May 30, 1939. W. H. BAIN 2,160,377

MANUFACTURE OF SANDALS

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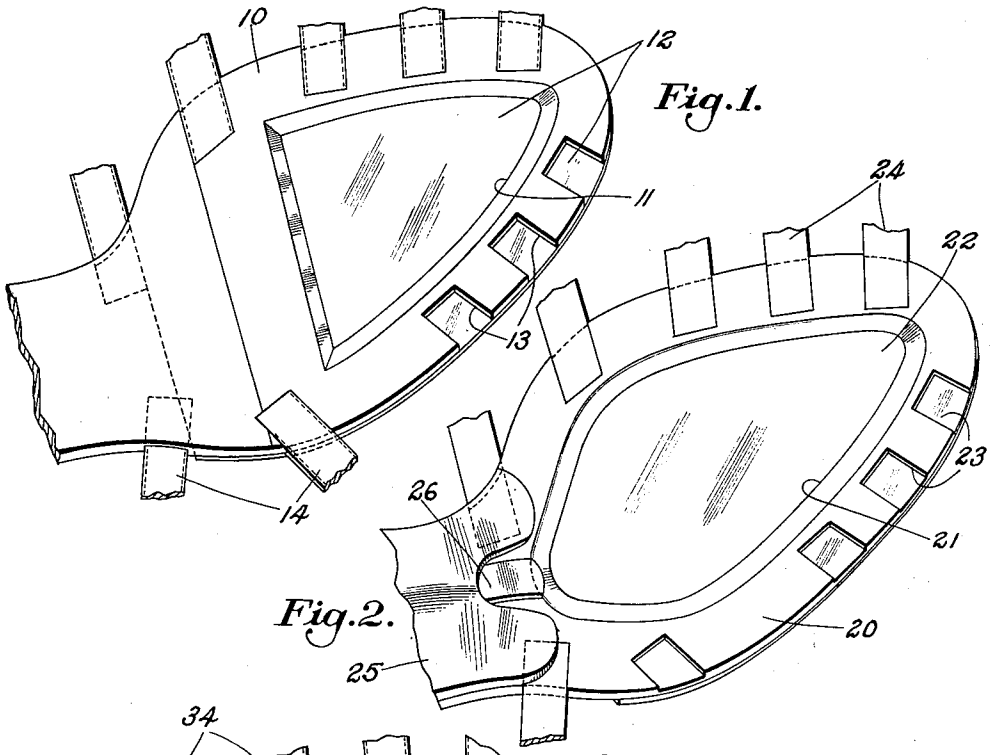


Fig. 1.

Fig. 2.

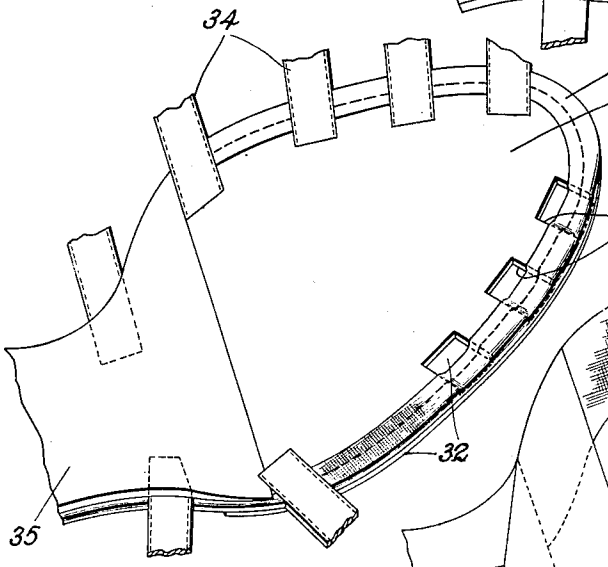


Fig. 3.

