Jan. 6, 1942. W. M. SCHOLL 2,268,777

SURGICAL PAD

Filed Aug. 5, 1938

Fig. 1

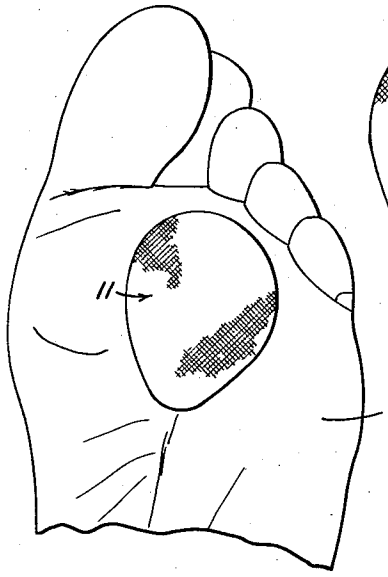


Fig. 2

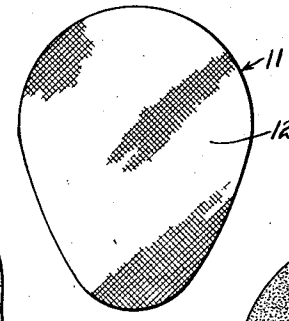


Fig. 5

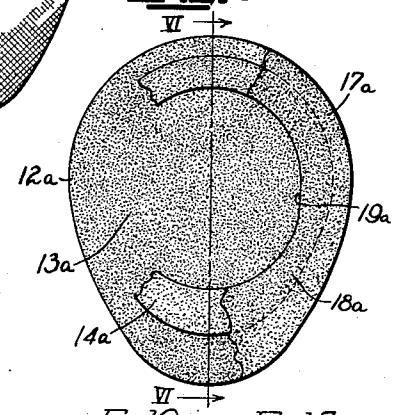


Fig. 4

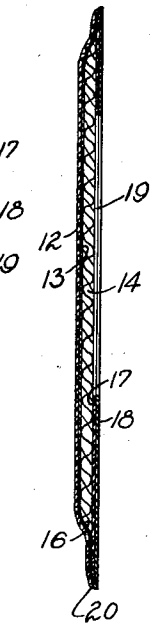


Fig. 3

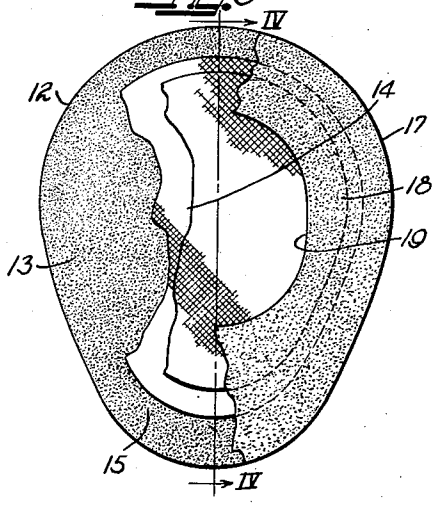


Fig. 6

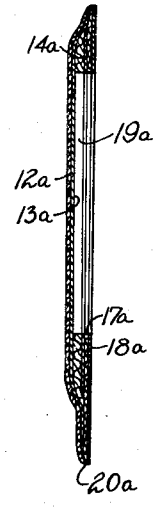
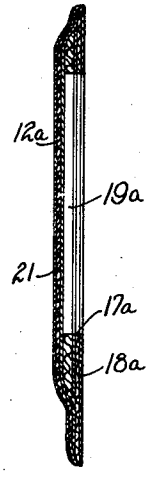


Fig. 7



Inventor

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by Charles Hill Attys.

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UNITED STATES PATENT OFFICE

2,268,777

SURGICAL PAD

William M. Scholl, Chicago, Ill.

Application August 5, 1938, Serial No. 223,156

1 Claim. (Cl. 128—153)

This invention relates to improvements in a surgical pad, and more particularly to a surgical pad of the character highly desirable for application to the human foot for relief of calli, corns and similar ailments, although the invention may have other uses and purposes as will be apparent to one skilled in the art.

