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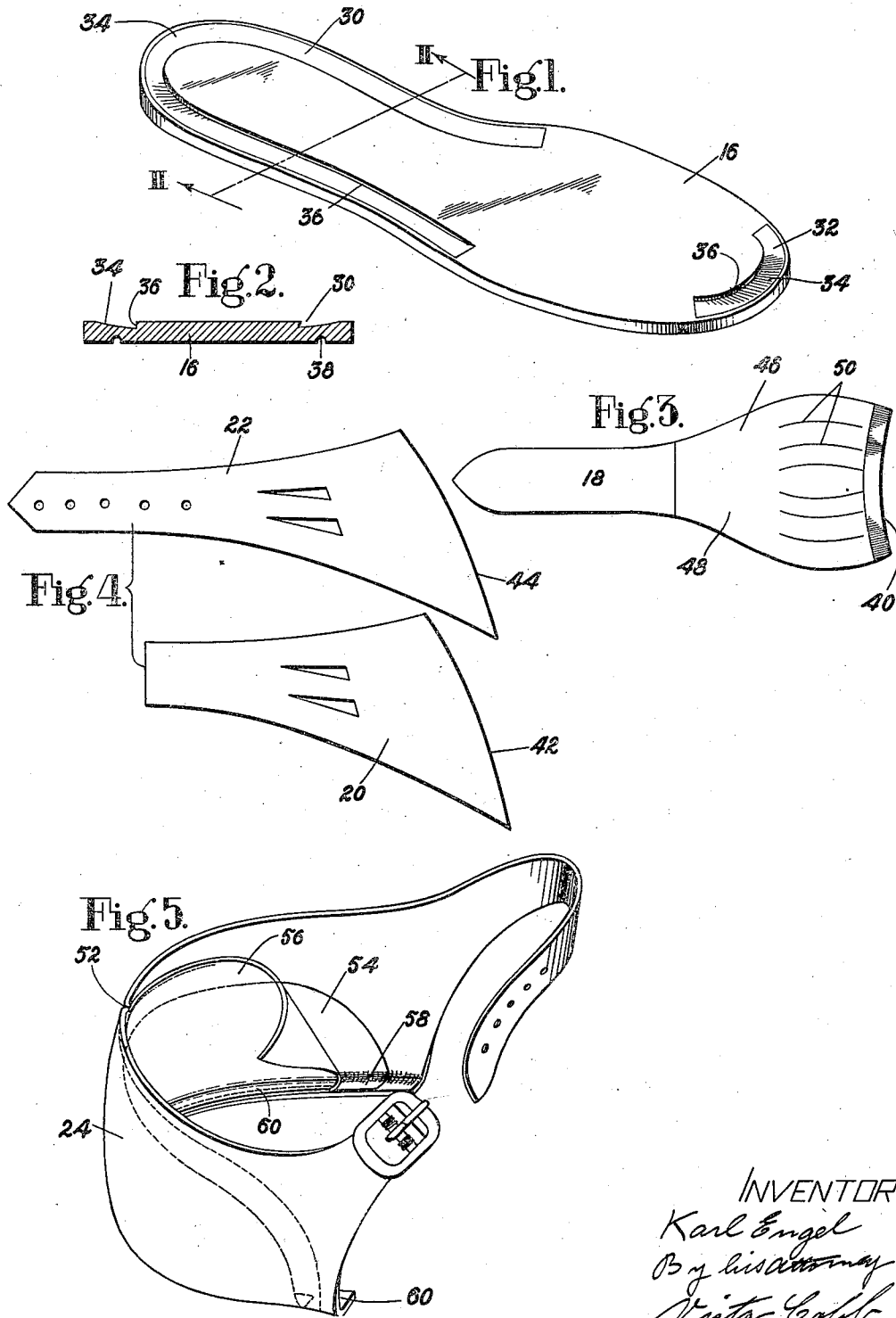
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2,146,805

SANDAL

Filed Aug. 27, 1936

2 Sheets-Sheet 1



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Feb. 14, 1939.

