Oct. 23, 1934. A. A. PAGE 1,977,693

FOOTWEAR

Filed April 25, 1932

Fig. 1.

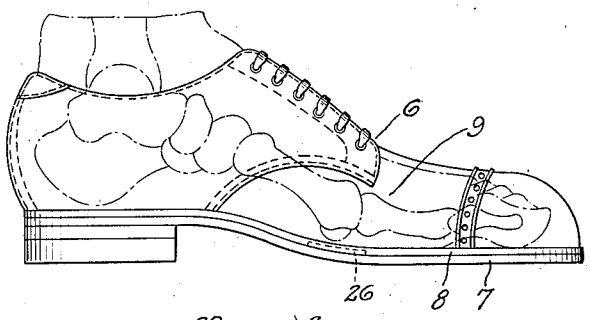


Fig. 2.

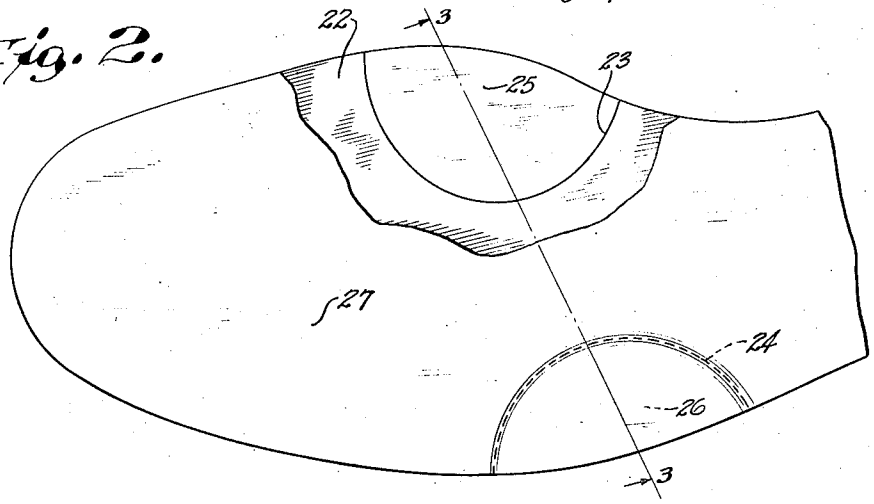


Fig. 3.

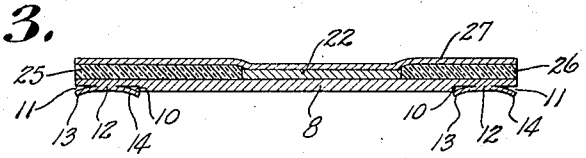
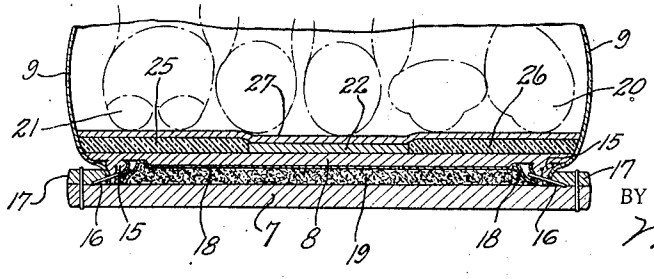


Fig. 4.



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Patented Oct. 23, 1934

1,977,693

UNITED STATES PATENT OFFICE

1,977,693

FOOTWEAR

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Application April 25, 1932, Serial No. 607,259

2 Claims. (Cl. 36—17)

This invention relates in general to improvements in footwear, and more particularly to footwear embodying means for cushioning portions of the foot during use.

Whenever the weight of the body is placed upon the foot, three points have to withstand the load. One of these points is below the heel, one on the outside below the junction of the fifth metatarsal bone and its corresponding phalangeal bone, and the other under the junction of the first metatarsal bone and its corresponding phalangeal bone. At the latter point adults have developed a depending bony growth to which the name sesamoid has been applied. With the ordinary type of shoe it is quite common to have painful callouses develop on the foot below the sesamoid bones and also below the inner end of the fifth metatarsal. In co-pending application Serial No. 567,898, filed October 9th, 1931, there is disclosed means for cushioning the sesamoid and fifth metatarsal, said means consisting of cushioning material inserted in recesses between the inner sole and the outer sole. The arrangement disclosed in this application is not as effective as it might be, in view of the fact that when the shoe is manufactured under the "Goodyear welt" method, the cushioning material cannot be extended laterally toward the side of the foot any farther than the dependeng lip of the insole which is used to join the welt, insole and upper together. Inasmuch as this lip is necessarily spaced inwardly a substantial distance from the marginal edges of the inner sole, it is with this arrangement impossible to cushion laterally to the side of the upper.

It is, therefore, one of the objects of this invention to provide an improved means for cushioning the sesamoid and fifth metatarsal bones, in which the cushioning material is so arranged that it may extend to the marginal edge of the inner sole and adjacent the sides of the upper.

