July 11, 1967 K. A. SIELOFF 3,330,573

SKI WALL RACK

Filed Aug. 26, 1964 2 Sheets-Sheet 1

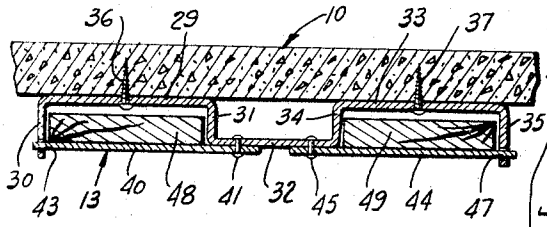


Fig. 3

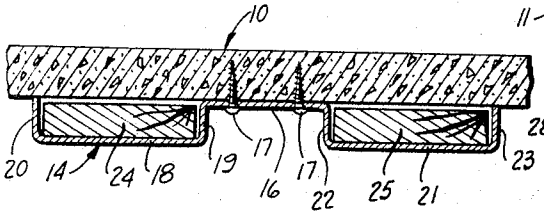


Fig. 4

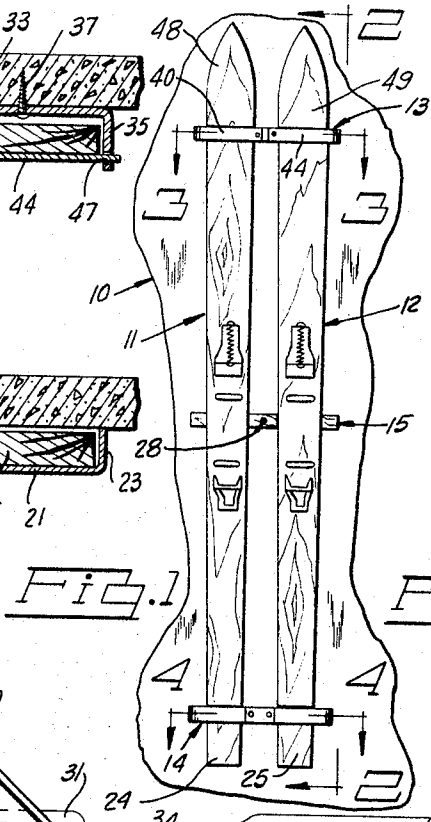


Fig. 1

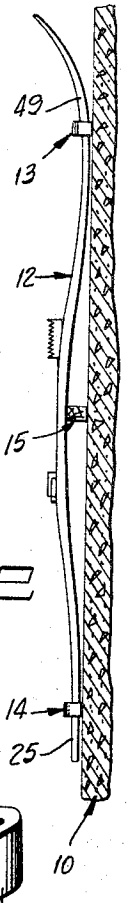


Fig. 2

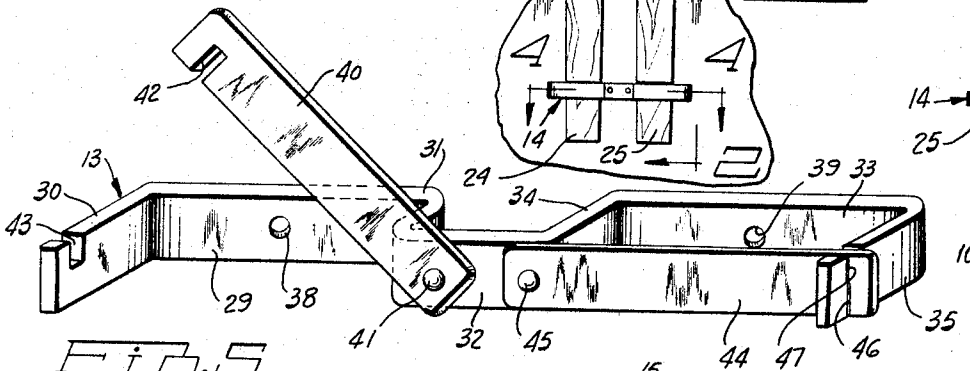


Fig. 5

