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F. VETTERLING

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INSOLE WITH INSERTION OF WIRE NETTING

Filed Sept. 5, 1925

Fig:1

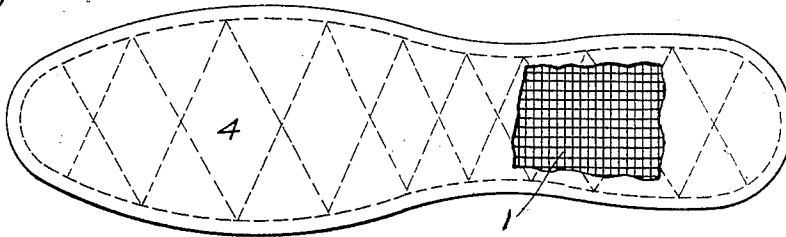


Fig:1a

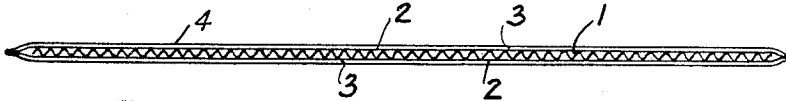


Fig:1b

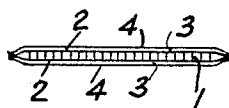


Fig:2

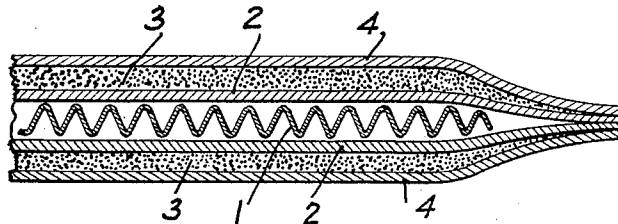


Fig:3

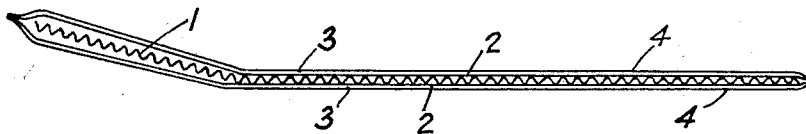
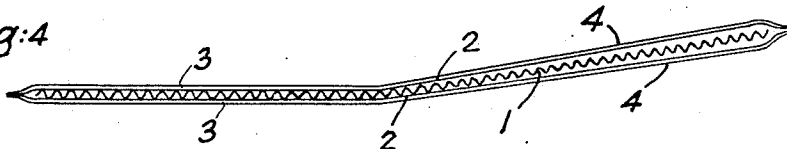


Fig:4



FRANZ VETTERLING
INVENTOR

BY *Walter E. Walheim*
ATTORNEY

UNITED STATES PATENT OFFICE.

FRANZ VETTERLING, OF WIESBADEN, GERMANY, ASSIGNOR OF ONE-HALF TO WOLLEIM, SEIDNER & HITZIGRATH, INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

INSOLE WITH INSERTION OF WIRE NETTING.

Application filed September 5, 1925, Serial No. 54,702, and in Germany December 29, 1924.

This invention relates to a sole to be inserted into boots or shoes, said sole having an insertion of wire netting. The commonly used soles of this type have the inconvenience
5 that the wire netting has a plane surface so that the object to provide for a layer of air of sufficient thickness between the sole of the boot and the sole of the foot is not attained. The wire netting is sometimes of
10 such rigidity that it does not adapt itself to the movements of the foot so that the blood circulation is impeded and the foot gets numb and catches cold.

It has already been proposed to obtain a
15 sufficiently thick air layer by giving to the insole a corrugated shape but, as such soles are generally made from rigid or not resistant material the above mentioned inconveniences are not avoided or the insole does not
20 preserve its shape for a sufficient length of time.

The wire insertion in the insole according to the invention consists of corrugated wire netting. An insole according to the inven-
25 tion in which a core of corrugated wire netting is loosely held within an envelope acts like an air cushion owing to its yieldability in every direction as the imprisoned air escapes according to the pressure exerted by
35 the foot from the heel to the ball and inversely. The variations of the shape of the insole which result herefrom effect a massaging of the sole of the foot and activate the blood circulation. This effect is increased
40 by the fact that the toes of the foot at the walking are able to execute gripping movements wherefrom results that the imprisoned air is still more agitated.

An embodiment of the invention is shown,
45 by way of example, in the accompanying drawing in which

Fig. 1 shows the insole in plan view, the outer cover being partly removed so that the inner arrangement is visible.

Fig. 1^a shows a longitudinal section through the inner envelope.

Fig. 1^b shows a cross sectional view through the same.

Fig. 2 shows partial longitudinal section on greatly enlarged scale.

Figs. 3 and 4 illustrate the air circulation in the insole during the walking.

The essential constituent of the insole is a sheet of corrugated wire netting 1 adapted to yield under the pressure of the foot in
60 the longitudinal direction and in the transverse direction. This layer 1 of corrugated wire is enclosed in a bag 2 of horse hair tissue or of canvas. This bag 2 is enclosed
65 between two layers 3 of a porous or absorbent material and the whole is enclosed in an outer envelope 4. Owing to the closed shape the insole forms a kind of air cushion which yields under the pressure exerted by
70 the foot in walking as shown in Figs. 3 and 4. The variations of the shape of the insole exert a massaging action upon the foot sole and assist in preserving the blood circulation and the natural heat of the foot. Moisture and sweat are absorbed by the
75 layers 3 of porous or absorbent material, the wire insertion 1 being well protected against rusting by the layers 3 and by the cover of horse hair tissue. Owing to the closed shape
80 of the insole the cold or moist air which at the walking should penetrate through the sole of the boot is prevented from getting at the foot. The layers 3 of absorbent material being bad heat conductors retain the
85 natural heat in the foot.

The elasticity of the wire netting offers the facility to produce mechanically indentations at certain points to afford accommodation for callouses or corns so that they
90 will gradually disappear.

I claim:—

1. An insole comprising an outer envelope, an inner envelope, layers of absorbent material between them, and a core of corrugated wire netting loosely disposed within
95 the inner envelope, the said outer and inner envelopes and layers providing in combination an air tight covering around the said core.

2. An insole comprising an outer envelope,
100 an inner envelope, layers of absorbent material between them, and a core of corrugated wire netting loosely disposed within the inner envelope, the said outer and inner envelopes and layers being fastened to-
105 gether and providing in combination an air tight covering around the said core.

FRANZ VETTERLING.