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AUTOMATIC SNAP FASTENING FOR SKIS

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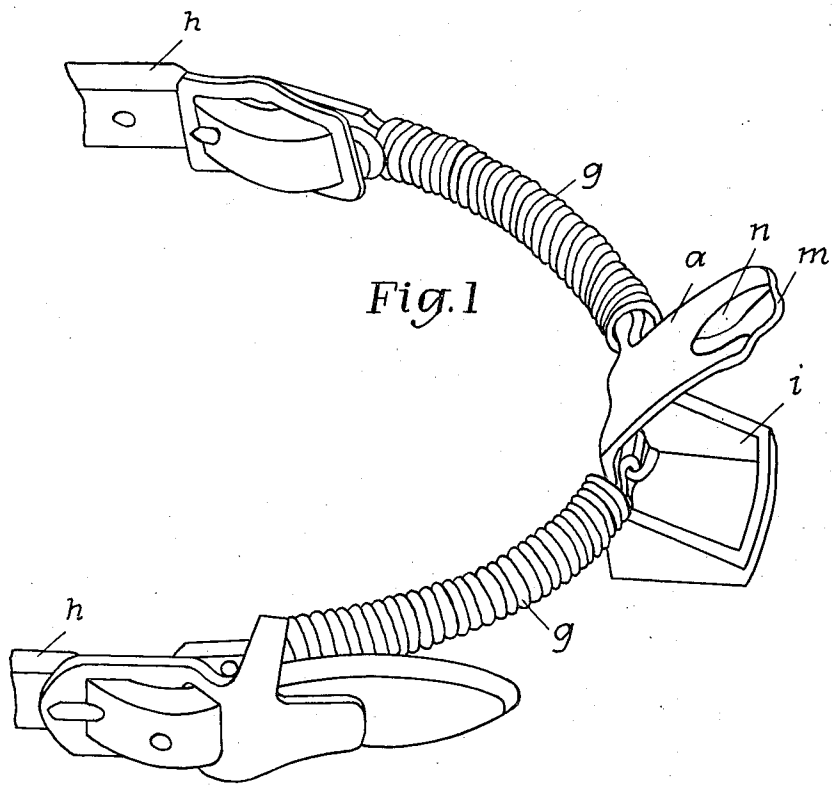


Fig. 1

Fig. 2

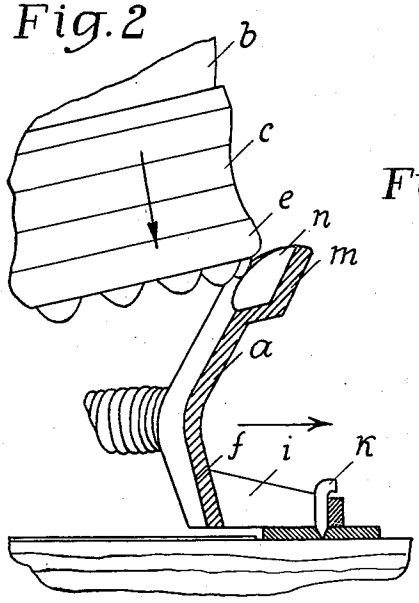
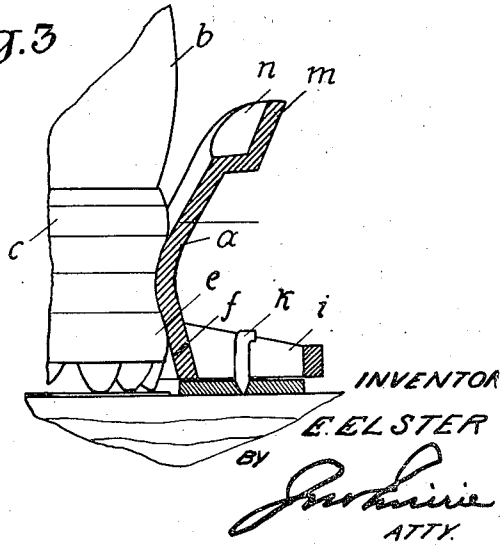


Fig. 3



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AUTOMATIC SNAP FASTENING FOR SKIS

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4 Claims. (Cl. 208—184)

The invention relates to an automatic snap fastening for skis, in which the heel grip is attached, by means of at least one resilient member, in such a manner that it snaps into locking engagement with the heel of a boot pressed down upon it. The fastening means may also be designed in such a way that the heel grip is itself composed of elastic members.

All the known fastenings constructed on the Huitfeldt system have the defect that the skier must bend down in fastening and unfastening the skis in order to turn over the tightener and, in some cases, to bring the heel grip into the proper position, which takes time and is troublesome.

