

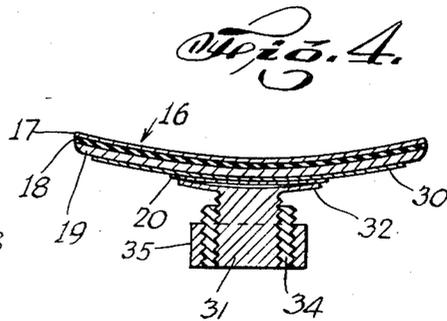
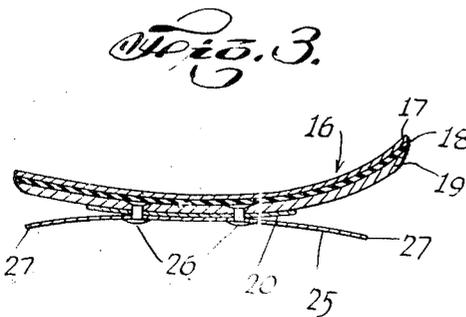
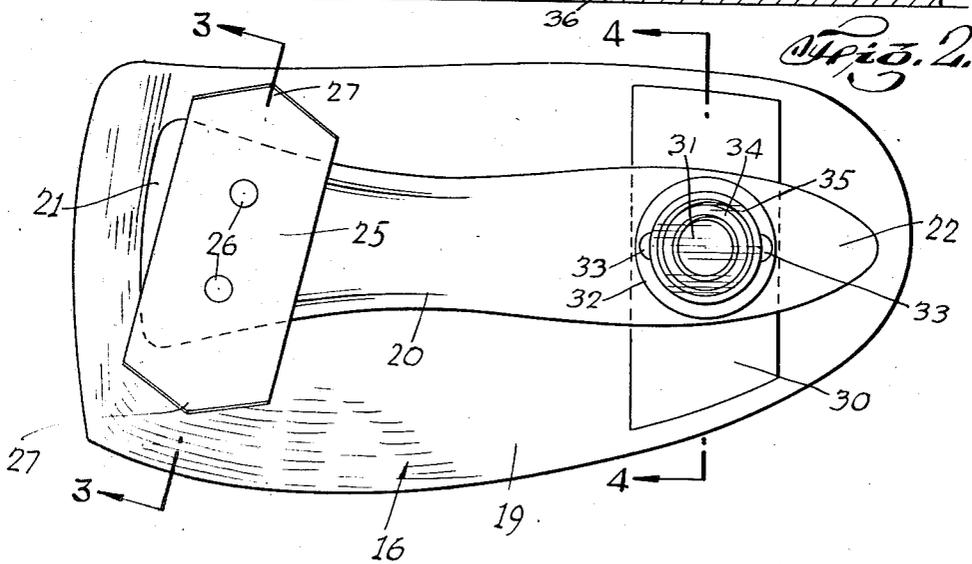
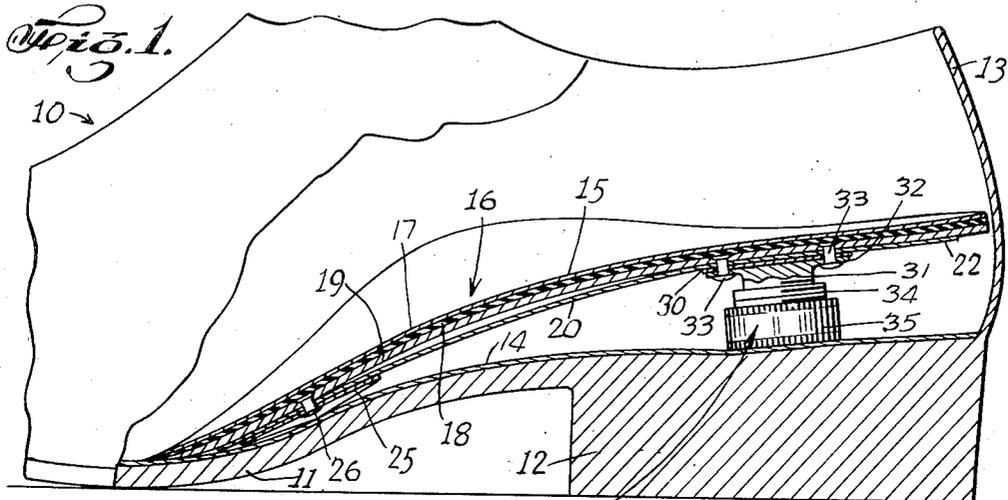
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2,184,210

INSERTABLE ADJUSTABLE HEIGHT INCREASING ELEVATOR FOR SHOES

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INSERTABLE ADJUSTABLE HEIGHT IN- CREASING ELEVATOR FOR SHOES

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3 Claims. (Cl. 36—8.5)

This invention relates to an insertable and height adjusting arch support for shoes.

The principal object of this invention is to provide an insertable arch support which is designed not only as an arch support but also to function as an elevator adapted to increase the height of the wearer.

A further object of the invention relates to the provision of an adjustable heel support for the arch which may be readily adjusted to any desired elevation to suit the individual needs of the wearer and which will permit equal adjustment of both or unequal adjustment as where the wearer has one foot shorter than the other.

