

(19)



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Office européen des brevets



(11)

EP 1 330 963 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
20.12.2006 Bulletin 2006/51

(51) Int Cl.:
A41D 13/012 ^(2006.01) **B63C 11/04** ^(2006.01)

(21) Application number: **03250388.0**

(22) Date of filing: **22.01.2003**

(54) Use of bias cut fabric panels for snugly fitting activity suits

Verwendung von schräg geschnittenen Gewebestücken in enganliegenden Sportanzügen

Utilisation des tissus coupés en diagonale pour des combinaisons d'activité bien ajustées

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PT SE SI SK TR**

(30) Priority: **25.01.2002 GB 0201714**

(43) Date of publication of application:
30.07.2003 Bulletin 2003/31

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EP 1 330 963 B1

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Description

[0001] This invention relates to suits for use in activities which typically involve water, and more specifically the invention relates to dry or wet suits and the improvement in their construction.

[0002] Although the following description is almost exclusively concerned with the manufacture and provision of an improved dry suit for underwater diving, those skilled in the art will instantly appreciate that the invention may equally be applied to other types of suit which are required to be relatively close fitting and made normally in a woven or non-stretch material where toughness and resistance to abrasion and puncture is a prerequisite, in particular so called dry suits, and furthermore that the particular activity, pastime or sport for which such clothing may be used is to be generally disregarded in assessing the scope of protection provided hereby. The only proviso offered in this regard is that the activity performed in such clothing will generally involve some body movement and therefore the clothing worn must permit this.

[0003] Document US5768703 discloses a garment related to the preamble of claim 1. Document DE19703481A1 discloses a protective glove made up of a network of resistant sections, which are joined together at joints, arranged to allow sufficient freedom of movement of the hand. In order to avoid restriction of movement, a lattice structure is arranged transverse to the inner palm section.

[0004] Divers membrane drysuits have traditionally been layered in construction with one or more of the layers being manufactured using impermeable composite materials. For the most part the composite material is of a construction comprising outer layer(s) of square woven polyester, nylon or other synthetic woven textile materials adhered to one or both sides of an impermeable layer film or membrane. The outer woven textiles are resistant to sea water or other alternate environment in which the suit is likely to be used. The membrane layer may be constructed of butyl rubber, polyurethane, polyester or similar impermeable compound or material and is traditionally secured to the outer textile lining(s) by coating, gluing or other any other means suitable to give satisfactory adhesion.

[0005] It is possible to manufacture the composite material in the form of a two-layer composite wherein the outer lining is attached to only one face of the impermeable layer or as a three layer composite wherein an outer lining of woven synthetic textile material is attached to both faces of the impermeable layer. It is however to be mentioned that the invention is not to be considered limited to the use of only two or three layer composite fabric materials. Additional layers may be included for the purposes of making the composite material more thermally efficient or thermally reflective, increasing chemical and/or heat resistance, for making the respective surfaces of the material more receptive or suitable for the var-

ious different seaming methods which may be employed during suit manufacture, or for rendering the respective material surfaces more suitable for the fitting of attachments to the suit or for bonding further layers of different materials thereto.

[0006] The purpose of the textile layer(s) affixed to one or both sides of the impermeable membrane is to protect the impermeable layer from puncture and/or damage by abrasion. Should the membrane become damaged and/or punctured to the extent that the composite material leaked; then the drysuit would be rendered dysfunctional and could more importantly endanger the life of the diver in certain situations.

[0007] Typically the weight of the layers of a composite material adapted for use in the manufacture of diving suits are within the following ranges, but it is to be mentioned that these in no way restrict the scope of the invention, as will be understood hereinafter: -

- A woven textile of 80 to 200 grams per square metre, one surface of which provides the external surface of the divers drysuit composite material and which would be subject to the rigours of the activity being undertaken in the suit;

- A woven textile of 40 to 150 grams per square metre which is sandwiched between the inner impermeable membrane and the abovementioned outer layer, and

- An impermeable membrane or film of 50 to 250 grams per square metre.

