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Nalick

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[54] **ADJUSTABLE SHOE INSERT TO REDUCE HEEL SPUR PAIN**

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[51] **Int. Cl.** **A43b 19/00,** A61f 5/14

[58] **Field of Search** ..... 36/58.5, 71, 2.5 R, 36/69, 81, 2.5 AH, 1; 128/614, 581, 596

[56] **References Cited**

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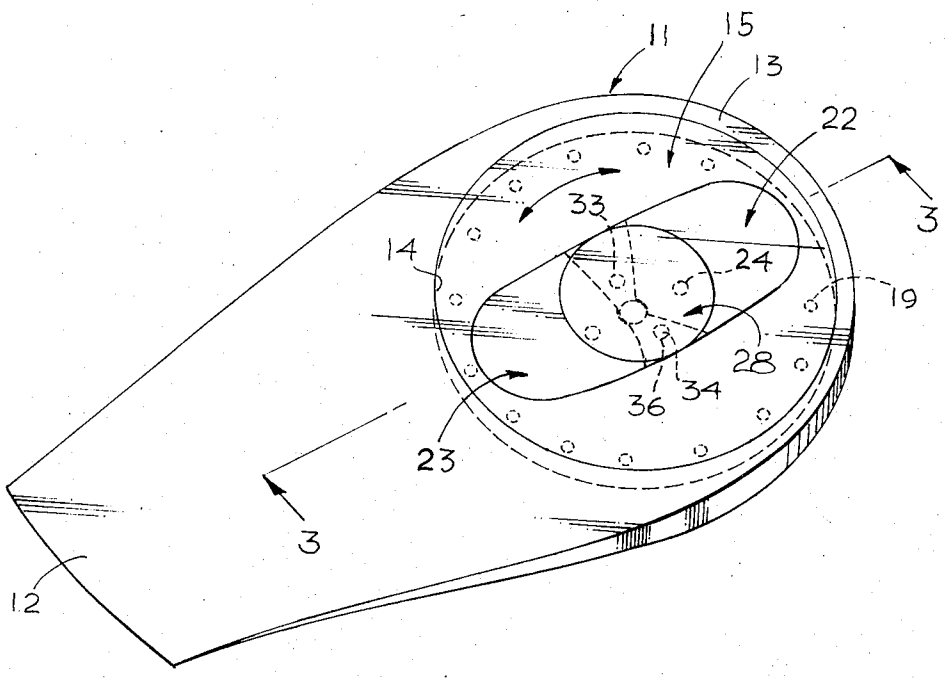
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[57] **ABSTRACT**

A rigid shoe insert device having means for adjusting the position and shape of a depression in the top surface of the device, to thereby locate the position of a heel spur on the wearer's heel, and hence to provide means to relieve the pressure of the spur on the flesh adjacent the spur by fixing the location of a depression in the surface of the insert to correspond to the shape and position of a spur on the underside of the heel bone.

