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Lawrence

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[54] **PACK FRAME TOP BRACKET**

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[51] **Int. Cl.** **A45f 3/10**

[58] **Field of Search** ..... 224/25 A, 8 R, 8 A, 9, 224/10

[56] **References Cited**

UNITED STATES PATENTS

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[57] **ABSTRACT**

A top bracket, preferably formed of a continuous tubular member, may be attached to the top of a tubular pack frame to form an extension of the frame. The structure extends the length of the frame and also projects laterally either rearwardly or forwardly of the frame in the form of a shelf or framework for lashing either loads or a shelter from the elements.

8 Claims, 1 Drawing Figure

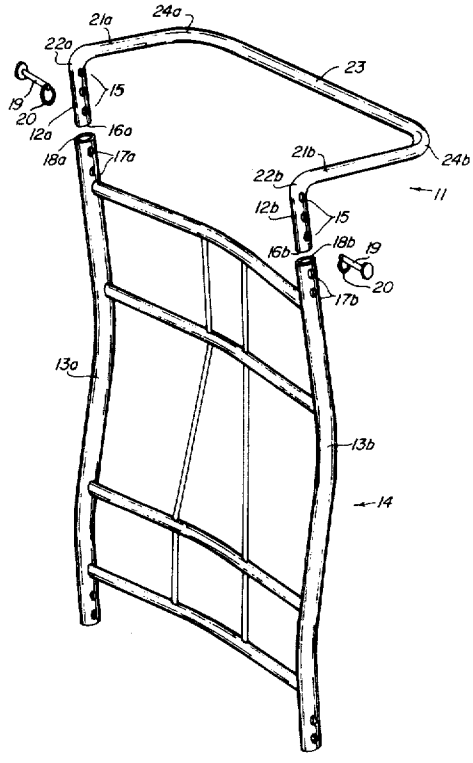
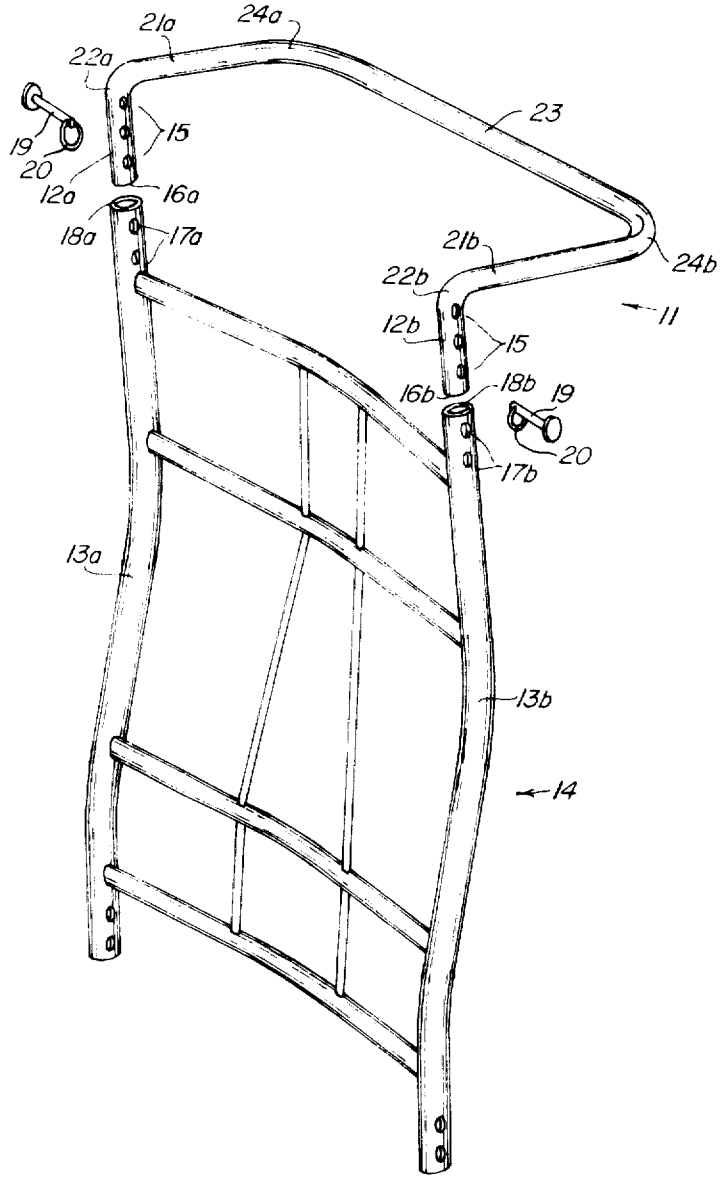


Fig. 1


21a
24a
22a
23
15
19
20
12a
16a
18a
17a
21b
24b
22b
11
12b
15
16b
18b
19
20
17b
13a
13b
14

PACK FRAME TOP BRACKET

BACKGROUND OF THE INVENTION

1. Field

This invention pertains to backpack frames, especially of the tubular frame type. It specifically provides a top bracket attachment for such a pack frame.

