Aug. 21, 1934. P. KAMRASS 1,971,223

WATERPROOF VENTILATOR FOR SHOES AND BOOTS

Filed June 22, 1931

Fig. 1.

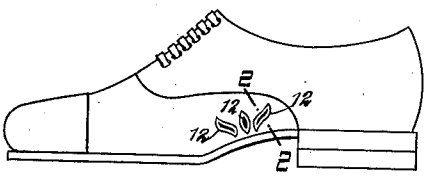


Fig. 2.

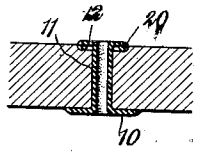


Fig. 3.

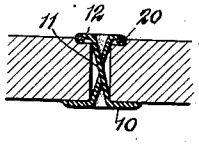


Fig. 4.

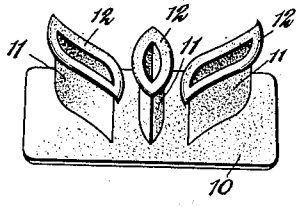


Fig. 5.

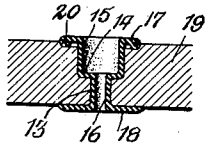


Fig. 7.

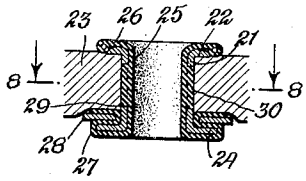


Fig. 6.

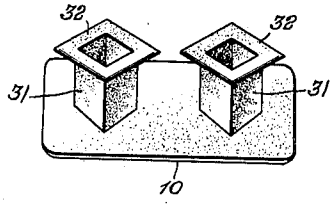


Fig. 8.

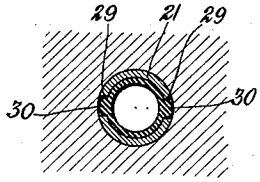
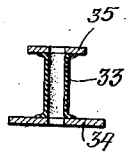


Fig. 9.



WITNESSES

Jos. R. Lamia

L. B. Marshall

INVENTOR

Philip Kamrass

BY Munn & Co.

ATTORNEYS

Patented Aug. 21, 1934 1,971,223

UNITED STATES PATENT OFFICE

1,971,223

WATERPROOF VENTILATOR FOR SHOES AND BOOTS

Philip Kamrass, New York, N. Y.

Application June 22, 1931, Serial No. 546,113

4 Claims. (Cl. 36—3)

This invention has for an object to provide a ventilator having a tubular flexible member which is inserted in an aperture in a shoe or boot, and which may be twisted when desired to close the opening therein. Preferably, the tubular member is made of elastic material and is provided with a base at the inner side and with a head at the outer side of the shoe or boot.

Another object of the invention is to provide a plurality of the tubular flexible members, on one base the tubular flexible members being arranged to form a design as desired.

Still another object of the invention is to provide the tubular flexible member with an enlarged portion having a head which connects it with the remainder of the tubular flexible member, so that the tubular flexible member when twisted will have a tendency to close at the head.

A further object of the invention is to provide a metal tube in which the tubular flexible member is disposed, the tubular flexible member having projections normally disposed in recesses in the metal tube, and which are forced in the direction of each other by the metal tube to close the tubular flexible member when the tubular flexible member is twisted. The metal tube has at its base means for securely holding the tubular flexible member to the base.

Additional objects of the invention will appear in the following specification in which the preferred form of the invention is described.

In the drawing similar reference characters refer to similar parts in all the views in which—

Figure 1 is a side elevation of a shoe provided with my ventilator.

Figure 2 is an enlarged fragmentary sectional view on the line 2—2 of Figure 1.

Figure 3 is a sectional view similar to the view illustrated in Figure 2, but with the tubular member twisted to close the opening therethrough.

Figure 4 is a perspective view illustrating a base with the three tubular members mounted thereon which are shown in place on a shoe in Figure 1 of the drawing.

Figure 5 is a sectional view illustrating another form of the invention.

Figure 6 is a perspective view illustrating still another form of the invention with two tubular members mounted on a base.

Figure 7 is a sectional view illustrating a modified form of the invention with the tubular member disposed in a metal tube secured to the shoe.

Figure 8 is a sectional view on the line 8—8 of Figure 7, and

Figure 9 is a sectional view illustrating another modified form of the invention.

