

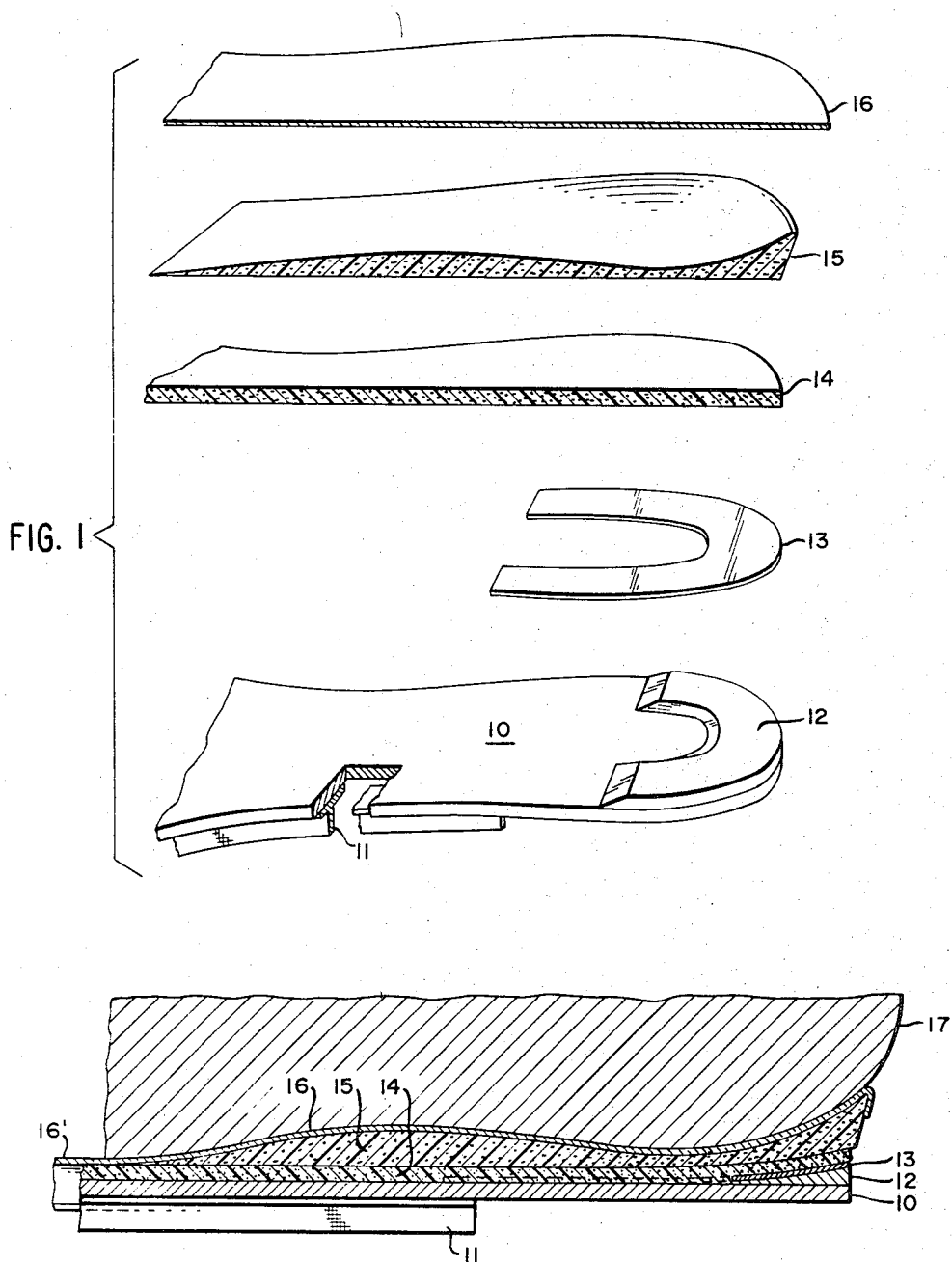
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CONTOURED INSOLE

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1

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CONTOURED INSOLE

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ABSTRACT OF THE DISCLOSURE

A composite insole having a concave heel seat portion resiliently supported by a molded cushion pad and a spring metal plate and including a built-in wedge tuck.

This invention comprises a new and improved insole constructed and arranged to improve the fit of shoes in which it is used as well as the comfort and posture of the wearer. It provides a full length cushion beneath the foot, a concave supporting surface fitting the heel and imparts a flat contour to the lasted shoe bottom preparatory to the reception of the outsole.

