

[54] STRAPLESS SKI POLE GRIP

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224/45 P, 45 S; 135/45 R, 51; 30/340, 125

[56] References Cited

UNITED STATES PATENTS

3,436,090	4/1969	Lange et al.	280/11.37 H
3,479,045	11/1969	Miller	280/11.37 H
3,565,451	2/1971	Giambazi	280/11.37 H

FOREIGN PATENTS OR APPLICATIONS

1,369,228	6/1964	France	280/11.37 H
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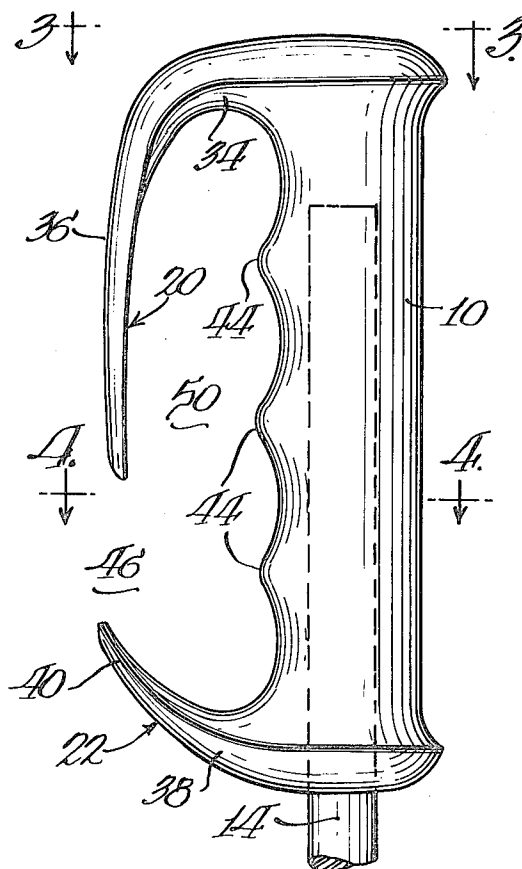
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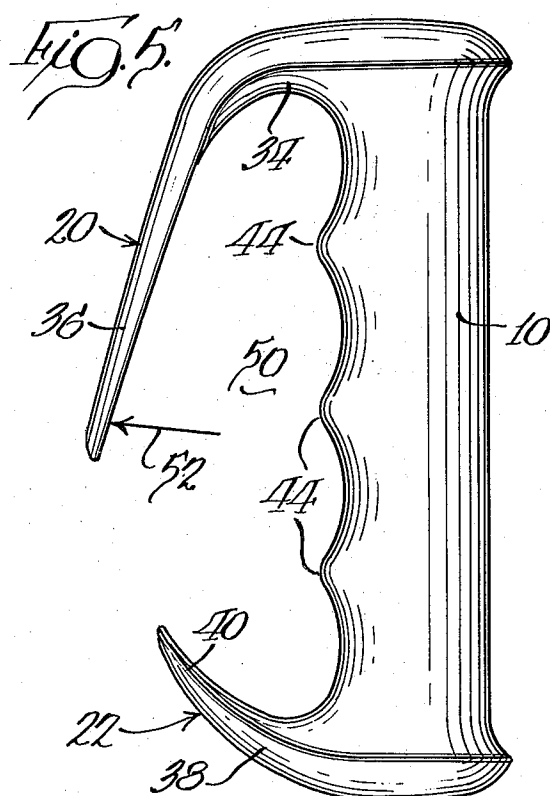
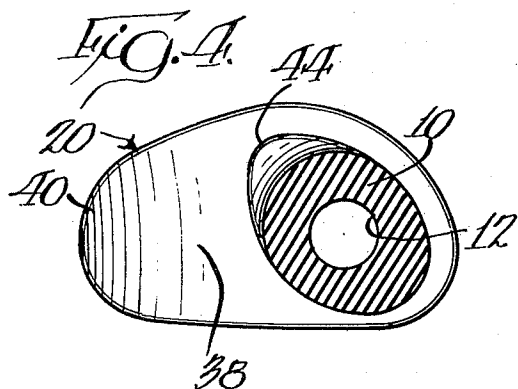
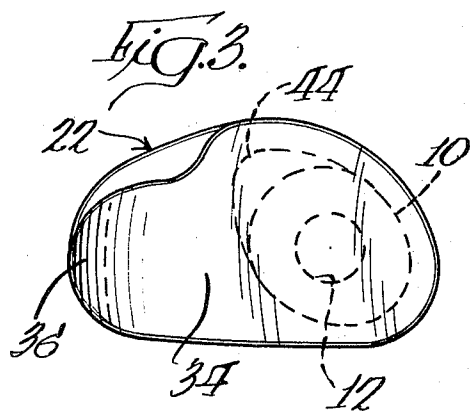
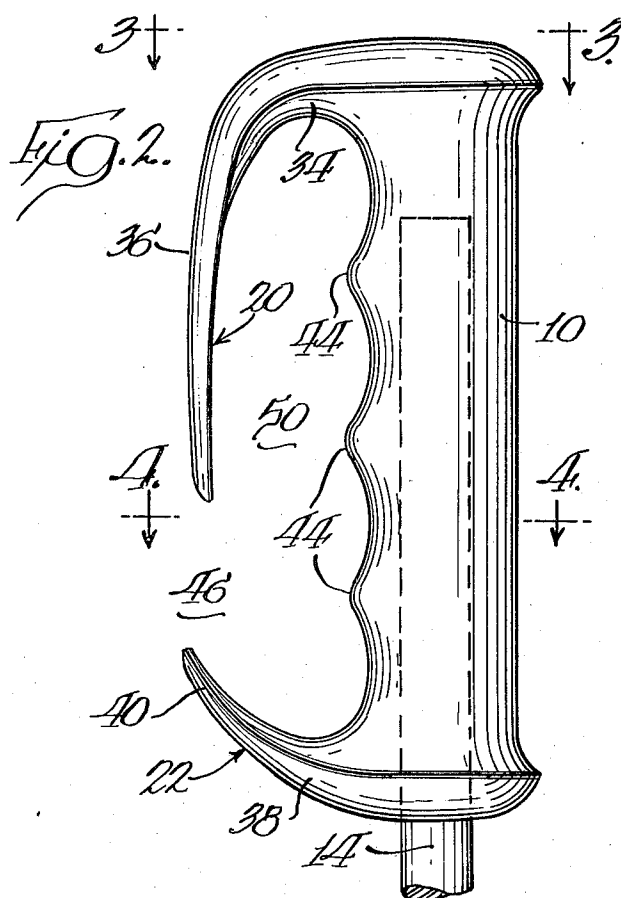
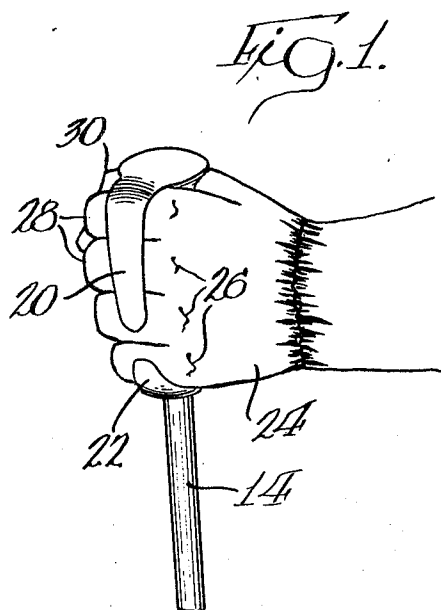
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ABSTRACT

