Dec. 10, 1963 P. W. PHILLIPSON 3,113,786

SKI POLE WRIST STRAPS

Filed Sept. 28, 1962

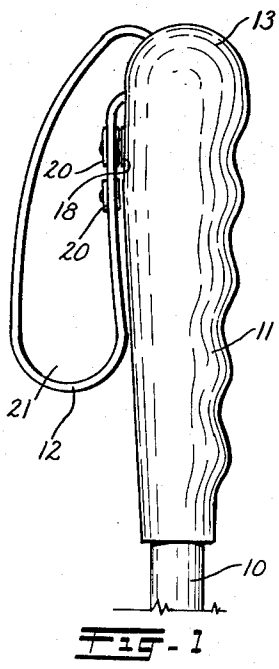


Fig. 1

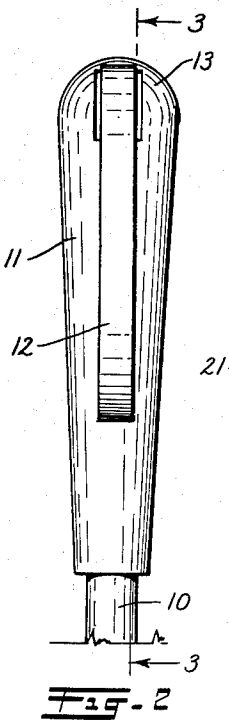


Fig. 2

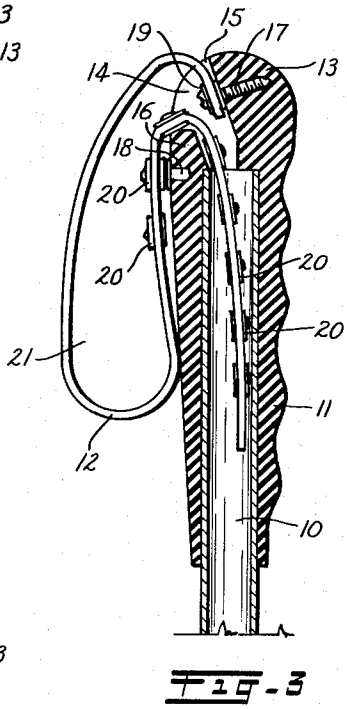


Fig. 3

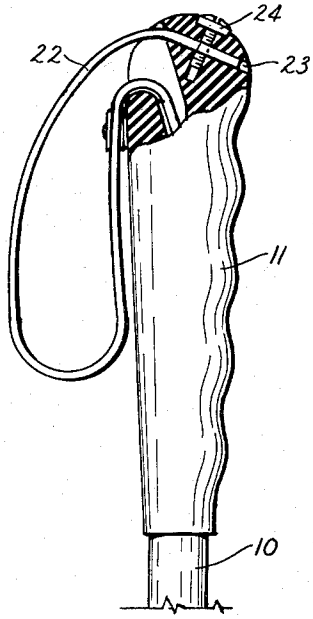


Fig. 5

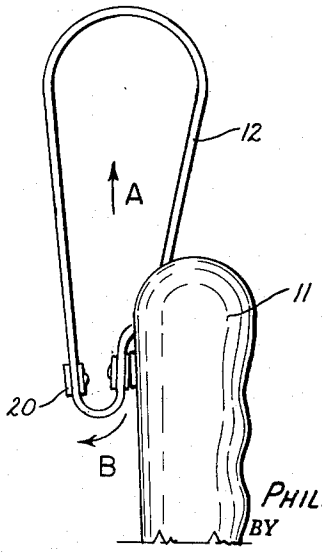


Fig. 4

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# SKI POLE WRIST STRAPS

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This invention relates to ski poles of the type used by snow skiers. Ski poles of this type usually comprise a cane-like shank having a hand grip at the upper extremity and a snow penetrating point or spike at the lower extremity. A disc or ring, usually called a basket, is mounted on the shank adjacent the spike to limit the amount of insertion of the spike and to self-support the pole in the snow and a wrist strap is attached to the hand grip for securing the pole to the wrist of the skier.

This invention relates more specifically to the wrist straps of the ski poles. These straps, while necessary to prevent accidental loss of the ski poles, have been the cause of serious injuries to the skiers. Frequently, during swift descent on a ski slope, the basket of a ski pole may catch upon roots, rocks, trees or other obstructions and since the poles are anchored to the skier's wrists, the result is a sudden jerk or pulling stress which may result in serious injury to the skier.

The principal object of this invention is to provide a wrist strap for ski poles which will accomplish all of the necessary functions of the conventional strap and yet which when subjected to stresses of unusual direction and unusual intensity will instantly release the wrist of the skier to prevent injury.

Another object is to provide a hand grip and wrist strap assembly for ski poles which will enable the wrist strap to be quickly, easily and securely adjusted as to length and which will completely enclose, conceal and store any unused portion of the strap out of the way of the skier.

Other objects and advantages reside in the detail construction of the invention, which is designed for simplicity, economy, and efficiency. These will become more apparent from the following description.

In the following detailed description of the invention, reference is had to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the description.

In the drawing:

FIG. 1 is a side elevational view of the improved hand grip and wrist strap assembly for ski poles in place upon the upper extremity of a ski pole;

FIG. 2 is a rear elevational view of the hand grip and wrist strap assembly of FIG. 1;

FIG. 3 is a vertical, longitudinal section taken on the line 3—3, FIG. 2;

FIG. 4 is a fragmentary, detail view of the upper portion of the hand grip showing a releasing position of the wrist strap to be later described; and

FIG. 5 is a side elevational view partially broken away to show an alternate attachment for the wrist strap.

