

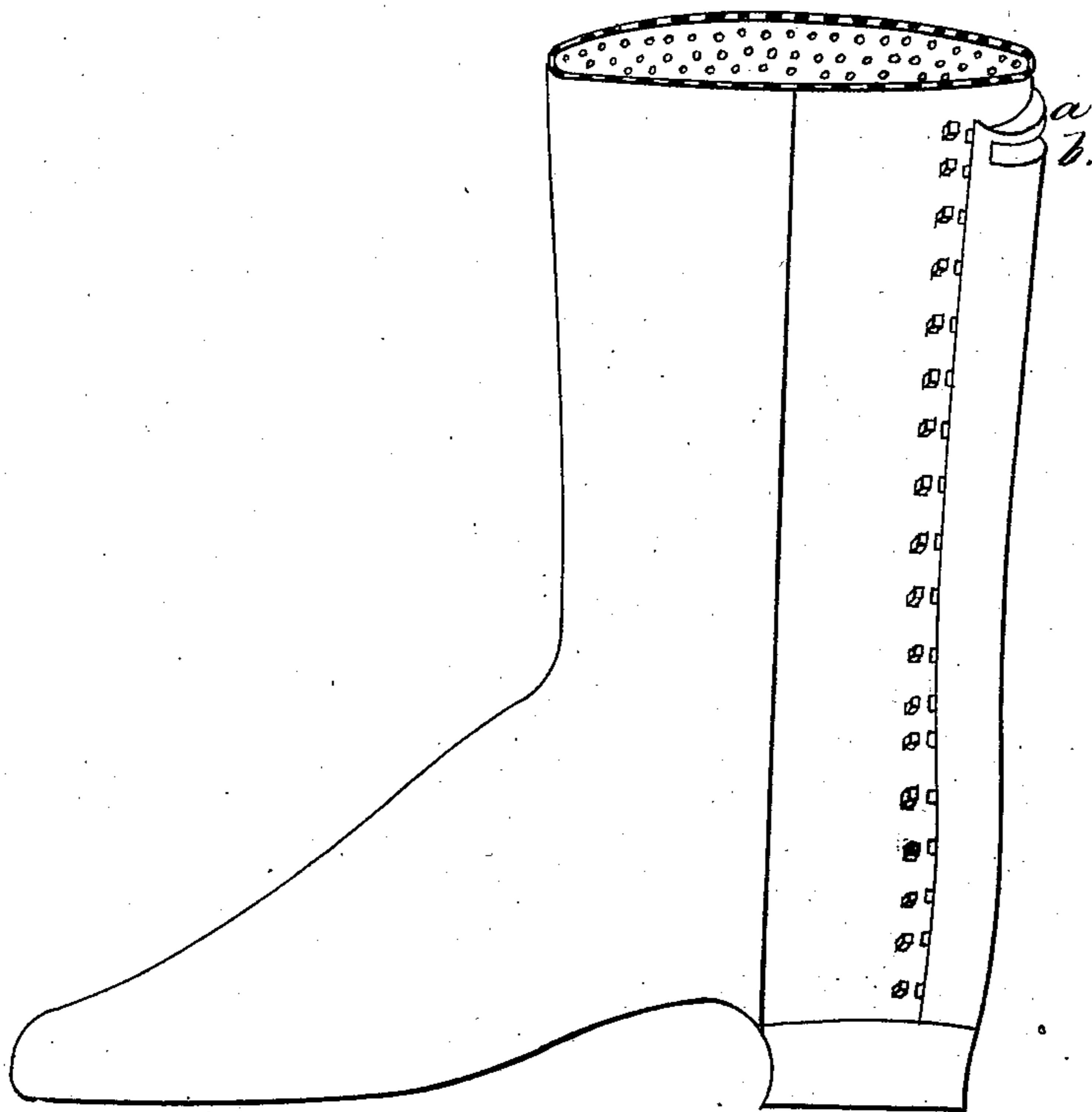
*B. H. Webb*

*Ventilating Boots and Shoes.*

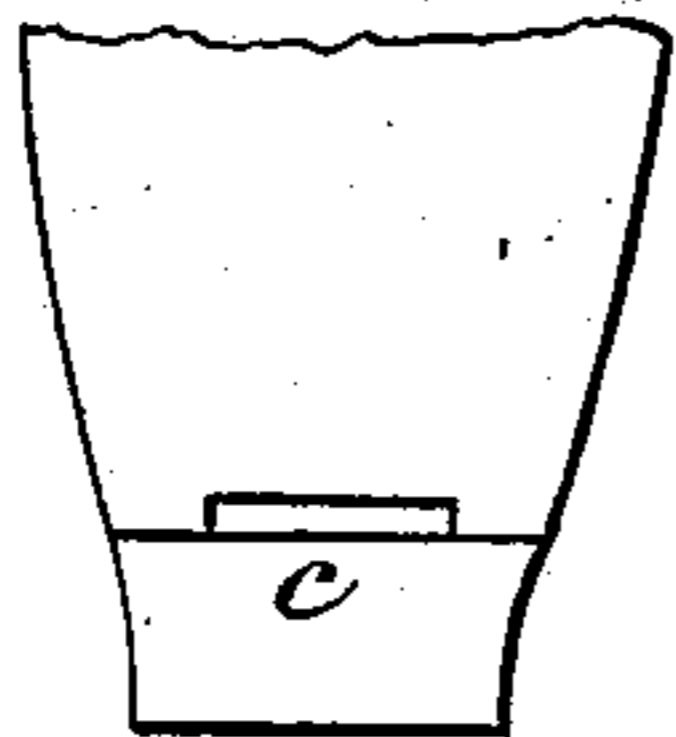
*N<sup>o</sup> 41,879.*

*Patented Mar. 8, 1864.*

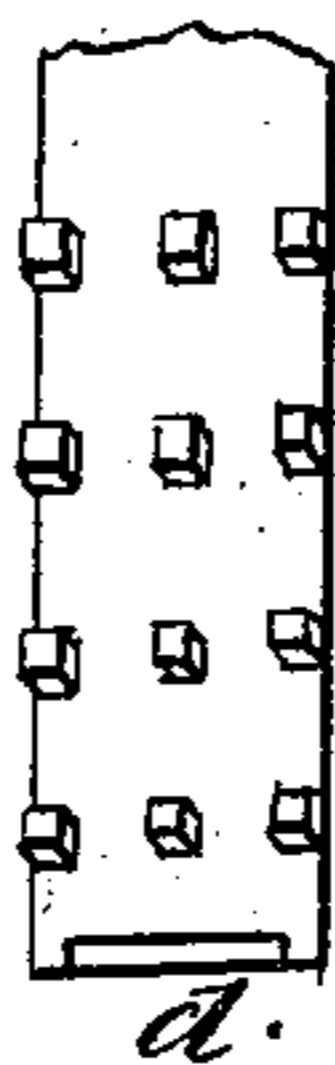
*Fig. 1*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*

*A. S. Webb*  
*A. B. Webb*

*Inventor:*

*B. H. Webb*

# UNITED STATES PATENT OFFICE.

BENJAMIN H. WEBB, OF NORTH CAMBRIDGE, NEW YORK.

## VENTILATING RUBBER BOOTS AND SHOES.

Specification forming part of Letters Patent No. 41,879, dated March 8, 1864.

*To all whom it may concern:*

Be it known that I, BENJAMIN H. WEBB, of North Cambridge, in the county of Washington and State of New York, have invented an Improvement in Ventilating Rubber Boots and Shoes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the combination of a tube with a boot that has channels all over the inside of it and an opening through it at the heel of the insole, the tube being on the outside of the back of the boot-leg and open at the top and connecting at the opening at the heel of the insole with the channels inside the boot, and kept from being in contact with the leg of the boot, except at the heel, by having small protuberances on the back of the tube, between the tube and boot-leg, so that air may circulate between the tube and leg of the boot to prevent the heat within the boot from heating the air in the tube, protuberances being formed each side of the tube and an opening in the front of the tube near the top, so that air may at all times readily pass up between the protuberances and into the tube, the channels in the boot being formed by attaching within the boot a lining made as a sock in the form and size of the inside of the boot and having protuberances on the outside of it, this lining being made of felt cloth or woven, the protuberances being about one-quarter of an inch square and about one-sixteenth of an inch thick, excepting on the sole, where they should be thicker and about one-eighth of an inch apart each way, holes being cut or woven in the lining at the corners of the protuberances, through which holes the perspiration may pass from the foot into the channels and be carried from the boot by air which will pass down the tube outside the boot and up between the protuberances inside.