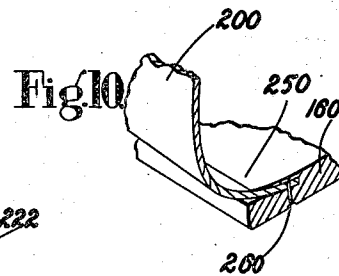
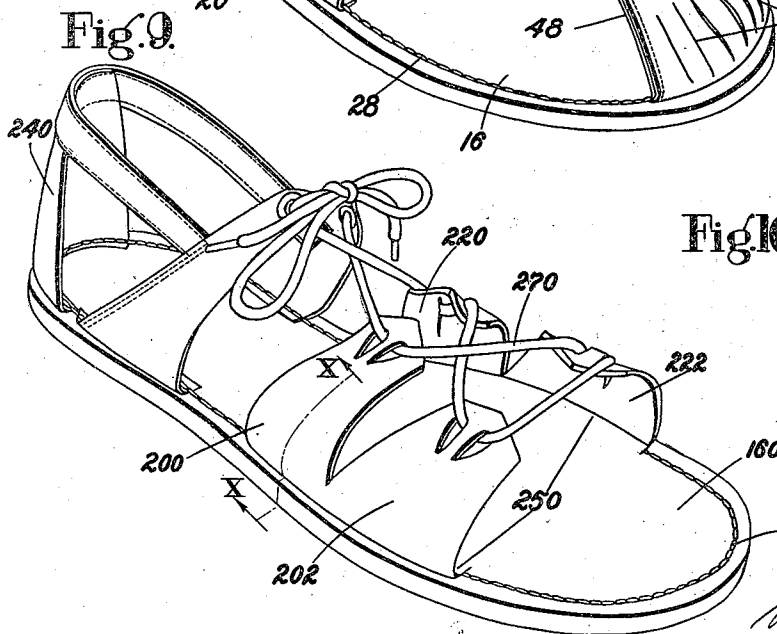
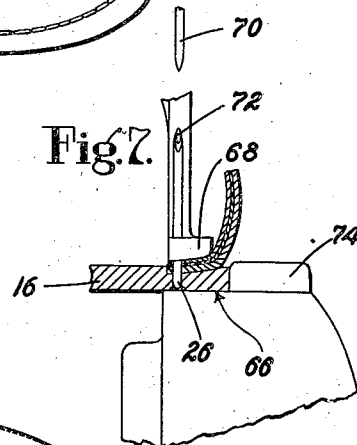
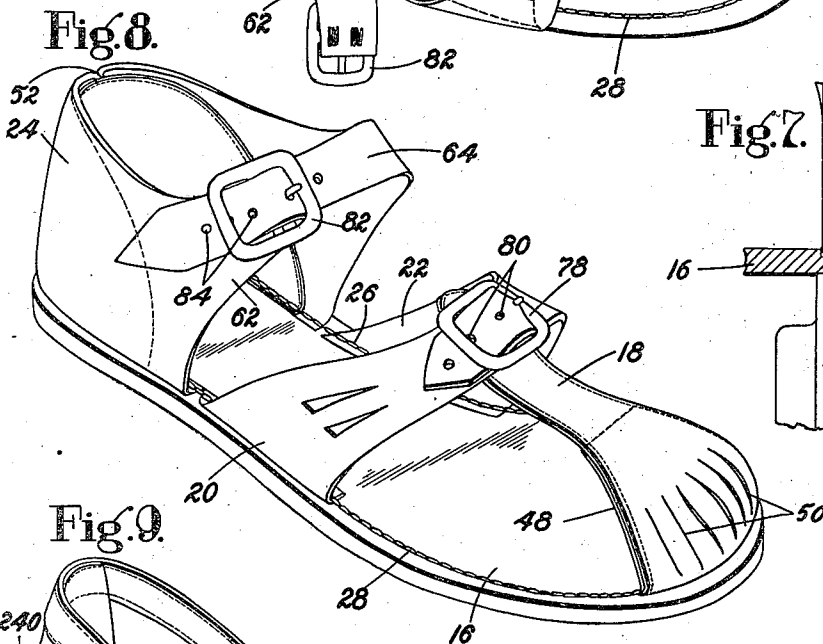
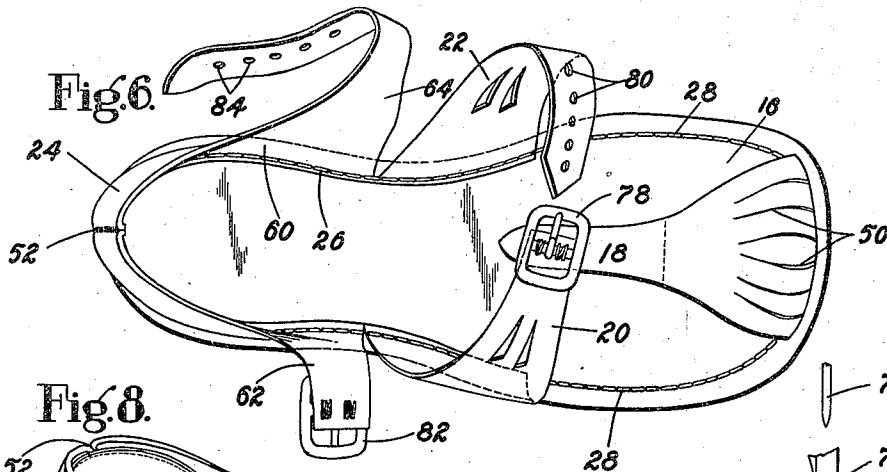
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2,146,805

