Dec. 6, 1966 R. J. McDONALD 3,290,049

HANDLES FOR SKI POLES AND THE LIKE

Filed Feb. 14, 1964

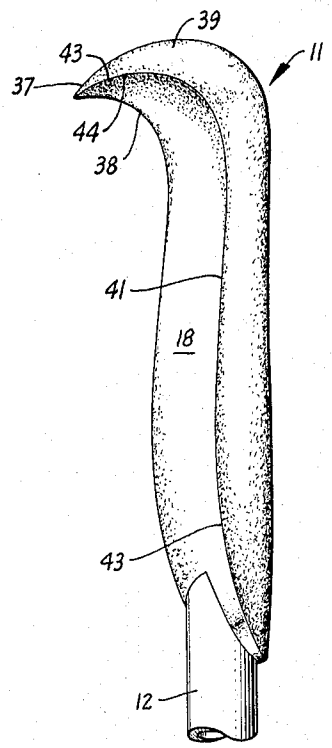


FIG. 1.

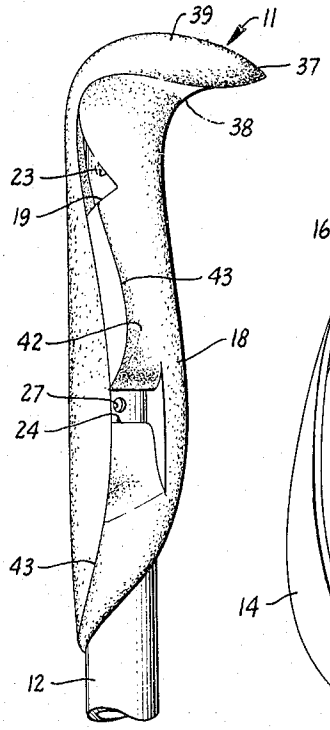


FIG. 2.

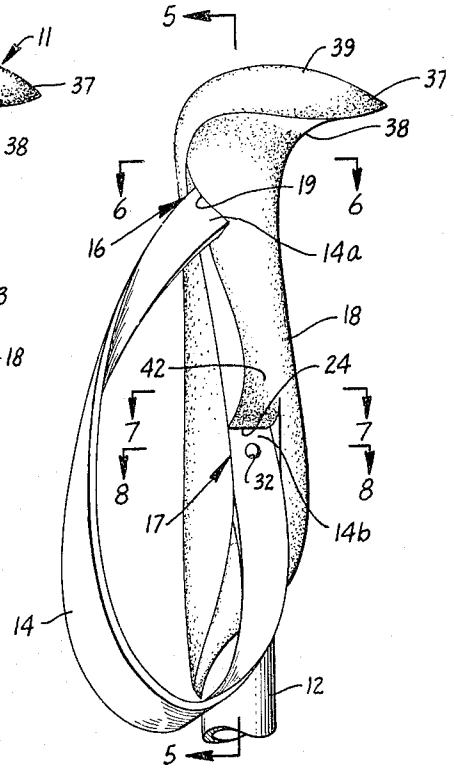


FIG. 3.

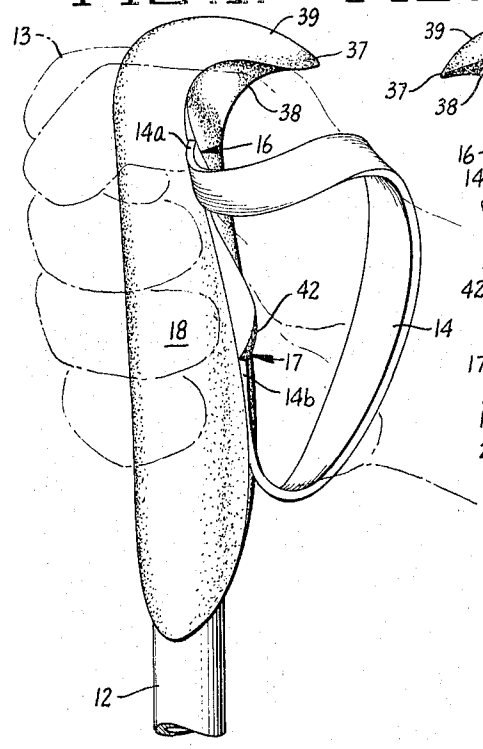


FIG. 4.

