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Rector

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[54] UNDERWATER DIVING GARMENT CONSTRUCTION

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[51] Int. Cl. B63c 11/02

[58] Field of Search 2/2, 2.1 R, 2.1 A, 2.5, 224 A, 2/DIG. 6, 78 B; 24/204, DIG. 18

[56] References Cited

UNITED STATES PATENTS

3,255,459 6/1966 Way 2/2.1 R

FOREIGN PATENTS OR APPLICATIONS

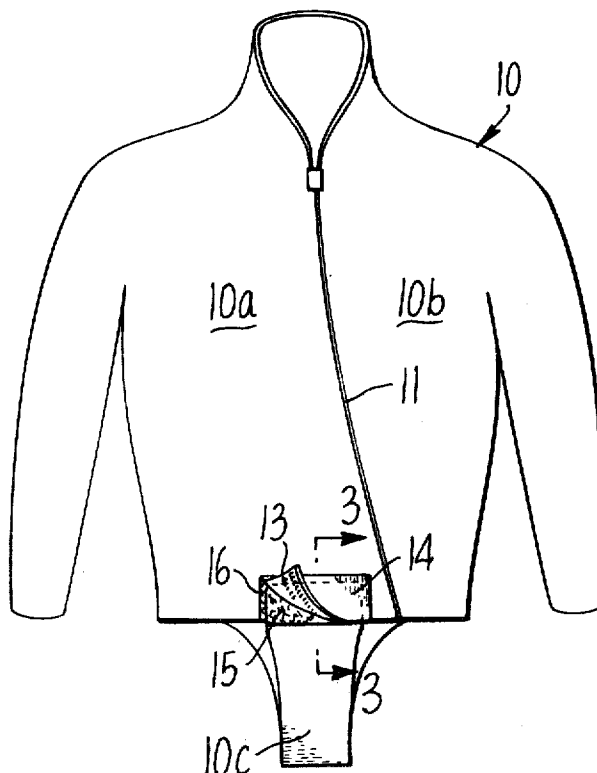
1,276,791 10/1961 France 2/224 A

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[57] ABSTRACT

An improved fastening means for use in the construction of an underwater diving garment having a tail strap and vest portion that extends below the waistline, said improved fastening means comprising a pair of pads having hooked surfaces, one pad being secured to the lower portion of said vest and the other pad being hinged to the vest above said first pad, the hooked surfaces of said pads being in opposed facing relation, and a woolly fabric material mounted on both sides of said tail strap for simultaneously engaging both pads while the end of said tail strap is sandwiched therebetween.

2 Claims, 3 Drawing Figures



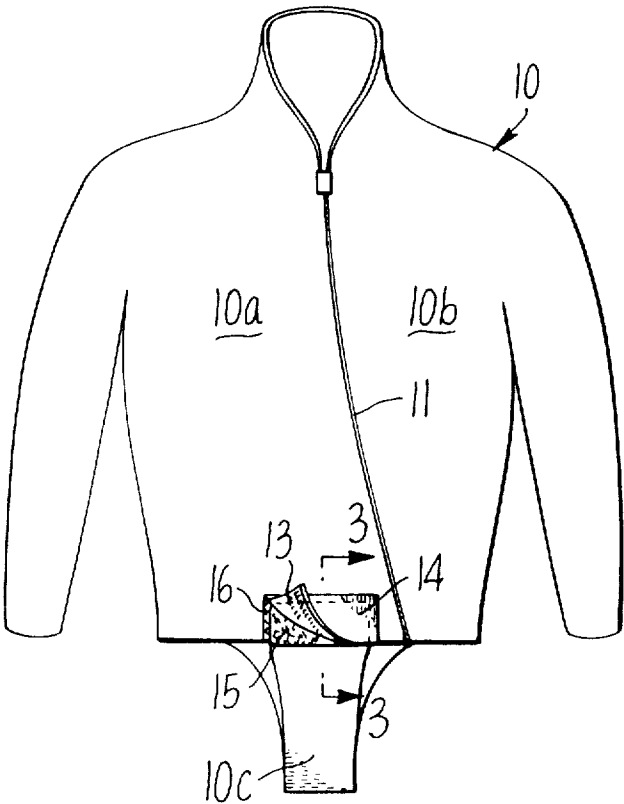


FIG. 1.

