

E. W. Parish,

Insole.

No. 103770.

Patented May 31, 1870.

Fig. 1.

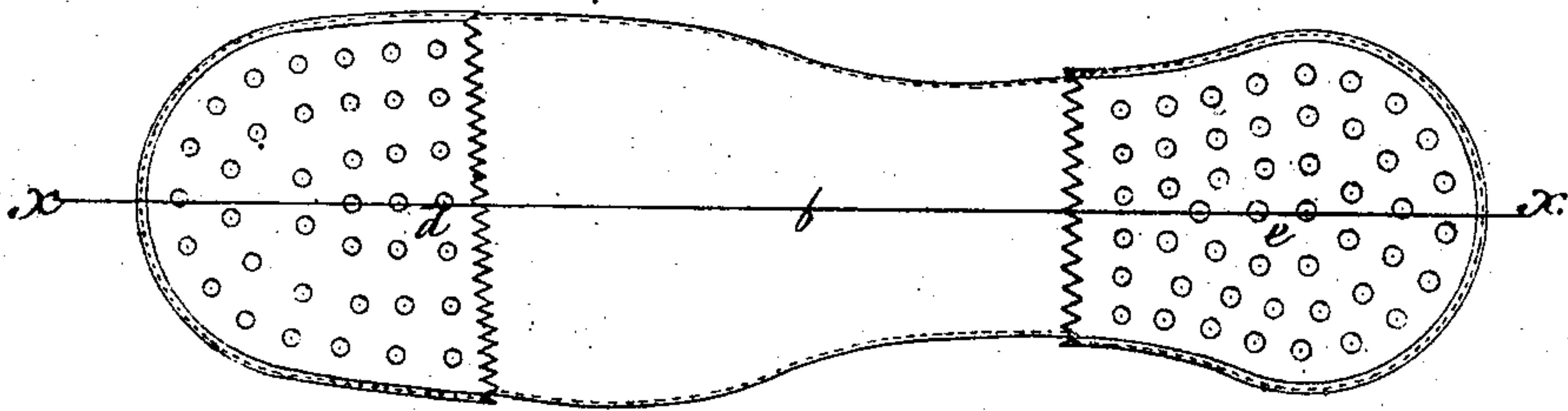


Fig. 2.

