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(54) **MULTI-PURPOSE UTILITY PACK**

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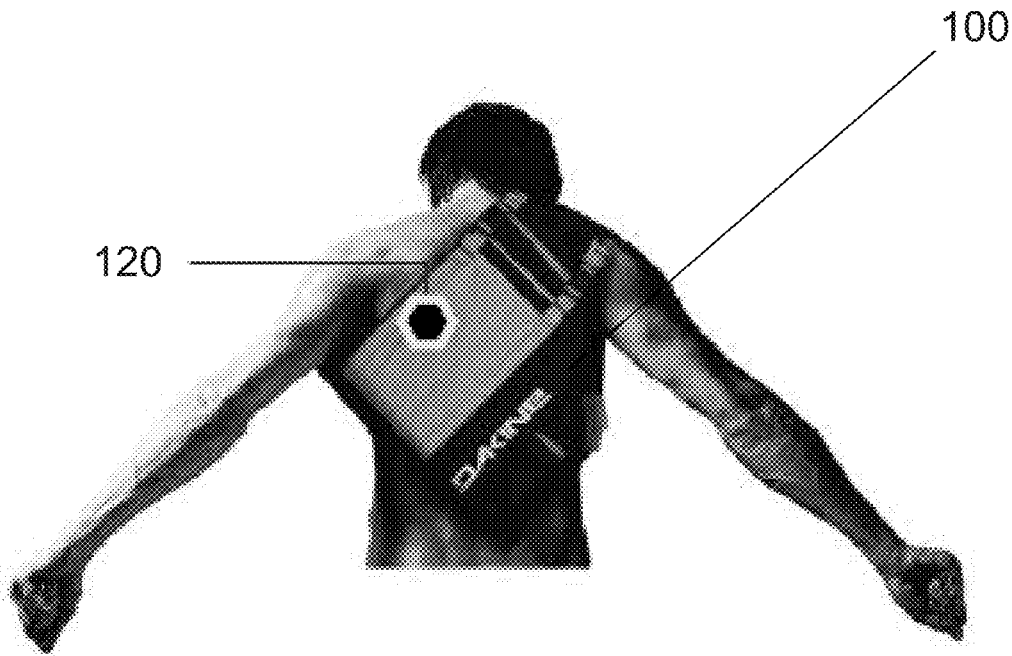
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(57) **ABSTRACT**

A multi-purpose utility pack is provided for carrying an object at an approximately 45 degree angle. The multi-purpose utility pack comprises a main body having at least a main compartment, a top portion, a bottom portion, a right portion, a left portion, an outside face and an inside face. The pack includes four strap mounts each including a fastening device, a releasable attachment flap having four strap mounts each including a fastening device for attaching the attachment flap to the main body of the pack. The attachment flap also includes a secondary strap fixedly attached to the attachment flap used to support the object being carried near the object's base.



