

Aug. 4, 1970

F. FESL

3,522,668

SPORTS BOOT, ESPECIALLY SKI BOOT

Filed April 1, 1968

2 Sheets-Sheet 1

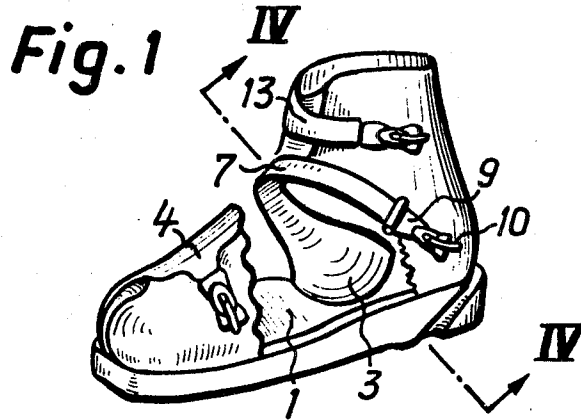


Fig. 2

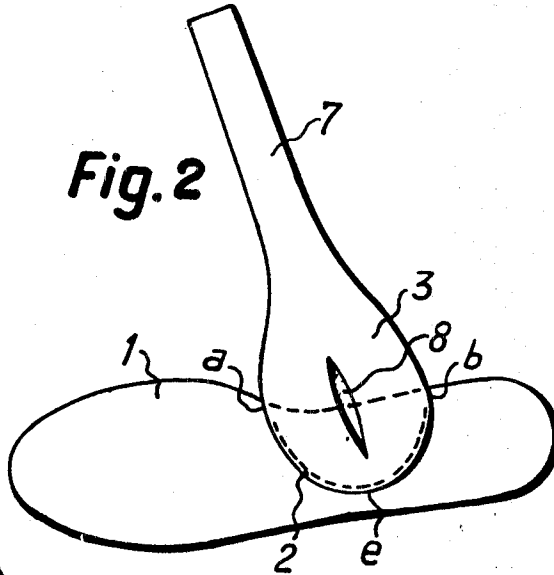
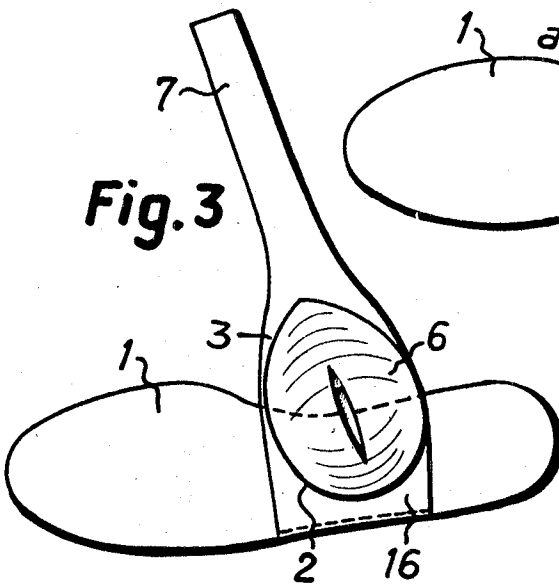


