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PARACHUTE BACK PACK AND HARNESS ASSEMBLY

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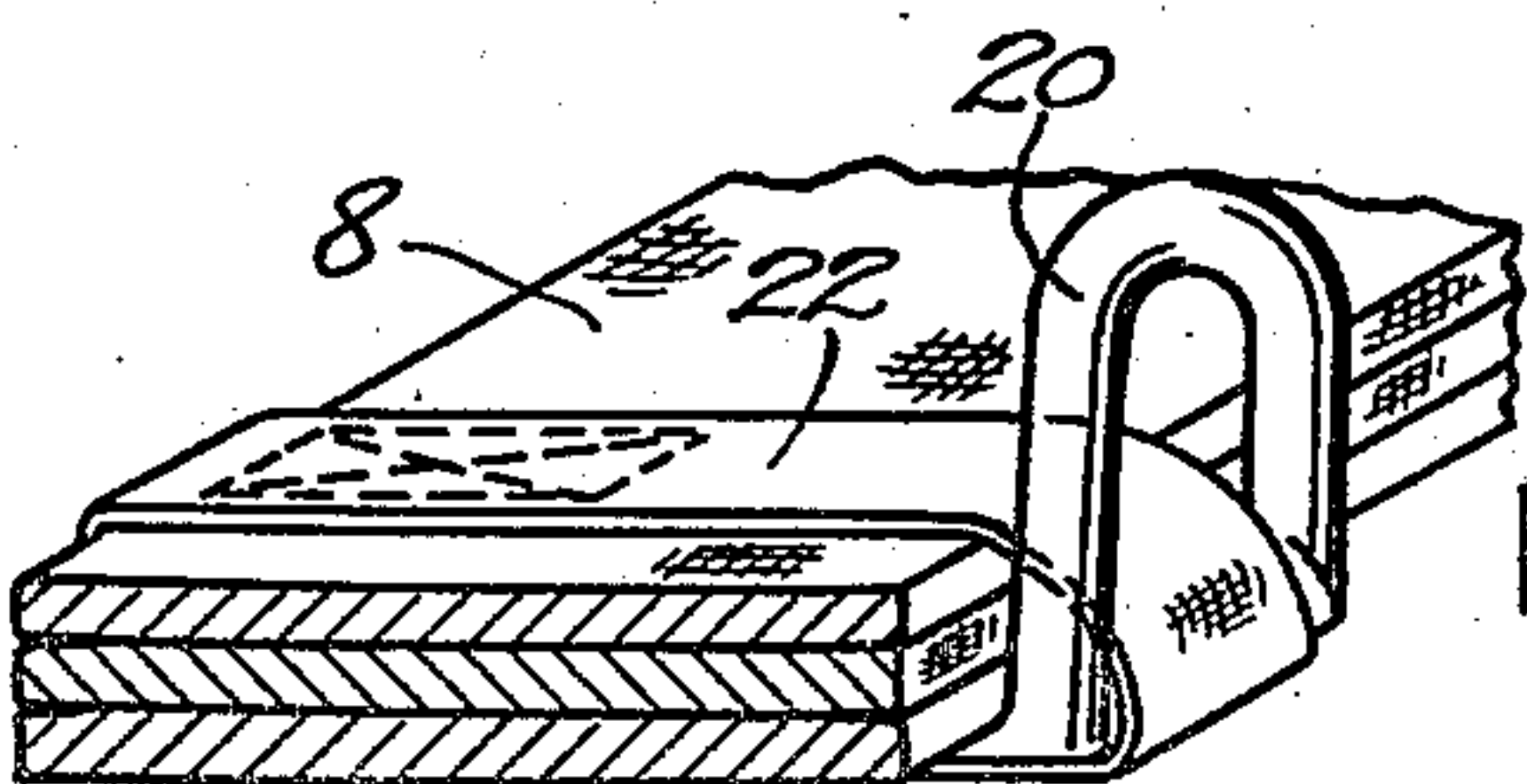
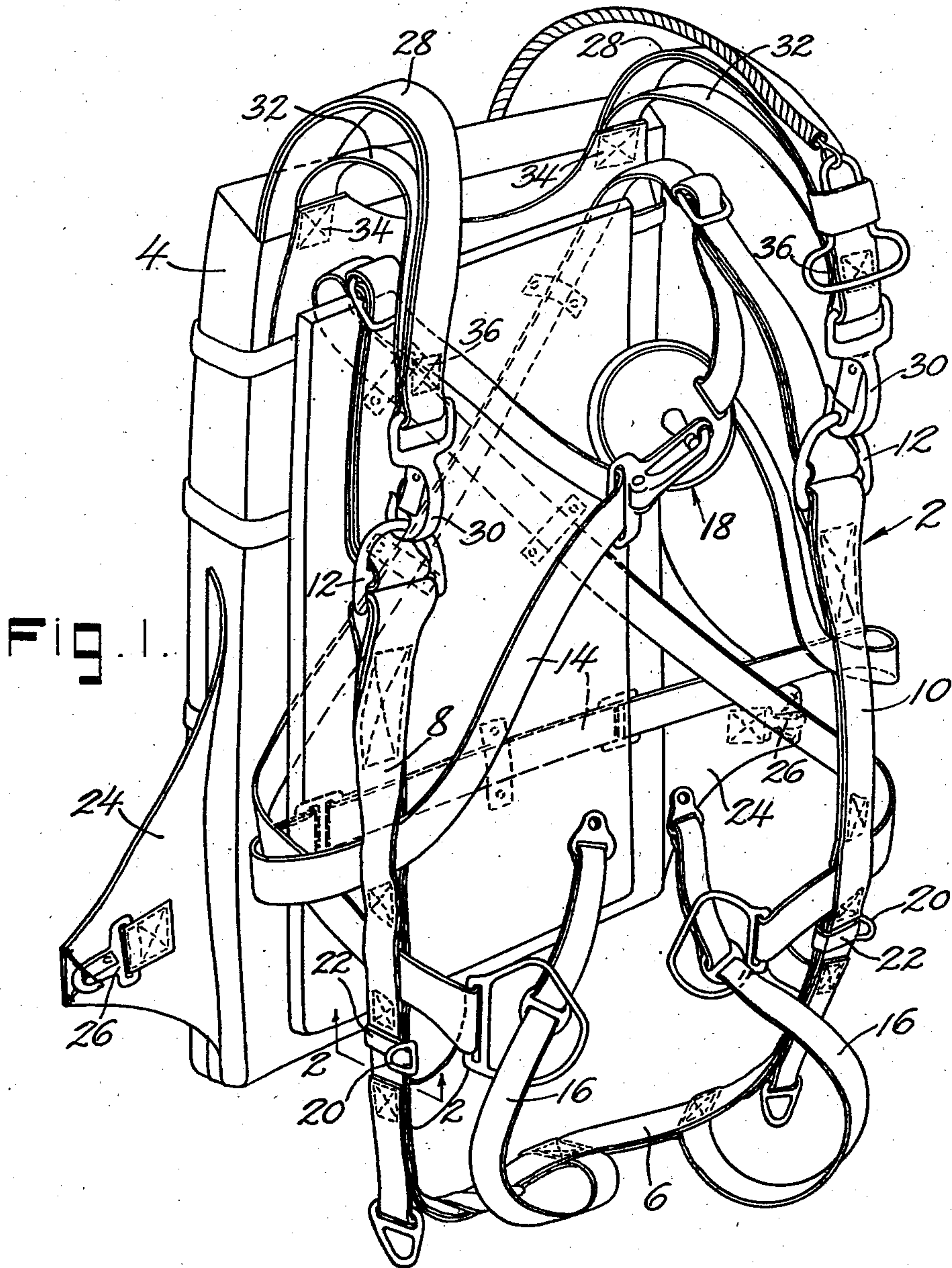


