

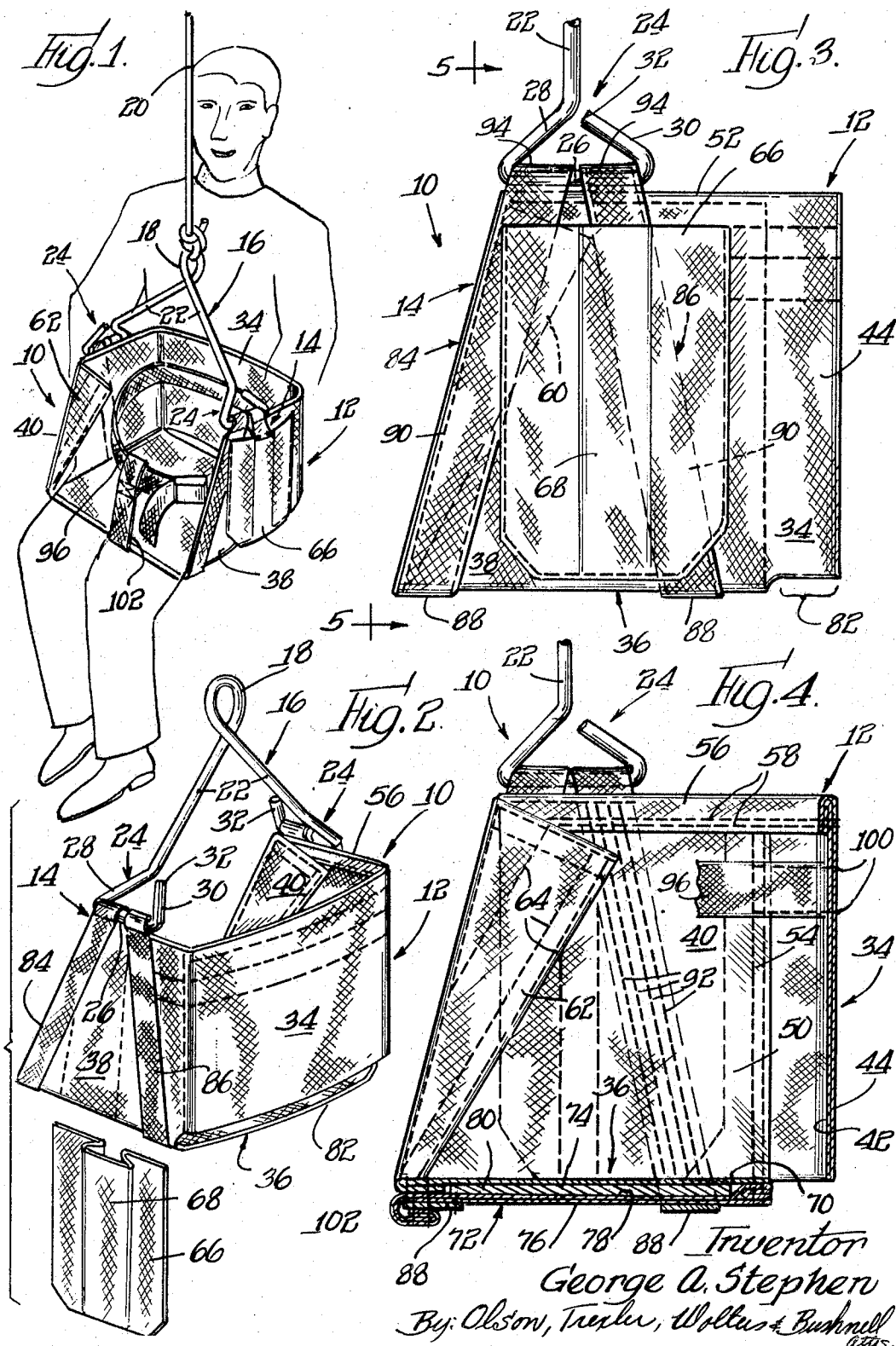
Dec. 16, 1969

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BOATSWAIN'S CHAIR

3,484,833