Fig. 3



INVENTOR
FRANZ FESL

Jacobs & Davidson

BY

ATTORNEY

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Fig. 4

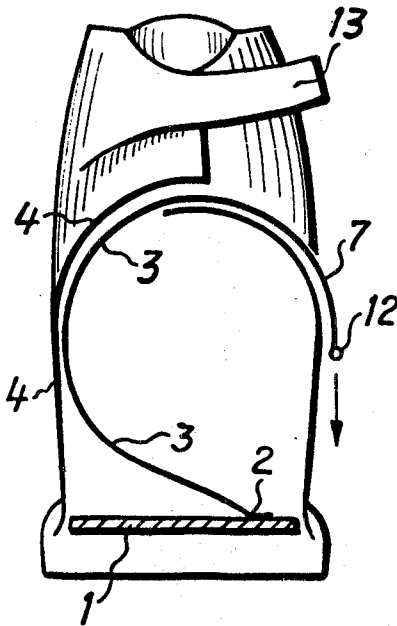


Fig. 5

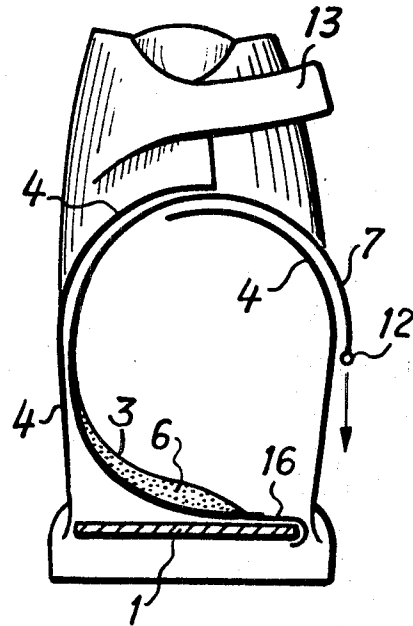


Fig. 6

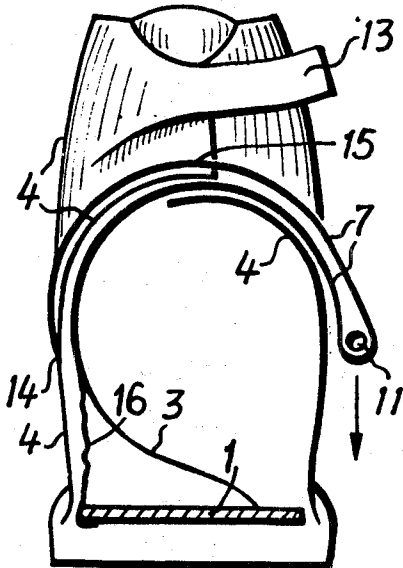
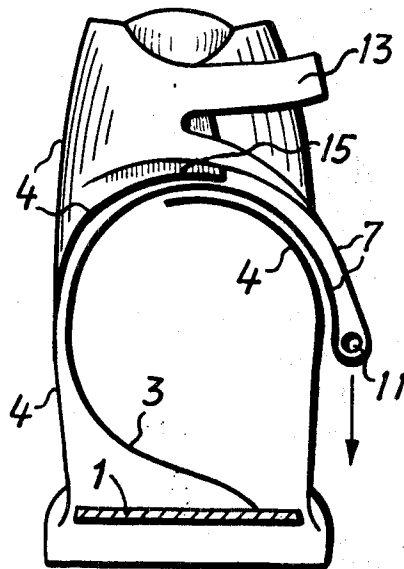


Fig. 7



INVENTOR

FRANZ FESL

BY

Jacobi & Davidson

ATTORNEY

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SPORTS BOOT, ESPECIALLY SKI BOOT

Franz Fesl, Dachauerstrasse 11,
Furstenfeldbruck, Germany

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F 52,078

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U.S. Cl. 36—2.5

11 Claims

ABSTRACT OF THE DISCLOSURE

A sports boot, in particular a ski boot, incorporating an inner sole and a support member for the arch of the foot depending from such inner sole and spaced from the heel. This support member includes an extended portion which provides a tension strap which can be guided to the opposite outer side of the boot.

BACKGROUND OF THE INVENTION

The present invention broadly pertains to footwear, and more particularly, relates to sports boots, especially ski boots.

SUMMARY OF THE INVENTION

This invention has for one of its prime objectives the construction of an improved sports boot which renders possible an ankle joint support at the foot of the user and produces at the foot a support pressure which acts opposite to the instep closure member so that the foot seats much better in the boot.

Another more specific object of the present invention pertains to an improved sports boot, in particular a ski boot, which is extremely comfortable to wear while at the same time providing for proper fitting of the foot in the boot.

Still a further object of the present invention relates to an improved sports boot which includes a support member for the arch of the foot and which can be fastened in such a way that the foot is securely and comfortably seated in the boot.

Now, in order to implement these and still further objects of the invention, which will become more readily apparent as the description proceeds, the inventive boot is generally manifested by the features that a support member which is spaced from the heel depends from the inner sole. This support member includes an extended portion which is constructed in the form of a tension or traction strap which can be guided to the opposite external side of the boot and there can be releasably fixedly retained by adjustable boot closure means. Owing to this construction, the foot is engaged from below at its central region and displaced rearwardly into the heel space or compartment of the boot, whereby the seating of the foot in the boot is improved. Furthermore, the attachment from the outside can be, for instance, regulated in accordance with the prevailing requirements by employing a traction closure member.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood, and objects other than those set forth above, will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

