

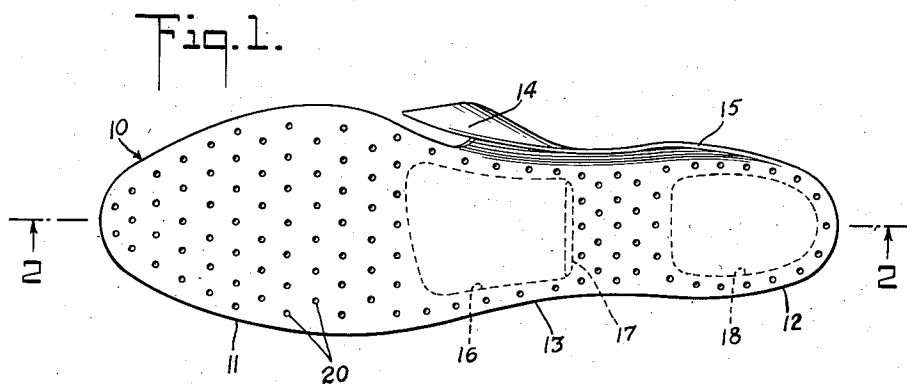
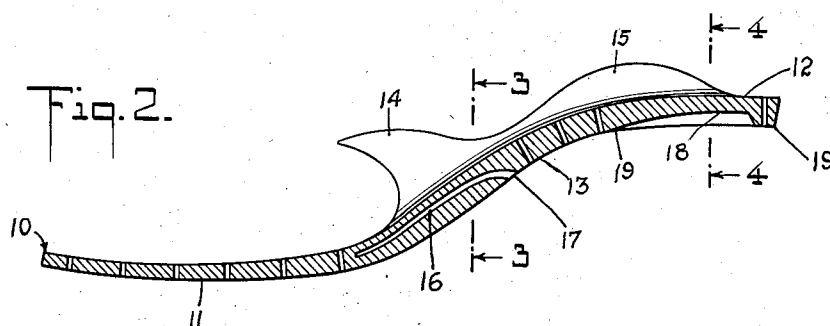
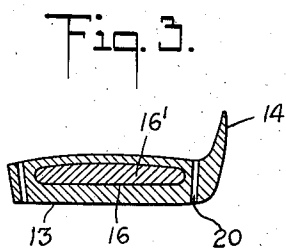
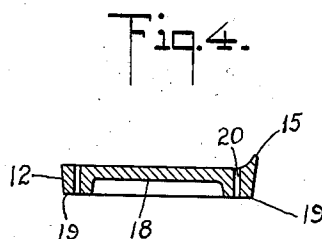
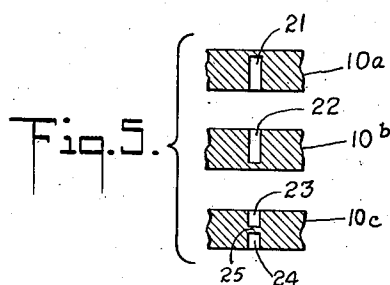
Jan. 8, 1952

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2,581,864

ARCH SUPPORT

Filed Nov. 28, 1950



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2,581,864

ARCH SUPPORT

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Application November 28, 1950, Serial No. 197,918

4 Claims. (Cl. 36—3)

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This invention relates to what are generally classified as arch supports. More particularly, the invention deals with devices of this kind adapted to be worn inside footwear for the support of the foot, as well as in the provision of what is known as a bunion shield. Still more particularly, the invention deals with devices of the character described, wherein the arch or metatarsal portion of the device includes a pocket, into which a suitable padding is adapted to be inserted to provide the desired metatarsal structure to suit the user of the device.

The novel features of the invention will be best understood from the following description, when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed and, in which, the separate parts are designated by suitable reference characters in each of the views, in which:

Fig. 1 is a plan view of an arch support made according to my invention.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Fig. 3 is a section on the line 3—3 of Fig. 2, omitting the background showing and illustrating a pad, not shown in Fig. 2.

Fig. 4 is a view similar to Fig. 3 taken on the line 4—4 of Fig. 2; and

Fig. 5 are detailed sectional views showing modified forms of perforating, the sectional views being on an enlarged scale.