Filed May 14, 1968

2 Sheets-Sheet 1



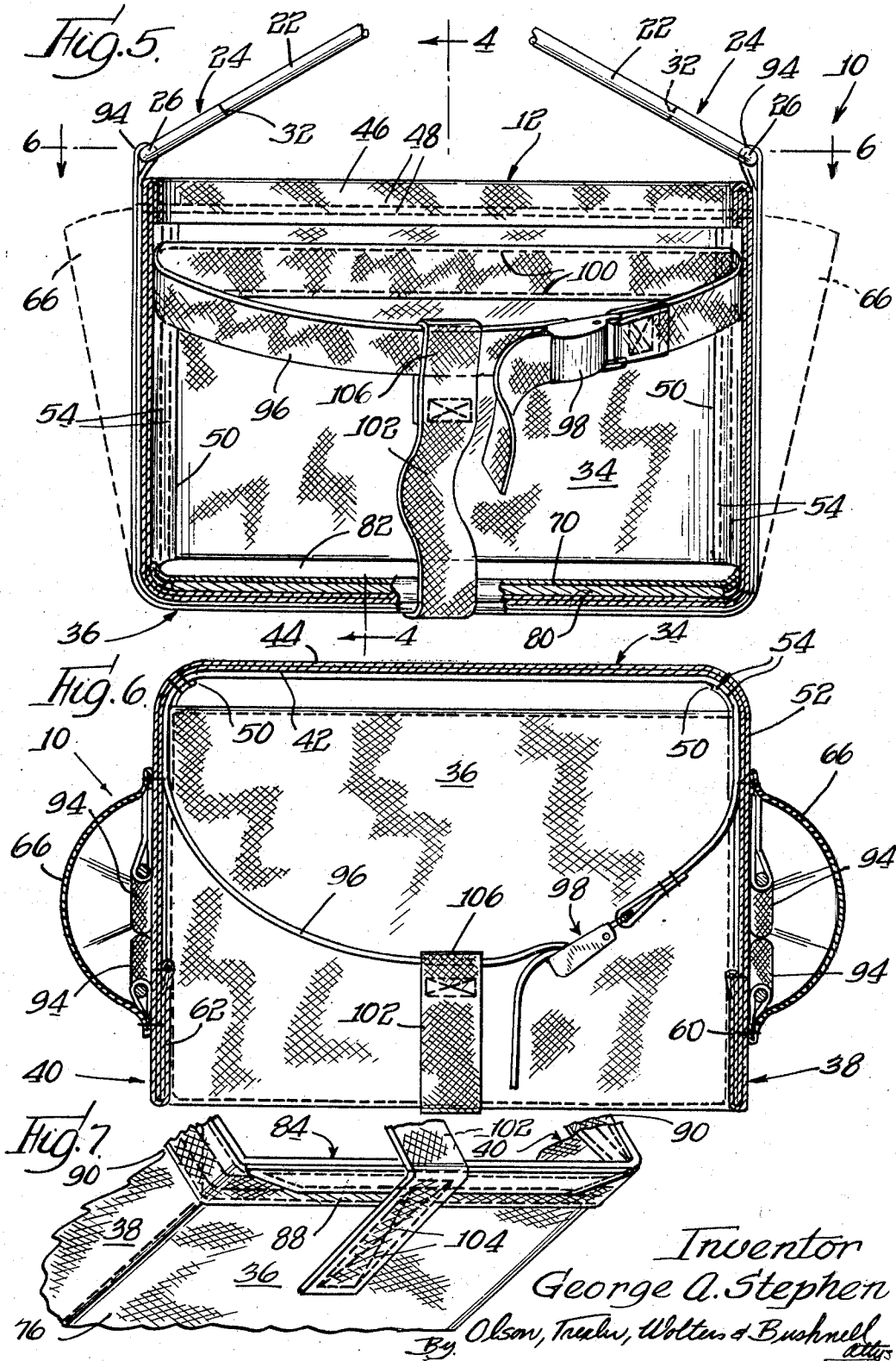
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BOATSWAIN'S CHAIR