The present invention is highly suitable for application to the ball of the foot, namely, the plantar surface of the foot beneath the anterior metatarsal arch. Calli on the ball of the foot are usually produced by abnormal pressure and friction against the surface of that portion of the foot commonly known as the anterior or metatarsal arch. When there is a weakness in this arch and distortion is caused by one or more of the metatarsals becoming depressed from the original arched position, the body's weight is unevenly distributed, resulting in abnormal pressure and frequently the formation of callosities. In order to effect a complete remedy, it is not only necessary to remove pressure from a callous, but it is also desirable to correct the weakened metatarsal arch.

I am aware that in the past many and various types of pads have been developed for the purpose of relieving pressure on corns, calli and the like. I am also aware that many and various devices have been developed for strengthening or supporting a weakened metatarsal arch. Insofar as I am aware, however, these devices were separate and distinct in nature and accordingly must be used separately upon the foot to accomplish each its own result.

With the foregoing in mind, it is an important object of the present invention to provide a combination structure in the nature of a surgical pad designed to function as a support for the metatarsal arch of a foot, and also shaped to receive and remove pressure from a callous or the like.

It is another object of this invention to provide a combination metatarsal arch support and calli pad having an adhesive surface for direct attachment to the foot of a user.

It is a further object of the invention to provide a metatarsal arch support in the nature of a pad having a very thin tapering surrounding edge, a relatively bulky interior, and provided with an adhesive surface for direct attachment of the pad to the foot of a user.

Still a further object of this invention is the provision of a substantially heart-shaped callous pad.

It is also an object of this invention to provide a surgical pad having a recess therein for the reception of a callous or the like, the pad also employing a cushioning medium and being shaped to function as a support for the metatarsal arch of the foot when the pad is applied in the proper location to the plantar surface of the foot.

It is still a further object of this invention to provide a self-adhering metatarsal arch support recessed or provided with an opening for the reception of a callous or the like, so as to remove pressure from the callous at the same time that the device supports the metatarsal arch.

While some of the more salient features, characteristics and advantages of the present invention have been above pointed out, others will become apparent from the following disclosures, taken in conjunction with the accompanying drawing, in which:

Figure 1 is a fragmentary bottom plan view of a portion of the human foot, showing the same equipped with a device embodying principles of the present invention;

Figure 2 is a plan view of a surgical pad embodying improvements of this invention;

Figure 3 is a plan view of the atttachment side of a surgical pad embodying principles of this invention, with parts broken away to better disclose parts underneath;

Figure 4 is an enlarged central sectional view of the structure shown in Figure 3, taken substantially as indicated by the line IV—IV of Figure 3, looking in the direction indicated by the arrows;

Figure 5 is a plan view of the atttachment side of a surgical pad embodying principles of this invention, but of a somewhat different construction, with parts broken away to disclose other parts underneath;

Figure 6 is an enlarged central sectional view of the structure shown in Figure 5, taken substantially as indicated by the line VI—VI of Figure 5; and

Figure 7 is a central sectional view through a pad embodying principles of this invention, but indicating a still different form of construction.

As shown on the drawing:

To illustrate the application of surgical pads embodying principles of the present invention, in Figure 1 I have illustrated a portion 10 of the human foot, to which a pad, generally indicated by numeral 11, it attached. The pad is attached to the ball of the foot directly beneath the anterior or metatarsal arch in position to lend corrective support to this arch. As stated above, the

application of the pad in this preferred location, as indicated in Figure 1, affords a distinctly novel and dual advantage in that it not only provides a support for a weakened metatarsal arch, but also protects and removes pressure from a callous or the like.

The embodiment of the pad seen in Figures 3 and 4 includes an outer covering member 12 preferably provided with an adhesive undersurface 13 which holds a cushioning element 14 in position thereon. The outer layer 12 may be of any suitable material, such as flannel, the well-known adhesive tape or the equivalent. The adhesive surface is preferably of the character that adheres upon application, such as the commonly known zinc oxide adhesive. The cushioning element 14 may be of any desired number of layers, two being shown by way of example in Figure 3, and of any suitable material, such as felt, sponge rubber, flannel, horse hair, lamb's wool, or equivalent material. As illustrated, the layers of the element 14 may be graduated in size to enhance the curvature of one side of the pad and augment its arch-supporting quality.

