July 1, 1941. L. J. COTTON 2,247,748

MEDICAL AND MECHANICAL FOOT CUSHION

Filed June 8, 1939

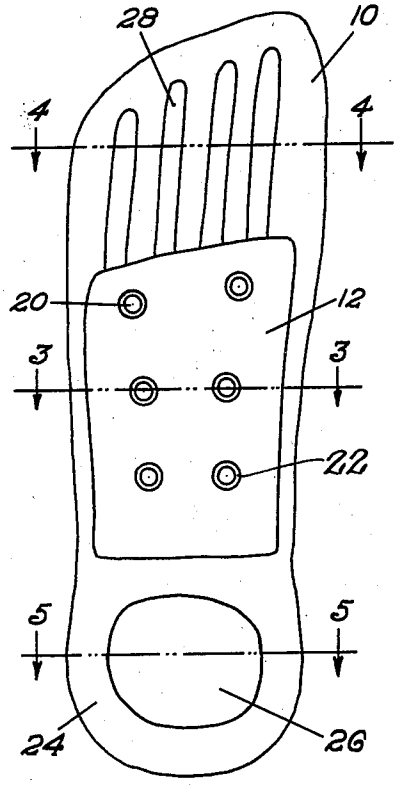


FIG. 1

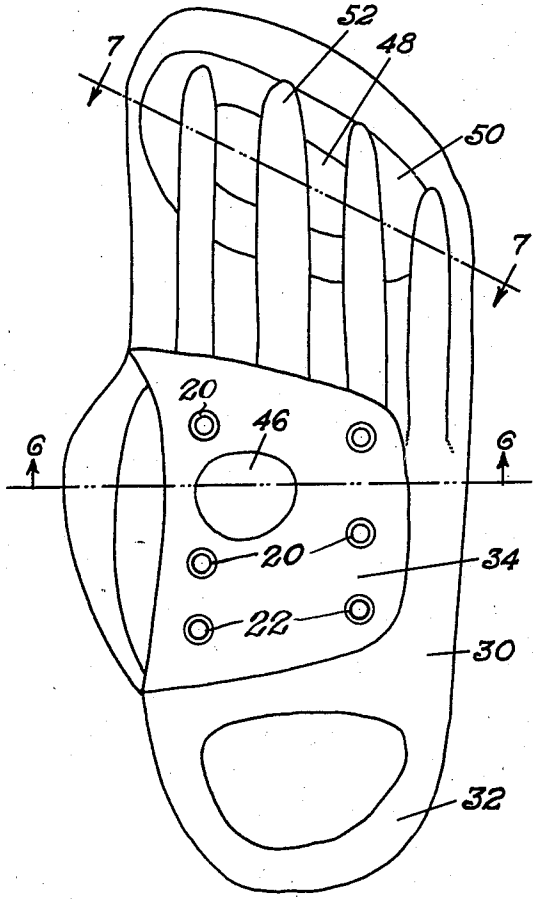


FIG. 2



FIG. 3



FIG. 4



FIG. 5

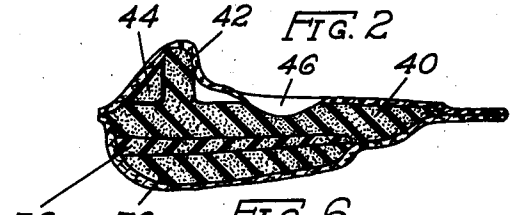


FIG. 6

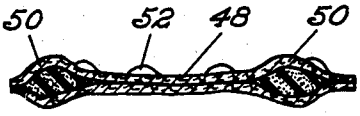


FIG. 7

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MEDICAL AND MECHANICAL FOOT CUSHION

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1 Claim. (Cl. 36—3)

This invention relates to a new and improved medical and mechanical foot cushion and has for one of its principal objects the provision of means for supporting the foot in its proper position and thus to insure correct posture of the entire body.

An important object of this invention is to provide an air-conditioned foot cushion that tends to eliminate sweaty feet.

Another important object of the device of this invention is the provision of a foot cushion that fully supports the main bones of the foot.

A further important object of this device is to provide a foot cushion that relieves undue pressures on nerve centers which, heretofore, have caused many body ailments such as rheumatism or arthritis.

A still further important object of this invention is the provision of a foot cushion that allows for perfect blood circulation.

Other and further important objects of the invention will be apparent from the disclosures in the accompanying drawing and following specification.

