June 21, 1966 J. A. MIESEL 3,257,054

SKI CARRIER

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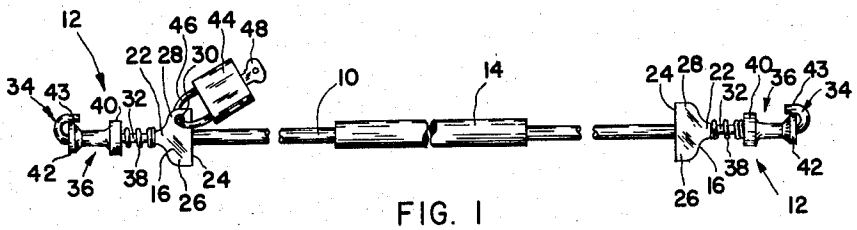


FIG. 1

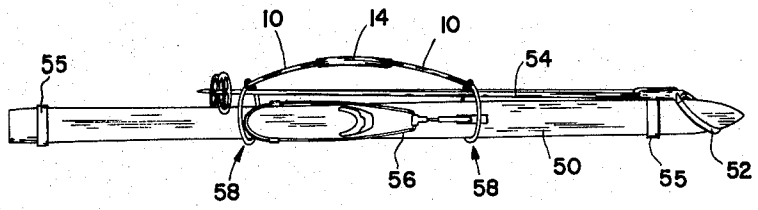


FIG. 2

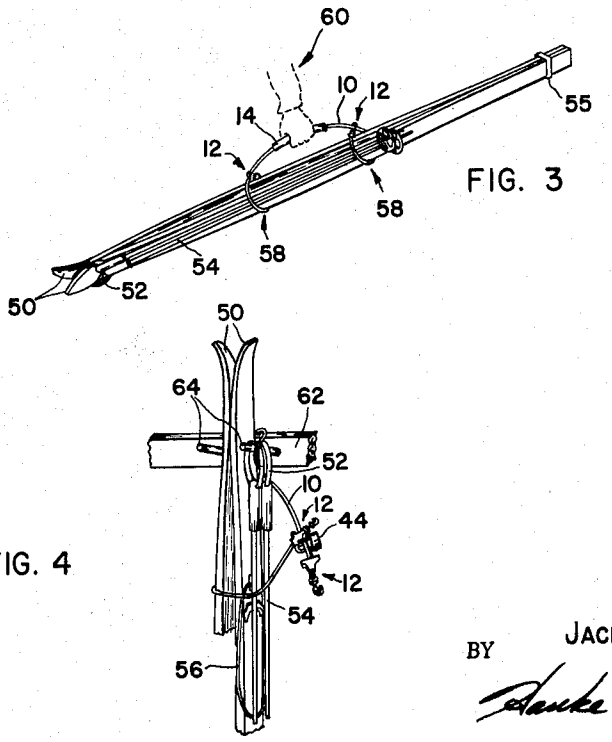


FIG. 3

FIG. 4

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SKI CARRIER

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FIG. 5

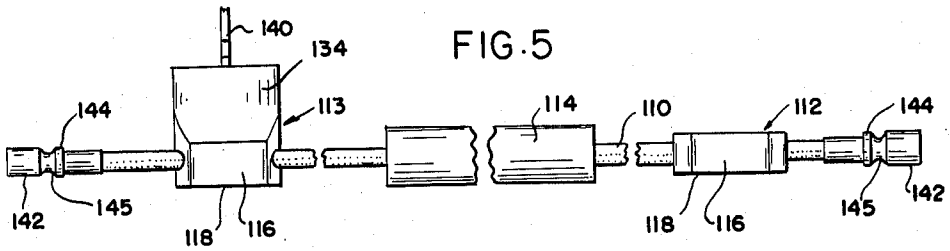


FIG. 6

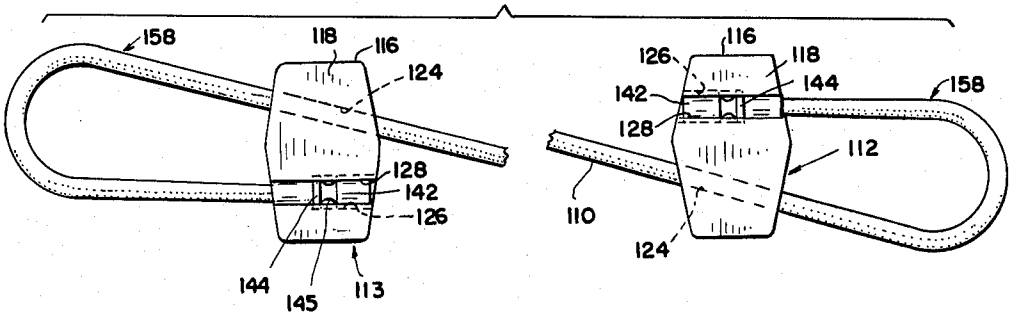


FIG. 7

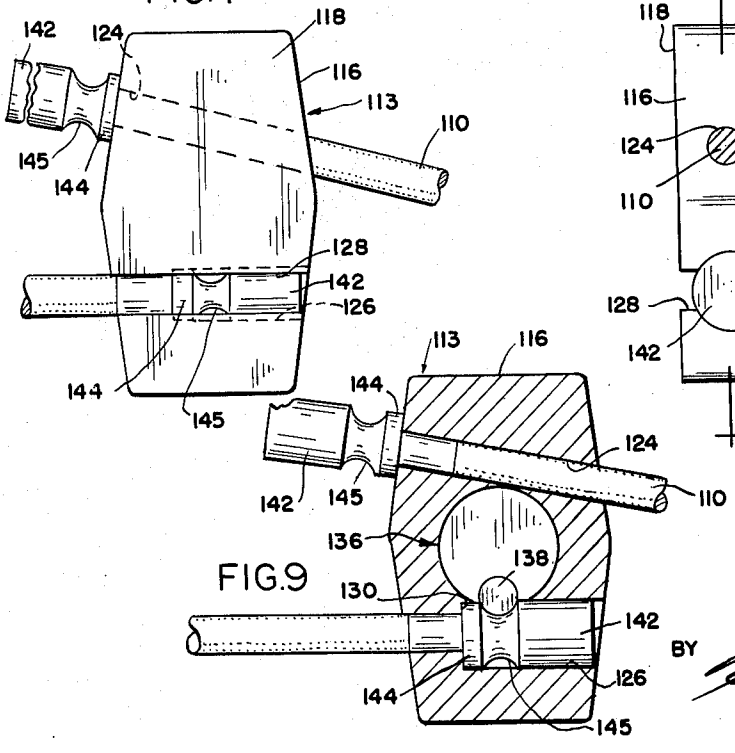


FIG. 8

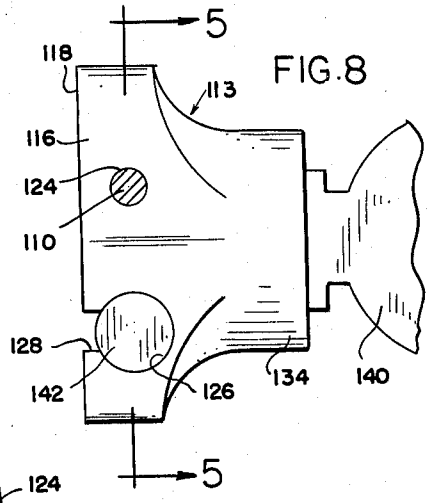


FIG. 9

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FIG. 10

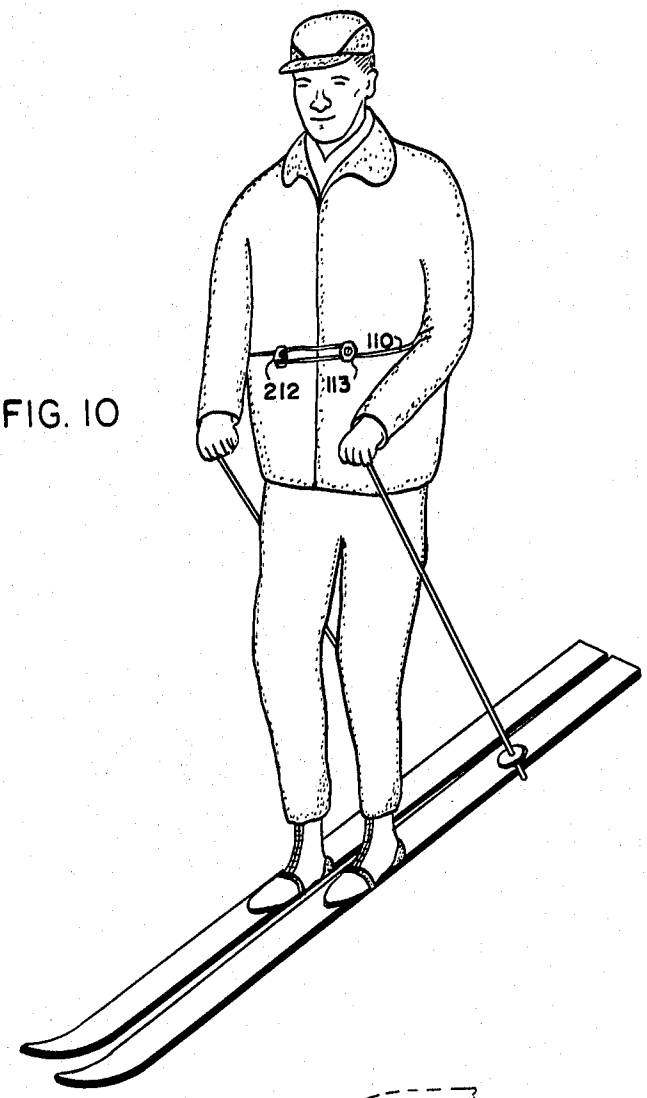
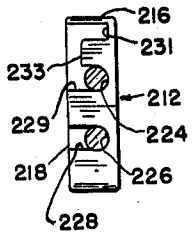


FIG. 12



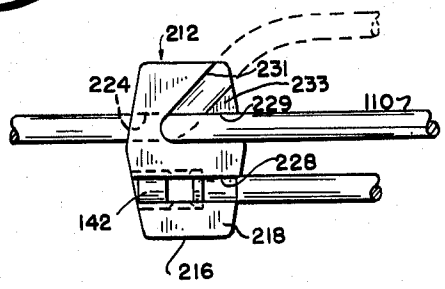


FIG. 11

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3,257,054

SKI CARRIER

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Filed Oct. 12, 1964, Ser. No. 404,560
5 Claims. (Cl. 224—56)

The application is a continuation-in-part of my co-pending application Ser. No. 358,820 filed April 10, 1964, now abandoned.

This invention relates generally to the art of carriers and more particularly has references to a combination carrier and clamp for ski equipment and the like.

