

Dec. 12, 1944.

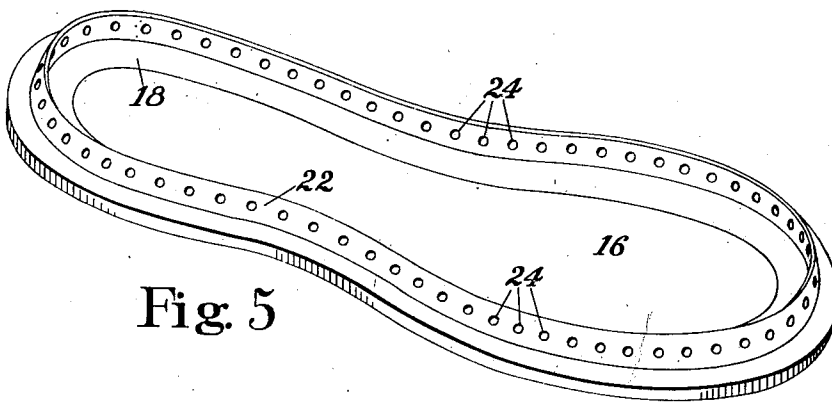
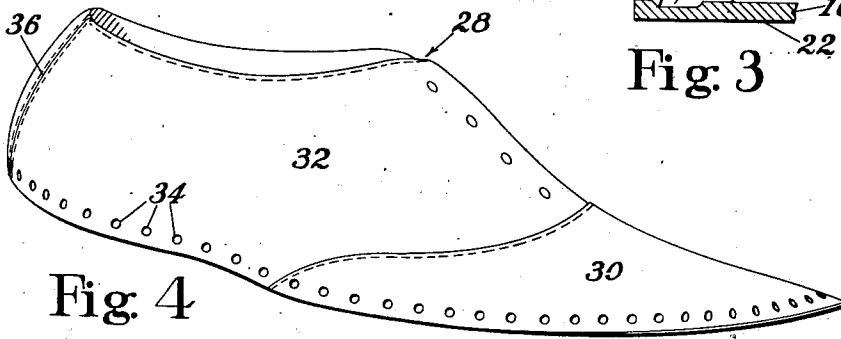
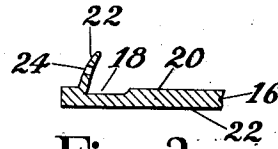
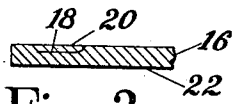
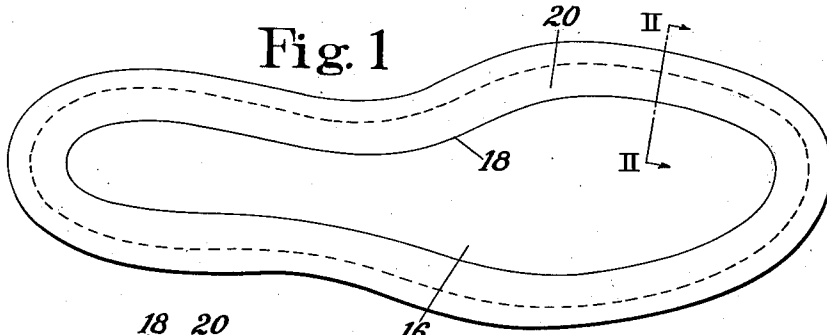
E. QUINN

2,364,816

SHOE

Filed Nov. 21, 1942

3 Sheets-Sheet 1



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By his attorney  
Merrill Colley

