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SKI BOOT

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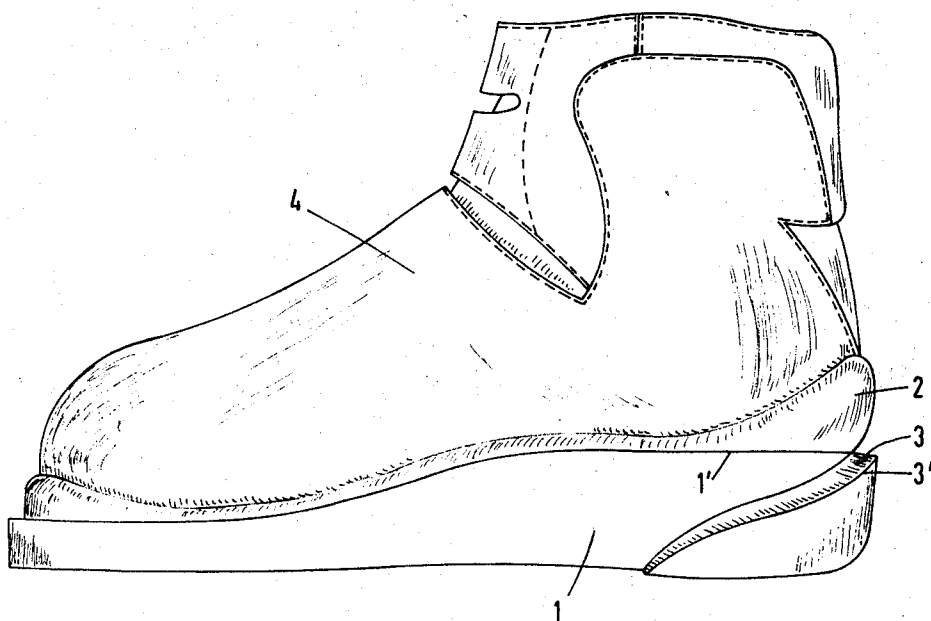


FIG. 1

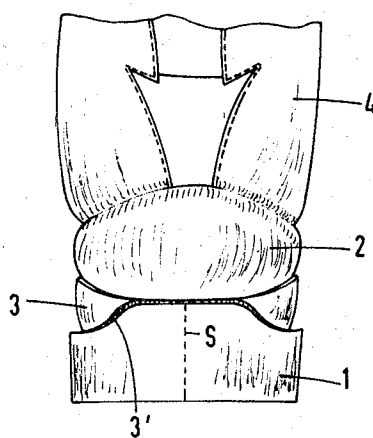


FIG. 2

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5 Claims. (Cl. 36—2.5)

The present invention relates to a ski boot with an outer sole which is molded upon the bottom of the upper and has at the rear or heel part thereof a beaded reinforcing projection which extends upwardly from the sole and is molded around the heel portion of the upper to which it is secured by being vulcanized or injection molded thereon. This beaded projection is provided primarily for securing the sole so firmly to the upper that it cannot possibly be torn off and also for protecting the leather of the upper from being chafed by the cable or strap of the ski binding. For preventing this cable from slipping off the heel, the latter is provided with a groove-like recess which extends around the rear of the heel and then slopes downwardly toward the bottom of the sole.

In a copending application for a ski boot of the type as described above, the groove for receiving the cable of the ski binding is designed so that at the center of the rear end of the heel the lower edge of this groove is located considerably below the extension of the upper edge of the outer sole, that is, below the point where the upper edge of a normal outer sole would be located. From this point the groove slopes at an angle downwardly toward the bottom of the sole.

While such a grooved heel construction is very suitable for a ski binding in which the ski is strapped to the heel part of the boot by a tension cable, it has now been found that it is not equally suitable for a so-called universal or cableless ski binding, that is, one without a tension cable and without lateral guides, since the part of such a binding which is usually made in the form of jaws cannot be applied on the grooved heel part so securely as the safety of the skier requires.

It is therefore an object of the present invention to provide a ski boot of the type as first described which, however, is equally suitable for a ski binding with a tension cable as well as for a cableless binding. For attaining this object, the invention provides that the heel part of the outer sole be molded so that, at the center of the rear end of the heel, the lower edge of the groove-like recess is located substantially at the same level as, or even at a higher level than the extension of the upper edge of the outer sole, that is, at a height from the bottom of the sole equal to or even greater than the height of the rear upper edge of a normal sole which is not provided with such a beaded, upwardly projecting heel reinforcement. The invention further provides that this lower edge of the groove-like recess which forms the support of the part of the ski binding which is applied upon the heel is substantially flat at least at the apex of the heel, and that from this apex it extends at first toward both sides in a substantially horizontal or only slightly downwardly curved direction and thereafter it slopes downwardly to the bottom of the sole at a steeper angle. The rear end of the heel portion is therefore no longer interrupted by the groove but forms a solid piece. This feature together with the fact that the lower edge of the groove-like recess is located at the apex of the heel at least at the same level where the upper edge of a normal heel would be located permits the same ski boot to be worn safely with many different types of ski bindings including cableless bindings and bindings with tension cables.