[0008] The importance of protecting the impermeable layer from damage and thus maintaining the impermeable characteristics of the drysuit as a whole is of the utmost importance. In circumstances where the impermeable membrane is punctured, ruptured or otherwise damaged, the suit will allow fluid to seep through the leak and the ability of the suit to withstand the pressure of the fluid externally of the suit is compromised. In cases where the drysuit is being used in deep water where fluid pressure is large, the result is at least a loss in the buoyancy provided by virtue of the encapsulation of the diver by the suit, which in turn could lead to uncontrolled ascent or descent. In severe circumstances, the diver may be injured, or more importantly may be drowned, suffer Nitrogen Narcosis, or experience decompression sickness more commonly known as the "Bends". A further danger of wearing a leaking dry suit during underwater activity, particularly in cooler and cold waters, is the almost total loss of thermal protection enabled or provided by the suit. This can lead to hypothermia and other low temperature exposure risks.

[0009] It is a commonly preferred to use "woven" textiles as opposed to "Knitted" textiles for the protective layers disposed to the outside of impermeable inner membrane, as such enhance puncture strength and abrasion resistance for the following reasons:

- Stronger non-elastic yarns can be used;
- Tighter weaves can be used offering better puncture resistance and strength;
- More cost effective in manufacture than knitted textiles.

[0010] The disadvantage of using "woven" textiles is the resistance to stretch along the warp and weft of the material. Thus a divers membrane drysuit is normally required to be designed and manufactured with the following allowances:

- extra length in the body to facilitate bending forward of the body, sitting and crouching;
- extra length in the front of the knee and shin to allow the diver to bend their knees and crouch;
- extra length in the back of the arm in order to bend the arm at the elbow and to bring the arms forward without undue restriction across the shoulders of the suit.

[0011] The extra length in the design of the suit results in a "baggy" and "cumbersome" product that can hamper the movement of the diver or user and reduce comfort and impair safety. A further disadvantage is the fact that large pockets of air can be prevalent in a suit that is over-size leading to poor control of the buoyancy by the diver resulting in impaired safety as discussed above.

[0012] A yet further disadvantage, particularly when the need of drysuits to be snug and tight fitting is concerned, is such suits tend to involve considerable exertion on the part of the wearer as they attempt to climb inside the suit. This problem has heretofore been considered inextricable on account of the inability of the fabric to stretch as mentioned above.

[0013] It is an object of this invention to provide an activity suit consisting substantially of a woven synthetic or naturally occurring fibre and an impermeable membrane which is capable of stretching.

[0014] It is a further object of the invention to provide a stretchable activity suit being substantially of a woven synthetic or naturally occurring fibre construction and which fits a wide variety of differently sized and shaped individuals snugly and comfortably without appearing misshapen, baggy or otherwise deformed after a wearer has donned the garment.

[0015] According to the present invention there is provided a use of a plurality of panels woven from synthetic or naturally occurring fibres joined to one another along their respective edges within a garment, said garment taking the form of an activity suit and being tailored so as to be a snug fit on the wearer, wherein the garment is of a shape, size and length so as to extend across joints of the wearer which would commonly be expected to flex during wear, wherein at least one of said panels adjacent one of said joints of said wearer which is cut on a bias as opposed to parallel to the warp or weft of the weave of that material, characterised in that the one or

more bias cut panels is oriented within the garment such that the direction of elongation or stretch of said panel bisects the warp and the weft of the fibres in the panel to allow elongation or stretch of said panel sufficient to accommodate the motion of the wearer.