4 Claims, 3 Drawing Figures



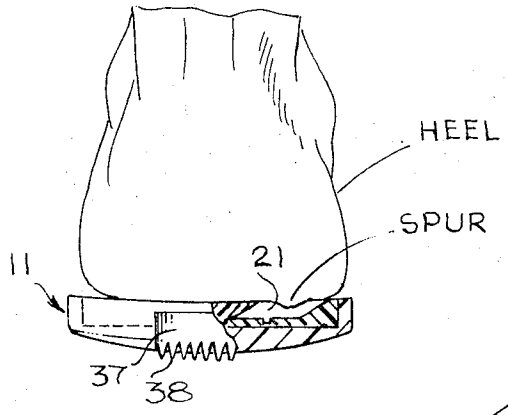


Fig. 1

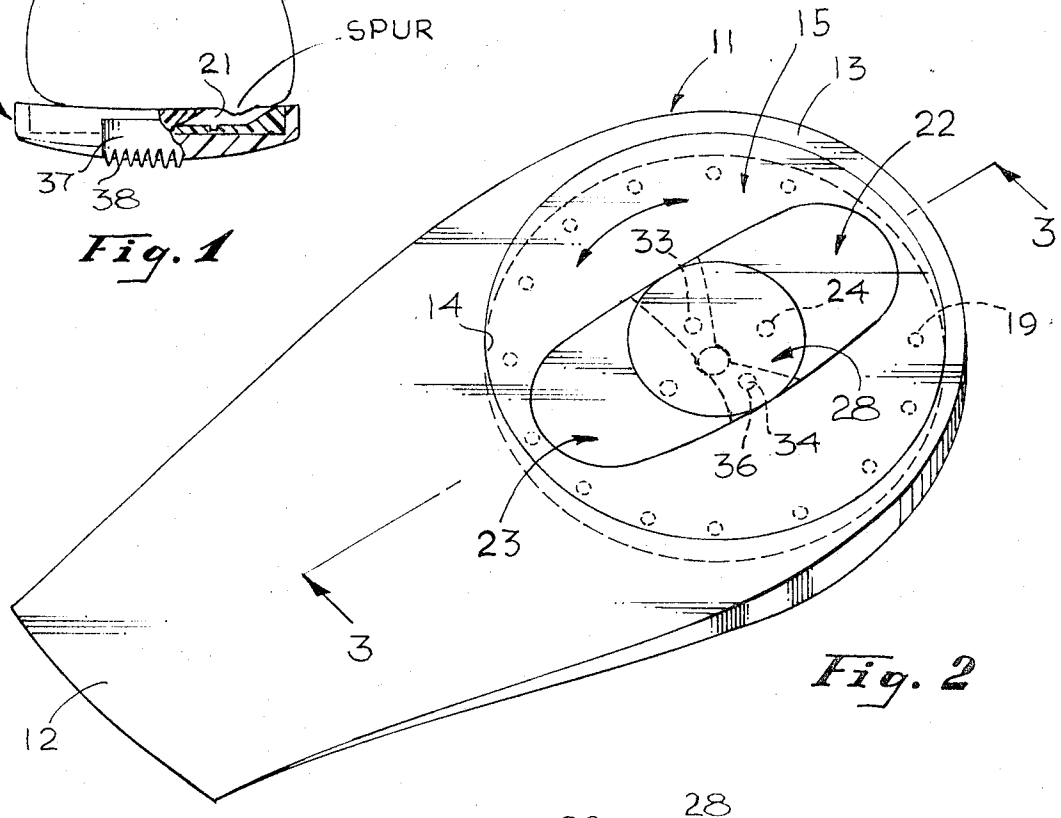


Fig. 2

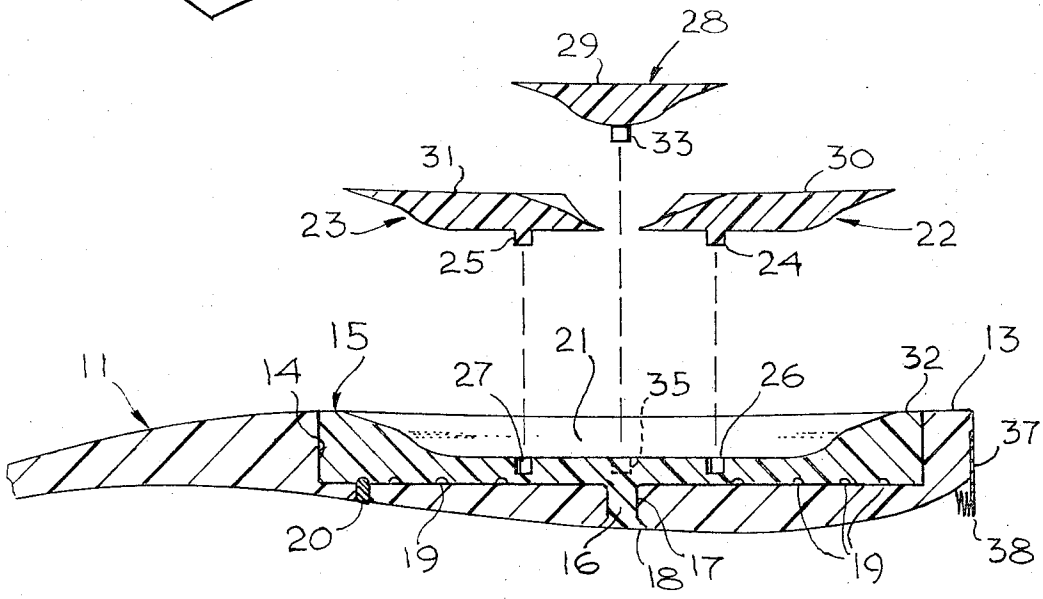


Fig. 3

ADJUSTABLE SHOE INSERT TO REDUCE HEEL SPUR PAIN

BACKGROUND OF THE INVENTION

The bony protuberances which sometimes form on the under surface of the calcaneus or heel bone, commonly called a "heel spur," frequently cause severe pains because of the repeated pressure during walking on the adjacent flesh of the heel. It is known that such pains can be relieved by providing a depression in the shoe surface adjacent the "spurs," but there is difficulty in ascertaining the size and shape of the spur and its orientation with reference to the heel surface contacted, which differ from one case to another.

This invention relates to a shoe insert which provides a depression on its heel-contacting surface whose position may be orientated and adjusted to correspond to the position and shape of the "spur" on the heel bone.

SUMMARY OF THE INVENTION

The object of this invention is to provide an insert device to be removably fixed inside a shoe at the heel bearing position, in which a formed depression thereon can be manually adjusted by trial to correspond to the orientation of the "spur" of a particular patient, thereby giving the maximum relief from the pain caused by the spur pressing into the surrounding fleshy part of the heel.

It is desirable to minimize the area of the depression so that the support area for the heel will not be reduced to the extent of distorting the flesh pad adjacent the heel bone.

This permits the manufacture and sale of a single device which is applicable to patients having diversely positioned and sized heel spurs.