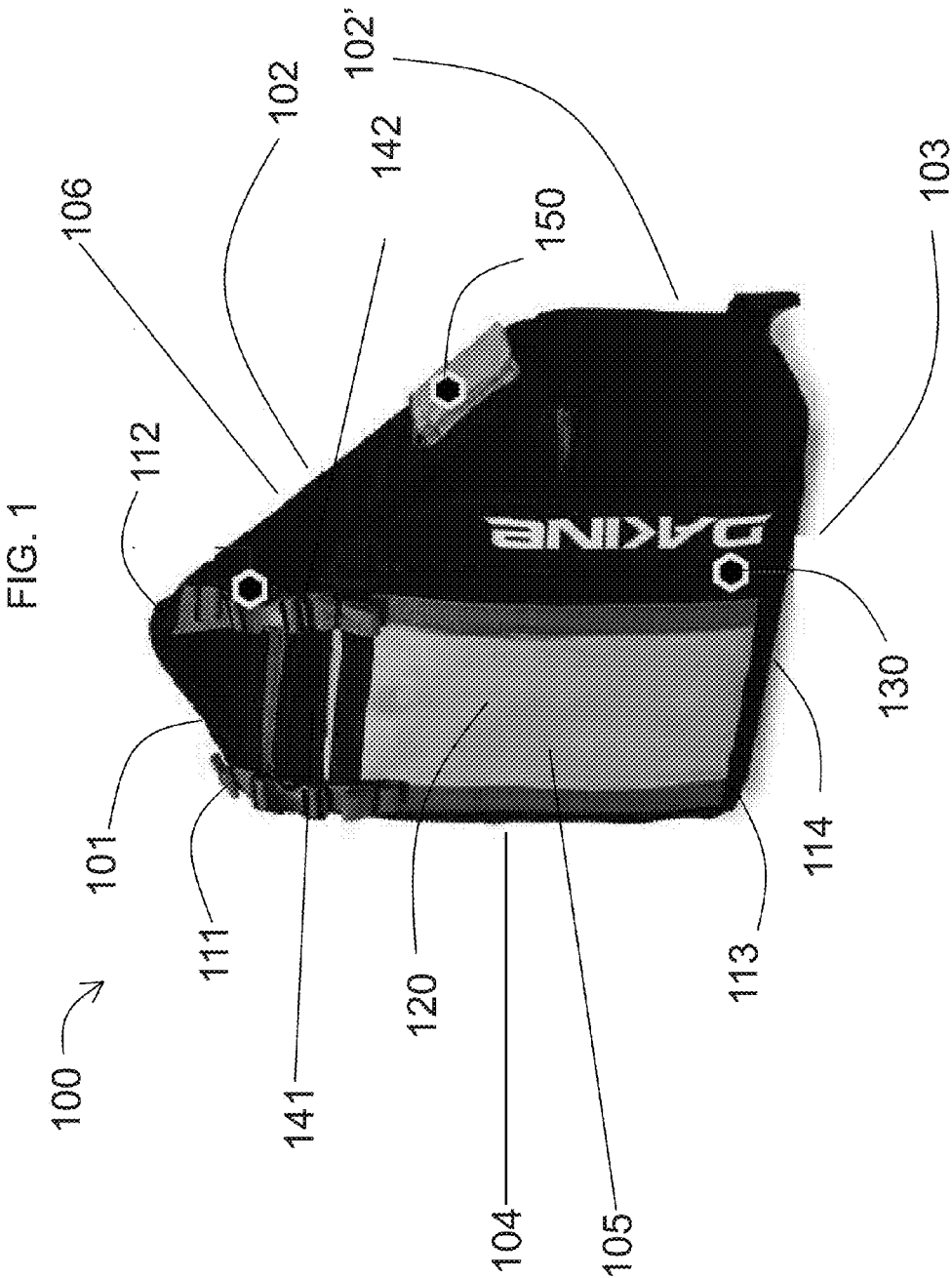


FIG. 2

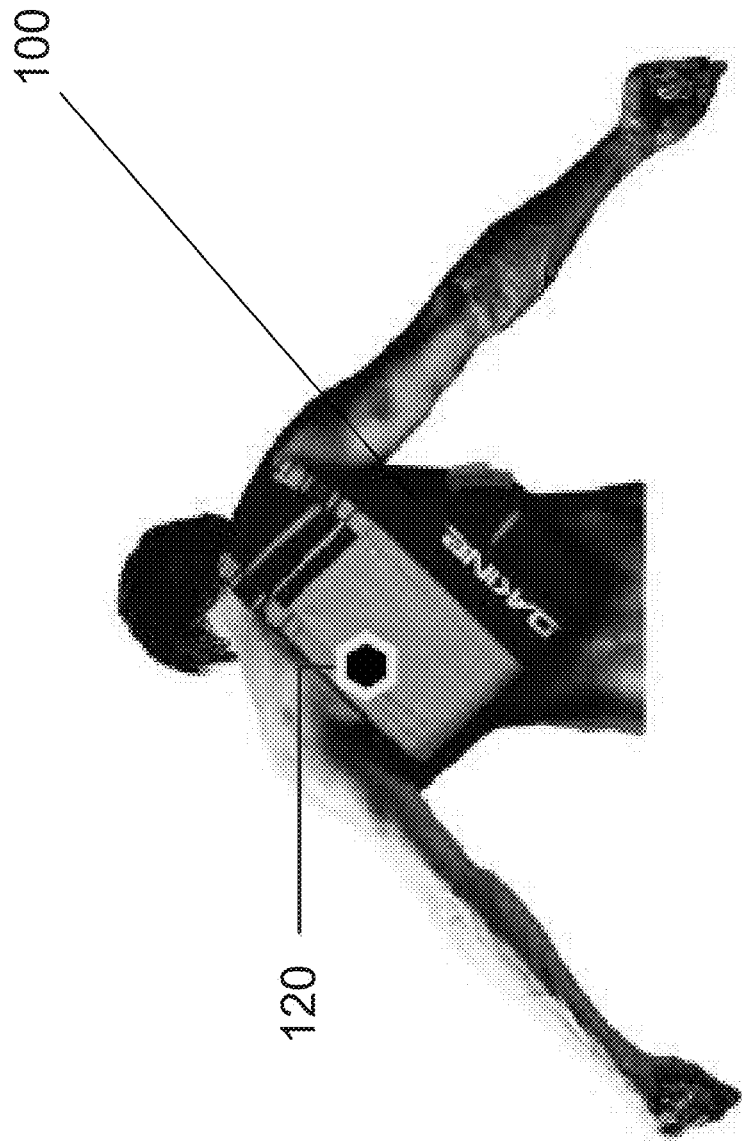


FIG. 3

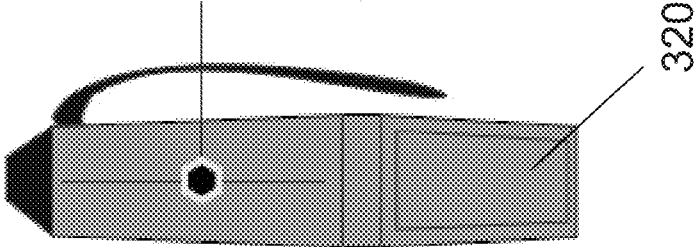


FIG. 4

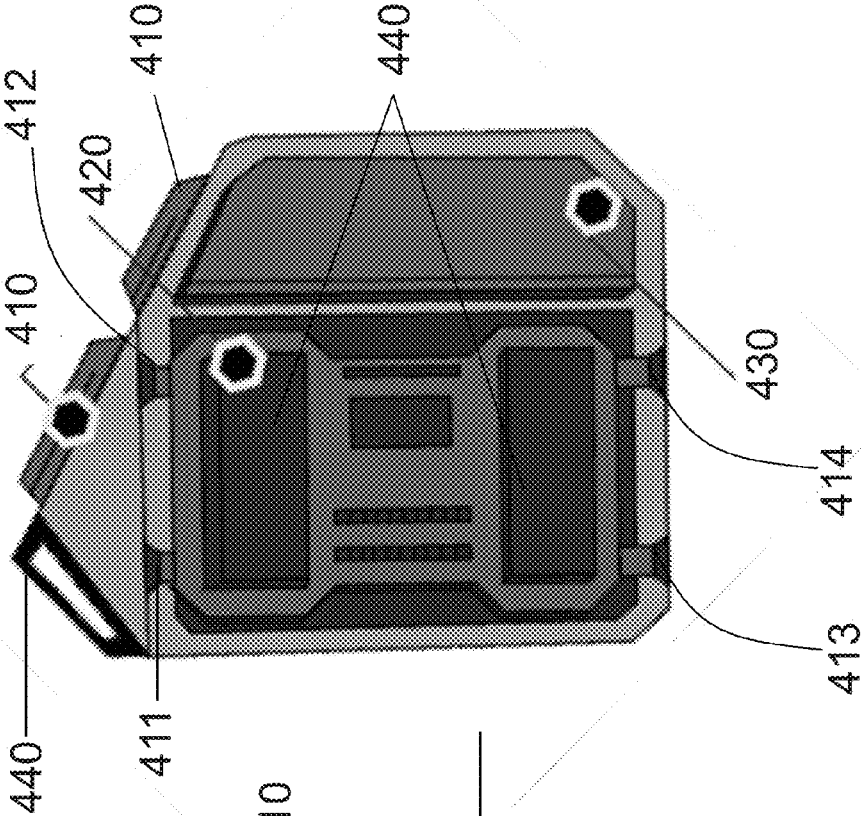
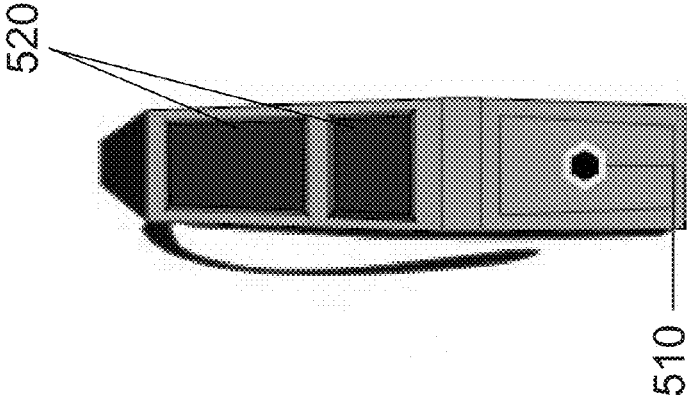
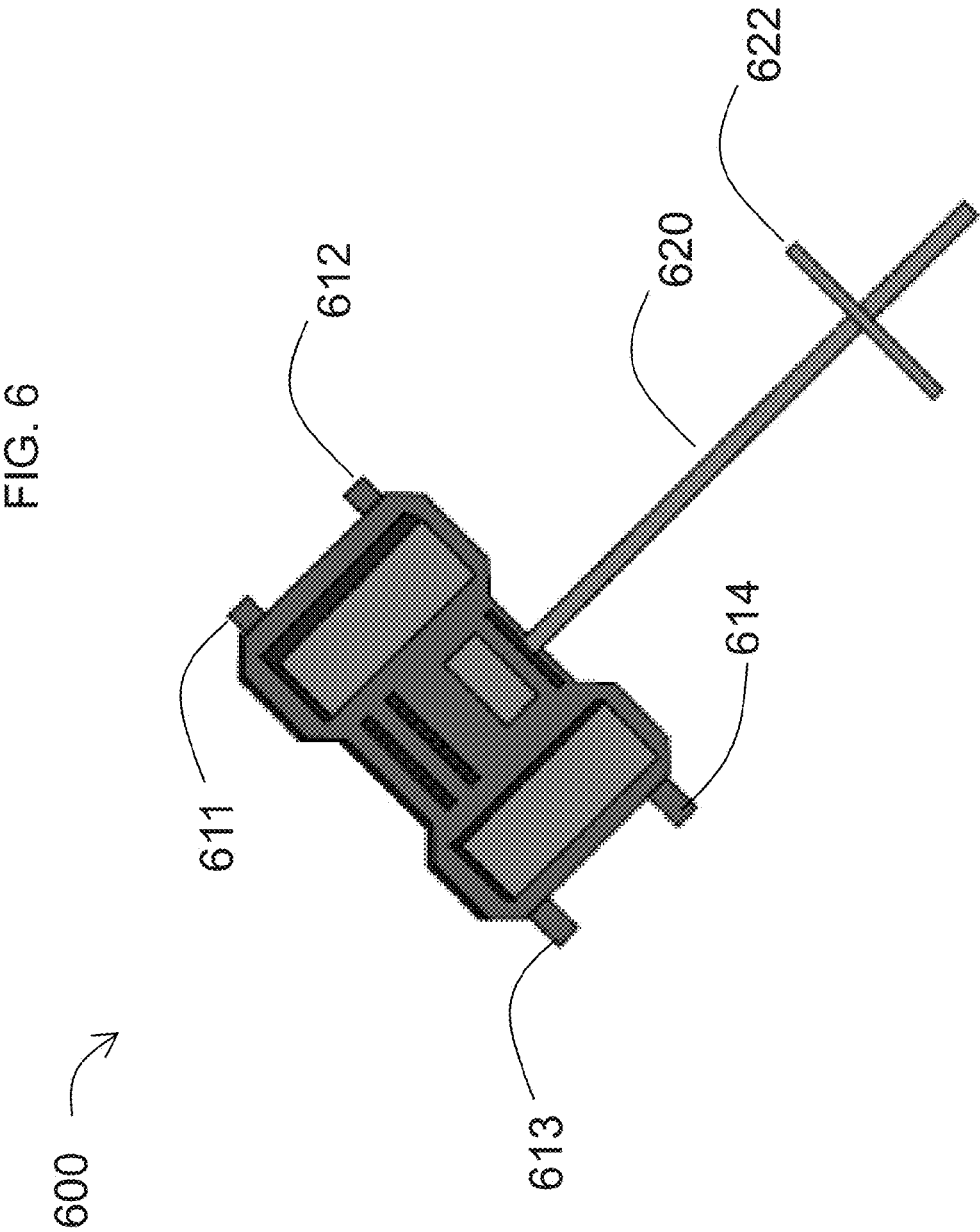


