United States Patent

[11] **3,561,782**

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[54] **SKI POLE CONSTRUCTION WITH LIQUID RESERVOIR**
7 Claims, 5 Drawing Figs.

[52] **U.S. Cl.** **280/11.37**
[51] **Int. Cl.** **A63c 11/22**
[50] **Field of Search** 280/11.37B

[56] **References Cited**

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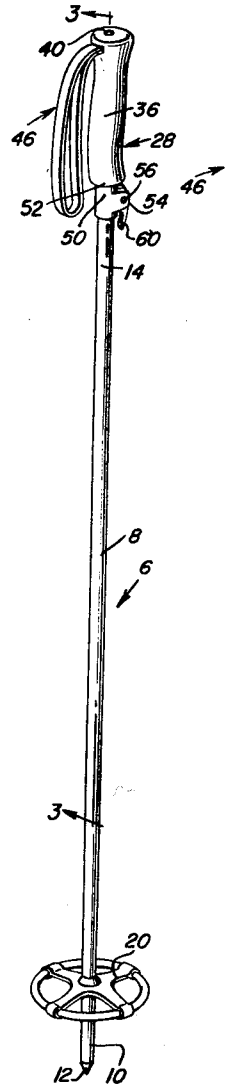
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ABSTRACT: A ski pole having an upper hollow end providing a liquid container. The contoured handgrip is readily applicable and removable, and is provided with a latch-controlled locking device. The handgrip when removed permits partial withdrawal of a flask for drinking use. In addition, the locking device functions as a safety release if the basket at the pointed lower end of the ski pole should become snagged on a tree, a bush or other obstruction.



