

United States Patent

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[56] **References Cited**

UNITED STATES PATENTS

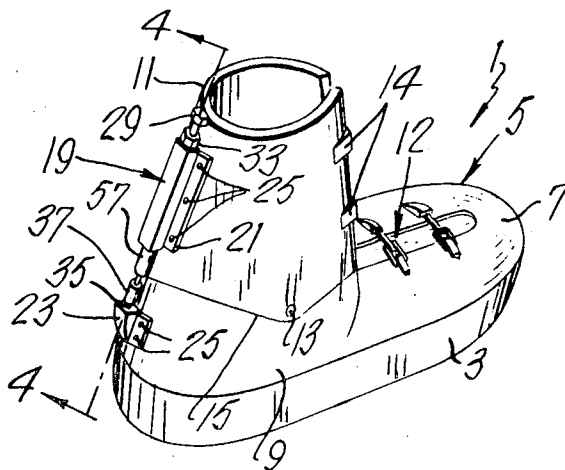
3,405,463	10/1968	Werner	36/2.5 AL
3,521,385	7/1970	Dalebout	36/2.5 AL

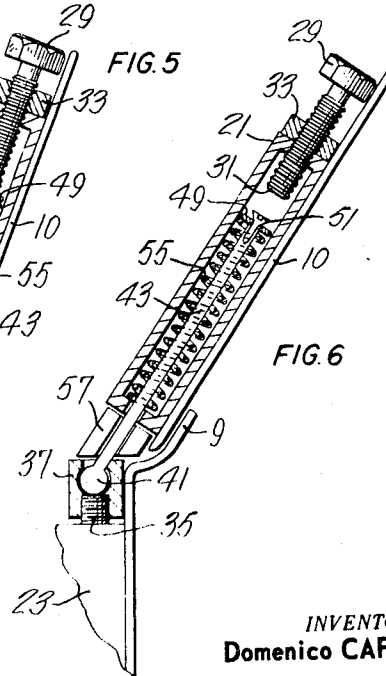
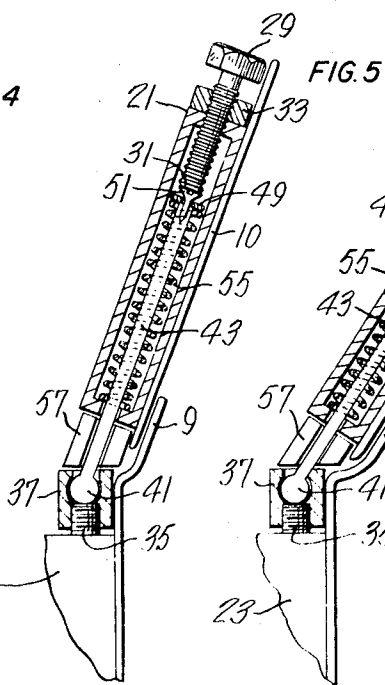
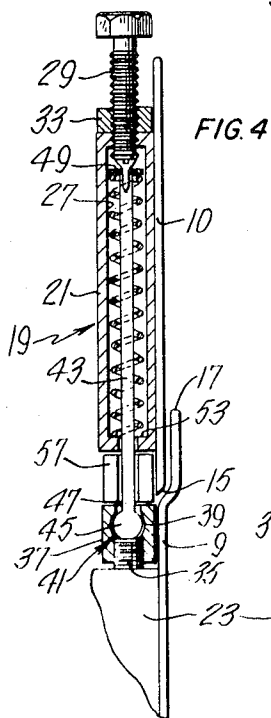
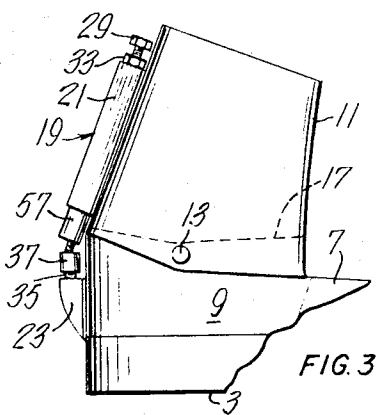
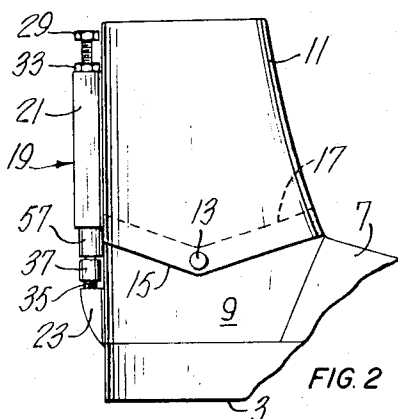
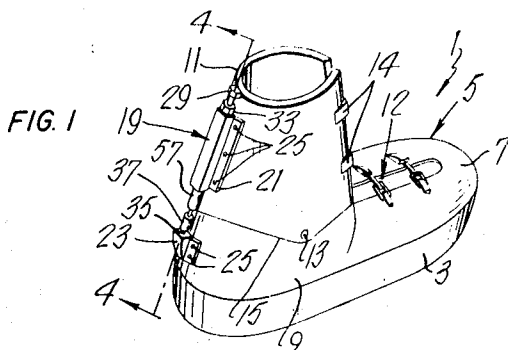
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[54] SKI BOOT HAVING A PIVOTED TOP
5 Claims, 6 Drawing Figs.