[0016] Most preferably, the garment is a diving wet or dry suit, consisting of a plurality of panels cut from a large piece of material in the conventional manner i.e. parallel to the warp or weft, and joined together in sealing manner along seams, and a plurality of bias cut panels of the same material also incorporated into the garment in like manner to the conventional cut panel along seams, said bias cut panels being located orientated and disposed with the garment in the strategically chosen locations so as to permit the ultimate wearer of the garment to flex his joints easily without significant resistance on account of the capability of the bias cut panels to stretch.

[0017] Most preferably the garment is a wet or dry suit consisting of a plurality of conventionally cut panels and a plurality of bias cut panels seamlessly and sealingly joined together, said garment having front and rear leg portions, front and rear torso portions, and front and rear arm portions which together define a cavity within the garment, said rear torso portion including a zip or other fastener to allow a wearer to don and remove the garment.

[0018] It is further preferable that one or more of the panels which constitute the front leg portions of the suit, particularly in the region where the shin, knee and front thigh of the wearer would be disposed when the suit is being worn, is bias cut.

[0019] Preferably one or more of the panels which constitute the rear arm portions of the suit, particularly in the region where the elbows of the wearer would be disposed when the suit is being worn, is bias cut.

[0020] Preferably one or more of the panels which constitute the rear torso portion of the suit, particularly in the region above where the buttocks of the wearer would be disposed when the suit is being worn, is bias cut.

[0021] It is currently well known that a property however of woven textile materials is that they will stretch along the bias (diagonal) of the weave, typically within a range of 30 to 60 degrees to the weft or warp.

[0022] The present invention takes advantage of this feature and by careful cutting of the composite material comprising woven material and impermeable membrane, and strategic orientation and positioning of the resulting bias cut panels, a suit can be provided which can expand or stretch in these panels where stretch as required by the motion of the wearer during the activity undertaken. Equally importantly, the capability of the bias cut panels to elastically recover to their original shape and size after having been stretched allows the suit as a whole to recover its original shape and thus continue to remain a snug fit on the wearer.

[0023] Typically said bias cut panel or panels are formed of the same woven material as the other material panels of the garment. The garment is dimensioned so

as to be worn by wearers of defined size and typically a garment for a particular wearer size is of smaller dimensions than would a non stretching garment for the same wearer size.

[0024] Depending upon the actual activity being undertaken by the user of the suit it may be more advantageous to locate the bias cut panels in different areas. By these means the suit can be made to offer the user a much better and closer fit without restricting body movement of the user. The cutting of the material on the bias can improve the stretch in the order of 700% as opposed to the material being cut directly along the alignment of the weft and/or warp.

[0025] The invention will be better understood with reference to the accompanying specific embodiment which is provided by way of example with reference to the following diagrams:

Figure 1 shows schematically a front elevation of a diving wet of dry suit, and

Figure 2 shows a rear elevation of the diving suit of Figure 1.

[0026] Referring to the Figures, a diving suit 2 is provided with front and rear arm portions, 4, 6, front and rear torso portions 8, 10, and front and rear leg portions 12, 14 respectively. Each of these portions may consist of a plurality of separate panels of composite laminate material comprising at least a woven synthetic or naturally occurring fibre (but most likely a synthetic yarn of polymer or plastics material), and an impermeable membrane sealingly and securely adhered thereto. Each of the panels which constitute a particular portion are sealingly secured to one another along their edges and also to the edges of other panels which constitute the different portions of the suit. The manner in which the panels are joined to one another, and the particular disposition and orientation of panels and their seams is part of the current state of the art and therefore not discussed here or shown in the diagrams.

[0027] It can be seen from the figures that elasticated cuffs 16, ankle portions 18 and neck portions 20 are provided to ensure that the body of a wearer is encapsulated therein to enhance his buoyancy when underneath the water as mentioned above.

[0028] In accordance with the invention, certain of the plurality of panels which are used in the manufacture of the suit 2 are bias cut as opposed to warp/weft cut, and furthermore the location and orientation of these bias cut panels within the suit is chosen so as to allow a significant degree of stretch in those portions of the suit which are most typically stretched by virtue of the movement of the wearer, depending on the activity pursued.