A strapless ski pole grip includes a generally cylindrical body having an axial bore for receiving the shaft of a ski pole. The ends of the cylindrical body have integral fingers which project outwardly and sideways to press against a skier's hand between the hand knuckles and the first finger joints. The lateral extents of the fingers form rigid supporting platforms for the top and bottoms of a skier's hand. At least one finger is resilient and moves sideways when the ski pole becomes captured to allow sliding withdrawal of the skier's hand.

15 Claims, 5 Drawing Figures





STRAPLESS SKI POLE GRIP

BACKGROUND OF THE INVENTION

This invention relates to a strapless ski pole grip which allows emergency release of a skier's hand, while also providing sufficient support during normal skiing conditions.

When a ski pole becomes captured in use, as by the basket becoming snagged on an object, conventional retention straps will bind the skier's hand to the captured ski pole and may create a serious injury. To obviate this problem, strapless ski pole grips have been developed, such as shown in U.S. Pat. No. 3,479,045 to Miller. Such a strapless grip includes one or more projections which overlie a small portion of the skier's hand to provide support therefore.

Unfortunately, the projections of known strapless grips provide minimal retention characteristics and sudden, but not uncommon, forces may cause the skier to lose his grip and hence the ski pole. For example, in some ski conditions which create sticky snow, the normally smooth upward release of the ski pole tip out of the snow may be prevented, producing a jerk as the skier lifts his hand upwardly. Since strapless ski pole grips have an upper resilient finger with a substantial upward movement, the unexpected jerk may pull the ski pole out of the skier's hand.

To overcome these problems, some ski pole grips use a quick-release type strap which does not have to be looped around the skier's wrist. Generally, the strap extends across the length of the body of the grip and forms a channel for the skier's hand. For example, in U.S. Pat. No. 3,565,451 to Giambazi, the strap includes a buckle which tightens the strap against the skier's hand, between the hand knuckles and the first finger joints, sufficient to prevent inadvertent release of the ski pole. Unfortunately, the retention strap still binds the skier's hand to the ski pole and during some emergency situations, the skier's hand may not be released.

SUMMARY OF THE INVENTION

In accordance with the present invention, an improved ski pole grip overcomes all of the above noted disadvantages of prior strapless grips and prior grips with quick-release type straps. For maximum safety in emergency situations, the retention strap is entirely eliminated. The grip uses a pair of projecting fingers which define a channel for retaining the skier's hand. During use, the lateral portions of the fingers form rigid upper and lower platforms for supporting the top and bottom of the skier's hand, regardless of the pressures exerted parallel with the ski pole axis. During an emergency situation, in which the ski pole becomes captured, the body of the skier will continue to move until the skier's arm is outstretched. One of the fingers will then move sideways, opening the channel and allowing sliding release of the skier's hand. As a result, the ski pole grip provides for emergency release while also providing for rigid support in the axial direction along which normal skiing forces are exerted.

One object of this invention is the provision of a strapless ski pole grip which provides adequate support and retention of a skier's hand even though the skier relaxes his grip, and which releases the hand quickly in the event of an emergency situation.

Further objects and features of the invention will be apparent from the following description and from the

drawings. While an illustrative embodiment of the invention is shown in the drawing and will be described in detail herein, the invention is susceptible of embodiment in many different forms and it should be understood that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the invention to the embodiment illustrated.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the novel strapless ski pole grip being held by a skier's hand;

FIG. 2 is a side view of the strapless ski pole grip of FIG. 1;

FIG. 3 is a top view taken along lines 3—3 of FIG. 2;

FIG. 4 is a sectional view taken along lines 4—4 of FIG. 2; and,

FIG. 5 is a side view, similar to FIG. 2, showing the side movement of the upper finger in order to open the channel and allow sliding release of a skier's hand.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, a strapless ski pole grip is illustrated which includes an elongated, generally cylindrical body 10 having an axial bore 12 for receiving the shaft 14 of a ski pole. The bore 12 extends along a substantial length of the body 10 and is coaxial with the ski pole shaft 14. Integral with body 10 and extending from the ends thereof are an upper projecting finger 20 and a lower projecting finger 22. As seen in FIG. 1, the pair of fingers 20 and 22 are located to press against the gloved fingers of a skier's hand 24, between the hand knuckles 26 and the first finger joints 28. The skier's thumb 30 extends around the opposite side of the body 10 to allow the skier's hand to firmly grasp the grip.