The boot with only the channels inside, as with a stove having an opening only into the pipe and chimney, is very far from being well ventilated; but when, in addition to the channels, the opening at the heel of the insole is formed the boot is sufficiently ventilated. When, in addition to the channels and opening the tube is attached as I have devised, the cold air continues to pass into the boot as

readily as with only the channels and opening, there being no perceptible alteration in the ventilation. I attach the tube to the opening for the purpose of keeping the snow, mud, and water from the opening. The agent here of circulation with the channels and opening, with or without the tube, is the heat of the foot, heated air being lighter than cold, and rises, when cold air can readily pass under it to force it up. If the foot has no heat, there is no circulation, and no need of any, there being in such case no perspiration. If the heat of the foot is very great, there is much perspiration and much circulation. The circulation is in proportion to the perspiration, the perspiration being in proportion to the heat of the foot. In summer and warm climates the foot is warmer than in cold climates and seasons, as well as the air outside the boot, and this device procures sufficient ventilation for all seasons and climates.

Figure 1 represents the boot with the tube and lining and protuberances. At the left edge of the tube is represented a part of the protuberances upon the back of the tube. Still farther to the left is represented the protuberances at the side of the tube. The parts *a* and *b* represent the openings in the top of the tube. The small circles in the lining within the top of the boot represent the openings through which the perspiration passes from the foot into the channels formed by the protuberances on the lining. The dark spots around the upper edge of the boot represent the upper part of the protuberances upon the lining. Fig. 2 represents the lower part of the back of the boot with an opening at *c*. Fig. 3 represents the back of the lower part of the tube with the protuberances upon it and an opening at *d*. The tube is to be placed upon the boot so that the opening *d* of the tube will be upon the opening *c* of the boot.

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

The combination of a tube, or what is equivalent, with boots and shoes that are made of india rubber or other material requiring ventilation, substantially as and for the purpose set forth.

B. H. WEBB.

Witnesses:

A. S. WEBB,  
SAMUEL SKIFF.