Fig. 2.

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PARACHUTE BACK PACK AND HARNESS
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My invention relates to parachute harness and pack assemblies and particularly to constructions which include a back pack and novel means for releasably securing the back pack to a harness.

Parachute packs of the back pack type have characteristic advantages in that they do not require special seat constructions in the aircraft and they are not so thick, cumbersome and uncomfortable to wear as seat packs and chest packs. On the other hand, back packs heretofore provided have generally been permanently secured to the harness so that the wearer has not been able to apply and wear the harness without being encumbered with the pack. Furthermore, the harness straps by which back packs have been supported tend to restrict the wearer's movements and often cut into the shoulders of the wearer if the pack is worn for long periods of time.

In accordance with my invention, these objections to prior harness and pack assemblies are overcome and constructions are provided whereby parachute back packs may be easily connected to and disconnected from parachute harnesses so that the harness may be worn by itself when desired. My construction also provides a yieldable support for the pack which is located adjacent the wearer's shoulders so that restrictions imposed on the wearer are reduced to a minimum.

One of the objects of my invention is to provide a novel type of parachute back pack and harness assembly in which the pack is separable from the harness.

Another object of my invention is to provide greater freedom of movement and greater comfort for persons wearing parachute back packs.

These and other objects and features of my invention will appear from the following description thereof in which reference is made to the figures of the accompanying drawing.

In the drawing:

Fig. 1 is a perspective of a preferred form of parachute pack and harness assembly embodying my invention, and

Fig. 2 is a vertical sectional view of a portion of the harness illustrated in Fig. 1, taken on the line 2-2 thereof.

In that form of my invention illustrated in figures of the drawing the parachute harness is indicated generally at 2 and is of the type shown and described in the copending application of King, Serial No. 534,605, filed May 8, 1944. The parachute back pack of the assembly is shown at 4 and is generally similar to that shown and described in the patent to Smith, No. 2,316,896, dated April 20, 1943. However, in accordance

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with the present invention the pack is separable from the harness so that the harness may be worn by the aviator while the pack is left in the aircraft or elsewhere, or is carried in the hand.

The harness embodies a seat trap 6 together with side risers 8 and 10 which carry connectors 12 located at points adjacent the wearer's shoulders. These connectors are generally similar to those used for receiving a quick attachable chest pack and when desired a chest pack may be used in place of a back pack without change in the harness of the present invention. The harness also includes body engaging straps 14 and leg straps 16 which are held in place on the wearer by a quick release device 18. However, it will be understood that any other suitable form of parachute harness having the connectors 12 on the side risers may be employed.

In accordance with the present invention the side risers 8 and 10 of the harness are further provided with connectors 20 located adjacent the wearer's hips and fixedly secured in place by means of the retaining bands 22 which encircle the webbing of which the side risers are formed. The bands are preferably secured firmly in place on the side risers so that they provide a fixed connector which is held in a predetermined position on the harness.

The parachute pack cover of the present invention is provided with flaps or pieces of material 24 which are secured to the cover and extend forward adjacent the wearer's hips. Connectors such as the snap buckles 26 are carried by the flaps 24 and are releasably engageable with the connectors 20 on the side risers of the harness. The snap buckle 26 and the connectors 20 thus serve to hold the pack in place on the harness when the parachute is carried by a wearer and further prevent the lower portion of the pack from projecting outward when the wearer leans forward or stoops over in getting in and out of the aircraft or moving about while wearing the parachute pack.

The parachute contained within the pack cover is provided with the usual lift webs 28 which carry snap fasteners 30 for releasably engaging the connectors 12 on the side risers near the wearer's shoulders. The lift webs extend into the pack and are attached to the suspension lines of the parachute canopy as in the usual parachute construction. However, straps 32 are connected to the free ends of the lift webs adjacent the fasteners 30 and are also connected to the upper portion of the parachute pack cover to hold the upper portion of the pack in place on the wearer. The

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straps 32 are permanently secured to the pack cover by stitching 34 and extend forward over the wearer's shoulders and are fixedly connected to the lift webs 28 at the point 36. The strap 32 thus serves to attach the pack cover and parachute pack to the free ends of the lift webs so that when the lift webs are attached to the connectors 12 on the harness the upper portion of the pack will be held in place.

With this construction the weight of the pack is carried by the straps 32 and the lift webs may be left relatively loose so that they are freely movable when the pack is opened and the parachute released. In order to render the construction more comfortable for the wearer the straps 32 are preferably formed of elastic material so that they will yield as the wearer moves about, but will retain the pack snugly in place independently of the lift webs and prevent it from becoming loose on the wearer or slipping into an uncomfortable position.

The back pack of the present invention can be readily connected to and removed from the harness so that the harness may be worn without wearing the pack, whereas the pack can be secured in place quickly and easily in much the same manner as a quick attachable chest pack. By disconnecting the snap fasteners 30 from the connectors 12 adjacent the wearer's shoulders and by disconnecting the snap fasteners 26 on the flaps 24 at the lower portion of the pack cover from the connectors 20 carried by the side risers and located adjacent the wearer's hips, the pack can be left in the aircraft or can be handled independently of the harness. However, when it is desired to wear the pack the pack is placed adjacent the wearer's back, the lift webs are pulled forward over the shoulders and secured to the connectors 12 by the snap fasteners 30. Since the straps 32 are attached to the lift webs near the fasteners 30 this operation also serves to secure the straps 32 to the harness to hold the upper portion of the pack in place. The lower portion of the pack is secured to the harness by drawing the side flaps 24 on the pack cover forward and connecting the snap fasteners 26 on the side flaps to the connectors 20 on the side risers 6 and 8 of the harness.