Upper projecting finger 20 has a relatively thick lateral section 34 which extends outward a sufficient distance to clear the gloved hand of the skier. At the end of the lateral section, the finger curves downwardly and forms an axial or side section 36 which extends parallel to and offset from the center axis of body 10. The axial section 36 preferably extends below the mid-point of the body 10, that is, the axial section 36 has a length greater than the majority of the length of the channel.

Lower projecting finger 22 has a relatively thick lateral section 38 which smoothly curves into an upturned angulated section 40 which is spaced from side section 36 by a gap 46. The axis of side section 36 and the axis of angulated section 40 are coplanar and intersect the center axis of cylindrical body 10. The axis of side section 36 intersects the lower finger 22, and defines an open channel 50 generally located between the cylindrical body 10 and the side fingers 20. The width of the channel 50 is made approximately equal to the width of the gloved hand.

Along cylindrical body 10, a series of ridges 44, oval cross-section, define therebetween a series of valleys for receiving the four fingers of the skier's hand. When the skier is properly holding the grip, as seen in FIG. 1, the fingers 20 and 22 press against the skier's fingers between the hand knuckles 26 and the first finger joints 28. At this time, the major axis of the ridges 44 extends forwardly. As can be seen in FIGS. 3 and 4, the major axis of ridges 44 is approximately at a 45° angle with respect to the center axis of the fingers 20 and 22. The ski pole grip shown in FIGS. 1-5 is designed for the left

hand of the skier, and it will be appreciated that a separate ski pole grip is provided for the right hand of a skier. In such a right hand grip, the fingers 20 and 22 would also be at an angle of approximately 45° with a major axis of the ridges 44, but would be located on the opposite side of the major axis.

The ski pole grip may be molded from PVC material having a durometer reading of approximately 75 to 85. The hardness and dimensions are selected so that the pair of fingers 20 and 22 are resilient, and the sections 36 and 40 can flex or bend. However, the lateral sections 34 and 38 are formed to be rigid in order to respectively define top and bottom platforms for supporting the skier's hand.

To grasp the ski pole, the skier inserts four fingers through the channel 50 and wraps his thumb around the opposite side of the body 10, as shown in FIG. 1. In this position, the inner surface of upper finger 20 presses gently against the skier's gloved fingers, between the hand knuckles 26 and the first finger joints 28. The pair of projecting fingers 20 and 22 form a retention system which maintains the ski pole in the skier's hand, even though he loosens his grip.

During an emergency situation, as when the ski pole becomes captured by an object, the skier's hand is pulled rearwardly, as the ski pole rotates about the shaft 14. The side section 36 of upper finger 20 is deflected to the side along a lateral axis 52, as seen in FIG. 5, opening the channel 50. This allows the skier's four fingers to readily slide out of the channel. The upper finger 20 is constructed to have a substantial side movement and little upward movement, to prevent inadvertent release under normal skiing conditions. Generally, sliding release of the hand will occur only when ski pole has been captured on an obstacle. For other conditions including large downward and upward pressures, the fingers 20 and 22 serve as rigid platforms which support the upper and lower sides of the skier's hand.

Various modifications may be made to the illustrated strapless ski pole grip, following the above teachings. Generally, the length of gap 46 is not critical. Preferably, the gap 46 should not be lengthened to an appreciable extent, as this would reduce the retention capabilities produced by the overlying finger 20. While the release finger 20 has been illustrated as being the upper finger, the positions of the upper and lower fingers could be reversed. As another modification, the upper finger 20 and the lower finger 22 could be made substantially the same length, and define therebetween a gap located at the mid-point of the ski grip. In such a case, both the upper and lower fingers would be used to press against the skier's hand.

I claim:

1. A strapless ski pole grip, comprising:

an elongated body member having an axial bore for receiving the shaft of a ski pole and a grip section for containing the fingers of the skier's hand, a resilient projection having a lateral section extending outwardly from one end of said body member and an axial section extending generally perpendicular to the lateral section and generally parallel with the axial bore,

said lateral and axial sections defining with said body member a channel for containing a skier's hand when grasping the elongated body member,

the axial section being adjacent the skier's hand with a length corresponding to at least the majority of the length of the grip section and of resilient structure which presses against the skier's hand to retain the skier's hand even when the skier is not firmly grasping the body member, and the resilient structure of the axial section having a resiliency to deflect and release the skier's hand when the ski pole becomes trapped during use.

