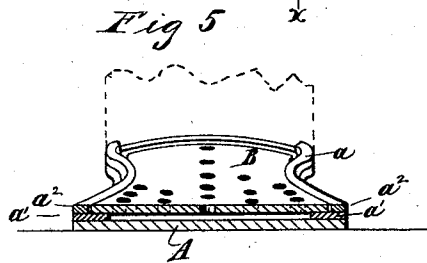
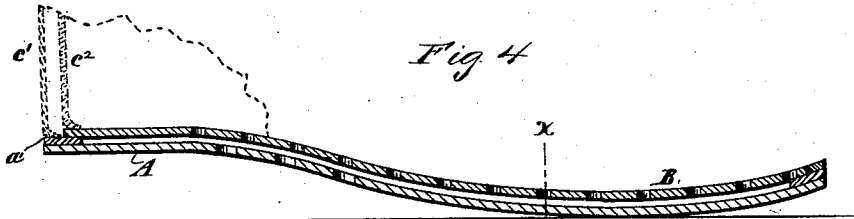
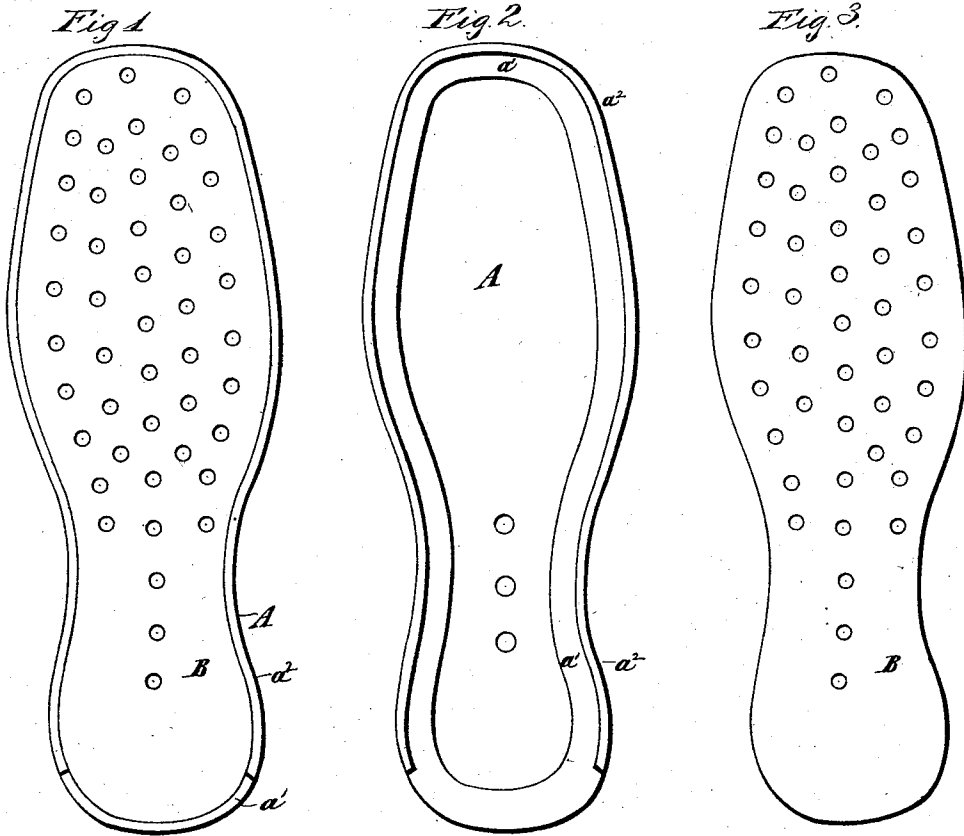


(No Model.)

S. C. HOWARD, G. W. PARKS & W. F. WHITING.
BOOT OR SHOE.

No. 455,847.

Patented July 14, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

STEPHEN C. HOWARD, OF PROVIDENCE, RHODE ISLAND, GEORGE W. PARKS, OF BROOKLYN, NEW YORK, AND WILLIAM F. WHITING, OF PROVIDENCE, RHODE ISLAND, ASSIGNORS OF ONE-FOURTH TO HIRAM HOWARD, OF PROVIDENCE, RHODE ISLAND.

BOOT OR SHOE.

SPECIFICATION forming part of Letters Patent No. 455,847, dated July 14, 1891.

Application filed June 28, 1890. Serial No. 357,069. (No model.)

