Dec. 9, 1947. F. H. SCHLECHT 2,432,340

MANUFACTURE OF WELT SHOES

Filed Dec. 19, 1945

Fig. 1.

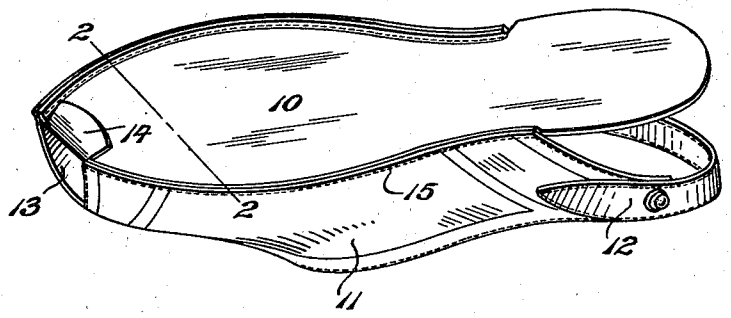


Fig. 2.

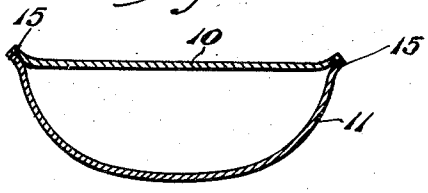


Fig. 3.

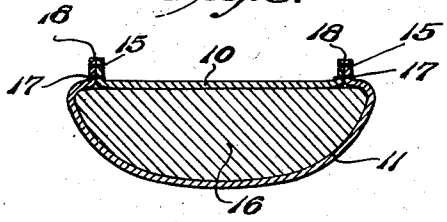


Fig. 4.

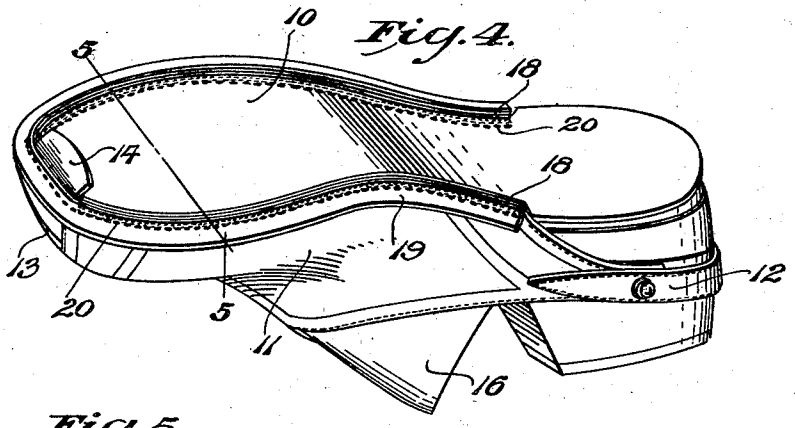
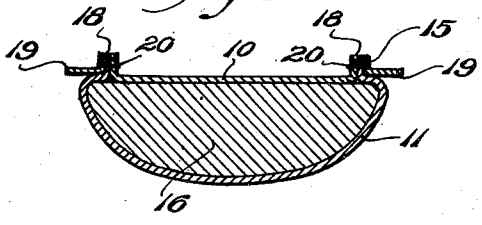


Fig. 5.



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Patented Dec. 9, 1947 2,432,340

UNITED STATES PATENT OFFICE

2,432,340

MANUFACTURE OF WELT SHOES

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Application December 19, 1945, Serial No. 636,012

4 Claims. (Cl. 12—142)

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This invention relates to the manufacture of welt shoes, and has for its object to provide an improved method of manufacturing said shoes whereby to obtain facility and economy in their formation, as well as to produce welt shoes characterized by their high degree of flexibilty, lightness in weight and comfort-affording wearing properties.

In the usual method now employed for producing welt shoes, the insole is first secured to the bottom of the last; next the upper and welt, through the customary inseaming operation, are secured to the marginal edges or ribs of the insole; thereafter a filler compound and an arch supporter or shank iron, if one of the latter is used, are applied to the insole, and, finally, the outsole is stitched to the welt. During these operations, the last is constantly present, requiring the use of a last throughout virtually all stages of shoe manufacture. This necessitates active use of a relatively large number of such lasts for the production of a given number of shoes.

Therefore, it is another object of the invention to provide a method of welt shoe manufacture in which the presence of a last is not required in the initial stages of such shoe manufacture but in subsequent stages only, so that a reduced number of such lasts may be used as compared with conventional practice.