FIG. 1 is a perspective view of a ski boot designed according to the teachings of the present invention, with parts of the boot broken away to expose certain of the structure necessary to understand the underlying concepts of the invention;

FIG. 2 is a top plan view of the support member and the inner sole of a boot utilizing the invention;

FIG. 3 is a top plan view of a support member and the inner sole according to a modified form of the invention;

FIG. 4 is a cross-sectional view taken through the boot shown in FIG. 1, substantially along the line IV—IV thereof;

FIG. 5 is a cross-sectional view through the boot of FIG. 1, similar to the showing of FIG. 4, however, with the boot using a support member of the type shown in FIG. 3;

FIG. 6 is a cross-sectional view through the ski boot of FIG. 1, similar to the showing of FIG. 4, whereby, however, the tension strap is guided at the outside over a deflecting element in the form of a deflecting roller, and from this location is returned back over the instep region of the boot and secured to the upper portion of the boot located at the inside of the foot; and,

FIG. 7 is a cross-sectional view similar to FIG. 6, however, with the difference that here the tension strap which passes over the deflecting roller is guided back to the instep region and merges with the anklebone sleeve of the boot.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Describing now the drawings, and, initially referring to the sports boot shown by way of example in FIG. 1, it will be recognized that a support member 3 for supporting the arch and therefore the ankle joint of the foot is secured to the inner sole 1. It will be recognized that this support member 3 narrows in width so as to form an extended portion which defines a tension strap 7. This tension strap 7 is guided at the region of the instep of the boot towards the outside and is directed at an inclination rearwardly to a suitable boot closure member 10 which, for instance, operates on the principle of a pivotal tensioning lever, as such is well known in the art.

Furthermore, it will be seen that at the free end of the tension strap 7, there is provided a bracket 9 which renders possible a lengthwise adjustment of the tension strap 7. In this manner it is possible for the tension strap 7 to be more or less tensioned, as desired, from the outer side of the upper 4 of the boot. Furthermore, since the closure member or buckle 10 has a number of fixing or engagement locations for the tension strap 7, it is possible, in conjunction with the lengthwise adjustability of the tension strap 7, to adjust the latter to accommodate different foot sizes or dimensions.

As will be recognized by referring to FIG. 2, the attachment of the support member 3 to the inner sole 1, in the illustrated embodiment of this figure, takes place by means of a strip member 2 in arc-shaped fashion, that is to say, along the points *a-e-b*. Furthermore, the support member 3 is spaced from the heel portion and is disposed at the region of the arch where the footprint of a foot is smallest. A slit 8 provided at the support member 3 renders possible arching of the support surface, so that the support member 3 can properly come to bear against the natural arch of the ankle joint. Thus, it should be apparent that the support member 3 is only connected along the strip member 2 with the inner sole 1, in other words not along the entire surface. It should be further understood that in lieu of stitches or a seam it would be possible for the attachment to be carried out by employing a suitable adhesive.

Now in FIG. 3 there is shown a modified form of the invention in which the support member 3 is provided with padding or a cushion 6 at the region of the arch. In this case, a flap member 16 is extended to the oppo-

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site edge of the inner sole 1 and is flexed about the latter, as such is clearly shown by referring to FIG. 5.

In the embodiment shown in FIG. 6, the tension strap 7 is guided at the outside over a deflecting element, here shown in the form of a deflecting roller 11 provided for the boot. At this location of the deflecting roller 11 or any equivalent or similar type structure, the tension strap 7 is deflected back over the instep portion 15 of the boot to the oppositely situated upper portion, where such tension strap now extends rearwardly and is secured at location 14 with the upper 4.

In order to limit the tension which is exerted upon the arch, it is possible, according to FIG. 6, to provide a member 16 which is anchored to the inner sole 1, as shown, and in the stretched condition limits the tension exerted upon the arch. In the non-tensioned condition of this flexible member 16, the latter is loose and can deposit itself in folds.

A similar embodiment is shown in FIG. 7 in which the tension strap 7 is also flexed and guided back to the instep region 15 and connected with a strap member 13 provided at the anklebone sleeve portion of the upper 4. It has been found to be advantageous to employ for this purpose the lower strap member. However, it would also be possible to provide for this purpose the middle strap member or an upper strap member which, however, would require that the strap members cross one another.

