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A. COHN

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SHOE AND THE METHOD OF MAKING SAME

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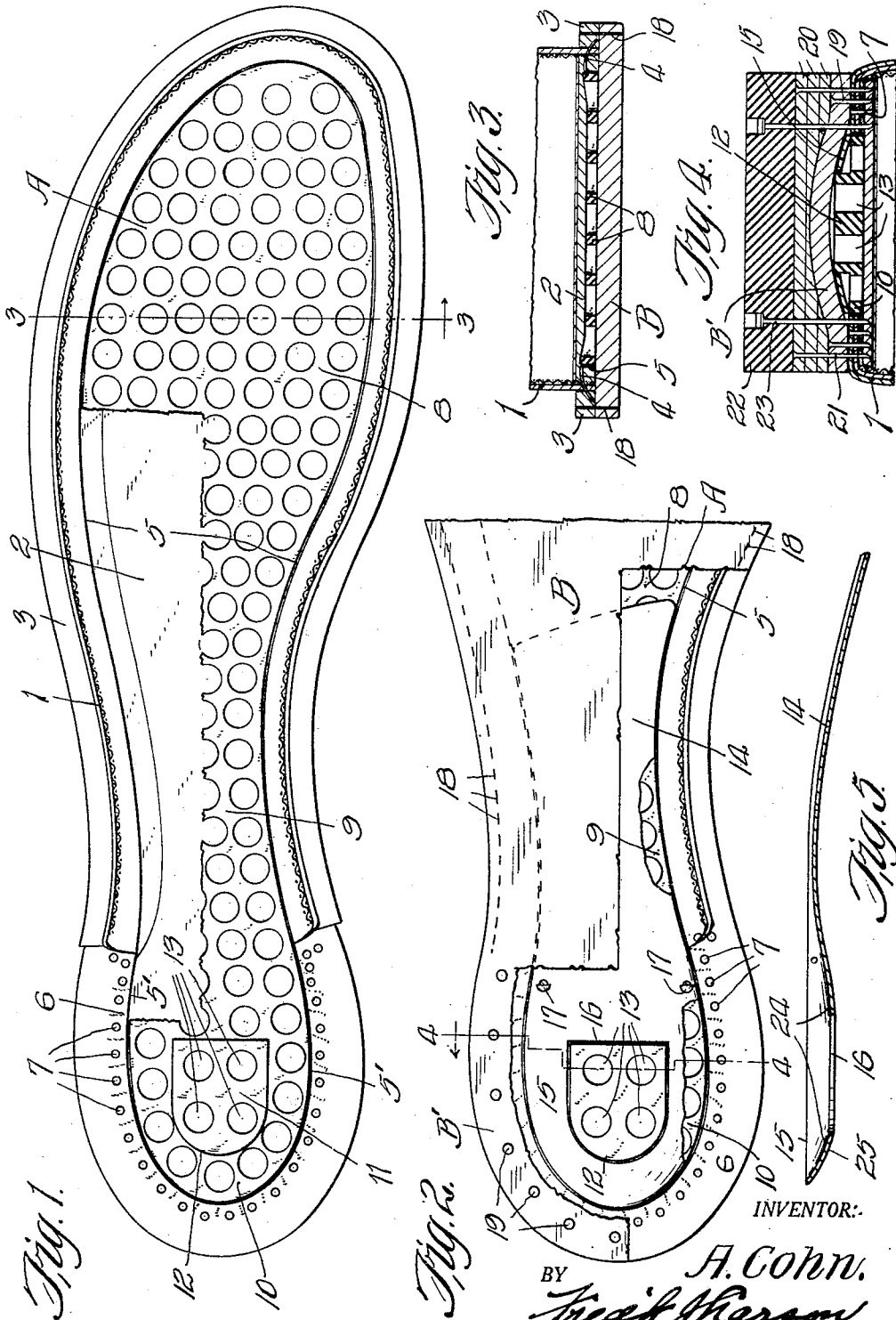


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

INVENTOR:

BY *A. Cohn.*
Frank Pearson
ATTORNEY.

UNITED STATES PATENT OFFICE

ABRAHAM COHN, OF ST. LOUIS, MISSOURI

SHOE AND THE METHOD OF MAKING SAME

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This invention relates to Goodyear welt shoes for men, women and children, and the method of manufacturing the same, and, has for its object to provide a shoe which will afford a cushion-pneumatic effect to the foot of the wearer, including the toe, ball, shank and heel portions of the foot.

An object of the invention resides in cementing a resilient rubber filler to the lower face of the insole including the toe, ball, shank and heel portions thereof.

