is completed, the lining is held evenly and smoothly stretched, and free from creases and other irregularities that may exist in the vamp portion of the upper and that may otherwise cause discomfort to the wearer.

Other objects will be apparent from the following description, reference being made to the annexed drawing, in which—

Fig. 1 is a bottom plan view of a lasted stitchdown shoe having the upper spread open to show clearly the devices by which the lining is stretched smoothly and evenly along and against the sides of the last, and laid over upon the exposed surface of the insole preparatory for attachment of the outsole.

Fig. 2 is an enlarged cross-sectional view on the line 2—2 of Fig. 1, showing the device for smoothly stretching and holding stretched the lining against the outer surface of the last.

Fig. 3 is a similar sectional view showing the use of glue for attaching the margin of the lining to the insole.

Fig. 4 is a side elevation of a child's shoe made in accordance with this invention, parts of the upper being removed to show the lining both at the forepart of the shoe and at the quarter.

The stitchdown shoe structure shown in Figs. 1, 2 and 3 and comprising an upper 1, a lining 2 for the forepart of the shoe and a lining 3 for the quarter, is mounted on a last 4 preparatory for lasting operations, including attachment of the insole 5 to the lining and the outsole 6 to the upper 1 to complete the shoe. The shoe upper and the lining therefor may be made and assembled in the usual or any preferred manner, and are placed upon the last 4 according to known practice. The insole 5 is temporarily secured to the last 4 as by small tacks 7 driven through the insole and into the last. The tacks 7 hold the insole from displacement during lasting operations and while the insole and outsole are being attached, as usual.

In order to lay and stretch the lining evenly and smoothly against and around the last, and to prevent the formation of creases or other irregularities in the lining beyond the edge of the insole and within the shoe, I provide a continuous and uninterrupted sleeve along the entire length of the margin of each lining part 2 and 3. The continuous and uninterrupted sleeve in connection with the margin of the lining part 2 may be formed, as shown, by folding outwardly the margin 8 extending the entire length of said lining part 2 and attaching said margin to the superposed portion of the lining proper by a line of stitches 9, or otherwise, to form the open sleeve 10. A flexible and substantially inelastic or unstretchable cord or wire 11 is arranged to extend through the sleeve 10, with the ends of said cord or wire projecting beyond the rear ends of said sleeve. The two ends of the continuous and uninterrupted sleeve 10 are rearwardly beyond the wider portion of the forepart of the last, at the instep part of the last, and are closer together than any other parts of said sleeve. Preferably, the cord or wire 11 is placed in position before the margin 8 is folded outwardly and before the attaching line of stitches 9 is formed, so that the difficulty of threading or passing the cord or wire 11 through the sleeve after the sleeve has been formed, is avoided.

The sleeve in connection with the quarter lining 3 may be formed, as shown, by folding outwardly the margin 12 thereof, and attaching said margin to the superposed portion of the lining

proper by a line of stitches 13, or otherwise, to form the open sleeve 14. A flexible substantially inelastic or unstretchable cord or wire 15 similar to the cord or wire 11 is arranged to extend continuously through the sleeve 14, with its ends projecting beyond the forward ends of said sleeve. As in the case of the cord or wire 11, the cord or wire 15 is preferably placed in position before the margin 12 is folded outwardly and before the attaching line of stitches 13 is formed, so that the difficulty of threading or passing said cord or wire through the sleeve is avoided.

Both sleeves may be formed as described, with the cords or wires extending continuously through said sleeves, before the lining sections are placed in or attached to the shoe upper. After the shoe upper is placed on the last in proper position for lasting operations, the respective cords or wires 11 and 15 are pulled and tightened, thereby causing them to function as drawstrings. The pulling and tightening of the cords or wires 11 and 15, in the manner of drawstrings, lays and stretches the respective lining sections 2 and 3 smoothly and evenly against, along and around the surfaces of the last 4 against which the lining is pressed. This prevents the formation of creases or other irregularities in the lining within the shoe. The lower margins of the lining sections are drawn inwardly to cover the margin of the insole 5 so that all of the parts of the sleeve-forming margins 8 and 12, including the lines of stitches 9 and 13, are inwardly beyond the edge of the insole 5. In each use of the term cord alone to refer to the parts 11 and 15, said term defines said parts 11 and 15, irrespective of whether said parts are composed of metallic substances or not.

The creases or wrinkles 16 do not extend to the tensely stretched portions of the lining sections but terminate substantially within the margins of the insole, so that the lining sections remain stretched smoothly and evenly on and against the last. The ends of the cord or wire 11 are securely held and prevented from slipping or becoming lax or loose, as by tying the ends together as shown at 17, or otherwise attaching the ends. The ends of the cord or wire 15 are similarly securely by a knot 18, or otherwise, to prevent slipping.

If desired, the sleeves 10 aand 14 and inwardly drawn margins 8 and 12 of the lining sections 2 and 3 may be attached permanently and directly to the insole 5 by glue 19 (Fig. 3), or otherwise. After the lining has been stretched smoothly and evenly around and against the shoe last, and has been secured in the smoothly and evenly stretched position, the outsole 6 is attached. The shoe shown is a child's shoe of the stitch-down type. It is clear that the invention may be used for stretching smoothly aand evenly the lining of other types of shoes, and is not limited to a stitch-down shoe.

From the foregoing, it is apparent that this invention in stitch-down shoes attains all of its intended objects and purposes efficiently, accurately and practicably. It saves time, and consequently reduces cost of manufacture. The cords or wires 11 and 15 may be drawn and attached manually or otherwise, and the use of the binding glue may be optional. The application of the invention may be varied otherwise than in the particulars specifically mentioned.

I claim:

In a stitch-down shoe having an upper including a vamp and a quarter, an insole, an outsole, and a lining for said vamp having its margin extended inwardly between said insole and said outsole and unattached to said upper and leaving the marginal portion of said upper extended outwardly beyond said insole; a pliable sleeve wholly unattached to the vamp portion of said upper and being attached only to and extending continuously and uninterruptedly throughout the length of said lining and having its ends at the forward portion of the shoe shank, fastening means attaching said sleeve and said margin of said lining directly to the underside of said insole and leaving the entire margin of the upper unattached to said lining and attached directly to said outsole apart from said attaching means for said sleeve, and a continuous inelastic cord extending through said sleeve and having its end portions attached to each other rearwardly beyond the rear ends of said sleeve adjacent to the forward portion of the shoe shank and forming a loop holding said margin of said lining close against the margin of said insole and the remainder of said lining being pulled free from wrinkles and irregularities throughout said vamp, leaving the entire margin of said upper free from such pulling and exposed for attachment to said outsole only.

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