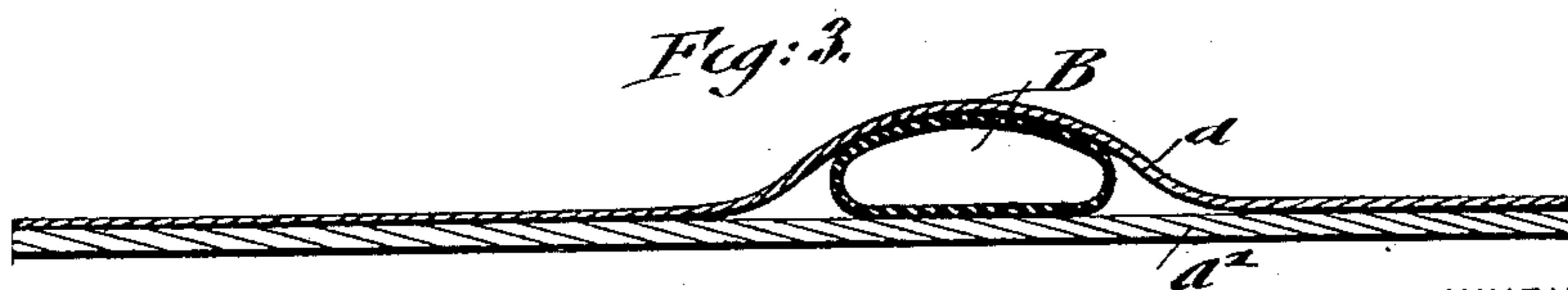
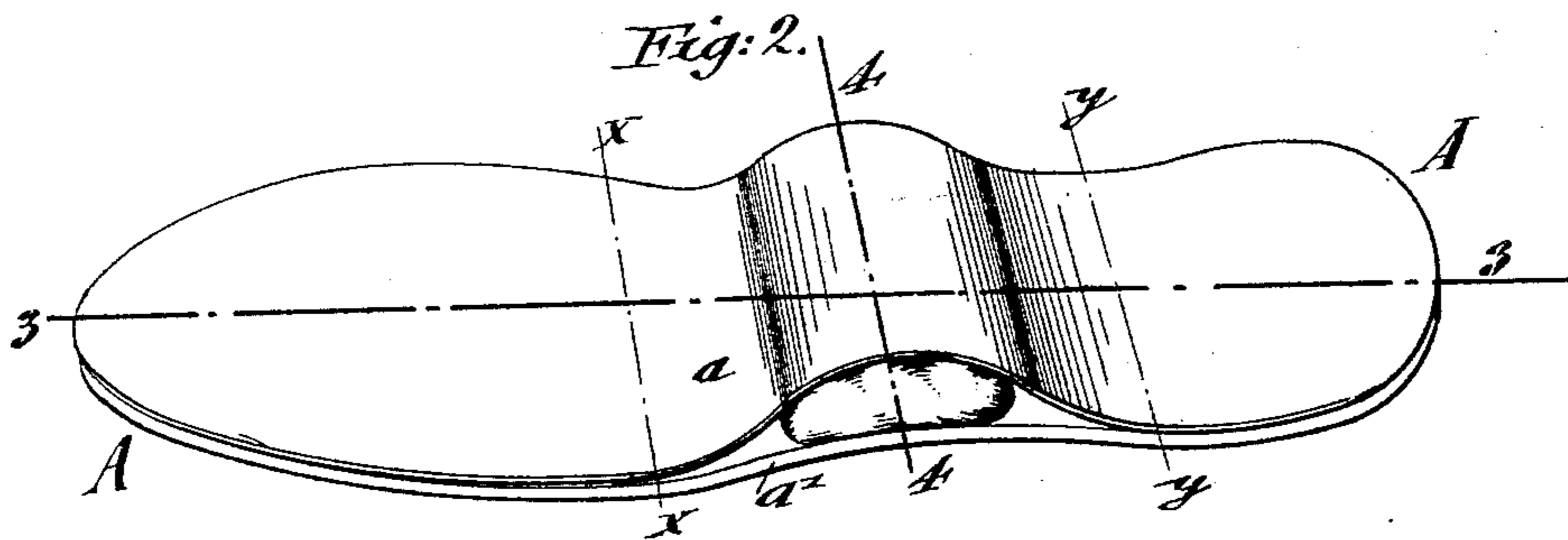
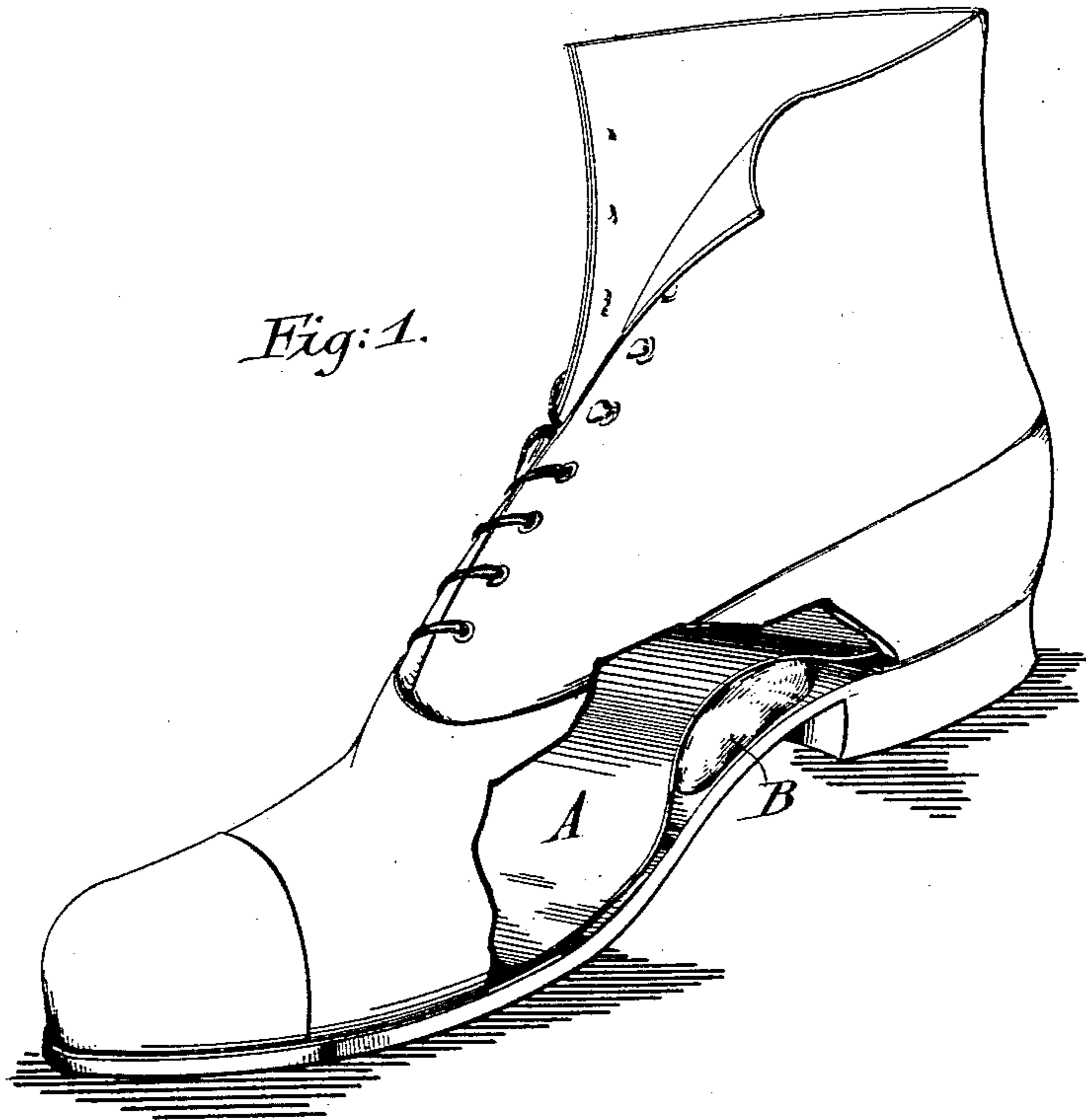


