ABSTRACT OF THE DISCLOSURE

A buckle for ski shoes of the kind in which a loop on one closure flap of the shoe opening is latched over one of a set of aligned projections on a form of over-dead-centre lever pivotally carried by a mounting bracket on the other closure flap, the effective length of the lever arm being adjustable by a screw threaded connection between the lever and mounting bracket. The improvement with which the invention is concerned is the provision of an additional member which is pivotally mounted on the bracket and can be clamped down on the aforementioned lever to retain it in its adjusted fastening position and safeguard the parts against damage.

This invention relates to a buckle for ski shoes of the kind comprising a suspension loop which can be secured to one closure flap of the shoe, a bracket for attachment to the other closure flap of the shoe, and a fastening lever pivotally mounted on said bracket and having a plurality of detent projections for the adjustable retention of the loop. Thus the loop can be latched over one or other of the detent projections, according to the size of shoe opening required, and the lever, which is of the over-dead-centre type, swung down to fasten the closure.

A disadvantage of such buckles is that the shoe closure can only be adjusted in increments of appreciable size, that is to say in accordance with the intervals between the said projections. To meet this shortcoming it has been proposed to make the fastening lever radially adjustable, in relation to its pivotal axis in the mounting bracket, by means of a threaded coupling rod. This provides for an infinitely-variable adjustment of the effective length of the lever arm of the projection chosen.

It is an object of this invention to further improve the ski shoe buckles of the kind set forth.

To this end, in the present invention a buckle of this character is additionally provided with a clamping member which is pivotally carried by the mounting bracket and is turnable thereon about the pivotal axis of said fastening lever, whereby this member can be swung down over the fastening lever to releasably engage the same with a clamping action.

This promotes secure rotation of the fastening lever in its fastening position, and may also serve to protect exposed parts against damage.

An embodiment of the buckle according to the invention is illustrated in the drawings, in which:

FIG. 1 is a plan view of this buckle,
FIG. 2 is a side view corresponding to FIG. 1, and
FIG. 3 is a longitudinal section on the line III—III of FIG. 1.

The buckle illustrated has a bracket which is adapted to be secured to one closure flap of the shoe by means of a plate and serves to pivotally mount a fastening lever which is flattened at the sides. This lever is provided with three detent projections over which a wire loop, which is pivotally connected to the other closure flap of the shoe, can be selectively engaged. It will be appreciated that more than three such detent projections could be used.

A sleeve of plastics material, for example nylon, internally screw-threaded at 7, is pressed into a bore extending in the longitudinal direction of fastening lever 3. This sleeve could, if required, be dispensed with and the internal thread drilled directly into the lever 3.

Mounted in the bracket 2 is a pin 8 on which a cylindrical part 10 is mounted for eccentric pivoting movement. One end of a threaded rod 9 is secured in part 10, whilst the free, threaded section of this rod is adjustably screwed into the threaded bore 7. This screw threaded connection caters for adjustment of the distance of the fastening lever 3 from the part 10 and from the pin 8, and thus provides for a fine adjustment of the buckle which permits of accurate fitting of the shoe to the foot of the wearer.

Pivoting mounted on the pin 8 is a spring steel arm 11 of U-cross section. When this arm is swung down on fastening lever 3, as illustrated in FIGS. 2 and 3, the side walls of this arm 11 embrace the sides of the lever.

This holds the lever 3 against unintentional rotation on its threaded support. Moreover the spacing of the side walls of the arm 11, which is preferably of sheet steel, is such that they will resiliently clamp against the lever 3. Furthermore, when the arm 11 is depressed on the fastening lever it protects the screw threading on the threaded rod 9. The rear end of the top wall of arm 11 has two slits 12 defining a resilient tongue 13.

The free end edge 14 of this tongue is located in front of pin 8 and somewhat lower than the upper side of the part 10 when the arm 11 is in the turned down position, which provides a dead centre position for the turned down arm.

The eccentric disposition of pin 8 in the part 10 enables the bore in this part to go right through to receive the rear end of threaded rod 9.

I claim:

1. In a buckle for ski shoes which comprises a suspension loop adapted to be secured to one closure flap of the shoe, a bracket for attachment to the other closure flap of the shoe, a fastening lever pivotally mounted on said bracket and having a plurality of detent projections for the adjustable retention of the aforesaid loop, and a screw threaded rod adjustably coupled between said fastening lever and said mounting bracket to vary the position of the lever relatively to its pivotal axis at said mounting bracket, the improvement which consists of a clamping member which is pivotally carried by the mounting bracket and is turnable thereon about the pivotal axis of said fastening lever, whereby said clamping member can be swung down over the fastening lever to releasably engage the same with a clamping action.

2. A buckle according to claim 1, in which the clamping member comprises an arm of U-cross section, and the fastening lever has flat side parts over which the side walls of said arm will be clampingly engaged.
3. A buckle according to claim 2, in which the clamping member is of resilient sheet steel.

4. A buckle according to claim 1, in which the mounting bracket includes a cylindrical bearing part pivotable relatively to the remainder of the bracket and has the said screw-threaded coupling rod connected thereto, and in which said clamping member is formed with a resilient tongue which bears against the periphery of said cylindrical bearing part, the free end of this tongue being disposed in front of the vertical plane through the pivotal axis of said fastening lever at the mounting bracket, and at the lever side of said axis, when the clamping member is depressed to engage the fastening lever.

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