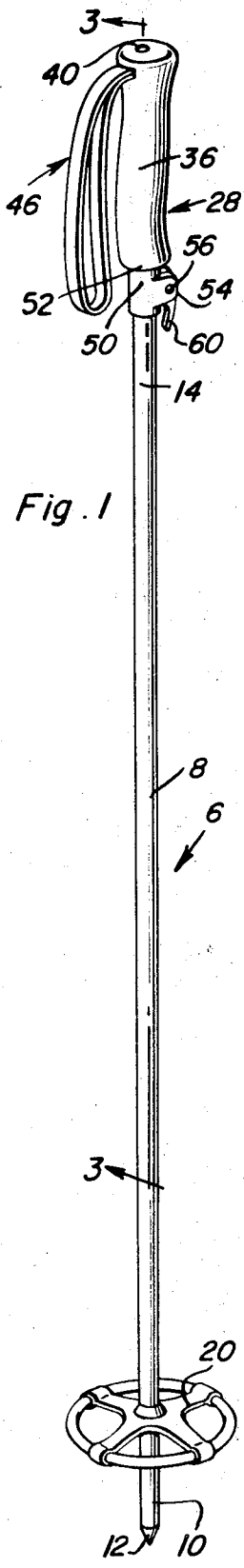


Fig. 1

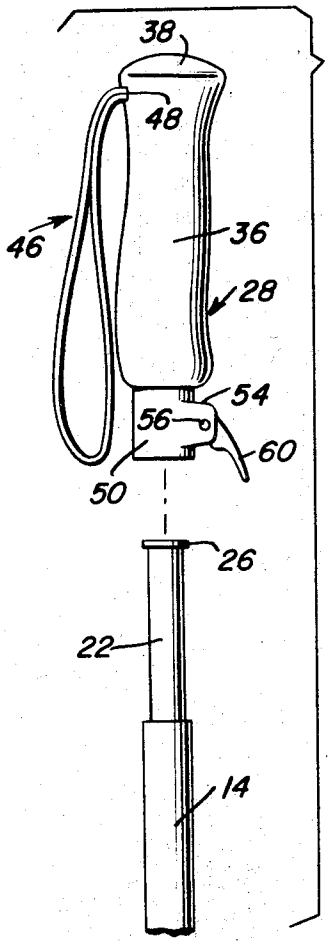


Fig. 2

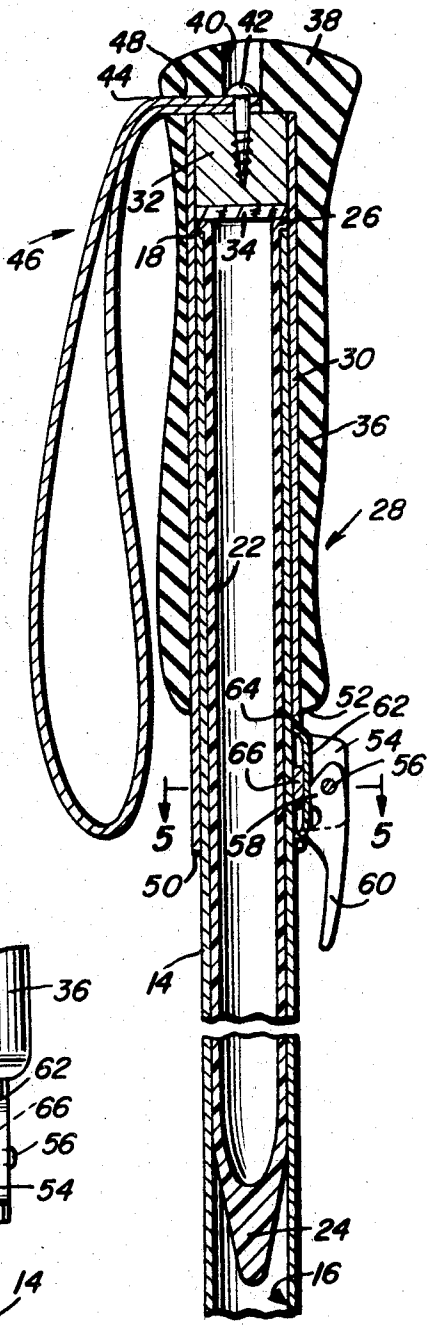


Fig. 3

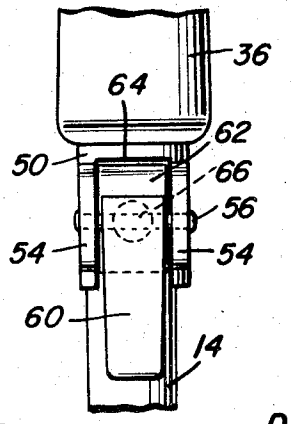


Fig. 4

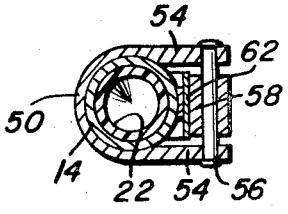


Fig. 5

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SKI POLE CONSTRUCTION WITH LIQUID RESERVOIR

This invention relates to a ski pole whose lower pointed end is of ordinary construction and whose upper end features a special purpose chamber which is lined by an insertable and removable plastic drinking flask and is provided with a readily applicable and removable handgrip, more particularly, a handgrip which is lined with a suitable sleeve whose projecting lower end is provided with a conveniently accessible locking device embodying a manually regulatable latch.

Briefly, the elongated ski pole is rigid and is characterized, explicitly stated, by an upper end portion, a lower end portion and an intervening or median portion interconnecting said upper and lower end portions. The lower end portion has a pointed terminal end and is provided above the pointed end with a fixedly mounted basket-type guard. The handle means embodies an elongated sleeve which is fitted into and lines the axial bore or socket of a molded suitably contoured handgrip. The sleeve is such in length and cross-sectional dimension that it fits removably and telescopingly over the cooperating upper end portion of the pole. This upper end portion is hollow and serves to define a chamber, more specifically, a chamber which is adapted to receive an insertable and removable plastic container. This container is referred to herein as a liquid-containing and drinking flask. The upper end of the container has an outstanding liplike flange which abuts the coacting upper end of the ski pole. The upper end of the sleeve is provided with an insert made of wood or the like and which is faced with a compressibly resilient washer which constitutes a gasket and abuts and seals the upper flanged end of the flask. The lower end of the sleeve is provided on one side with retainer means, that is, a special adaptation which functions to retentively but releasably mount and secure the sleeve and handgrip on the upper portion of the ski pole. To the ends desired, the retainer means is preferably in the form of a bracket having a pivoted lever, the lever having a cam acting on a spring which in turn acts on and frictionally retains a shoelike detent against the surface of the ski pole.

One improvement has to do with the readily applicable and removable handle means having the usual hand strap at an upper end and a protruding sleeve at the lower end which is equipped with the aforementioned retainer. The retainer is such that the trip lever actuates a cam and the cam acts on a spring carrying a friction gripping and clamping detent or shoe. With this arrangement the handle functions as a safety release device should the commonly used basket on the ski pole get snagged on a tree, bush or other obstruction. The handle or handgrip can be released and slipped off the ski pole with a view toward minimizing the likelihood of injury to the skier's arms or shoulders as the case may be.