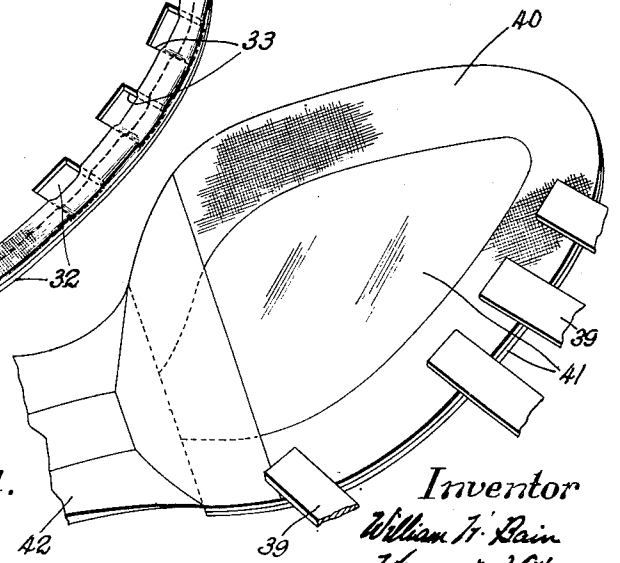


Fig. 4.

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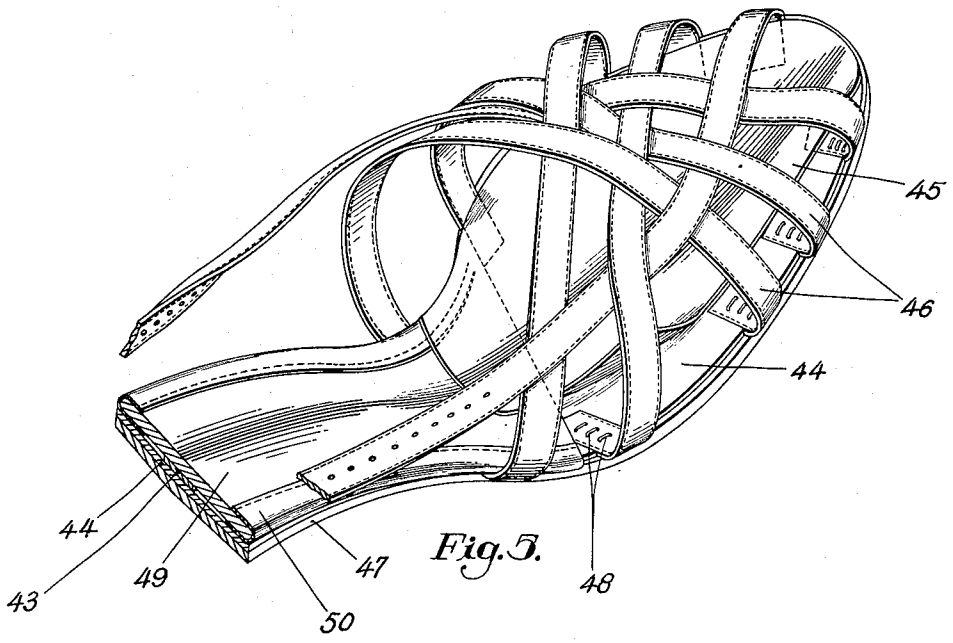


Fig. 5.

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UNITED STATES PATENT OFFICE

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MANUFACTURE OF SANDALS

William Henry Bain, Lewiston, Maine

Application October 12, 1937, Serial No. 168,616

5 Claims. (Cl. 12—142)

This invention consists in a novel method of manufacturing sandals of improved construction and attractive appearance, embodying also an insole of new and improved construction. The invention also includes within its scope the novel strap sandal herein shown as produced by the method of my invention.

In the manufacture of strap sandals as heretofore carried out, much difficulty has been encountered in securely attaching the strap ends in the sandal bottom without the necessity for extensive hand fitting work on the part of an expert shoemaker. This is particularly true where it is desired to secure the strap ends in flush surface relation to the surface of the insole beneath the foot of the wearer. Difficulty has also been encountered in so treating the edge of the insole that it shall present an attractive finish and not show a raw edge where it is visible between the straps along the sides of the sandal.

