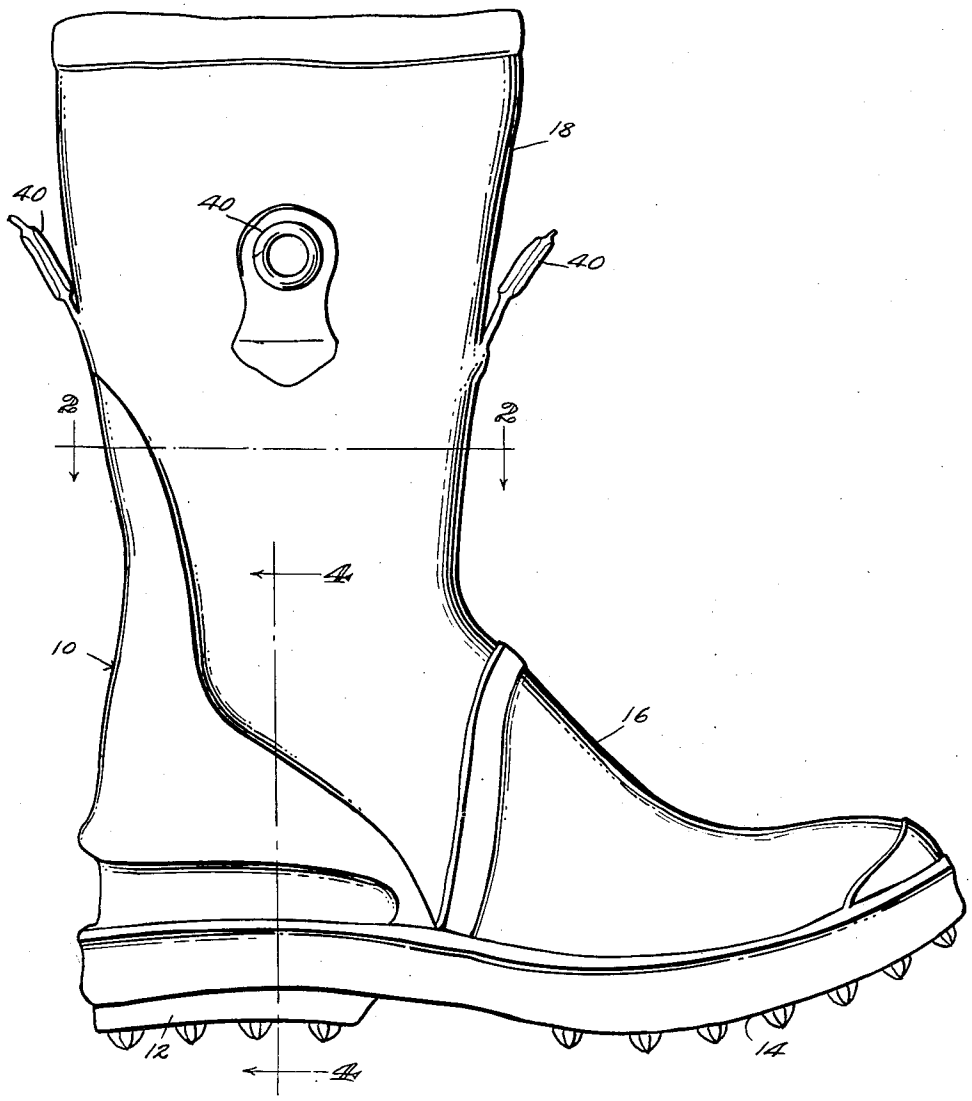
March 15, 1955 J. L. McGINN 2,703,937

VENTILATED BOOT

Filed July 14, 1952 3 Sheets-Sheet 1

Fig. 1.



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VENTILATED BOOT

Filed July 14, 1952 3 Sheets-Sheet 2

Fig. 2.

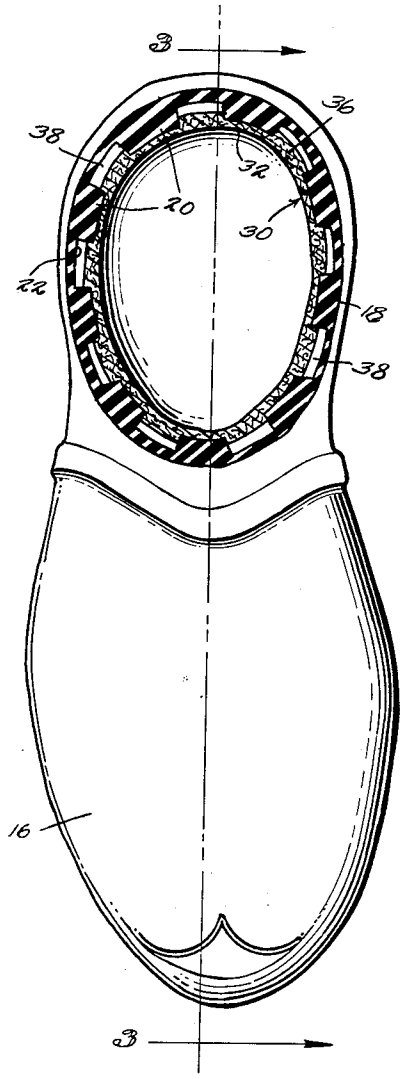
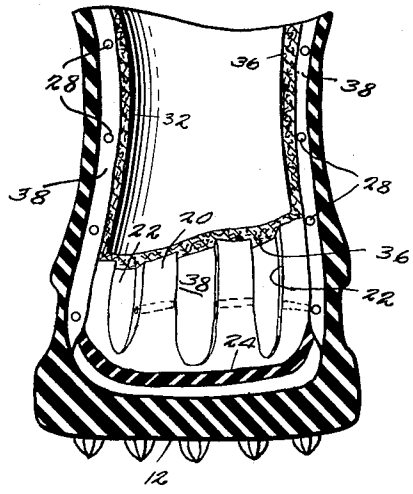