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9 Claims

ABSTRACT OF THE DISCLOSURE

A loftable seating appliance useful as a boatswain's chair comprises a flexible seat arrangement that includes a back panel unit, a bottom panel unit and side members joining the back and bottom panel units. A flexible support arrangement is disposed across the bottom panel unit and up the side members and has annular fitments at its opposite ends. The appliance also comprises a rigid suspension unit that is disposed athwart the seat arrangement; and this suspension unit includes terminal rods, that are assembled through the annular fitments, and a line-receiving eye situated intermediate the terminal rods and spaced vertically apart therefrom generally at the level of the breastbone of a person seated in the appliance.

This invention relates generally to ships and boats and more particularly to appliances for use on board sailing yachts and the like.

In many instances, repair or rearrangement of the rigging of a sailing vessel is desired where a shipyard crane is not available for lowering a man into proper position to do the work. Under such circumstances, it is common practice for the crew member in charge of the rigging to improvise a sling out of rope for use in hoisting a man up into position employing the sheave commonly secured to the top of the mast. In some instances, a short length of planking is incorporated in the sling to provide a more comfortable seat; but in either event, the hoisted worker must hang onto the sling with one hand while attempting to complete his job with his free hand. As a consequence, the progress of the work is slow and the activity itself is dangerous.

Accordingly, it is an important object of the present invention to provide a loftable seating appliance which is safe and comfortable and which permits unhampered use of both arms and legs.

A more general object of the invention is to provide a new and improved loftable seating appliance.

Another object of the invention is to provide a loftable seating appliance that is characterized by superior balance.

Still another object of the invention is to provide a loftable seating appliance which presents a comfortable, secure seating surface.

These and other objects and features of the invention will become more apparent from a consideration of the following descriptions.

The invention, both as to its construction and its mode of use, will be better understood by reference to the following disclosure and drawings forming a part thereof, wherein:

FIG. 1 is a perspective view of a seaman being hoisted aloft in a seating appliance constructed in compliance with the principles of the present invention;

FIG. 2 is an enlarged perspective showing of the appliance of FIG. 1, viewed from a rear quarter and shown with one of the gusseted pocket panels exploded away to reveal details of construction;

FIG. 3 is a further enlarged side elevational view of the appliance of FIG. 1;

FIG. 4 is a view similar to the showing of FIG. 3 but

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taken in section, substantially along the line 4—4 of FIG. 5, to reveal details of construction;

FIG. 5 is a front elevational view taken along the line 5—5 of FIG. 3 and suggesting the open condition of the pocket panels in broken outline;

FIG. 6 is a top plan view taken substantially along the line 6—6 of FIG. 5; and

FIG. 7 is a bottom perspective view taken on a slightly reduced scale and showing attachment of the crotch strap member.

Referring now in detail to the drawing, specifically to FIGS. 1 and 2, a loftable seating appliance, indicated generally by the reference numeral 10, comprises a flexible seat arrangement 12, a flexible support arrangement 14 and a rigid suspension unit 16. The suspension unit 16 is advantageously fabricated as a forged steel member of considerable strength and rigidity, useful embodiments of the invention having incorporated forged steel rod of nominal $\frac{5}{8}$ inch diameter; and structurally, the suspension unit 16 includes, as the uppermost element of the seating appliance 10, an eye 18 which is shaped and dimensioned to receive a line 20 in knotted engagement, as is shown in FIG. 1, or in looped or other relationship as is desired. With reference to FIG. 2, outboard of the eye 18 the suspension unit 16 includes a pair of downwardly and outwardly flaring arms 22 which terminate in triangularly shaped fitment hooks 24. Each of the hooks 24 includes a central, horizontally extending rod portion 26, a connecting portion 28 that joins the rod portion 26 with the associated arm 22, and an end portion 30 that has a tip 32 which is spaced from the connecting portion 28 adjacent its juncture with the arm 22 for assembly with the associated support arrangement 14, as will be described hereinafter.