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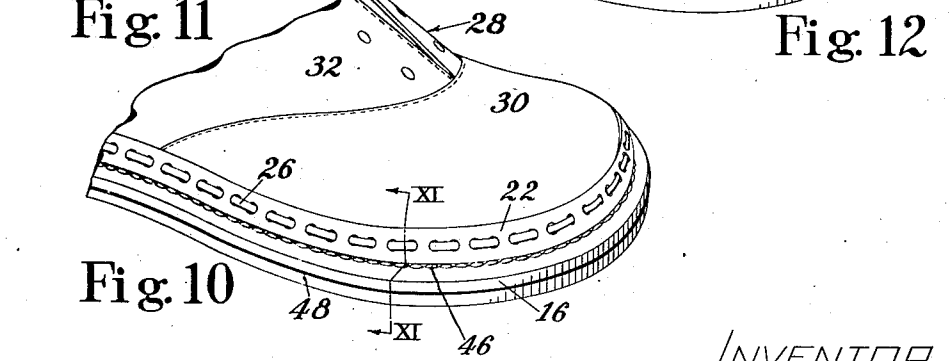
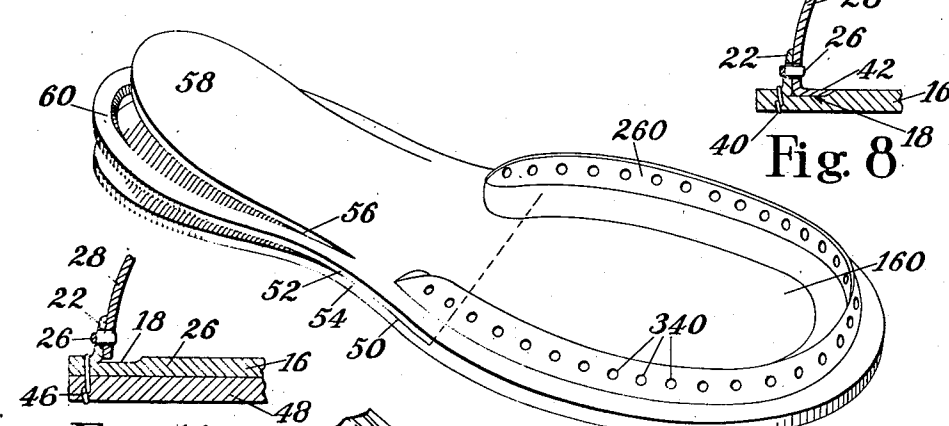
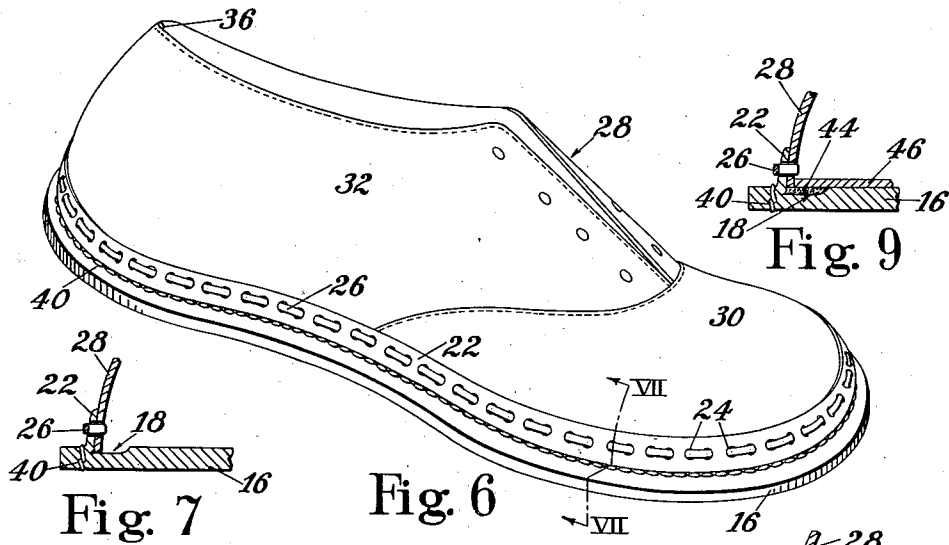
E. QUINN

