A rack primarily for storage of snowboards or skis at an elevated position is formed generally as a triangle with an additional upstanding arm for hanging the rack from a rafter, beam, ceiling or other elevated structure. In one form at least one snowboard can be retained on hooked overhangs that extend beyond the base leg of the triangle, with two such racks being used in tandem to hang the snowboards. The rack can be formed of bent and welded metal rod and has a suspension connection such as a tapered screw thread or other connection at the upper end of the arm for attaching the rack to a selected structure, preferably wood.
FIG. 5
RACK FOR STORAGE

BACKGROUND

[0001] The invention concerns storage of snowboards, skis or other similarly-shaped elongated sporting equipment or other items. In a preferred form the invention comprises a rack of simple construction to be supported from an elevated position such as from a beam or joist in a structure, with generally two such racks being used in tandem to store snowboards or skis or other elongated sporting equipment.

[0002] Snowboards and skis are stored in various ways. Sometimes they are stored in the rafters or similar places, but more often they are simply stood up in a corner of a room or laid horizontally on a floor. Other storage arrangements have been proposed, but none as space-saving, efficient and elegantly simple as that of the present invention described below.

SUMMARY

[0003] The invention comprises a simple rack, primarily for storage of snowboards or skis (or other equipment) at an elevated position, formed preferably as a generally triangular frame with an additional upstanding arm for hanging the rack from a rafter, beam, ceiling or other elevated structure. In one form at least two snowboards can be received on the frame of the rack, two such racks being required in tandem to hang the snowboards. The rack can be formed of welded rod and has at the upper end of the arm, some form of connection for attaching the rack to a selected structure. In a preferred form this is a simple tapered screw thread at the end of the arm, but it could be a hole for a fastener or another connection arrangement.

[0004] In a preferred form the rack comprises a stainless steel rod forming generally a symmetrical (isosceles) triangle with the arm extending upward from the upper apex of the triangle, for storing elongated items such as snowboards or skis. Two of the racks are supported in tandem from an elevated structure, hanging down to provide support locations for the stored items. Preferably the horizontal support bar at the base of the triangle extends laterally beyond the triangle corners at both sides, with an upturned end on each overhang, to provide for snowboards to be stored in a leaning orientation on the outside of the triangle frame.

[0005] Accordingly, it is among the objects of the invention to provide a simple, effective and efficient space-saving rack arrangement particularly for snowboards or skis, to retain these items of sporting equipment at an elevated and out-of-the-way position, while providing for easy retrieval. These and other objects, advantages and features of the invention will be apparent from the following descriptions of preferred embodiments, considered along with the accompanying drawings.

BRIEF DESCRIPTION OF DRAWINGS

[0006] This invention will be more fully understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

[0007] FIG. 1 is a front elevation view showing a rack according to the principles of the invention, in one preferred embodiment.

[0008] FIG. 2 is a view similar to FIG. 1 but showing the rack secured to an overhead wood beam or joist.

[0009] FIG. 3 is a view showing two of the FIG. 1 racks installed on a beam or joist or other element of building structure.

[0010] FIG. 4 is a view similar to FIG. 1, but in a modified form, and showing snowboards retained at outsides of the racks, only one of two racks being shown in FIG. 4.

[0011] FIG. 5 is a perspective view showing snowboards and skis retained by the racks.

[0012] FIGS. 6 through 10 show alternate forms of rack configurations.

DETAILED DESCRIPTION

[0013] Certain exemplary embodiments will now be described to provide an overall understanding of the principles of the structure, function, manufacture, and use of the devices and methods disclosed herein. One or more examples of these embodiments are illustrated in the accompanying drawings. Those skilled in the art will understand that the devices and methods specifically described herein and illustrated in the accompanying drawings are non-limiting exemplary embodiments and that the scope of the present invention is defined solely by the claims. The features illustrated or described in connection with one exemplary embodiment may be combined with the features of other embodiments. Such modifications and variations are intended to be included within the scope of the present invention.

[0014] In the drawings, FIG. 1 shows a snowboard or ski retention rack 10 according to a preferred embodiment of the invention. In this preferred form the rack is fabricated of bent and welded rod 12, generally shaped as a triangle but with an upwardly extending arm 14 extending from the top apex 13 of the triangle. A bottom bar 16 is essentially horizontal, and preferably extends beyond the length of the triangle base to form two overhangs 18. Each overhang has an upturned end or lip 20, forming a hook. The rod may be stainless steel, for corrosion resistance, or another appropriate metal such as brass, or may even be a strong plastic material. At the upper end of the upwardly extending arm 14 is some form of connection arrangement for receiving a fastener or otherwise affording attachment to a beam, rafter, ceiling or other elevated structure. In this case the upright arm 14 is shown as ending in a tapered screw 22 for screwing directly into the bottom side of a wood member such as a joist, beam, rafter or ceiling, as shown at 23 in FIG. 2.

