Jan. 11, 1966 E. A. ATWILL 3,228,217

SKI LOCK

Filed April 10, 1964

FIG. 1

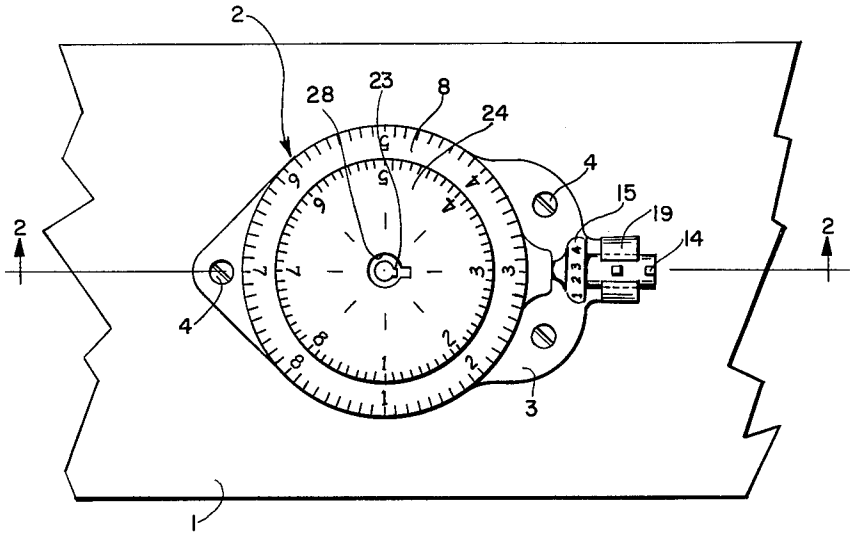


FIG. 2

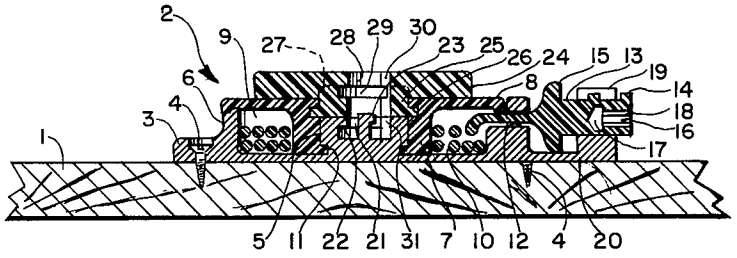


FIG. 3

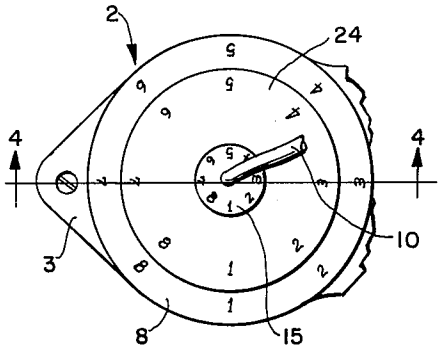
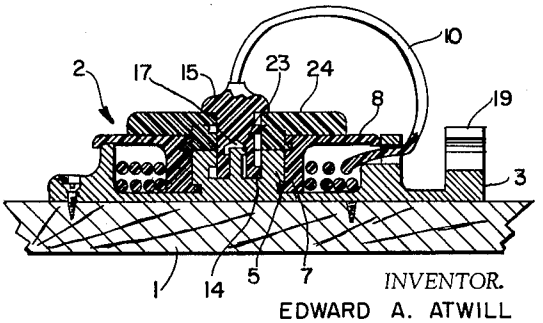


FIG. 4



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SKI LOCK

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This invention relates to a new and useful ski lock, for tying ski equipment together and to a fixed anchor, thereby to prevent loss of such equipment.

A primary object of this invention is to provide a flexible tie member carried by a ski and adapted to be extended through and around other ski equipment and an anchor member for securing the ski and such other equipment to the anchor.

Another object of this invention is to provide the foregoing in a compact, lightweight unit wherein the tie member is confined and out of the way when not in use.

In one aspect thereof, a ski lock constructed in accordance with this invention is characterized by the provision, in combination with a ski, of a reel carried by the ski, a flexible tie member carried by the reel for winding thereon and unwinding therefrom, one end of the tie member being fixed on the ski, and means for detachably connecting the opposite end of the tie member to the ski when the tie member is unwound from the reel.

The foregoing and other objects, advantages and characterizing features of a ski lock of this invention will become clearly apparent from the ensuing detailed description of an illustrative embodiment thereof, considered in conjunction with the accompanying drawing depicting the same wherein:

FIG. 1 is a fragmentary top plan view of a ski incorporating a lock unit of this invention, showing the same as it appears when not in use;

FIG. 2 is a fragmentary, longitudinal sectional view thereof, taken about on line 2—2 of FIG. 1;

FIG. 3 is a fragmentary top plan view of the lock unit, showing the same as it appears when the flexible tie member is in use; and

FIG. 4 is a fragmentary, longitudinal sectional view thereof, taken about on line 4—4 of FIG. 3.

Referring now in detail to the illustrative embodiment depicted in the accompanying drawing, there is shown a ski 1 incorporating a lock unit of this invention, generally designated 2. Lock unit 2 comprises a reel having a base member 3 secured to the upper side of ski 1, as by screws 4.

Base member 3 is formed to provide an upstanding boss 5 surrounded by an upstanding side wall 6 concentric therewith. Boss 5 receives the hub 7 of a reel member having a horizontal top wall 8 extending outwardly across side wall 6. In this way, the reel and base members define an enclosed, annular cavity 9 receiving a flexible tie member 10.