Continuing with reference to FIG. 2 and with supplemental reference to FIGS. 3 and 4, the seat arrangement 12 comprises a back panel unit 34, a bottom panel unit 36 and opposite side members 38 and 40. The back panel unit 34 is fabricated as a double thickness of fabric, inner layer 42 and outer layer 44, shown in FIG. 4; and this back panel unit 34 is provided with an upper hem 46, hem 46 being secured by a double row of stitching 48, as shown in FIG. 5. The side members 38 and 40 are advantageously fashioned as a double thick layer of fabric, inner layer 50, shown in FIG. 4, and outer layer 52, shown in FIG. 3, outer layer 52 being an extension of the piece of material forming the outer layer 44 of back panel unit 34 and inner layer 50 forming an extension of one of the layers of material in bottom panel unit 36, as will be described more fully hereinafter. At their juncture with back panel unit 34, the inner layers 50 of side members 38 and 40 are secured by a double row of vertical stitching 54, best shown in FIG. 5. In addition, the side members 38 and 40 are fashioned with hems 56 which are secured by a double row of stitching 58, the hems 56 and the stitching 58 being extensions of the hem 46 and the stitching 48 of back panel unit 34.

As is shown in FIG. 1, the back panel unit 34 and the side members 38 and 40 are selected to take a height which is effective to provide cradling support for the hips and lower back of a worker hoisted in the seating appliance 10. In addition and with reference again to FIGS. 3 and 4, the side members 38 and 40 are individually provided with triangularly hemmed front portions 60 and 62 respectively which are held in place by a plurality of rows of stitching 64. This triangular hemming completely avoids the presence of free-flapping upper front corners in the seat arrangement 12 and thus eliminates a substantial source of entanglement with any closely disposed lines or other gear as well as a potential source of interference in the work being done by the man hoisted

aloft. In addition, each of the side members 38 and 40 is provided with a single thickness tool pocket 66 which is sewn on the outside of the side member as a flap pocket. The pockets 66 are fashioned with a central gusset 68 as is shown in FIG. 2 whereby the pocket panel lies flat when not in use but where the pocket may be substantially expanded to present a large carrying volume when in use, as is shown and suggested in FIGS. 5 and 6.

Continuing with particular reference to FIG. 4, the bottom panel unit 36 comprises an upper layer 70 made up of a single thickness or sheet of fabric and a bottom layer 72 made up of an upper layer or sheet 74 and a lower layer or sheet 76. The layer 76 is an extension of the inner layers 50 of side members 38 and 40. Thus, the bottom panel unit, the back panel unit, and the respective side members are formed of interleaved sheets of fabric, which, when properly stitched, form the seat arrangement 12 into a very strong yet flexible and comfortable unit.

In addition, the upper layer comprising sheet 70 is generally spaced from the lower layer comprising sheets 74 and 76 and sewn thereto at only three sides in order to define a pocket 78. Furthermore, the top layer 70 is joined to the underlying thicknesses of material only at respective edge regions so that the pocket 78 is substantially coextensive with the dimensions of bottom panel unit 36. In accordance with the features of the present invention, a rigid planar member 80, fabricated from marine grade plywood, for example, is slidably disposed in the pocket 78 and is cut to substantially the full dimensions of the pocket to form a deep, wide and rigid seating surface in the appliance 10. The rigidity afforded by the planar member 80 allows a worker seated in the appliance 10 to pivot on his buttocks relative to the floor of the appliance, and this ability has been found to facilitate the work being done aloft. The seat arrangement 12 is also fabricated to permit the back panel unit 34 a substantial degree of free flexing response to body movements of the seated worker; and for this purpose, the back panel unit 34 is separated from the bottom panel unit 36 at the rear edge of the seating arrangement 12, providing a gap shown at 82 in FIGS. 2, 3 and 5.