No. 632,529.

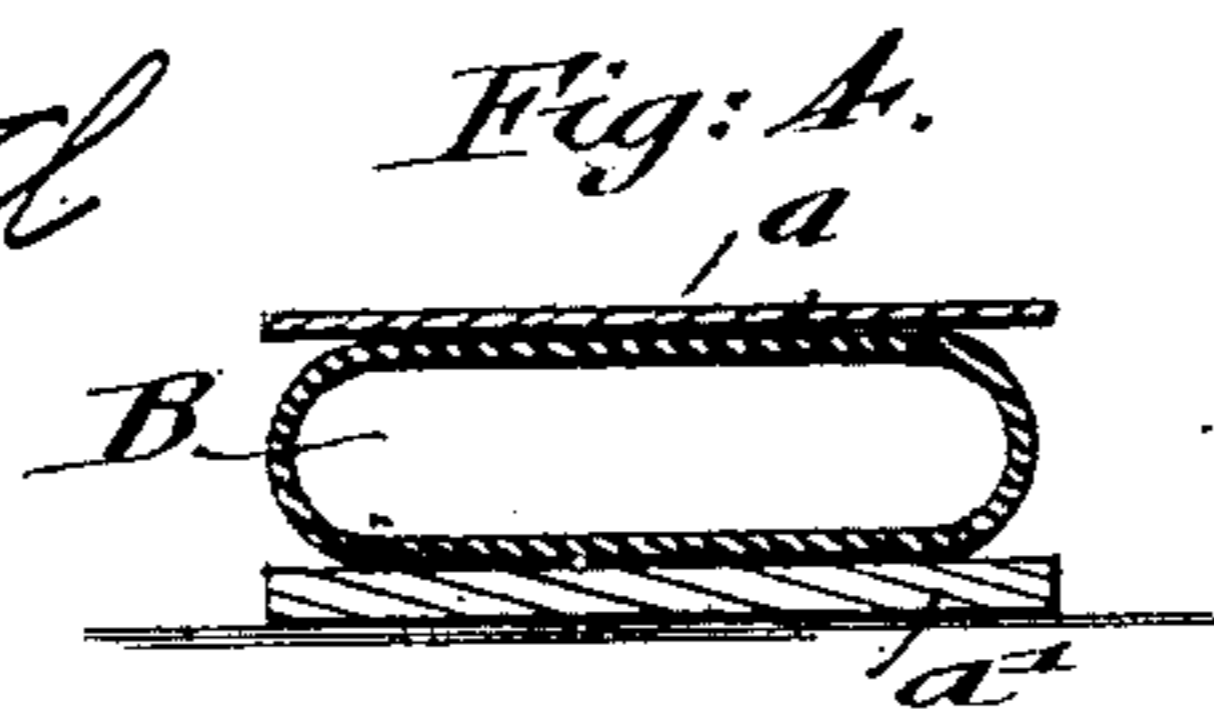
Patented Sept. 5, 1899.

