July 26, 1927. 1,636,905

A. E. FALOR ET AL

SHOE

Filed June 14, 1924

FIG-1-

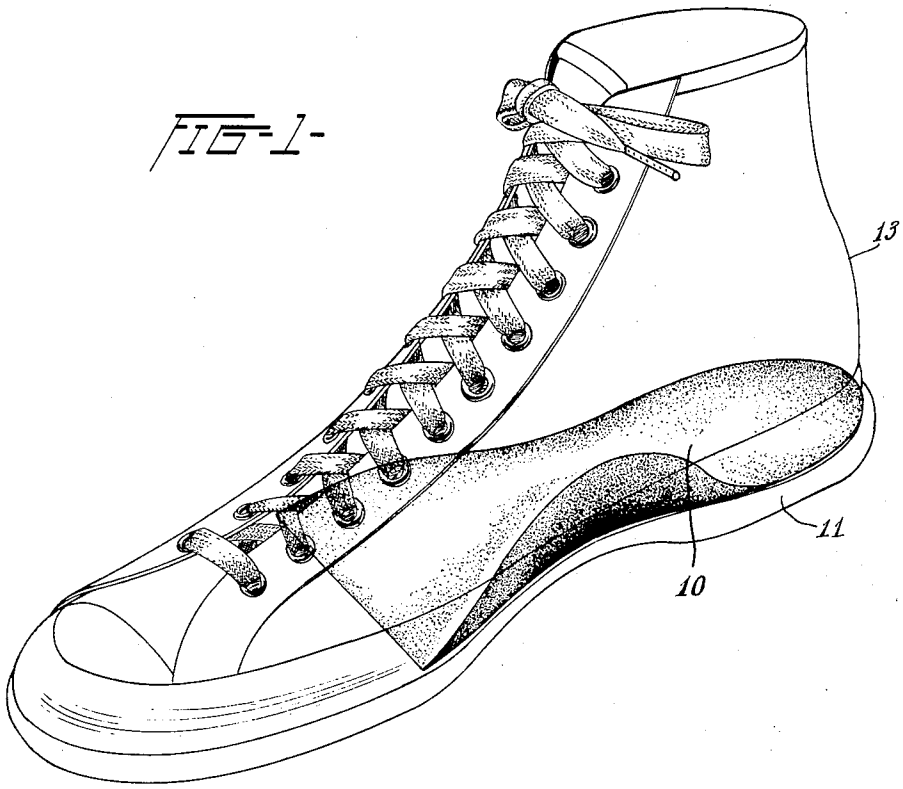
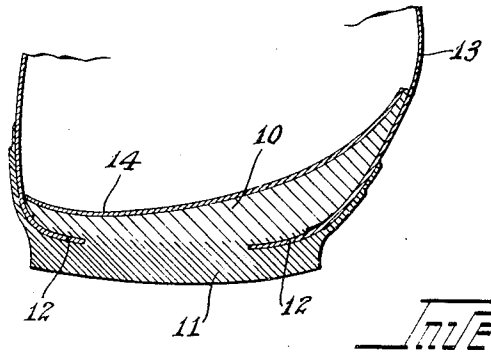


FIG-2-



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UNITED STATES PATENT OFFICE.

ABRAM E. FALOR AND FREDERICK H. MARTIN, OF AKRON, OHIO, ASSIGNORS TO THE B. F. GOODRICH COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

SHOE.

Application filed June 14, 1924. Serial No. 719,971.

This invention relates to shoes of light construction and more particularly heelless, soft-soled, rubber and fabric shoes such as are commonly used for tennis and other sports. Many persons find that when their feet are accustomed to ordinary leather shoes the substitution of sport shoes of the character described results in tiring of the feet and in many instances pain and soreness of the feet follow the change from the one to the other type of shoe.

The principal object of our invention is to provide an improved sport shoe adapted to lessen the undesirable effects described and more particularly to provide a comfortable and durable sport shoe of the heelless, rubber-and-cloth type.

We have discovered that the discomfort of tennis shoes as heretofore made results chiefly from the lack of support for the arch of the foot, rather than from the absence of the heel or the general looseness and yielding character of the shoe, and that such discomfort may be largely avoided, while dispensing with the heel and retaining the advantages of the light, easy fitting, fabric construction, by providing a suitable arch support and without necessarily modifying the construction in any other way.

Our preferred type of arch support is shown in the accompanying drawings, of which:

Fig. 1 is a perspective, phantom view of a tennis shoe with our improved arch-support incorporated therein.

Fig. 2 is a cross-section of the shoe at the instep portion, showing details of construction.

Referring to the drawings, the arch support 10, locally thickened and thus formed on its upper face to fit the sole of the wearer's foot in a manner to support the arch thereof, is thinned out over the heel portion of the sole 11 and forward past the instep, preferably overlying the sole substantially throughout the latter's width and being secured to the sole throughout their contacting area, as by cementing or vulcanization, the arch support thus being adapted to be held in arch-supporting position by its attachment to the sole rather than by its engagement with the upper, so that the upper is not unduly strained or distorted by movement or deformation of the arch support. The latter may be formed of any suitable material, a relatively stiff rubber compound being desirable in some cases, where the support is required to sustain a considerable force, while a soft, sponge-rubber compound may provide sufficient support in other cases and at the same time permit freer movement of the foot.

Details of the structure are shown in Fig. 2, where the arch support 10, which may be of the same or a different compound from that of the sole 11, is integrally united with the latter by vulcanization, the margins 12, 12, of the upper 13 extending between the two and being vulcanized thereto. The arch support may be provided with a surface layer or insole 14 of fabric.

The provision of the arch support secured to the sole of the shoe, and primarily supported and held in position by its connection with the sole rather than by its engagement with the upper, results in a structure having the advantages above set out, and as the details of construction may be modified without departing from this inventive idea, we do not wholly limit our claims to the exact details of construction shown.

We claim:

1. A soft-soled, rubber-and-fabric shoe having a locally thickened arch-supporting member within the confines of the upper of the shoe and integrally coalesced with the sole of the shoe.

2. A shoe comprising a rubber sole, a cloth upper attached to the sole, and an arch-supporting member integrally secured to said sole and to the upper at its bottom and side wall portions respectively, said member being materially thickened at the shank only of the sole.

3. A shoe comprising a soft, flexible sole, an upper attached to the sole, and a resilient

arch-supporting member having its side wall secured to and shaped by the upper of the shoe.

4. A shoe comprising a rubber sole, an upper attached thereto, a rubber arch-supporting member materially thickened at the instep and integrally secured to and shaped by, as to its bottom and side wall portions, the sole and the upper, respectively, by the concurrent vulcanization of the arch-supporting member and the rubber portions of the shoe.

In witness whereof we have hereunto set our hands this 10th day of June, 1924.

ABRAM E. FALOR.
FREDERICK H. MARTIN.