To all whom it may concern:

Be it known that we, STEPHEN C. HOWARD and WILLIAM F. WHITING, of Providence, in the county of Providence and State of Rhode Island, and GEORGE W. PARKS, of Brooklyn, Kings county, and State of New York, have invented a certain new and useful Improvement in Boots or Shoes, of which the following is a specification.

The object of our improvement is to provide ventilation in boots or shoes.

The improvement consists in the combination of an outsole, a perforated insole, supports on the outsole for sustaining the perforated insole above the main portion of the outsole, so as to form a space between the two soles, and openings through which this space communicates with the atmosphere.

In the accompanying drawings, Figure 1 is a top view of soles embodying our improvement. Fig. 2 is a top view of the outsole alone. Fig. 3 is a top view of the insole alone. Fig. 4 is a central longitudinal section of the two soles connected. Fig. 5 is a transverse section of the two soles connected, the section being taken at the plane of the dotted line xx , Fig. 4.

Similar letters of reference designate corresponding parts in all the figures.

A designates the outsole, and B the insole. Both these soles may be of ordinary or any desired outline. The outsole has a rim portion a' , extending around its edge and elevated from the main portion. It also has a second rim a^2 , which is elevated above the rim a' and extends around the exterior outer edge of the latter throughout the whole or the greater part of the edge of the sole. The rim a^2 does not extend around the heel portion. The outsole may be made of leather or any suitable material, and its rims may be made of strips of the same material cemented or otherwise fastened in place. The insole may be made of leather or other suitable material. It is of a size to rest upon the rim a' of the outsole and fit within the rim a^2 thereof. Its edge portions are supported by the rim a' , and it is throughout elevated above the main portion of the outsole. During the use of the shoe the insole may be pressed against

the outsole, so as not to be wholly elevated above the latter. It will nevertheless be elevated throughout a great portion of its surface above the outsole.

Owing to the elevation of the insole above the outsole, there is a space provided between the two soles. The perforations of the insole afford ventilation, as air may circulate from within the shoe to the space between the two soles, and also in the reverse direction.

It is intended that the space between the two soles shall communicate with the atmosphere. For this purpose we have shown the shank or bridge a of the outsole as provided with perforations. Owing to the fact that the rim a^2 is not continued around the outsole openings are also afforded at the heel. Of course sometimes the insole will rest upon the heel portion of the rim a' , and then there will be no opening caused by the omission of the rim a^2 at the heel of the outsole; but in walking the insole will at times be raised from the heel portion of the rim a' , and then there will be openings caused by the omission of the rim a^2 at this part of the insole. Openings may be provided at any other part of a boot or shoe for the passage of air. It is obvious that if a double-heel portion were provided in the upper of a boot or shoe and the two parts of the double upper connected at the heel portion of the two soles where the rim a^2 is omitted from the outsole and were separated for a distance equal to the width of the said rim a^2 a space might be provided leading to any point above the soles. We have represented by dotted lines in Fig. 4 two parts $c c'$ of such a double upper.

The fact that the insole is supported at the edges and elevated above the main portion of the outsole leaves it free to rise and fall throughout a portion of its extent and operate with a pumping action during the walking of the wearer. This will of course result in circulating air within the boot or shoe.

Boots or shoes made in accordance with our invention are not designed for wear in wet places unless protected by water-proof overshoes; but it is obvious that they may be worn within doors or out of doors during dry weather.

The upper may be attached to the outsole in any well-known manner. For instance, the rim *a'* may be an inwardly-turned portion of the upper, as shown at the heel portion in 5 in Fig. 4, and the outsole attached thereto by sewing or otherwise. By another means the rim *a'* may be wholly independent of the upper and the edges of the upper drawn over the edge of the outsole in the usual way of 10 lasting and another sole provided with perforations in the shank placed upon what we here term the "outsole."

It is to be understood that we do not limit ourselves to any manner of attaching the up- 15 per to the sole, nor do we limit ourselves to the number of layers that may constitute an outsole.

What we claim as our invention, and desire to secure by Letters Patent, is—

20 In a boot or shoe, the combination, with an outsole, of a rim portion extending around the edge of the outsole and elevated from its

main portion, a second rim elevated above and extending around the outer edge of the first-named rim, excepting around the heel 25 portion, and an insole having its edge portion supported by the first-named rim within the second-named rim and elevated above the inner surface of the outsole, whereby it may have a pumping action, the said outsole hav- 30 ing perforations and the said insole having perforations, substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of subscribing witnesses.

STEPHEN C. HOWARD.
GEORGE W. PARKS.
WILLIAM F. WHITING.

Witnesses for Howard and Parks:

K. L. BRENNAN,
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Witnesses for Whiting:

JOHN DODD,
E. F. HEDLY.