[52]	U.S. Cl.....	36/2.5 AL
[51]	Int. Cl.....	A43b 00/00
[50]	Field of Search.....	36/2.5 R, 2.5 AL

ABSTRACT: A ski boot having a top which can pivot toward and away from the toe of the boot. Means are provided for adjusting the angular position of the top of the boot relative to the lower part of the boot.





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SKI BOOT HAVING A PIVOTED TOP

BACKGROUND OF INVENTION

1. Field of Invention

This invention relates to an improved ski boot. More particularly, this invention relates to an improved ski boot having an upper, the top part of which is pivotably connected to the lower part of the upper. Means are connected between the top and the lower parts for adjusting the angular position of the top part relative to the lower part.

2. Description of Prior Art

Ski boots now used are made very stiff to better assist the skier in turning the skis. The more rigid boots still, however, must have a reasonably high top in order to provide proper support for the wearer. With the boots being made more rigid, and particularly when made from molded thermoplastic material, it is extremely difficult, if not impossible, for a person to bend from the ankles, as is usually required when skiing. The rigid high, top front edge of the boot does permit the leg to bend.

In an attempt to overcome this problem, boots are being made with the top of the upper formed to slant forward toward the toe of the boot so that the skier's legs are automatically bent at the ankle when wearing the boot and thus locked in the proper skiing position. However, since the top of the boot is in a permanent forward, slanted position, the boot, when made with a top slanted in one intermediate position, is not suitable for all types of skiers. For beginners, the boot is very uncomfortable, since the legs are forced into an unnatural position. They usually require a boot with a top having little forward slant. Excellent skiers require boots with an exaggerated forward slant.

SUMMARY OF INVENTION

It is therefore the purpose of the present invention to provide a ski boot having an upper top which can be adjusted to vary its slant toward the front of the boot to accommodate different types of skiers.

The invention further provides a boot whereby even after the top has been adjusted to have a specific slant toward the front of the boot, the top can, during skiing, be slanted even further toward the front of the boot by the skier's leg action, when desired.

The invention is particularly directed toward a ski boot comprising a sole and a two part upper, one upper part including a vamp and a quarter connected to the sole, the other upper part comprising a top for the boot. Means pivotably connect the top to the one upper part. Additional adjustable means are connected between the top and the one upper part for varying the position of the top relative to the one upper part about the pivot means.

BRIEF DESCRIPTION OF DRAWINGS

The invention will now be described in detail having reference to the accompanying drawings, wherein:

FIG. 1 is a schematic view of a ski boot having an adjustable top;

FIG. 2 is a partial side elevation view of the ski boot showing the top of the ski boot in one position;

FIG. 3 is a partial side elevation view showing the top of the ski boot adjusted to a second position where it leans toward the front of the boot;

FIG. 4 is a cross section view taken along line 4—4 of FIG. 1 with the top of the ski boot in the position shown in FIG. 2;

FIG. 5 is a cross section view of the ski boot taken along line 4—4 of FIG. 1 with the top of the ski boot in the position shown in FIG. 3; and

FIG. 6 is a cross section view similar to those shown in FIGS. 4 and 5, showing the position of the top of the ski boot when additional bending of the ankle is required.

DESCRIPTION OF PREFERRED EMBODIMENTS

The ski boot 1 shown in FIG. 1 includes a sole 3 and a two part upper 5. One part of the upper includes the vamp 7 and the quarter 9 of the boot, both of which are fixed to the sole 3. The other part of the upper comprises the top 11 of the boot. The top 11 is pivotably connected to the quarter 9. A rivet 13 or similar pivot means connects each side of the top 11 adjacent its lower edge 15 to the side of the quarter 9 adjacent its upper edge 17. The top 11 overlaps a portion of the quarter to ensure that, when the top is pivoted relative to the quarter, there is no direct opening to the interior of the boot. Both the top 11 and the vamp 7 have suitable closure means 12 for permitting entry into the boot. The closure means 12 can include a plurality of adjustable buckles 14 for opening and closing the closure, as is well known, with some of the buckles located on the vamp 7 and the others located on the top 11.

The top 11 is connected to the quarter 9 by the rivets 13 located at the sides of the boots approximately adjacent the ankle of the boot wearer. The top can be pivoted in a direction toward or away from the toe of the boot, thus permitting the skier to bend his legs at the ankle even though the boot is stiff.

Adjustable means 19 are provided to vary the position or, more particularly, the amount of forward slant of the top 11 with respect to the remainder of the boot. These means 19 preferably are connected to the backs of both the top and the quarter. The means 19 can be adjusted in length to thereby cause the top 11 to pivot with respect to the quarter 9 about the rivets 13.