Another object of the invention is to provide a method of welt shoe manufacture in which the insole of the shoe is not directly secured to a last, as in ordinary practice, but is first united with the shoe upper to form a last-receiving assembly, so that a so-called "slip" last may be inserted therein for the purpose of exercising its supporting function in the subsequently executed welt and outsole-securing operations.

For a further understanding of the invention, reference is to be had to the following description and the accompanying drawing, wherein:

Fig. 1 is a perspective view of a shoe upper and insole assembly made in accordance with the present invention prior to the insertion of a last therein;

Fig. 2 is a vertical transverse cross sectional view taken through the assembled insole and upper on the plane indicated by the line 2—2 of Fig. 1;

Fig. 3 is a similar view disclosing a last inserted in the shoe with the insole and upper stretched thereabout to form the marginal welt-attaching ribs;

Fig. 4 is a perspective view disclosing a last inserted in the shoe and also showing a welt

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strip secured to the marginal ribs of the upper and insole;

Fig. 5 is a vertical transverse cross sectional view taken on the plane indicated by the line 5—5 of Fig. 4.

Referring more particularly to the drawing, the numeral 10 designates the standard insole of a shoe made in accordance with the present invention and the numeral 11 designates the usual leather upper, which may be lined or reenforced as desired. In the present instance, the upper has been shown to include a heel strap 12 and an open toe 13. This design, however, is optional and it will be understood that many others may be substituted therefor. With the open toe design, the fore part of the insole 10 is cut to provide a rearwardly bent flap 14 which, in later stages of the manufacture of the shoe, is removed in part.

Before mounting the shoe on a last, the upper is stitched, as at 15, to the margins of the insole for initial union therewith and thereafter a slip last 16 is inserted into the partially formed shoe as provided by the initially united insole and upper. Insertion of the last stretches the upper and the insole and, following its insertion, the adjoining marginal edges of the insole and upper, which were originally united by the stitching 15, are again stitched as at 17, producing the upstanding ribs 18, shown in Fig. 3. Thereafter, a welt 19 is stitched as at 20, by the usual inseaming operation, to the ribs 18 and the toe flap 14 of the insole, and upon the completion of the inseaming operation, the surplus portion of the flap 14 is preferably severed from the shoe, that is, the portions extending beyond the inseam stitching.

From this point on, the shoe is completed with the use of standard manufacturing operations, not shown, employed in welt shoe production. That is, a bottom filler, such as granulated cork, is applied to the sole between the welt ribs, a shank stiffener inserted, if used, and an outsole stitched to the welt 19, the heel of the shoe being thereafter applied and secured in any suitable manner.

By the operations described, a very flexible welt shoe is produced which is devoid of the stiffness and rigidity of welt shoes produced by conventional methods. In addition, economies in manufacture are provided in the utilization of lasts and in prolonging the period of their manufacturing usefulness.

I claim:

1. In the manufacture of welt shoes, the steps

which comprise initially stitching an upper to an insole along the adjoining marginal edges thereof in the absence of a last; then inserting a last into the partially completed shoe; additionally stitching the upper to the insole following the insertion of the last by a row of stitching extending around said marginal edges within the confines of the initial stitching to form welt-attaching ribs; and thereafter, through an inseaming operation, securing an outsole-attaching welt to said ribs.

2. In the manufacture of welt shoes, the steps which comprise providing an upper having an open toe, providing an associated insole having at the toe end thereof a bendable flap, stitching the lower marginal edges of said upper to the adjacent marginal edges of said insole in a manner independent of the flap and in the absence of a last, then inserting a last into the partially completed shoe, bending the flap rearwardly and downwardly toward the forepart of the insole; and, through an inseaming operation, stitching an outsole-attaching welt to the aforesaid marginal edges of said upper and insole and the base portion of said flap.

3. In the manufacture of welt shoes, the steps which comprise providing an upper having an open toe, providing an associated insole having at the toe end thereof a bendable flap, stitching the lower marginal edges of said upper to the adjacent marginal edges of said insole in a manner independent of the flap and in the absence

of a last, then inserting a last into the partially completed shoe, bending the flap rearwardly and downwardly toward the forepart of the insole; then, through an inseaming operation, stitching an outsole-attaching welt to the aforesaid marginal edges of said upper and insole and the base portion of said flap, and, following the stitching of the welt to the base portion of the flap, severing the balance of the latter from the shoe.

4. In the manufacture of welt shoes, the steps which comprise: initially stitching an upper to an insole along the shank and forepart margins thereof in the absence of a last; then inserting a last into the partially completed shoe; additionally stitching the upper to the insole by stitching around their margins within the confines of the initial stitching to form welt-attaching ribs disposed substantially in perpendicular relation to the plane of the insole; and thereafter, through an inseaming operation, securing an outsole-attaching welt to said ribs.

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