F. N. PAUL.

VENTILATED SHOE.

APPLICATION FILED AUG. 10, 1917.

1,264,122.

Patented Apr. 23, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

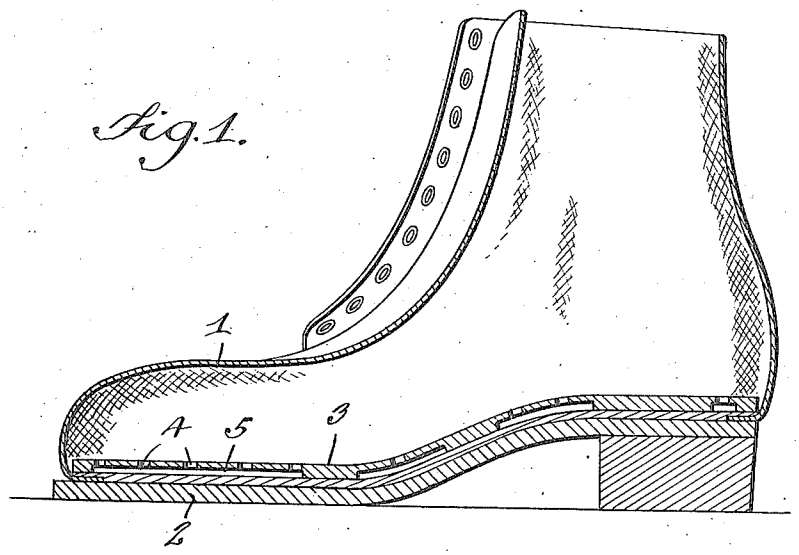


Fig. 2.

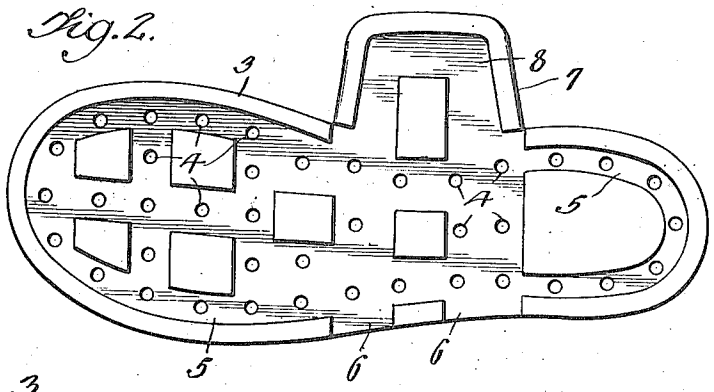


Fig. 3.

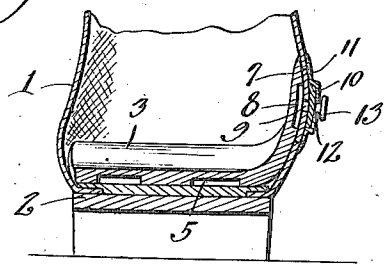
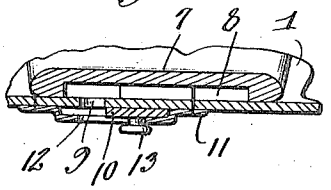


Fig. 4.



WITNESSES

E. Ordeman Jr.

N. L. Coleman

INVENTOR

F. N. Paul,

BY Victor J. Evans

ATTORNEY

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2 SHEETS—SHEET 2.

Fig. 5.