FIG. 5





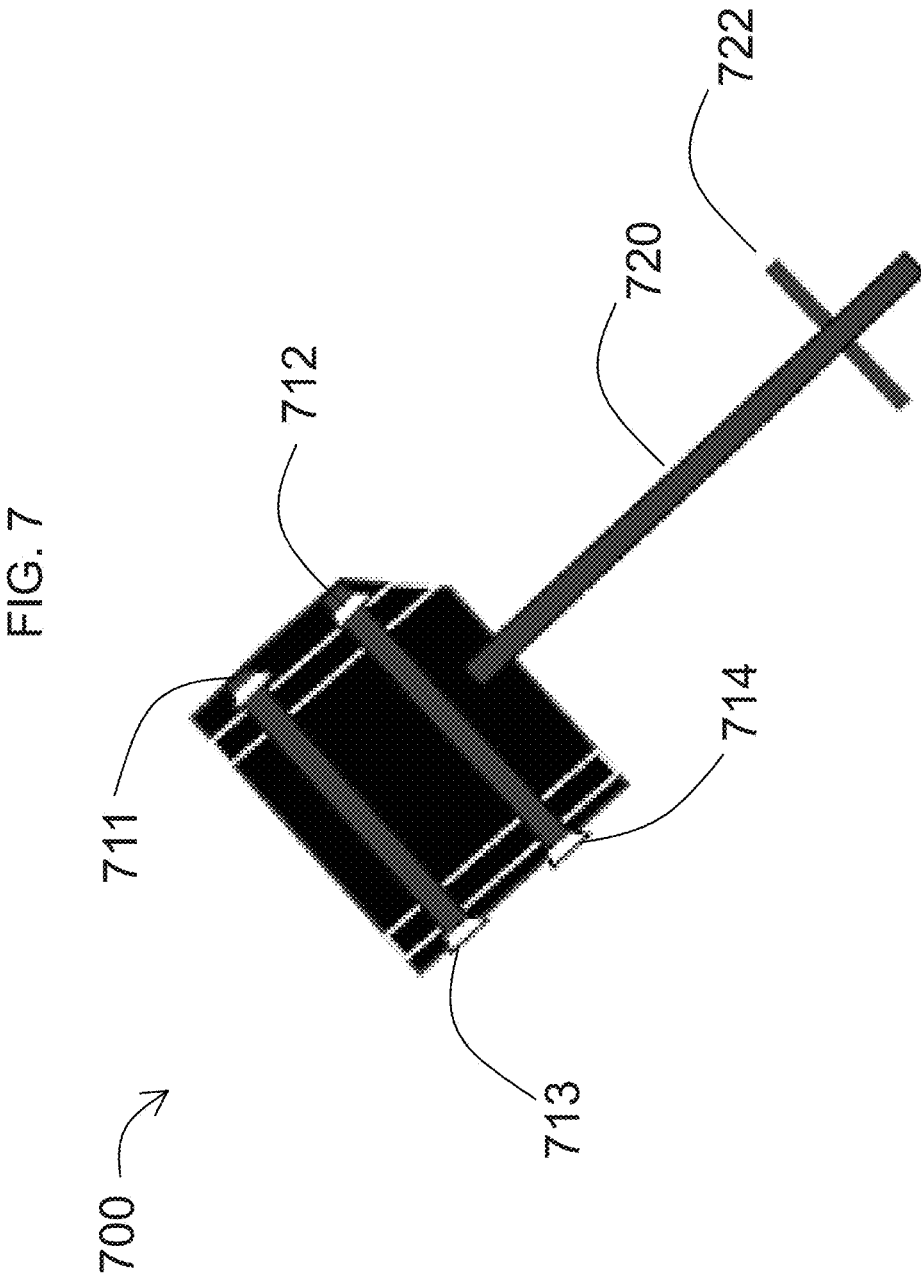
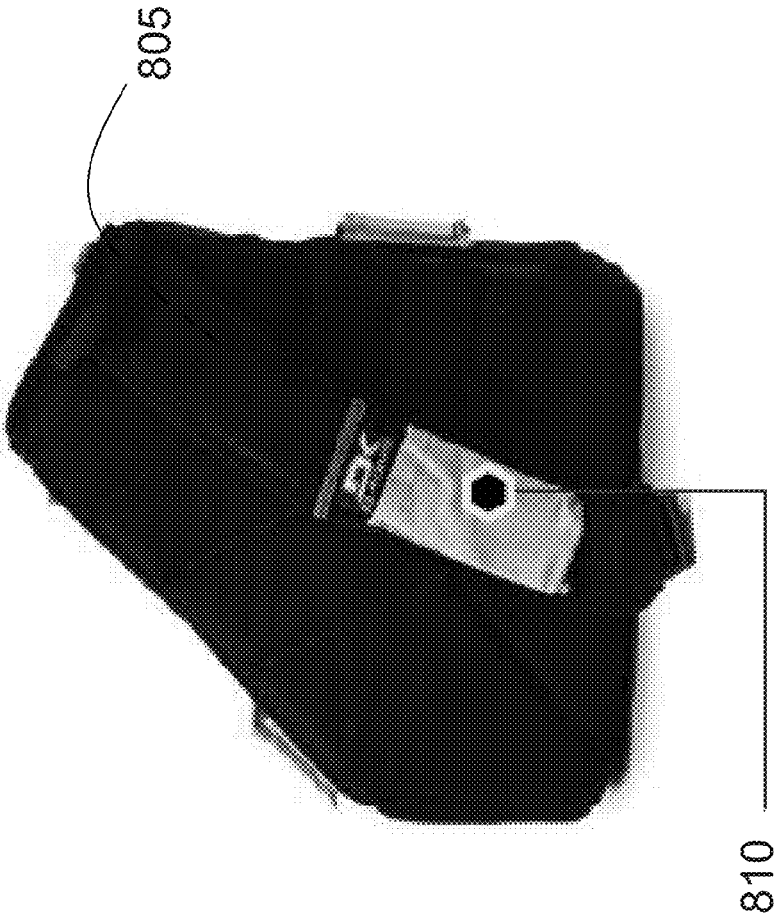