The present invention aims to obviate these difficulties and to improve the manufacture of sandals in other important respects. For example, it contemplates the employment of an insole having a temporarily attached reinforcing sheet, such as thin tough fibre, which may be made up as a part of the insole together with the straps as a stock fitting operation so that it comes to the shoemaker as a unit ready to be placed upon the last. The reinforcing sheet is arranged so that it may be stripped from the lasted sandal after the last has been pulled and in the meantime it serves to reinforce the insole during the shoemaking processes, to permit the use of a light or skeletonized insole and cooperates in providing a secure attachment of the sandal straps by furnishing directly a surface for attachment or by reinforcing the portion of the insole to which the straps are connected.

Among many other advantages the employment of a reinforcing sheet of this character permits a binding tape to be secured to the marginal edges of the insole in a continuous manner and so as to extend across notches provided for the reception of the strap ends. Under such circumstances the reinforcing sheet supplies a surface to which each of the strap ends may be cemented independently of the binding, and thus obviates any displacement of the binding which might have occurred during the shoemaking processes.

These and other features of the invention will be best understood and appreciated from the following description of several insoles embodying the invention and a preferred form of strap sandal in which the said novel insoles may be employed with good advantage, all as shown in the accompanying drawings in which,

Figs. 1 to 4 are fragmentary views in perspective of four insoles having somewhat different characteristics and all being adapted to be embodied in the sandal of my invention, and

Fig. 5 is a view in perspective of the shank and forepart of a sandal made with an insole of still different characteristics.

The characteristic common to all the insoles herein illustrated is the reinforcing sheet which covers the last-engaging face thereof and which is adapted to be stripped from the insole, after the last has been removed. The sandal straps are temporarily attached to the reinforced body of the insole, by being edge notched into it or otherwise, and may be held in assembled position thereon partly through the medium of the reinforcing sheet and then, upon the removal of the latter, the straps may be conveniently reached and fastened permanently to the outsole or other parts of the sandal bottom.

The insole shown in Fig. 1, comprises a blank 10 extending for the full length of the sole and formed of insole leather or any composition commonly used for such purposes. The blank 10 is skeletonized in the forepart, having a large aperture 11 therein, and is reinforced throughout its forepart by a sheet 12 of fibre or the like which is temporarily secured thereto in substantially flush edge relation and so as to constitute the last-engaging face of the insole. The blank 10 is also provided with a series of rectangular edge notches 13 which, in this case, extend entirely through the blank 10 and so expose the reinforcing sheet 12, just as it is exposed through the aperture 11. As herein shown the whole forepart of the blank 10 is reduced by buffing or otherwise back to substantially the ball line and the rear edge of the reinforcing sheet 12 extends rearwardly of the ball line, as indicated by the dotted lines in Fig. 1.

Having prepared the insole as above explained and located the edge notches 13 in accordance with the style of the sandal desired, sandal straps 14 are assembled with the insole by having one end of each cemented into the notches 13, in this case being temporarily secured to the reinforcing sheet 12, which forms the bottom of the notches, and to the walls of the notches. The insole with its straps thus assembled in flush surface relation is now ready to be conformed to the last bottom and secured thereto with its reinforcing sheet 12 next to the last.

The insole shown in Fig. 2 is similar to that

above described in many respects. It includes the blank 20 which has a large aperture 21 in its forepart and which extends for the full length of the insole. In this case the blank is not reduced in the forepart but is stiffened in the shank portion by a shank piece 25 and a metallic stiffener 26. The forepart of the blank is provided with rectangular edge notches 23 but these do not extend completely through the blank as before. Instead a thin portion of the blank is retained to serve as a bottom for the notches. A reinforcing sheet 22 covers the lower face of the insole, as seen in Fig. 2, and this is exposed through the aperture 21. It underlies the notches 23 but is not visible at these points. The sandal straps 24 are assembled with the insole by having one end of each cemented into the notches 23 in substantially flush surface relation, and the insole thus made ready for use.

