A method and apparatus for a ski pole holder for attachment to a ski lift chair comprising a retaining bracket configured to hold at least one ski pole and mounting hardware configured to attach the ski pole holder to the ski lift chair.
Figure 1C
Figure 4
METHODS AND APPARATUS FOR A SKI POLE RETAINER

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Patent Application No. 61/322,764, titled "Ski Pole Retainer" filed Apr. 9, 2010, and incorporates the disclosure of such application by reference.

BACKGROUND OF INVENTION

[0002] Skiers, once on a ski lift, are required to carry or hold their ski poles. Sometimes skiers are able to sit on top of their ski poles when there is extra room on the ski lift. It is especially important for a skier to maintain control of his ski poles while on the ski lift. A dropped pole results in, at best, a long retrieval process and, at worst, the pole may fall in an unreachable, or out of bounds area resulting in a lost pole. Additionally, dropped poles create hazards for other skiers and snowboarders and can create dangerous conditions for the skier, ski patrol, and mountain ski resort lift operators who attempt to retrieve these dropped poles.

SUMMARY OF THE INVENTION

[0003] A method and apparatus for a ski pole holder for attachment to a ski lift chair comprising a retaining bracket configured to hold at least one ski pole and mounting hardware configured to attach the ski pole holder to the ski lift chair.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] A more complete understanding of the present invention may be derived by referring to the following illustrative figures. In the following figures, like reference numbers refer to similar elements and steps throughout the figures.

[0005] FIG. 1A illustrates an embodiment of a ski pole holder from a side perspective.

[0006] FIG. 1B illustrates an embodiment of a ski pole holder from a front perspective.

[0007] FIG. 1C illustrates an embodiment of a ski pole holder from a top perspective.

[0008] FIGS. 2A and 2B illustrate a front and top perspective of an embodiment of a ski pole holder.

[0009] FIGS. 3A and 3B illustrates a front and top perspective of an embodiment of a ski pole holder.

[0010] FIG. 4 illustrates an embodiment of a ski pole holder.

[0011] FIGS. 5A and 5B illustrate a mounting hardware comprising a collar standing alone and attached to a ski pole holder.

[0012] FIG. 6 illustrates an embodiment of a ski pole holder with a recessed mounting hardware comprising a clamp.

[0013] Elements and steps in the figures are illustrated for simplicity and clarity and have not necessarily been rendered according to any particular sequence. For example, steps that may be performed concurrently or in different order are illustrated in the figures to help to improve understanding of embodiments of the present invention.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

[0014] The present invention may be described in terms of various functional components and parts. In one embodiment, a ski pole holder 100 may be attached to a ski lift chair. The ski pole holder 100 may hold or stabilize at least one ski pole in a confined area without any intervention from a skier other than the skier placing the pole into the ski pole holder 100. The ski pole holder 100 may allow the ski pole to make minor movements while placed in the ski pole holder, but the ski pole remains contained in the ski pole holder 100 without user intervention. The ski pole holder 100 is capable of supporting and carrying the ski poles for the duration of a ski lift ride. Once the skier no longer needs to retain the ski pole in the ski pole holder 100, the ski pole holder 100 facilitates easy removal of the ski pole.

[0015] In one embodiment, the ski pole holder 100 comprises a retaining bracket 102 and a mounting hardware 104. The retaining bracket 102 holds or stabilizes at least one ski pole. The mounting hardware 104 securely attaches the retaining bracket to the ski lift chair.

[0016] The retaining bracket 102 holds one or more ski poles so that the ski poles do not fall off the ski lift. The retaining bracket 102 may be configured in any suitable manner to hold the ski poles to prevent them from falling off the chair lift, and may engage the ski pole in any appropriate manner. For example, the retaining bracket 102 may include hooks, receptacles, clamps, carabiners, or other suitable connector to be selectively and detachably connected to the shaft, wrist strap, grip, or other portion of the ski pole. Referring to FIGS. 1A-B, an exemplary retaining bracket 102 will be discussed.

[0017] The exemplary retaining bracket 102 may be configured to support a ski pole while a skier is riding a lift. The retaining bracket 102 may comprise any appropriate support, such as a flat surface, a convex or concave upper surface, one or more slots or a grating, and/or a hard or a resilient surface. The retaining bracket 102 may comprise any suitable element for supporting the poles such as by supporting the handles. The retaining bracket 102 may further comprise any suitable retaining portions configured in any suitable manner to retain the ski poles in position relative to the retaining bracket 102. For example, the retaining bracket 102 may comprise arms, hooks, ridges, walls, connectors, clamps, catches, or other suitable elements adapted to maintain the position at least a portion of the ski pole relative to the retaining bracket 102.

