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SKI POLE WITH LIQUID CONTAINER

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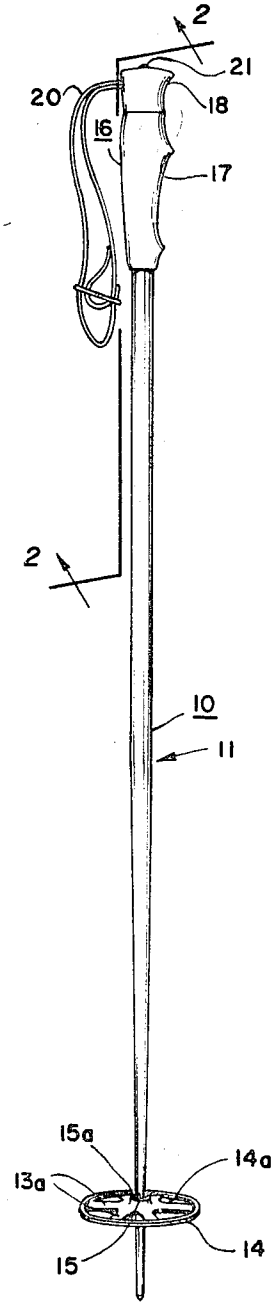


FIG. 1

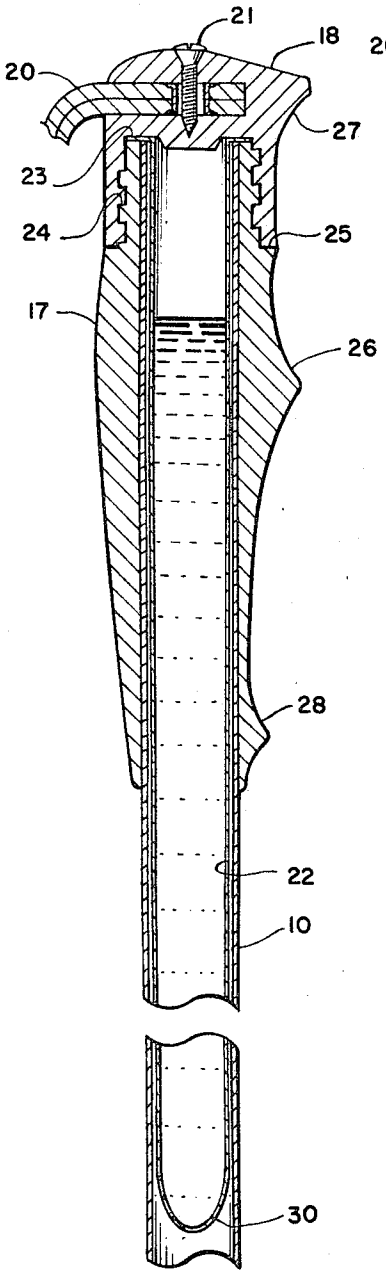


FIG. 2

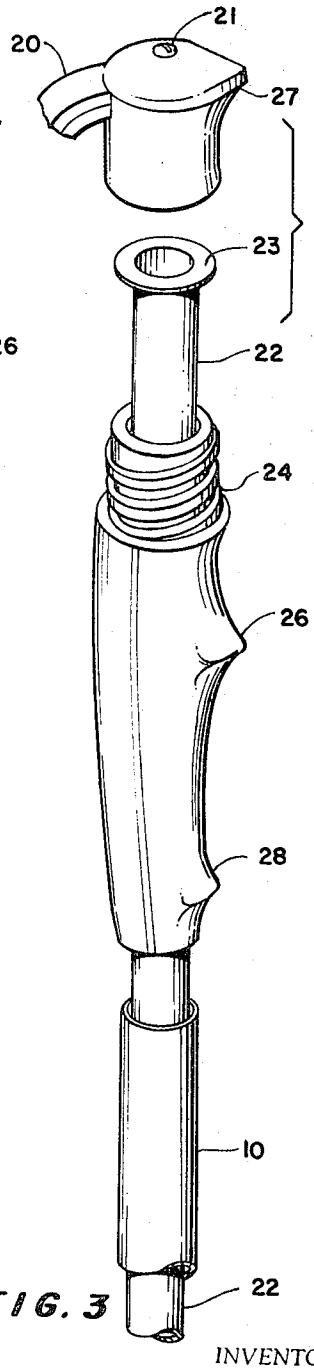


FIG. 3

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ABSTRACT OF THE DISCLOSURE

A ski pole comprises a tubular shaft having a substantial length of uniform diameter and a plastic flask or vial removably mounted within the uniform portion for containing a liquid such as a beverage. The flask is clamped in the ski pole handle assembly and is readily detachable from the pole therewith.