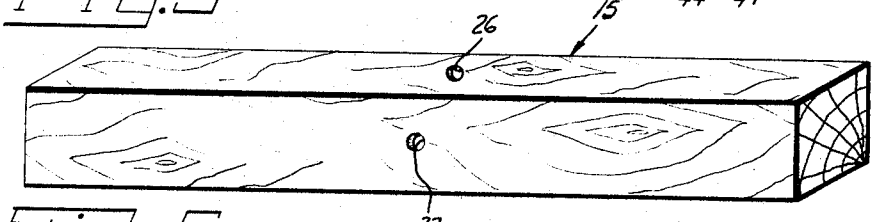


Fig. 6

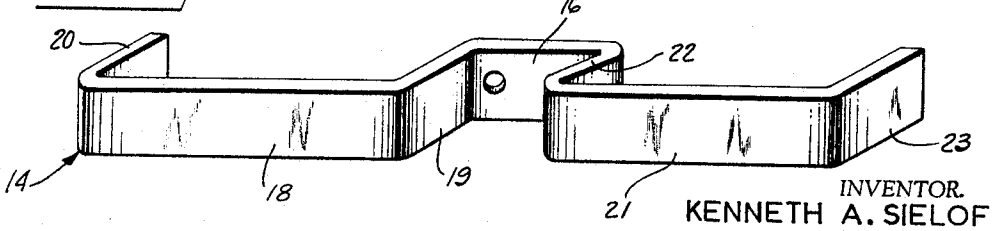


Fig. 7

INVENTOR.
KENNETH A. SIELOFF

BY
Donnelly, Ingentag & Herrington

ATTORNEYS

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SKI WALL RACK

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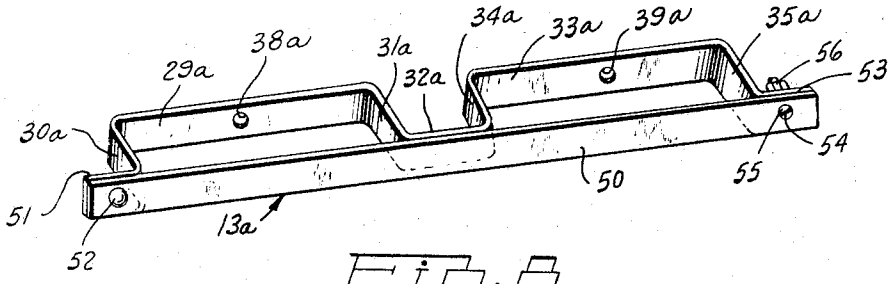