BRIEF DESCRIPTION OF THE DRAWING

Referring to the drawings:

FIG. 1 is an elevational view of the device as applied under a human heel, as viewed from the rear, with parts broken away and shown in section;

FIG. 2 is a top perspective view of the insert device; and

FIG. 3 is a cross-sectional view taken on the line 3—3 of FIG. 2, showing the removable fillers for the groove or depression, in disassembly.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In the preferred form of the shoe insert device as shown in the drawings, the base member **11** is a relatively thin member contoured to fit inside the heel portion of a shoe, being tapered from a thin forward edge **12,** to a thicker rear portion **13.** The rear portion **13** is provided with a shallow cavity **14** into which is fitted a cylindrical disk **15,** whose upper surface is level with the top surface of the surrounding part of the rear portion **13,** of the base member.

The disk **15** is provided with a pivot pin **16** projecting downwardly into a hole **17** in the rear base portion **13,** the pivot having a head at its lower end to rotatably retain the disk within the cavity **14.**

The disk **15** is provided on its under face adjacent the periphery thereof with small holes or dents **19** distributed around the disk at intervals, which dents are engaged, at times, by an upwardly directed rounded head detent pin **20** extending into the davity **14** from the

base **11.** This ratcheting means allows the disk **15** to be rotated, and then fixed at any angular position as determined by the distribution of the dents **19.** The detent pin may be spring actuated, but generally the flexibility of the disk and base member makes this unnecessary.

A trough-like depression **21** is formed in the upper portion of the disk **15,** this depression extending diametrically across the face thereof. The depression **21** has gently sloped walls and ends so that there are no sharp edges or corners which might be uncomfortable on the wearer's heel.

Partial filler pieces **22** and **23** are provided, extending toward the disk center, each filler piece being provided with friction-fitting holding pins **24** and **25** respectively, corresponding holes **26** and **27** being provided in the base **11** at bottom of the trough **21.** The inner ends of the filler pieces **22** and **23** are tapered and shaped to receive the closure piece **28,** whose top surface **29** in the assembly is level with the top surfaces **30** and **31** of the filler pieces **22** and **23,** respectively, and with the flat top surface **32** of the disk **15** adjacent the trough **21.** A pair of friction-fitting pins **33** and **34** extend from the under side of the closure piece **28** into corresponding holes **35** and **36** in the bottom of the trough **21.** The closure piece **28** provides means for changing the top surface to a flat one without any depressions, a desirable condition for an insert in the wearer's other shoe to equalize the "lift" effect of the shoe insert which reduces the bad effects of a heel spur.

The two-part filler for the trough gives flexibility in the size and location of the effective part of the trough or depression to correspond to the shape, size and orientation of the spur.

The insert device may be provided with means to keep its position fixed inside the shoe, for example, as shown, a metal band **37** with sharp teeth **38** on its lower edge is securely attached, as by rivets or adhesive, to the rear edge of the insert, the teeth **38** engaging the inside liner of the heel of the shoe.

The insert device may be made of any suitable material, for examples, synthetic plastic or aluminimum.

I claim:

1. A shoe insert device for relieving the pain caused by pressure of a wearer's heel spur, said device being adapted to fit inside the heel-supporting portion of a shoe, comprising

a relatively thin base portion contoured to fit the shoe on its lower face and anatomically shaped to fit the bottom of a human foot on the upper face, said upper face having a movable member whose top surface is provided with an elongated trough-like depression;

means for adjusting said movable member to a position selected to correspond to the position of a heel spur on the wearer's heel; and

a partial filler means for said depression removably attached within said depression.

2. A shoe insert device for relieving the pain caused by pressure of a wearer's heel spur, said device being adapted to fit inside the heel-supporting portion of a shoe, comprising

a relatively thin base portion contoured to fit the shoe on its lower face and anatomically shaped to fit the bottom of a human foot on the upper face, said upper face having a movable member whose top surface is provided with an elongated trough-like depression;

means for adjusting said movable member to a position selected to correspond to the position of a heel spur on the wearer's heel; and

a closure member removably attached within said depression and shaped to level out the open portions of said depression in said movable member.

3. A shoe insert device adapted to fit inside the heel-supporting portion of a shoe comprising

1. a rigid base portion having means to at least temporarily fix the position of the device in the shoe, and having a shallow cylindrical recess in its upper surface centered beneath the weight bearing portion of the shoe wearer's heel;
2. a cylindrical disk fitting within the recess of said base portion and rotatably attached thereto, including means to selectively position said disk radially therein, the upper face of said disk having a diametrically disposed elongated tapering-walled depression extending at least partly across said disk; and
3. a pair of spaced-apart filler pieces having flat top surfaces and contoured undersurfaces adapted to smoothly fit into the end portions of said depression, said pieces being separably secured by friction pins fitting into corresponding holes in the bottom of said depression.

4. The device defined in claim **2,** in which there is also provided a flat-surfaced closure member fitting into the space between and over the inner ends of said filler pieces including friction fitting pins separably engaging corresponding holes in the bottom of the central portion of said trough.

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