A further object of the invention resides in applying a combined shank stiffener and heel plate to the shank and heel portions of the resilient rubber filler and then securing the outsole to the welt, and to the heel seat of the upper so that the resilient rubber filler shank stiffener and heel plate will be interposed between the insole and outsole of the shoe.

It is also an object of the invention to provide an improved method of manufacturing whereby a cushion-pneumatic arch support shoe may be made in a simple, efficient and practical production manner and at a relatively low cost.

These and other objects will be apparent from the following description and annexed drawing, in which:

Fig. 1 is a bottom plan view of a Goodyear welt shoe, showing the resilient rubber filler, minus an outsole, applied to the insole, including the toe, ball, shank and heel portions thereof.

Fig. 2 is a bottom plan view of the heel and shank portions of the shoe showing the shank stiffener and heel plate applied to the resilient rubber filler, part of the outsole being broken away.

Fig. 3 is a sectional view of the shoe taken on line 3—3 of Fig. 1 and showing the outsole in place.

Fig. 4 is a sectional view of the shoe taken on line 4—4 of Fig. 2 and showing the heel attached.

Fig. 5 is a longitudinal sectional elevation of the combined shank stiffener and heel plate.

As shown in the drawing, the shoe comprises an upper 1 including its lining to

which an insole 2 and a welt 3 are secured to the upper by means of the stitched in-seam 4, known as a Goodyear welt, which arrangement of parts provides a cavity 5 upon the insole and within the bounds of the in-seam, as will be apparent from Figs. 1 and 3. The cavity 5 extends over the shank portion of the insole to the heel portion thereof, and the heel portion of the cavity is designated 5' where it lies within the bounds of the turned over heel portion 6 of the upper which forms the heel seat of the shoe by being nailed as at 7, to the heel portion of the insole as will be apparent from Figs. 1 and 4. The foregoing describes a Goodyear welt shoe before a filler or outsole has been applied thereto.

After the shoe has been manufactured, as above described, I cement a filler A, preferably of perforated resilient rubber, although not necessarily perforated, to the lower face of the insole 2 including the toe, ball, shank and heel portions thereof. The perforated resilient rubber filler A fills the cavity 5 and the heel portion 5' thereof and the filler includes an integral sole shaped front portion 8, the arch portion 9 and the heel portion 10. The heel portion 10 of the filler is provided centrally thereof with a suitably shaped thickened portion 11 to provide a plug 12 depending from the lower face of the filler, which plug is also preferably perforated, as at 13, although not necessarily so.

After the perforated resilient rubber filler A has been cemented to the lower face of the insole 2 including its toe, ball, shank and heel portions, I apply a combined shank stiffener 14 having an integral heel plate portion 15 which is provided with a central opening 16 to the lower face of the resilient rubber filler A so as to cover the heel and shank portions of the insole 2, as will be apparent from Fig. 2. The plug portion 12 at the heel portion of the filler is receivable in the central opening 16 in the heel plate portion of the shank stiffener and after the shank stiffener and the heel plate portion have been assembled upon the filler, I secure the shank stiffener and heel plate por-

tion thereof to the filler by means of a pair of suitable nails 17 driven through the rubber filler and into the insole for temporarily holding the shank stiffener and heel portion thereof in position upon the rubber filler during further handling of the shoe, in further operations in the manufacture of the shoe.

After the shank stiffener and the heel plate have been assembled and secured upon the heel and shank portions of the rubber filler, an outsole B is laid into position upon the rubber filler and the shank stiffener and its heel portion and then the outsole is stitched to the welt, as at 18. Next, the integral heel portion B' of the outsole B is secured to the heel seat of the shoe by suitable nails, as at 19.

After the outsole and heel portion thereof has been applied and secured to a shoe, as described, a plurality of leather heel lifts 20 are applied to the heel portion of the outsole and secured in position by suitable nails designated 21.

After the heel lifts 20 have been assembled and secured in position, a rubber heel 22 can be applied to the leather lifts 20 by means of suitable nails 23, which nails pass through the heel portion B' of the outsole B, and through the heel portion of the insole 2, just passing the edge of the heel portion of the metallic arch shank, as shown in Fig. 4. A leather heel may be secured to the shoe in lieu of the rubber heel, if so desired.

As shown in Figs. 4 and 5, the heel portion of the arch shank is longitudinally and transversely concaved-convexed and designated 24 and 25, respectively, and the arch portion of the arch shank is also longitudinally and transversely concaved-convexed to the desired shape.

From the foregoing description, it will be seen that I provide a Goodyear welt shoe having a sole, shank and heel portion thereof that will give a cushion-pneumatic effect to the foot of the wearer, even with the use of a metallic shank stiffener having an integral heel plate section. The center of the heel of the wearer will be afforded greater resiliency than the remainder of the foot due to the resilient plug portion of the filler being thicker than the filler proper and being surrounded by an air chamber so as to absorb the greatest shock which is imparted to the heel of the foot of the wearer when walking and to properly cushion the heel of the foot when standing.