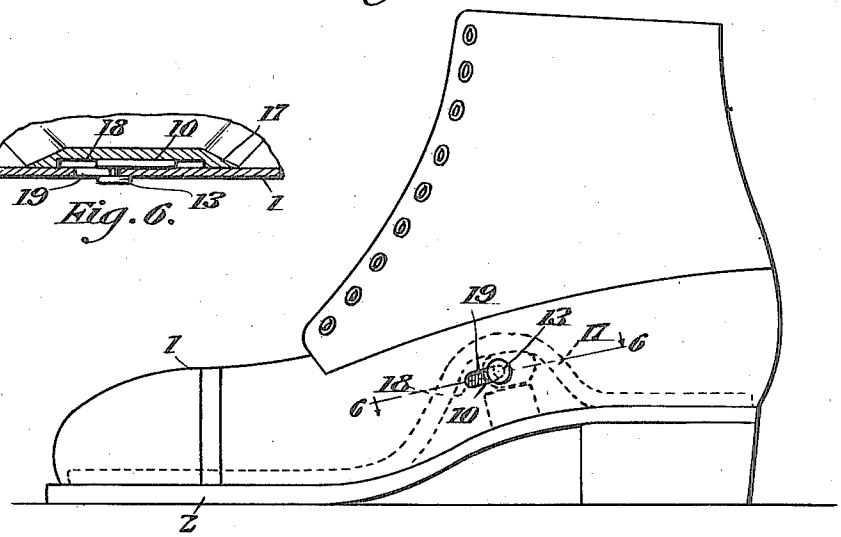


Fig. 6.

Fig. 7.

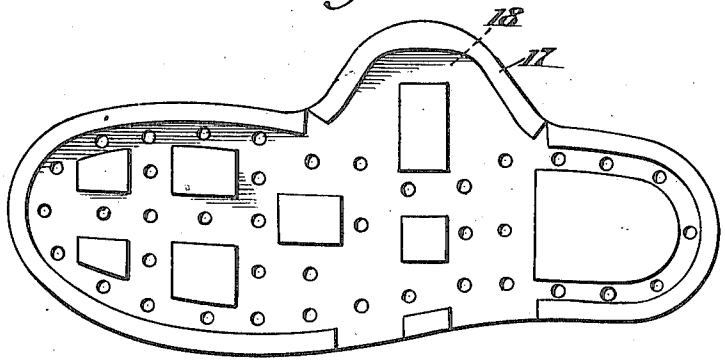
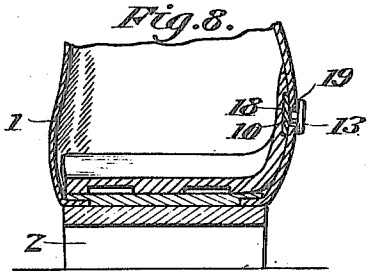


Fig. 8.



INVENTOR

F. N. Paul

WITNESSES

M. A. Phelps

N. L. Hollamer

BY Victor J. Evans

ATTORNEY

UNITED STATES PATENT OFFICE.

FREDERICK N. PAUL, OF FLAGSTAFF, ARIZONA.

VENTILATED SHOE.

1,264,122. Specification of Letters Patent. Patented Apr. 23, 1918.

Application filed August 10, 1917. Serial No. 185,546.

To all whom it may concern:

Be it known that I, FREDERICK N. PAUL, a citizen of United States, residing at Flagstaff, in the county of Coconino and State of Arizona, have invented new and useful Improvements in Ventilated Shoes, of which the following is a specification.

This invention is a ventilated shoe having means permitting a good circulation of air around the foot and in contact with the bottom thereof, and has for one of its objects the provision of a perforated inner sole channeled in its face next the outer sole to form air passages between the two soles which are in communication with the atmosphere.

Another object of the invention is to provide a shoe having a valve opening formed through the upper thereof and communicating with air channels formed between the inner and outer soles, said valve opening being closable by a sliding valve or cover.

Another object of the invention is to provide a combined ventilating sole and arch support.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter fully described, illustrated and claimed.

In the drawing,

Figure 1 is a longitudinal sectional view through a shoe showing the improved ventilating attachment.

Fig. 2 is a plan view showing the bottom side of the ventilating sole.

Fig. 3 is a transverse sectional view through the shoe and ventilating sole, showing the valve opening.

Fig. 4 is a horizontal sectional view through the valve and associated parts.