[0029] For example, when the wearer of the suit 2 wishes to kneel or bend his knees towards his chest, the front leg portions of the suit, particularly in the region of the knees and perhaps less so the shins and lower thighs,

are stretched, and in a conventional suit where all the panel from which its construction are warp/weft cut, such extension is generally impossible. Accordingly, the movement of the wearer is immediately restricted unless additional material is included in these panels to permit the movement. In the normal upright posture, or when the wearer's knees are not bent, this additional material is manifested by the suit being baggy and appearing not to fit the wearer in this region.

[0030] In Figure 1, the suit according to the invention is thus provided with bias cut composite material panels in the region of the shins and knees of the wearer as shown at 22, 24 in the hatched region. The direction of extension capable by these panels is shown by arrows 26, 28.

[0031] It will also be appreciated that in bending the elbows, the wearer of the suit will exert a force which tends to stretch the panels of material between the elbows and the wrists, and possibly also between the elbows and the shoulders. Accordingly, bias cut fabric panels 30, 32 may be used in the construction of the rear arm portions 6 of the suit.

[0032] Finally, when the wearer bends forward from the waist, the panels constituting the rear back portion 10 of the suit are likely to be stretched, and therefore again it is useful to include bias cut panels in this region.

Claims

1. The use of a plurality of panels woven from synthetic or naturally occurring fibres joined to one another along their respective edges within a garment (2), said garment (2) taking the form of an activity suit (2) and being tailored so as to be a snug fit on the wearer, wherein the garment (2) is of a shape, size and length so as to extend across joints of the wearer which would commonly be expected to flex during wear, wherein at least one of said panels (22; 24; 30; 32), adjacent one of said joints of said wearer is cut on a bias as opposed to parallel to the warp or weft of the weave of that material, **characterised in that** the one or more bias cut panels (22; 24; 30; 32) is oriented within the garment such that the direction of elongation or stretch (26, 28) of said panel bisects the warp and the weft of the fibres in the panel to allow elongation or stretch of said panel sufficient to accommodate said flexure motion of the wearer.
2. The use of panels within a garment (2) according to claim 1 **characterised in that** the garment is a diving wet or dry suit (2), consisting of a plurality of panels cut from a large piece of material in the conventional manner i.e. parallel to the warp or weft, and joined together in sealing manner along seams, and a plurality of bias cut panels (22, 24, 30, 32) of the same material also incorporated into the garment in like manner to the conventional cut panel along seams,

said bias cut panels being located orientated and disposed with the garment (2) so as to permit the wearer of the garment to flex joints on account of the relative capability of the bias cut panels to stretch.

3. The use of panels within a garment (2) according to claim 1 **characterised in that** all the woven fibre panels from which the garment (2) is constructed are cut on the bias.
4. The use of panels within a garment (2) according to claim 1 **characterised in that** the garment is a wet or dry suit (2) for use in water consisting of a plurality of conventionally cut panels and a plurality of bias cut panels (22, 24, 30, 32) sealingly joined together, said garment having front and rear leg portions, front and rear torso portions, and front and rear arm portions which together define a cavity for the wearer within the garment, said rear torso portion including a zip or other fastener to allow the wearer to don and remove the garment.
5. The use of panels within a garment (2) according to claim 4 **characterised in that** one or more of the panels which constitute the front leg portions (22, 24) of the suit (2), particularly in the region where the shin, knee and front thigh of the wearer would be disposed when the suit is being worn, is/are bias cut.
6. The use of panels within a garment (2) according to claim 4 **characterised in that** one or more of the panels which constitute the rear arm portions (30, 32) of the suit (2), particularly in the region where the elbows of the wearer would be disposed when the suit is being worn, is/are bias cut.
7. The use of panels within a garment (2) according to claim 4, **characterised in that** one or more of the panels which constitute the rear torso portion (10) of the suit (2), particularly in the region above where the buttocks of the wearer would be disposed when the suit is being worn, is/are bias cut.
8. The use of panels within a garment (2) according to claim 1 **characterised in that** the angle of the bias cut is in the range of 30 to 60 degrees to the weft or warp.
9. The use of panels within a garment (2) according to claim 8 **characterised in that** said panel or panels (22; 24; 30; 32) are formed of the same woven material as the other material panels of the garment (2).
10. The use of panels within a garment (2) according to claim 1 **characterised in that** the garment (2) is dimensioned so as to be worn by wearers of defined size.