SANDAL

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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SANDAL

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3 Claims. (Cl. 36—11.5)

This invention relates to improvements in sandals and has for its object to provide a sandal of strong and sturdy construction and of pleasing appearance and one which is inexpensive to manufacture.

With this object in view the invention provides a sandal which, as herein illustrated, comprises a tread sole, and upper members, for example straps, which are secured to the marginal portion of the sole in spaced localities by means of stitches that extend through the sole and through the upper members, the stitches constituting portions of a single continuous row of stitches other portions of which consist of stitches which extend through the sole only along portions of its margin to which the upper members are not secured and which provide ornamentation for those portions of the sole margin.

The upper portion of the sandal, herein illustrated as a preferred embodiment of my invention, comprises a heel part and a plurality of forepart members or straps, the lower marginal portions of which are inturned and are countersunk within open marginal channels formed in the upper or inner surface of the sole. These channels slope downwardly and inwardly and terminate in substantially perpendicular shoulders against which the inner edges of the upper members are butted, the depth of the channels being such that the upper surfaces of the inturned portions of the upper members are substantially flush with the adjacent upper surface of the sole and thus will have no tendency to cause discomfort to the foot.

The invention will now be explained with reference to the accompanying drawings, in which

Fig. 1 is a perspective view of the sole of the sandal;

Fig. 2 is a cross-sectional view taken along the line II—II of Fig. 1;

Fig. 3 is a plan view of one of the upper members which is secured to the toe of the sole;

Fig. 4 is a plan view of the members of a cross-strap which is secured to the shank portion of the sole;

Fig. 5 is a perspective view of the heel portion of the upper;

Fig. 6 is a plan view of the completed sandal;

Fig. 7 is a cross-sectional view of a portion of the sandal illustrating the operation of stitching the heel portion of the upper to the sole;

Fig. 8 is a perspective view of the completed sandal;

Fig. 9 is a perspective view of a completed sandal showing a modified construction; and

Fig. 10 is a detailed view partially in perspective and partially in section along the line X—X of Fig. 9.

Referring to the drawings, the sandal illustrated as a preferred embodiment of my invention in Figs. 1 to 8, inclusive, comprises a tread sole 16 and an upper which is made up of a plurality of members consisting of a toe strap 18, cross-strap members 20 and 22, and a heel member or quarter 24. The lower marginal portions of the upper members are turned inwardly and secured to the marginal portion of the upper side of the tread sole by means of stitches 26 which extend through the upper members and through the tread sole. The stitches 26 are arranged in a single continuous row which extends entirely around the marginal portion of the sole, the row including stitches which extend only through the sole along the opposite lateral margins of its forepart, as indicated at 28, where there are no upper members to be secured to the sole. As shown the inturned lower margins of the upper members are countersunk within marginal recesses or channels in the sole 16 so that their inner surfaces are substantially flush with the inner or upper surface of the sole and thus no ridges are formed such as might be uncomfortable to the foot in the localities where the upper is attached to the sole.

As best shown in Fig. 1, the recesses in the sole 16 comprise a recess or channel 30 which extends around the heel and along the opposite lateral margins of the shank portion of the sole for receiving the margins of the heel member 24 of the upper and the lower end portions of the cross-strap members 20 and 22, and a recess or channel 32 at the toe end of the sole for receiving the lower end portion of the toe strap 18. These channels 30 and 32 may be formed by suitable stock fitting operations and preferably, and as shown, the channels extend inwardly from locations spaced from the sole edge and are disposed at an inclination so as to provide, in each channel, a downwardly sloping surface 34 over which the inturned margin of the upper member is laid, and an inner perpendicular shoulder 36 against which the edge of the upper member is adapted to abut. A stitch-receiving groove 38 is preferably formed in the lower or tread face of the sole.