The strength, comfort and flexibility that is desired in the seat arrangement 12 is advantageously achieved by fabricating the various elements from canvas or like fabric. In addition, woven fabrics of this type possess comparatively high friction characteristics which are desirable in that the person seated in the appliance 10 tends to be held in place and does not tend to slide out of the unit.

The support arrangement 14 includes a pair of spaced, generally U-shaped straps or webs 84 and 86, as is shown in FIGS. 2 and 3. Each of these straps comprises a bottom spanning portion 88 and a pair of side spanning portions 90. To provide strength, flexibility and lightweight in the support arrangement 14, the straps 84 and 86 are fashioned from a woven fabric and, in particular, of such a fabric made from such strong fibers as nylon and acrylic fibers. Furthermore, the bottom spanning portion 88 of front strap 84 traverses the forward edge of bottom panel unit 36 whereas the bottom spanning portion 88 of rear strap 86 traverses the rear edge of bottom panel unit 36. Thus, the weight supported by the appliance 10 is centered between these two straps whereby to establish and insure effective balance in the seating appliance. Each of the straps 84 and 86 is secured by four rows of longitudinal stitching 92, best seen in FIG. 4. In accord with another feature of the present invention, the seat arrangement 12 is disposed generally inwardly of the support arrangement 14, at least one panel of the seat arrangement separating the hoisted worker from the straps 84 and 86. Thus, the strong but comparatively low friction fabric of which the straps 84 and 86 are made is not in contact with the clothing of the seated person. Accord-

ingly, there is no diminution in the friction value of the fabric of the seat arrangement resulting from the use of either nylon or acrylic cloth for the straps 84 and 86.

As is shown in FIGS. 2 and 3, the side spanning portions 90 of straps 84 and 86 converge generally from the bottom panel unit to the top edge of the side members 38 and 40. In addition, the side spanning portions 90 of the straps 84 and 86 terminate in annular fittings 94 which are relatively closely spaced because of the convergence of the side spanning portions. The fittings 94 are conveniently formed by looping the material of the webs 84 and 86 and running the otherwise free end parallel with the side spanning portions a suitable distance to prevent their becoming ripped out in use. The fittings 94 serve as attachment sites for the suspension unit 16; and in particular, the fittings 94 encircle the horizontal rod portions 26 of the fitment hooks 24 as is shown in FIGS. 3 and 5. It should be appreciated that the tip 32 of the fitment hook 24 forms the lead element in slipping the fitment hook into the fittings 94. Moreover, it should be noted, with reference to FIGS. 2 and 5, that the respective tips 32 are disposed on opposite sides of the arms 22 whereby to preserve assembly of the fittings 94 and hooks 24 even during the more vigorous gyrations of the appliance 10 when it is aloft. As has been described hereinabove, the rigid planar member 80 preserves the bottom edges of side members 38 and 40 in relatively spread relationship. Similarly, the suspension unit 16 serves to preserve the upper edges of the respective side members in spaced relation. As a result, the seating appliance 10 tends to remain in box-like configuration during use rather than wrapping itself tightly against the body of the hoisted worker. Because of this preserved configuration, the worker has substantial freedom of movement and at the same time safe and comfortable support.