Due to their length and configuration, conventional snow skis are extremely awkward and difficult to transport from place to place, or to store when not in use. A number of devices have heretofore been provided or suggested in response to this problem. These devices usually comprise various types of clamps adapted to fasten to the edges or upper faces of a pair of skis placed in bottom to bottom abutment, and to secure the two skis rigidly together. This permits the skis to be then handled as a unit rather than as two independent members.

However, the resulting unitary structure or "package" is itself even more unwieldly and cumbersome than a single ski. To transport such a package, it must be supported along its length substantially at its center of gravity, a point which usually coincides with the ski bindings. As a result, the skis comprise an inconvenient bundle which is uncomfortable to carry for any appreciable distance or length of time.

The problem is further complicated when a pair of ski poles are to be transported or stored along with the skis. Several devices have been suggested for retaining the skis and poles together. Among these are various types of clamps which hold the poles rigidly against the skis, and devices which maintain the poles in spaced relation with respect to the skis. Some of these clamps are provided with handles or similar structures for carrying the skis and poles as a unit.

However, each of these devices is complicated, bulky, and expensive. None of them are adapted to fix the poles and skis together, provide a carrying bundle, and yet to be so compact and light in weight as to be easily carried in a coat pocket or the like when not in use. This is extremely important to the skier who wishes to carry his skis and poles to the point where skiing is to begin and either has no place there where he can safely store his ski clamp while he is gone, or else does not intend to return to that area at all. In such a case, it is highly desirable that his ski clamp and carrier be compact enough to fit in his pocket or the like while he is skiing, ready for use when his skis are eventually removed.

Another problem associated with skis and ski poles is that of the possibility of theft. The skis and poles must frequently be left in the open or in various public areas for some period of time. Several locks and clamps have heretofore been suggested for locking the skis and/or the ski poles to a nearby stationary fixture. However, none of these clamps forms an integral part of a combination ski clamp and carrier device. As a result, separate equipment must be provided for each of these functions.