The invention, in a preferred form, is shown in the drawing and hereinafter more fully described.

In the drawing:

Figure 1 is a top plan view of one form of the foot cushion of this invention.

Figure 2 is a top plan view of another form of foot cushion.

Figure 3 is a sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a sectional view taken on the line 4—4 of Figure 1.

Figure 5 is a section of the foot cushion taken on the line 5—5 of Figure 1.

Figure 6 is section of the foot cushion shown in Figure 2 taken on the line 6—6.

Figure 7 is a sectional view taken on the line 7—7 of Figure 2.

As shown in the drawing:

The reference numeral 10 indicates generally an inner sole for supplementary insertion in foot wear. Built on and in this inner sole 10 are a number of cushioning elements. One of these cushioning portions is located at 12 and is better shown in Figure 3. The cushion element 14 is made of sponge rubber or some equally effective material and is pocketed between the leather coverings 16 and 18 of the inner sole 10. Holes 20 are positioned in this cushion 12 and press-fitted in these holes 20 are pieces of rubber tubing 22 that come flush with the top and bottom of the opposing leather pieces 16 and 18. These holes 20 produce an air-conditioned shoe that eliminates sweaty feet and does away with the well-known athlete's foot. Air enters the top of a shoe and passes down and around through these holes 20 in the foot cushion, causing a continual circulation of air currents that tends to evaporate any moisture being formed.

Another cushion portion 24 is positioned around the heel and as best shown in Figures 1 and 5 leaves a hollow portion 26. This cushion 24 that just surrounds the heel keeps the main weight or bearing off the bone of the heel and helps keep the heel bone in a fixed position. This is very important because when the heel bone is given an opportunity to shift or turn, the foot arches collapse and thus cramp nerve centers and blood vessels. The cramping of the blood vessels are the main cause of a number of body ailments and more particularly are the direct cause of dry and dead skin on the feet. The pressure on the nerve centers tends to produce rheumatic or neuralgic effects on a person.

A common foot ailment is the overlapping of toes and by applying ribs or ridged supports 28 which increase in height as they advance toward the forward end of the inner sole 10, between the toes, overlapping no longer exists. These ridged supports 28 that lie between the phalanges lift up the fallen ligaments and do away with bunions.

Figure 2 is another inner sole 30 on which is built similar cushioning elements as in Figure 1. The heel cushioning at 32 is similar to that of 24 in Figures 1 and 5. The principal longitudinal arch supporting cushion at 34 is made with an especially designed resilient construction. As best shown in Figure 6, the cushion itself is composed of a bottom layer 36 of the sponge rubber, a wedge-shaped piece of sponge rubber 38, and the top layer of sponge rubber 40 which is molded with a protruding ridge 42 and forms a side wall for the arch. Backing this ridge on the outside is another strip of rubber 44 somewhat triangular in shape which gives a strong resiliency to the ridge wall 42. This wall 42 and cushion 34 strengthens weak feet and holds the body in a more erect position. A circular recess 46 for medicine of a doctor's prescription is an ideal application point.

The toe portion of the inner sole 30 is equipped with a callous recess at 48 which has a surrounding raised cushion 50. By taking the weight of a person off his callouses, they will leave promptly. The ridges shown at 28 and used to keep

the toes separated and uphold the ligaments are not sacrificed because of the callous recess **48**. Between-toe ridges **52** are placed right over the callous recess and in no way interfere with each other.

It is my purpose to provide a foot cushion suitable for anyone with foot ailments. I do not intend to limit them exactly as shown in the drawing, but any combination of cushion or air circulation elements that is deemed necessary for the proper restoration of foot health is my main motive. I want also to include the provision of making the cushions any size necessary for good arch support and to this end, I intend to be able to add or subtract wedges of sponge rubber similar to the piece shown at **38**.

The foot cushions herein described are a cure for fallen arches, lumbago, stiffness of limbs, callouses, cold feet and legs, swollen ankles and legs, and numbness of hands and feet.

I am aware that many changes may be made and numerous details of construction varied throughout a wide range without departing from the principles of this invention, and I, therefore, do not purpose limiting the patent granted hereon otherwise than as necessitated by the prior art.

I claim as my invention:

An inner sole for shoes composed of a leather foundation, a cushion for arch support, ventilating holes through the cushion and a side wall resilient ridge for the cushion, a circular cushion having a central recess for the heel and ribs of cushions for between the toes, said ribs of cushions increasing in height as they proceed forward.

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