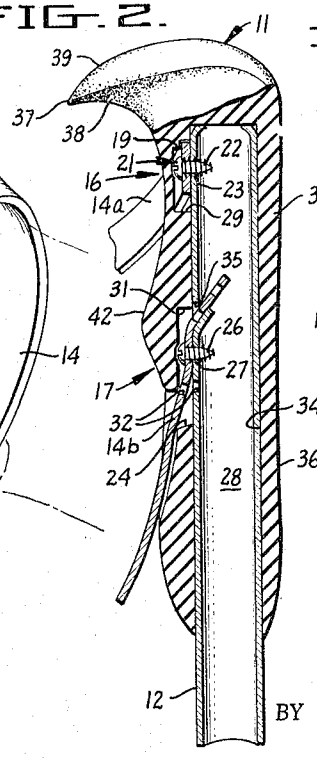


FIG. 5.

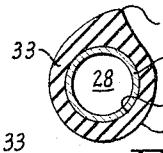


FIG. 6.

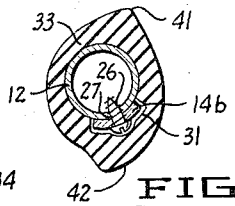


FIG. 7.

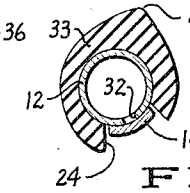


FIG. 8.

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HANDLES FOR SKI POLES AND THE LIKE

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10 Claims. (Cl. 280—11.37)

This invention relates to improvements in handles for ski poles and the like and more particularly to those handles which incorporate a retaining or wrist strap.

Ski poles are used by skiers for balance and traction and are notably essential in slalom and high speed downhill skiing. In these modes of skiing, enormous forces are exerted on the pole by the skier and it is imperative to provide a positive and comfortable gripping location for the skier's hand on the pole, for here is where these forces are most acute.

Straps are sometimes provided to insure against complete loss of the pole by the skier in case of temporary dislodgment. Thus the strap is attached to the handle of the ski pole and forms a loop, into which the skier's hand is inserted. In other words, the strap has its ends attached to the pole handle from whence the strap encircles the wrist of the skier.

In previous modes of attaching the strap to the ski pole handle, the strap emerged from juxtaposed points on the handle, usually near the top of the handle just above the gripping surface. This required the skier to grip a portion of the strap between the palm of his hand and the ski pole handle; and, as a more serious consequence, the hand could be pulled over the top of the handle leaving the pole free to dangle at the end of the skier's wrist. The disadvantage of having a ski pole flailing at the end of one's wrist, while plummeting down the slopes, is obvious.

As an additional consequence the term "skier's thumb" has become an axiom among skiers. This refers to the many sprained and sometimes broken thumbs suffered by the users of the present type of strap which attaches to the pole at a single top location.

This invention further obviates the inadequate profile of the present ski pole handles which are designed to fit both the right and left hand and as a consequence fit neither hand well.

Further shortcomings of present-day handles are similarly overcome, such as the danger of losing an eye or other injury when the butt end of the handle is thrust into the face during an unexpected mishap. Some attempts have been made to relieve this danger, as by placing large spherical bulbs at the ends of the handle, but have proved to be inadequate.

Accordingly, it is a principal object of the present invention to provide a handle for ski poles which affords the maximum of comfort and safety to the user.

A further object of the present invention is to provide a ski pole handle and strap combination in which, in case of a user's hand losing its grip on the handle, the strap will keep the pole next to the skier's hand in correct position for him to again grip the handle and regain control of the ski pole.

A still further object of the present invention is to provide a handle and wrist strap which obviates the discomfort of having to grip a portion of the strap between the hand and handle.

Another object of the present invention is to provide a handle of the character described having a configuration which engages the hand in a comfortable and secure manner and cooperates therewith to prevent the handle from twisting in the hand.

Yet another object of the present invention is to fasten the straps to the pole in such a way that the handle

is also secured on the pole with the fastening means hidden from view.

Another object of the present invention is to provide a ski pole handle which incorporates the aforesaid features in an attractive and economically producible configuration.

Further objects and advantages of the invention will be apparent as the specification progresses, and the new and useful features of the handles for ski poles and the like will be fully defined in the claims attached hereto.