In the drawing, the upper extremity of a tubular ski pole is shown at **10** over which a molded hand grip **11** is permanently fitted. The wrist strap for attaching the ski pole to the wrist of the skier is illustrated at **12**. This invention relates, more particularly, to the means for attaching the strap **12** to the hand grip **11** so that it will be automatically released in cas eof accident.

The invention contemplates forming a rounded semi-spherical top **13** on the grip **11** having a strap passage **14** formed in one side thereof and communicating with



the hollow interior of the pole **10** at the upper extremity of the latter.

The strap passage **14** has a width slightly in excess of the width of the strap **12** and is formed with a flat inclined front wall **15** and a relatively short rounded rear wall **16**. The front wall **15** is drilled to receive a strap attachment screw **17** and a conventional male snap fastener element **18** is fixedly mounted on the hand grip **11** immediately below the rounded rear wall **16** of the strap passage **14**.

The wrist strap **12** is provided with a plurality of spaced female snap fastener elements **20** adjacent its lower extremity. The upper extremity of the strap is fixedly secured to the grip **11** between clamping washers **19** by means of the attachment screw **17** and is then turned or folded back on itself to form a wrist loop **21**. The lower extremity of the strap is passed into and through the strap passage **14** so as to depend within the pole **10** as shown in FIG. 3. After the loop **21** has been adjusted to fit the skier's wrist, it is secured in the adjusted position by snapping the fastener element **20**, which is nearest the fixed fastener element **18**, upon the latter fixed fastener. The plurality of fastener elements **20** provide a wide range of adjustment of the size of the wrist loop **21**.

It is characteristic of snap fasteneres that they will withstand extreme stresses applied in directions at an angle to their axes without separation, but when the stresses are applied in a generally axial direction, the fastener elements will be readily tilted or peeled apart. This invention takes advantage of this natural characteristic for when in normal use the wrist strap will tend to pull downwardly, that is, sidewardly on the attached snap fasteners, so that the latter will remain fastened. However, should the ski pole become entangled during a run, the direction of pull on the wrist strap will be as indicated by the arrow "A" in FIG. 4, that is, in axial alignment with the ski pole and substantially at right angles to the axis of the fastener elements **18** and **20** so that the latter elements are relatively tilted and instantly pried apart, as indicated by the arrow "B", to release the skier's wrist to prevent injury.

An alternate means of attaching the upper extremity of a wrist strap is illustrated in FIG. 5. This form is similar to the previously described form in every way except that the upper extremity of the wrist strap, indicated at **22**, is inserted into a strap socket **23** formed in the cap of the grip. The inserted strap terminal is locked in place in the socket **23** by means of a set screw **24** threaded into the cap of the grip and extending through the terminal extremity of the strap as shown in FIG. 5.

In all forms of the invention, the free extremity of the wrist strap is completely contained within the hollow pole **10** out of the way of the skier. The portion of the strap positioned in the pole also acts to prevent rotation of the strap about the axis of the fixed fastener element **18** so that the loop **21** will always depend downwardly from the fastener element **18** so that upward pull on the strap will act to separate the fastener elements **18** and **20** initially at their lower peripheries.

While a specific form of the improvement has been described and illustrated herein, it is to be understood that the same may be varied, within the scope of the appended claims, without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired secured by Letters Patent is:

1. Means for detachably attaching a wrist strap to a ski pole comprising: a hand grip fitted downwardly over the upper extremity of said pole; a fixed fastening means securing one extremity of said strap to said hand grip; a first snap fastener element affixed to said hand

grip below said fixed fastening means; and a second coacting snap fastener element mounted on said strap adjacent the other extremity of the latter and in engagement with said first snap fastener element to form a wrist loop in said strap, the axes of said engaged snap fastener elements being positioned substantially at right angles to the longitudinal axis of said ski pole so that tension between said loop and said pole in the direction of the axis of the latter will act to pry said elements apart.

2. Means for detachably attaching a wrist strap to a tubular ski pole comprising: a hand grip fitted downwardly over said ski pole; a cap portion on said hand grip over the open upper extremity of said pole; a strap passage entering the side of said cap portion and communicating with said open extremity; means securing one extremity of said wrist strap to said grip above the entrance of said strap passage, the other extremity of said strap extending through said strap passage and terminating within said ski pole; and detachable means securing said strap to the exterior of said grip below the entrance of said passage to form a wrist loop in the medial portion of said strap which when pulled upwardly will detach said detachable means.

3. Means for detachably attaching a wrist strap to a tubular ski pole as described in claim 2 in which the detachable means comprises a snap-fastener element fixedly mounted on said grip immediately below the entrance of said strap passage and a cooperating snap-fastener element on said strap snapped over the first element.



4. Means for detachably attaching a wrist strap to a tubular ski pole as described in claim 3, in which the strap passage has two side walls, a front wall and a rear wall, the means for securing the first extremity of said strap being mounted on said front wall so that said strap will normally extend first upwardly thence outwardly and downwardly and thence upwardly past said snap-fastener element thence inwardly over said rear wall and downwardly through said strap passage and into the hollow interior of said ski pole.

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