From the disclosure in Figure 3, it will be seen that the cushioning element 14 is preferably of less area than the cover member 12, so as to leave a margin 15 completely around the cushioning element. As seen best in Figure 4, this cushioning element is preferably provided with a tapering edge 16. Held to the adhesive surface of the margin 15 outside of the cushioning element is an attaching member 17 having an adhesive undersurface 18 and provided with a central opening or recess 19, leaving the central portion of the cushioning element exposed. The cushioning element is thereby nicely bound in position with the central portion exposed for contact with the callous or similarly afflicted portion of the foot. The member 17, which may be of any suitable material, such as adhesive tape, cloth with an adhesive surface, or the equivalent, affords ample adhesion for firmly attaching the entire pad directly to the foot of a user.

The pad is thus independent of articles of footwear worn by the user and remains in position for as long a time as may be desired. It will be noted that the construction above described provides the complete pad with a very thin tapering outer edge 20, so that the pad will lie snugly against the foot and not tend to become loosened by contact with articles of apparel, or cause any discomfort to the user.

It will therefore be seen that the pad is provided with a suitable pocket for the reception of a callous or the like, and at the same time provided with a cushioning element designed to support a weakened metatarsal arch. Thus, the single device performs the double function of removing pressure from and around the callous and of supporting the anterior arch. It will further be noted that the pad is preferably of substantially a heart shape, and therefore properly covers the area of the anterior arch and gives added support to the surrounding weight carrying parts of the metatarsal arch. The adhesive coating of the pad binds the soft structure of the foot and prevents the lateral spreading of the anterior or metatarsal arch.

The structure seen more particularly in Figures 5 and 6 exemplified as a pad of generally the same character as that above described, but which is designed to accommodate a callous of greater height or size. In this instance, an outer cover member 12a having an adhesive undersurface 13a is employed in the manner above described. The cushioning member 14a, however, is centrally apertured, preferably provided with an adhesive undersurface, but otherwise is of the same character and function as the cushioning element 14. The attaching member 17a is secured both to the cushioning element and the inner face of the cover 12a by the respective adhesive surfaces, and this attaching member functions the same as the attaching member 17, but differs therefrom only in size. Consequently, with this construction, the central aperture or recess 19a is somewhat deeper, so that the device will accommodate a callous of materially greater height, and still not only removes pressure from that callous and the region therearound, but also functions to support the anterior or metatarsal arch of the foot and bind the soft parts thereadjacent together, just as above described.

The structure shown in Figure 7 is identical with that shown in Figures 5 and 6, with the exception that the outer member 12a is provided with a water-repellant surface 21. If so desired, the cover members 12 or 12a may be formed of material of a water-repellant character, and this figure is merely to indicate that a moisture-impervious covering may be used on any pad embodying principles of this invention.

From the foregoing, it is apparent that I have provided a combination surgical pad performing a dual function of eliminating pressure from and immediately adjacent a callous or the like, and at the same time affording a support to the metatarsal or anterior arch of the foot. The support so afforded is not only an upward cushioning pressure, but also a binding of the soft parts of the foot adjacent the afflicted region to prevent lateral spreading of the anterior arch. The preferred heart shape of the pad enables it to perform its dual functions in a more efficient manner. In addition, it will be seen that the device is simple in construction, easy to apply in position, will remain in position until removed, regardless of articles of apparel, and is economical to manufacture and use.

I am aware that many changes may be made and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I, therefore, do not purpose limiting the patent granted herein otherwise than is necessitated by the scope of the appended claim.

I claim as my invention:

A foot corrective appliance embodying a combination two-purpose structure including a surgical pad having a substantially egg or heart-shaped bounding contour to fit intimately on the plantar surface of a foot in the region of the metatarsal arch with the broader end of the pad towards the toes and the narrower end towards the instep, said pad embodying a cushioning member capable of supporting the metatarsal arch, and a bottom member on said cushioning member having an adhesive surface for direct adherence to the foot of a user, said bottom member having an opening therein for the reception of an affliction in the general nature of a callous, and said cushioning member overlying said opening.

WILLIAM M. SCHOLL.