FIG. 8



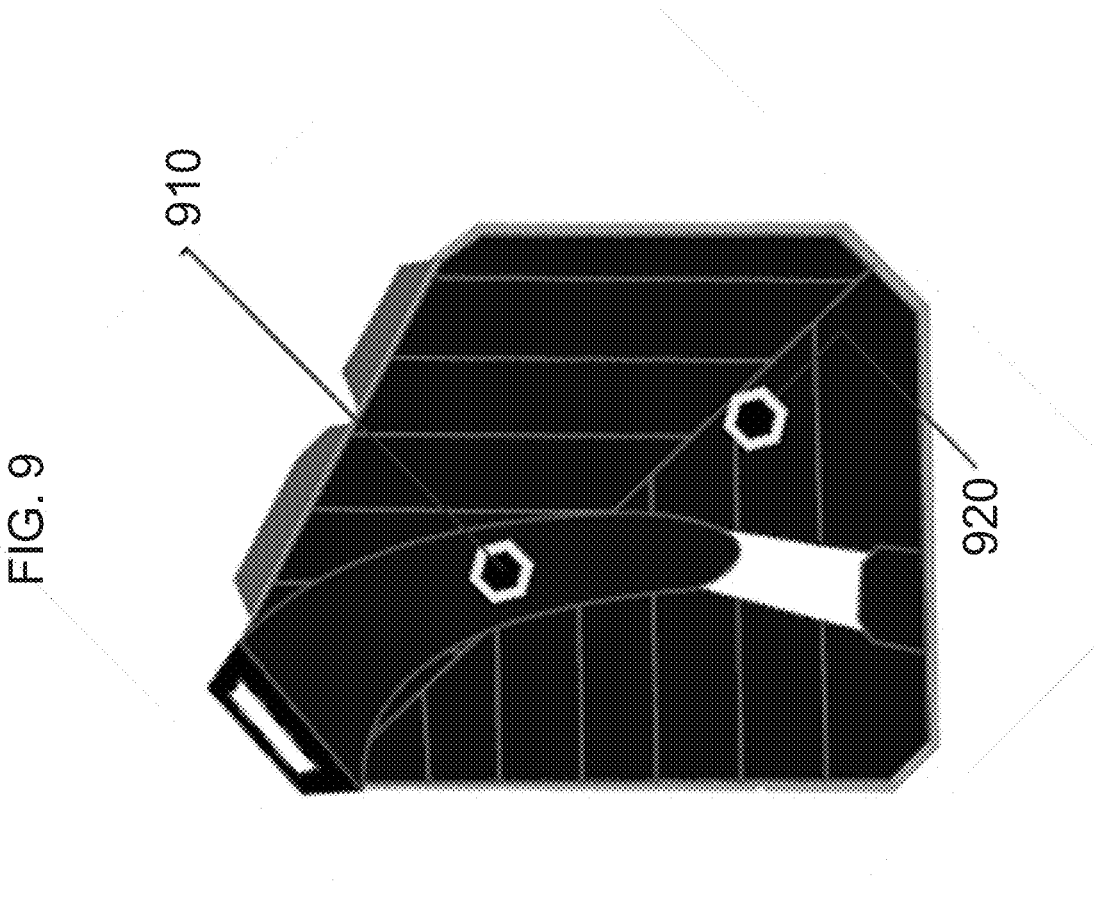


FIG. 11

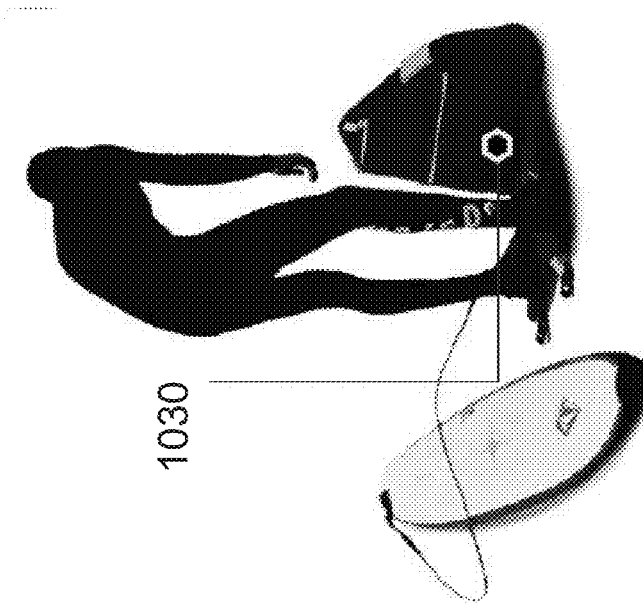


FIG. 10

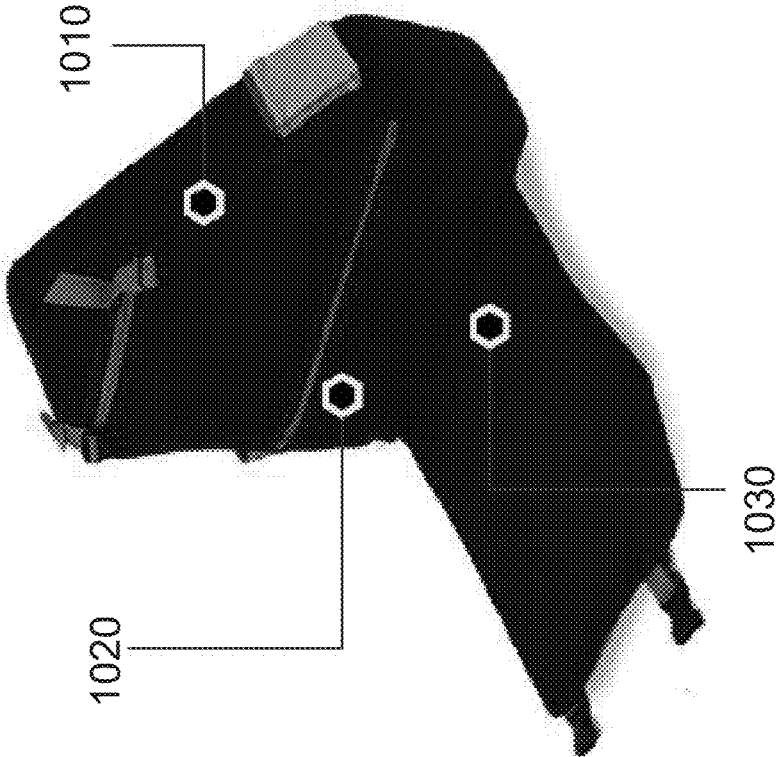


FIG. 13



FIG. 12

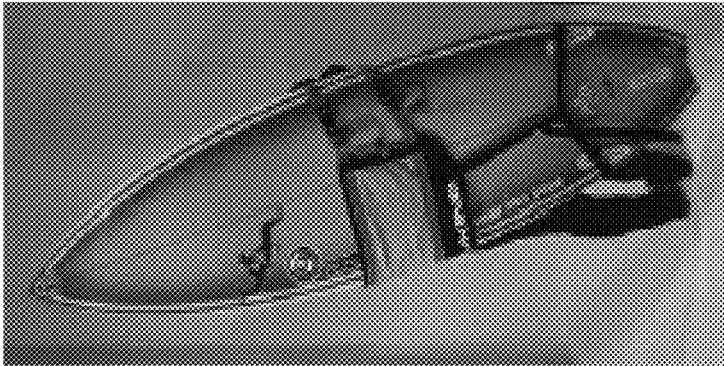