With each of the above problems in mind, the present invention has for its primary object that of providing a combination clamp and carrying device for equipment such as skis and ski poles.

Another object of the present invention is to provide a device of this kind which may be quickly applied to the equipment and removed therefrom when not in use.

Another object of the present invention is to provide a combination device of this kind which is simple, of light weight, compact, and easily stored in the user's pocket or carried around his waist.

Another object of the present invention is to provide a carrying device for skis and ski poles which may be employed in addition to conventional ski-clamps or other ski-carrying means.

Another object of the present invention is to provide a carrying device for skis and ski poles on which one may easily attach other equipment such as ski goggles, ski gloves, and the like. A ski boot tree (or carrier) may be supported with the same hand that supports the carrying device.

Yet another object is to provide a device of this kind which may be employed to lock such skiing equipment to a tree, pole, ski rack or other suitable fixture.

In one preferred embodiment of the invention which will be subsequently described in detail, the device comprises a length of smooth flexible cable having a small spring clamp at each end and a flexible handle mounted midway therebetween. The device is used for carrying the skis and poles by passing each end of the cable about this skiing equipment and securing the clamps on the cable to form loops at each end thereof. The clamps are adapted to slidingly lock along the cable. The device may be easily employed to secure the poles and skis tightly together by sliding the clamps along the cable and thereby reducing the size of the loops until they fit tightly about the skis and poles. The user grasps the handle and lifts the entire "package" as a unit.

When the device is to be used to secure the skis and poles to a stationary object such as a tree, or ski rack, one of the clamps is passed through the ski bindings and pole loops or straps, and then around the appropriate tree or ski rack. The clamp is then secured to the opposite end of the cable by means of a small lock, adapted for this purpose. For convenience, the lock may remain attached to the carrier at all times.

In another preferred embodiment of the invention, which will also be subsequently described in detail, the device comprises a length of smooth flexible cable having a pair of clamp members slidably carried on the cable. Means are provided for removably securing the ends of the cable to the clamp members so that a loop is formed at each end thereof, which can be enlarged or tightened by moving the clamp members to different positions along the cable. A flexible handle is provided midway between the ends of the cable. The carrier is used in the manner described above by securing the equipment within the loops and then grasping the handle to carry the entire package.

To lock the equipment to a stationary object one of the clamp is passed through the ski bondings and pole loops or straps, and then around the fixed object. The clamp is then secured to the opposite end of the cable by a locking means proivded in and a part of one of the clamps.

It can be seen that the devices of the present invention can be quickly mounted about the skis and poles. The clamps are easily slid along the cable by the user with one hand to tighten the loops in noose-like fashion about the skis and poles, while the other hand holds the skis and poles together in position. The loops may similarly be enlarged with one hand in order to remove the skis and poles while the other hand supports the ski equipment.

The present devices are therefore simple in construction, easy to use, and can be conveniently stored in the skier's pocket or the like when not in use. The present carriers may be inexpensively fabricated out of a variety of standard commercially available materials and hence are readily adaptable for large scale production.

Other objects and advantages of the present invention will be more readily apparent from the following detailed description of two preferred embodiments thereof. The description makes reference to the drawings in which,

FIG. 1 is a plan view of one preferred embodiment of

the present invention, employed as a ski carrier, in fully extended position,

FIG. 2 is a side view of the device illustrated in FIG. 1 mounted in position on a pair of skis and ski poles,

FIG. 3 is a perspective view of the device mounted as in FIG. 2 and carried by the skier,

FIG. 4 is a perspective view of the device of FIG. 1 employed to lock the skis and poles to a ski rack,

FIG. 5 is a view similar to FIG. 1 but illustrating another preferred embodiment of the present invention,

FIG. 6 is an enlarged fragmentary view illustrating the manner in which the loops are formed in the device of FIG. 5,

FIG. 7 is an enlarged fragmentary view illustrating the manner in which the ends of the cable are locked together in the device of FIG. 5,

FIG. 8 is an elevational end view of one of the clamp members of the device illustrated in FIG. 5,

FIG. 9 is a cross-sectional view taken substantially at line 5—5 of FIG. 8,

FIG. 10 is a perspective view illustrating the manner in which the device may be carried around a skier's waist when not in use,

FIG. 11 is a fragmentary elevational view illustrating a preferred modification of one of the clamp members of the device of FIG. 5, and

FIG. 12 is a fragmentary elevational view as seen from the right hand side of FIG. 11.

