Oct. 23, 1934. A. A. PAGE 1,977,694

FOOTWEAR

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Fig. 1.

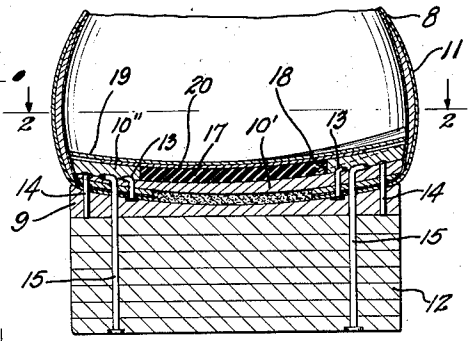


Fig. 2.

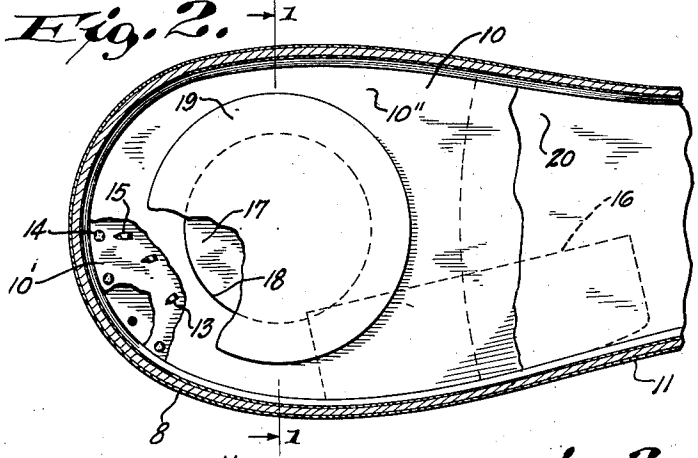


Fig. 5.

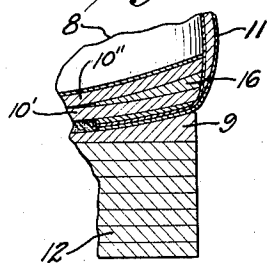


Fig. 3.

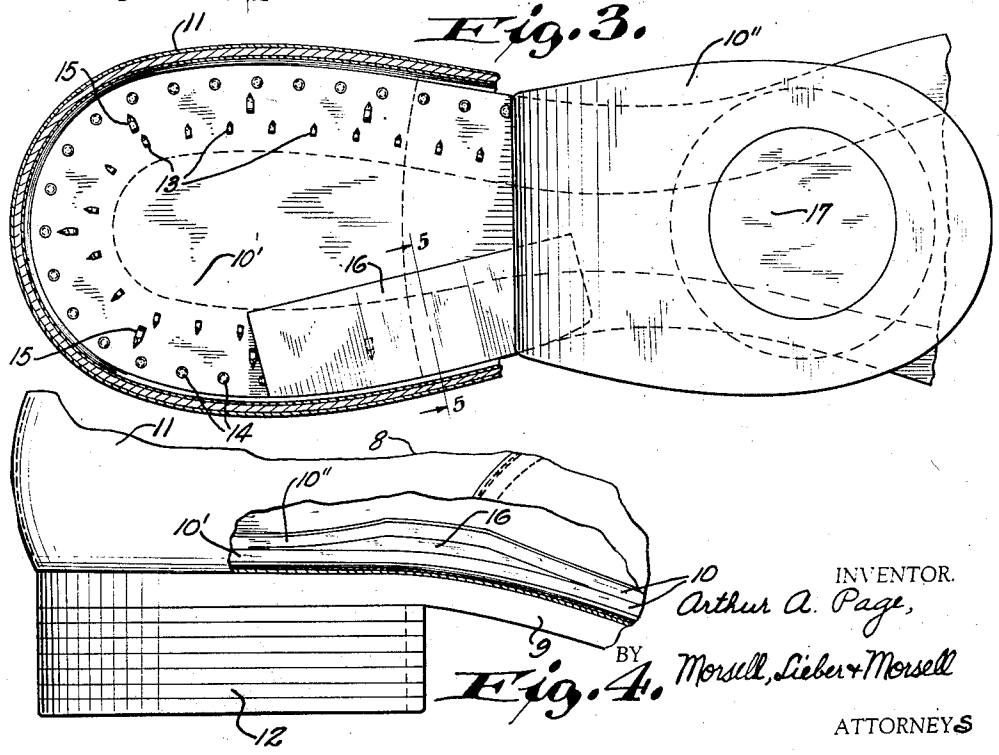


Fig. 4.

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FOOTWEAR

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1 Claim. (Cl. 36—37)

This invention relates to improvements in footwear, and more particularly to footwear embodying a double insole construction, which, in its application to the heel portion of a shoe, provides for manufacturing advantages and advantages in the structure of the finished product.

Heretofore, in the construction of footwear, considerable difficulty has been had in satisfactorily protecting the heel seat against protruding nail ends which pass into the heel seat from the securement of heel, rear sole and rear upper portions of the footwear. If, as in ordinary practice, the heel seat is merely covered by the usual thin insole covering layer, then the protuberances occasioned by the heel seat nails will be felt therethrough by the wearer and the shoe is uncomfortable. On the other hand, if the heel seat is padded, this causes the inner heel portion of the shoe to be elevated above the insole, which is unsatisfactory.

It is, therefore, one of the objects of the present invention to provide a footwear construction wherein the heel seat is protected against protruding nails, and the above objections are overcome.

A further object of the invention is to provide an inner sole arrangement for footwear which permits the practical incorporation therein of a resilient heel cushion, which cushion is neatly accommodated by the arrangement and is held in proper position against distortion or dislodgement for heel cushioning purposes.