Fig. 8

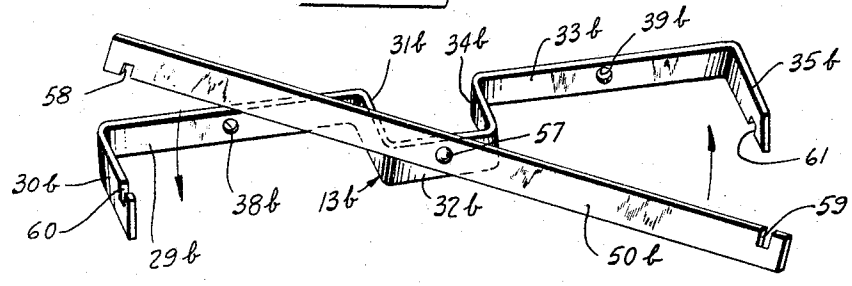


Fig. 9

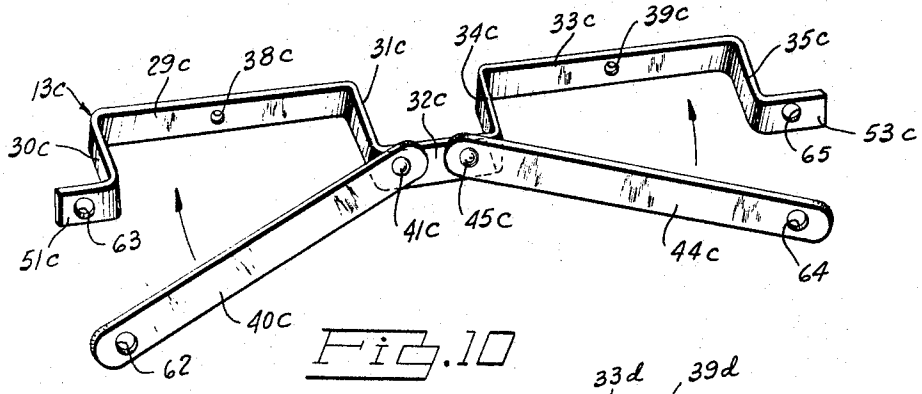


Fig. 10

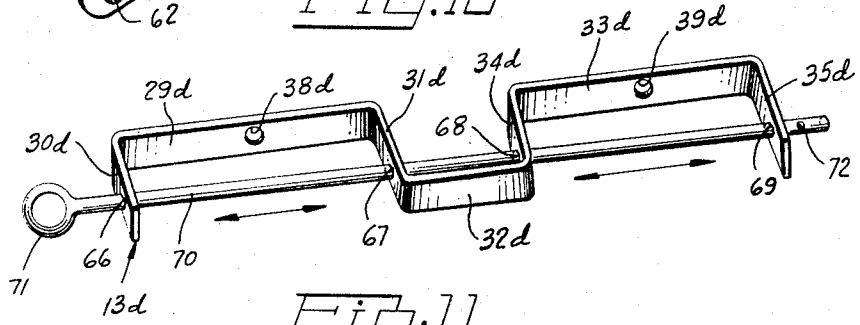


Fig. 11

INVENTOR.
KENNETH A. SIELOFF

BY

Donnelly, Mentag & Harrington

ATTORNEYS

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3,330,573

SKI WALL RACK

Kenneth A. Sieloff, Troy, Mich., assignor to Conlan-Sieloff Industries, Inc., Birmingham, Mich., a corporation of Michigan

Filed Aug. 26, 1964, Ser. No. 392,238
3 Claims. (Cl. 280—11.37)

This invention relates generally to the ski art and, more particularly, to a novel and improved ski rack means for holding skis on the wall of a building when they are not in use.

The storing of skis when they are not being used presents many problems. For example, improper storage may injuriously affect the craftsmanship built into the skis, as well as damaging the finish of the skis. Improper storage of skis may also damage the edges thereof, and cause warpage and change in the camber of the skis. Accordingly, it is an important object of the present invention to provide a novel and improved ski rack which will overcome the aforementioned problems of ski storage.

It is another object of the present invention to provide a novel and improved ski rack for holding a pair of skis on a wall, and which functions to protect the finish and craftsmanship built into skis, protects the edges thereof against damage, retains the camber in the skis, and prevents warpage.

It is a further object of the present invention to provide a novel and improved ski wall rack which will add to the decor of a recreation or family room when it is used to hold a pair of skis on a wall in such rooms.

It is still another object of the present invention to provide a novel and improved ski wall rack which is simple and compact in construction, economical of manufacture, and efficient in operation.

It is still a further object of the present invention to provide a novel and improved ski wall rack which includes a clamp means and bracket means mounted in vertically spaced apart positions on a base means, as a wall or board, and a camber board mounted on said base means at a position intermediate said clamp means and bracket means and adapted to be positioned under the middle of a pair of skis to maintain the proper camber in the skis when they are held or stored on the base means.

Other objects, features and advantages of this invention will be apparent from the following detailed description, appended claims, and the accompanying drawings.

In the drawings:

FIG. 1 is an elevational view of a pair of skis held in a stored position by a ski wall rack made in accordance with the principles of the present invention;

FIG. 2 is a side elevational view of the structure illustrated in FIG. 1, taken along the line 2—2 thereof, and looking in the direction of the arrows;

FIG. 3 is a fragmentary, enlarged horizontal sectional view of the structure illustrated in FIG. 1, taken along the line 3—3 thereof and looking in the direction of the arrows;

FIG. 4 is a fragmentary, enlarged horizontal sectional view of the structure illustrated in FIG. 1, taken along the line 4—4 thereof, and looking in the direction of the arrows;

FIG. 5 is an enlarged, perspective view of a first clamp means employed in the ski wall rack of the present invention;

FIG. 6 is an enlarged, perspective view of the camber block employed in the ski wall rack of the present invention;

FIG. 7 is an enlarged, perspective view of the bracket employed in the ski wall rack of the present invention;

FIG. 8 is a perspective view of a second clamp means which may be employed in the ski wall rack of the present invention;

FIG. 9 is a perspective view of a third clamp means which may be employed in the ski wall rack of the present invention;

FIG. 10 is a perspective view of a fourth clamp means which may be employed in the ski wall rack of the present invention; and,

FIG. 11 is a perspective view of a fifth clamp means which may be employed in the ski wall rack of the present invention.