Description

Referring to FIGS. 1–4 in detail, a preferred embodiment of the invention employed as a ski carrier is illustrated as generally including a flexible cable **10** having a clamp **12** at each end.

The cable **10**, constructed of rubber or plastic-coated metal material, is about four feet long and has a handle **14**, constructed of a short section of flexible tubing, mounted midway along its length.

Each clamp **12** comprises a stationary flat body **16** having an internally bored projection and an internally bored end wall **24**. The body includes a pair of transversely projecting ears **26** and **28** extending outwardly from the central portion of the body **16** in the direction perpendicular to the axis of the clamp **12**. The ear **28** on one of the clamp bodies **16** (at the left of FIG. 1) includes a hole **30** extending therethrough.

The end of the cable **10** is fixed permanently in the end wall **24** in the body **16**. A short rod **32** is fixed in the projection **22** and terminates in its opposite end in a hook portion **34**.

A small metal spool member **36** is disposed along the rod **32** and is normally biased toward the hook **34** by a coil spring **38** which extends about the rod between the spool and the body **16**. The spool **36** has a first flange **40** at one end adjacent which the spring **38** is adapted to bear, and a second flange **42** at its opposite or outer end which is normally contacted by the side of the returning portion **43** of hook **34**.

A small conventional padlock **44** is removably mounted on one of the bodies **16** (at the left of FIG. 1) by means of its locking bar **46** which extends through the hole **30** in the body. A removable key **48** is provided for the padlock **44**.

FIGS. 2 and 3 illustrate the manner in which the device of FIG. 1 is used as a carrier and clamp. A pair of skis **50** are first stood vertically in bottom-to-bottom abutment and the wrist straps **52** of the ski poles **54** are placed over the tips of one of the skis. A pair of conventional ski clamps **55** are locked about the skis at the ends thereof. One end of the cable **10** is passed around the skis **50** and poles **54** just forward of the ski bindings **56**, and returned upon itself to form a loop **58**. The clamp **12** is brought adjacent a point along the length of the cable, and the spool **36** moved downwardly against the force of the spring **38** so as to provide a space between the flange **42** and the end of the hook **34**. The cable **10** is pushed under the hook **34** and the pressure on the spool **36** is released. This causes the hook to hold the cable against the flange **42**.

The tension in spring **38** is sufficient to cause the clamp **12** to engage the cable **10** but it permits the clamp to be slid along the length of the cable when sufficient force is applied in the direction of descend movement. Thus the size of the loop **58** may be reduced by pushing the clamp **12** toward the encircled ski equipment. This is done until the loop fits tightly about the skis and poles and thereby acts as a clamp in retaining the equipment rigidly together as a single unit. The clamp **12** is sufficiently tight so as to prevent the loop **58** from being loosened merely by carrying or jarring the skis and poles. However, the loop **58** may be intentionally enlarged by pulling the clamp **12** along the cable **10** in the direction away from encircled ski equipment. These tightening and loosening operations are easily and quickly performed with one hand while the other hand supports the skis **50** and poles **54** in either a horizontal or vertical position.

The other end of the cable **10** is similarly passed around the skis and poles immediately behind the bindings **56** and the clamp **12** secured to the cable **10** to form another loop **58**. This loop is reduced so as to clamp the skis and poles together in the same manner as described above with respect to the first loop.

With the two loops **58** at the end of the cable **10** thus encircling the ski equipment at two points at opposite ends of the binding **56**, the central portion of the cable **10** and the handle **14** are disposed longitudinally in spaced relation with respect to the ski equipment. The handle **14** is grasped by the hand as indicated at **60** in FIG. 3, with the entire bundle or "package" of skis and poles carried as a unit depending below the handle. The user can carry two separate sets of skis and poles in this manner, one with each hand. Other ski equipment such as boots may be readily carried along with the skis and poles by grasping the boots tree handle with the same hand that supports the ski carrier handle **14**.

The device of FIG. 1 may be used solely as a carrier, if desired, by clamping the skis together with conventional clamps at each end and attaching the cable **10** in the same fashion as described above. The loops **58** will retain the ski poles **54** together with the clamped skis if this is desired.