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SHOE

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3 Sheets-Sheet 2



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E. QUINN

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SHOE

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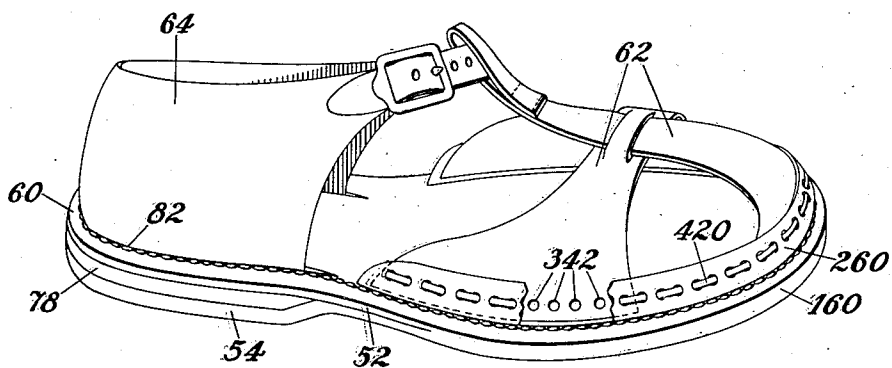


Fig. 13

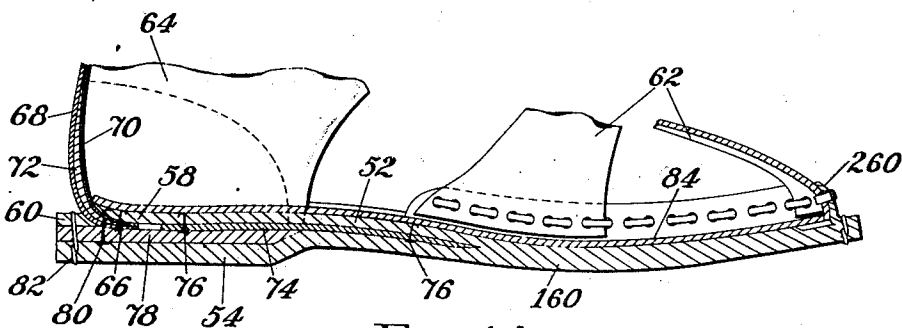


Fig. 14

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# UNITED STATES PATENT OFFICE

2,364,816

## SHOE

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Application November 21, 1942, Serial No. 466,447

9 Claims. (Cl. 36—12)

This invention relates to improvements in shoes.

The general object of the invention is to provide a shoe of simple but rugged construction which has a distinctive and pleasing appearance and which embodies novel features of practical utility and is inexpensive to manufacture.

Another object of the invention is to provide for increased wear in the bottom of the shoe without employing a single ply sole of excessive thickness.

In one of its illustrative embodiments my improved shoe comprises an upper and a single leather sole, the sole having a grain surface at its upper side and having at that side an upstanding marginal flange to the inner side of which the upper is secured by means of a lacing. As shown, the flange is integral with the body of the sole and consists of the upturned flap of an "inside" marginal channel, i. e., a channel formed by a cut which extends from the grain face of the sole outwardly toward the sole edge. Thus, the outer side of the flap which is exposed to view in the finished shoe, as well as the upper side of the sole margin which extends outwardly beyond the flange, has a grain leather surface, this being a feature which contributes to the production of a pleasing and finished appearance in the shoe. A lacing extends through a series of small perforations in the sole flange and through a corresponding series of registering perforations in the margin of the upper. A line of stitching is sewn around the margin of the sole, the stitches being located outwardly of, but closely adjacent to, the face of the sole flange and serving to reinforce the integral connection between the flange and the body of the sole so as to insure against any tendency of the flange to tear away from the sole. The sole having a flesh surface upon its lower side provides a soft yielding tread for the shoe and makes the sole substantially more resistant to wear under certain conditions of use than it would be if it had a grain surface upon its tread side. In order, however, to provide for even greater wear in the bottom of the shoe without employing a single ply sole of excessive thickness, a second sole-shaped ply or layer may be applied beneath the above-described sole and in such a case the marginal line of stitches above referred to will be sewn through both plies of the sole and thus will serve as the means for securing the two plies together as well as means for reinforcing the upper attaching flange.

