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Kemp

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[54] **CUSHION HEEL PAD FOR SPUR HEELS**

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[52] **U.S. Cl.** **36/71**

[51] **Int. Cl.** **A43b 19/00**

[58] **Field of Search** ..... 36/71, 2.5 R; 128/600, 128/613

[56] **References Cited**

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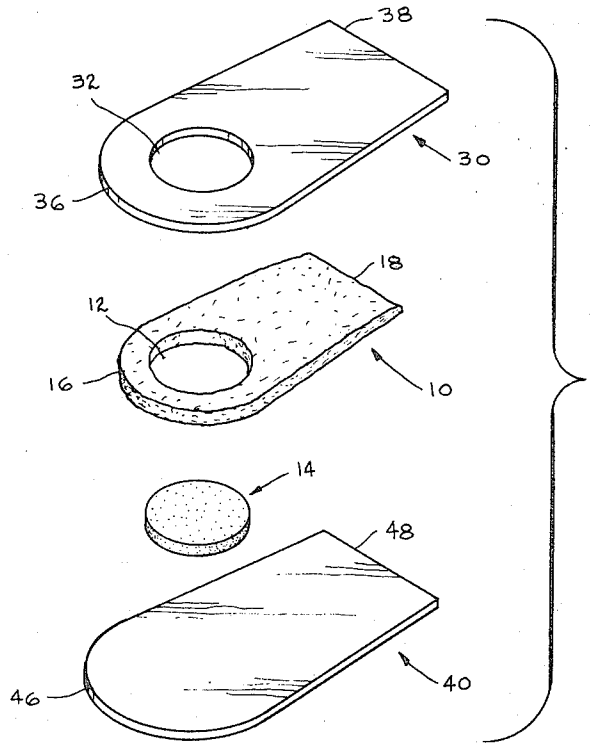
Primary Examiner—Patrick D. Lawson

[57] **ABSTRACT**

A soft pad to be worn inside the shoe of a person having a cancaneal spur or bony projection downward from the os calcis, or a calcium deposit in the same area. The essential parts of the pad include a pad of soft and relatively compressible fabric, e.g., felt, having a hole therethrough to receive the spur. This hole is filled with an insert of resilient foam rubber which is compressed by the spur, and which assumes its original shape when the user removes his shoe.

To make the pad more durable, a lower layer of soft or imitation leather is disposed beneath the felt pad, and an upper layer of leather may also be added, the upper layer having a hole therethrough which registers with the hole through the thickness of the felt pad. When both leather layers are used, they are preferably made wider and longer than the felt pad, and they are disposed to extend beyond the periphery of the felt pad in all directions. The leather layers may then be bonded together by stitching or adhesives, and they thus encase and protect the layer of felt. It is not necessary to bond the assembled pad to the user's shoe; in fact, it is an advantage to be able to move the pad from one pair of shoes to another.