The toe strap 18 is formed with a curved lower edge 40 (Fig. 3) shaped to engage the shoulder 36 of the toe channel 32 and the cross-strap members 20 and 22 are formed with curved lower edges 42 and 44 (Fig. 4) shaped to fit respectively the portions of the perpendicular shoulder 36 of the channel 30 in the shank portion of the sole. The

toe strap 18 is made with a relatively wide portion 46 which is reinforced by a lining 48, the wide portion of the strap, together with the lining 48, being slashed as indicated at 50 to enable it to assume a convex contour adapted to conform to the shape of the toe portion of the foot. Preferably the lining 48 terminates short of the curved edge 40 of the toe strap to avoid undue thickness in the inturned marginal portion of the toe strap.

The heel member 24 of the upper is made in two parts which are united by a back seam 52 and is stiffened by means of a molded counter 54 which is interposed between the heel member itself and a lining 56. The counter 54 has an inturned lower marginal flange 58 which causes the lower margins of the heel member 24 and the lining 56 to be correspondingly inturned, as indicated at 60 in Figs. 5 and 6. The heel member 24 is shaped to provide two integral angle strap portions 62 and 64.

In making the sandal the several upper members above described are successively placed in assembled relation to the sole 16 with their lower marginal portions located within the channeled portions of the sole and with their lower edges abutting the respective portions of the shoulders 36 and immediately after each part has been thus positioned, and while it is being held in place by the operator, it is stitched to the sole. Preferably the heel portion 24 of the upper will be first assembled with the sole with the inturned margin or flange 60 received within the rear portion of the channel 30 and with the inner edge of the flange 60 bearing against the shoulder 36 of that channel. While the heel part 24 is held manually in its assembled position its inturned flange 60 is stitched to the sole by means of stitches which extend through both the upper part and the sole and are received within the groove 38 in the tread face of the sole. Next, the strap member 22 is positioned in the channel 30 at the inside shank portion of the sole immediately in front of the upper member 34 and the stitching operation continued to secure the member 22 to the sole. The stitching is then continued forwardly along the inside margin of the forepart of the shoe until the toe channel 32 is reached. The toe strap 18 is then positioned within the toe channel 32 with its curved lower edge 40 engaging the shoulder 36 of that channel and the stitching continued around the toe of the sole, thereby uniting the toe strap with the sole. The stitching is then continued along the outside marginal portion of the forepart of the sole until the forward end of the channel 30 is reached. Finally, the strap member 20 is positioned within the forward portion of the channel 30 at the outside shank portion of the sole and the stitching continued to the point where the stitched seam was commenced thereby securing the strap member 20 to the sole. A single continuous row of through-and-through stitches is thus made which extends entirely around the sole securely uniting all of the upper parts to the sole and providing ornamentation for the marginal portions of the sole at opposite sides of the forepart where there are no upper members to be secured to the sole and where the stitches extend through the sole only. This stitching may be accomplished by the use of a lock stitch sewing machine such, for example, as that disclosed in United States Letters Patent No. 939,152, granted November 2, 1909, upon application of F. W. Merrick, the machine as shown in Fig. 7 comprising a work support 66, a presser foot 68, an awl 70,

a straight-hook needle 72, and an edge guide 74, and being provided also with the usual work feeding and thread guiding and looping devices (not shown). The location of the stitches relatively to the sole edge is determined by the edge guide 74 which is positioned to locate the stitches within the groove 38.

After the upper members have been stitched to the sole, the upper or free end of the strap member 20 is stitched to the free end of the toe strap 18 and a buckle 78 is secured to joined ends of the members 18 and 20 for engagement with holes 80 which have previously been punched in the strap member 22. A buckle 82 is secured to the strap member 62 of the heel part 24 for cooperation with holes 84 which have previously been punched in the strap member 64.

Inasmuch as the inturned lower marginal portions of the several upper members of the sandal are countersunk within the channels 30 and 32 in the sole, the upper or foot-engaging surfaces of these portions of the upper members will be substantially flush with the upper or inner surface of the sole so that a practically continuous smooth surface is presented for engagement with the foot, there being no ridges or irregularities such as might tend to cause discomfort to the wearer of the sandal.