The present invention has for one of its objects to provide a heel grip for a ski, having an upstanding wall, the arcuate portion of which has its upper edge outwardly flared for engagement camwise by the downwardly pressed heel of a boot and presents internally means for gripping that heel. At least one resilient tie member serving to secure the heel grip pivotally to the ski acts also to constrain the grip forwards for effecting engagement between said gripping means and said heel.

The invention has for another of its objects to provide a suitably formed heel grip which is held firmly on to the ski by suitable means during the act of unfastening, and in such a way it does not require to be set in position again for refastening. Said holding means are preferably adjustable in the longitudinal direction of the ski.

In pursuance of a further object, the invention may provide a suitably formed heel grip which is pivotally secured to the ski by at least one stiff resilient tie member which permits limited movement of said heel grip backwards on the ski under the camwise action of the downwardly pressed heel of a boot, and limited forward movement when said heel is freed from said heel grip.

A preferred embodiment of snap fastening means according to the invention is illustrated in the accompanying drawing. Fig. 1 is a perspective view of a snap fastening means. Fig. 2 is a longitudinal section through the heel grip showing the heel of the boot disengaged from the heel grip. Fig. 3 is a similar section with the heel grip in engagement with the heel.

Referring to the drawing, the upper edge of the arcuate portion of a heel grip *a* is flared outwards, after the manner of a funnel. The grip is attached to fixing straps *h* by means of a spring *g*, and is also provided with a loop member or bow *i* which may coact with a hook *k*, located on the ski, in a manner described hereinafter.

In fastening, the toe of the boot *b* is first inserted between the cheeks of the toe grip, in the usual manner, and the boot heel *c* is then pressed down into the heel grip *a*, which by the camwise action of the said heel on the flared surface is forced backwards until the projecting lower edge *e* of the boot heel, or an attachment secured on the said heel, snaps into the groove *f* formed by flaring the lower edge of the heel grip. When the boot is to be released, the heel grip *a* is held down by means of the other ski, or boot, or by a stick—or by the hand in the case of complicated falls—and the heel of the boot *b* is slightly lifted at the same time. This causes the heel grip to tilt, and the surface *f* assumes a steeper angle, so that the projecting edge *e* on the boot heel *c* presses the heel grip *a* backwards, against the pull of the spring *g*. The boot thus springs out of the fastening and the heel grip quickly moves forward again, under the action of the spring *g*, until the bow *i* catches on the hook *k* and retains the heel grip firmly in the position shown in Fig. 2. To facilitate the insertion of the tip of a ski-stock into the heel grip, this latter can be provided with a groove or the like *n*. In refastening, the heel grip *a* is pushed backwards by the heel, as already mentioned, thus detaching the bow *i* from the hook *k*, and maintained by the boot in the position shown in Fig. 3, wherein the grip *a* is free to move up and down without engagement of the bow *i* and the hook *k*.

The spring elements G, here shown as helical springs, indicate conventionally any equivalent means for the purpose.

The funnel effect of the heel grip can be increased by making the curvature of the said grip smaller, when in the relaxed condition, than the outline of the heel of the boot, so that the heel tends to press the cheeks of the grip and the straps or springs apart.

I claim:—

1. A heel grip for skis including a tensioning member terminally secured to the ski, and a heel piece connected to and under the tension of said member, said heel piece being formed at its lower portion to conform to the shape of the heel and being flared outwardly in its upper portion to provide a guide for the introduction of the heel into the grip, the outwardly inclined portion of the heel piece being formed with a socket to receive the tip of an element for holding the heel piece to permit removal of the heel.

2. A heel grip for skis including a tensioning

member terminally secured to the ski, a heel piece connected to and under the tension of said member, said heel piece having a non-planar surface on the heel side adapted to abut the cooperating surface of the heel of a shoe, and a guide projecting upwardly and rearwardly beyond the vertical plane of said heel piece to facilitate the introduction or removal of the shoe heel from the grip.

3. A heel grip for skis including a tensioning member terminally secured to the ski, a heel piece connected to and under the tension of said member, said heel piece having a non-planar surface on the heel side adapted to abut the cooperating surface of the heel of a shoe, and a guide projecting upwardly and rearwardly beyond the vertical plane of said heel piece to facilitate the introduction or removal of the shoe heel from the grip, said guide having a convex surface adapted to coact with a portion of the shoe heel to guide the heel in assembled relation with the heel piece.

4. A heel grip for skis including a tensioning member terminally secured to the ski, a heel piece connected to and under the tension of said member, said heel piece having a non-planar surface on the heel side adapted to abut the cooperating surface of the heel of a shoe, means carried by the ski and adapted to engage said heel piece to limit the forward movement of the same caused by said tensioning member, and a guide projecting upwardly and rearwardly from said heel piece to facilitate the introduction or removal of the shoe from the grip.

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