Nov. 4, 1969 J. M. HAWKINS 3,475,774

INFLATABLE BODY-ATTACHMENTS FOR MARINE LIFESAVING

Filed Feb. 14, 1968 2 Sheets-Sheet 1

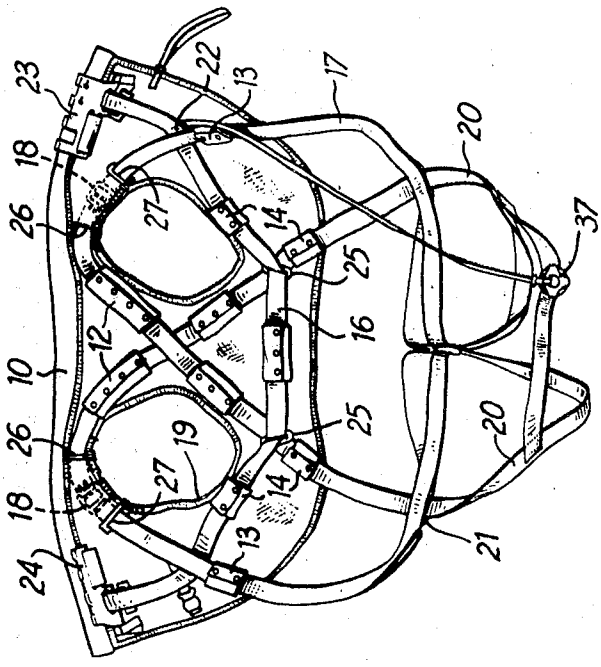

FIG. 2.

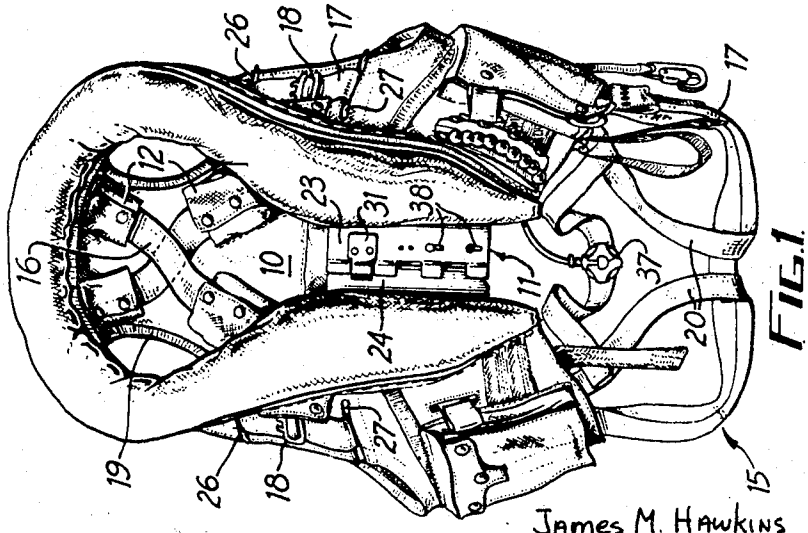

FIG. 1.

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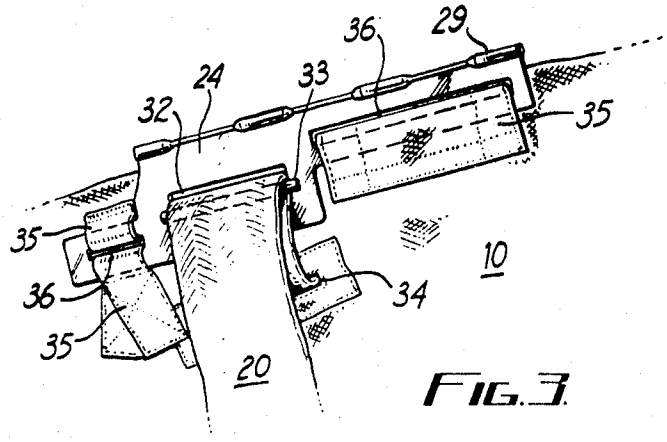


FIG. 3.