The practice of the above-disclosed method results in the production of a sandal which is of unusually simple construction consisting only of a single sole and a small number of upper members; which is particularly strong and serviceable because of the manner in which the upper members are secured to the sole; and which can be manufactured inexpensively, inasmuch as the only major operation to be performed after the parts have been cut out and the sole has been fitted is a single stitching operation which takes place concurrently with the manual assembly with the sole of the several upper members. It is to be noted that the manufacture of the sandal does not require the use of a last or the performance of any lasting or equivalent operations. The sandal, moreover, is of particularly pleasing and stylish appearance, this being due partly to the presence of the ornamentation provided by those portions of the continuous row of stitches which are located between the straps or other spaced upper members in the forepart or in the open shank portion of the sandal.

The construction of the sandal may be varied in numerous particulars without departing from the spirit of the invention. For example, as shown in Fig. 9, the heel part 240 of the upper may be made of openwork construction, and the upper members in the forepart of the shoe may constitute two strap members 200 and 220 and, as shown, other strap members 202 and 222 may be formed integrally with the strap members 200 and 220, respectively. In the construction shown in Fig. 9 it is unnecessary to provide any toe strap and the sole 160 may be channeled only at opposite sides of its forepart to receive the strap members 200-202 and 220-222, respectively. As shown, these channels are formed with channel flaps as indicated at 250 in Fig. 10. These flaps will be raised prior to the stitching of the strap members to the sole and later laid so as to cover and conceal the stitches 260 which are in the channels. In this construction the sole is not channeled at its upper side in its heel portion or in any of those portions of its margin where the stitches extend only through the sole itself as at the opposite sides of the shank and

at 280 around the toe and in those localities the stitches are exposed on the upper face of the sole and provide ornamentation for the margin of the latter. In order that the heel part 240 and the several strap members may be adapted to hold the sandal upon the foot a lacing 270 may be threaded through suitably formed openings in the strap members and in the heel part, as shown in Fig. 9.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A single-sole sandal comprising a tread sole having in its upper side a marginal channel confined to the toe portion of the sole and a second marginal channel confined to the heel and shank portions of the sole and having unchanneled marginal portions between said channels, each of said channels having an inner boundary defined by a shoulder perpendicular to the upper side of the sole, a toe strap having an inturned portion received in said toe channel with the edge of said portion abutting the shoulder of said channel, a quarter and two cross-strap members each having inturned portions received in said heel and shank channel with the edges of said portions abutting the shoulder of said channel, and a row of stitching extending entirely around said sole, said row comprising stitches extending through the channeled portions of the sole and securing said toe strap, said cross-strap members and said quarter within said channels with the upper surfaces of said members exposed for engagement with the foot in flush relation to the adjacent surface portions of said sole, and other stitches extending only through said unchanneled marginal portions of the sole and providing ornamentation for said portions.

2. A single-sole sandal comprising a tread sole having a marginal channel in its forepart and another marginal channel in its rear part and having unchanneled marginal portions between

said channels, each of said channels being downwardly and inwardly inclined in directions transverse to the sole edge, a forepart upper member having an inturned portion received in said forepart channel, a heel part upper member having an inturned portion received in said rear part channel, a row of stitching extending entirely around the sole, said row comprising stitches extending through the channeled portions of the sole and securing said inturned portions of said upper members within said channels with the upper surfaces of said members substantially flush with the upper surface of the sole and other stitches extending only through said unchanneled portions of the sole and providing ornamentation for said portions, and channel flaps formed integrally with said sole, said flaps overlying said inturned portions of said upper members and covering the stitches which secure said members to the sole.

3. A single-sole sandal comprising a tread sole having a marginal channel in its forepart and another marginal channel in its rear part and having unchanneled marginal portions between said channels, each of said channels being downwardly and inwardly inclined in directions transverse to the sole edge, a forepart upper member having an inturned portion received in said forepart channel, a heel part upper member having an inturned portion received in said rear part channel, and a row of stitching extending entirely around the sole, said row comprising stitches extending through the channeled portions of the sole and securing said inturned portions of said upper members within said channels with the upper surfaces of said members substantially flush with the upper surface of the sole and other stitches extending only through said unchanneled portions of the sole and providing ornamentation for said portions.

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