Fig. 4.



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Filed July 14, 1952 3 Sheets-Sheet 3

Fig. 3

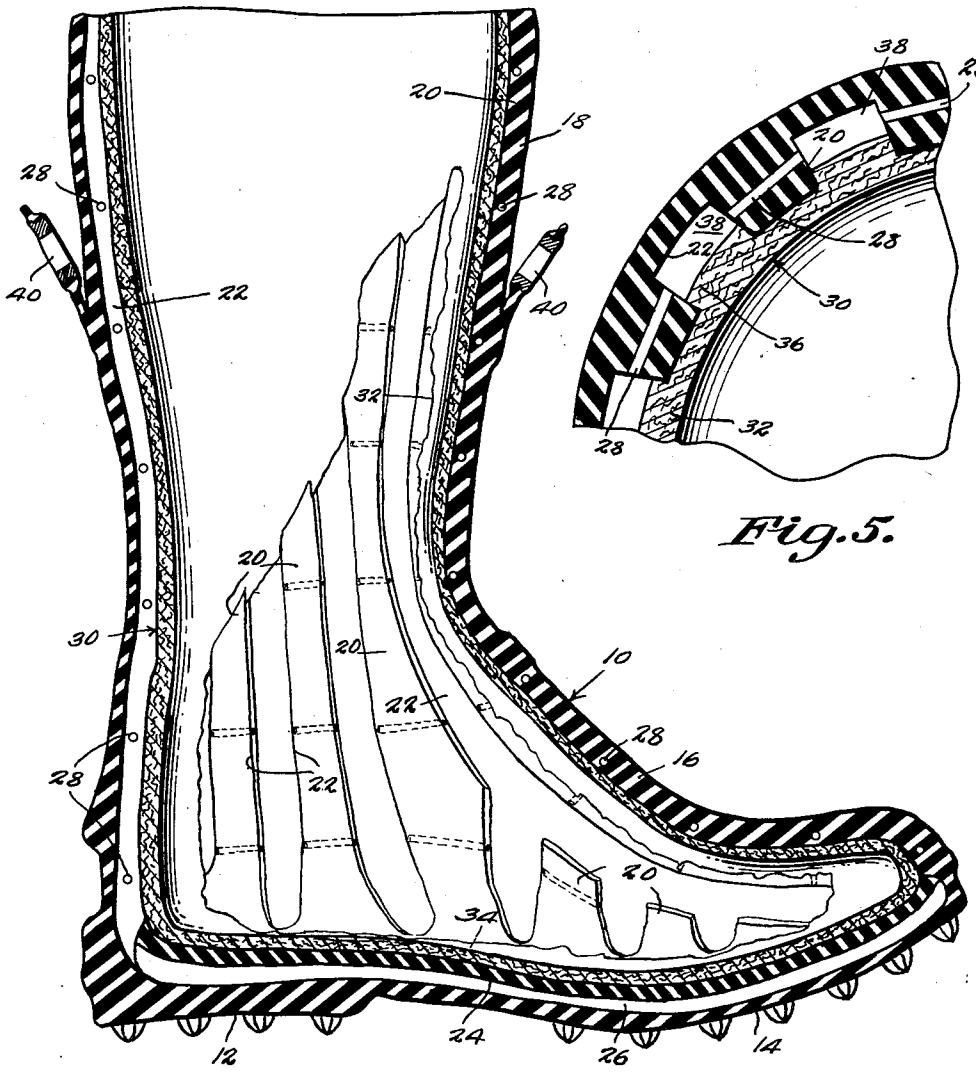


Fig. 5.

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United States Patent Office 2,703,937 Patented Mar. 15, 1955

2,703,937

VENTILATED BOOT

John L. McGinn, Arlington, Va.

Application July 14, 1952, Serial No. 298,679

2 Claims. (Cl. 36—3)

This invention relates to a boot, and more particularly to a boot of the type employed by combat troops, paratroopers, and others engaged in activities where protection from extreme temperatures is required.