As is perhaps already evident and aside from the safety type handle means, the removable grip portion of the handle means is provided with a closure which is in turn equipped with a gasket, the gasket being pressed and latched tightly against a limit stop and positioning flange on the upper end of the insertable and removable container or flask, thus sealing the contents of the container against leakage.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a view in perspective of a ski pole constructed in accordance with the invention and readied for use.

FIG. 2 is a view on an enlarged scale showing the handle means released and bodily removed, showing the upper end portion of the hollow or chambered ski pole and showing the flanged upper end portion of the container or flask lifted out and projecting to a conveniently usable position.

FIG. 3 is an enlarged section with parts in section and elevation taken approximately on the plane of the vertical section line 3–3 of FIG. 1 looking in the direction of the arrows.

FIG. 4 is an enlarged detail elevational view showing the latch-equipped retainer means, that is a view observing this means in FIG. 3 in a direction from right to left and appearing in elevation.

And FIG. 5 is a horizontal section taken approximately on the plane of the section line 5–5 of FIG. 3.

Taking up first the ski pole it will be evident that it resembles any ordinary or conventional type ski pole. It is denoted, generally stated, by the numeral **6** and embodies a median or body portion **8** of requisite length and cross section, a complemental lower end portion **10** having a pointed terminal or leading end **12** and an upper portion **14**. This upper portion **14** as better shown in FIG. 3 is hollow and provides a cylindrical chamber of uniform dimension from end to end. The extreme upper end of this hollow portion is denoted at **18** and provides a shoulder which serves in a manner to be described. The lower portion is provided above the point with an appropriate guard such as is commonly referred to as a basket and is denoted for convenience of reference by the numeral **20**. Thus the ski pole **6** except for being hollow at the upper end portion is not unusual.

The chamber **16** is such as to accommodate an insertable and removable telescopingly fitted plastic elongated container which is denoted by the numeral **22** and which has a pointed lower end **24** (FIG. 3) and has an upper flanged end **26**, the flange providing an annular lip and said lip being normally seated on the shoulder **18** when the container is fitted and sealed in place as shown. The container or flask lends itself to use as a receptacle for a liquid beverage or for whatever purpose the skier finds use therefor. Manifestly with this type of snug fitting but removable container it is desirable that the handle means, denoted generally by the numeral **28**, must be such in construction as to provide a satisfactory retaining and sealing device.

In carrying out a preferred embodiment of the handle means it comprises an elongated open-ended sleeve **30** which is fitted snugly but removably over the coacting upper end portion **14** of the ski pole. The upper end portion of the sleeve is provided with a wooden or an equivalent filler or plug **32** which functions as a stopper or closure and which is faced with a compressibly resilient gasket **34** which fits atop the flange and provides a satisfactory seal when the parts are assembled in the manner shown in FIG. 3.

The major upper end and body portions of the sleeve are fitted within and serve to line the socket or bore of a molded plastic or equivalent handgrip which is denoted, generally stated, by the numeral **36**. The extreme upper closed end of the grip is denoted at 38 and is provided with an axial hole **40** permitting access to be had to a screw **42** which is used to fasten an end portion **44** of a hand strap **46** in a radial hole **48** provided therefor. The lower end portion of the sleeve, denoted at **50** projects beyond the corresponding lower end **52** of the handgrip where it is provided with an integral or permanently attached retainer means. More specifically the retainer means comprises a bracket embodying a pair of spaced parallel ears **54** provided with a pivot pin **56** which serves to hingedly mount the cam-equipped end portion **58** of a lever-type latch **60**. The latch, that is the handle portion, is accessible for easy use and functions to retentively apply the cam nose **58**. When pressed in place the nose is engageable with a median portion of a suitable leaf spring **62** which has inturned or laterally directed end portions **64**. This spring is provided intermediate its ends with a suitably attached disclike friction shoe or detent **66**. This detent is of a shape that it can be pressed firmly against the surface of the ski pole in a manner to retentively but releasably latch the sleeve portion of the handle means **28** in its set position, that is the position shown in FIGS. 1 and 3 in particular.