The insole shown in Fig. 3 includes the blank 30, which in this case, may be assumed to be of a fibrous composition and is not skeletonized in its forepart but is solid except for its rectangular edge notches 33. In this case the entire margin of the blank is provided with a textile binding tape 31, folded about its edge and held in place by a line of stitching. It will be noted that binding 31 extends continuously across the open ends of the notches 33, bridging them as it were. The shank portion of the insole is stiffened and given body by a shank piece 35 secured thereto in the usual manner, and the forepart is reinforced by a thin tough fibre sheet 32 which is exposed through the notches 33 within the binding 31. Sandal straps 34 are cemented in the notches 33 and thus attached to the binding 31 as well as the face of the reinforcing sheet 32.

The insole shown in Fig. 4 has no edge notches but comprises an open blank 40 of textile material, such as duck, died out or otherwise fashioned somewhat like a rand and outlining the forepart of the insole. The blank is reinforced by a fibre sheet 41 and permanently attached at its rear end to a shank piece 42. Sandal straps 39 are cemented to the face of the blank 40 in locations predetermined for the style of sandal to be made.

In using any one of the four insoles above described in the manufacture of a sandal of the general type shown in Fig. 5, the insole with its assembled straps is first tacked to the last bottom with the reinforcing sheet next to the last. The insole 44 in Fig. 5 is edge notched to receive the straps 46 and is provided with the reinforcing sheet 45 which in Fig. 5 is represented as having served its function, and as being partially stripped from the insole. The insole unit of Fig. 5 includes a metallic shank stiffener 43 and sole piece 49 having a textile binding about its margin and extending approximately from the ball line to the heel seat. While the insole is on the last the straps 46 are drawn over the last, cut to length and secured at their free ends in the appropriate edge notches. The outsole 47 is also conformed to the sandal bottom and permanently secured in place as by cementing. During all the operations the strap ends are strongly but temporarily held in place by their attachment to the reinforcing sheet itself or to the insole material in close proximity to the reinforcing sheet. When the last has been pulled, however, there is no longer any strain upon the straps and no danger of displacing them by stripping off the reinforcing sheet as suggested in Fig. 5. This operation uncovers the strap ends, presenting them in convenient reach to be permanently secured by fasteners, such as staples 48, driven through the straps and clenched in the outsole 47. Thus the manufacturing strains are taken care of by providing the removable reinforcing sheet and the strains in wear are taken care of by the permanent fasteners inserted when the reinforcing sheet is removed.

Having thus described my invention, what I claim is new and desire to secure by United States Letters Patent is,—

1. A method of making sandals, which consists in assembling on a last bottom an insole blank having straps located in edge notches therein and covered by a relatively thin reinforcing sheet and an outsole, and then, after removing the last and stripping off the reinforcing sheet and attaching the strap ends to the underlying outsole.

2. A method of making sandals, which consists in securing sandal straps in edge notches in an insole blank having a relatively thin reinforcing sheet upon its last-engaging face, and after removing the sandal from the last stripping the reinforcing sheet to expose the strap ends and securing them to an underlying outsole.

3. A method of making sandals, which consists in cutting spaced notches in the marginal edges of an insole blank, temporarily attaching a thin reinforcing sheet to the face of the blank so as to underlie said notches, locating sandal straps in the notches, conforming the insole with its straps to a last bottom, attaching an outsole, stripping the reinforcing sheet after removing the last, thus exposing the strap ends, and then permanently securing them to the outsole.

4. A method of making sandals, which consists in cutting spaced notches in the marginal edges of an insole blank, edge binding the blank across the open ends of the notches, temporarily attaching a thin reinforcing sheet to the face of the blank, locating sandal straps in the notches above said reinforcing sheet and binding, placing the insole upon a last bottom with the reinforcing sheet innermost, attaching an outsole, removing the last, stripping off the reinforcing sheet, thus exposing the inner ends of the straps, and then permanently securing them to the outsole.

5. In the manufacture of sandals the steps of edge notching an insole, cementing a thin cover sheet to one surface of said insole below the notches, cementing to said cover sheet the free ends of straps disposed in said notches, securing an outsole to the surface of the insole opposite said cover sheet, stripping off said cover sheet, and attaching the straps to said outsole by inserting fasteners in the ends of the straps in the notches.

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