[0018] In the present exemplary embodiment, the retaining bracket 102 may comprise a body 106. The body 106 may comprise a pair of spaced apart members 108 and an end 110 that are configured to define a slot 112. The slot 112 may extend from an open end 114 to the end 110. While the pair of spaced apart members 108 are shown in a substantially parallel orientation, they may be placed in any suitable configuration that can be contemplated to accommodate a conventional ski pole.

[0019] The pair of members 108 may be configured to define a support surface 116, an inner surface 118, and an outer surface 120. The slot 112 may extend from the open end 114 through the middle of the retaining bracket 102 towards the end 110. The slot 112 may be wide enough for a conventional ski pole shaft to pass through, but narrower than a
conventional ski pole handle. The inner surface 118 provides contact to the ski poles to limit lateral/side-to-side movement. In another embodiment, the orientation of the members 108 may further define a substantially circular hole large enough to accommodate the ski pole shaft, but small enough so the handle does not pass through. Further, in this embodiment, the slot 112 extends from the open end 116 to the hole. In another embodiment, the orientation of the members 108 may only define a substantially circular hole and does not define the slot 112.

[0020] In the present exemplary embodiment the retaining bracket 102 may comprise a retaining portion 122 extending upwardly from the spaced apart members 108. The retaining portion 122 may be configured to define a retaining surface 124. The retaining surface 124 may be configured to provide additional surface contact to the ski pole handles in order to retain the ski poles within the slot. The height of the retaining portion 122 may be selected to retain the ski pole handles below the top of the retaining portion 122. In the present embodiment, the retaining portion comprises a pair of arms.

[0021] The retaining bracket 102 may support the weight of at least one ski pole on the support surface 116, and the retaining surface 124 may maintain the position of the ski poles relative to the retaining bracket 102. Thus, the ski pole holder 100 supports the ski pole in the event of any anticipated jolts, bounces, or other movement associated with the ski lift that might otherwise cause the ski poles to inadvertently escape from retention by the retaining bracket 102.

[0022] Thus, when the ski pole shaft is disposed within the slot 112, the ski pole may slide down and through the slot 112 until the bottom of the handle rests on and is supported by the support surface 116. The ski pole is further maintained in the slot 112 by the handle resting against the retaining surface 124, and the ski pole is limited in movement by contact with the inner surface 118. In one embodiment, the members 108 have a height of approximately 2.25" and the retaining portion 122 extends 2.75" above the members 108.

[0023] In another embodiment, the body 106 may be situated at an upward angle. Thus, the pair of members 108 slope upwards from the end 110 and the open end 114 is at a higher elevation than the end 110. In this embodiment, the retaining portion 122 comprises the members 108 and the retaining surface 124 is integrated into the support surface 116. In operation, the ski poles are placed through the open end 114 into the slot 112 and are held in the ski pole holder 100 by gravity and friction.

[0024] Referring to FIG. 1C, in another embodiment, the retaining bracket 102 may comprise an gateway 130 at the open end 116. The gateway 130 may comprise member or members extending from the body 106 and configured to define an enclosing surface 132. The gateway 130 may comprise any suitable structure that allows the ski poles to enter the slot 112 and provides further support with the enclosing surface 132. The gateway 130 may comprise a flexible member, a door, a latch, a group of bristles or any other suitable mechanism adapted to inhibit movement of the ski pole through the slot 112 without the user applying significant force. For example, in one embodiment, the gateway 130 may comprise a pair of resilient members situated near the open end 116. Thus, when the skier pulls the ski pole into the ski pole holder 100, the shaft of the ski pole exerts a force on the gateway 116, causing the gateway 116 to move or flex and allowing the ski pole to enter the slot 112. The enclosing surface 132 then provides additional retention for the ski poles. In one embodiment, the gateway 130 is configured such that the ski poles remain in the ski pole holder 100 even when the ski pole holder has been inverted. For example, when the ski pole holder 100 is mounted on a rearing bar on the chair, the rearing bar may be lifted up and over the chair. In the event that a skier forgets to remove his ski poles from the ski pole holder 100 before lifting the rearing bar, the gateway 130 will prevent the ski pole from falling out of the ski pole holder 100 and a ski pole basket will be supported at the slot 112.