FIG. 4 shows how the present device may be employed to lock the skis and poles to a conventional ski rack **62**. The skis **50** are stood vertically back-to-back between the support pegs **64** on the rack **62**. The ski poles **54** are hung on the rack with the loops **52** encircling one of the pegs **64**. One end of the cable **10** is then passed through the ski bindings **56** of both skis, around the rack **62**, through the loops **52**, and locked to the opposite end of the cable with the padlock **44** as indicated in FIG. 4. In this position the locking bar **46** of the padlock encircles the cable **10**, of the opposite end of the carrier, immediately in front of its adjacent clamp **12**. The padlock thus locks this large loop closed and prevents the skis and poles from being separated from the cable without the key **48**.

Any ski equipment may be locked to any stationary fixture in the same manner as described above.

Another preferred embodiment of the present invention is illustrated in FIGS. 5–9 as comprising a flexible cable **110** having a pair of clamps **112–113** slidably mounted on the cable **110**. The cable **110** is also preferably constructed of rubber or plastic coated metal material and is provide with a handle **114** constructed of a short section of flexible tubing mounted midway along its length and separating the clamps **112–113**.

Each clamp **112–113** preferably comprises a flat body **116** having a flat surface **118**. A pair of through bores **124** and **126** are provided in the body **116** and have their axes substantially parallel with the plane of the surface **118**. The cable **110** extends through the bores **124**. The

surface **118** is recessed as at **128** so that the bore **126** is open axially through the surface **118**. As can best be seen in FIG. 9 the bores **124** preferably extend angularly with respect to the bores **126**. The bores **126** are enlarged as at **130** as can best be seen in FIG. 9. The clamp **113** is provided with a recessed projection **134** which carries a rotatably mounted locking disc **136**. The locking disc **136** includes an axially extending cam projection **138** disposed adjacent the edge of the disc **138** and which is rotated with the disc **136** by key **140** into the bore **126**. As is conventional, the locking disc **136** can only be rotated by the key **140**.

The ends of the cable **110** are provided with enlarged end members **142** preferably of metal and having an annular enlarged portion **144** and are adapted to be received axially in the bores **126** with the enlarged portions **144** engaging the annular edge formed by the annular enlargements **130** of the bores **126**. The recesses **128** are dimensioned to receive the cable **110** but to prevent the end members **142** from being separated from the clamp members **112–113** through the recesses so that to position the end members **142** or to remove them from the recesses **126** it is necessary to bring the recesses **128** in registry with the cable **110** at a point spaced from the ends thereof. The end members **142** are also provided with annular recesses **145**.

FIG. 6 illustrates the manner in which the device of FIG. 5 is looped so that it can be used as a carrier and a clamp in the same manner as described above with reference to FIGS. 2 and 3. The skis and ski poles are positioned as described above and are not shown in FIG. 6. The ends of the cable **110** are passed around the skis and returned upon themselves to form a loop **158** at each end. The end members **142** are positoned in the bores **126** and are prevented from moving axially from the bores **126** by the enlarged portions **144**. The bores **124** are of a sufficient diameter to permit the clamp members **112–113** to be slid along the length of the cable **110** so that the size of the loop **158** may be reduced by pushing the clamp members **112**, toward the encircled ski equipment. The resultant angular positioning of the cable with respect to the bores **124** increases friction and resists enlargement of the loops **158** so as to prevent loosening of the loops **158** during carrying of the ski equipment. The loops **158**, however, may be intentionally enlarged by pushing the clamp members **112** away from the ski equipment.

With the two loops **158** secured about the ski equipment the carrier of FIG. 5 is used substantially as described above with reference to the carrier of FIG. 1.

FIG. 9 illustrates the manner in which the ends of the device of FIG. 5 can be locked together so that the device can be used to lock ski equipment to a stationary object such as a ski rack or the like. The ski equipment would be preferably positioned as described above with reference to FIG. 4 with the end member **142** opposite the clamp member **113** positioned within the bore **126** of clamp member **114**. The end member **142** adjacent the clamp member **113** is sufficiently large and the bore **124** is sufficiently small to prevent the clamp member **113** from being separated from the end of cable **110** through the bore **124**. With the end of the cable **110** fastened together in this manner the key **140** is rotated to rotate the locking disc **136** to thereby rotate the cam projection **138** into the recess **145** of the end member **142**. With the cam projection **138** locked within the recess **145**, the end member **142** is prevented from moving axially so that the end member **142** is securely locked to the clamp member **113**.