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

Fig. 1 is a plan view of the sole of my improved shoe as it appears before the flap of the channel has been raised into upstanding position to form the attaching flange;

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

Fig. 3 is a fragmentary sectional view similar to Fig. 2 but showing the sole as it appears after the channel flap has been raised to form an upper attaching flange;

10 Fig. 4 is a perspective view of the upper of the shoe;

Fig. 5 is a perspective view of the sole showing particularly the appearance of the upper attaching flange;

15 Fig. 6 is a perspective view of the completed shoe;

Fig. 7 is a fragmentary sectional view taken along the line VII—VII of Fig. 6;

20 Figs. 8 and 9 are fragmentary sectional views similar to Fig. 7 but illustrating modified constructions;

Fig. 10 is a fragmentary perspective view of a shoe constructed in accordance with my invention and having a two-ply sole;

25 Fig. 11 is a fragmentary sectional view taken along the line XI—XI of Fig. 10;

Fig. 12 is a perspective view of a sole constructed in accordance with my invention for use in the manufacture of an open shank sandal;

30 Fig. 13 is a perspective view of an open shank sandal embodying the sole shown in Fig. 12; and

Fig. 14 is a view in longitudinal section of the sandal shown in Fig. 13.

35 Referring first to Figs. 1 to 9, inclusive, of the drawings, the invention is therein illustrated as embodied in a shoe having a single ply sole cut from a thin piece of leather having a grain surface at one side and a flesh surface at its opposite side. The sole is prepared for the attachment of an upper thereto by having a marginal channel 18 formed in its grain-surfaced side by a cut which extends from that surface outwardly toward the sole edge, and by raising the flap 20 of the channel into an upstanding position to form an upper attaching flange 22 that is integral with the sole (see Figs. 3 and 5).

40 A series of small perforations 24 are punched in the flange for the reception of a lacing 26 (Fig. 6) by means of which the upper is to be secured to the flange. The upper 28 is cut to size without surplus marginal allowance and, as shown in Fig. 4, it comprises a vamp 30 and a two-part quarter 32, the quarter being stitched to the vamp in the usual manner. While the upper is in

a flat condition a series of small holes or perforations 34, corresponding to those in the sole flange, are punched in the margin of the upper, after which the rear edges of the two parts of the quarter are united by a conventional back seam 36. The upper and the sole are assembled without lasting, the respective perforations in the upper and the sole being brought into registration and the lacing 26 being threaded through the registering perforations. The perforations 24 in the sole are uniformly spaced and correspond in number to those in the upper but the perforations in the upper are spaced somewhat more widely in certain parts as, for example, around the forepart, so that when the two sets of perforations are brought into registration a desired amount of fullness will be thrown into the vamp. The shoe is completed by sewing a continuous line of stitching 40 through the marginal portion of the sole which projects beyond the flange 22, the stitches being located close to the base of the flange and serving to reinforce the integral connection between the flange and the sole so as to insure against any tendency of the flange to peel or tear away from the sole.

Inasmuch as the upper attaching flange, in the shoe thus produced, is formed by the flap of an inside channel, the flange will have a natural curvature heightwise of the shoe adapting it to conform to the contour of the foot and the upper edge of the flange will coincide in circumference with the size of the upper, whereas if the flange were formed by raising the flap of an outside channel it would, of course, be oversize at its top edge and thus would not be readily conformable to the shape of the foot. Moreover, the exposed outer side of the flange 22 has a grain leather surface which is continuous with the grain surface at the adjacent upper side of the projecting margin of the sole and which imparts a finished and attractive appearance to the shoe. The sole of the shoe has a flesh surface at its tread side, this being a feature which makes the sole more resistant to wear under certain conditions of use and enables the wearer to tread softly and with less tendency to slip.

