

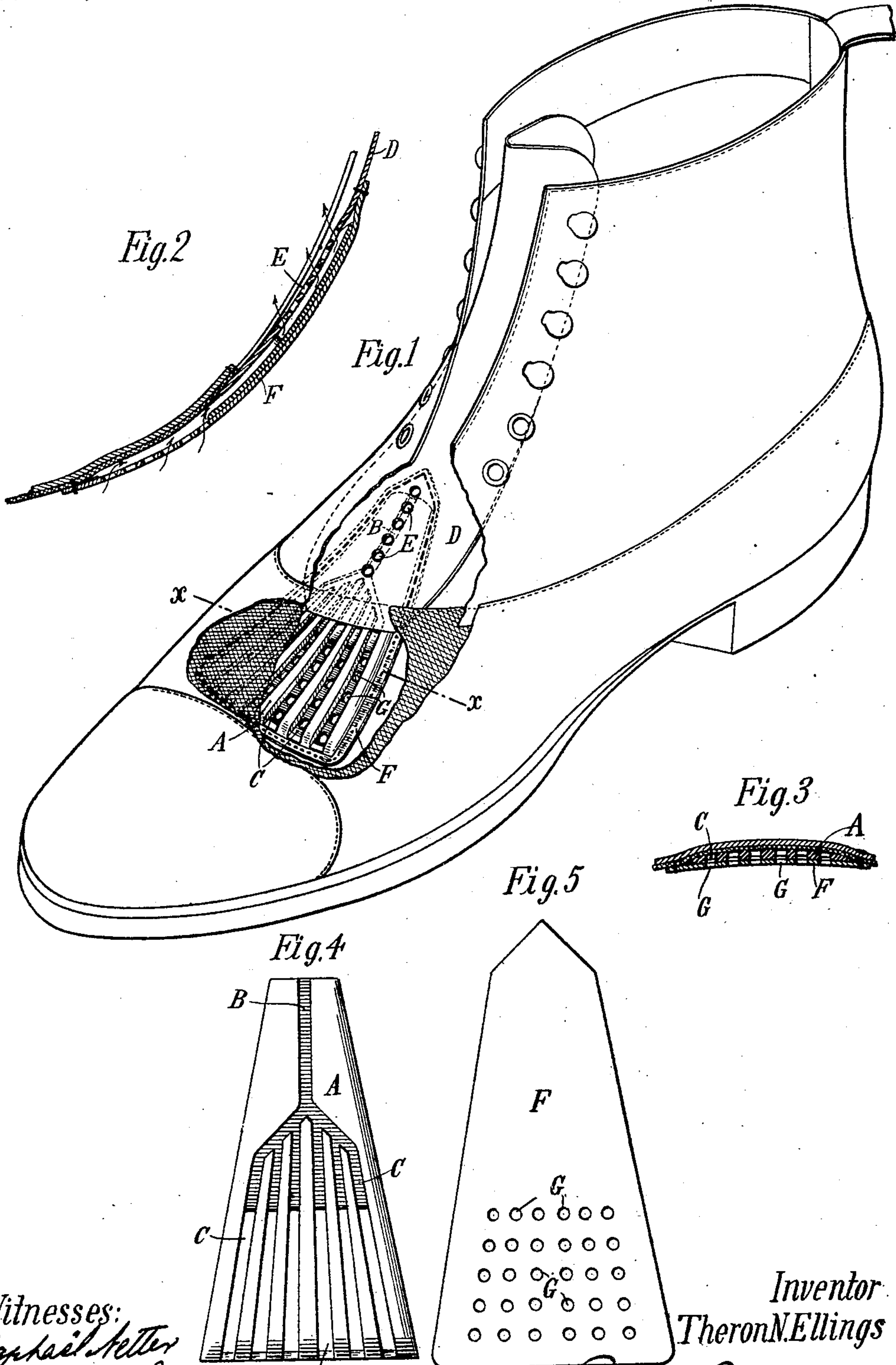
No. 682,182.

Patented Sept. 10, 1901.

T. N. ELLINGS.  
VENTILATED SHOE.

(Application filed Apr. 4, 1901.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## VENTILATED SHOE.

SPECIFICATION forming part of Letters Patent No. 682,182, dated September 10, 1901.

Application filed April 4, 1901. Serial No. 54,251. (No model.)

*To all whom it may concern:*

Be it known that I, THERON N. ELLINGS, a subject of the King of Sweden and Norway, residing at the borough of Manhattan, in the city, county, and State of New York, have invented certain new and useful Improvements in Ventilated Shoes, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

The object of my invention is to provide for the ventilation of the interior of shoes while on the feet by means which by the movement of the foot of the wearer will operate to expel air from and draw it into the interior of the shoe through a suitably-located opening or series of perforations generally in the part of the shoe over the instep.