2. State of the Art

There are many types of hiker's backpack frames in use. For example, see U.S. Letters Patent 3,563,431. Some of these frames are made from tubular members fastened together in various ways. They generally include tubular upright side supports which define a common plane. Such frames are conventionally built in standard sizes which conveniently accomodate most loads. On occasion, extensions in length of the frame are desirable to facilitate lashing of higher loads or the lashing of loads higher with respect to the shoulders of the individual using the frame. Lashing of high loads on a conventional frame has been inconvenient and awkward because oblong heavy loads (such as a rifle) when lashed to a pliable pack bag or bundle tend to move or become loosened during transport.

SUMMARY OF THE INVENTION

The present invention includes several structural elements arranged in the form of an extension bracket which can be attached to the top of a tubular pack frame to form an extension of the frame. The several elements include vertical coplaner side extensions, a corresponding pair of coplaner lateral extension members, and a connection member. The vertical side extension members are of approximately equal length and are adapted at one end to connect to the upper portion of the side supports of the frame. The lateral extension members are also of approximately equal length and are attached to and extend approximately normally away from the upper ends of the vertical side extension members. The connection member is attached to and extends between the distal ends of the lateral extension members. The connection member may be coplaner with or approximately parallel to the plane of the coplaner lateral extension members. The several elements may be separately constructed or formed of a continuous tube or conduit into the desired shape.

A notable characteristic of the bracket of this invention is that it does not simply straddle the top of the frame in a vertical plane defined by the frame proper. Rather, the bracket of the invention extends rearwardly in a lateral or horizontal plane. Optionally the bracket may be rotated 180° so that the shelf defined by the connecting member and the lateral extension members projects to the front or over the top of the head of an individual carrying the frame.

A principal advantage of the claimed bracket is that heavy loads may be lashed directly to the frame's structure rather than to a pliable pack or luggage lashed to the frame. Backward extension also provides more clearance for headwear than is available in conventional frame extensions. The shelf defined by the extension members and connector facilitates lashing of loads either above or below the shelf.

With the bracket installed in the reverse position at a height that will clear the wearer's head, it forms a framework for a sun or rain shelter over the wearer's head. Moreover, heavy loads may be lashed above the head. The center of gravity of such a load is then approximately in line with the center line of the wearer's body when standing erect. As a result, the wearer is able to assume a more upright position with the load directly overhead, thereby avoiding the need to crouch or lean forward to keep his balance.

It is desirable to provide adjustment means so that the shelf portion of the bracket may be located at a desired height with respect to the head of the wearer. Various lashing lugs, pins, "D" rings or other fittings may be provided to facilitate the lashing of loads.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1**, which illustrates what is presently regarded as the best form for carrying out the invention, is an exploded perspective view of the invention in association with a simplified rendition of a pack frame and conventional connectors.

DESCRIPTION OF THE ILLUSTRATED EMBODIMENT

Referring to the drawing, the top bracket extension member **11** of this invention includes two side extension members **12***a*, 12*b* adapted to slide into corresponding side supports **13***a*, **13***b* of a tubular pack frame **14.** As illustrated, both the tubular pack frame **14** and the bracket **11** are constructed of cylindrical conduit or tubing. The tubing of the bracket **11** is somewhat smaller in diameter than the tubing of the side supports **13** so that the side extensions **12***a*, 12*b* slide into the side supports **13***a*, 13*b* in a telescoping or male/female arrangement. A plurality of bores **15** are provided in each of the vertical side extensions **12** near the bottom ends **16***a*, 16*b* of the side extensions **12.** Corresponding bores **17***a*, 17*b* at the top ends **18***a*, 18*b* of the side supports **13** are provided through the side supports **13** so that the bracket **11** may be vertically adjusted with respect to the frame **14.** As shown, any of the bores **15** may be brought into a registering position with either bore **17** and fastened into place in conventional fashion with the pins **19.** Locking rings **20** are provided to pass through a hole in the end of the pins **19** to lock the pins **19** in place, thereby to secure the pins **19** in place during use.