Fig. 5 is an elevation of the inner side of the right shoe, showing in dotted lines the position of the flap, and in full lines the knob on the valve and the slot in which the stem of the knob slides.

Fig. 6 is an enlarged horizontal section taken on the line 6—6 of Fig. 5, showing a slight modification in the construction of the valve casing.

Fig. 7 is a plan view of my improved inner sole, showing a slightly different shape of its flap from that illustrated in Fig. 2.

Fig. 8 is a vertical section through the valve in Fig. 5.

Referring in detail to the drawing by numerals, 1 designates as an entirety a ventilated shoe constructed in accordance with my invention, having an outer sole 2 and an inner ventilating sole 3 which is formed with a plurality of perforations 4 communicating with channels or passages 5 provided on the under side of the sole. These passages communicate with the interior of the shoe through the perforations 4 and the edge openings 6 as shown.

A tongue or flap 7 is formed on one side edge of the sole intermediate its ends and lies against the upper of the shoe at the inner side of the foot and serves admirably as an arch support. This flap is formed with the U-shaped air passage or channel 8 in its face next to the side of the shoe upper.

A valve opening 9 through the inner side of the shoe provides communication with the atmosphere and admits air into the U channel of the flap. The valve opening may, when desired, be closed or partly closed by a valve or cover 10 which is held in position against the exterior surface of the shoe by a guide or casing 11 having a central opening or slot 12 through which extends the handle or operating knob 13 of the valve.

In use, air will be drawn into and forced from the shoe by the working of the foot within the shoe and good ventilation established. Air flowing in through the valve opening will circulate through the channels in the flap and inner sole and find its way through the perforations 4 and edge openings 6, into contact with the foot. It will be noted that the valve being on the inner side of the shoe in the arch depression thereof is hardly noticeable and does not detract in any way from the appearance of the foot covering. The flap 7 besides acting as a conductor of the air to the channels of the inner sole also serves in the capacity of an arch support, and therefore is doubly useful.

Figs. 5 and 6 show a slight modification of the same general idea, to the extent that the exterior valve casing 11 of Fig. 3 is here omitted and the upturned portion or flap 17 itself constitutes the guide or casing for the valve. On its face next adjacent the upper it is channeled as best seen at 18 in Fig. 6, and the upper opposite said channel is pierced with a slot 19 through which pro-

jects the stem of the valve-knob 13. The valve 10 slides into the channel 18 inside the upper instead of outside the same as seen in Fig. 4, and therefore there is less exposed on the exterior of the shoe, as well shown in Fig. 5. This view and also Fig. 7 show that the flap 17 may unite with the edge of the inner sole on oblique lines rather than on abrupt lines, but in this respect I do not wish to be limited. Also I reserve the widest latitude as to the material of parts and to exact details beyond features covered by the appended claims.

From the foregoing description taken in connection with the accompanying drawing, it will be seen that I have devised a very practical, useful and meritorious ventilating shoe which will permit of a free circulation of air about the foot and which will adequately support the arch of the foot.

What I claim is:—

1. In a ventilated shoe, an inner sole formed with perforations extending therethrough and channels on its lower side communicating with said perforations, a flap formed on one edge of said sole having channels communicating with said first mentioned channels, said flap lying against the inner side of the shoe, and means controlling the admission of air to the channels of said flap.

2. In a ventilated shoe, an inner perforated sole having air channels formed on the lower side thereof, an arch supporting flap having air channels communicating with said first mentioned channels, the shoe being formed with an opening opposite the channels in the flap, a sliding valve for closing said opening, and a casing inclosing said valve.

3. In a ventilated shoe, the combination with the upper provided with a horizontal slot in one side just above the shank of the sole; of a perforated inner sole having channels in its lower face and an integral arch supporting flap at one edge lying against the upper and having channels next it and one of them overlying said slot, a valve slidably mounted in the last-mentioned channel, and a valve stem projecting through said slot.

In testimony whereof I affix my signature.

FREDERICK N. PAUL.