In carrying out my invention I employ a strip or piece of rubber or any other suitable material containing longitudinal passages or channels, and this I secure to the inside of the upper in such position as to form ventilating-passages between the lower portions of the interior of the shoe and one or more openings at a sufficiently high point in the upper as not to admit moisture, the arrangement being such that the ordinary movements of the foot within the shoe will alternately draw in and expel air through the ventilating-passages.

The invention may be carried out in many specifically different ways, all embodying the same principle; but I prefer in applying the improvement to the ordinary form of laced shoe to proceed as follows: I mold or otherwise form of rubber or any other suitable material a substantially triangular strip or piece, containing on one side a groove or channel extending from the apex and then branching into a series of divergent channels, which near the base of the triangular piece extend entirely through the body of the piece, forming a series of slots therein. This piece I secure to the base of the tongue of a shoe so that the wider or base portion will extend down beneath the vamp to a point approximately over the toe-joints of the foot. Over the piece I sew or otherwise secure a strip of thin soft leather or other suitable material of substantially the same shape and containing

at its lower or wider portion a series of perforations. Over the groove or channel in the narrow portion of the ventilating-piece which is attached to the tongue I punch in the latter one or more perforations, thereby completing a free passage for air between the outside of the shoe and the interior portion under the vamp. With this arrangement as the leather of the vamp between the instep and toe is alternately creased and straightened out by the movement of the foot the air is alternately forced out and drawn in by a bellows-like action through the aforesaid ventilating-passages.

It will be understood that the improvement is applicable to any kind of boot or shoe and that when there is no tongue, as in button-shoes, the ventilating-piece may be secured directly to that portion of the boot or shoe which covers the instep. The particular embodiment of the invention herein described is selected as the most convenient for purposes of illustration and will be described by reference to the accompanying drawings.

Figure 1 is a view in perspective of a shoe to which the invention is applied, portions of the leather being cut away to show the ventilating-piece. Fig. 2 is a longitudinal section of a portion of the shoe over the instep on a line through the middle of the ventilating-piece. Fig. 3 is a transverse section of the same on line *xx* of Fig. 1. Fig. 4 is a plan view, on an enlarged scale, of the upper side of the ventilating-piece, and Fig. 5 is a plan view of the leather covering-strip for the ventilating-piece.

In its preferred form the ventilating-piece A is a flat strip of rubber or other suitable material of substantially the shape shown in Fig. 4. In its upper surface is a groove or channel B, which branches out into the divergent channels C. From about the middle of the piece to near its end these channels C extend entirely through the piece, either continuously or at close intervals. The upper or narrow portion of the piece *a* is secured to the under side of the tongue D, and a series of perforations E are punched in the tongue over the groove B.

F is a strip of thin soft leather or other suitable material, which is sewed to the tongue



and the vamp of the shoe over the ventilating-strip, as shown. A series of perforations G are punched in this strip over the slotted portion of the piece A, and in this way it will  
5 be seen that air-passages are formed from the part of the shoe below the instep through the channels in the piece A and out through the perforations in the tongue or instep. When the foot is moved, the alternate contraction and expansion of the air-space within  
10 the shoe operates to force air out and draw it in through these channels. By this means moist air is expelled from the inside of the shoe and a perfect ventilation of the shoe  
15 secured.

What I claim as my invention is—

1. The combination with a shoe, of a ventilating-piece provided with channels or grooves and attached to the inside of the upper of the  
20 shoe and extending downward beneath the vamp, to form ventilating-passages between the inside of the lower or vamp-inclosed portion of the shoe and one or more perforations at a point in the instep, as set forth.

25 2. The combination with a shoe, of a ventilating-piece provided with channels or grooves and applied to the inside of upper of the shoe, and extending downward beneath the vamp, and a strip of leather or other suitable material secured over said piece, the said strip hav-  
30 ing perforations therein over the channels in

the ventilating-piece, and the upper being perforated to complete the air-passages from the inside of the shoe, as set forth.

3. The combination with a shoe, of a ventila- 35  
ting-piece of rubber or the like having a channel or groove extending from one end and branching into a series of divergent channels, the said piece being applied to the inside of the upper of the shoe and forming  
40 ventilating-passages from the vamp-inclosed portion of the shoe to one or more perforations in the same in the instep portion, as set forth.

4. The ventilating attachment for shoes 45  
consisting of a strip of rubber or the like having a channel or groove A extending from one end and branching into channels B, the latter extending through the strip to form a series of slots near the lower and wider end  
50 of the piece, as herein set forth.

5. The combination with a shoe of the ventila-  
ting-strip of rubber or the like having a channel or groove A branching into chan-  
nels B, the latter extending through the strip  
55 to form a series of slots near its wider end, and the covering-strip of leather F having perforations therein, as set forth.

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