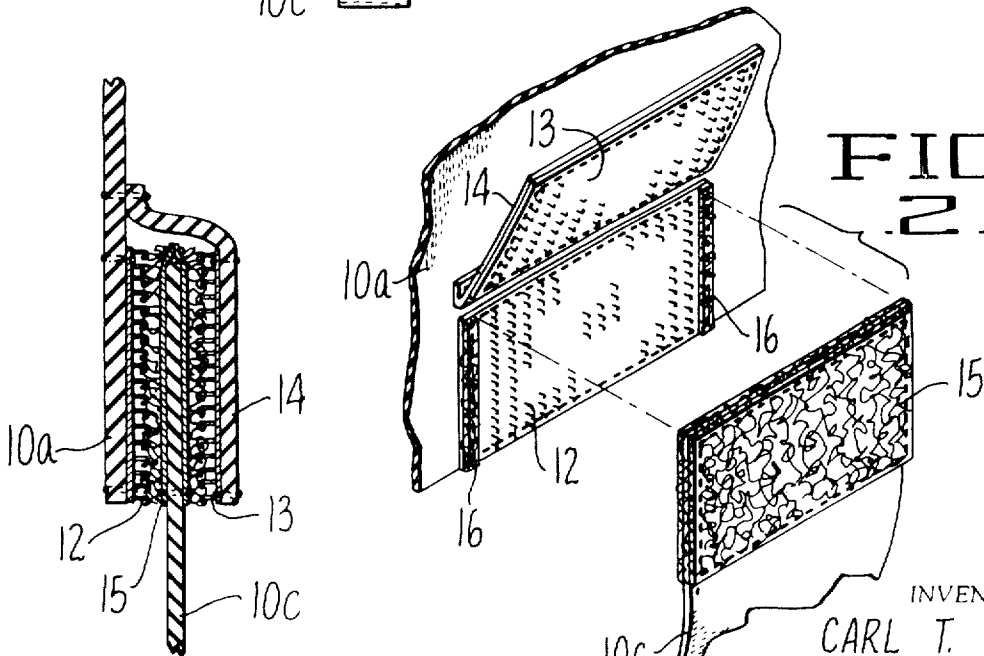


FIG. 2.

FIG. 3.

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UNDERWATER DIVING GARMENT CONSTRUCTION

This invention relates generally to the construction of underwater diving garments, particularly diving garments having a tail strap which may be selectively connected or disconnected from a vest portion of the garment.

It is one object of the present invention to provide an improved fastening means for an underwater diving garment that eliminates and replaces exposed metallic fasteners as conventionally employed.

Another object of the invention is to provide an improved fastening means of the type described having no exposed obstructions, catch points or hard object as might mark, dent or scar wooden objects.

Another object is to provide a fastening means comprised of hooked surface material which would normally tear or rupture fabrics used in the manufacture of an underwater garment but which, by reason of the particular arrangement of materials, can be used safely in the fastening means of the present invention.

A still further object of the invention is to provide an improved fastening means that is relatively inexpensive to manufacture and attach to a diving garment.

Other objects of this invention will become apparent in view of the following detailed description and accompanying drawings.

In the drawings forming part of this application and in which like parts are identified by like reference numerals throughout the same,

FIG. 1 is a front elevation of an underwater diving jacket constructed with the improved fastening device for a tail strap as contemplated by this invention;

FIG. 2 is a perspective view and enlarged detail of the fastening means employed in the garment of FIG. 1; and

FIG. 3 is an enlarged section of the fastening means taken on line 3—3 of FIG. 1.

Referring to FIG. 1, diving jacket 10 comprises a pair of vest portions 10a and 10b which can be joined together by a diagonal zipper 11. Jacket 10 further comprises a tail strap 10c, the end of said strap being secured to the lower edge of vest portion 10a by the improved fastening means of the present invention. More particularly, the fastening means comprises a pair of pads 12 and 13, each pad having an exposed hooked surface defined by a plurality of tiny hooks which project outwardly approximately 1/32 inch from a support backing. The tiny hooks may be arranged in rows approximately 1/10 inch apart, each row containing approximately 20 hooks per inch of fabric. Material of this kind is commonly sold under the trademark Velcro and it is generally known by that same name.

Pad 12 is cemented, sewn or otherwise attached to the lower edge of vest portion 10a, as illustrated in FIGS. 2 and 3.

Pad 13 is secured to a backing or flap 14, one edge of the flap being secured directly above the top edge of pad 12, the hooked surface of pad 13 being arranged in opposed facing relation to the hooked surface of pad 12.

5 A woolly fabric material 15 is secured on both sides of the end of tail strap 10c. This woolly material provides the essential hairs or fibers which engage and interlock with the tiny hooks of pad 12 and 13, as illustrated in FIG. 3.

10 In a preferred construction, a pair of lateral side strips 16, each made of woolly material, are secured on opposite sides of pad 12. Each side strip may be engaged by the hooked side surfaces of pad 13 both while the end of tail strap 10c is sandwiched between the pads as well as when it is removed therefrom.

15 In operation, the fastening means described is quickly and easily operated by simply placing the end of the tail strap 10c between pads 12 and 13 and pressing the pads into contact with the woolly surfaces of material 15. Side strips 16 assure proper alignment of the strap relative to the pads but also provide a direct and positive connection that holds flap 14 down when the end of strap 10c is removed. This latter feature is of importance, for if the flap is not secured while strap 10c is removed, there is danger that the exposed hooked surfaces of pads 12 and 13 might come into contact with the fabric of the garment, resulting in tears or abrasions.

20 Although a preferred embodiment of this invention has been illustrated and described, certain modifications and changes may be made without departing from the spirit of the invention or the scope of the attached claims, and each of such modifications and changes is contemplated.

30 What is claimed is:

1. In combination with an underwater diving garment having a vest portion and a tail strap secured at one end to the rear portion thereof and extending below the lower edge of the vest portion, an improved means for removably fastening the end other of the tail strap to the front portion of the vest portion comprising a first pad having a hooked surface and secured to the lower front portion of said vest portion, a second pad having a hooked surface and hinged to said vest portion above said first pad, the hooked surface of said second pad being located in opposed facing relation to the hooked surface of said first pad, and a woolly fabric mounted on both sides of said tail strap simultaneously engaging the hooked surfaces of said first and second pads while the other end of said tail strap is sandwiched therebetween.

2. The combination of claim 1, said improved fastening means further comprising a pair of lateral side strips of woolly material secured on opposite sides of said first pad and engaging side portions of the hooked surface of said second pad while said tail strap is sandwiched between and engaged with said pads.

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