A still further object of the invention relates to the provision of an anchoring spring plate at the base of the arch support which functions to anchor the arch support in the shoe so as to prevent movement thereof, which will act as an added support for the metatarsal and which will further act as a shock absorber.

With the foregoing and other objects in view, the invention resides in the novel arrangement and combination of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

A practical embodiment of the invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a part elevational view of a shoe partly in section showing the combined elevator and arch support in position.

Figure 2 is a bottom plan view of the combined elevator and arch support.

Figure 3 is a transverse sectional view taken on line 3—3, Figure 2.

Figure 4 is a transverse sectional view taken on line 4—4, Figure 2.

Referring to the drawing, 10 denotes a conventional form of shoe comprising a sole 11, heel 12, upper 13 and inner sole 14. Adapted for placement within the shoe 10 is an arch support 15 that combines both the features of an arch support and elevator as will be hereinafter described.

The combined arch support and elevator 15 is made up of a leather arch support 16 of molded form constructed of an upper leather layer 17, an intermediate rubber cushion layer 18, and a lower leather layer 19, all bonded together and molded into a shape suitable for an arch sup-

port in the manner well known. Extending lengthwise of the molded arch 16 is a metal shank 20 which is disposed beneath the same and is secured thereto in the manner to be hereinafter described. The shank 20 is formed of sheet metal shaped into a form corresponding to the molded arch 16 to provide a support therefor, the forward end of the shank 20 being enlarged as at 21, while the rear end of the shank is tapered as at 22.

Arranged transversely of the forward end of the shank 20 is a front spring steel plate 25, longitudinally bowed with the convex side thereof abutting the shank end 21. Rivets 26 permanently secure the center portion of the spring plate 25 and shank end 20 to the lower layer 19 of the leather arch support 16 (this being done prior to the bonding of the layers 17, 18 and 19). Viewing Figure 3 it will be seen that the free end portions of the spring plate 25 curve away from the lower surface of the arch support 16, each end of the plate 25 terminating into a point 27 which is adapted to dig into the inner sole of the shoe when the arch support 15 is placed therein so as to anchor the arch support against movement.

Disposed transversely between the rear end of the shank 20 and the lower layer 19 is a longitudinally bowed rear spring plate 30 arranged with its concave side seating the adjacent lower layer 19, the ends of said spring plate being substantially straight and terminating short of the sides of the lower layer 19. A threaded stem 31 provided with an integral disc like head 32 is seated on the shank 20, said disc head 32, shank end portion 22, spring plate 30, and lower layer 19 being rigidly and permanently secured together by means of the rivets 33 arranged in a fore and aft relation, as shown in Figure 1.

Fitted over the threaded stem 31 is an internally and externally threaded sleeve 34, and similarly fitted over the sleeve 34 is an internally threaded collar 35, the exterior surface of which is preferably knurled or serrated so as to facilitate manual rotation thereof. In order to prevent accidental loss of either the sleeve or collar or both, any desired form of limiting means (not shown) may be provided to prevent removal of the collar 35 off of the sleeve 34 as well as removal of the sleeve 34 off of the stem 31. The stem 31, sleeve 34 and collar 35 comprise the elevator adjusting means 36.

With the complete combined arch support and elevator 15, formed as described above the same is inserted in the shoe 10, both the sleeve 34 and

collar 35 being first relatively rotated to give the desired adjusted length, for supporting the heel portion of the arch support 16 raised above the inside heel surface of the shoe, see Figure 1. As indicated above the pointed ends 27 of the front spring plate 25 will bite into the inner sole of the shoe to thereby prevent forward movement of the combined arch support and elevator 15 therein, in the manner readily apparent, the collar 35 being centrally seated on the inside heel surface of the shoe. The bowed front spring plate 25 will function both as a support for the metatarsal as well as a shock absorber. The threaded sleeve 34 and threaded collar 35 enable a fine and accurate adjustment in height. Where it is desired to obtain not only an increase in height but also to compensate for one leg being shorter than the other, the adjustable elevator support 36 will permit a proper adjustment to accomplish this purpose.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. An insertable combined arch support and elevator for a shoe comprising a flexible non-metallic arch support having an elongated metal shank on the under surface thereof, shock absorbing

means fixed to the forward end of said shank, a plate secured to the rear end of said shank, an elevator support adjustable as to height fastened to said plate, said shock absorbing means comprising a longitudinally bowed spring having pointed ends adapted to bite into the inner sole of the shoe to thus inhibit displacement of said combined arch support and elevator when in position in the shoe.

2. The combined arch support and elevator set out in claim 1; wherein said elevator support comprises a threaded stem, a flanged disc-like head integral with the upper end of said stem, an interiorly and exteriorly threaded sleeve movably mounted on said stem, and an interiorly threaded collar movably mounted on said sleeve, movement of said sleeve or collar or both relative to said stem providing an adjustment of the length of said elevator support.

3. The combined arch support and elevator set out in claim 1; wherein said non-metallic arch comprises upper and lower leather layers and an intermediate rubber cushioning layer therebetween and bonded thereto.

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