In the drawing, I have shown at 10 an arch supporting device, comprising a sole portion 11, a heel portion 12, a curved arch or metatarsal portion 13 and a side bunion shield 14 having an extension 15 at one side of the heel portion.

The arch or metatarsal portion 13 has a relatively large pocket 16 formed therein which extends to the rear portion of the sole 11. The pocket 16 has an opening, as at 17, at the rear portion thereof and the pocket occupies a greater portion of the width of the metatarsal portion of the device.

The heel portion 12 is recessed on its lower surface, as at 18, which leaves a boundary wall 19 extending around the sides and rear part of the heel portion, the recess 18 tapering into the metatarsal portion, as indicated at 19 in Fig. 2. This recessed heel provides what I term a "hammock cushion seat" for the heel which allows the central portion of the heel of the foot to extend downwardly, while maintaining the sides of the heel firmly supported by the wall 19.

The entire device is provided with perforations 20 spaced on all parts thereof, except the pocket portion 16 and recess part 18 of the heel. This

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construction provides ventilation and, further, increases the flexible characteristics of the material.

In Fig. 5 of the drawing, I have shown at 10a, 10b, and 10c three modified forms of wall structure, which may be incorporated in the arch support. These wall structures differ from that shown in Figs. 1 to 4, inclusive, in that the apertures, such as the apertures 20, instead of extending completely through the device, extend only partially through the wall structure. The wall structure 10a has apertures 21 which open through the bottom thereof. The wall structure 10b has apertures 22 opening through the top thereof; whereas, the wall structure 10c has apertures 23 opening through the top wall and apertures 24 opening through the bottom wall, these apertures being divided by a partition 25.

In Fig. 2 of the drawing, the pocket 16 is shown blank or, in other words, without a pad therein; whereas, in Fig. 3, a pad 16' is shown arranged in the pocket 16, the pad being of a predetermined thickness to suit the user of the arch support. In this connection, it will be understood that pads of varying thicknesses can be employed to control the build-up of the metatarsal portion of the device.

My improved arch support is preferably moulded from suitable mouldable materials, preferably a plastic material, which has the characteristic of maintaining a moulded shape, but of the consistency of rubber which facilitates flexure of the device in the use thereof and to the end of opening the pocket 16 for insertion of the pad 16'. "Vinylite" resins are suitable for this purpose and it has been found that plastic materials of this type and kind are non-toxic and completely sanitary, keeping in mind that the same may be washed or cleaned from time to time. By reason of the flexibility of the material, it will be apparent that the support will adapt itself to the contour of the foot and provide the comfort as well as firm support of the foot in the shoe.

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

1. An arch support of the character described, comprising a unitary plastic body comprising a sole, heel and intermediate metatarsal portions, the metatarsal portion of the support having a pocket disposed between upper and lower surfaces of said unitary body, said pocket having an opening through one wall of the support for insertion of a pad in said pocket, and the support

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having, throughout the major portion of the area thereof, perforations opening through at least one surface thereof.

2. An arch support of the character described, comprising a unitary plastic body comprising a sole, heel and intermediate metatarsal portions, the metatarsal portion of the support having a pocket disposed between upper and lower surfaces of said unitary body, said pocket having an opening through one wall of the support for insertion of a pad in said pocket, the support having, throughout the major portion of the area thereof, perforations opening through at least one surface thereof, and the heel portion of the support having a recess on the lower surface thereof bounded by side and rear walls.

3. An arch support of the character described, comprising a unitary plastic body comprising a sole, heel and intermediate metatarsal portions, the metatarsal portion of the support having a pocket disposed between upper and lower surfaces of said unitary body, said pocket having an opening through one wall of the support for insertion of a pad in said pocket, the support having, throughout the major portion of the area thereof, perforations opening through at least one surface thereof, the heel portion of the support having a recess on the lower surface thereof bounded by side and rear walls, and one side of the support having a bunion shield.

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4. A foot supporting device of the character described, comprising a unitary body of flexible plastic material, said body having sole and heel portions joined and vertically offset by an intermediary metatarsal portion, said metatarsal portion having a pocket arranged between upper and lower surfaces and opening through one surface of said body, the opening being disposed adjacent the heel portion, the pocket being adapted to receive a pad in providing a metatarsal support, said heel end portion being hollowed-out to provide a cushioned seat, and said body having apertures therein opening through at least one surface of said body.

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