FIG. 15

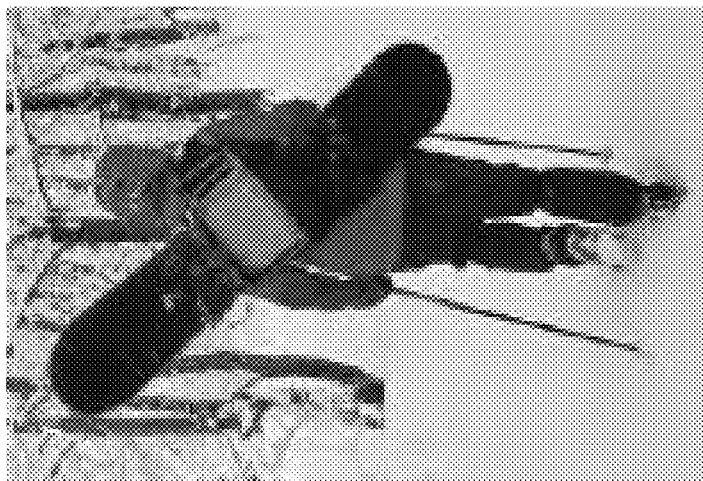


FIG. 14

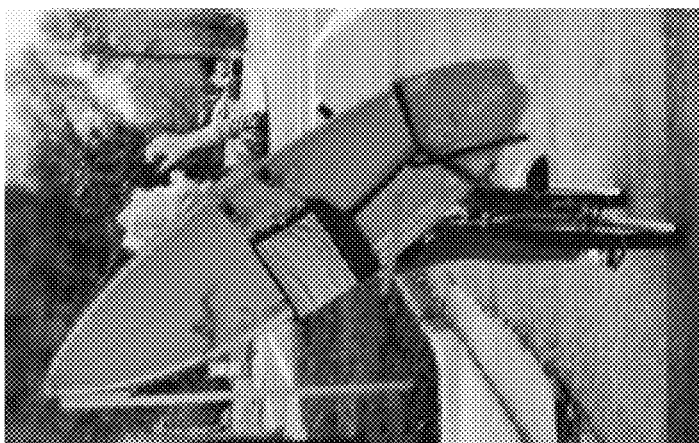
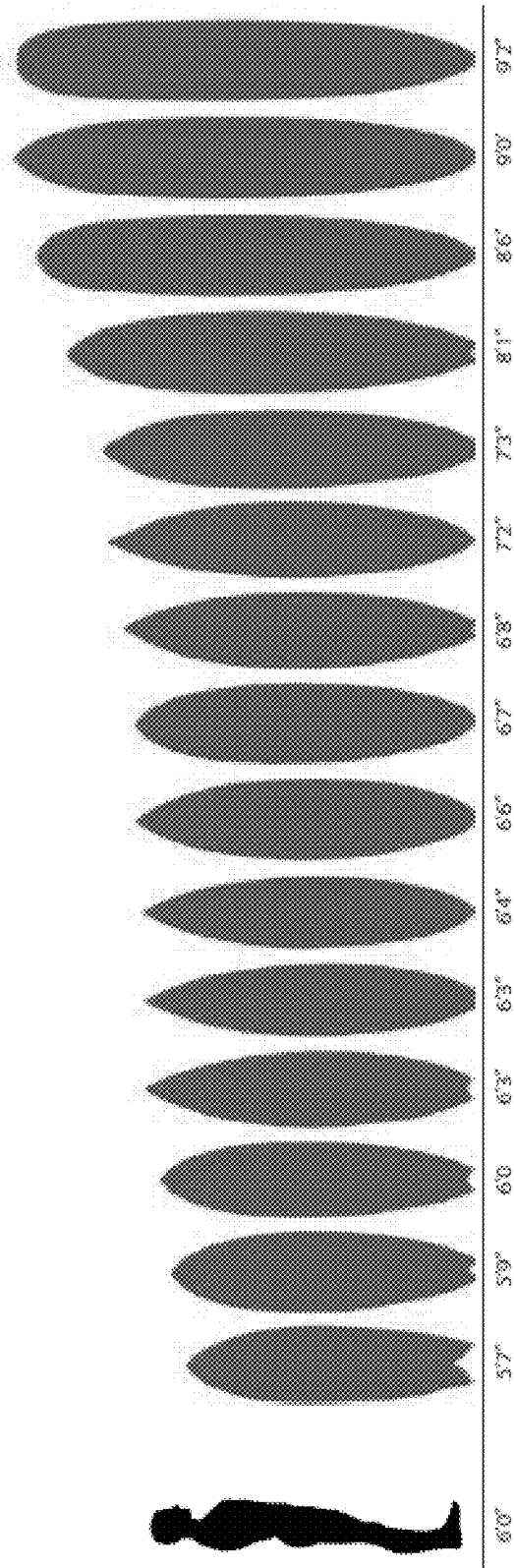
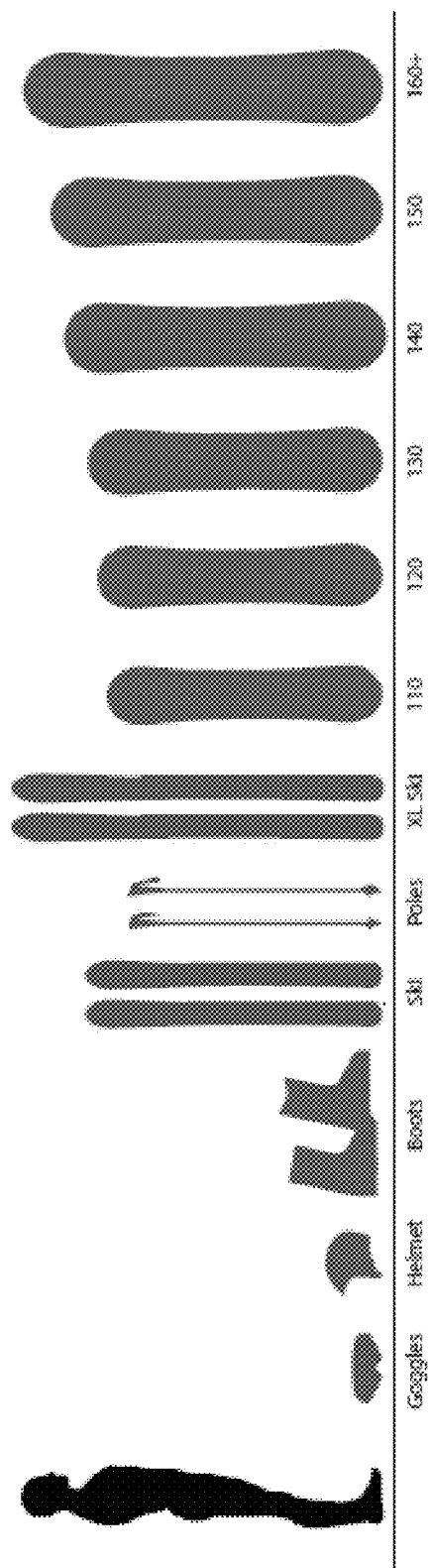