Continuing with reference to FIGS. 5 and 6, the seating appliance 10 includes a safety belt 96 which horizontally encircles the seat arrangement 12 intermediate the bottom panel unit and the fittings 94 generally at the level of the waist of a person seated in the appliance 10. The belt 96 is releasably closed upon itself by means of an aircraft-type seat belt buckle 98, and the belt 96 is secured to the back panel unit 34 by means of horizontal stitching 100, best seen in FIG. 5. Cooperating in the securing of a person in the appliance 10 is a crotch strap member 102 which is secured at its one end to the front edge portion of bottom panel unit 36 by means of a plurality of rows of stitching 104, illustrated in FIG. 7, strap member 102 overlapping the material of front strap 84 and the bottom-most sheet 76 of bottom panel unit 36. The opposite end of crotch strap member 102 is formed into a loop 106 that slidably receives the safety belt 96. The crotch strap member 102 effectively prevents the hoisted worker from sliding out of the seating appliance 10 in the space beneath safety belt 96. Thus, the worker is free to use both of his arms and both of his legs in accomplishing his work tasks and need employ none of his limbs in retaining his seat in the appliance 10. Cooperating in the facility with which the worker may use his arms is the disposition of line-receiving eye 18 generally at the level of the breastbone of the person seated in the seat arrangement 12. This latter feature is clearly illustrated in FIG. 1.

The manner in which the present invention may be practiced and the purpose to which it may be put are evident from the foregoing descriptions.

The drawings and the foregoing descriptions are not intended to represent the only forms of my invention in regard to the details of its construction and the manner of its operation. Changes in form and in the proportion of parts, as well as the substitution of equivalents, are contemplated as circumstances may suggest or render expedient; and although specific terms have been employed, they are intended in a generic or descriptive sense and not for purposes of limitation, the scope of the invention being delineated in the following claims.

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The invention is claimed as follows:

1. A loftable seating and work appliance comprising: flexible seat means including back panel means, bottom panel means and side members joining said back and bottom panel means; flexible support means secured to said seat means, including a pair of spaced straps disposed across said bottom panel means and up said side members and having annular fitting means at their opposite ends, the corresponding ends of said straps being adjacently disposed to situate the associated fitting means in closely spaced relationship and said straps flaring apart downwardly from said fitting means to dispose respective strap portions adjacent the front and rear edges of said bottom panel means; rigid suspension means disposed athwart said seat means and including terminal rod means assembled through said fitting means, whereby to spread said side members laterally at the upper ends thereof, said suspension means further including a line-receiving eye intermediate said terminal rod means and spaced vertically apart from said rod means generally at the level of the breastbone of a person seated in said seat means; and a rigid planar member substantially coextensive with said bottom panel means and secured to said bottom panel means with said strap portions disposed supportingly beneath said planar member, said planar member coacting with said suspension means to maintain said seating appliance in a box-like configuration generally non-adherent to the body of the occupant.

2. A loftable seating appliance according to claim 1 wherein said bottom panel means includes an upper layer and a lower layer spaced from said upper layer and joined to said upper layer at respective edge regions thereof to define a pocket and wherein said rigid planar member is slidably received in said pocket.

3. A loftable seating appliance according to claim 1 wherein said flexible support means includes a pair of spaced straps woven of tensile strong fibers and stitch means connecting said straps to said bottom panel means and to said side members.

4. A loftable seating appliance according to claim 1 wherein said flexible seat means is of comparatively high friction fabric, wherein said flexible support means is of

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comparatively low friction fabric, and wherein said seat means is disposed relatively inwardly of said support means, whereby to seat a person securely in said appliance in contact with said comparatively high friction fabric.

5. A loftable seating appliance according to claim 4 wherein said comparatively high friction fabric is canvas.

6. A loftable seating appliance according to claim 4 wherein said comparatively high friction fabric is selected from the class consisting essentially of nylon and acrylic fabrics.

7. A loftable seating appliance according to claim 1 wherein said appliance further comprises buckled belt means secured to said seat means in horizontally encircling relationship intermediate said bottom panel means and said annular fitting means.

8. A loftable seating appliance according to claim 7 wherein said appliance further comprises a crotch strap member secured at its one end to the front edge portion of said bottom panel means at substantially the midpoint thereof and slidably connected at its other end to said belt means.

9. A loftable seating appliance according to claim 1 wherein said side members have triangularly hemmed upper front corners.

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