2. The strapless ski pole grip of claim 1 wherein said projection extends from said body member so that the axial section is adjacent the fingers of the skier's hand, between the hand knuckles and first finger joints, when the skier's hand is gripping the elongated body member.

3. The strapless ski pole grip of claim 2 wherein the grip section of said elongated body member includes a plurality of ridges which extend laterally from the body member to define valleys for containing the fingers of the skier's hand, said elongated body member having a generally oval transverse cross-section through the ridges with a major axis located at an angle approximately 45° with a plane containing the axial section and the axial bore.

4. The strapless ski pole grip of claim 1 including a second projection having a section extending outwardly from an opposite end of said body member and terminating adjacent the axial section of the first named resilient projection.

5. The strapless ski pole grip of claim 4 wherein the lateral section of the first named resilient projection and a lateral part of the second projection are both substantially rigid to form upper and lower platforms for supporting the skier's hand, said axial section deflecting substantially sideways to open the channel and allow sliding release of the skier's hand.

6. A strapless ski pole grip, comprising:

a generally cylindrical body member having a pair of ends which extend beyond a skier's hand when gripping the body member,

a pair of fingers extending outwardly from the pair of ends of the body member with both pairs of fingers being located in a common plane with the body member,

the pair of fingers having configurations which curve toward each other and terminate at ends which define therebetween a gap of a length less than the combined length of the pair of fingers, the gap and at least one of the pair of fingers being substantially located along a common axis offset and parallel with the generally cylindrical member, and the at least one finger being of resilient structure to press against the skier's hand.

7. The strapless ski pole grip of claim 6 wherein the pair of fingers both have substantially rigid sections adjacent and contiguous with the cylindrical body member to form upper and lower platforms for rigid support of the upper and lower portions of a skier's hand.

8. The strapless ski pole grip of claim 7 wherein the at least one finger includes a contiguous axial section located along the common axis, said axial section having a configuration to deflect away from said body member to allow release of the skier's hand.

9. The strapless ski pole grip of claim 8 wherein the axial section presses against the skier's fingers between the hand knuckles and the first finger joints.

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10. The strapless ski pole grip of claim 6 wherein one of said pair of fingers has a length substantially longer than the length of the other of the pair of fingers to cause the gap to be located near one end of the body member.

11. The strapless ski pole grip of claim 10 wherein said one of said pair of fingers comprises the upper finger adjacent the top end of the body member, said gap being located below the mid-point of the body member and generally adjacent the third and fourth fingers of the skier's hand when gripping the body member.

12. A strapless ski pole grip, comprising:
an elongated body member having an axial bore for receiving the shaft of a ski pole,

said body member terminating in upper and lower projections which extend outwardly from the body member and form rigid upper and lower platforms for supporting the upper and lower portions of a skier's hand when grasping the elongated body member,

at least one of said projections having an integral side finger which extends to beyond the mid-point of the elongated body member and is generally parallel to and offset from the axis of the elongated body member, said side finger being adjacent the skier's

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hand when grasping the body member, said side finger being resilient for sideways movement away from the body member to allow sliding release of the skier's hand while the rigid upper and lower platforms prevent axial release of the skier's hand.

13. The strapless ski pole grip of claim 12 wherein said body member and said projections are formed of plastic having an resiliency to allow substantial side movement of said side finger and to prevent any substantial axial movement of the upper and lower platforms.

14. The strapless ski pole grip of claim 12 wherein the projection opposite the projection having the integral side finger has an end curving toward and terminating near the side finger to define therebetween a gap, said side finger and said curving end being located in a common plane generally coaxial with the axial bore.

15. The strapless ski pole grip of claim 12 wherein the side finger is of resilient structure which gently presses against the skier's fingers between the hand knuckles and the first finger joints when the skier's hand is grasping the body member.

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