

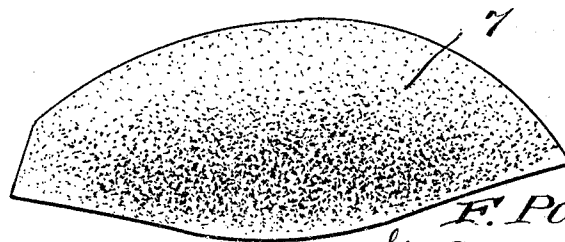
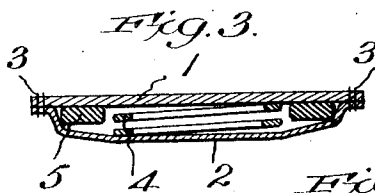
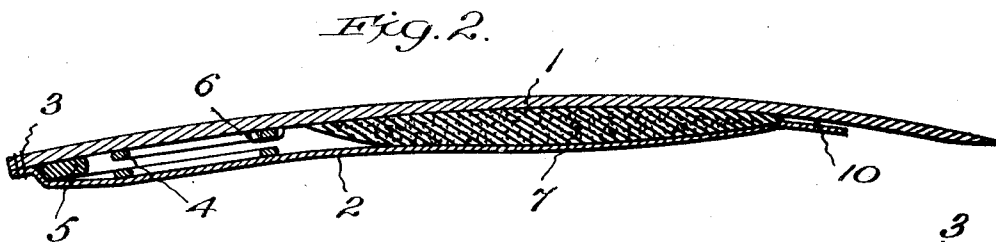
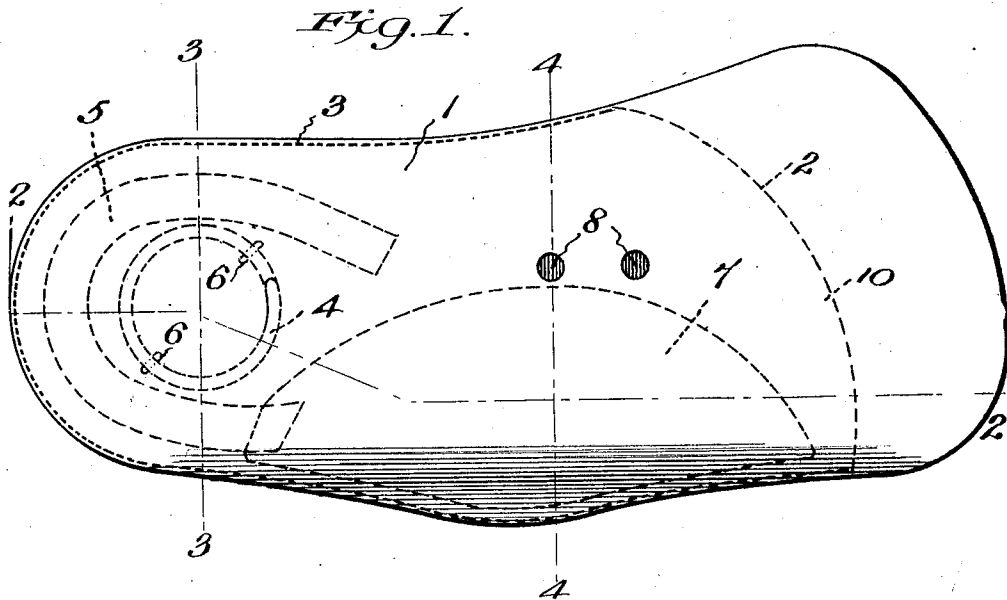
Oct. 30, 1928.

1,689,398

F. P. LLOY

INSOLE FOR BOOTS AND SHOES

Filed June 6, 1927



Inventor
F. Paul Lloyd.
By his Attorney *Geo. A. Byrne.*

UNITED STATES PATENT OFFICE.

F. PAUL LIOY, OF PASSAIC, NEW JERSEY.

INSOLE FOR BOOTS AND SHOES.

Application filed June 6, 1927. Serial No. 196,715.

This invention relates to improvements in insoles for boots and shoes and is adapted to be inserted in boots and shoes of ordinary construction.

5 The general object of the invention is to provide a yielding insole that will freely give to the weight of the wearer during the act of walking and thereby make walking more comfortable by relieving the jars and shocks incident thereto.

A further object of the invention is to provide an efficient means for automatically forcing a circulation of air through the shoe and about the foot.