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The present invention is primarily concerned with a ski boot having an upper, an outer sole permanently attached to the upper and having a heel portion, and a projection defining a bead permanently attached to the upper at the heel portion of the sole and extending upwardly along the outside of the upper. In such a ski boot, the projection begins in the vicinity of the apex of the heel portion at a point approximately at the level of the upper edge of the sole, which edge extends to the heel portion. Furthermore, the heel portion has a surface for receiving the part of a ski binding which engages the heel portion, which surface is disposed between the sole and the projection and extends substantially horizontally in the region of the apex of the heel portion.

The features and advantages of the present invention will become more clearly apparent from the following description of the drawings, in which:

FIGURE 1 shows a side view of a ski boot according to the invention, while

FIGURE 2 shows a rear view of the lower part of the ski boot according to FIGURE 1.

As shown in the drawings, the ski boot has an upper 4 on which the outer sole 1 of rubber or plastic is cast in a conventional manner. On its upper side, the outer sole 1 is provided with a reinforcing bead 2 which extends around the entire boot between the upper edge of the actual sole and the adjacent parts of the upper to which it is secured, for example, by being vulcanized thereon. At the rear of the boot, this reinforcing bead projects upwardly so as to form a heel cover which envelops the heel part of the upper and not only protects this part from being chafed by the tension strap or tension cable of the ski binding but also secures the heel part of the sole so firmly to the upper that it cannot possibly be torn off the upper. According to the present invention, the heel part of the outer sole is provided with a groove-like recess 3, the lower edge 3' of which extends from the apex S of the heel for a certain distance toward both sides in a substantially horizontal direction, as shown particularly in FIGURE 2, and it then slopes downwardly at an angle toward the bottom of the sole. Especially this horizontal part of the lower edge 3' of the recess 3 at both sides of the apex S of the heel has preferably a substantially flat surface which is located at a height from the bottom of the sole which is approximately equal to or even higher than the height of the upper edge 1' of a normal sole without a beaded projection.

From the above description as well as from the drawings it is evident that, even though the sole of the ski boot is provided with a groove-like recess for supporting a tension strap or tension cable of a ski binding, this recess is made of such a shape and placed in such a position that underneath it a solid heel portion remains which has such a height and length from the apex S of the heel that any other type of ski binding, for example, in the form of jaws, may be firmly secured to the heel part of the outer sole.

Although my invention has been illustrated and described with reference to the preferred embodiments thereof, I wish to have it understood that it is in no way limited to the details of such embodiments but is capable of numerous modifications within the scope of the appended claims.

Having thus fully disclosed my invention, what I claim is:

1. In a ski boot having an upper with an outer sole molded thereon and a beaded projection extending upwardly from said sole at the rear part thereof and secured to and enveloping the heel part of said upper so as to form a protective cover therefor, and to secure the sole more firmly to the upper, said sole having a groove-like

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recess extending substantially from the base of said projection at the apex of the heel for a certain distance in a substantially horizontal direction toward both sides and then sloping downwardly at an angle toward the bottom of the sole, the lower edge of said recess being substantially flat and adapted to support a tension cable or the like of a ski binding and having a height from the bottom of the sole at the apex of the heel at least equal to the height of a normal heel without said beaded projection, the uninterrupted heel part underneath said edge being adapted to form a solid support for the heel connecting means of a ski binding of a different type.

2. A ski boot comprising: an upper; an outer sole permanently attached to said upper and having a heel portion; and a projection defining a bead permanently attached to said upper at said heel portion of said sole and extending upwardly along the outside of said upper; wherein said projection begins in the vicinity of the apex of said heel portion at a point approximately at the level of the upper edge of said sole, which edge extends around said heel portion, and said heel portion has a surface for receiving the part of a ski binding which engages said heel portion, which surface, in the region of said

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apex of said heel portion, is disposed substantially at the level of said upper edge of said sole and extends substantially horizontally.

3. An arrangement as defined in claim 2 wherein said projection is integral with said sole and envelops the heel part of said upper, and both said sole and said projection are injection molded onto said upper.

4. An arrangement as defined in claim 2 wherein said projection is integral with said sole and envelops the heel part of said upper, and both said projection and said sole are vulcanized onto said upper.

5. An arrangement as defined in claim 4 wherein said projection extends completely around said boot.

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