11. The use of panels within a garment (2) according to claim 10 **characterised in that** the garment (2) for a particular wearer size is dimension smaller than would a non stretching garment for the same wearer size.

Patentansprüche

1. Verwendung einer Mehrzahl von aus Kunst- oder natürlich vorkommenden Fasern gewebten Stücken, die entlang ihrer jeweiligen Ränder in einem Kleidungsstück (2) miteinander verbunden sind, wobei das genannte Kleidungsstück (2) die Form eines Aktivitätsanzugs (2) hat und so zugeschnitten ist, dass es dem Träger satt anliegend passt, wobei das Kleidungsstück (2) eine Gestalt, Größe und Länge hat, um sich über Gelenke des Trägers zu erstrecken, von denen man allgemein erwarten würde, dass sie sich während des Tragens biegen, wobei wenigstens eines der genannten Stücke (22; 24; 30; 32) neben einem der genannten Gelenke des genannten Trägers schräg anstatt parallel zu Kette oder Schuss der Bindung dieses Materials geschnitten ist, **dadurch gekennzeichnet, dass** das eine oder die mehreren schräg geschnittenen Stücke (22; 24; 30; 32) in dem Kleidungsstück so ausgerichtet ist/sind, dass die Längungs- oder Dehnungsrichtung (26, 28) des genannten Stücks die Kette und den Schuss der Fasern in dem Stück halbiert, um eine ausreichende Längung oder Dehnung des genannten Stücks zuzulassen, um der genannten Biegebewegung des Trägers gerecht zu werden.
2. Verwendung von Stücken innerhalb eines Kleidungsstücks (2) nach Anspruch 1, **dadurch gekennzeichnet, dass** das Kleidungsstück ein Nass- oder Trockentauchanzug (2) ist, der aus einer Mehrzahl von Stücken, die auf konventionelle Weise, d.h. parallel zu Kette oder Schuss, aus einem großen Materialstück ausgeschnitten wurden und dichtend entlang Nähten miteinander verbunden sind, und einer Mehrzahl von schräg geschnittenen Stücken (22, 24, 30, 32) aus demselben Material besteht, die ebenfalls auf die gleiche Weise wie das konventionell geschnittene Stück entlang Nähten in das Kleidungsstück eingefügt sind, wobei die genannten schräg geschnittenen Stücke so auf das Kleidungsstück (2) ausgerichtet und mit ihm angeordnet positioniert sind, dass der Träger des Kleidungsstücks Gelenke aufgrund der relativen Dehnfähigkeit der schräg geschnittenen Stücke biegen kann.
3. Verwendung von Stücken innerhalb eines Kleidungsstücks (2) nach Anspruch 1, **dadurch gekennzeichnet, dass** alle Fasergewebestücke, aus denen das Kleidungsstück (2) zusammengesetzt ist, schräg zum Gewebe geschnitten sind.