A. KORWAN.
PNEUMATIC INSOLE.
(Application filed Jan. 3, 1899.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

ANTON KORWAN, OF NEW YORK, N. Y.

PNEUMATIC INSOLE.

SPECIFICATION forming part of Letters Patent No. 632,529, dated September 5, 1899.

Application filed January 3, 1899. Serial No. 700,892. (No model.)

To all whom it may concern:

Be it known that I, ANTON KORWAN, a citizen of the United States, residing in the city of New York, in the borough of Queens and State of New York, have invented certain new and useful Improvements in Pneumatic Insoles, of which the following is a specification.

The object of this invention is to furnish an improved pneumatic insole which may be placed in the boot or shoe below the foot and which is so constructed that a pneumatic cushion is located below the hollow of the foot, so as to support the same and produce by the alternate compression and expansion a motion of the air below the sole of the foot, so that the heating of the same and the inconveniences arising therefrom to persons afflicted with "burning" feet are to a considerable extent obviated or alleviated.

The invention consists of an insole comprising a lower layer, an air-tight cushion located upon and extending transversely of and entirely across the same at its narrow portion below the hollow of the foot, and an upper layer upon said lower layer and cushion, said layers being disconnected from each other for a short distance each side of said cushion, so as to form air-passages between the layers at each side of the cushion.

In the accompanying drawings, Figure 1 represents a perspective view of a shoe having a part of the upper removed, so as to show my improved pneumatic insole. Fig. 2 is a perspective view of the insole itself. Fig. 3 is a vertical longitudinal section on line 3 3, Fig. 2; and Fig. 4 is a vertical transverse section of the same on line 4 4, Fig. 2.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the sole portion of my improved pneumatic insole, which is composed of two layers of leather, canvas, or other suitable material, the lower layer *a'* being made, preferably, of greater thickness than the upper layer *a* and of the same or a different material from the upper layer, as may be desired. At the narrow portion of the sole, which is the part located below the hollow of the foot, is interposed between the two layers *a a'* a pneumatic cushion B, which is made of rubber or other suitable material and which corresponds in width to the narrow portion of the insole and which is of such a height as to fill up the

space below the hollow of the foot. The cushion or air-chamber is closed at both ends, and by the alternate compression and expansion produced in walking the unconfined air in the shoe is caused to circulate through the air-passages at each side of the cushion.

In place of making an entire sole that extends from the toe to the heel the front and the heel can be cut off according to the dotted lines *xx* and *yy* of Fig. 2, as some people, especially those who like loosely-fitting shoes, would object to the insertion of a complete insole. In this case the shortened insole would accomplish the same result. The shortened insole is retained in the shoe by reason of the greater width of the insole at its ends on lines *xx* and *yy* than at its center, in which respect it corresponds with the shape of the shoe.

The advantages of my improved pneumatic insole are, first, that the cushion supports the hollow of the foot and contributes to ease in walking; and, second, the alternate compression and expansion of the pneumatic cushion produces the movement of the air below the sole of the foot from the hollow toward the front and rear ends of the shoe, so that a cooling action is exerted on the sole of the foot, which is especially beneficial to persons whose occupation compels them to stand or walk a great part of the time. My improved insole alleviates these inconveniences to a considerable extent and forms a comparatively cheap remedy for this purpose.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

An insole, consisting of a lower layer, an air-tight cushion located upon and extending transversely of and entirely across the same at its narrow portion below the hollow of the foot, and an upper layer upon said lower layer and cushion, said layers being disconnected from each other for a short distance each side of said cushion, so as to form air-passages between the layers at each side of the cushion, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ANTON KORWAN.

Witnesses:

PAUL GOEPEL,
M. HENRY WURTZEL.