FIG. 16



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MULTI-PURPOSE UTILITY PACK

TECHNICAL FIELD

[0001] The invention generally relates to backpacks in general, and more particularly, to a multi-purpose utility pack which holds large object at an angle for ease of mobility.

BACKGROUND

[0002] Backpacks, or packs, are commonly used by hikers, bikers and students for carrying any sort of equipment, items or books. Backpacks form an essential part of the gear of the outdoor trekkers and the urban backpackers, allowing mobility and compactness. Most backpacks include a bag attached to a set of shoulder straps. Such packs are used for general transportation of goods, and have variable capacity. Most backpacks consist of a main body with a main pocket to hold the goods or items, and cannot carry large objects, such as surfboards or snowboards. Other strapping mechanisms used for carrying large objects obstruct mobility of the arms or legs of the users.

[0003] Therefore, improved multi-purpose utility packs which can hold large objects at an angle while allowing the user to be hands free and providing user mobility, and can also be used as an everyday backpack can be beneficial.

SUMMARY OF THE INVENTION

[0004] Provided herein are embodiments of a multi-purpose utility pack which can hold a large object at an angle while allowing the user to be hands free and providing substantially unobstructed user mobility, and which can also be used as an everyday backpack.

[0005] The devices, systems and methods disclose herein a multi-purpose utility pack for carrying an object at an approximately 45 degree angle. The multi-purpose utility pack includes a main body having at least a main compartment, a top portion, a bottom portion, a right portion, a left portion, an outside face and an inside face. The pack includes four strap mounts each including a fastening device, a releasable attachment flap having four strap mounts each including a fastening device for attaching the attachment flap to the four fastening devices of the four strap mounts on the pack. The attachment flap also includes a secondary strap fixedly attached to the attachment flap used to support the object being carried near the object's base.

[0006] In some embodiments, the multi-purpose utility pack includes two strap mounts at or near the top portion of the pack each including a fastening device, an attachment flap wherein the bottom edge of the attachment flap is fixedly attached at or near the bottom edge of the outside face of the main body of the pack. The top edge or near the top edge of the attachment flap includes two strap mounts each including a fastening device for attaching the attachment flap to the two fastening devices of the two strap mounts on the pack. The attachment flap also includes a secondary strap fixedly attached to the attachment flap used to support the object being carried near the object's base.

[0007] Other features and advantages of the present invention will become apparent from the following more detailed description, taken in conjunction with the accompanying drawings, which illustrate, by way of examples, the principles of the present invention.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0008] Illustrated in the accompanying drawings is at least one of the best mode embodiments of the present invention. In such drawings:

[0009] FIG. 1 illustrates a perspective view of a multi-purpose utility pack according to an example embodiment.

[0010] FIG. 2 illustrates a usage of a multi-purpose utility pack according to an example embodiment.

[0011] FIG. 3 illustrates a right side view of a multi-purpose utility pack according to an example embodiment.

[0012] FIG. 4 illustrates an outside face of a multi-purpose utility pack according to an example embodiment.

[0013] FIG. 5 illustrates a left side view of a multi-purpose utility pack according to an example embodiment.

[0014] FIG. 6 illustrates an attachment flap of a multi-purpose utility pack according to an example embodiment.

[0015] FIG. 7 illustrates another attachment flap of a multi-purpose utility pack according to an example embodiment.

[0016] FIG. 8 illustrates an inside face of a multi-purpose utility pack according to an example embodiment.

[0017] FIG. 9 illustrates another inside face of a multi-purpose utility pack according to an example embodiment.

[0018] FIG. 10 illustrates another perspective view of a multi-purpose utility pack according to an example embodiment.

[0019] FIG. 11 illustrates an exemplary use of a multi-purpose utility pack according to an example embodiment.

[0020] FIG. 12 illustrates another exemplary use of a multi-purpose utility pack for carrying a surfboard according to an example embodiment.

[0021] FIG. 13 illustrates another view of an exemplary use of a multi-purpose utility pack for carrying a surfboard according to an example embodiment.

[0022] FIG. 14 illustrates another exemplary use of a multi-purpose utility pack for carrying a surfboard according to an example embodiment.

[0023] FIG. 15 illustrates another exemplary use of a multi-purpose utility pack for carrying a snowboard according to an example embodiment.

[0024] FIG. 16 illustrates examples of objects that can be carried with a multi-purpose utility pack according to an example embodiment.

[0025] FIG. 17 illustrates other examples of objects that can be carried with a multi-purpose utility pack according to an example embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0026] The above described figures illustrate the described invention and method of use in at least one of its preferred, best mode embodiment, which is further defined in detail in the following description. Those having ordinary skill in the art may be able to make alterations and modifications to what is described herein without departing from its spirit and scope. While this invention is susceptible of embodiment in many different forms, there is shown in the drawings and will herein be described in detail a preferred embodiment of the invention with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the broad aspect of the invention to the embodiment illustrated.

All features, elements, components, functions, and steps described with respect to any embodiment provided herein are intended to be freely combinable and substitutable with those from any other embodiment unless otherwise stated. Therefore, it should be understood that what is illustrated is set forth only for the purposes of example and should not be taken as a limitation on the scope of the present invention.

[0027] In the following description and in the figures, like elements are identified with like reference numerals. The use of “e.g.,” “etc.,” and “or” indicates non-exclusive alternatives without limitation, unless otherwise noted. The use of “including” or “includes” means “including, but not limited to,” or “includes, but not limited to,” unless otherwise noted.

[0028] In the example embodiments, the multi-purpose utility pack is shown in FIGS. 1-17. The multi-purpose utility pack is designated as **100** in the figures and allows the user to be completely hands free and substantially free mobility of the arms and legs, while carrying a large object and the necessary equipment, for example, for a long expedition to an action sports area. The pack **100** can also be used as a normal everyday backpack. For example, FIG. 16 illustrates some exemplary surfboards in different shapes and sizes that a user can carry with the pack **100**. In another example, FIG. 17 illustrates some exemplary snowboards and equipment that a user can carry with the pack **100**. The examples of sports equipment are used in these figures. However, the objects and equipment are not limited to sports equipment.