A shoe manufactured with the resilient rubber filler in the cavity of a Goodyear welt shoe, the use of which filler is only practical in such a make of shoe, affords a cushion-pneumatic effect to the shoe between the inner and outer soles, which is readily yieldable to all conditions and by its use, the wearer is in reality walking on air, as

well as yieldable rubber, which has the necessary resiliency to prevent the feet of the wearer from tiring under the most severe conditions, owing to the filler extending from the toe of the shoe to the heel thereof in the cavity between the insole and outsole of the Goodyear welt shoe.

There are instances wherein the use of a shank stiffener and heel portion thereof may not be desirable in the manufacture of shoes, but in every instance the filler used, is made of resilient rubber and it is interposed between the usual insole and outsole of the shoe and extends from the toe of the shoe to and including the heel portion thereof.

The many advantages of the herein described invention will readily suggest themselves to those skilled in the art to which it appertains.

It is to be understood that the particular procedure set forth, is presented for purpose of explanation and illustration and that modifications of the procedure may be made without departing from my invention, as defined in the appended claims.

What I claim is:

1. The method of manufacturing Goodyear welt shoes consisting in cementing a resilient rubber filler having a thickened central heel portion upon the lower face of the insole of the shoe and within the cavity formed by stitching the insole to the lower edge of the upper of the shoe, its lining and the welt and by turning under and tacking the lower edge portion of the heel section of the upper and its lining and counter to the heel section of the insole which forms also the heel seat for the shoe, applying a shank stiffener having an integral heel plate section provided with a central aperture upon the rubber filler with the thickened central heel portion of the rubber filler receivable in the central aperture of the heel section of the shank stiffener, tacking the shank stiffener and its heel plate section against displacement upon the resilient rubber filler, stitching an outsole to the welt and nailing the heel portion of the outsole to the heel seat of the shoe with the resilient rubber filler and the shank stiffener and its heel plate section interposed between the insole and outsole of the shoe.

2. The method of manufacturing Goodyear welt shoes consisting in cementing a perforated resilient rubber filler having a thickened central heel portion upon the lower face of the insole of the shoe and within the cavity formed by stitching the insole to the lower edge of the upper of the shoe, its lining, and the welt and by turning under and tacking the lower edge portion of the heel section of the upper and its lining to the heel section of the insole which forms also the heel seat for the shoe, applying a metallic shank stiffener having an integral longi-

tudinally and transversely concaved-convexed heel plate section provided with a central aperture, upon the rubber filler with the thickened central heel portion of the perforated resilient rubber filler receivable
5 in the central aperture of the heel section of the shank stiffener, tacking the shank stiffener and its heel plate section against displacement upon the perforated resilient rubber filler, stitching an outsole to the welt
10 and nailing the heel portion of the outsole to the heel seat of the shoe with the perforated resilient rubber filler and the shank stiffener and its heel plate section interposed
15 between the insole and outsole of the shoe.

3. The method of manufacturing Good-year welt shoes beyond the stage of securing the insole and welt to the upper by stitching and by tacking the heel section of
20 the upper to the insole to form the heel seat of the shoe, consisting in cementing a resilient rubber filler having its heel portion centrally thickened to provide a plug to the lower face of the insole including the toe,
25 ball, shank and heel portions thereof, securing a metallic plate to the shank and heel sections of the rubber filler with the plug of the heel section of the rubber filler receivable in an aperture in the heel section
30 of the plate which is preferably concaved-convexed, and stitching an outsole to the welt and nailing the heel portion of the outsole to the heel seat of the shoe with the resilient rubber filler interposed between
35 the insole and outsole including the toe, ball, shank and heel sections thereof.

4. The method of manufacturing Good-year welt shoes beyond the stage of securing the insole and welt to the upper by stitching
40 and by tacking the heel section of the upper to form the heel seat of the shoe which provides in-seam and heel cavities for the shoe, consisting in cementing a perforated solid resilient rubber filler conforming to the
45 shape of the in-seam and heel seat cavities to the toe, ball, shank and heel portions of the insole, applying and securing a combined shank and heel stiffener having an opening centrally of the heel portion thereof to the lower face of the shank and heel
50 portions of the insole with the combined shank and heel stiffener confined within the bounds of the shank portion of the in-seam cavity and the heel seat cavity, applying
55 and stitching an outsole to the welt and nailing the heel portion of the outsole to the heel seat of the shoe with the upper face of the shank and heel portions of the outsole engaging the combined shank and heel
60 stiffener.

In testimony whereof, I have hereunto affixed my signature.

ABRAHAM COHN.