As herein shown these results are achieved by combining in a composite insole structure the following components, viz.,

(1) The usual full length fibrous ply to which the upper is to be secured by cement lasting or through the medium of a sewing rib,

(2) A wedge tuck which is secured to the inner rear surface of the fibrous ply and which compensates for the upwardly tapering rear end surface usually found in the last and on account of which the heel has a tendency to rock longitudinally,

(3) A heel plate of spring metal which overlies the wedge tuck and is adhesively attached to it,

(4) A full length cushion ply which overlies the spring plate and the forepart of the outer ply,

(5) A molded cushion pad having an upwardly concave heel seat portion merging into a forwardly tapering shank portion, and

(6) A full length sock lining covering the cushion ply and the forwardly tapering portion of the cushion pad.

These components are adhesively secured together and enclosed within the sock lining of which the margin may be folded over and adhesively secured to the edge of the outer fibrous ply or the other components of the structure.

It will become apparent that by building up the heel seat portion of the insole in this manner the upwardly tapering rear end surface of the last is fully compensated so that the outer surface of the insole lies on the last in a substantially flat plane well adapted to receive the outsole in its initial flat condition.

These and other features of the invention will be best understood and appreciated from a preferred embodiment thereof selected for purposes of illustration and shown in the accompanying drawings in which—

FIG. 1 is an exploded view showing the component parts of the insole spaced from each other but in the order of their assembly, and

FIG. 2 is a fragmentary view in longitudinal section showing the rear and shank portions of the insole together with a portion of the last.

The foundation component 10 of the composite insole is a full length ply of fibrous insole material or leather slightly stiff but pliable and resilient in character. This base insole ply 10 herein shown is of the Goodyear type and so carries a sewing rib 11 in its outer or lower surface as seen in the drawings, but for use in cement lasted shoes its lower surface would be plain.

2

To the rear end of the base ply 10 is adhesively secured a wedge tuck 12 of such thickness as substantially to compensate for the tapering rear end surface of the last in connection with which the insole is to be employed. The tuck 12 is of horseshoe shape and attached to the ply 10 with its open end foremost.

A heel seat plate 13 of spring sheet steel overlies the tuck 12 and is adhesively attached to it. It is also of horseshoe shape and is considerably longer than the wedge tuck 12 so that it extends forwardly and slopes toward the upper surface of the ply 10. A solid or slitted spring plate may be employed as a full equivalent of that shown in FIG. 1. Its function is to prevent penetration of the heel seat lasting tacks or nails through the insole and also resiliently to support the peripheral portions of the overlying cushion pad, which is one component of the composite insole.

A full length cushion ply 14 of PVC or other blown synthetic resin overlies the spring plate 13 and covers the shank and forepart of the base ply 10.

A molded cushion pad 15 is attached to the cushion ply 14 and has an upwardly concave heel seat portion merging into a forwardly tapering shank portion which extends substantially to the break line of the sole.

The composite insole is completed by a full length sock lining 16 of upper leather or coated textile material. This is adhesively secured to the underlying cushion pad 15 and in the forepart of the insole to the adjacent cushion ply 14. The sock lining provides a smooth well finished envelope or casing for the other components of the insole. In the forepart of the insole the margin of the sock lining is wrapped about and adhesively secured to the margin of the base ply 10. The relation of the composite insole to the last 17 is indicated in FIG. 2 from which it will appear that the wedge tuck 12 and the cushion pad 15 compensate for the rear end taper of the last so the effective lower face of the composite insole lies in a flat plane.

Having thus disclosed my invention what I claim as new and desire to secure by Letters Patent is:

1. A contoured insole comprising a full length stiff fibrous outer ply including forepart and heel portions, a wedge tuck secured to the upper rear surface thereof, a heel seat plate of spring steel overlying the rear end of said outer ply and said wedge tuck, a full length cushion ply overlying said spring plate and the forepart of said stiff ply, a molded cushion pad having an upwardly concave heel seat portion merging into a forwardly tapering shank portion positioned on said cushion ply, and an inner full length sock lining covering and adhesively united to said cushion ply and the forwardly tapering portion of said cushion pad; said spring plate sloping forwardly from the heel seat beneath said cushion ply and resiliently supporting the curved peripheral portions of said molded cushion pad in upwardly concave contour.

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