It may be found desirable to cut the upper of the shoe with a narrow marginal allowance, and to turn this marginal portion inwardly, in the act of assembling the upper with the sole, as shown at 42 in Fig. 8, to fill the channel 18 so that no marginal depression will be present inside the shoe. Alternatively, the channel 18 may be filled by means of a separate filler strip, or by a mass of plastic filling material, as indicated at 44 in Fig. 9, this filling material being applied either before or after the upper has been secured to the sole flange. A sock lining 46 may be employed to cover the inner side of the sole 18 and the filling material 44. If desired, a sock lining similar to the sock lining 46 may be used in shoes constructed as shown in Figs. 7 and 8.

In order to provide a shoe bottom adapted to withstand a greater amount of wear without employing a single ply of increased thickness, a layer or ply 48, which need be no thicker than the layer constituting the sole 16 and which is cut to correspond in size and shape to the latter, is secured in place upon the shoe bottom as by means of cement. Thereafter, as shown in Figs. 10 and 11, the ply 48 is secured to the sole 16 by a marginal line of through-and-through stitches 400, the line of stitches being located in the sole 16 in the same relation to the upper attaching flange 22 as the stitches 40, shown in Figs. 6 to 9,

inclusive, so that the stitches 400 will reinforce the flange 22 as well as secure the sole layer 48 to the shoe.

For use in making an open shank sandal I have shown in Fig. 12 a leather sole 160 having an upper attaching flange 260 which extends around the forepart and a short distance only into the shank portion of the sole, the flange being formed at the grain side of the sole by raising the flap of a channel cut in the sole in the same manner as that hereinbefore described. The flange 260 is provided with a series of lacing receiving perforations 340. The heel and shank portions of the sole are split, as indicated at 50, into an upper layer 52 and a lower layer 54, each of which is integrally connected at its forward extremity with the forepart of the sole and a U-shaped slit 56 is formed in the heel portion of the upper layer 52, the slit extending from the upper to the lower side of that layer and dividing it into a central heel seat tab 58 and a marginal U-shaped rand 60, each integral with the forward portion of that layer. An upper suitable for assembly with such a sole, as illustrated in Figs. 13 and 14, comprises a forepart strap assembly 62 and a separate back part or quarter 64. The end portions of the straps constituting the forepart assembly are provided with a series of lacing receiving perforations 342 (Fig. 13). In making the shoe the forepart upper assembly 62 is disposed with the end portions of its straps lying against the inner side of the sole flange and with the perforations 342 registering with the perforations 340 in the flange, and a lacing 420 is threaded through the registered perforations and through the perforations in the sole flange in the localities between the straps, as shown in Fig. 13. A last is then thrust into the shoe, the lower heel and shank layer 54 and the rand 60 are turned back away from the last, and the margin of the back part 64 is lasted over the tab 58 and secured to the latter as by means of tacks 66 (Fig. 14). As shown, the back part 64 may comprise an outer layer 68, a lining 70 and a counter stiffener 72 which is interposed between the outer layer and the lining. A shank stiffener 74 may be secured by tacks 76 to the lower side of the upper sole layer 52, the stiffener extending forwardly between the sole layers 50 and 52 substantially to the break line at the junction of the shank and forward portions of the sole. The rand 60 is then returned to normal position so that its inner edge engages the outer side of the back part of the upper just above the overlapped lower margin thereof. A spring heel lift 78 is laid over the lasted heel seat of the shoe and secured to the latter as by means of a series of nails, one of which is shown at 80, the nails extending through the margin of the back part 64 and into the tab 58 as shown in Fig. 14. Then the lower layer 54 of the sole is laid over the heel lift 78 and a line of stitching 82 is sewn through the sole layer 54, the heel lift 78 and the rand 60 to secure these parts together. Forwardly of the heel lift 78 the stitching 82 is continued along opposite sides of the shank and around the forepart, the stitching serving to secure directly together the two sole layers 50 and 52 in the shank portion of the sole and serving also in this portion and in the forepart of the sole to reinforce the sole flange 260, the stitching 82 being, for this latter purpose, located close to the base of the flange as in the case of the previously described constructions. Finally, the outsole is trimmed and its trimmed edge is finished in any conventional manner, the trimming being