The lateral extension members **21***a*, 21*b* are attached to the top ends **22***a*, 22*b* of the side extension members **12***a* and **12***b*. The lateral extension members **21** are coplaner and extend approximately normally away from their respective side extension members **12***a*, 12*b*. The connector member **23** is attached to the distal ends **24***a*, 24*b* of the lateral extension members **21***a*, 21*b* to extend therebetween in the same plane as or in approximately the plane of the lateral extension members **21.** The lateral extension members **21,** the side extension members **12** and the connector member **23** may be separate members assembled in the arrangement herein described or they may be fashioned from a single conduit or tube which is formed into the desired shape.

Lateral extension members **21***a*, 21*b* and connector member **23** together comprise an approximately horizontal shelf which may be mounted to extend either rearwardly or forwardly with respect to the frame **14.** That is, the bracket **11** may be attached to frame **14** so that the lateral extension members **21** and connector member **23** are to the rear of the frame **14** as herein illustrated. Alternately the bracket **11** may be attached to extend forward, if desired by the user. Preferably, the side extension members **12** are of sufficient length

to allow the lateral extension members and connector member 23 to extend above or over the top of the head of the user. Loads secured to the bracket 11 when the bracket 11 extends over the top of the head are more nearly in line with the center of the user's body. Less static moment results with the load above the head, permitting the user to walk more erect.

It is within contemplation that means other than the illustrated bores 15, 17 and pins 19 may be used as attachment means. Such attachment means may provide for infinite adjustment of the vertical position of the bracket 11 with respect to the frame 14. Moreover, various accessories and fittings may be associated with the bracket 11 as desired for particular applications to facilitate lashing or carrying of special loads. For example, a fabric covering may be stretched atop the shelf portion of the bracket as a protection against the elements whether or not loads are lashed to the bracket.

Reference herein to specific details of the illustrated embodiment should not be taken as restricting the intended scope of the claims which themselves recite those details regarded as essential to the invention.

I claim:

1. In a backpack frame for hikers having at least two spaced, upright coplaner side supports, the improvement which comprises a top shelf extension formed from:

a pair of side extension members of approximately equal length, each of which carries releasable means to connect the lower portion thereof in longitudinally adjustable relationship to the upper portion of either of said side supports thereby selectively extending the effective lengths of said side supports to above the head of a hiker wearing said frame;

a pair of coplaner lateral extension members of approximately equal length extending from attachment to and approximately normal to the upper ends of respective said side extension members; and

a connection member extending from attachment between the distal ends of said lateral extension members approximately parallel the plane defined by said lateral extension members such that said side extension members, said lateral extension members and said connection member define a top shelf for said frame which may be selectively positioned either to the front of said frame above the head of a hiker wearing such frame or rearwardly of said frame.

2. The improvement of claim 1 wherein the upper portion of said side supports and the lower portion of said side extension members carry adjustment means cooperative to connect said supports to said members at selected locations thereby selectively to adjust the effective length of said side supports.

3. The improvement of claim 2 wherein said adjustment means comprise a plurality of lateral bores through said side supports and said side extension members located so that a selected bore through a said side support may be selectively registered with any selected bore through a said side extension member.

4. The improvement of claim 1 wherein said side supports are of tubular construction and said side extension members are also of tubular construction with similar cross sectional configuration but sized relative to said side supports to slideably, coaxially engage said supports in a male/female relationship.

5. The improvement of claim 4 wherein said top bracket is formed from a single piece of tubing.

6. In combination, a backpack frame having at least two spaced upright coplaner supports and a rigid adjustable top bracket which is comprised of:

a pair of side extension members of approximately equal length, each of which is releasably connected in longitudinally adjustable relationship to the upper portion of one of said side supports thereby selectively extending the effective lengths of said side supports to above the head of a hiker wearing said frame;

a pair of coplaner lateral extension members of approximately equal length extending from attachment to and approximately normal to the upper ends of respective said side extension members; and

a connection member extending from attachment between the distal ends of said lateral extension members approximately parallel the plane defined by said lateral extension members such that said side extension members, said lateral extension members and said connection member define a top shelf for said frame which may be selectively positioned either to the front of said frame above the head of a hiker wearing such frame or rearwardly of said frame.

7. The combination of claim 6 wherein the upper portion of said side supports and the lower portion of said side extension members carry adjustment means cooperative to connect said side supports to said side extension members at selected locations thereby to selectively adjust the effective length of said side supports.

8. The combination of claim 7 wherein said adjustment means comprise a plurality of lateral bores through said side supports and said side extension members located so that a selected bore through a said side support may be selectively registered with any selected bore through a said side extension member.

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