The cover of the back pack of the present invention may be of a conventional type, but have the lower flaps 24 with their snap fasteners 26 secured to the lower portion of the pack cover. In a similar way the straps 32 may be secured to the upper portion of the pack cover and to the lift webs 28. The major elements of the assembly therefore can be produced by simple modification of existing and well-known type of parachute packs and harness, whereas the pack may be easily secured to and removed from the harness to permit the aviator to wear the harness without being encumbered with the pack.

While I have shown and described a particular form of parachute harness and pack adapted for use in assemblies embodying my invention it will be understood that numerous changes and modifications may be made in the form and type of harness and back pack employed and in the elements used for connecting and disconnecting the back pack to the harness. In view thereof it should be understood that the embodiment of my invention herein shown and described is intended to be illustrative only and is not intended to limit the scope of my invention.

I claim:

1. A parachute back pack and harness as-

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sembly comprising a pack cover having connectors carried thereby for releasably securing the lower portion of the pack to a harness, lift webs extending from the pack, yieldable means extending forwardly over the wearer's shoulders for connecting the upper portion of the pack cover to said lift webs, and a harness having means thereon located adjacent the wearer's hips for receiving said connectors and having means thereon located adjacent the wearer's shoulders for connection to said lift webs.

2. A parachute back pack and harness assembly comprising a pack cover having connectors carried thereby for releasably securing the lower portion of the pack cover to a harness, lift webs extending from the pack, elastic straps extending forwardly over the wearer's shoulders connecting the upper portion of the pack cover to said lift webs, and a harness having means thereon located adjacent the wearer's hips for receiving said connectors and having means thereon located adjacent the wearer's shoulders for connection to said lift webs.

3. A parachute pack and harness assembly comprising a seat strap and side risers, connectors carried by the side risers and located below the wearer's shoulders, other connectors carried by the side risers and located adjacent the wearer's hips, a back pack having lift webs extending therefrom provided with means releasably engageable with those connectors on the side risers which are located below the wearer's shoulders, means attached to the pack cover and lift webs and extending forward over the wearer's shoulders for supporting the pack, and means connected to the lower portion of the pack cover and releasably engageable with the connectors located adjacent the wearer's hips for holding the lower portion of the pack in place with respect to the harness.

4. A cover for a parachute back pack comprising a flexible enclosure for a parachute, means secured to the lower portion of said enclosure and extending from opposite sides thereof for placement adjacent a wearer's hips, said means carrying connectors releasably engageable with means located on a parachute harness for holding the lower portion of the pack cover to a harness and permitting separation of the pack from the harness when the harness is being worn.

5. A cover for a parachute back pack comprising a flexible enclosure for a parachute, means fixedly secured to the lower portion of said enclosure and extending from opposite sides thereof for placement adjacent a wearer's hips, said means carrying snap fasteners for releasably securing the lower portion of the pack cover to a harness and permitting separation of the pack from the harness as desired when the harness is being worn.

6. A parachute back pack comprising a flexible cover enclosing a parachute canopy, lift webs secured to the canopy and extending from said cover, connectors carried by said lift webs for releasably securing the parachute to a parachute harness, means connecting the upper portion of the pack cover to said lift webs adjacent said connectors and means secured to the lower portion of said cover and releasably connectable to the parachute harness.

7. A parachute back pack and harness assembly in which the lift webs are detachably secured to the parachute harness, means for detachably securing said back pack to said harness comprising bands of flexible material extensible over

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each shoulder of the wearer with the extremities at one end fixedly secured to the back pack on either side thereof and the opposite extremities fixedly secured to the lift webs adjacent the means thereon for detachably securing them to the harness.

8. A parachute back pack and harness assembly comprising a back pack having lift webs extending therefrom, a snap fastener fixedly secured to each of said lift webs and a band of flexible material fixedly secured to each side of said back pack and extending over each shoulder of the wearer of said parachute assembly and secured to the lift webs adjacent said snap fasteners, said harness having side risers with connecting means fixedly secured thereto adjacent the shoulders of the wearer for receiving said snap fasteners.

9. A parachute back pack and harness assembly comprising a back pack, lift webs projecting from the upper portion of the back pack and having snap fasteners secured to the forwardly

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extending extremities thereof, and a band of material secured to each side of said back pack and extending over the corresponding shoulder of the wearer of said parachute assembly and secured to said lift webs adjacent said snap fasteners, said harness having side risers with connecting means fixedly secured thereto adjacent the shoulders of the wearer.

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REFERENCES CITED

The following references are of record in the file of this patent:

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