

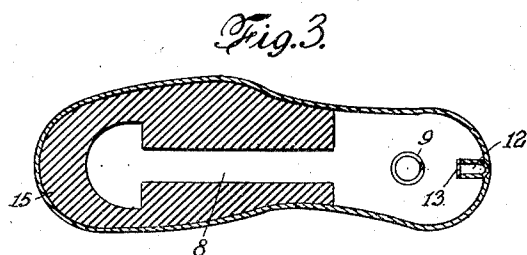
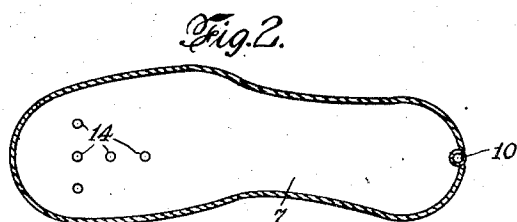
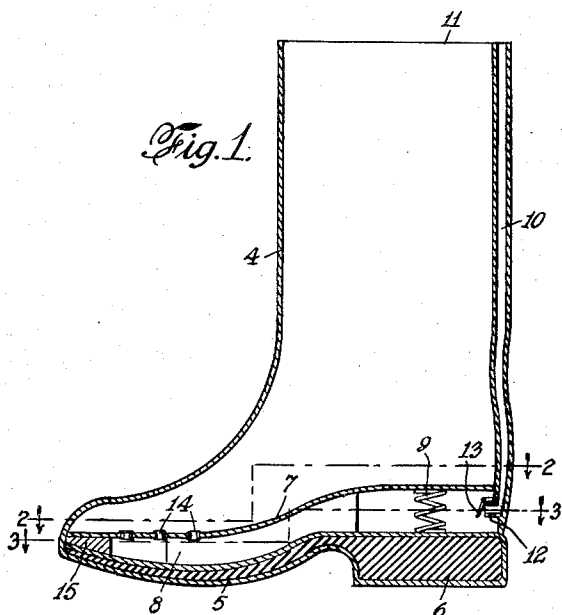
May 15, 1951

M. DUNKER

2,552,711

SOLE TO PERMIT CIRCULATION OF AIR IN RUBBER FOOTWEAR

Filed Sept. 22, 1949



INVENTOR.
MARTHA DUNKER
BY *Marvin R. Dunning*

ATTORNEY

UNITED STATES PATENT OFFICE

2,552,711

SOLE TO PERMIT CIRCULATION OF AIR IN
RUBBER FOOTWEAR

Martha Dunker, Corona, N. Y.

Application September 22, 1949, Serial No. 117,227

1 Claim. (Cl. 36—3)

1

This invention relates to ventilated footwear. More particularly the invention pertains to rubber boots and the like and means for aerating same. Further the invention relates to means for equipping boots in a manner to protect the feet of the wearer against cold air and dampness.

An object of the invention is to provide boots and other footwear with means for circulating air therethrough while same are in use. Another object is to provide for ventilating footwear by means which prevent water from entering to wet the feet and stockings of the wearer. It is also an object to provide footwear which is sanitary and healthful. Also it is an object to provide simple and inexpensive means for accomplishing the results set forth. Other objects and the advantages of the invention will appear as the specification is read in connection with the drawing forming a part thereof in which:

Figure 1 is an elevation, side view in section of a boot embodying the invention in a preferred form.

Figure 2 is a top view, in section, of Fig. 1, taken on the line 2—2.

Figure 3 is a top view of Fig. 1, in section taken on the line 3—3.

In the drawing is shown a boot comprising an upper portion 4 to which is suitably attached the sole 5 and the heel 6 all in a well known manner. Within the lower foot portion of the boot is a foot-plate 7 which may be composed of suitable resilient material such as leather, for example. This foot plate 7 is sealed along its outer edge to the inner face of the boot or shoe so as to form a space 8 between same and the inner face of the sole 5. Suitable resilient means such as the spring 9, serves to urge the plate 7 away from the sole 5 so as to maintain an air space 8, therebetween. Preferably, at the rear of the boot is formed a duct 10 which runs from the top 11 of the boot down to the inlet port 12 by means of which the duct 10 communicates with the space 8. This space 8, of suitable area is formed in the intermediate sole member 15. The inlet port 12, is equipped with a check-valve 13 which is adapted to be closed by the pressure of the air in space 8 when the plate 7 is depressed as for example by the foot of a person wearing the boot. As shown in Fig. 2 the plate 7, is provided with holes or air ports 14 and as shown in Fig. 3, the plate 7 may be further supported by a suitable resilient material, such as sponge rubber or the like, which may be formed to provide the air space 8 previously referred to. From the above it will be seen that when the boot is worn by a person, and steps are taken, the weight of the person will depress the plate 7 and the air in space 8, which because of the valve 13, cannot escape through the duct 10, upon being displaced is forced through the openings or ports 14 and must pass

2

upwardly and out of the boot at the top 11. Accordingly, as a person walks, air will be drawn into the boot to the space 8, through the duct 10 as the plate is returned to its normal position by the spring 9, and expelled from the space 8 through the ports 14 as the said plate 7 is depressed. In this manner, as the person wearing the boot walks, fresh air is pumped into the boot, circulated therethrough and ejected with each step taken. As the circulating air is drawn into the boot at the upper portion thereof 11, the foot is ventilated by the fresh incoming air and there is no danger of water entering in wet weather and storm. Boots constructed in accordance with my invention are healthy to wear, comfortable and sanitary. They are well suited to usage over long periods of constant service as well as for casual use.

Having illustrated and described a preferred embodiment of my invention it will be understood that structural changes may be made without departing from the spirit of the invention as set forth in the following claim, I claim as my invention:

In a ventilated boot, the combination of a boot upper having a sole attached thereto, an inner sole sealed at its edges to the interior of the foot of the boot and spaced above the inner surface of the sole, resilient means for retaining the inner sole normally in its spaced relationship, air vents in the inner sole in communication with the space between it and the inner surface of the boot sole, an air inlet duct in communication with said space and leading to the top of the boot upper and a valve in said duct which is adapted to be closed by the pressure of the air displaced through the said air vents when the said inner sole is angularly depressed.

MARTHA DUNKER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
426,495	Falkner	Apr. 29, 1890
1,335,273	Bruce	Mar. 30, 1920
1,469,291	Bojtos	Oct. 2, 1923
1,660,698	Williams	Feb. 28, 1928
2,190,802	Powell	Feb. 20, 1940
2,480,035	Lindstrom	Aug. 23, 1949

FOREIGN PATENTS

Number	Country	Date
89,045	Sweden	Apr. 13, 1940
105,616	Great Britain	Apr. 20, 1917