[0015] It should be understood that the connection device 22 on the arm 14 can take other forms. FIG. 4 shows a fastener hole 24 through the frame at the top of the arm 14, to receive a nail or screw, as another embodiment. The fastener hole 24 could be oriented in either direction, i.e. in the direction parallel to the plane of the rack device 10 as shown or in a 90°-rotated position. Two such holes can be provided, staggered in height, at different orientations, to provide for using the rack at two different positions attached to the side of an elongated beam member, or for attachment to a pair of successive rafters, joists or beams that are arranged in parallel, such that two racks 10 can be arranged in aligned, parallel orientation.

[0016] It should also be understood that the top end of the arm 14 can be formed into a bracket, such as a U-shaped bracket for hanging on a beam, a bracket with one or two vertical faces with holes for attachment at either side of a beam, joist or rafter, or another form of bracket or hanger effective to engage the arm 14 with available elevated structure. The bracket can have a flat, horizontal plate for securing
to a ceiling. The upper end of the upwardly extending arm 24 could also be threaded as a machine screw, for attachment to one of several different types of fittings that can be part of a set that accompany the rack. For example, one such threaded fitting could provide a hole to take the place of the hole 24 shown in FIG. 1, or could provide a hole at 90.0 to the hole 24 (simply by rotating the threaded fitting to another angular position); another could provide a hook for hooking over a beam or joist; another could provide a ceiling attachment bracket with holes for screwing fasteners upwardly into a ceiling; another could provide a tapered screw as in FIGS. 1 and 2; or any other conceivable attachment device appropriate for different circumstances.

[0017] FIG. 3 shows two of the racks 10 as installed on a beam or joist 23, or other horizontal structure in a building or other structure. The two racks 10 are aligned and in generally parallel relationship, each being secured via the tapered threads 22 as in FIGS. 1 and 2.

[0018] FIG. 4 shows a rack 10 (of a pair of aligned racks) supporting snowboards 26 and 28 and skis 30. As illustrated, the snowboards rest on the overhangs 18 of the horizontal bottom sections 16 of the two racks 10, secured in position by the upturned hooks 20. FIGS. 4 and 5 show that two snowboards can be retained on the outside of the triangular frame of each of the two tandem racks 10, and one or several pairs of skis can be stored within the triangle opening 32. The racks can be larger if desired, for stacking more snowboards, including within the triangle, or more skis or combinations of both. Surfboards can be accommodated, with the rack made of the appropriate size.

[0019] Although the generally triangular configuration illustrated in these drawings is a preferred embodiment, the shape of the racks can be otherwise. For example, each rack could be generally an L-shape, with a lip at the tip of the bottom leg of the L, to retain one or several snowboards or pairs of skis. Each rack could be formed in a different shape, such as a square or rectangular shape if desired. What is most important is that the rack or frame 10 include a bottom leg which is essentially horizontal, or slightly tilted in a direction to retain skis or snowboards on the rack. The term generally horizontal as used in the claims is intended to include such a slight tilt. The term generally vertical refers to an upside down T-shape.

Again, the horizontal members can be slightly inclined in order to retain the snowboard or skis without the need for any lip at the outer edge, or a lip or upturned hook can be included avoiding the need for any slope.

[0020] Some examples of such variations are shown in FIGS. 6 through 10. FIG. 6 shows a variation in which a rack 40 has a double L configuration. The upper end of the rack 40 can have a tapered screw thread 22 as indicated, or any other form of connection discussed above and also below. Each horizontal frame member 42, 44 of the rack 40 preferably has an outer lip as shown and may have a strut 46, enabling lighter metal rod or other material to be used for the rack. Snowboards can be retained with their length horizontal but width inclined on such a rack, generally as shown in FIG. 5.

[0021] FIG. 7 shows a rack 48 similar to the rack 40, but with a single L configuration.

[0022] FIG. 8 shows a rack 50 which is similar to the rack 10 shown in FIGS. 1 and 2 but having an additional vertical bar 52 through the middle of the triangle configuration. This can help organize pairs of skis in the triangular spaces 54 defined on either side of the vertical bar 52, while snowboards can be retained on the two outer sides of the rack 50, just as in FIGS. 1-5.

[0023] FIG. 9 shows another variation wherein a rack 56 has an upwardly extending arm or rod 58 for connection with a joist or other structural member 23 at an elevated position, but the rod is attached to a frame piece 60 formed in a different configuration from the other embodiments. The frame or block 60 can be formed of metal, molded from plastic or even formed of wood. Snowboards or skis can be retained in the generally horizontal but obliquely angled slots 62 shown in the frame or block piece 60.

[0024] In FIG. 10 the illustrated rack 65 is functionally similar to the rack of FIG. 9, but is preferably formed of metal rod or bar material, welded into the configuration shown. A strut 66 may be included, and two slots 68 are available for surfboards or skis.