Combat troops, paratroopers and others engaged in like occupations are subject to extreme temperature changes in which the feet in particular are subject to injury by freezing.

The primary object of this invention is to prevent the freezing of the extremities of combat troops or paratroopers and to assure the circulation of air from normally warm portions of the body of the user around the lower extremities of the limbs of the user.

Another object is to produce such circulation by the normal walking of the user.

The above and other objects may be attained by employing this invention which embodies among its features a boot having an outer heel and outer sole, an upper carried by the heel and sole and a leg encircling portion carried by the upper, spaced ribs carried by the boot upper and by the leg encircling portion of the boot and projecting inwardly therefrom, an insole carried by the ribs adjacent and in spaced relation to the heel and sole portions of the boot, and a felt lining within the boot and engaging the ribs to define with the walls of the ribs spaced ducts which communicate with the space between the insole and the sole and heel of the boot so that the motion of the foot of the wearer within the boot while walking will flex the insole and cause the air between the insole and the heel and sole of the boot to be circulated through the ducts.

Other features include spaced ribs on the felt lining for entrance into the spaces between the ribs on the boot to define with the spaces between the ribs of the boot ducts, which communicate with the space between the insole and the heel and outer sole, and spaced openings extending through the ribs and communicating with the ducts.

In the drawings,

Fig. 1 is a side view of a boot embodying the features of this invention,

Fig. 2 is a horizontal sectional view taken substantially on the line 2—2 of Fig. 1,

Fig. 3 is a vertical sectional view taken substantially on the line 3—3 of Fig. 2,

Fig. 4 is a fragmentary sectional view taken substantially on the line 4—4 of Fig. 1, and

Fig. 5 is a fragmentary enlarged horizontal sectional view through the boot leg.

Referring to the drawings in detail a boot designated generally **10** comprises a heel portion **12** to which is joined a sole portion **14** and connected to the heel and sole portions **12** and **14** is a conventional boot upper **16** which carries and from which projects upwardly a leg encircling portion **18**. Spaced longitudinally extending ribs **20** are carried by the leg encircling portion **18** and boot upper **16** and project inwardly therefrom to define between them spaced grooves **22**. Carried by the ribs **20** adjacent their lower ends is an insole **24** which as illustrated in Fig. 3 is spaced from the heel portion **12** and sole **14** to define a space **26** which communicates with the spaces **22** defined between the ribs **20**. Extending through the ribs **20** and communicating with the spaces **22** on opposite sides thereof are longitudinally spaced openings **28** which establish communication between adjacent recesses **22** as will be readily understood upon reference to the drawings.

Fitted within the boot is a lining designated generally **30** which is preferably of felt or like flexible insulating material. This lining comprises a body portion **32** shaped to conform to the foot of the user and has a sole portion **34** which is adapted to rest on the insole **24** of the boot. The sole portion **34** is integral with the body **32** and this body is provided with an upper portion, and a leg encircling portion conforming generally with the structure previously described. Carried by the upper portion and leg encircling portion of the body **32** are outwardly extending ribs **36** which are adapted to enter the spaces **22** between the ribs **20** and to define with the walls of the ribs and the upper and leg encircling portions **16** and **18** of the boot ducts **38** which communicate at their lower ends with the space **26** between the heel **12**, sole **14** and insole **24**. It will thus be seen that as the insole **24** is flexed through the walking of the person wearing the boot, the air in the space **26** will be circulated through the ducts **38** into and out of the area immediately above the top of the boot.

Suitable eyes **40** are secured to the leg encircling portion of the boot intermediate the ends thereof and are adapted to receive the lacing by which a trouser leg may be tightly bound around the upper end of the boot so as to establish communication between the space **26** and the interior of the trouser leg. In this way the air contained within the trouser leg which has been warmed by the trunk and upper portions of the legs of the user can be alternately pumped into and out of the space **26** so as to warm the foot and avoid the freezing thereof.

While in the foregoing there has been shown and described the preferred embodiment of this invention it is to be understood that minor changes in the details of construction combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

What is claimed is:

1. In a boot having an outer heel, an outer sole, an upper carried by the heel and sole and a leg encircling portion carried by the upper, means for circulating air around the foot of the wearer and venting the boot into a trouser leg encircling the top of the boot, said means comprising spaced apart longitudinally extending ribs carried by the upper and by the leg encircling portion of the boot and extending inwardly therefrom, an insole carried by the ribs within the boot and extending above and in spaced relation to the outer heel and outer sole of the boot with the spaces between the ribs communicating with the space between the insole and the outer sole and heel of the boot, a porous lining within the boot and spaced ribs carried by the lining and extending partially into the spaces between the ribs on the upper and on the leg encircling portion to cooperate therewith in forming therebetween air ducts which communicate with the space below the insole and open through the top of the boot.

2. The structure defined in claim 1 in which the ribs have longitudinally spaced transverse openings between the upper, said leg encircling portion and said lining extending therethrough and opening into the ducts.

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