This invention relates to ski poles for conventional use in skiing and particularly to such pole including an improved arrangement for mounting a detachable liquid container within the shaft of the pole.

Heretofore, ski poles have been provided with compartments in their handles for the storage of small tools or the like, and various elongated articles, such as canes and simulated golf clubs, have been provided with liquid storage containers. These articles have been satisfactory for use of the limited scope for which they were intended. It is desirable to provide a ski pole entirely suitable for regular skiing use but which is also capable of carrying a quantity of a beverage or other liquid. Accordingly, it is an object of this invention to provide a ski pole having an improved arrangement for storing a quantity of liquid therein.

It is another object of this invention to provide a ski pole including a liquid storage container and an improved arrangement for removing the container from the ski pole for use or refilling.

It is another object of this invention to provide an improved ski pole arranged to carry a flask of liquid and which is capable of normal use as a ski pole without likelihood of leakage of liquid from the flask.

A further object of this invention is to provide a ski pole of the tubular metal shaft type having a handle, hand strap and stop disc and including an improved arrangement whereby the handle, strap and disc may readily be removed from the shaft for repair or replacement of the shaft.

Briefly, in carrying out the objects of this invention in one embodiment thereof a ski pole is constructed with a shaft of metal tubing having a uniform diameter over about one-half its length and which is then tapered to a relatively small diameter at the lower end where a point is securely attached. A stop basket is attached near the lower end and a handle is firmly but slidably mounted about the top end of the shaft. The handle carries an elongated flexible plastic flask or vial extending a substantial distance into the uniform portion of the tubular shaft and which has an outwardly extending flange about its open end firmly clamped between the handle and a cap carrying the hand strap and which is securely screwed onto the main body of the handle. This clamping arrangement both seals the flask and holds it securely in position. The handle with the assembled flask may be slidably removed from the shaft without detaching the screw cap or top of the handle.

The features of novelty which characterize this invention are pointed out with particularity in the claims annexed to and forming a part of this specification. The invention itself, however, both as to its organization and its manner of use, together with further objects and advantages thereof, will best be understood from the following description taken in connection with the accompanying drawing in which:

FIG. 1 is an elevation view of a ski pole embodying the invention, the stop basket being shown slightly tilted from its normal position;

FIG. 2 is an enlarged sectional view of the upper portion and handle of the ski pole of FIG. 1; and

FIG. 3 is an exploded perspective view of the upper portion of the pole.

Referring now to the drawing, the ski pole illustrated in FIG. 1 comprises a shaft **10** which is a metal tube of strong aluminum alloy. The upper portion of the shaft above a zone indicated at **11** is of uniform diameter and the shaft tapers from the zone **11** to the lower tip where a steel point **12** is securely held in the tube by a frictional fit, the point being provided with slight projections which prevent withdrawal from the tube after it has been pressed into position. The details of construction of the tip are not shown as they are not essential to an understanding of the present invention.

A stop or basket **13** is securely held on the lower portion of the shaft in the conventional position for such stop on ski poles. The stop comprises an outer metal ring **14** and a metal hub **15** connected by a strong plastic spider bonded to the hub and rim. Preferably the spider comprises a hub portion **15***a* and a rim portion **14***a* connected by a plurality of spokes **13***a* and the metal rim is of channel-shaped section opening toward the center to surround the rim portion of the spider and provides substantial extended surface in contact with the rim and a good reinforced construction when the two are bonded together. The basket is held on the shaft by the frictional fit of the hub **15** on the taper of the shaft. The basket is urged against its seat on the shaft during use of the ski pole but may be removed when desired by forcing it toward the tip.

At the upper end of the shaft there is provided a handle **16** including a main body portion **17** and a cap **18** screwed onto the body portion and having a hand strap or loop **20** securely attached to the cap by a screw **21** which passes through a grommeted hole passing through the two ends of the loop.

As shown in FIGS. 2 and 3, an elongated thin walled liquid flask or vial **22** is positioned within the uniform diameter portion of the shaft **10**. The flask is securely held between the cap **18** and the body portion **17** of the handle by a flange **23** which projects outwardly from the flask and is pressed between the cap **18** and body portion **17** of the handle when the cap is screwed onto the handle. Preferably, the outside diameter of the flask is made just slightly smaller than the internal diameter of the tube **10** so that the flask may be inserted in the tube with an easy sliding fit. The pressure is applied by threads, indicated as square threads **24** on the body **17** and internal threads in the cap matching the threads **24**, which are arranged to clamp the flange **23** securely against the body **17** when the cap has been screwed down into the position shown in FIG. 2. In this position the lower edge of the cap presses the flange **23** against a shoulder **25** on the body portion **17**. A knob or projection **26** is provided on one side of the body **17** and a similar projection **27** on one side of the cap **18**; these projections are in alinement when the cap is tightened in position and provide the desired hand grip. A third projection **28** is provided on the body portion in alinement with the projections **26** and **27** near the lower end of the handle to provide a bottom grip stop.