As shown in the drawings, the adjustable means 19 can comprise a first member 21 affixed to the top 11 at the back thereof and a second member 23 affixed to the quarter at the back thereof. Both members 21, 23 can be connected to the top and the quarter by rivets 25. The first member 21 has a bore 27 extending therethrough in a direction from the bottom edge of the top 11 to the top edge. An abutment in the form of a screw 29 closes the top end of the bore 27. The top end of the bore 27 is threaded to receive the screw 29. The position of the screw 29 can be varied to change the position of its abutment face 31. A locknut 33 is threaded on the adjustable screw 29 to lock it in its adjusted position. The second member 23 has a stud 35 projecting therefrom toward the first member. A cap 37 is screwed on the stud 35. The cap 37 has a socket 39 forming part of a ball and socket joint 41.

A link 43 extends between the first and second members 21, 23. The link 43 is pivotably connected at one end to the second member 23. This connection comprises ball and socket joint 41, with the ball 45 fixed to the one end of the link 43. The link 43 passes through an aperture 47 in the cap 37 and extends into the bore 27 of the first member 21 where its other end abuts the abutment face 31 of the screw 29.

The other end of the link 43 can have an abutment member connected to it. The abutment member can comprise a washer 49 held to the link by a screw 51. The bore 27 has an abutment shoulder 53 at its lower end. A spring 55, in the bore 27, encircles link 43 and is positioned between the washer 49 and shoulder 53.

A soft rubber collar 57 can be positioned on the exposed portion of the link 43 extending between cap 37 and the bottom of the top member 21, as shown in FIG. 3. The collar 57 serves to close the openings to the socket 39 and the bore 27 to snow.

FIGS. 2 and 4 illustrate the top 11 adjusted in a nearly vertical extending position. The screw 29 has been moved outwardly to withdraw the abutment face 31 toward the top edge of the top 11. This permits the first member 21 to move nearer toward the second member 23 and the top 11 to pivot counterclockwise as viewed in FIG. 2 about rivets 13 to the vertical position shown. The spring 55 biases the top in a counterclockwise direction.

FIGS. 3 and 5 illustrate the top 11 adjusted to slant from the vertical toward the front of the boot. The screw 29 has been screwed into the bore 27 from its position shown in FIG. 4.

Since the link 43 has a fixed length, and the face 31 of the screw already abutted against the end of the link 43 when the top was in a vertical extending position, this causes the first member 21 to move relative to the screw 29 and thus pivot the top 11 in a clockwise direction about rivets 13 to the position shown in FIG. 5. It is thus seen that the angular position of the top 11 relative to the remainder of the boot can be easily varied by operation of the adjustment screw 29.

Since the link 43 is not fixed to the first member 21, the top 11 of the boot can be further pivoted clockwise from its initial adjusted position, whether this initial position is that shown in FIG. 3 or FIG. 5, by the leg action of the skier.

This permits the skier's legs to bend even more from the ankles when turning, than the bend required in the normal skiing position. The top 11, shown in FIG. 6, has been moved further in a clockwise direction from its adjusted position shown in FIG. 5 by the skier's leg action. In this position, the link 43 and abutment face 31 of the screw 29 have been moved apart. When the skier straightens slightly from the turning position to the normal running position, the spring 55 returns the top 11 to its adjusted running position, whereby the face 31 again abuts the end of link 43.

While a ball and socket joint 41 has been shown connecting the link 43 to the second member 23, other pivotable connections can be used.

Further, the members 21, 23 could be interchanged so the adjustment screw 29 is on the quarter instead of the top, if desired.

I claim:

1. A ski boot comprising: a sole and a two-part upper, one upper part, including a vamp and a quarter, connected to the sole, the other upper part comprising the top of the boot; first means pivotably connecting the top to the one upper part so

the top can pivot toward or away from the vamp; and adjustable second means connected between the top and the one upper part for varying the position of the top relative to the one upper part about the first means, said adjustable second means comprising: a first member connected to the back of the quarter; a second member connected to the back of the top; a rigid link extending between said members; means pivotably connecting one end of the link to one of said members, the other end of the link contacting an abutment on the other member.

2. A ski boot as claimed in claim 1, wherein the abutment is mounted in the other member for movement relative to the other member in a direction toward or away from the one end of the link.

3. A ski boot as claimed in claim 2, wherein the means pivotally connecting the one end of the link to the one member comprises a ball-and-socket joint.

4. A ski boot as claimed in claim 1, including spring means connected between said link and said other member for biasing said members toward one another.

5. A ski boot comprising: a sole; an upper including a quarter and vamp connected to the sole; a top; means pivotably connecting the top to the quarter for movement toward or away from the vamp; a first member connected to the back of the top; a second member connected to the back of the quarter; a rigid link pivotably connected at one end to the second member, the link extending toward the first member; an abutment member on the first member engaging the other end of the link; means moving the abutment member relative to the first member in a direction toward or away from the second member; and spring means biasing the first member toward the second member.

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