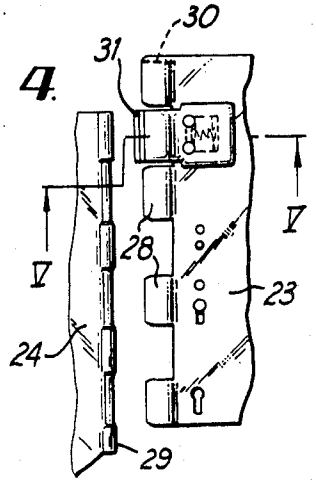
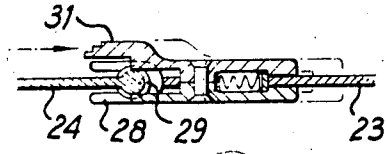


FIG. 4.

FIG. 5.



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INFLATABLE BODY-ATTACHMENTS FOR MARINE LIFESAVING

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U.S. Cl. 9—341 2 Claims

ABSTRACT OF THE DISCLOSURE

An inflatable likejacket for marine lifesaving having a buoyancy chamber designed to be worn in the form of a stole and located upon the wearer's body by a structure such as a waistcoat, in combination with personal parachute harness detachably mounted upon the inner side of said attachment structure and sharing therewith a common fastening means which also provides for adjustment of said harness. When the buoyancy chamber is associated with a waistcoat, the common fastening means may comprise metal plates connected to opposite edges of a medial front opening thereof and provided with self-locking slides for adjacent adjustment straps of said harness, the free edges of the two plates having rows of mutually-complementary formations adapted for engagement by a combined interdigitating and endwise sliding movement.

This invention relates to inflatable body-attachments, with particular (but not exclusive) reference to that type of appliance which comprises two elongated inflatable portions adapted to be secured together side-by-side for disposal in front of the wearer's chest, a third inflatable portion permanently connecting adjacent ends of the two first-mentioned and adapted to extend around the sides and back of the wearer's neck, and means for locating the jacket upon the body of the wearer.

Lifejackets of the "split-stole" type referred to, and either provided with attachment harness or built into a garment (such as a waistcoat) have become standard equipment for service personnel and other individuals who require, or may require, to make parachute descents from aircraft.

It is known practice to provide the attachment structure of a lifejacket with a stowage pouch or flaps within or under which the inflatable portions of the appliance can be compactly accommodated in rolled or folded condition, so that they will not interfere with the subsequent donning of personal parachute harness or be prevented by the latter from full deployment in the event of their self-inflation being initiated whilst the wearer is still airborne.

When seat harness also has to be worn, it is usual for the lifejacket to be put on over the parachute harness, whose fastening and adjustment to the body must be completed before the jacket can be secured, an operation which is considerably complicated when the harness is worn over a "parital-pressure suit" provided at the chest region with a bulky regulator for the oxygen supply thereto.

The present invention is based upon an appreciation of the foregoing, and has for its object to facilitate and expedite the putting-on of a lifejacket of the type aforesaid and associated parachute harness.

According to this invention, a lifejacket of the type referred to, and having a personal parachute harness detachably mounted upon the inner surface of its attachment structure, is characterized in that said lifejacket and harness share a common fastening means which also provides for adjustment of the harness.

Conveniently such fastening means comprises two metal plates which are connected to opposite front edges of the jacket attachment structure and harness webbing, each such plate having spaced marginal formations adapted to be engaged with similarly-spaced complementary formations on the other plate by a combined interdigitating and endwise sliding movement.

In the accompanying drawings,

FIG. 1 is a front view of a lifejacket embodying the present invention, and shown with the fastening means secured;

FIG. 2 is a similar view showing the lifejacket in open condition;

FIG. 3 is a perspective view to an enlarged scale, showing the attachment to the jacket of one of the fastener members and the latter's manner of engagement with the parachute harness;

FIG. 4 is a fragmentary front elevation of the fastener members in separate condition; and

FIG. 5 is an enlarged section on the line 5—5 of FIG. 4.

In the example illustrated, the invention is applied to a lifejacket constructed as described in the specification of our prior British Patent No. 1,046,696, where attachment structure consists of a waistcoat **10** with a medial front opening **11**.

Press-studded flaps **12**, **13**, **14** inside the front and back of this waistcoat **10** detachably secure thereto the adjacent parts of a parachute harness **15** of known form.