[0029] Generally, the pack **100** can hold large objects at an approximately 45 degree angle off the spine of the user's back on the outside face, farthest from the user's back, of the pack **100** for transporting, thus allowing the user substantially unobstructed arms and legs mobility and to be hands free while the user is in motion, for example, walking, hiking, riding a bicycle, etc. The pack **100** may be made of durable and lightweight material known in the art, for example, canvas fabric, neoprene lining, L200 foam, leather, etc. The bottom of the pack **100** may be reinforced. The pack **100** generally includes four strap mounts which allow the user to quickly attach, and switch, attachments to the outside face of the pack **100**. At least two of the strap mounts can be adjusted to accommodate different object widths and thicknesses. In some embodiments, different flap attachments designed to carry (for example, wrap around) different object widths and weights can be latched on to the strap mounts. The flap attachment may include at least four strap mounts used to latch the flap attachment on to the strap mounts on the pack **100**. The flap attachment can also include a secondary strap used to support the object being carried near the object's base. In the descriptions herein, for illustration purposes, the pack **100** will be described in an upright position. The strap mounts may also be referred to as mounts.

[0030] Turning to FIG. 1, an example embodiment of a multi-purpose utility pack **100** is shown. In the example embodiment, the pack **100** generally comprises a backpack with a main compartment and two or more secondary pockets, a top portion **101**, a bottom portion **103**, a right portion **102** and **102'**, a left portion **104**, an outside face **105** and an inside face **106**. The top portion **101** is approximately 45-degree angled off a horizontal axis. The top portion **101** and right portion **102** form an angle between 90 and 180 degrees. The pack **100** also includes four strap mounts **111**, **112**, **113**, **114**; mounts **111** and **112** are at or near the top of

the pack **100**; mounts **113** and **114** are at or near the bottom of the pack **100** and are not shown. As will be shown herein, when the pack **100** is worn by a user, in some embodiments, the four strap mounts **111**, **112**, **113**, **114** are approximately 45-degree-angled off the spine of the user. It is noted that in some embodiments, the top mounts **111** and **112** may be affixed to the pack **100** along the edge between the top portion **101** and the outside face **105**. In these embodiments, the top mounts **111** and **112** are at approximately 45-degree angle, as with the top portion **101**. In other embodiments, all four mounts **111**, **112**, **113**, **114** are horizontally affixed to the pack **100** along two horizontal axes, as shown in FIG. 4 (mounts **411**, **412**, **413**, **414**). The mounts **111**, **112**, **113**, **114** may include a quick release clip, or any fastening device known in the art, for example, parachute clip, buckle, etc. In some embodiments, at least the two top mounts **111**, **112** may include adjustable straps. In these embodiments, the fastening device, for example, a quick release clip, is at the distal, free end of the adjustable strap. The proximal end of the strap is fixedly attached to the main body of the pack **100**. The adjustable straps allow the pack **100** to hold a variety of shapes and sizes of the objects to be carried.

[0031] A releasable attachment flap **120** can be attached or latched on to the outside face **105**, farthest to the user's back, of the pack **100**. The attachment flap **120** includes four strap mounts having fastening devices that would match with the four strap mounts **111**, **112**, **113**, **114**, for quick attachment to (and release from) the main body of the pack **100**. Different attachment flaps **120** designs (as shown in examples in FIGS. 6 and 7) can be used to carry a variety of shapes, sizes and weights of objects. In some embodiments, at least the two top strap mounts **141**, **142** of the attachment flap **120** may include adjustable straps. In these embodiments, the fastening device, for example, a quick release clip, is at the distal, free end of the adjustable strap. The proximal end of the strap is fixedly attached to the top edge of the attachment flap **120**. The adjustable straps allow the attachment flap **120** to accommodate a variety of shapes and sizes of the objects to be carried. It is noted that the adjustable straps of both the mounts **111** and **112** on the main body of the pack **100**, and the mounts **141** and **142** on the attachment flap **120** can be adjusted for a maximum object width. The attachment flap **120** also includes a secondary strap **130** to support the carried object near the base of the object (as shown in examples in FIGS. 12 to 15). In some embodiments, all four strap mounts of the attachment flap **120** may include adjustable straps. FIGS. 4, 6 and 7 illustrate more example embodiments of the attachment flap **120**.

[0032] The pack **100** may have a single strap affixed to the inside face **106**, closest to the user's back, of the pack **100** at an approximately 45 degree angle, as shown in FIGS. 8 and 9. In the example embodiments, the user wears the pack **100** with the single strap around the chest and upper torso at an approximately 45 degree angle to counter balance the weight of the object attached to the pack **100**. The pack **100** includes a main compartment (not shown) and a plurality of secondary pockets. A pocket **150** is shown as example in FIG. 1. Other exemplary pockets are also shown in FIGS. 3, 4, 5 and 10.

[0033] In some embodiments, the pocket **150**, or another pocket of the pack **100**, includes a rechargeable battery charger that can be used to charge a portable device, for example, a cell phone.

[0034] Turning to FIG. 2, the multi-purpose utility pack 100 is shown as a backpack without carrying a large object. In this example embodiment, the pack 100 is used as an everyday backpack, for example, for carrying books or small objects.

[0035] Turning to FIG. 3, a right side view of an example embodiment of the pack 100 is shown. In this example embodiment, the pack 100 includes a main compartment 310 (top portion is shown) and at least one secondary pocket 320.

[0036] Turning to FIG. 4, an example embodiment of an outside face of the pack 100 is shown. In this example embodiment, the pack 100 includes a plurality of secondary pockets 410, 430 on the main body of the pack 100. In some embodiments, the attachment flap 420 also includes a plurality of secondary pockets 440. The pack 100 may also include a handle 440 at the top of the pack 100, for example, for carrying.

[0037] Turning to FIG. 5, a left side view of an example embodiment of the pack 100 is shown. In this example embodiment, the pack 100 includes a main compartment 510 (bottom portion is shown) and a plurality of secondary pockets 520.

[0038] Turning to FIG. 6, an example embodiment of an attachment flap 600 is shown. The attachment flap 600 may be used to carry, for example, a snowboard. In this example embodiment, the flap 600 includes four mounts 611, 612, 613 and 614. The four mounts 611, 612, 613 and 614 may be fastened to the four strap mounts on the body of the pack 100. In some embodiments, the top mounts 611 and 612 may be at the distal, free end of respective adjustable straps, allowing the flap 600 to accommodate a variety of shapes and sizes of objects to be carried. In some embodiments, all four mounts 611, 612, 613 and 614 may be at the distal, free end of respective adjustable straps. Also as described herein, the flap 600 includes a secondary strap 620 to support the carried object near the base of the object. The cross strap 622 may be used to wrap around the width of the object as shown in the example embodiments in FIGS. 12 to 15. The secondary strap 620 may be fixedly attached, for example, sewn into, the flap 600.

[0039] Turning to FIG. 7, an example embodiment of an attachment flap 700 is shown. The attachment flap 700 may be used to carry, for example, a surfboard. In this example embodiment, the flap 700 includes four mounts 711, 712, 713 and 714. The four mounts 711, 712, 713 and 714 may be fastened to the four strap mounts on the body of the pack 100. In some embodiments, the top mounts 711 and 712 may be at the distal, free end of respective adjustable straps, allowing the flap 700 to accommodate a variety of shapes and sizes of objects to be carried. In some embodiments, all four mounts 711, 712, 713 and 714 may be at the distal, free end of respective adjustable straps. Also as described herein, the flap 700 includes a secondary strap 720 to support the carried object near the base of the object. The cross strap 722 may be used to wrap around the width of the object as shown in the example embodiments in FIGS. 12 to 15. The secondary strap 720 may be fixedly attached, for example, sewn into, the flap 700.