A more specific object of the invention is to provide footwear in which an auxiliary inner sole is superimposed upon the usual inner sole, and in which said auxiliary inner sole is provided with recesses extending to the side edges thereof for the reception of cushioning material.

A further object of the invention is to provide footwear embodying means which is effective in preventing the formation of callouses or other growths.

A further object of the invention is to provide footwear embodying cushioning means which is simple and inexpensive in construction, and well adapted for the purpose described.

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

In the accompanying drawing illustrating one complete embodiment of the preferred form of the invention, in which the same reference numerals indicate the same parts in all of the views:

Fig. 1 is a side elevational view of a shoe, the structure of the heel and foot being indicated by dot and dash lines;

Fig. 2 is an enlarged plan view of the insole of the shoe, parts being broken away;

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2; and

Fig. 4 is a similar sectional view showing the complete sole structure and portions of the upper and illustrating in dot and dash lines portions of the human foot.

Referring to the drawing, the numeral 6 designates the shoe generally, said shoe having the usual outer sole 7 and inner sole 8, and an upper 9.

In the manufacture of shoes, under what is generally known as the "Goodyear welt" method, the inner sole is usually formed on its lower side and around the periphery thereof with slits 10 and 11 extending parallel to one another and terminating short of meeting, as at 12. The marginal portions of the sole formed by said slits and indicated by the numerals 13 and 14 in Fig. 3, are forced downwardly and pressed together to form a depending marginal lip 15, as shown in Fig. 4. This lip as illustrated is spaced somewhat inwardly from the marginal edge of the insole. In present day "Goodyear welt" shoe constructions, stitching 16 extends through the welt 17, through the lower edge of the uppers 9, through the lip 15, and sometimes also through a piece of canvas or similar material 18 which may be positioned below the insole, if desired. Thus, this lip is essential in securing the parts together. Generally, a filler material 19 is positioned between the canvas 18 and the outer sole.

Due to this lip above described, with prior cushioning constructions wherein the cushioning material was inserted in recesses in the lower side of the insole, the cushioning material could not be positioned any closer to the marginal edge of the insole than the inner side of the lip 15. In view of the fact that the fifth metatarsal bone indicated by the numeral 20 in Fig. 4, and the outer sesamoid growth indicated by the numeral 21, oftentimes are positioned over the lip 15, proper cushioning of these points was not possible. Furthermore, with the "Goodyear welt" construction there is a tendency for the marginal edge of the

insole to curve upwardly and thus the first and fifth metatarsal bones are likely to be elevated by the hard leather of the inner sole. With the present invention, however, wherein cushioning material can be extended to the extreme marginal edge and wherein the auxiliary inner sole is utilized, there will be less tendency for the inner sole to curl up at the edges and even if it does to a certain extent, the cushioning material will relieve the first and fifth metatarsal bones.

With the present construction, the usual inner sole is preferably made of slightly less thickness, and an auxiliary inner sole 22 is superimposed thereon and secured in position by means of an adhesive or by stitching or in any other suitable way. This auxiliary inner sole is formed with recesses 23 and 24 which extend inwardly from opposite side edge portions. Within these recesses, cushioning material, such as rubber, and indicated by the numerals 25 and 26, is inserted, it being noted that these sections of cushioning material extend to the extreme marginal edge of the inner sole. A relatively thin section of lining material or the like 27 is preferably secured by an adhesive or by stitching over the auxiliary insole and over the cushioning material.

As a result of this novel arrangement, it is readily apparent that the cushioning material extends laterally beyond the lip to the sides of the uppers to effectively cushion the fifth metatarsal bone and the outer sesamoid growth, regardless of how tight a fit there may be within the shoe.

It is to be understood that the auxiliary insole may be buffed out on its lower side instead of having the complete cutout shown. It is further to be understood that while there is a particular need for this invention in connection with shoes constructed under the "Goodyear welt" method, that the construction may also be effectively utilized in other types of shoes and it is therefore not intended to be limited to use in connection with the "Goodyear welt" type. Other changes and modifications may occur to those skilled in the art, and it is to be understood that all of such changes are contemplated as may come within the scope of the claims.

What I claim is:

1. In a Goodyear welt shoe having a main insole formed with a depending inseam ridge near its marginal edge, an auxiliary insole positioned on the upper face of said main insole and having a cut-out extending inwardly from its edge beyond said inseam ridge, and a rubber cushioning pad filling said cut-out and extending over the inseam ridge.

2. In a Goodyear welt shoe having a main insole formed with a depending inseam ridge near its marginal edge, an auxiliary insole permanently attached to the upper face of said main insole and having a substantially semi-circular cut-out extending inwardly from its edge beyond said inseam ridge, a rubber cushioning pad of slightly greater thickness than said auxiliary insole filling said cut-out and permanently attached to said main insole over the inseam ridge, and a thin lining secured to the top of said auxiliary insole and extending over said pad, the increased thickness of said pad causing said lining to bulge upwardly to a slight extent.

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