Referring now to the drawings and in particular to FIGS. 1 through 4, the numeral **10** generally designates a wall of a building upon which the ski rack of the present invention is mounted for purposes of illustration. Although the ski rack of the present invention is illustrated as being mounted on a wall, as for example the basement wall of a building or the wall of a recreation room, it will be understood that it may be mounted on a vertical board which is in turn mounted on a wall, if desired.

The numerals **11** and **12** generally designate a pair of skis in FIG. 1 which are shown as being held on the wall **10** by a rack means made in accordance with the principles of the present invention, and which comprise the clamp means **13**, the bracket means **14** and the camber block **15**. The clamp means **13** is mounted in a vertically spaced apart position above the bracket means **14** with the camber block **15** being disposed at an intermediate position between the clamp means **13** and the bracket means **14**.

As best seen in FIGS. 4 and 7, the bracket means **14** is adapted to hold the lower ends of the skis **11** and **12** in a stored position on the wall **10**. The bracket means **14** includes the central retainer plate portion **16** which is adapted to be fixedly secured to the wall or base means **10** by any suitable means, as by the screws **17**. The bracket means **14** includes a pair of spaced apart U-shaped bracket portions which are integrally connected to the retainer plate portion **16**.

As shown in FIGS. 4 and 7, one of the U-shaped bracket portions comprises the bight portion **18** which is disposed parallel to the surface of the wall **10** and at a spaced apart position. Integrally connected to the ends of the bight portion **18** are the legs **19** which extend inwardly toward the wall **10**. The inner end of the leg **19** is integrally connected to the one end of the retainer plate portion **16**. The inner end of the leg **20** is adapted to abut the surface of the wall **10**.

The second U-shaped bracket portion includes the bight portion **21** which is disposed in a position laterally spaced apart from the bight portion **18** of the first U-shaped bracket portion. Integrally connected to the ends of the bight portion **21** are the inwardly extended legs **22** and **23**. The inner end of the leg **22** is integrally connected to the end of the retainer plate portion **16**. The inner end of the leg portion **23** is adapted to abut the wall **10**. As shown in FIGS. 1 and 4, the U-shaped bracket portions of the bracket means **14** are adapted to slidably receive the lower ends **24** and **25** of the skis **11** and **12**, respectively. It will be seen that the U-shaped bracket portions coact with the base means or wall **10** to form a pair of laterally spaced apart brackets into which the ski ends **24** and **25** may be easily and quickly mounted.

In one embodiment the bracket means **14** was made from a single strip of metal which was formed into the shape or configuration illustrated in FIGS. 4 and 7. In said embodiment, the overall length of the bracket means **14** was approximately 9¼ inches. The bight portions **18** and **21** of the bracket means **14** were about 3¾ inches

long and the length of the leg portions was about ¾ of an inch.

The camber block **15** is shown to an enlarged scale in FIG. 6, and it comprises a block of wood or any any other suitable material which is adapted to be fixedly secured to the wall **10** at an intermediate position between the clamp means **13** and the bracket means **14**. In one embodiment the camber block **15** was made from wood and was made to the dimensions listed as follows. The block **15** in said embodiment was approximately 8¾ inches in length, 1½ inches in width and 1 inch in thickness.

As shown in FIG. 6, the camber block **15** is provided with a pair of holes therethrough indicated by the numerals **26** and **27**, for selectively securing the camber block directly on the wall **10** or on a suitable base board which in turn may be mounted on the wall. As shown in FIG. 1, the block **15** is secured to the wall **10** by a suitable screw **28** which would be a wood screw if the block **15** is mounted on a board which is in turn mounted on the wall, or a concrete type screw adapted to be used for securing an item to cement if the block **15** is mounted directly on a concrete wall.

The block hole **26** is formed through the wide side of the block **15** and the hole **27** is formed through the narrow side of the block **15**. The block **15** is provided with the holes **26** and **27** so that the user of the ski rack may have a selection of two thicknesses so that he can increase the degree of camber, if desired, by mounting the block **15** on its narrow side and securing it to the wall **10** by a screw as **28** passing through the hole **27**.

As best seen in FIGS. 3 and 5, clamp means **13** includes a pair of laterally spaced apart, U-shaped clamp members. One of these U-shaped clamp members includes the bight portion **29** and the integral outwardly extended legs **30** and **31** which extend perpendicularly outward from the wall **10**. The outer end of the leg **31** is integrally connected to one end of the connector plate **32** which is disposed parallel to the surface of the wall **10**. The other U-shaped clamp member includes the bight portion **33** and the integral outwardly extended legs **34** and **35** which are also disposed perpendicular to the wall **10**. The outer end of the leg **34** is integral with the other end of the connector plate **32**. The U-shaped pair of clamp members are fixedly secured to the supporting means or wall **10** by any suitable means, as by the screws **36** and **37** which are adapted to pass through the screw holes **38** and **39**, respectively, as shown in FIG. 5.