The preferred form of the invention is illustrated in the accompanying drawing forming part of this application, in which:

FIGURE 1 is a front elevational view of one side of a typical right hand grip made in accordance with the preferred form of the present invention but as it would be on a ski pole without the retaining strap in place;

FIGURE 2, a rear elevational view of the grip shown in FIGURE 1 and is the side diametrically opposite that shown in FIGURE 1;

FIGURE 3, a view similar to FIGURE 2 but with the retaining strap in place;

FIGURE 4, a side view of the handle in FIGURE 3 slightly rotated to the right and shown as it would be gripped by a skier;

FIGURE 5, an elevational section taken substantially in the plane of line **5—5** of FIGURE 3 and illustrating how the strap is secured to the pole;

FIGURE 6, a section taken along line **6—6** of FIGURE 3;

FIGURE 7, a section taken along line **7—7** of FIGURE 3; and

FIGURE 8, a sectional view taken along line **8—8** of FIGURE 3.

While only the preferred form of the invention is shown, it should be understood that various changes or modifications may be made within the scope of the claims attached hereto without departing from the spirit of the invention.

It should be appreciated that the grip illustrated is intended to be used with the right hand and that a left hand grip would be a mirror image of that illustrated.

As shown in the drawing the handle for ski poles and the like of the present invention consists basically of handle means **11** of elongated form adapted to provide a hand hold at one end of a pole **12**, and a flexible strap **14** operatively connected to said handle means at longitudinally spaced locations **16** and **17** therealong so that the handle means **11** and strap **14** cooperate to provide a loop adapted to engage and restrain the hand **13** of the skier.

As an important feature of the present invention the strap ends are separated where they engage the grip or handle. This separation could take the form of securing the strap ends at points **16** and **17** as is illustrated or in other ways, the main feature being that the effective ends of the strap are separated and that a grip surface **18** is interposed therebetween to complete the loop. The preferred relationship of strap and handle is best shown in FIGURE 4, wherein the strap emerges from near the top of the handle, preferably at an angle as shown, and passes under the thumb, around the back of the hand and reenters the handle near the butt end of the hand.

This relationship of the strap ends overcomes several difficulties encountered in previous ski pole handle and wrist strap combinations. For instance, it will be noted that if the hand is opened the gripping surface **18** will remain near the palm of the hand and be in a position to be readily regrasped.

It will be noted further that by separating the strap ends the hand will be stopped from sliding any appreciable

distance along the handle. Similarly the thumb joint, between the thumb and index finger, is not submitted to the full force of a blow as on previous handles.

Another important feature of the present invention is the mode in which the strap is secured to the ski pole. The strap emerging from the lower end of the handle, at **17**, is directed downwardly and away from the handle. From here the strap makes a half twist and enters the upper end of the handle at **16**, axially displaced and askew to the lower end.

Preferably, the length of the strap is adjusted by concealed means and the usual buckle is eliminated. Such concealed adjusting means may be of any suitable form. As here shown, the upper strap end **14***a* enters the handle through passageway **19** and is secured to the ski pole by suitable fastening means **21** such as a screw **22** held in hole **23** in ski pole **12**; the other end **14***b* enters the handle through passage **24** and is similarly secured to the ski pole by a screw **26** in hole **27**.

In order to keep the attractive qualities that have been designed into the handle, the fastening means are hidden from view but are readily accessible. This is accomplished by relieving the interior bore **28** to provide recesses **29** and **31** under the handle adjacent the passages **19** and **24** into which the strap ends and the fastening means are lodged. To apply the handle and straps to a ski pole the handle is pulled onto the end of the ski pole until the passages **19** and **24** coincide with holes **23** and **27**; the strap ends are then secured to the pole with screws **22** and **26**. After the strap ends are so secured the handle is pulled further onto the pole until the strap ends and their fastening means are concealed under the handle in recesses **29** and **31**. This mode of attachment also keeps the handle **11** from moving axially or circumferentially on the pole **12**. The usual plug in the end of the ski pole may be eliminated by swaging over the end of the pole as shown in FIGURE 5.