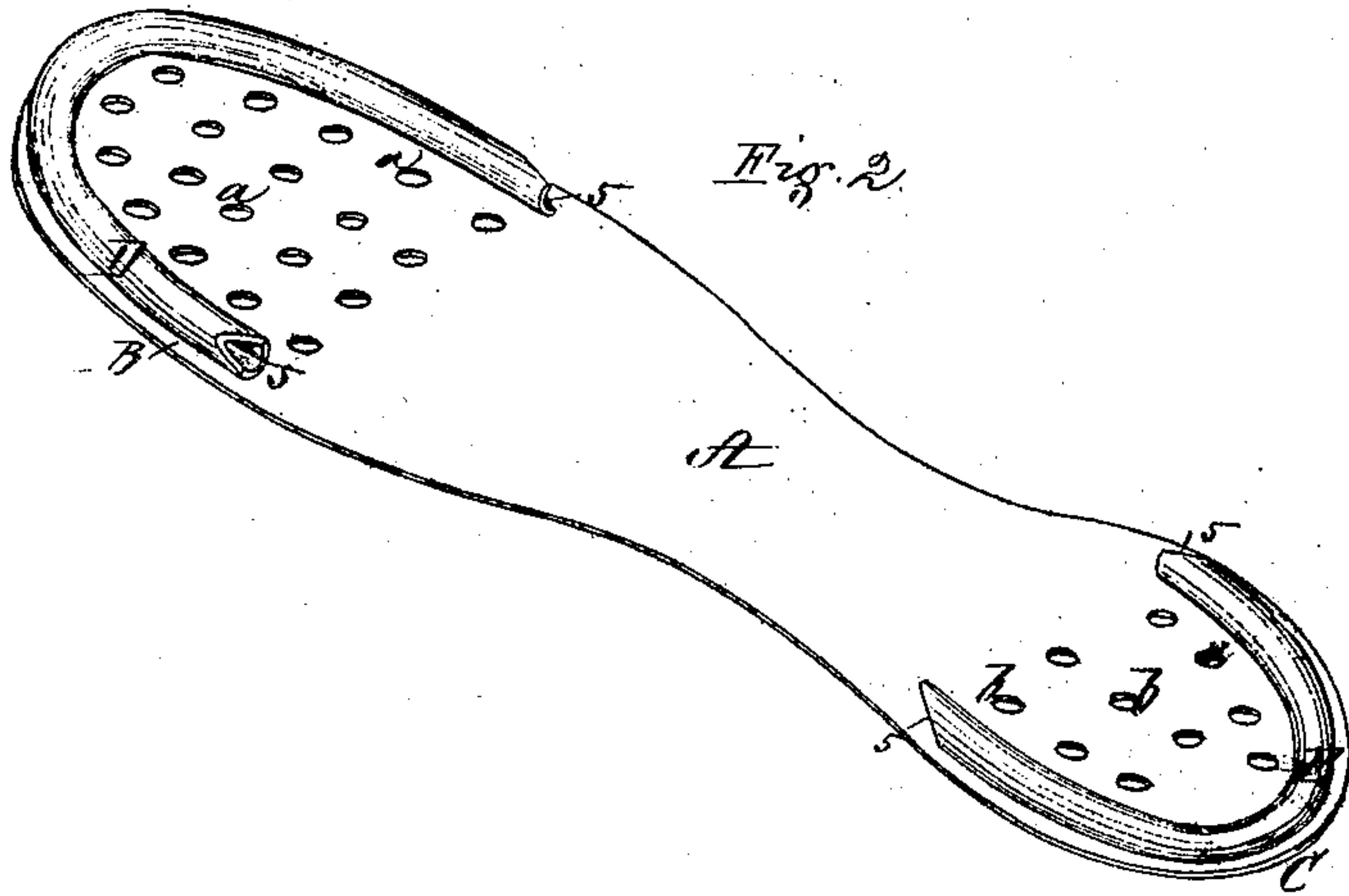


Fig. 3.

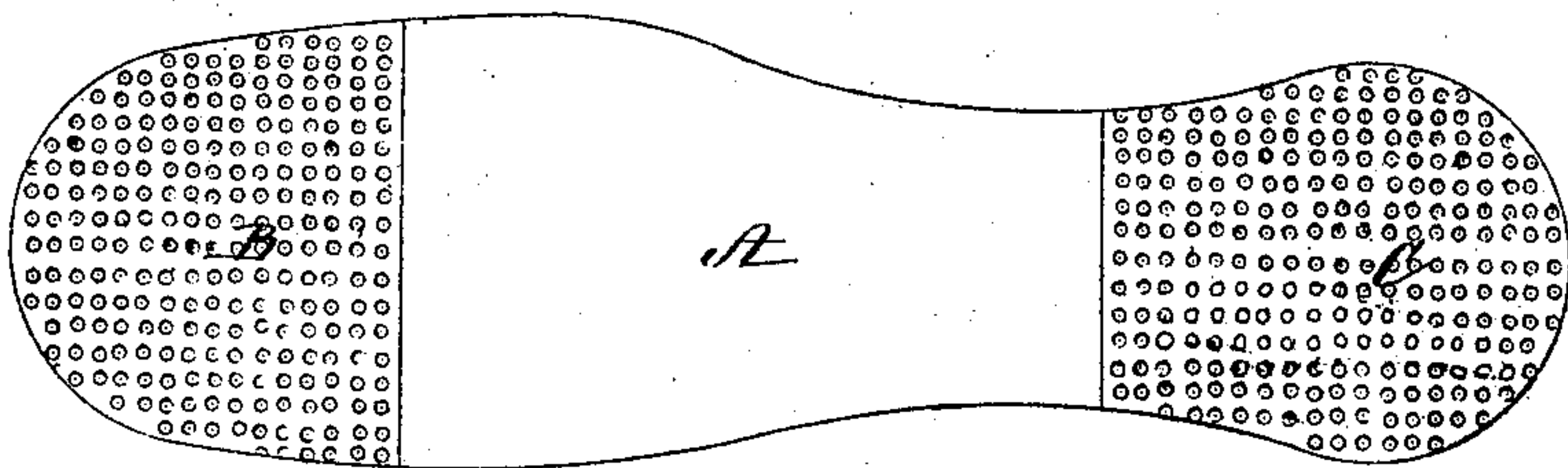


Fig. 4.



