Aug. 12, 1924. 1,504,908

R. SATO

INSOLE FOR SHOES

Filed Jan. 3, 1923

Fig. 1.

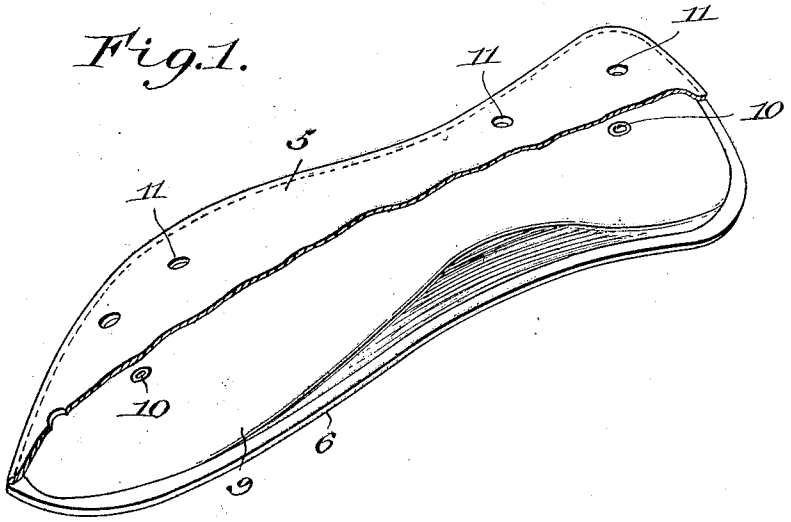


Fig. 2.

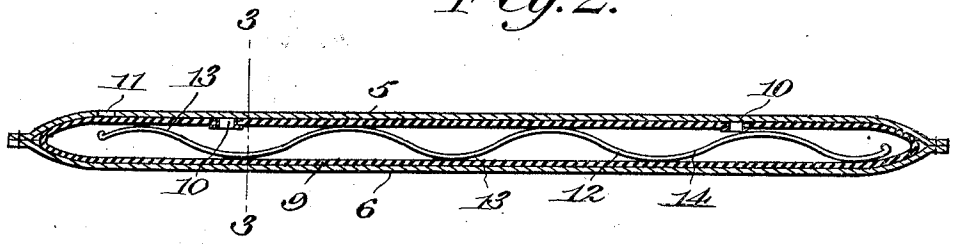
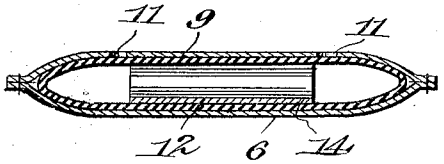


Fig. 3.



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WITNESS: Lew. Ely.

Patented Aug. 12, 1924. 1,504,908

UNITED STATES PATENT OFFICE.

RYUJI SATO, OF NEW YORK, N. Y.

INSOLE FOR SHOES.

Application filed January 3, 1923. Serial No. 610,482.

To all whom it may concern:

Be it known that I, RYUJI SATO, a subject of the Emperor of Japan, residing at New York city, in the county of New York and State of New York, have invented new and useful Improvements in Insoles for Shoes, of which the following is a specification.

This invention relates to insoles for shoes.

An object of the invention is to provide an insole having means for automatically creating a forced ventilation of the shoe and for causing fresh air to be circulated around the foot of the wearer.

A further object of the invention is to provide an insole of the character which, through its buoyancy will furnish a great amount of comfort to the user which will operate to absorb shocks and jars which are commonly transmitted to the body in the process of walking.

With these and other objects in view, the invention resides in certain novel construction and combination and arrangement of parts, the essential features of which are hereinafter fully described, are particularly pointed out in the appended claims, and are illustrated in the accompanying drawing, in which:—

Figure 1 is a sectional perspective view of the insole.

Figure 2 is a vertical longitudinal section therethrough.

Figure 3 is a transverse section on line 3—3 of Figure 2.

In carrying the invention into practice, I provide an enclosing structure which may consist of layers of leather or cork or other suitable well-known materials 5 and 6 stitched or suitably secured together at their marginal edges. It is preferred that an adhesive be employed between the marginal edges of the materials 5 and 6 so as to seal the enclosure around such edges.

Interposed between the materials 5 and 6 is a hollow elastic body 9 formed of rubber and provided with openings 10 over which the material 5 is arranged so that when pressure is applied to the body to partly collapse same air will be forced through the openings 10 and into the space between the body 9 and the material 5 and thence escape from suitable perforations 11 formed in said material 5. The openings 10 are respectively arranged near the front and rear portions of the insole. Incident thereto when the ball and foot portions of the foot are brought against the ground and when there is relative movement between the insole and foot of the user, the body 9 acts somewhat like a bellows, air being respectively sucked into the body 9 and exhausted therefrom through the openings 10. In this manner and in view of the openings 11 which operate in conjunction with the openings 10, a fresh supply of atmospheric air is constantly circulated around the foot of the user. This invites a sanitary condition, reduces perspiration of the feet and provides an insole which through its buoyant qualities is shock absorbent and comfortable to the foot.

The hollow body 9 has preferably incorporated therewith a suitable leaf spring 12 having portions 13 and 14 respectively bearing against the upper and lower walls of the body so as to assist in normally holding this body distended.

While I have described what I deem to be the most desirable embodiment of my invention, it is obvious that many of the details may be varied without in any way departing from the spirit of my invention, and I therefore do not limit myself to the exact details of construction herein set forth nor to anything less than the whole of my invention limited only by the appended claims.

What is claimed as new is:—

1. An insole including an enclosure structure having a perforated wall, and a hollow elastic body contained in the enclosure and provided with openings co-acting with the openings of the enclosures to induce a circulation of air around the foot respectively on inflation and deflation of said body.

2. An insole including a hollow normally distended body having perforations, and a perforated enclosure for the body.

In testimony whereof I have affixed my signature.

RYUJI SATO.