15 A still further object of the invention is to also provide an insole with a yielding arch support for diminishing fatigue experienced by persons unaccustomed to long walks and to these ends the invention consists in the novel details of construction and combination of parts more fully hereinafter described and particularly pointed out in the claims.

In the drawings—

25 Figure 1 is a top plan view of the improved insole.

Figure 2 is a longitudinal sectional view thereof, along the line 2—2 of Figure 1.

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

30 Figure 4 is a cross sectional view on the line 4—4 of Figure 1 and—

Figure 5 is a detail plan view of the cushion for supporting the arch.

Referring to the drawings in detail the invention consists of an upper or top piece 1 and a lower or bottom piece 2 which are connected together along their outer edges, at the heel and side portions of the insole, but not at the toe portion, by a row of stitching

40 3. The upper piece is preferably formed of a relatively thick and tough piece of leather and the bottom piece is formed of thin pliable leather and these pieces are held apart, at the heel portion of the insole, by a stout coil

45 spring 4 and a flat U-shaped rubber cushion 5. The rubber cushion is rectangular in cross section and to prevent displacement within the insole it is secured to the top piece 1, by having its upper surface cemented to the inner surface of the top piece. The cushion is located adjacent the outer edge of the insole with its arms pointing toward the toe portion thereof so that a communicating

space may be established between the heel and arch portion of the insole. 55

The spring 4 is located within the inner or central portion of the rubber cushion 5 and is secured against displacement by means of staples 6 which connect it to the inner surface of the top piece 1. The spring when in its open, or extended position, is arranged to project beyond the plane of the bottom surface of the cushion 5, so that when pressure is brought to bear upon the heel of the insole the spring will yield and be compressed within the central portion of the cushion, which forms substantially a pocket for the spring. 65

As an aid in supporting the arch of the foot, a cushion 7 is also provided on the insole. This cushion is located within the space formed between the top and bottom pieces 1 and 2 and to prevent its displacement it is also suitably secured, as by cement, to the inner face of the top piece 1. This cushion is preferably formed of a suitable porous rubber and is given a curvature as shown to conform to the natural shape of the arch. 75

The top piece 1 is provided with a series of perforations 8 for the ingress and egress of air as the upper or top piece 1 moves upward or downward. When the pressure comes upon the part 1, the air confined between the parts 1 and 2 is expelled partly through the perforations 8 and partly through the space 10 between the parts 1 and 2, adjacent the toe portion of the insole and is forced outward through the shoe, and when pressure is relieved the spring and rubber cushions react and force the part 1 outward, thereby drawing air into the shoe and space formed between the upper and lower parts 1 and 2. 85 90

By filling the insole through the perforations 8 with a suitable perfumed antiseptic powder it is obvious that when the insole is in use this powder will be forced out of the same to all the parts of the shoe with the result that a pleasant odor will arise therefrom. 95

Other modifications may suggest themselves to those skilled in the art, and it will be understood that any changes in form, proportion and the minor details of construction may be resorted to without departing from the principle of the invention as claimed. 100

What is claimed is:

1. An insole for shoes comprising upper 105 and lower parts joined at the heel and side

portions, the meeting ends at the toe portion of said parts providing a ventilating opening, a rubber cushion interposed between said parts at the heel portion and providing a central pocket and a coil spring located within said pocket.

2. An insole for shoes comprising joined upper and lower parts, said upper part provided with ventilating openings, rubber cushions interposed between said parts at the heel and arch portions, said heel cushion providing a central pocket, and a coil spring located within said pocket, said spring when extended adapted to project beyond the plane of the bottom surface of said heel cushion and when compressed to be confined within said pocket.

3. An insole for shoes comprising upper and power parts joined along the edges of the heel and side portions only, the meeting

ends at the toe portion of said parts providing a ventilating opening arranged beneath said upper part, said upper part also provided with ventilating openings, a spring interposed between said parts at the heel portion and a rubber cushion interposed between said parts at the arch portion.

4. An insole for shoes comprising joined upper and lower parts provided with ventilating openings, a rubber cushion interposed between said parts at the arch portion and a U shaped rubber cushion interposed between said parts at the heel portion, the arms of said heel cushion pointing toward the toe portion so that a communicating space is established between the heel and arch portion.

In testimony whereof I have hereunto affixed my signature on this 23rd day of May 1927.

F. PAUL LIOY.