(No Model.)

L. R. EASTMAN.

VENTILATED SHOE.

No. 485,180. Patented Nov. 1, 1892.

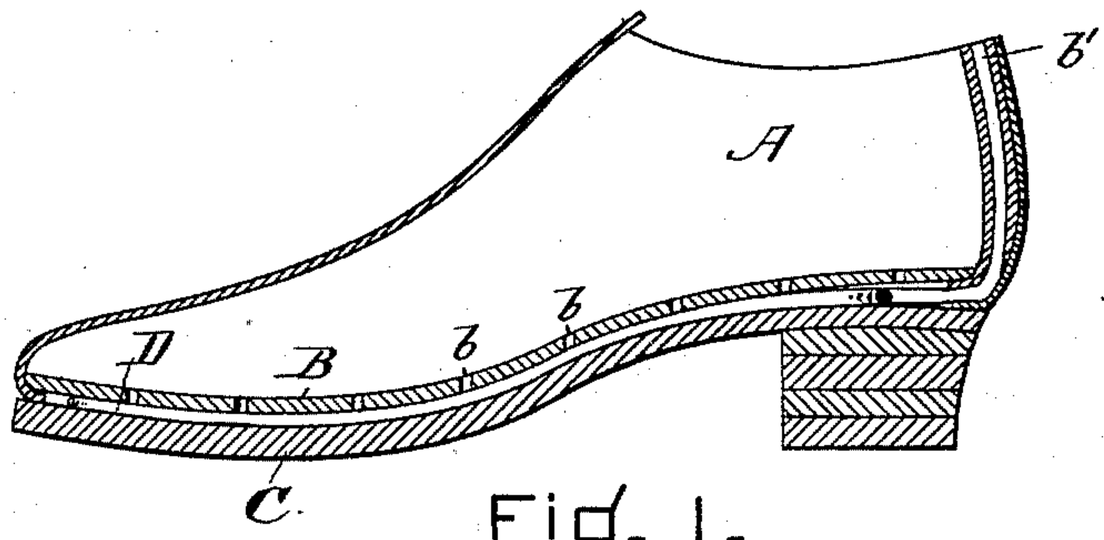

Fig. 1.

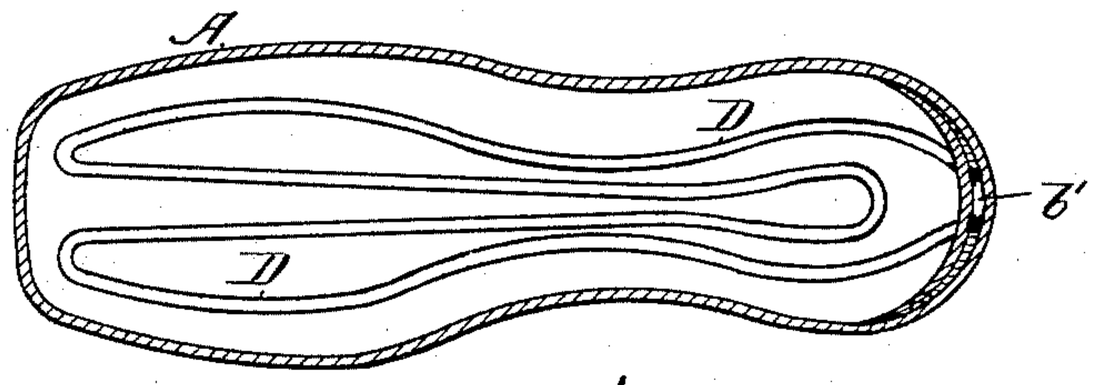

Fig. 2.

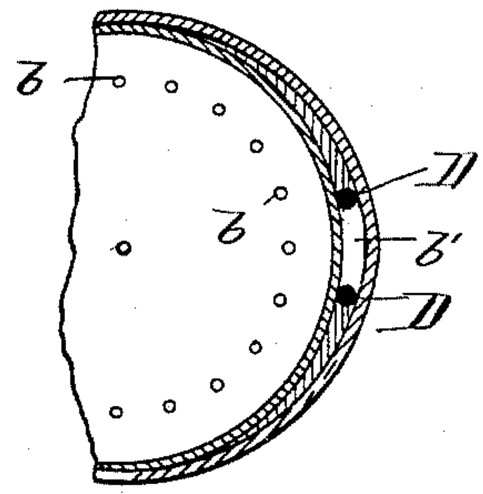

Fig. 3.

WITNESSES.
H B Leach
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LUCIUS R. EASTMAN, OF BOSTON, MASSACHUSETTS.

VENTILATED SHOE.

SPECIFICATION forming part of Letters Patent No. 485,180, dated November 1, 1892.

Application filed November 13, 1891. Serial No. 411,767. (No model.)

To all whom it may concern:

Be it known that I, LUCIUS R. EASTMAN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Shoes, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of my invention is to provide a flexible ventilator for boots and shoes. Said ventilator is inserted between the bottom and insole and is formed by bending steel or other wire in the shape of the sole, leaving longitudinal spaces for the circulation of air. The insole is formed with perforations over and opening into the spaces between the lengths of wire. An opening is formed in the counter leading to the top of the shoe for the entrance of fresh air. Said opening communicates with the air-spaces. Another object of my invention is to provide a flexible shank for the boot or shoe. This is done by contracting the wires at the shank of the boot or shoe. By this form the ventilator performs the function of a steel shank. The ventilator can be made with latitudinal bends, if desired; but I prefer the above-described form. I attain these objects by the mechanism shown in the accompanying drawings, in which—

Figure 1 represents a longitudinal section of a shoe embodying my improvement. Fig. 2 is a plan of the bottom sole with the metallic ventilator in place. Fig. 3 is an enlarged transverse section.

Referring to the drawings, A represents a shoe; B, an insole, which may be of the usual form, except that it has a number of perforations *b*.

D, Figs. 1 and 2, shows the metallic ventilator arranged in such a manner that the spaces between its lengths will be under the perforations *b* in the insole.

C, Figs. 1 and 2, is the bottom sole, upon which rests the metallic ventilator D.

b', Figs. 1, 2, and 3, show the air-space in the counter for the entrance of fresh air. This air-space is formed by bending each end of the wire D into a space cut out of the counter, as shown.

The operation is as follows: In the act of walking the foot is expanded and contracted as the pressure is put on and taken off. A bellows or piston action is formed and the air is drawn in and forced out of the air-space *b'*. Complete ventilation is secured by the air circulating between the lengths of wire and through the perforations *b* into the inside of the shoe.

I claim—

In a ventilated shoe, the combination of an insole having perforations *b* with a single piece of wire bent at the toe and heel, forming lengths, said lengths placed lengthwise between the inner and outer soles to form an air-space, the outside lengths conforming to the contour of the sole, all of the lengths contracted at the shank, and a portion bent nearly at right angles and inserted in a space formed by removing a part of the counter, forming an air-inlet passage *b'*, with its opening at the top of the counter for the admission of air, all constructed and adapted to operate substantially as described, and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 12th day of November, A. D. 1891.

LUCIUS R. EASTMAN.

Witnesses:
HENRY B. LEACH,
FRANK G. PARKER.