Adjustment of the strap length is here effected by securing the strap through suitable alternate holes **32**, provided in either the shaft or strap. It will be appreciated that a considerable length of strap can be accommodated in the relieved recesses **29–31** by enlarging them, and that the strap could run entirely under the handle if desired. However, it is preferred to pass the end of the strap into the interior of the ski pole through a slot **35**. In this manner, a wide range of adjustment may be accommodated while concealing the strap ends.

The handle is essentially an elongated sleeve **33** having generally cylindrical walls **34** and **36** defining an interior shaft receiving bore **28** and an exterior grip surface **18**. But, as an important part of the present invention, the profile of the exterior wall **36** is made to more comfortably and securely support a human hand and restrain the handle against twisting. In this connection the preferred form of the invention provides separate handles for each hand, that is, one for the right hand and one for the left.

The upper end of the sleeve **33** is closed by an enlarged end portion **37** which extends out over the grip surface **18**. This enlarged extension or projection keeps the hand from being pulled over the top of the handle. The lower surface **38** of the projection is concave to fit adjacent the thumb and index finger (see FIGURE 4) while the upper end **39** of the end portion is convex to afford more protection in case the ski pole is jabbed toward the face. As best seen in FIGURE 4 the enlarged end **37** lays substantially in the contour of the upper end of the fist **13**, combining therewith to present a large area of impact to absorb any blows imparted to the body or head by the ski pole.

Further hand conforming features of the grip surface include a protruding ridge **41** extending longitudinally along one side of the handle, and projecting therefrom. This ridge is formed to engage the fingers of the user's hand and more particularly to fit within the crotch made by the inside second joint of the fingers. When the skier is using the handle this ridge gives him a reference line to help orient the hand on the handle and also provides a means to keep the handle from rotating within his hand.

Similarly, the side of the grip surface substantially diametrically opposite the ridge **41** has a configuration **42** adapted to conform to the palm of the user's hand and which also helps to position the hand and keep the handle from rotating. In addition, the palm conforming projection **42** forms an enlarged cross-section for the handle, under which relieved recesses **29** and **31** are provided.

The handle is preferably made of a moldable rubber to present a soft and "warm" feel to the hand. The elasticity and friction of the rubber also helps to keep the grip on the pole, the shaft receiving bore **28** being made somewhat smaller than the diameter of the pole in such case.

So as not to detract from the smooth flowing lines of the preferred form of the ski pole handle it is contemcorporated into the general aesthetic harmony of the handle. This is achieved, as is clearly shown in the drawings, by running the line **43** along the apex of the first or finger-engaging projecting ridge **41**, thence along the intersection **44** of the convexo-concavo end portions **38** and **39** and along the apex of the second or palm-engaging projection **42**.

From the foregoing description, it is seen that I have provided a handle for ski poles and the like which affords improved comfort and safety to the user, which incorporates a retaining strap in a manner wherein the handle is retained in close proximity to the hand even though temporarily dislodged, and which interposes a grip surface between the strap ends, with hand conforming projections, all of which are incorporated in an attractive ensemble.

I claim:

1. A handle for ski poles or the like comprising handle means of elongated form adapted for providing a hand hold at one end of a pole, and a flexible flat strap operatively connected to said handle means at longitudinally spaced locations therealong with one end of the strap being connected in angular relation to the other end of the strap and the strap being held in a half twist whereby said flexible strap cooperates with said handle means to provide a hand engaging and restraining loop.

2. A handle for ski poles or the like, comprising handle means of elongated form adapted for providing a hand hold at one end of a pole, a flexible flat strap operatively connected to said handle means at longitudinally spaced locations therealong with one end of the strap being connected in angular relation to the other end of the strap and the strap being held in a half twist whereby said flexible strap cooperates with a portion of said handle means being formed with a grip surface adapted for engagement by the hand of the user, said grip surface defining the portion of said handle which cooperates with said strap to define said hand engaging and restraining loop.

3. A handle for ski poles or the like as described in claim 2 and wherein said flexible strap provides the major portion of said loop.

4. A handle for ski poles or the like as described in claim 2 and wherein said handle means is formed with an enlarged end portion extending radially outwardly of said grip surface at the palm engaging side thereof, said enlarged end portion formed with a convex upper surface adapted to fit over the joint between the thumb and the main body of the hand to cooperate with the hand of the user in providing a greatly enlarged impact area at the end of the handle, and a concave lower surface adapted to be positioned in overlying relation to the hand of the user and cooperative with said strap for retaining said hand in proper gripping relation to said handle, said strap having both connections spaced from the enlarged end portion of the handle to allow the thumb to be positioned between the strap and the end portion and securely held therebetween.