[0025] It should be understood that the rack of the invention can be made in any desired size and different proportions and can be used to support any type of elongated equipment, such as surfboards, with appropriate sizing.

[0026] One skilled in the art will appreciate further features and advantages of the invention based on the above-described embodiments. Accordingly, the invention is not to be limited by what has been particularly shown and described, except as indicated by the appended claims. All publications and references cited herein are expressly incorporated herein by reference in their entirety.

What is claimed is:
1. A rack, comprising: a frame comprising a base support bar and at least two arms extending upwardly from the base support bar to intersect at an apex to form a generally triangular structure, the base support bar extending laterally beyond the length of a base of the generally triangular structure to form two overhangs; an arm extending upwardly from the apex; and a suspension connection disposed at an upper end of the upwardly extending arm.
2. The rack of claim 1, wherein the frame comprises a metal rod material.
3. The rack of claim 2, wherein the metal rod material comprises stainless steel.
4. The rack of claim 1, wherein the suspension connection further comprises a tapered screw thread formed on the upper end of the upwardly extending arm.
5. The rack of claim 1, wherein each of the overhangs of the base support bar comprises an upturned end.
6. The rack of claim 1, wherein each of the overhangs of the base support bar is slightly inclined relative to a center point of the base of the generally triangular structure.
7. The rack of claim 1, further comprising a vertical bar extending from the apex to the base support bar.
8. A storage system, comprising: a first frame having a first base support bar and at least two arms extending upwardly from the first base support bar to intersect at a first apex to form a first generally triangular structure, the first base support bar extending laterally beyond the length of a first base of the first generally triangular structure to form two overhangs, wherein each of the overhangs includes an upturned end; a first arm extending upwardly from the first apex; a first suspension connection disposed at a first upper end of the first upwardly extending arm;
a second frame having a second base support bar and at least two arms extending upwardly from the second base support bar to intersect at a second apex to form a second generally triangular structure, the second base support bar extending laterally beyond the length of a second base of the second generally triangular structure to form two overhangs; a second arm extending upwardly from the second apex; and a second suspension connection disposed at a second upper end of the second upwardly extending arm, wherein the first and second frames are generally aligned to support one or more pieces of elongate equipment disposed therebetween.

9. The system of claim 8, wherein at least one of the first and second frames comprise a metal rod material.

10. The system of claim 9, wherein the metal rod material comprises stainless steel.

11. The system of claim 8, wherein at least one of the first and second suspension connections further comprises a tapered screw formed on the respective first and second upper end of the respective first and second upwardly extending arm.

12. The system of claim 8, wherein each of the overhangs of at least one of the first frame and the second frame comprises an upturned end.

13. The system of claim 8, wherein each of the overhangs of at least one of the first frame and the second frame is slightly inclined relative to a center point of the base of the generally triangular structure.

14. The system of claim 8, further comprising a first vertical bar extending from the first apex to the first base support bar.

15. The system of claim 14, further comprising a second vertical bar extending from the second apex to the second base support bar.

16. The system of claim 8, further comprising a beam disposed between the first and second frames, the first and second suspension connections being coupled to the beam.

17. A method for storing elongate equipment, comprising: placing a first end of a first piece of elongate equipment on a first holding surface of a first triangular-shaped frame, the first holding surface being defined by an outer surface of a first leg of the first frame and a first portion of a bottom bar of the first frame that extends laterally beyond the first leg in a first direction; placing a second end of the first piece of elongate equipment on a first holding surface of a second triangular-shaped frame, the first holding surface being defined by an outer surface of a first leg of the second frame and a first portion of a bottom bar of the second frame that extends laterally beyond the first leg in the first direction; placing a first end of a second piece of elongate equipment on a second holding surface of the first triangular-shaped frame, the second holding surface being defined by an outer surface of a second leg of the first frame and a second portion of the bottom bar of the first frame that extends laterally beyond the second leg in a second direction, the second direction being opposite to the first direction; and placing a second end of the second piece of elongate equipment on a second holding surface of the second triangular-shaped frame, the second holding surface being defined by an outer surface of a second leg of the second frame and a second portion of the bottom bar of the second frame that extends laterally beyond the second leg in the second direction.

18. The method of claim 17, further comprising: placing a first end of a third piece of elongate equipment on a third holding surface of the first triangular-shaped frame, the third holding surface being defined by at least a portion of the bottom bar disposed between the first and second legs of the first frame; and placing a second end of the third piece of elongate equipment on a third holding surface of the second triangular-shaped frame, the third holding surface being defined by at least a portion of the bottom bar disposed between the first and second legs of the second frame.

19. The method of claim 17, further comprising: attaching a first upwardly extending arm extending from an apex of the first triangular-shaped frame into an elevated structure; attaching a second upwardly extending arm extending from an apex of the second triangular-shaped frame into an elevated structure.

20. The method of claim 17, wherein at least one of the bottom bars of the first and second frames further comprises an upturned end on each of the first and second portions of the respective bottom bar.

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