Furthermore, it would be possible to produce the support member 3 and the inner sole 1 from a single member or piece, whereby it is necessary to observe that, in such case, then, the arc-shaped portion, which is defined or enclosed by the points *a*, *e*, *b*, is not adhesively connected with the lower sole, rather is freely disposed.

Finally, it should be mentioned that apart from ski boots, the inventive structure could also be employed for mountain shoes or boots, especially climbing boots, which can also be equipped with a lacing closure system.

While there is shown and described present preferred embodiments of the invention, it is to be distinctly understood that the invention is not limited thereto, but may be otherwise variously embodied and practiced within the scope of the following claims. Accordingly,

What is claimed is:

1. A sports boot, in particular a ski boot having an insole and a heel characterized in that a supporting member for the arch of the foot is spaced from the heel and includes an extension in the form of a tension strap, said supporting member being attached at least adjacent one side of said insole and said strap being guided in a downward direction to the opposite outer side of said boot; an releasable adjustable boot closure means on said opposite outer side of said boot cooperating with said strap to releasably fix said strap.

2. A sports boot as defined in claim 1, characterized in that said tension strap extends outwardly, downwardly and at an inclination toward the rear in the direction of said heel portion.

3. A sports boot, especially a ski boot, as defined in claim 1, wherein said sports boot includes an upper a part of which defines an instep portion, a deflecting element provided for said boot, said tension strap being guided about said deflecting element and being flexed in loop-like fashion back over the instep portion of the boot to the oppositely situated portion of the upper.

4. A sports boot, especially a ski boot, as defined in claim 1, wherein said sports boot includes an upper providing an ankle bone sleeve and an instep portion, a strap member provided at said ankle bone sleeve, a deflecting element provided for said boot, said tension strap extending about said deflecting element and being guided back in the direction towards said instep portion and at

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such location being connected with said strap member of the ankle bone sleeve.

5. A sports boot, especially a ski boot, as defined in claim 1, further including padding means provided for said support member.

6. A sports boot, especially a ski boot, as defined in claim 1, wherein said support member is constructed at said inner sole in the form of a substantially arc-shaped strip which extends towards the side of the inner sole which is located at the outside of the foot when inserted in the boot.

7. A sports boot, especially a ski boot, as defined in claim 1, wherein said support member is flexed about said inner sole.

8. A sports boot, in particular a ski boot having an insole and a heel characterized in that a supporting member for the arch of the foot is spaced from the heel and includes an extension in the form of a tension strap, said supporting member being attached at least adjacent one side of said insole and said strap being guided in a downward direction to the opposite outer side of said boot; and boot closure means on the opposite outer side of said boot cooperating with said strap to releasably fix said strap.

9. A sports boot, especially a ski boot, incorporating an inner sole, a support member for the arch of the foot depending from said inner sole and spaced from the heel, said support member including an extended portion providing a tension strap which can be guided to the opposite outer side of the boot and at such location is adapted to be releasably fixed by adjustable boot closure means, an upper, a part of which defines an instep portion and a deflecting element, said tension strap being guided about said deflecting element and being flexed in loop-like fashion back over the instep portion to the oppositely situated portion of the upper.

10. A sports boot, especially a ski boot, incorporating an inner sole, a support member for the arch of the foot depending from said inner sole and spaced from the heel, said support member including an extended portion providing a tension strap which can be guided to the opposite outer side of the boot and at such location is adapted to be releasably fixed by adjustable boot closure means, an upper providing an ankle bone sleeve and an instep portion, a strap member provided at said ankle bone sleeve, a deflecting element provided for said boot, said tension strap extending about said deflecting element and being guided back in the direction towards said instep portion and at such location being connected with said strap member of the ankle bone sleeve.

11. A sports boot, especially a ski boot, incorporating an inner sole, a support member for the arch of the foot depending from said inner sole and spaced from the heel, said support member including an extended portion providing a tension strap which can be guided to the opposite outer side of the boot and at such location is adapted to be releasably fixed by adjustable boot closure means, said support member being constructed at said inner sole in the form of a substantially arch-shaped strip which extends towards the side of the inner sole which is located at the outside of the foot when inserted in the boot.

References Cited

UNITED STATES PATENTS

2,539,026	1/1951	Mangold	36—2.5
2,785,480	3/1957	Maccarone	36—76 X
3,327,410	6/1967	Park et al.	36—2.5

FOREIGN PATENTS

225,507	3/1910	Germany.
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PATRICK D. LAWSON, Primary Examiner