4. Verwendung von Stücken innerhalb eines Kleidungsstücks (2) nach Anspruch 1, **dadurch gekennzeichnet, dass** das Kleidungsstück ein Nass- oder Trockenanzug (2) zur Verwendung in Wasser ist, der aus einer Mehrzahl von konventionell geschnittenen Stücken und einer Mehrzahl von schräg geschnittenen Stücken (22, 24, 30, 32) besteht, die dichtend miteinander verbunden sind, wobei das genannte Kleidungsstück vordere und hintere Beinteile, vordere und hintere Rumpfteile und vordere und hintere Arnteile hat, die zusammen einen Hohlraum für einen Träger in dem Kleidungsstück definieren, wobei der hintere Rumpfteil einen Reißverschluss oder anderen Verschluss hat, damit der Träger das Kleidungsstück an- und ablegen kann.
5. Verwendung von Stücken innerhalb eines Kleidungsstücks (2) nach Anspruch 4, **dadurch gekennzeichnet, dass** eines oder mehrere der Stücke, die die vorderen Beinteile (22, 24) des Anzugs (2) bilden, besonders in dem Bereich, in dem das Schienbein, das Knie und die Oberschenkelvorderseite des Trägers angeordnet wären, wenn der Anzug getragen würde, schräg geschnitten ist/sind.
6. Verwendung von Stücken innerhalb eines Kleidungsstücks (2) nach Anspruch 4, **dadurch gekennzeichnet, dass** eines oder mehrere der Stücke, die die hinteren Arnteile (30, 32) des Anzugs (2) bilden, besonders in dem Bereich, in dem sich die Ellbogen des Trägers befinden würden, wenn der Anzug getragen wird, schräg geschnitten ist/sind.
7. Verwendung von Stücken innerhalb eines Kleidungsstücks (2) nach Anspruch 4, **dadurch gekennzeichnet, dass** eines oder mehrere der Stücke, die den hinteren Rumpfteil (10) des Anzugs (2) bilden, besonders in dem Bereich oberhalb davon, wo sich das Gesäß des Trägers befinden würden, wenn der Anzug getragen wird, schräg geschnitten ist/sind.
8. Verwendung von Stücken innerhalb eines Kleidungsstücks (2) nach Anspruch 1, **dadurch gekennzeichnet, dass** der Winkel des schrägen Schnitts im Bereich von 30 bis 60 Grad zum Schuss oder zur Kette beträgt.
9. Verwendung von Stücken innerhalb eines Kleidungsstücks (2) nach Anspruch 8, **dadurch gekennzeichnet, dass** das genannte Stück oder die genannten Stücke (22; 24; 30; 32) aus demselben gewebten Material wie die anderen Materialstücke des Kleidungsstücks (2) gebildet sind.
10. Verwendung von Stücken innerhalb eines Kleidungsstücks (2) nach Anspruch 1, **dadurch gekennzeichnet, dass** das Kleidungsstück (2) dimen-

sioniert ist, um von Trägern einer definierten Größe getragen zu werden.

11. Verwendung von Stücken innerhalb eines Kleidungsstücks (2) nach Anspruch 10, **dadurch gekennzeichnet, dass** das Kleidungsstück (2) für eine bestimmte Trägergröße kleiner dimensioniert ist, als ein sich nicht dehnendes Kleidungsstück für die gleiche Trägergröße wäre.