Witnesses,
J. C. Stearns
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Inventor,
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United States Patent Office.

EDWARD W. PARISH, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND JOHN PARISH, OF SAME PLACE.

Letters Patent No. 103,770, dated May 31, 1870.

IMPROVED INNER SOLE FOR BOOTS AND SHOES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, EDWARD W. PARISH, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Inner Soles for Boots and Shoes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a plan of my improved inner sole.

Figure 2 is a perspective view of the same, with the lining or covering removed to show the construction of the under side of the interior.

Figure 3 is a plan showing the construction of the upper side of the interior.

Figure 4 is a central longitudinal section on the line *xx* of fig. 1.

My invention consists in an elastic tube and a perforated plate applied to the toe and heel portions of an inner sole of a boot or shoe, the toe and heel of the sole being also perforated, and a covering of leather, or other suitable air-tight material, being provided, which extends across the under side of the sole, thus inclosing the elastic tubes within a chamber, through which, and the perforated plates and perforations in the toe and heel of the sole, the air is caused to circulate by the ordinary action of the foot in walking, the elastic tubes being alternately compressed and expanded by the pressure of the toe and heel upon them, thus affording a soft yielding cushion for the foot, and circulating the air around it, thus maintaining an even temperature within the boot or shoe of the wearer.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawing—

A is a piece of prepared pasteboard, of suitable thickness, of the size and form of the foot, required to serve as an inner sole for a boot or shoe.

The toe and heel portions of this sole are provided with perforations, *a b*, (see figs. 2 and 4,) over which, on the upper side of the sole A, are secured perforated metal plates B C.

The toe and heel portions of the sole are slightly cut away, so that rubber tubes, D E, may be attached directly to the under side of the perforated plates B C, the said tubes being bent around to conform to the shape of the toe and heel, and the extremities of the tubes being tapered off on their upper sides, so that an enlarged orifice, 5, may be formed, having a direct communication with the perforations in the metal plates B C, a direct communication also being

opened between the perforations *a b* in the toe and heel, and the perforated plates B C.

Extending entirely over the whole surface of the sole, under and outside the tubes D E, is a covering, G, of enameled leather, or other suitable material, impervious to air, forming a chamber, *c*.

The upper side of the sole, between the perforated plates B C, is covered with a strip of flannel, 6, or other suitable material, and the said plates are covered by perforated leather pieces, *d e*, to keep the foot or stocking of the wearer from contact therewith, and to protect the plates from rust.

When the foot of the wearer presses flatly down upon the whole surface of the sole both of the elastic tubes are compressed, and, there being no thickness of pasteboard above them, the sole is not of more than ordinary thickness.

The covering G may be dispensed with, and a chamber, *c*, formed between the sole secured to the boot and the pasteboard inner sole, without departing from the spirit of my invention.

It will be seen, from the foregoing construction, that, as the heel and toe of the foot alternately bring the weight of the wearer upon the tubes under them, they are compressed and expanded, so that the air surrounding the foot is forced down through the perforated plates B C and perforations *a b*, in the inner sole, into and through the tubes D E, to the chamber *c*, which is thus alternately exhausted and filled, thereby insuring a continuous current of air, of a uniform temperature, between the foot and the boot or shoe, and providing a perfect ventilation, which, in a great measure, carries the perspiration away from the foot, while the body of air within the chamber affords a soft and elastic cushion thereto.

Claim.

What I claim as my invention, and desire to secure by Letters Patent, is—

The application of one or more elastic tubes D E to the inner sole of a boot or shoe, for the purpose set forth.

Also, an inner sole, provided with perforations *a b*, perforated plates B C, elastic tubes D E, and with or without a covering, G, substantially as and for the purpose set forth.

Witness my hand this 5th day of March, A. D. 1870.

EDWARD W. PARISH.

Witnesses:

N. W. STEARNS,

GEORGE E. BELTON.