10 Claims, 4 Drawing Figures



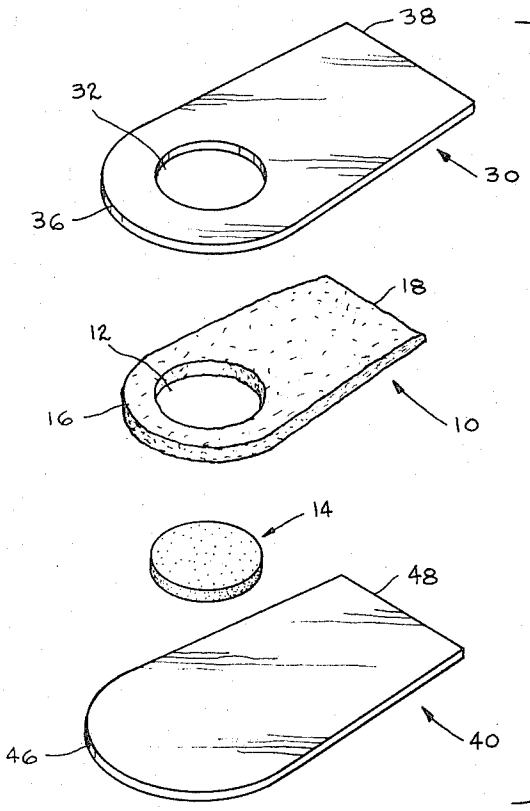


fig.1

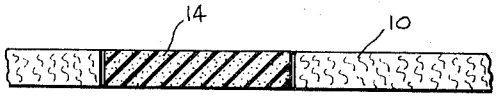


fig.2

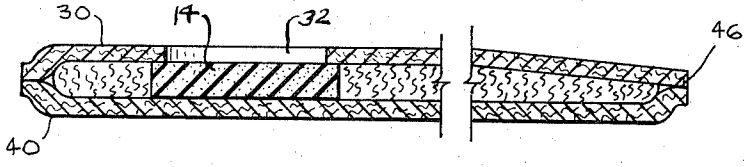


fig.3

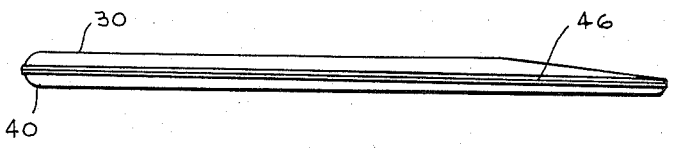


fig.4

CUSHION HEEL PAD FOR SPUR HEELS

BACKGROUND OF THE INVENTION

1. Field of Invention

The present invention lies within the general field of orthopedic devices, in particular those adapted to relieve abnormalities of the human foot. More specifically, the present invention provides a cushion heel pad designed especially for people suffering from a bony spur projecting downwardly from the os calcis. Such a heel spur constitutes a painful problem for the afflicted patient, as he cannot walk in ordinary shoes without suffering excruciating pain. The same is true when walking barefoot along a hard surface, although in this condition the patient can avoid some pain by walking only on the ball of the afflicted foot. Since this is only a partial solution to the problem, further measures are called for.

2. Prior Art

A heel spur can be removed by a surgical procedure, but there is no guarantee that the spur will not grow back again, and this is exactly what happens in a number of cases. Another common expedient is to gouge out a hole in the patient's shoe and fill the hole with soft rubber to receive the spur. While this technique is sometimes beneficial, it requires that every pair of shoes of the patient must be similarly treated.

It is also known to use a relatively soft pad having an empty, unfilled hole to receive the spur. While this affords some relief, the user still experiences discomfort, apparently because the spur and adjoining heel surface are left unsupported.

OBJECTS OF THE INVENTION

Accordingly, the principal object of the present invention is to furnish a cushion heel pad for a spur heel which overcomes the objections to prior art techniques and devices. A second object is to furnish such a heel pad which supports the entire heel of the user, including both the spur and the area surrounding it. A third object is to furnish such a heel pad which can be used with ordinary, unmodified shoes. A fourth object is to furnish a cushion heel pad to be used by a person afflicted with a heel spur in such manner that the pain otherwise experienced when walking on the afflicted heel is eliminated or minimized. A fifth object is to furnish such a heel pad that is readily transferred from one pair of shoes to another, and can even be used by the afflicted person when trying on new shoes at a shoe store.

SHORT DESCRIPTION OF THE INVENTION

The cushion heel pads of the present invention include as indispensable parts only a pad and a resilient insert in an opening through the thickness of the pad. The pad is made of a soft and compressed material, of which one example is felt. It has length and idth dimension roughly conforming to the inside dimensions of the heel portion of the user's shoe, and a thickness at least equal to the length of the average spur, about ⅛ inch. A greater thickness may be desirable, but is preferably limited to about twice such average spur length.

The hole formed in the pad should be located to underlie the location of most heel spurs, approximately at the center of the heel bone. A hole diameter of about one inch will insure that the typical spur will be received in the hole.

It is an important part of the invention that the hole in the pad be filled with a soft but resilient material, one which will be compressed by the spur and furnish support to both the spur and the area immediately adjacent to it. One of the most suitable materials is foam rubber.

To enhance the durability of the pad, it may be provided with one or both an upper layer of covering material and a lower layer of covering material, such being relatively hard and durable in comparison with the pad sandwiched between them, e.g., leather in a thickness about equal to but preferably somewhat less than the thickness of the pad. When both upper and lower coverings are used, they are made to conform roughly to the interior heel surface of the shoe while the pad is made slightly smaller. The pad is disposed between the coverings so that the coverings extend beyond the pad around its periphery, whereupon the two coverings are secured to one another by an adhesive, stitching or the like. In this way the coverings form a complete pocket for the less durable pad and insert, making the overall assembly more durable and more readily transferable from one pair of shoes to the next.

The upper covering, whether used alone or in conjunction with a bottom covering, is provided with an opening approximately equal in size to that through the pad. Such opening is located so that it registers with the opening in the pad when the two parts are assembled. Note that such assembly may include adhesives between the pad and whatever coverings are used, and that the resilient insert may also be bonded to the pad and the bottom covering.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

The reader will perhaps more readily comprehend the invention by examining the enclosed drawing forming a part of the present application. This drawing includes the following figures which depict an illustrative embodiment.

FIG. 1 is an exploded view in perspective of such embodiment, in reduced scale.

FIG. 2 is an enlarged scale longitudinal section of the essential parts of the embodiment, the insert and a portion of the pad which receives the insert.

FIG. 3 is another enlarged scale longitudinal section of the same embodiment, showing the pad and insert of FIG. 2, together with both upper and lower coverings.

FIG. 4 is a full scale side elevation of the same embodiment.

DETAILED DESCRIPTION OF THE DRAWING FIGURES AND INVENTION

As indicated in the drawing, particularly in FIG. 2, the indispensable parts of the illustrated embodiment of the present invention are a pad **10** having an opening **12** therethrough which receives the resilient insert **14.** Pad **10** is generally rectangular in form, but with its rearward or lefthand portion **16** rounded off to conform to the rounded heel portion of the usual shoe. The extent to which the pad extends forwardly is somewhat arbitrary, being more than sufficient in length to receive the average heel of the human foot. The forward end terminates in a squared-off geometry, which is also somewhat arbitrary, as a rounded or other termination would be equally effective.