Reel hub 7 is revolvable about boss 5, having an internal lip 11 snap-fitted into an annular groove in the boss. Tie member 10 is secured at its inner end to the reel hub 7, whereby the tie member can be wound upon the reel hub, for storage within the cavity 9.

The outer end of tie member 10 extends through an opening 12 in side wall 6, which is higher at this point, and terminates in a locking end member in the form of a plug having a body 13 formed with keys 14 thereon, and with an enlarged head 15. Body 13 has a bore 16 extending inwardly from its outer end, to an enlarged, internal recess 17, a keyway 18 extending along the bore to the recess 17, for a purpose to be described. When not in use, the locking end member 13, 15 is held in place by the spring fingers 19 of a clamping yoke carried by an extension 20 of base member 3.

Boss 5 has an annular recess 21 formed to provide an undercut shoulder 22 in its outer side wall, adjacent the lower end of the recess, and a key 23 on the inner wall of the recess, adjacent its outer end. A lock wheel 24 is revolvable on the reel wall 8, having a hub 25 received against the upper end of boss 5 and an external lip or flange 26 snap-fitted in a groove in the reel hub 7.

Wheel 24 can be formed in two parts, secured together as indicated in broken lines at 27, and is formed to provide a central opening 28 therethrough alined with the annular recess 21 in boss 11. A groove 29 is formed in the side wall of opening 28, and a keyway 30 extends along the opening 28. Another keyway 31 extends along the annular recess 21.

When the lock device is not in use, the tie member 10 is stored and the locking end member 13, 15 held in the unit, as shown in FIGS. 1 and 2. However, when it is desired to fasten the ski to another piece of ski equipment, or to a fixed anchor, the locking end member 13, 15 is detached from the yoke 19, and the flexible tie member 10 is unwound from reel hub 7 to the length desired. The tie member 10 is engaged through a ski pole wrist strap, for example, and the binding of another ski, if desired, and then around a fixed anchor member such as a tree, post, or the like. When the desired tying connection has been made, the end member body 13 is inserted through opening 29 into recess 21. This can be accomplished only when body 13, lock wheel 24 and base member 3 are properly angularly oriented, to align keys 14 with keyways 30 and 31. When this is done, the end member body can be inserted into opening 28 and recess 21, with the key 23 passing along keyway 18 in the end member body.

When the end member body is fully inserted, it is rotated relative to base member 3, and locking wheel 24 is rotated relative thereto, whereby keys 14 engage in groove 29 and beneath shoulder 22, with key 23 engaged in recess 17, in a manner precluding the withdrawal of the locking end member from its locking connection with the wheel 24 and the base member 3. This condition is depicted in FIGS. 3 and 4, although it will be appreciated that in actual practice a considerably greater extent of tie member 10 will be unwound from the wheel hub than is shown in FIG. 4.

When it is desired to release the locking connection thus made, the end member head 15 and wheel 24 are rotated, to the proper angular position relative to each other and to the base member 3, to align the various keys and keyways, permitting the end member to be withdrawn, and replaced in the yoke 19. The tie member is rewound on the reel hub, by rotating the reel wall 8.

Accordingly, it is seen that my invention fully accomplishes its intended objects. It will be appreciated that the various parts described herein can be made of metal, plastic or any suitable material, and further that the foregoing detailed description has been given by way of illustration only, it being intended that the scope of my invention be defined by the appended claims.

Having fully disclosed and completely described my invention, and its mode of operation, what I claim as new is:

1. A ski lock comprising, in combination with a ski, a base member fastened to said ski, said base member having an upwardly opening recess, a reel mounted on said base member, a lock wheel mounted on said base member for rotation relative thereto, said lock wheel having an opening therethrough alined with said recess, a flexible tie member carried by said reel for winding thereon and unwinding therefrom, a locking end member carried by said tie member for insertion through said lock wheel opening into said recess, and means including coacting keys and keyways on said locking end member

and said base member and said lock wheel for insertion and removal of said locking end member relative to said opening and said recess only when said lock wheel and said locking end member bear a predetermined angular orientation relative to said base member, said locking end member being rotatable in said recess relative to said base member, and said lock wheel being rotatable relative to said locking end member and to said base member thereby to double lock said end member in said recess.

2. A ski lock comprising, in combination with a ski, a base member fastened to said ski, said base member having an upstanding boss, an upwardly opening recess with a key in said boss, a reel member rotatably mounted on said base member boss, a flexible tie member carried by said reel member for winding thereon and unwinding therefrom, said reel and base members enclosing the portion of said tie member wound on said reel member, one end of said tie member being anchored to said reel member, a lock part revolvable on said reel member and having a grooved central opening alined with said recess, and a locking end member carried by said tie member adjacent the opposite end thereof, said end member having a key for releasable locking engagement with said grooved opening of said lock part and means including a recess for releasable locking engagement with said key of said base upon insertion and relative rotation of said end member in said recess and said opening, said lock

part having a keyway for said end member key and said end member having a keyway for said base member key for insertion and removal of said end member relative to said recess and said opening upon predetermined relative angular orientation of said end member, said lock part and said base member boss.

3. A ski lock and ski combination as set forth in claim 2, wherein said base member recess has an annular groove therein, said locking end member having two spaced keys thereon for releasable locking engagement with both said grooves upon rotation of said locking end member relative to said base member boss and to said lock part.

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