carried out so as to insure that the edges of the rand 60, the heel lift 78 and the lower layer 54 will be flush around the heel portion of the shoe bottom. As shown, a sock lining 84 may be inserted in the shoe.

Obviously, the design and relative arrangement of the parts of the upper of the shoe shown in Figs. 13 and 14 may be varied and the above-described feature of having the upper laced to a sole flange in the forepart or in the forepart and shank portions and overlapped upon a tab cut from the sole in the heel portion is not necessarily restricted in its application to open shank types of shoes but may be embodied in shoes having full uppers.

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

1. A shoe comprising a sole having an upstanding flange formed integrally therewith and consisting of the upturned flap of a marginal channel extending from the upper face of the sole outwardly toward the sole edge, said flange having a series of perforations extending therealong, an upper having its lower margin lying against the inner side of said flange, said margin having a series of perforations therein registering with the perforations in said flange, a lacing running through the respective registering perforations and securing the upper to the flange, and a line of stitching extending through the margin of said sole outwardly of but closely adjacent to the base of said flange, said stitching reinforcing the integral connection between the flange and the body of the sole.

2. A shoe comprising a leather sole having an upstanding marginal flange formed integrally therewith and spaced inwardly from the sole edge, the sole having a marginal grain surface at its upper side outwardly of said flange and said flange having a series of perforations extending therealong and having at its outer side a grain surface continuous with said marginal grain surface, an upper having a lower margin engaging the inner side of said flange, said margin having a series of perforations therein registering with the perforations in said flange, a lacing running through the respective registering perforations and securing the upper to the sole, and a line of stitching extending through the margin of the sole outwardly of but closely adjacent to the base of said flange and reinforcing the integral connection between the flange and the body of the sole.

3. A shoe comprising a leather sole having upon its upper side an upstanding marginal flange consisting of the upturned flap of an endless marginal channel formed by a cut directed from the upper face of the sole outwardly toward the sole edge and extending entirely around the sole, said flange having a grain surface at its outer side and having a series of perforations extending therealong, an upper having its lower margin overlapping the inner side of said flange, said margin having a series of perforations registering with the perforations in the flange, a lacing extending through the respective registering perforations and securing the upper to the inner side of the flange, and a line of stitching extending through the margin of said sole, said stitching being located outwardly of but closely adjacent to the base of said flange to reinforce the joint between the flange and the body of the sole.

4. A shoe comprising a sole having an upstanding flange consisting of the upturned flap of a

marginal channel cut in the upper face of the sole and extending outwardly toward the sole edge, said flange having a series of perforations extending therealong, an upper having a lower portion lying against the inner side of said flange and provided with a series of perforations registering with the perforations in said flange, the marginal extremity of said lower portion being intumed and laid in said channel so as to fill the latter, a lacing extending through the respective registering perforations and securing the upper to said flange, a second sole beneath the first sole, and a line of stitching extending through the margins of said soles outwardly of said flange and securing the soles together.

5. A shoe comprising a leather sole having a grain surface at its upper side and having an upstanding flange formed integrally with the sole and consisting of the upturned flap of a marginal channel cut in the grain surface of the sole and extending outwardly toward the sole edge, said flange having a grain surface at its outer side and a series of perforations extending therealong, an upper having its lower margin lying against the inner side of said flange, said margin having a series of perforations registering with the perforations in said flange, a lacing extending through the respective registering perforations and securing the upper to said sole, a second sole beneath the first sole, and a line of stitching extending through the margins of said soles and securing the soles together, said stitching being located outwardly of but closely adjacent to the base of said flange and reinforcing the integral connection between said flange and said first sole.