A hole **12** is formed through the thickness of pad **10,** and such hole is located so that its center approximately underlies the center of the os calcis of the average human foot. It is made sufficient in diameter to receive almost all spurs which may project downwardly from the heel bone of the foot. For the average adult foot, hole **12** would be located so that its center is approximately 1½ inch from the back **16** of the pad, measured along a line bisecting the pad into two equal longitudinal halves, and the diameter of the hole is approximately 1 inch in a pad to be used by adults.

The material of pad **10** is preferably one which is relatively soft and pre-compressed, so that it experiences relatively little further compression in service. While various materials may be used for the pad, an ideally suitable material is felt.

The insert **14** has the same dimensions as the opening **12** in pad **10,** and it is received in the pad in snug relationship, as shown in the drawing. It is made of a material which may be described as soft and resilient, so that it is compressed by the spur projecting downward from the heel bone and furnishes support for both the spur and the heel area immediately surrounding the spur. Again, various materials may be used for this purpose, but an ideal such material is foam rubber. Insert **14** is preferably secured in position within opening **12** by adhesive bonding it to the pad, particularly if the pad and insert are used without any coverings. The thickness of both the pad and the insert lie within the range of 1–2 times the length of the average spur. Since this length is about ⅛ inch to ¼ inch, the pad and insert should be between ⅛ inch and ½ inch in thickness. A smaller thickness will let the spur project downwardly through the insert **14,** while a greater thickness will tend to unduly elevate the heel, making it awkward for the user to walk in the normal manner, unless an identical pad is worn in the other shoe of the pair.

When used, the upper covering **30** and lower covering **40** are made of material which is relatively hard but nevertheless pliable, soft leather being a particularly good choice of material. Both coverings **30** and **40** have the same overall shape as pad **10,** with rounded rearward portions **36** and **46** and squared-off front ends **38** and **48.** When used either alone or together with the bottom covering **40,** the upper covering **30** has an opening **32** formed through its thickness at approximately the same location as the hole **12** in pad **10,** so that when it is assembled with the pad and insert the center of hole **32** underlies the center of the heel bone and registers with hole **12** in the pad. Each covering is preferably somewhat thinner than the pad, being just sufficient in thickness to provide a durable protection for the pad.

When pads **30** and **40** are used together, they are preferably somewhat longer and wider than pad **10,** and are disposed so that the periphery of each covering extends beyond the periphery of pad **10** at all points. With this kind of dimensional relationship, the two coverings may be joined together at their edges around their complete peripheries, as by adhesives or stitching. They thus form a complete closure for the pad, enhancing its durability and making it more readily transferable from one pair of shoes to another.

In use, the assembled pad is placed in the heel portion of the shoe and the wearer puts his foot into the shoe in the usual manner. The spur from the os calcis extends downwardly through opening **32** of upper covering **30** and into the insert **14,** extending nearly to the bottom of the same but stopping short of lower covering **40.** The compressible and elastic material of the insert avoids pain to the user, and yet furnishes support for the spur and the area immediately surrounding it.

We have thus described one particular embodiment of the invention, but it is to be understood that any variations of the inventive concept are possible. The invention is not limited to the particular embodiment described, but is limited only by the scope of the following claims.

What is claimed is:

1. A cushion pad for heel spurs comprising a layer of soft and compressed fabric, said layer having an opening through the thickness thereof and being contoured to fit inside the user's shoe in the heel area thereof, and an insert in said hole of soft and resilient material.

2. The cushion pad of claim **1** which also includes a lower covering of relatively hard but pliable material underlying said layer of fabric and said resilient insert, said lower covering being bonded to said fabric and insert by an adhesive.

3. The cushion pad of claim **2** which further includes an upper covering of relatively hard but pliable material disposed on top of said fabric and resilient insert, said upper covering having an opening therethrough registering with the opening in said layer of fabric.

4. The cushion pad of claim **3** in which said upper and lower coverings extend beyond the periphery of the layer of fabric and are bonded to one another.

5. The cushion pad of claim **1** in which said fabric layer is a layer of felt and said resilient insert is a foam rubber.

6. The cushion pad of claim **5** which further includes both a lower covering of relatively hard but pliable material underlying said layer of felt and insert and an upper covering of similar material disposed on top of said layer of felt and insert, such upper covering having a hole therethrough which registers with the hole in the felt pad.

7. The cushion pad of claim **6** in which said coverings are thin layers of leather which extend beyond the periphery of said layer of felt and are bonded to one another at their edges.

8. The cushion pad of claim **6** in which said holes in the felt pad and upper covering are disposed to be centered under the center of the heel bone when the adjacent end of the pad fits against the curved back of the shoe, and said holes are approximately 1 inch in diameter.

9. The cushion pad of claim **8** in which the centers of said holes are approximately 1½ inches from the rearward end of the pad, measured along its longitudinal center line.

10. The cushion pad of claim **1** in which said layer of soft and compressed fabric has an approximate thickness in the range of ⅛ to ½ inch.

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