This handle means as already suggested constitutes a safety release device in the event that the basket **20** on the ski pole should become snagged in any way on a tree, a stump, a bush or other obstruction. With the construction and arrangement shown, the handle can be released so that it will slip off the ski

pole thus saving injury to the skier's arms and shoulders. The brass or equivalent detent **66** functions as a friction shoe and is carried on the spring means **62** and the spring means is forced into a secured position by moving the cam **58** of the lever **60** to the position illustrated in FIG. **3**. The latch can be released to assume the position shown in FIG. **2** whereupon the handle means **28** can be slipped off either for safety purposes or to uncover the flask **22** so that it can be withdrawn in the manner shown in FIG. **2** for readily accessible and sanitary drinking purposes. In fact the entire container can be withdrawn and cleansed from time to time and restored for acceptable use.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

I claim:

1. For use by a skier, an elongated rigid ski pole characterized by upper, lower and median portions, said lower portion having a pointed terminal end and being provided above said end with a fixed conventional-type basket, handle means embodying an elongated grip having an axial bore lined with a fixed sleeve, said sleeve being slidingly, fittingly and telescopingly mounted over a coacting part of said upper portion, said sleeve being provided with retainer means which is retentively but releasably connectable with said upper portion, whereby to permit said handle means to be quickly and conveniently released and freed by said pole whenever necessary or desired, said retainer means embodying a leaf spring, a friction-held detent carried by said spring and adapted to be pressed directly against the surface of the ski pole, and a pivotally mounted manually trippable lever, said lever having a cam and said cam being cooperable with said spring.

2. The ski pole defined in and according to claim **1** and wherein said sleeve is provided with a pair of spaced parallel outstanding ears constituting a bracket, said spring being confined for operation between said ears and an end portion of said lever being pivotally mounted between said ears.

3. The ski pole defined in and according to claim **2** and wherein said bore constitutes an elongated socket, said socket being closed at an upper end, the corresponding upper end of said sleeve being fitted in the closed end portion of said socket and provided with a plug, said plug constituting a stopper and having a face covered with a compressibly resilient washer, said washer constituting a gasket.

4. The ski pole defined in and according to claim **3** and in combination, a readily insertable and removable elongated flask, the upper end portion of said ski pole being hollow and said flask being fitted telescopingly into said hollow portion, said flask having an upper end provided with an endless flange, said flange constituting a shoulder and being seated atop a coacting end portion of said pole, and said gasket being pressed firmly against said flange.

5. For use by a skier, an elongated rigid ski pole having an upper end portion, a lower end portion and an intervening body portion connecting said upper and lower end portions, said lower end portion being pointed and provided above said pointed end with a guard, said upper end portion being hollow and providing a chamber, the extreme upper open end of the chamber providing a shoulder, an insertable and removable elongated container, said container constituting a liquid-containing and drinking flask, said container having a flange at an upper end and said flange being firmly but releasably engageable with said shoulder, and readily applicable and removable handle means for closing and retaining said flask in a closed but ready-to-use position, said handle means comprising an elongated sleeve, said sleeve being provided at an upper end with a filler plug and said plug having a face covered with a gasket, said gasket adapted to abut and sealingly engage said flange, said sleeve being fitted in the bore of a contoured handgrip, said sleeve having a lower end portion projecting beyond the corresponding lower end portion of said handgrip, said projecting portion being provided on one side with a pair of outstanding spaced parallel opposed ears constituting a bracket, a lever having one end pivoted between said ears and having an end portion providing a trippable finger grip, and means between said ears for retentively but releasably engaging a cooperating surface of the ski pole.

6. The ski pole defined in and according to claim **5** and wherein said means comprises a leaf spring located between the ears, said spring having laterally directed terminal and portions slidingly contacting coordinating surface portions of the ski pole, said lever having a cam and said cam being releasably engageable with a median portion of said spring, and a median portion of said spring being provided with a detent, said detent having friction clamping engagement with a cooperating surface of the ski pole.

7. For use by a skier, an elongated ski pole having an upper end portion, a lower end portion and an intervening body portion connecting said upper and lower end portions, said lower end portion being pointed and provided above said pointed end with a guard, said upper end portion being hollow, readily applicable and removable handle means embodying an elongated grip having an axial bore lined with a fixedly mounted sleeve, said sleeve being slidingly, fittingly and telescopically mounted over a coacting exterior upper part of said upper end portion, said sleeve having a lower end portion projecting beyond the corresponding lower end portion of said handgrip, said projecting portion being provided on one side with a pair of integral outstanding spaced parallel opposed ears coacting with each other and said sleeve and providing a bracket, a lever having one end pivoted between said ears and having an end portion providing an accessible trippable finger grip, a leaf spring proportional with and located cooperatively between said ears, said spring having laterally directed terminal upper and lower end portions slidingly contacting coordinating exterior surface portions of said ski pole, said lever having a cam releasably engageable with a median yieldable portion of said spring, said median yieldable portion of said spring being provided with a detent having friction clamping engagement with a cooperating exterior surface of the ski pole.