[0025] A ski pole may be placed in the ski pole holder 100 by elevating the pole handles above the tops of the members 108 and sliding the shafts of the ski poles into the open end 114 of the slot 112. When the ski pole shafts are well within the slot 112, the handles may be dropped into the retaining bracket 102. The poles are retained within the slot 112 by the inner surface 118 and the retaining surface 124 inhibiting escape of the poles by engaging the ski pole handles. The ski pole handles place the weight of the ski poles onto the retaining bracket 102, and the retaining bracket 102 holds or stabilizes the ski poles in the slot 112. To remove the ski poles, the skier lifts the ski poles out and up so that the handles are above the top of the retaining portion 122. The ski pole shafts may then be removed from the slot 112.

[0026] The retaining bracket 102 may be adapted in any suitable manner to retain the ski poles and perform other functions as well. In one embodiment, the retaining bracket 102 further comprises a container 202 for holding various articles such as cell phones, food, beverages, sunglasses, cameras, sunblock or sunscreen, or other items. The container 202 may comprise any suitable container of any suitable shape and that the container 202 may be situated in any suitable manner.

[0027] For example, referring to FIGS. 2A and 2B, a container ski pole holder 200 may further comprise the container 202 depending from the body 106. In this embodiment, the container 202 may hold ski poles and/or various articles. Further, the retaining portion 122, discussed above, may be integrated into the container 202. In this embodiment, the container 202 may comprise a support member 204 and a retaining portion 122 comprising a retaining wall 206. The support member 204 may be coupled with an upper portion of the spaced apart members 108. The pr of spaced apart members 108 along with the slot 112 is configured the same as discussed above with respect to FIGS. 1A and 1B. The retaining wall 206 may comprise an inner wall 208 and an outer wall 210. The cylindrical shape of the container 202 may be further adapted to hold beverage containers of varying sizes. Further, while the container 202 is shown as generally cylindrical, it is understood that any suitable configuration is contemplated.

[0028] With continued reference to FIGS. 2A and 2B, the pair of spaced apart members 108 may be approximately 2.25 inches tall. The container 202 may be disposed directly on top of the pair of spaced apart members 108, and may measure approximately 2.75 inches tall with an outer diameter between approximately four and five inches and an inner diameter that is approximately three-quarters of an inch to an inch smaller than the outer diameter. The slot 112 is approximately three-quarters of an inch to an inch wide and runs through the bottom of the body and through the top of the cylindrical container. The slot 112 is between approximately two inches and three and a half inches in length.

[0029] In another embodiment, the retaining bracket 102 is extended to accommodate a plurality of ski poles. For
example, referring to FIGS. 3A and 3B, a channel ski pole holder 300 comprises an extended shape. The retaining bracket 302 comprises a body 106 comprising a base 304. The base 304 comprises a support element 306 defining a channel 308. In this embodiment, the retaining element 310 comprises a retaining element 310 extending from the support element 306. The base 304 and the retaining element 310 define an entrance 312 linking the channel 308 to outside of the retaining bracket. The retaining element 310 defines an inside surface 314 and an outside surface 316. A first ski pole 318 and a second ski pole 320 are being held in the ski pole holder 300. In this embodiment, the channel 308 is configured to accommodate four ski poles, but the retaining bracket 302 and the channel 300 may be extended to accommodate any number of ski poles. Furthermore, the channel 308 and the entrance 312 may be oriented in any suitable configuration that allows the ski poles 318, 320 to be placed into and held by the ski pole holder 300.

[0030] The ski pole holder may also comprise multiple retaining brackets 102 coupled together in order to accommodate multiple skiers with multiple pairs of ski poles. For example, referring now to FIG. 4, in another embodiment, the ski pole holder 400 comprises a first retaining bracket 402 and a second retaining bracket 404. The first and second retaining brackets 402, 404 may comprise any combination of the previously described retaining brackets coupled together in any suitable manner. For example, the first and second ski retaining brackets 402, 404 may comprise two retaining brackets 102 with containers 202 such as the container ski pole holders 200. The first and second retaining brackets 402, 404 may be coupled together in any suitable manner, or they may comprise a single piece. Furthermore, additional retaining brackets may be added in order to accommodate additional ski poles.

[0031] In another embodiment, a lighting element may be integrated into the ski pole holder 100. The lighting element may comprise any suitable lighting element. For example, in one embodiment the lighting element may comprise a series of LEDs and a means of powering the LEDs. The LEDs may be powered by power source, for example, a battery or a solar cell.

[0032] In another embodiment, the ski pole holder is configured to display an object such as an advertisement or message. With continued reference to FIG. 1A-1B and FIG. 2A-B, the ski pole holder 100, 200 may comprise a display of an advertisement for goods and services or other information that would be relevant to the skier. For example, an advertisement may be placed on the outer surface 120 of the body 106 or on the outer wall 210 of the container 202. The display may be attached to the ski pole holder 100, 200 in a number of ways. For example, in one embodiment, an advertisement is attached to the exterior of the ski pole holder using an adhesive.