The clamp means **13** further includes a pair of pivotally mounted retainer arms or clamp arms indicated by the numerals **40** and **44**, in FIGS. 3 and 5. The clamp arm **40** is formed as an elongated plate with the inner end thereof pivotally mounted on the connector plate **32** by means of the rivet **41**. The outer end of the clamp arm **40** is provided with a downwardly facing lock slot **42** which is adapted to mate with and be seated in the upwardly facing lock slot **43** formed in the clamp leg **30**. As shown in FIGS. 3 and 5, the clamp arm **40** may be pivoted upwardly to open the adjacent U-shaped clamp member to permit the insertion of the front end **48** of the ski **11**. The retainer arm **40** is then pivoted downwardly in a counterclockwise direction, as viewed in FIG. 5, until the slot **43** in the leg **30** receives the retainer arm **40**. The slot **42** in the retainer arm **40** passes over the lower portion of the leg **30**.

The clamping means **13** further includes the second retainer arm or clamp plate **44** which is pivotally mounted by means of the rivet **45** on the connector plate **32**. The outer end of the clamp arm **44** is provided with a downwardly facing locking slot **46** formed in the lower side. The U-shaped clamp member leg **35** is provided with a mating upwardly facing locking slot **47** on the upper end thereof for the reception of the outer end of the clamping arm **44**. As shown in FIGS. 1 and 3, the clamping arm **44** is adapted to be pivoted upwardly and downwardly and when it is in the down or locked position shown in FIGS. 1 and 3, the front end **49** of the ski **12** will be embraced and clamped in a fixed position in the ski rack.

The clamp means **13** and the bracket means **14** may be made from any suitable material as, for example, a suitable metal, plastic, or like material. In one embodiment, these parts of the ski rack were made from chrome plated, cold rolled steel.

The ski wall rack of the present invention may be made to hold skis of all makes and sizes. It is adapted to protect the finish and craftmanship of the skis by protecting the edges thereof against damage, helping to prevent warpage and helping to maintain the camber in the skis. The ski wall rack of the present invention is adapted to be mounted on a suitable supporting means. It may be mounted on a base board which in turn may be mounted on a building wall, or it may be mounted directly on the building wall itself. It may be mounted in any room of the building, as for example, on the wall of a recreation or family room. It may be mounted in a horizontal position as well, if desired.

When mounting the ski wall rack in operative position on a wall, the camber block **15** is first affixed to the wall so that when the ski is in place, the block **15** will be under the middle of the ski. It will be understood that the degree of camber of the ski may be increased by mounting the block **15** on its narrow edge so as to permit inserting the mounting screw **28** through the hole **27** instead of through the hole **26**. The skis may be used as measuring guides when mounting the clamp means **13** and bracket means **14** on a wall or other supporting means. For example, after the block **15** has been secured on a wall, the skis may be held so that the block **15** is disposed under the longitudinal middle point thereof. The clamp means **13** and bracket means **14** would then be positioned and secured in place about six inches from the front and rear ends, respectively, of the skis. The rear ends of the skis are first mounted in the bracket means **14** and the front ends are then moved into the U-shaped clamping member of the clamp means **13**. The skis are held against lengthwise movement because the clamp means **13** and the bracket means **14** maintains the skis in a cambered position over the block **15** whereby the ends of the skis tend to pivot outwardly from the wall **10** and into a friction type grip with clamp means **13** and the bracket means **14**. Experience has shown that the ski wall rack of the present invention is an efficient and practical apparatus for storing a pair of skis when they are not in use.