The device of FIG. 5 may be carried in the pocket when not in use or it may be positioned in belt-like fashion around the skier's waist. FIG. 10 illustrates the manner in which the devices of the present invention can be carried around the skier's waist. If it is to be positioned around the skier's waist the end members **142** are positioned in the clamp members **112–113** at the opposite ends of the cable **110** and the clamp members **112–113** are then slid away from each other along the cable **110** to tighten the carrier about the skier's waist. The angular positioning of the bores **124** tends to retain the cable in its tightened position.

FIG. 11 and FIG. 12 illustrate a preferred modification of the clamp member **112** of the device illustrated in FIGS. 5–9. The modified clamp **212** comprises a flat body **216** having a flat surface **218**. A pair of through bores **224** and **226** are provided in the body **216** having their axes substantially parallel with the plane of the surface **218**. The cable **110** extends through the bore **224**. The surface **218** is recessed as at **228** and **229** so that the bore **226** is open axially through the surface **218** and a portion of the axial length of the bore **224** is also open through the surface **218**. A recess **231** is provided in the surface **218** to intersect the recess **229** and bore **224** angularly as illustrated. The intersection of the recess **231** and the bore **224** and recess **229** forms a triangular shaped projection **233**. The upper portion of the projection **233** is preferably removed so that the upper face of the projection **233** is disposed somewhat below the surface **218**.

The preferred modification of FIGS. 11 and 12 is especially suitable for being positioned about a skier's waist in the manner illustrated in FIG. 10. With the end member **142** and clamp members **113** and **212** positioned as described above and with the carrier in a tightened position the cable **110** is grasped at a point adjacent the bore **224** of the clamp **212** and a portion of the cable **110** is moved upwardly through the recess **229**, across the projection **233** and downwardly into the recess **231** as illustrated in phantom lines in FIG. 11. In this position the clamp **212** cannot be slid along the cable **110** and the device will remain securely tightened about the skier's waist.

Although the present invention has been described as employed for ski equipment, it is apparent that it is useful for a variety of other carrying and/or clamping applications.

It will similarly be apparent to those skilled in the art in which the invention pertains that various changes and modifications in the construction of the component parts may be made without departing from the spirit of the invention, or from the scope of the appended claims.

I claim:

1. A carrier for ski equipment such as skis, ski poles and the like comprising,

(a) an elongated member at least the ends of which are flexible,

(b) clamping means on said elongated member adjacent each of said ends,

(c) said clamping means comprising a first and a second body member slidably mounted on and at opposite ends of said elongated member,

(d) the ends of said elongated member being provided with enlarged end portions and each of said body members being provided with a recess for receiving said elongated member whereby the ends of said elongated member can be returned upon themselves and inserted in said recess to form a closed loop about said ski equipment, axial separation of said body members and the ends of said elongated member to open said loop being prevented by said enlarged end portions,

(e) said first body member recess being provided with a radially enlarged portion to axially receive one of said enlarged portions of said elongated member,

(f) said enlarged end portion being provided with an annular recess,

(g) lock means carried by said first body member and being selectively movable into said annular recess of said enlarged portions of said elongated member to lock said end portion to said body member, and

(h) separable check means adapted to be carried by the operator for operating said lock means.

2. The carrier defined in claim 1 and including a handle portion on said elongated member and intermediate said body members.

3. The carrier defined in claim 1 and including,

(a) said body members being slidably mounted on said elongated member by means of through bores provided in said body members, and

(b) said through bores being of a smaller diameter than said enlarged portions of said elongated member.

4. The device as defined in claim 3 and in which said through bores are disposed with their axes extending angularly with respect to the axes of said recesses.

5. The device as defined in claim 3 and in which said second body member comprises

(a) a first recessed portion registering with an axial portion of said through bore, and

(b) a second recessed portion extending angularly with respect to said through bore and said first recessed portion and intersecting the same whereby a portion of said elongated member can be moved from said through bore through said first recessed portion and positioned in said second recessed portion.

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