By referring to the drawing, it will be seen that in the form of the invention illustrated in Figures 1, 2, 3, and 4, of the drawing, there is a base 10 which is disposed at the inner side of the shoe, and there are a plurality of tubular flexible members 11, which are secured to the base 10, and which are disposed in apertures in the shoe, the tubular members 11 having heads 12, which are disposed at the outer side of the shoe and which may be twisted as desired to twist the tubular members 11, and thereby close the openings therethrough, as illustrated in Figure 3 of the drawing. These flexible tubular members 11 are preferably elastic, although it will be understood that they may be made of other material. It will be understood that there are openings in the base 10 and in the heads 12 which communicate with the openings in the tubular members 11, so that when the tubular members are disposed, as illustrated in Figures 2 and 4 of the drawing, air may pass through the tubular members to the inner side of the shoe.

In Figure 5, there is shown another form of the invention where the tubular member 13 has a head 14 which serves to connect the ends of the tubular member, one of the ends, preferably the outer end 15 of the tubular member, having a greater inner diameter than the other end 16. The outer end 15 of the tubular member 13 has a head 17 with an opening through which communication is afforded with the tubular member. The inner end 16 of the tubular member 13 has a base 18 disposed against the inner side of the shoe member 19, the member 19 also having an opening through which the opening in the tubular member communicates. Preferably, the head 17 has a metal core 20 adjacent its periphery which serves to hold the head 17 in position. A similar metal core 20 is used in the head shown in the form of the invention illustrated in Figures 2, 3, and 4. When the form of the invention illustrated in Figure 5 of the drawing is used and the head 17 is twisted, the tubular member 13 has a tendency to collapse and close the opening at the head 14 in the tubular member.

In the form of the invention illustrated in Figure 7 of the drawing, a metal tube 21 is employed which has an outwardly extending head flange 22, engaging the outer side of the shoe member 23, and an outwardly extending base flange 24 disposed at the inner side of the shoe, a flexible, preferably an elastic, tubular member 25 being disposed in the metal tube 21. This

tubular member 25 has an outwardly extending flange head 26 disposed at the outer side of the metal flange head 22, the tubular member being disposed around the outwardly extending base flange 24 at 27, and being held in position by a washer 28 which serves to press the tubular member against the inner side of the shoe member 23 and the outwardly extending base flange 24.

The metal tube 21 has oppositely disposed recesses 29 in which are normally disposed projections 30 on the tubular member 25. It will be understood that with this construction, when the head 26 is rotated, it will serve to move the tubular member so that the projections 30 will be moved out of the recesses 29 and against the inner side of the metal tube 21 which with the twisting of the tubular member 25 will serve to close the opening therethrough. The inner end of the tubular member will be prevented from rotating by means of the washer 28 which holds it secured relatively to the metal tube 21 and the shoe member 23.

In the form of the invention illustrated in Figure 6, the tubular members 31 are square in cross section, and the heads 32 are also square. In other respects, the construction illustrated in Figure 6 corresponds with the construction illustrated in Figure 4 with the exception that there are only two tubular members 31 in the construction illustrated in Figure 6 of the drawing, and there are three tubular members 11 in the construction illustrated in Figure 4 of the drawing.

In the form of the invention illustrated in Figure 9, there is a tubular flexible member 33 which is preferably elastic, and there is a base 34 of another material, and a head 35 which may be of the same material as the base 34, or of still another material. It will be understood that with this construction, the base 34 may, if desired, be made of leather, and the head 35 may also be made of leather, but in some cases, the head 35 may be made of cloth. However, the materials of which the base 34 and the head 35 are constructed are of no moment, the construction in Figure 9 merely serving to illustrate the fact that the flexible or elastic tubular member 33 may be made of a material different from the base 34 or the head 35.

What is claimed:

1. In an article of the class described, a metal tube having a base at one end and a head at its other end with openings through the base and head with which the opening in the metal tube communicates, there being one or more recesses in the wall of the metal tube, a flexible tubular member disposed in the metal tube having a projection or projections normally disposed in the recesses respectively, the tubular member having a base secured to the base on the metal tube, and a head disposed at the first mentioned head.

2. In an article of the class described, a metal tube having at one end an outwardly extending flange base and at its other end an outwardly extending flange head, a flexible tube disposed in the metal tube and having a base bent around the first mentioned base, and a head disposed against the outer side of the said flanged head.

3. In an article of the class described, a metal tube having a base at one end and a head at its other end with openings through the base and head with which the opening in the metal tube communicates, there being one or more recesses in the wall of the metal tube, an elastic tubular member disposed in the metal tube and having a projection or projections normally disposed in the recesses respectively, the tubular member having a base secured to the base on the metal tube and a head disposed at the first mentioned head.

4. In combination with a shoe or boot having a ventilating aperture, a flexible resilient tubular member of such diameter and length disposed in the aperture and fixed at one end thereof that when the free end thereof is twisted with relation to the fixed end the aperture will be closed, and when returned to normal position the passage will be opened.

PHILIP KAMRASS.