[0040] Turning to FIG. 8, a view of an example embodiment of an inside face of the pack 100 is shown. In this example embodiment, the pack 100 includes a single strap affixed to the inside face, closest to the user's back, of the pack 100 at an approximately 45 degree angle. A pocket 810

may be releasably or fixedly affixed to the single strap 805 of the pack 100. The pocket 810 may include a rechargeable battery charger that can be used to charge a portable device, for example, a cell phone. In some embodiments, the single strap 805 may be adjustable to fit the size and height of the user. Any fastening device known in the art, for example, a buckle or Velcro (as shown in FIG. 9), may be used to provide adjustability for the strap 805.

[0041] Turning to FIG. 9, a view of another example embodiment of an inside face of the pack 100 is shown. In this example embodiment, the single strap 910 of the pack 100 can be adjusted using Velcro. The inside face of the pack 100 may also include airflow ventilation system 920.

[0042] Turning to FIGS. 10 and 11, a further example embodiment of a pack 100 is shown. In the example embodiment, as shown in FIG. 10, the outside face of the pack 100 includes a large pocket 1010 and a smaller pocket 1020 for storage. For example, the pocket 1010 may be used to store a towel, while the pocket 1020 may be used to store a wetsuit. In some embodiments, the pockets 1010 and 1020 may be water resistant. As shown in FIGS. 10 and 11, the attachment flap 1030 may be used as a changing pad.

[0043] In some embodiments, the pack 100 includes only two strap mounts 111, 112 at or near the top of the pack 100 as described herein. In these embodiments, an attachment flap is fixedly attached to the bottom edge of the outside face of the pack 100.

[0044] Turning to FIGS. 12 to 15, example embodiments of a pack 100 being used to carry large objects are shown. In the example embodiments, the users use the pack 100 to carry large objects such as surfboards (FIGS. 12 to 14) and snowboards (FIG. 15). The objects are carried at an approximately 45 degree angle off the spine of the user's back. While carrying the large objects with the pack 100, the users still have substantially unobstructed arms, hands and legs mobility. The adjustable flap can be adjusted to fit different object sizes and shapes. Different flaps may be used for different objects.

[0045] Turning to FIG. 16, examples of objects that a user can carry with a pack 100 are shown. For example, a 6-foot tall user may use the pack 100 to carry a surfboard of different sizes and shapes as shown. The shapes and sizes shown are only for illustration purpose and are not meant as limitations.

[0046] Turning to FIG. 17, further examples of objects that a user can carry with a pack 100 are shown. For example, a user may use the pack 100 to carry various ski equipment, helmet, boots, etc., together with a pair of skis. In another example, the user may carry a snowboard of different sizes and shapes. The equipment and shapes and sizes shown are only for illustration purpose and are not meant as limitations.

[0047] The enablements described above are considered novel over the prior art and are considered critical to the operation of at least one aspect of the invention and to the achievement of the above described objectives. The words used in this specification to describe the instant embodiments are to be understood not only in the sense of their commonly defined meanings, but to include by special definition in this specification: structure, material or acts beyond the scope of the commonly defined meanings. Thus if an element can be understood in the context of this specification as including more than one meaning, then its use must be understood as being generic to all possible

meanings supported by the specification and by the word or words describing the element.

[0048] The definitions of the words or drawing elements described herein are meant to include not only the combination of elements which are literally set forth, but all equivalent structure, material or acts for performing substantially the same function in substantially the same way to obtain substantially the same result. In this sense it is therefore contemplated that an equivalent substitution of two or more elements may be made for any one of the elements described and its various embodiments or that a single element may be substituted for two or more elements in a claim.

[0049] Changes from the claimed subject matter as viewed by a person with ordinary skill in the art, now known or later devised, are expressly contemplated as being equivalents within the scope intended and its various embodiments. Therefore, obvious substitutions now or later known to one with ordinary skill in the art are defined to be within the scope of the defined elements. This disclosure is thus meant to be understood to include what is specifically illustrated and described above, what is conceptually equivalent, what can be obviously substituted, and also what incorporates the essential ideas.

What is claimed is:

1. A multi-purpose utility pack for carrying an object at an approximately 45 degree angle, the multi-purpose utility pack comprising:

a main body having at least a main compartment, a top portion, a bottom portion, a right portion, a left portion, an outside face and an inside face;

four strap mounts on the main body, each including a fastening device;

a releasable attachment flap having four strap mounts each including a fastening device for attaching the attachment flap to the four fastening devices of the four strap mounts on the main body; and

a secondary strap fixedly attached to the attachment flap.

2. The multi-purpose utility pack of claim 1, wherein two of the four strap mounts are at or near the top of the outside face of the multi-purpose utility pack, and two of the four strap mounts are at or near the bottom of the outside face of the multi-purpose utility pack.

3. The multi-purpose utility pack of claim 1, wherein at least two of the four strap mounts each including an adjustable strap.

4. The multi-purpose utility pack of claim 3, wherein the fastening device is at the distal, free end of the adjustable strap.

5. The multi-purpose utility pack of claim 1, wherein the fastening device is a quick release parachute clip.

6. The multi-purpose utility pack of claim 1, wherein the fastening device is a buckle.

7. The multi-purpose utility pack of claim 1, wherein at least two of the four strap mounts of the attachment flap each includes an adjustable strap.

8. The multi-purpose utility pack of claim 7, wherein the fastening device is at the distal, free end of the adjustable strap.

9. The multi-purpose utility pack of claim 1, wherein a single strap is affixed to the inside face of the multi-purpose utility pack at an approximately 45 degree angle.

10. The multi-purpose utility pack of claim 1, wherein the multi-purpose utility pack further comprises a plurality of pockets, wherein one of the plurality of pockets includes a rechargeable battery charger.

11. The multi-purpose utility pack of claim 1, wherein the top portion is approximately 45 degree angle in reference a horizontal axis.

12. The multi-purpose utility pack of claim 1, wherein the attachment flap is designed to fit objects of various shapes and sizes.

13. A multi-purpose utility pack for carrying an object at an approximately 45 degree angle, the multi-purpose utility pack comprising:

a main body having at least a main compartment, a top portion, a bottom portion, a right portion, a left portion, an outside face and an inside face;

two strap mounts at or near the top portion, each including a fastening device;

an attachment flap wherein the bottom edge of the attachment flap is fixedly attached at or near the bottom of the outside face of the main body, the top edge of the attachment flap includes two strap mounts each including a fastening device for attaching the attachment flap to the two fastening devices of the two strap mounts at or near the top portion; and

a secondary strap fixedly attached to the attachment flap.

14. The multi-purpose utility pack of claim 13, wherein the two strap mounts each includes an adjustable strap.

15. The multi-purpose utility pack of claim 14, wherein the fastening device is at the distal, free end of the adjustable strap.

16. The multi-purpose utility pack of claim 13, wherein the fastening device is a quick release parachute clip.

17. The multi-purpose utility pack of claim 13, wherein the fastening device is a buckle.

18. The multi-purpose utility pack of claim 13, wherein a single strap is affixed to the inside face of the multi-purpose utility pack at an approximately 45 degree angle.

19. The multi-purpose utility pack of claim 13, wherein the multi-purpose utility pack further comprises a plurality of pockets, wherein one of the plurality of pockets includes a rechargeable battery charger.

20. The multi-purpose utility pack of claim 13, wherein the attachment flap is designed to fit objects of various shapes and sizes.

* * * * *