

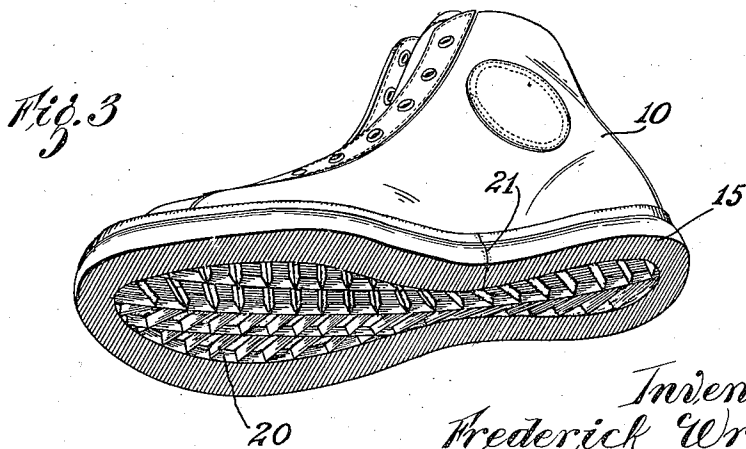
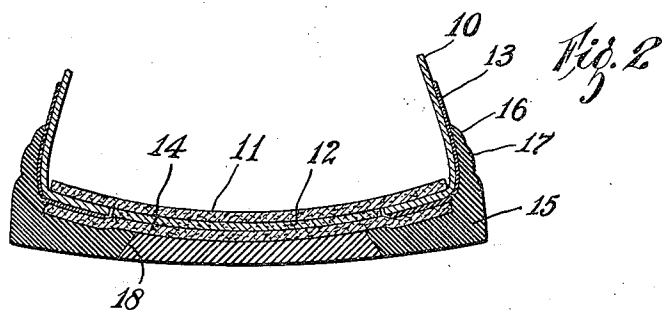
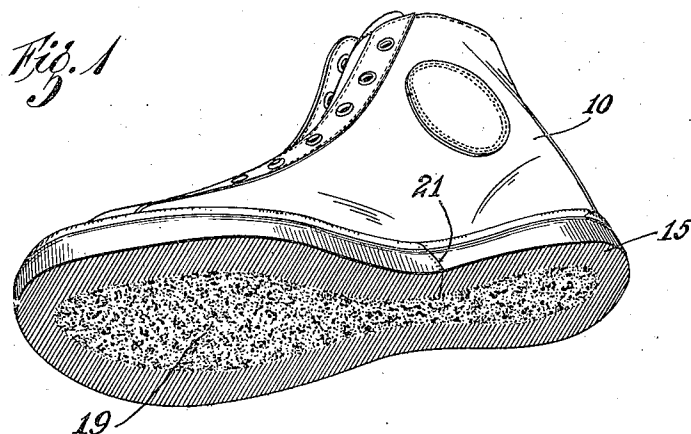
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RUBBER SOLED SHOE AND METHOD OF MAKING THE SAME

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## UNITED STATES PATENT OFFICE

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## RUBBER-SOLED SHOE AND METHOD OF MAKING THE SAME

Application filed November 26, 1927. Serial No. 235,865.

This invention relates to rubber-soled shoes and to methods of making the same and its chief objects are to provide a durable shoe of this character; to provide neatness of appearance; and to provide for economy of manufacture. A more specific object is to provide a shoe and a method of making the same wherein, without vulcanizing the sole against a molding member, the sole may be provided with an artistic or a nonslip design similar to designs such as heretofore have been impressed upon the sole during the vulcanization thereof.

Of the accompanying drawings:

Fig. 1 is a perspective view of a tennis shoe embodying and made in accordance with my invention in its preferred form as to shoes having soles comprising comminuted cork.

Fig. 2 is a transverse section of the lower portion of the shoe, showing the sole construction.

Fig. 3 is a perspective view of a tennis shoe corresponding to that shown in Fig. 1, except that the sole is formed in part of its area with a pronounced non-slip design.

In the manufacture of the shoe in accordance with my invention the upper 10, insole 11, middle-sole 12, a rubber foxing or finishing strip 13 and a smooth-sole 14 are assembled upon a last, and I then apply to the built-up structure a strip of rubber 15, preferably pre-formed by means of an extruding machine, which has such cross sectional form as to serve both as a foxing strip and as a sole-margin strip, extending from the foxing area onto the peripheral margin of the lower face of the smooth-sole 14.

The strip 15 may be formed with ornamental ribs 16, 17 on its outer side face and the inner edge of its sole-margin portion is preferably beveled as shown at 18, so that when the strip has been placed about the shoe structure and adhesively joined thereto it defines a cavity which tapers inward toward the smooth-sole 14, for convenience in introducing a filling material or a filling piece of rubber composition into the cavity and thoroughly compacting it therein and consolidating it with the rest of the structure.

In the production of the cork-sole shoe

shown in Fig. 1, this cavity is filled with a cork and rubber composition 19, which preferably is pre-formed by cutting it from a calendered sheet of the composition, the sheet permissibly having a surface design of grained effect, or of any other suitable character, impressed upon the face thereof which is to constitute the tread face of the sole.

In the shoe of Fig. 3 the tapered space defined by the combination foxing and sole-margin strip 15 is filled with a pre-formed blank 20 of any suitable rubber composition provided by cutting it from a calendered sheet impressed with a non-slip design as shown.

In both cases the filling piece, 19 or 20, is adhesively secured to the smooth-sole 14 and to the cavity-defining beveled margins of the strip 15, and is thoroughly consolidated with the structure by suitable pressure before vulcanization of the shoe. The shoe is then vulcanized, in this preferred procedure, without form-altering mold pressure upon the sole, as by the open-heat method of vulcanization.

Preferably the strip 15 is applied as a single length adapted to extend entirely about the sole-margin of the shoe, its ends being joined in a seam or splice as shown at 21.

The several advantages set out in the above statement of objects are thus provided, and as various modifications are possible without sacrifice of all of these advantages, I do not wholly limit my claims to the specific construction or the specific procedure herein described.

I claim:

1. The method of making a shoe which comprises providing a shoe structure for the reception of outer-sole and foxing elements, forming a combination foxing and outer sole-margin strip having integral portions adapted to be fitted respectively against the foxing area and the margin of the lower face of the sole portion of the said structure, applying the said strip to the said structure, and thereafter applying a central outer-sole member to said structure.

2. The method of making a shoe which comprises applying to a shoe-structure a filler element constituting the middle portion of the outer sole and a combination sole-margin

and foxing strip of rubber composition having a full-thickness outer-sole portion and vulcanizing the resulting structure.

3. The method of making a shoe which  
5 comprises applying to a shoe-structure a filler element constituting the middle portion of the outer sole and a combination sole-margin and foxing strip of rubber composition and vulcanizing the resulting structure, the filler  
10 element and the combination strip being pre-formed before their application to the structure and vulcanized without form-altering mold pressure.

4. A shoe comprising a main shoe structure,  
15 a combination sole-margin and foxing strip applied thereto, and a tread element in the space surrounded by the said strip, the sole portion of the said strip and the said tread element being of substantially equal thickness  
20 and substantially flush with each other at their tread faces and fitted together in edge-to-edge relation.

In witness whereof I have hereunto set my hand this 23rd day of November, 1927.

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FREDERICK WRAY.

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