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LE ROY G. POWELL

2,190,802

VENTILATED BOOT

Filed Oct. 24, 1938

Fig. 1.

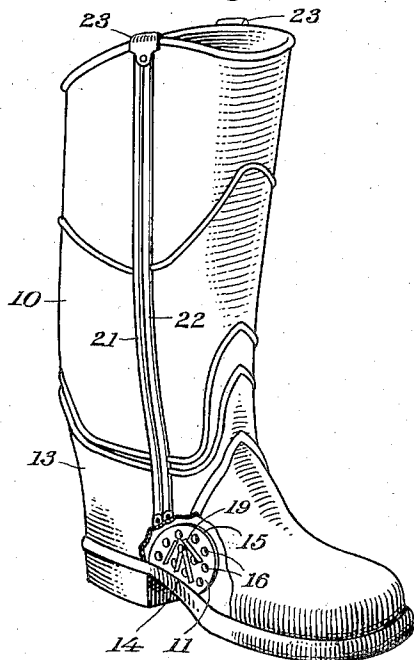


Fig. 3.

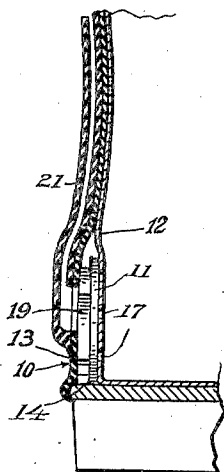


Fig. 2.

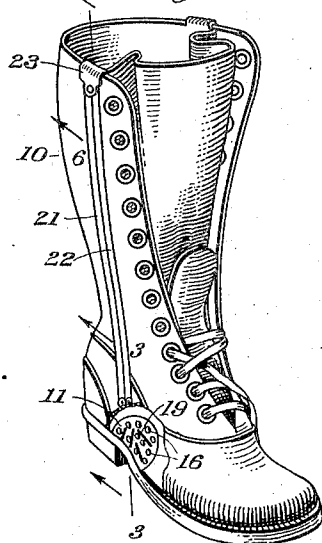


Fig. 4.

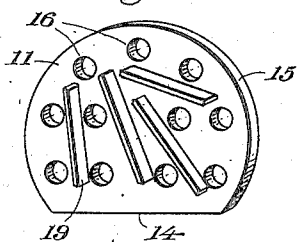
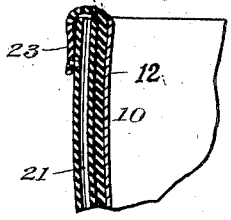


Fig. 5.



Fig. 6.



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## UNITED STATES PATENT OFFICE

2,190,802

## VENTILATED BOOT

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Application October 24, 1938, Serial No. 236,739

4 Claims. (Cl. 36—3)

My invention relates to improvements in ventilated footgear.

An important object of my invention is to provide a ventilated footgear that is simple in construction, efficient in operation and inexpensive to manufacture.

Another object of my invention is to provide a ventilated footgear that does not interfere in any way with the walking movement of the wearer.

Yet another object of my invention is to provide a ventilating means for footgear that is light in weight, and is, nevertheless, extremely durable in use.

Still another object of my invention is to provide a ventilated footgear that will promote greater comfort and healthier feet.

Other objects and advantages of my invention will be apparent during the course of the following description.

In the accompanying drawing, forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a perspective view of a device embodying my invention, and showing its association with a rubber boot,

Figure 2 is a perspective view of the same, illustrating its association with a leather boot,

Figure 3 is a fragmentary sectional view taken on the line 3—3 of Figure 2,

Figure 4 is a perspective view of the ventilating plate,

Figure 5 is an edgewise elevation of the same, and

Figure 6 is a fragmentary sectional view taken on the line 6—6 of Figure 2.

In the drawing, wherein for the purpose of illustration, is shown a preferred embodiment of my invention, the numeral 10 designates a boot of conventional design which is provided with a ventilating plate 11 built into the vamp of the boot at either side thereof in close proximity to the heel and securely fastened between the inner and outer walls 12 and 13 respectively.