[0033] In one embodiment, the ski pole holder 100, 200 further comprises a pocket with a removable insert configured to display an object such as an advertisement. The pocket may further comprise a clear cover for the pocket, forming a compartment for storing an item to be displayed. For example, a clear plastic cover may be placed over the pocket that is cut out from the body of the retaining bracket. The removable insert may comprise an advertisement or other relevant information. The removable insert may be easily changed. In one embodiment, the pocket is configured to be substantially weatherproof. In another embodiment, a digital or video screen may be placed in the pocket or otherwise attached to the ski pole holder 100, 200. In another embodiment a headphne plug may be included to play audio from a radio, video, or other source. The headphone plug may play audio from the digital or video screen. In another embodiment, a thermometer configured to display the current temperature may be placed in the pocket.

[0034] The retaining bracket 102 may be constructed out of any suitable material. For example, the retaining bracket 102 may be constructed out of plastic, metal, wood, or composite material. The material may comprise a semi-rigid material designed to flex or stretch, or it may comprise a rigid material. In one embodiment, the retaining bracket 102 comprises a polyurethane structure. The polyurethane structure may be configured to be molded as a single piece or multiple pieces by any conventional molding process such as injection molding. The polyurethane structure may be configured to withstand extreme temperatures ranging from a high temperature of 255 degrees (F.) to a low temperature of minus 50 degrees (F.). The polyurethane may comprise any suitable color and may comprise multiple colors and may be glow-in-the-dark to help facilitate night skiing.

[0035] The ski pole holder 100, 200 further comprises mounting hardware 104 for attaching the retaining bracket to the ski lift chair. The mounting hardware 104 may comprise any suitable mechanism for attaching the retaining bracket to the ski lift chair. For example, the mounting hardware 104 may comprise a collar, a clamp, a bolt, a screw, a weld joint, an adhesive, or a combination thereof. The mounting hardware 104 may be configured to support the weight of the ski poles and other articles that may be placed in the ski pole holder 100, 200. The mounting hardware 104 is further configured to hold the retaining bracket 102 in a steady position and does not allow the ski pole holder 102 to rotate. The mounting hardware 104 is able to mount to a variety of shape and sizes. For example, in one embodiment, the mounting hardware 104 capable of attaching the ski pole holder 100, 200 to a round or shaped shaped tube ranging from approximately ½ inch to 2 inches in diameter on the ski lift chair. Furthermore, the mounting hardware may comprise tamper proof or tamper resistant components so that a skier cannot remove the ski pole holder 100, 200 from the chair.

[0036] In one embodiment, the mounting hardware 104 may be attached to the retaining bracket using high strength adhesive or epoxy. In another embodiment, the mounting hardware 104 may be molded into the retaining bracket 102. In yet another embodiment, the mounting hardware 104 may be attached to the retaining bracket 102 using a suitable fastener such as one or more bolts or one or more screws.

[0037] Referring to FIGS. 5A and 5B, in one embodiment, the mounting hardware 104 comprises a collar 500. The collar 500 is mounted at a first mounting point 510 to the retaining bracket 102 using a suitable fastener. In one embodiment, the collar 500 is mounted to the retaining bracket 102 using a screw. In one embodiment, the collar 500 comprises a first half 520, a second half 530, and a bolt 540. In one embodiment, the first half 520 is secured to the retaining bracket 102 using a screw. The ski pole holder 100 is then positioned at a chair mounting point on the ski lift chair. The second half 530 is then placed so that the collar 500 wraps around a portion of the ski lift chair. The collar 500 is then locked around the chair mounting point using the bolt 540.

[0038] Referring to FIG. 6, in another embodiment, the mounting hardware comprises a clamp 600. The clamp 600...
exhibits pressure on the chair mounting point on at least one side in order to keep the ski pole holder stationary. The clamp may comprise a suitable clamping mechanism such as a c-clamp, a band-clamp, or a j-bolt configured to work as a clamp.

In one embodiment, the retaining bracket 102 features a portion molded to fit the mounting hardware or, in another embodiment, a portion of the retaining bracket 102 may be cut away so that the mounting hardware may be recessed into the retaining bracket 102. Referring again to FIGS. 5B and 6, the mounting hardware 104, is recessed into the retaining bracket 102. The retaining bracket 102 may also feature a groove so that when retaining bracket 102 is attached to the ski lift chair, the ski pole holder will be properly oriented. Furthermore, the recessed mounting hardware allows the ski pole holder to ensure that the ski poles do not come in contact with the mounting hardware.