The main webbing of such harness is in two parts **16**, **17** joined at their ends by "quick-release" buckles **18** and is disposed in "figure-of-8" form, its smaller loop and cross-over being produced from the part **16** and located inside the back of the waistcoat **10** by five flaps **12** whilst its larger loop, produced from the part **17**, is led around the arm holes **19** and under flaps **13** inside the front of the waistcoat so as to pass behind the wearer's thighs.

Two adjusting webs **20** are brought forwardly between the wearer's leg from the mid-point of the webbing part **17** through lower and upper slots **21**, **22** in each half of the latter and are adjustably attached respectively to coacting fastener members **23**, **24** for the waistcoat opening **11**. Between their respective intersections with the webbing part **17** these webs **20** pass beneath pairs of flaps **14** inside the waistcoat **10** and through intermediate slotted metal slides **25** on the harness part **16**.

It will be noted that the ends of the webbing parts **16**, **17** are brought respectively through slits **26**, **27** in front of the armholes **19**, which facilitates separation of the harness **15** from the waistcoat **10** during wear of the latter since the connecting buckles **18** are external thereto.

Each of the fastener members aforesaid comprises an elongated stainless-steel or other metal plate which in the case of the member **23** has a row of mutually-spaced keyhole-section lugs **28** along its free edge, the corresponding edge of the member **24** exhibiting complementary beads **29** which are somewhat shorter than the gaps between the lugs **28**.

It will be appreciated that relative endwise movement of the members **23**, **24**, after interdigitation of their respective marginal formations, provides a secure fastening, the endmost lug **28** being preferably rendered "blind" by an obstruction such as **30** so that interengagement of the fastener members can be effected in one endwise direction only and suitable means, such as a spring-loaded sliding catch **31**, being provided on the member **23** intermediate two of the lugs **28** to prevent accidental disengagement of the beads **29** from the latter.

As an alternative to the marginal formations described, both members **23**, **24** may be provided with rows of hooked lugs, one set of lugs being reversed with reference

to the other set and made slightly narrower to allow the requisite interdigitation.

Each of the members **23, 24** is broadened at one end and formed with a longitudinal slot **32** having a round bar **33** slidable across the width thereof and the adjacent adjusting web **20** of the parachute harness **15** is passed around this bar as shown in FIG. 3 before being taken to the outside of the waistcoat **10** through a slit **34.**

Fabric tongues **35** at opposite edges of the waistcoat opening **11** are passed through further longitudinal slots **36** in the members **23, 24** and sewn down, so that the single act of securing the waistcoat **10** around the body will also fasten the parachute harness **15,** which can then be adjusted by pulling outwardly on the exposed free ends of the two webs **20.**

When the integrated lifejacket and parachute harness (which latter may carry a quick-release device **37** for engagement with seat harness and parachute attachments) are worn over a partial-pressure suit or jerkin, a regulator (not shown) for the oxygen supply to the inflatable parts of the latter may be mounted upon one of the fastener members (for example, by releasably engaging it with keyhole slots **38** in the member **23,** which is made relatively wide for the purpose) its presence at this position in no way hampering the engagement or disengagement of the members **23, 24.**

The lower corner of each fastener plate may be cut away, if necessary, to clear the connection of the oxygen supply to the partial-pressure garment.

What I claim is:

1. A lifejacket comprising two elongated inflatable portions for disposal in front of the wearer's chest, a third

inflatable portion permanently connecting adjacent ends of the two first-mentioned and adapted to extend around the sides and back of the wearer's neck, a flexible carrier structure for said inflatable portions adapted to embrace the wearer's torso, and two metal plates connected to opposed parts of said carrier structure for fastening such parts together in front of the wearer's body, each of said plates having spaced marginal formations engageable with similarly spaced complementary formations on the other plate by a combined interdigitating and endwise sliding movement, in combination with a personal parachute harness also having opposed front parts thereof connected respectively to said plate in a manner permitting adjustment of said harness about the wearer's body.

2. The combination as claimed in claim **1,** wherein the two plates forming a common fastening means for said lifejacket and harness are mutually engageable by endwise sliding movement in one direction only, and a catch on one such plate prevents accidental disengagement of said plates.

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