FIG. 8 illustrates a second clamp means embodiment which may be employed in the invention. This second embodiment has been generally designated by the numeral **13** followed by the small letter *"a."* The parts of the clamp means **13***a* which are similar to the first described clamp means **13** have been marked with similar reference numerals followed by the small letter *"a."*

It will be seen that the only difference between the first described clamp means **13** and the clamp means **13***a* is that the retainer arms **40** and **44** for the first embodiment have been replaced with a single elongated retainer arm or clamp arm designated by the numeral **50**. One end of the retainer arm **50** has been pivotally mounted on the leg extension **51** by means of the rivet **52**. The other end of the retainer arm **50** is provided with the hole **54** which is adapted to mate with a similar hole in the leg extension **53**. It will be seen that when the retainer arm **50** is swung upwardly or downwardly from the position shown in FIG. 8, the front ends of a pair of skis may be inserted in the U-shaped clamping members of the clamp means **13***a*. The retainer arm **50** may then be pivoted to the closed or clamping position shown in FIG. 8, whereby the front ends of the skis are circled and clasped in a tensioned stored position.

Any suitable means may be mounted through the holes **54** for securing the retainer arm **50** in place. It is preferable that a conventional padlock may be used, as for example, the type of padlock which has a U-shaped shackle which can be passed through the hole **54** and then locked in place to prevent unauthorized taking of the skis from the ski wall rack. It will also be understood that if it is not desired to lock the rack **13***a* by means of a padlock that any suitable screw means or pin may be passed through the hole **54** to secure the retainer arm **50** in place, as for example, the screw **55** which is adapted to pass through the hole **54** and be secured in place by means of the nut **56**.

FIG. 9 illustrates a third embodiment of a clamp means which may be employed in carrying out the principles of the present invention. The embodiment of FIG. 9 has been generally designated by the numeral **13***b*, and the parts thereof which are similar to the parts of the first embodiment of FIGS. 1–3 and 5 have been marked with the same reference numerals followed by the small letter *"b."*

The clamp means **13***b* of FIG. 9 has been provided with a single, elongated retainer arm **50***b* which is pivotally mounted at the longitudinal center thereof on the connector plate **32***b* by means of the rivet **57**. The retainer arm **50***b* is provided on one end thereof with the downwardly facing locking slot **58** and on the other end thereof with the upwardly facing locking slot **59**. The last mentioned slots are adapted to coact with the locking slots **60** and **61** formed in the upper and lower sides, respectively, of the clamp member legs **30***b* and **35***b*, respectively. It will be seen that when the retainer arm **50***b* is moved clockwise, as viewed in FIG. 9, it will be moved to a vertical position to permit the front ends of a pair of skis to be mounted in the clamp means **13***b*. When the retainer arm **50***b* is moved counterclockwise, the bar will be moved to a horizontal position to permit the one end of the retainer bar **50***b* to pass into the slot **60** in the arm **30***b* and through the slot **58** to overlap and receive the leg **30***b*. The opposite end of the retainer arm **50***b* also interlocks in the same manner with the leg member **35***b*.

FIG. 10 illustrates a fourth embodiment of a clamp means which may be employed in carrying out the principles of the present invention. The clamp means of FIG. 10 is designated by the numeral **13***c*. The parts of the clamp means **13***c* which are similar to the clamp means **13** and **13***a*, of FIGS. 3 and 8, respectively, have been marked with the same reference numerals followed by the small letter *"c."* The only difference between the embodiment of FIG. 1 and FIG. 10 is that in the embodiment of FIG. 10, the retainer arms **40***c* and **44***c* are adapted to be secured in place by suitable lock means adapted to be passed through suitable holes in the retainer arms and the mating U-shaped clamping members.

As shown in FIG. 10, the outer end of the pivotally mounted retainer arm **40***c* is provided with a hole **62** which is adapted to be aligned with the hole **63** formed in the leg extension **51***c*. The shackle of a suitable padlock may be mounted through these mating holes to lock the retainer arm **40***c* in place and prevent unauthorized usage of the skis. It will also be understood that a suitable screw, as the screw **55** and the nut **56** in FIG. 8, may be used to secure the retainer arm **40***c* in place. The other retainer arm **44***c* is also provided with a similar hole **64** adapted to be aligned with the hole **65** in the leg extension **53***c*. A suitable padlock or screw as mentioned for use in holes **62** and **63** may also be used to secure the retainer arm **44***c* in position.