In the foregoing specification, the invention has been described with reference to specific exemplary embodiments. Various modifications and changes may be made, however, without departing from the scope of the present invention as set forth in the claims. The specification and figures are illustrative, rather than restrictive, and modifications are intended to be included within the scope of the present invention. Accordingly, the scope of the invention should be determined by the claims and their legal equivalents rather than by the examples described.

For example, the steps recited in any method or process claims may be executed in any order and, unless otherwise noted, are not limited to the specific order presented in the claims. Additionally, the components and/or elements recited in any apparatus claims may be assembled or otherwise operationally configured in a variety of permutations and are accordingly not limited to the specific configuration recited in the claims.

Benefits, other advantages and solutions to problems have been described above with regard to particular embodiments; however, any benefit, advantage, solution to problem or any element that may cause any particular benefit, advantage or solution to occur or to become more pronounced are not to be construed as critical, required or essential features or components of any or all the claims.

As used herein, the terms “comprise”, “comprises”, “comprising”, “having”, “including”, “includes” or any variation thereof, are intended to reference a non-exclusive inclusion, such that a process, method, article, composition or apparatus that comprises a list of elements does not include only those elements recited, but may also include other elements not expressly listed or inherent to such process, method, article, composition or apparatus. Other combinations and/or modifications of the above-described structures, arrangements, applications, proportions, elements, materials or components used in the practice of the present invention, in addition to those not specifically recited, may be varied or otherwise particularly adapted to specific environments, manufacturing specifications, design parameters or other operating requirements without departing from the general principles of the same.

1. A ski pole holder for attachment to a ski lift chair, comprising:
   a retaining bracket configured to hold at least one ski pole; and
   a mounting hardware coupled to the retaining bracket and configured to attach to the ski lift chair.

2. A ski pole holder for attachment to a ski lift chair according to claim 1, wherein the retaining bracket comprises:
   a body comprising:
   a first member and a second member defining a space between the members;
   an end connecting the members;
   wherein the members are adapted to receive at least one ski pole.

3. A ski pole holder for attachment to a ski lift chair according to claim 2, wherein the retaining bracket further comprises a gateway coupled to the body and configured to inhibit a ski pole from exiting the ski pole holder.

4. A ski pole holder for attachment to a ski lift chair according to claim 2, wherein:
   the members define a slot; and
   the members further define a support surface.

5. A ski pole holder for attachment to a ski lift chair according to claim 4, wherein the slot is adapted to accommodate two ski poles.

6. A ski pole holder for attachment to a ski lift chair according to claim 2, wherein the retaining bracket further comprises a retaining portion defining a retaining surface.

7. A ski pole holder for attachment to a ski lift chair according to claim 6, wherein the retaining portion extends vertically from the body and further defines the slot.

8. A ski pole holder for attachment to a ski lift chair according to claim 1, wherein the retaining bracket comprises a container.

9. A ski pole holder for attachment to a ski lift chair according to claim 1, wherein the mounting hardware comprises a collar.

10. A ski pole holder for attachment to a ski lift chair according to claim 1, wherein the mounting hardware comprises a clamp.

11. A ski pole holder for attachment to a ski lift chair according to claim 1, wherein the mounting hardware is recessed into the retaining bracket.

12. A ski pole holder for attachment to a ski lift chair according to claim 1, further comprising a second retaining bracket.

13. A ski pole holder for attachment to a ski lift chair, comprising:
   a retaining bracket comprising:
   a body comprising a first member and a second member connected at a closed end and defining a slot at an open end and further defining a support surface;
   wherein the slot is adapted to receive a ski pole shaft; and
   a mounting hardware coupled to the retaining bracket and configured to attach to the ski lift chair.

14. A ski pole holder for attachment to a ski lift chair according to claim 13, wherein the slot is adapted to accommodate more than one ski pole.

15. A ski pole holder for attachment to a ski lift chair according to claim 13, wherein the retaining bracket further comprises a container.

16. A ski pole holder for attachment to a ski lift chair according to claim 13, wherein the mounting hardware comprises a collar.

17. A ski pole holder for attachment to a ski lift chair according to claim 13, wherein the mounting hardware is recessed into the retaining bracket.
18. A method of transporting a ski pole while on a ski lift comprising:
lifting a ski pole handle over a retaining portion while moving a ski pole shaft through a slot defined in a body;
lowering the ski pole handle after passing over the retaining portion; and
placing the ski pole handle on a support surface.

19. A method of transporting a ski pole while on a ski lift according to claim 18, wherein the retaining portion comprises a container.

20. A method of transporting a ski pole while on a ski lift according to claim 18, wherein the body comprises a first member and a second member defining the slot.