6. A shoe comprising a sole having an upstanding flange formed integrally therewith and consisting of the upturned flap of a marginal channel extending from the upper face of the sole outwardly toward the sole edge, said flange having a series of perforations extending therealong, an upper having an intumed lower margin received within said channel and filling the same and having a portion immediately above said intumed margin engaging the inner side of said flange, said portion having a series of perforations therein registering with the perforations in said flange, a lacing threaded through said respective registering perforations and securing the upper to the sole, and a line of stitching extending through the margin of said sole outwardly of but close to the base of said flange, said stitching reinforcing the integral connection between said flange and the body of the sole.

7. A shoe comprising a sole having an upstanding flange formed integrally therewith and consisting of the flap of a marginal channel cut in the upper face of the sole and extending outwardly toward the sole edge, said flange having a series of perforations extending therealong, an upper cut to size without surplus marginal allowance and having its lower margin lying against the inner side of said flange, said margin having a series of perforations registering with the perforations in said flange, a lacing extending through the respective registering perforations and securing the upper to said sole, a second sole beneath the first sole, and a line of stitching extending through the margins of said soles and securing the soles together, said line of stitching being outwardly of but closely adjacent to said upstanding flange to reinforce the integral connection between said flange and said first sole.

8. A shoe comprising a tread sole having an

upstanding flange formed integral therewith and extending around its forepart and into its shank portion at the upper side of the sole, said flange consisting of the lip of a marginal channel cut in the upper face of the sole and extending outwardly toward the sole edge and said sole having its heel and shank portions divided edgewise into an upper layer and a lower layer each integrally connected at its forward extremity with the forepart of the sole and the heel portion of said upper layer having a marginal U-shaped slit extending from its upper to its lower side and dividing said layer into a central tab and a marginal U-shaped rand each integral with the forward portion of said layer, an upper comprising a vamp and a quarter, said vamp having its lower margin secured to the inner side of said flange and said quarter having its lower margin intumed between said rand and said tab and secured in overlapped position upon the lower side of said tab, a heel lift positioned between said overlapped upper margin and said lower sole layer and secured to said tab, and a line of stitching extending entirely around the margin of said sole, said stitching securing together said rand, said heel lift and said lower sole layer and being located outwardly of but adjacent to the base of said flange in the shank and forepart of the sole to reinforce the integral connection between the flange and the body of the sole.

9. An open shank sandal comprising a tread sole having an upstanding flange formed integral therewith and extending around its forepart at the upper side of the sole, said flange

consisting of the lip of a marginal channel cut in the upper face of the sole and extending outwardly toward the sole edge and said sole having its heel and shank portions divided edgewise into an upper layer and a lower layer each integrally connected at its forward extremity with the forepart of the sole and the heel portion of said upper layer having a U-shaped slit extending from its upper to its lower side and dividing said layer into a central tab and a marginal U-shaped rand each integral with the forward portion of said layer, an upper comprising separate forward and rear portions, said forward portion having its lower margin secured to the inner side of said flange and said rear portion having its lower margin intumed between said rand and said tab and secured in overlapped position upon the lower side of said tab, a shank stiffener interposed between said upper and lower layers and extending substantially throughout the length of the shank portion of the sole, a spring heel interposed between the overlapped upper margin and said lower sole layer and secured to said tab, and a line of stitching extending entirely around the margin of said sole, said stitching securing together the rand, the spring heel and the lower layer of the sole in the heel portion of the shoe and securing the upper sole layer to the lower sole layer in the shank portion of the sole and being located outwardly of but adjacent to the outer side of said flange in the forepart of the sole and reinforcing the integral connection between said flange and the body portion of the sole.

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