Revendications

1. Utilisation d'une pluralité de panneaux tissés en fibres synthétiques ou naturelles, joints ensemble le long de leurs bords respectifs dans un vêtement (2), ledit vêtement (2) prenant la forme d'une combinaison d'activité (2) et étant façonné de sorte à bien s'ajuster au porteur, et dont la forme, la taille et la longueur sont prévues de sorte que le vêtement (2) s'étend en travers des articulations du porteur qui fléchissent généralement pendant le port, au moins un desdits panneaux (22; 24; 30; 32) adjacents à l'une des articulations dudit porteur étant coupé en biais plutôt qu'en droit fil de ce tissu, **caractérisée en ce que** le panneau ou chaque panneau coupé en biais (22; 24; 30; 32) est orienté dans le vêtement de sorte que la direction d'allongement ou d'extension (26, 28) dudit panneau bissecte la chaîne et la trame des fibres du panneau pour conférer audit panneau un potentiel d'extension ou d'allongement suffisant pour s'adapter auxdits mouvements de flexion du porteur.
2. Utilisation de panneaux dans un vêtement (2) selon la revendication 1, **caractérisée en ce que** le vêtement est une combinaison de plongée sèche ou humide (2) composée d'une pluralité de panneaux coupés en droit fil traditionnel dans une pièce de tissu et joints ensemble de façon étanche le long de coutures, ainsi que d'une pluralité de panneaux coupés en biais (22, 24, 30, 32) dans le même tissu et également incorporés dans le vêtement le long de coutures tout comme les panneaux coupés en droit fil traditionnel, lesdits panneaux coupés en biais étant placés dans le vêtement (2) selon une orientation et une disposition qui permettent au porteur du vêtement de fléchir ses articulations du fait de l'aptitude relative à l'extension des panneaux coupés en biais.
3. Utilisation de panneaux dans un vêtement (2) selon la revendication 1, **caractérisée en ce que** tous les panneaux en fibres tissées qui composent le vêtement (2) sont coupés en biais.
4. Utilisation de panneaux dans un vêtement (2) selon la revendication 1, **caractérisé en ce que** le vêtement est une combinaison de plongée sèche ou hu-

mide (2), utilisée dans l'eau, et qui se compose d'une pluralité de panneaux coupés conventionnellement (droit fil) et d'une pluralité de panneaux coupés en biais (22, 24, 30, 32), joints ensemble de façon étanche, ledit vêtement ayant des parties antérieures et postérieures pour les jambes, des parties antérieures et postérieures pour le torse et des parties antérieures et postérieures pour les bras qui, ensemble, délimitent une cavité pour le porteur à l'intérieur du vêtement, ladite partie postérieure pour le torse comprenant une fermeture éclair ou autre fermeture, ce qui permet au porteur de mettre et de retirer le vêtement.

vêtement non étirable pour la même taille de porteur.

5. L'utilisation de panneaux dans un vêtement (2) selon la revendication 4, **caractérisée en ce que** le panneau ou chaque panneau constituant les parties antérieures pour les jambes (22, 24) de la combinaison (2), particulièrement dans la région où se trouveraient le tibia, le genou et la partie avant de la cuisse du porteur pendant l'utilisation, est coupé en biais. 5
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6. Utilisation de panneaux dans un vêtement (2) selon la revendication 4, **caractérisée en ce que** le panneau ou chaque panneau constituant les parties postérieures pour les bras (30, 32) de la combinaison (2), particulièrement dans la région où se trouveraient les coudes du porteur pendant l'utilisation, est coupé en biais. 25
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7. Utilisation de panneaux dans un vêtement (2) selon la revendication 4, **caractérisée en ce que** le panneau ou chaque panneau constituant la partie postérieure pour le torse (10) de la combinaison (2), particulièrement dans la région où se trouverait le fessier du porteur pendant l'utilisation, est coupé en biais. 35
8. Utilisation de panneaux dans un vêtement (2) selon la revendication 1, **caractérisée en ce que** l'angle de coupe en biais est compris dans la plage de 30 à 60 degrés relativement à la chaîne ou à la trame. 40
9. Utilisation de panneaux dans un vêtement (2) selon la revendication 8, **caractérisée en ce que** ledit panneau ou lesdits panneaux (22; 24; 30; 32) est/sont formé/s en même tissu que les autres panneaux tissés du vêtement (2). 45
10. Utilisation de panneaux dans un vêtement (2) selon la revendication 1, **caractérisée en ce que** le vêtement (2) est dimensionné de sorte à être porté par des porteurs de tailles déterminées. 50
11. Utilisation de panneaux dans un vêtement (2) selon la revendication 10, **caractérisée en ce que** le vêtement (2) destiné à une taille de porteur déterminée a des dimensions plus petites que s'il s'agissait d'un 55