FIG. 11 illustrates a fifth embodiment of a clamp means adapted to be employed in carrying out the principles of the present invention. The parts of the clamp means of FIG. 11 which are similar to the clamp means **13** of FIG. 1 have been marked with the same reference numerals followed by the small letter *"d."* The clamp means in FIG. 11 is generally indicated by the numeral **13***d*. As shown in FIG. 1, the U-shaped clamping member legs **30***d*, **31***d*, **34***d* and **35***d*, have been provided with th aligned holes **66**, **67**, **68** and **69**, respectively, for the slid ing reception of the elongated retainer rod **70**. The re tainer rod **70** has been provided with a suitable handl **71**. It will be seen that when the retainer rod **70** is re moved from the last mentioned holes, a pair of skis may b inserted in the clamp means **13***d*. After the front ends o a pair of skis have been inserted in the U-shaped clam portions of the clamp means **13***d*, the retainer rod **70** i then slidably moved into the last mentioned holes to com plete the encirclement or clasping of the ski front end and to retain them in the ski rack. If desired, the right end of the retainer rod **70** as viewed in FIG. 11, may be provided with a suitable lock means for retaining the retainer rod **70** in the clamping position shown in FIG. 11 to prevent unauthorized usage of the skis. For example, a suitable hole **72** may be provided through said end of the retainer rod **70** to permit a suitable locking means to be inserted therethrough, as for example, the shackle of a padlock.

While it will be apparent that the preferred embodiments of the invention herein disclosed are well calculated to fulfill the objects above stated, it will be appreciated that the invention is susceptible to modification, variation and change without departing from the proper scope or fair meaning of the subjoined claims.

What I claim is:

1. A ski rack or mounting a pair of skis on a supporting means comprising:

(a) a camber retainer means mounted on said supporting means and adapted to be positioned under the pair of skis at the longitudinal middle point of each of the skis;

(b) a bracket means mounted on said supporting means and adapted to receive and encircle the rear ends of a pair of skis;

(c) a clamp means mounted on said supporting means and disposed in alignment with said camber retaining means and bracket means, and adapted to receive the front ends of a pair of skis and clamp the skis on the supporting means;

(d) said clamp means including a pair of spaced apart, interconnected clamp members which are mounted on said supporting means and which are open on the outer sides thereof for the reception of the front ends of a pair of skis, and retainer means mounted on said clamp members for retaining the skis in said clamp members; and,

(e) said retainer means comprising a retainer arm pivotally mounted across the open outer side of each of said clamp members, and one end of each of the retainer arms being pivoted on the inner side of one of the clamp members and the other end of each of the retainer arms being provided with a lock slot for interlocking engagement with a slot on the outer side of one of the clamp members.

2. A ski rack for mounting a pair of skis on a supporting means comprising:

(a) a camber retainer means mounted on said supporting means and adapted to be positioned under the pair of skis at the longitudinal middle point of each of the skis;

(b) a bracket means mounted on said supporting means and adapted to receive and encircle the rear ends of a pair of skis;

(c) a clamp means mounted on said supporting means and disposed in alignment with said camber retaining means and bracket means, and adapted to receive the front ends of a pair of skis and clamp the skis on the supporting means;

(d) said clamp means including a pair of spaced apart, interconnected clamp members which are mounted on said supporting means and which are open on the outer sides thereof for the reception of the front ends of a pair of skis, and retainer means mounted on

said clamp members for retaining the skis in said clamp members; and,

(e) said retainer means comprises an elongated retainer arm pivotally mounted at the longitudinal center point thereof at a point between said clamp members, and a slot on each of the ends of said elongated retainer arm for locking engagement with a slot on one of the clamp members in a closed position across the open sides of the clamp members.

3. A ski rack for mounting a pair of skis on a supporting means comprising:

(a) a camber retainer means mounted on said supporting means and adapted to be positioned under the pair of skis at the longitudinal middle point of each of the skis;

(b) a bracket means mounted on said supporting means and adapted to receive and encircle the rear ends of a pair of skis;

(c) a clamp means mounted on said supporting means and disposed in alignment with said camber retaining means and bracket means, and adapted to receive the front ends of a pair of skis and clamp the skis on the supporting means;

(d) said clamp means including a pair of spaced apart, interconnected clamp members which are mounted on said supporting means and which are open on the

outer sides thereof for the reception of the front ends of a pair of skis, and retainer means mounted on said clamp members for retaining the skis in said clamp members; and

(e) said retainer means includes an elongated retainer rod removably mounted through holes in the clamp members in a slidable manner across the open outer sides of the clamp members for selective closure of the same, and means for locking the retainer rod in closed position across the clamp members.

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BENJAMIN HERSH, *Primary Examiner.*

MILTON L. SMITH, *Examiner.*