The plate extends forwardly of the heel portion of the boot to substantially the front of the instep thereof and is provided with a flat bottom portion 14 which rests on the sole of the boot, and a curved upper periphery 15 which arches upwardly to a point slightly below and in front of the ankle and downwardly to the front of the instep. A multiplicity of apertures 16 in the plate 11 register with corresponding openings 17 in the inner wall 12 of the boot 10 and afford communication therethrough to substantially

cover the entire central portion of the foot at each side thereof. The elongated ribs 19 which project vertically from the outer plane surface of the plate 11 function to hold the outer wall 13 of the boot spaced away from the plate 11 and to form air spaces for pockets therebetween. A pair of air tubes 21 and 22 of rubber or the like extend upwardly from the air spaces, along the leg of the boot to the top thereof exteriorly of the outer wall 12, in a manner to permit the inside of the boot to remain perfectly smooth. As illustrated in Figure 3, the lower ends of the tubes open through the outer wall 13 substantially centrally of the plates and it may thus be seen that they afford air passages which communicate with the atmosphere at their upper ends and the air space adjacent the plate 11 at their lower ends. A flap 23 is provided adjacent the top of the boot which may be secured by a snap fastener 24 or the like, over the upper end of the tubes in cold weather, or folded inside the boot in hot weather, thus permitting fresh air to circulate around the foot.

As hereinbefore set forth, the ventilating plates cover substantially the entire middle portion of the foot from the heel to the front of the instep and upwardly to a point slightly below and in front of the ankle; this relatively large area has unrestricted communication with a plurality of air spaces or pockets defined by the ribs 19, and the tubes 21 and 22 permit a free circulation of air from the air pockets to the atmosphere. It is a well known fact that the middle portion of the foot moves appreciably during the normal walking movement, and such movements of the foot will obviously create disturbances of the air within the boot. When the heel of the foot is being elevated, it will rise slightly from the inner sole to permit air from the pockets defined by the ventilating plates to have access to the space between the bottom of the foot and the inner sole, and when the foot is moved to a flat position, the said air will be dispersed to all portions of the boot and any excess air will be discharged through the apertures 16 and 17 into the air spaces between the ribs 19 and out through the tubes 21 and 22. As the heel is again raised above the inner sole of the boot, the tubes will have supplied a fresh quantity of air to the pockets so that the suction created by the elevation of the foot from the inner sole of the boot will draw fresh air from the pockets of the ventilating plate.

It may thus be seen that the plates 11 are uniquely positioned so as not to interfere with the

free walking movement but that, by virtue of the air pockets defined by the ribs 19 on the plates, an adequate quantity of fresh air will be available at all times.

- 5 It is to be understood that the form of my invention, herewith shown and described, is to be taken as a preferred example of the same, and that while I prefer to use rubber tubes, I do not wish to be restricted to the same, and that various  
10 changes in the size, shape and arrangement of parts may be resorted to, without departing from the spirit of my invention or the scope of the sub-joined claims.

Having thus described my invention, I claim:

- 15 1. The combination with a boot of a ventilating plate disposed between the inner and outer walls of the boot at either side thereof and extending from the heel to substantially the front of the instep, said plate having a plurality of  
20 apertures therein which register with corresponding apertures in the inner wall of the said boot to afford exclusive communication with the above defined portion of the foot, ribs carried by the  
25 said ventilating plate functioning to maintain the outer wall of the boot spaced therefrom, and forming an air space therebetween, and air tubes extending along the leg of the boot, communi-  
30 cating at their lower ends with the above mentioned air space, and at their upper ends with the atmosphere.
2. The combination with a boot of a ventilating plate disposed between the inner and outer walls of the boot at either side thereof, at the instep portion of the foot, said plate having a  
35 plurality of apertures therein which register with corresponding apertures in the inner wall of the

said boot to afford exclusive communication with the above defined portion of the foot, ribs carried by the said ventilating plate functioning to maintain the outer wall of the boot spaced therefrom, and forming an air space therebetween, air  
5 tubes extending along the leg of the boot, communicating at their lower end with the above mentioned air space, and at their upper end with the atmosphere, and flaps secured to the boot adjacent the top thereof and sealing the upper  
10 end of the said air tubes from the atmosphere.

3. The combination with a boot of a ventilating plate having a plurality of apertures which communicate with the interior of the boot, a plurality  
15 of spaced rib members carried by the said ventilating plate forming air spaces therebetween so that the movements of the foot within the boot may draw air from the said spaces and into the boot, air tubes attached to said boot communi-  
20 cating with the atmosphere and with the above mentioned air spaces to maintain a fresh supply of air in the said spaces at all times, and means for sealing the end of the tubes communicating with the atmosphere.

4. The combination with a boot of a ventilating plate having a plurality of apertures which  
25 communicate with the interior of the boot, a plurality of spaced rib members carried by the said ventilating plate forming air spaces therebetween, so that the movements of the foot with-  
30 in the boot may draw air from the said spaces and into the boot, and air tubes attached to said boot communicating with the atmosphere and with the above mentioned air spaces to maintain  
35 a fresh supply of air in said spaces at all times.

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