The flask **22** is provided so that a liquid such as an alcoholic beverage may be carried in the ski pole during its normal use in skiing. The flask **22** preferably is made of a highly flexible plastic which remains sufficiently

flexible at low temperatures, and a clear non-toxic polyvinyl chloride has been found well suited to this use. This material is very flexible and tough and can be bent or even tied in a knot without rupturing its walls; it may, for example, be used as a tourniquet without destroying it for use as a liquid container. The flask **22** may be formed from a non-toxic polyvinyl chloride tube of uniform outside diameter which is closed and sealed at its lower end as indicated at **30**. When the flange **23** is clamped between the cap and the body **17**, it not only seals the flask against leakage of the liquid therein but also holds it securely so that the flask is maintained in position during the normal use of the ski pole.

The main body **17** of the handle is secured on the metal tubing **10** by a tight friction fit and may be removed by drawing it from the end of the shaft **10**. The handle is constructed of a molded plastic material and it has been found that, when in use at the low temperatures encountered during the skiing season, the handle grips the pole more securely than at high temperatures and holds the handle and shaft together for normal skiing use. However, should the ski pole be trapped or caught during a fall, for example, the handle can pull free from the pole and thereby prevent injury to the skier under such circumstances.

When the handle is drawn from the pole the beverage flask is removed from the shaft with the handle. Thus, if the skier desires to leave his poles when he enters a warming house, for example, he can take the handle and flask with him and thereby make it less likely that the poles will be taken by mistake or stolen.

The provision whereby the handle and basket may be removed from the shaft has a further advantage in that the shaft may be quickly removed and replaced in the event of damage to the shaft. Furthermore, some skiers may wish to have shafts of different colors which may be used with different colored ski outfits and this removable shaft arrangement makes it possible to harmonize the coloring of the shafts with the clothing without requiring separate ski poles for each outfit.

As an example, and not by way of limitation, a ski pole embodying the invention has been constructed in which the shaft is 54 inches long and in which the uniform diameter portion extends from the top downwardly for about 30 inches, the remainder of the shaft being tapered as shown in the drawing. The shaft employed was a ¾ inch tubing of durable aluminum alloy having an outside diameter of ¾ inch and an inside diameter of about $^{11}/_{16}$ inch. The handle for the ski pole was constructed as illustrated in the drawing and was molded from a suitable plastic such as a polyethylene or a vinyl with suitable coloring dye or pigment. The flask was constructed of colorless polyvinyl chloride tubing of ⅝ inch diameter about two feet long closed at the lower end and provided with a flange **23** about ⅛ inch wide at the top of the polyvinyl tubing by forming from the material of the tube. A pair of ski poles constructed in this manner were found to be entirely suited to use during normal skiing, to provide the safety advantages indicated above, and to make it possible to carry a beverage without leakage and without interfering with the normal use of the poles. Furthermore, the handles could be removed with the filled beverage flask and replaced without difficulty and without destroying the sealing of the flange between the cap and the handle.

I claim:

1. A ski pole or the like comprising an elongated hollow metal tube constituting the shaft of the pole, a handle slidably fitted about one end of said tube in firm frictional engagement, an elongated container of flexible plastic material lying within said tube, said container being closed at one end and open at the other adjacent said handle and having an outwardly extending annular flange about its open end, a cap for said handle threaded on the body thereof and removable for access to said container, said flange on said container lying between adjacent portions of said cap and said handle, respectively, and said cap when firmly secured sealing said container and attaching said container to said handle whereby the handle and container may be slid from said tube as a unit.

2. A ski pole or the like as set forth in claim **1** including a hand strap loop secured to said cap.

3. A ski pole or the like as set forth in claim **1** wherein said tube is of uniform diameter for a distance of the order of one-half its length from said handle end and is tapered for the remainder of its length toward its end remote from the handle, and said container being of uniform diameter for substantially its full length and lying within said uniform diameter portion of said handle.

4. A ski pole or the like as set forth in claim **1** including a pointed tip closing the end of said tube remote from said handle, and a stop basket detachably secured to said tube near said tip, said tube being tapered toward said tip and said basket having a hub secured on the taper by a press fit whereby both the handle and the basket are secured frictionally and may readily be removed for storage or replacement.

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