It has been found by specialists in foot ailments and by scientific shoe manufacturers that a shoe, for the majority of wearers, should have the inner side portion of its heel built up slightly to throw the weight of the foot more outwardly than ordinarily, and to that end those dealing with corrective shoes have incorporated make-shift wedges in the inner heel portions of shoes. In the present invention, due to the double inner sole arrangement, wedges may be inserted between desired heel portions of the inner sole layers very conveniently during manufacturing operations, whereby the finished shoe has the desired corrective features, but said features are hidden and do not impair the appearance, neatness and comfort of the shoe.

A further object of the invention is to provide a footwear construction which is inexpensive and does not add materially to the cost of a shoe, but enhances its comfort and value to the wearer.

A further object of the invention is to provide a footwear construction which is strong and durable and which is well adapted for the purposes set forth.

With the above and other objects in view, the invention consists of the improved footwear construction, and its parts and combinations as set forth in the claim, and all equivalents thereof.

In the accompanying drawing in which the same reference characters indicate the same parts in all of the views:

Fig. 1 is a transverse vertical sectional view through the heel portion of a shoe embodying the invention indicated by lines 1—1 in Fig. 2;

Fig. 2 is a horizontal longitudinal sectional view indicated on line 2—2 of Fig. 1 with parts broken away to show details of construction;

Fig. 3 is a view similar to Fig. 2 only showing the outer layer of the double inner sole turned back to show a wedge and heel seat portions;

Fig. 4 is a side view of a rear portion of a shoe in which the invention is incorporated, with a portion of the shoe upper broken out to show the double inner sole and interposed wedge; and

Fig. 5 is a fragmentary detail sectional view taken on line 5—5 of Fig. 3.

Referring now more particularly to the drawing, it will appear that the numeral 8 designates the shoe generally, said shoe having the usual outer sole 9, an inner sole 10, and an upper 11.

In the manufacture of shoes, the upper 8 is shaped about a last, and then the inner sole 10, the outer sole 9, and the heel 12 are attached thereto. During these operations various nails have their end portions protruded through the heel portion of the inner sole, and the protruding ends of said nails are bent over and flattened down by a metallic heel nail clinching plate which is interposed between the heel portion of the last and the heel portion of the inner sole. The nails so flattened are lasting tacks 13, fiber heel seat nails 14 and long heel nails 15.

In the manufacture of a shoe embodying the present invention, the inner sole 10 is bi-layered, comprising superimposed inner and outer layers 10′ and 10″ respectively. Initially the two inner sole layers 10′ and 10″ are secured together about two-thirds of the distance from the front rearwardly, leaving substantial rear portions of the same unsecured. Prior to the operations on the shoe last a metal heel nail clinching plate is inserted between the heel portions of the inner sole layers, and then, when the last is in position and the outer sole 9 and heel 12 are attached, the various nails 13, 14 and 15 are only projected through the heel portion of the inner layer of the inner sole and are flattened and bent over by the

clinching plate. When the shoe is subsequently removed from the last the unsecured portion of the top layer 10'' of the inner sole may be bent forwardly, as in Fig. 3 and the heel nail clinching plate is then removed.

At this point, if desired, a heel build-up wedge 16 may be inserted and said wedge is secured in a desired position to the top surface of the lower inner sole layer 10' so that when the layer 10'' is turned back in position the wedge is interposed between portions of the layers 10' and 10'' and elevates desired portions of the top layer 10''. Said wedge is preferably formed of leather or a like material and is of any suitable size, thickness and proportions. The wedge may be secured in position by any suitable adhesive or securing means. After removal of the heel nail clinching plate and the insertion of the build-up wedge 16, the top layer 10'' of the inner sole is turned down into horizontal position and the unsecured portion of said layer is then cemented or otherwise secured in superimposed position on the lower layer 10'.

Another feature of the invention is the incorporation in the heel portion of the bi-layered inner sole, of a resilient heel cushion 17. To accommodate said cushion the medial heel portion of the inner sole top layer 10'' is formed with an opening 18 in which said cushion lodges. The bottom of the cushion rests directly against the lower layer 10' and is thereby supported and is held against displacement and distortion. The top of the cushion may carry a leather cover 19 and the entire inner sole construction is covered by the usual leather covering layer 20.

It will be seen from the foregoing that the bi-layered arrangement of the inner sole lends material manufacturing advantages to the shoe in that the build-up wedge is readily incorporated in the shoe in a "finished" manner and to avoid the objection of being make shift and also, the interposition and removal of the heel nail clinching plate is facilitated and is in keeping with the other operations. So far as the completed shoe is concerned, it will be evident that the foot of the wearer is protected against the discomforture of protruding heel seat nails, and a practical nailless heel seat results inasmuch as the top inner sole layer 10'' amply covers and protects any heel seat nail protuberances. The bi-layered inner sole arrangement is also advantageous and permits the incorporation of the resilient heel cushion. Furthermore, the improved footwear construction is both simple and novel, and is well adapted for the purposes set forth.

What is claimed as the invention is:

In a shoe construction, a shoe upper portion, a bi-layered inner sole to which the shoe upper portion is attached, both layers of said inner sole being of substantial thickness, an outer sole carried by the inner sole, a heel, nails securing the heel to the inner sole, said nails projecting through the lower layer of the inner sole and terminating adjacent its top surface and said projecting portions of the nails being covered and guarded by the upper layer of said inner sole, a heel build-up wedge interposed between rear side portions of the layers of said inner sole, the upper layer of said inner sole having an opening extending through its rear portion, and a resilient heel cushion filling said opening and supported against the lower layer of the inner sole.

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