5. A handle for ski poles or the like as described in claim 2 and wherein said handle means is formed with a ridge extending longitudinally along said grip surface and projecting therefrom for engagement by the fingers of the user's hand, the side of said grip surface substantially diametrically opposite said ridge having a configuration adapted to conform to the palm of the hand of the user and cooperative with said ridge for orienting the hand in correct position on the handle with respect to said loop for restraining said handle against rotation from such position.

6. A handle for ski poles or the like as described in claim 2 and having retaining means on said handle means anchoring the strap ends with the terminal portions of the loop at locations spaced circumferentially for conforming the loop to the configuration of the hand.

7. A handle for ski poles comprising, handle means of elongated form adapted for providing a hand hold at one end of a ski pole, a flexible flat strap operatively connected to said handle means at longitudinally and circumferentially spaced locations therealong, with one end of the strap being connected in angular relation to the other end of the strap and the strap being held in a half twist whereby said flexible strap cooperates with a portion of said handle means, said handle means being formed with a grip surface adapted for engagement by the hand of a user, said handle means formed with an enlarged end portion extending radially outwardly of said grip surface at the palm engaging side thereof, said enlarged end portion formed with a convex upper surface adapted to fit over the joint between the thumb and the main body of the hand to cooperate with the hand of the user in providing a greatly enlarged impact area at the end of the handle and a concave lower surface adapted to be positioned in overlying relation to the hand of the user and form a stop therefore to retain said hand on said handle, said strap having both connections spaced from the enlarged end portion of the handle to allow the thumb to be positioned between the strap and the end portion and securely held therebetween, said grip surface being formed with a ridge extending longitudinally therealong and projecting therefrom for engagement by the fingers of the user's hand, and the side of said grip surface substantially diametrically opposite said ridge having a configuration adapted to conform to the palm of the hand of a user and cooperative with said ridge for orienting the hand in correct position on the handle and restraining said handle against rotation from such position.

8. A handle for ski poles and the like, comprising a handle adapted for mounting on the end of a pole and forming a hand hold thereon, said handle being of

elongated sleeve-like form with generally cylindrical walls defining an interior bore adapted for slidably receiving the end of a pole and an exterior grip surface adapted for gripping engagement by the hand of a user, the walls of said handle being formed with passages extending therethrough at longitudinally spaced locations along said sleeve, said wall of said handle at said interior bore having internal recesses adjacent to said passages and adapted for accommodating the ends of a strap whereby said handle may be slid along a pole to cover and conceal the ends of a strap within said internal recesses.

9. A ski pole, comprising a shaft, a handle of elongated form mounted on the upper end of the shaft, and a flexible retaining strap having its ends extending through the handle and secured directly to said shaft at longitudinally and circumferentially spaced locations therealong, said strap cooperating with said handle to provide a loop adapted for engaging and restraining a hand in gripping position relative to said handle.

10. A ski pole, comprising a shaft, a handle mounted on the end of the shaft and forming a hand hold thereon, said handle being of elongated sleeve-like form with generally cylindrical walls defining an interior bore slidably receiving said end of said shaft and an exterior grip surface adapted for gripping engagement by the hand of a user, the walls of said handle being formed with passages extending therethrough at longitudinally spaced locations along said sleeve, a flexible strap cooperative with said handle to define a hand engaging loop and having its opposite ends positioned in said passages, and a plurality of fastening means formed for securing said opposite ends of said strap to said shaft, said wall of said handle at said interior bore having internal recesses adjacent to said passages so as to accommodate said strap ends and said fastening means whereby said handle may be slid along said shaft to cover and conceal said fastening means within said internal recesses.

References Cited by the Examiner

UNITED STATES PATENTS

D. 191,751	11/1961	Woodall.	
2,627,420	2/1953	Wheeler	280—11.37
2,741,485	4/1956	Storm et al.	280—11.37
3,181,880	5/1965	Cameron et al.	280—11.37

FOREIGN PATENTS

194,209	2/1938	Switzerland.
195,361	4/1938	Switzerland.

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