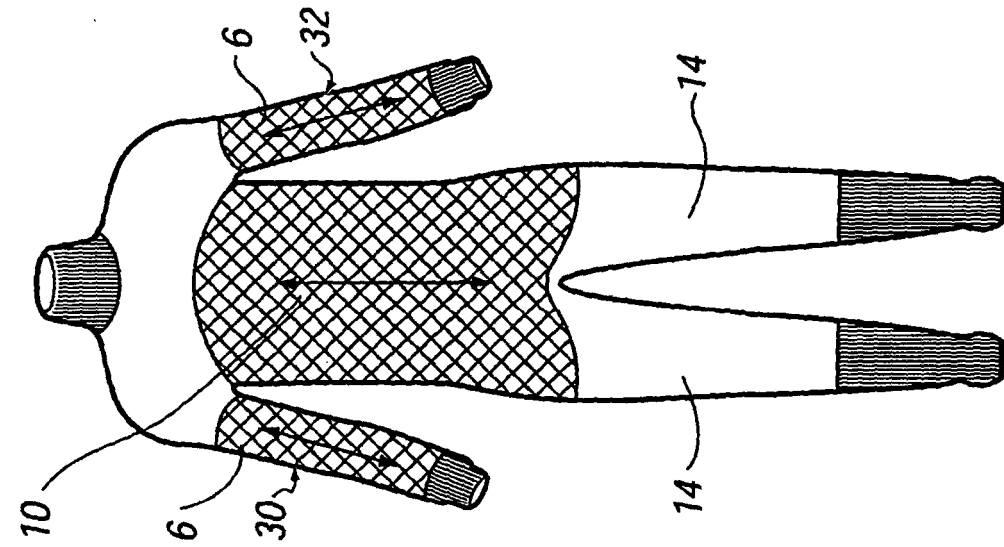


FIG. 2

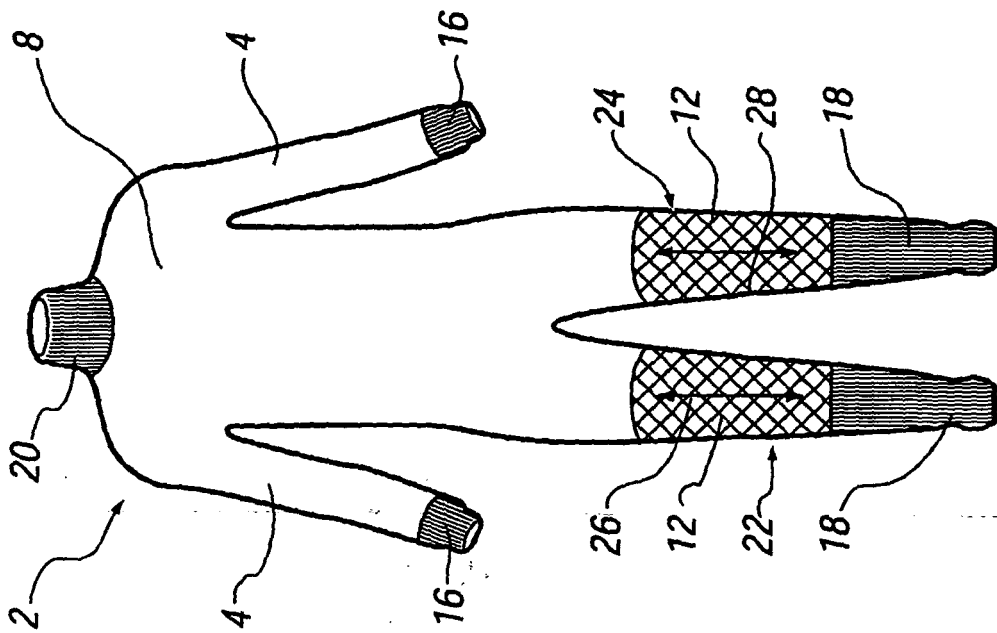


FIG. 1