(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 652 438 A1

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
03.05.2006 Bulletin 2006/18

(51) Int Cl.:
A41D 23/00 *(2006.01)* ***A42B 1/04*** *(2006.01)*

(21) Application number: **05109913.3**

(22) Date of filing: **24.10.2005**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(30) Priority: **27.10.2004 IT TO20040137 U**

(71) Applicant: **Prioli, Raffaele**
10061 Cavour TO (IT)

(72) Inventor: **Prioli, Raffaele**
10061 Cavour TO (IT)

(74) Representative: **Dini, Roberto**
Metroconsult S.r.l.
Piazza Cavour 3
10060 None (Torino) (IT)

(54) **Tubular multifunctionnal garment**

(57) The present invention relates to a multipurpose garment having a substantially cylindrical, open shape and being suitable for being deformed in order to be worn on peripheral parts of the body, in particular head and/or neck, arms and legs.

This garment is characterized in that it is made of a material having a substantially bielastic behavior.

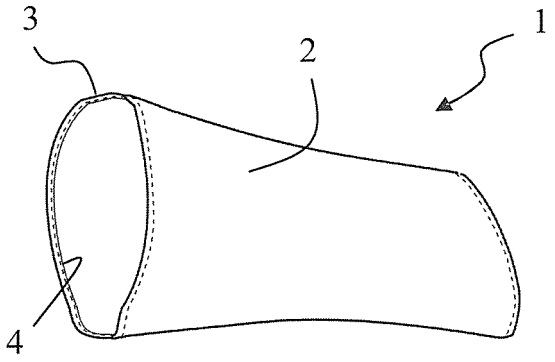

Fig. 6

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Description

[0001] The present invention relates to a multipurpose garment having a substantially cylindrical, open shape and being suitable for being deformed in order to be worn on peripheral parts of the body, such as head and/or neck, arms and legs. This garment is preferably of a type being suitable for positioning itself in such a way as to substantially adhere to those peripheral parts on which it is worn, typically in contact with the skin and/or hair.

[0002] The multipurpose garment being the subject of the invention is of a type being substantially known to the public as concerns its external shape and its use as a garment suited to being worn in many fashions.

[0003] For a better understanding, Figs. 1 to 5 annexed to the present description show the garment worn according to some application examples. These figures schematically show some of its known applications, among which the use as a bandana in Fig. 1, as a hair cuff in Fig. 2, as a hair band in Fig. 3, as a face protection scarf or neckerchief (also used as an underhelmet cap) in Fig. 4, and as a wrist cuff in Fig. 5.

[0004] Also known are the methods for handling the garment in order to wear it in the above fashions.

[0005] It should be underlined that such a type of garment is particularly used and sold as a clothing accessory for motorcyclists, being often used as an underhelmet cap: to this end, see Figs. 1, 3 and 4, imagining a user wearing an integral helmet, which compresses the garment between its inner lining and the user's face and/or hair.

[0006] Multipurpose garments of this typology known in the art are made of a fabric whose weft is woven in such a way as to essentially provide elasticity in one direction only, typically being perpendicular to the cylinder directrices identifying its shape; in other words, in a direction being transversal to the garment in its non-deformed configuration.

[0007] In this description, the above-mentioned fabric is defined as a fabric having substantially unidirectional elasticity.

[0008] Although the known garments, being elastic, offer the user a certain ease of use as well as a certain degree of adaptability to the shapes on which they are worn, they however have several drawbacks.

[0009] A first drawback is the fact that sometimes the garment does not fit appropriately the surfaces to which it should adhere. Such a characteristic causes a number of consequences, such as:

- a sometimes ineffective transpiration of the surfaces the garment adheres to, resulting in risks of reddening of the skin, if worn directly on the skin, and in a low level of comfort perceived by the user;
- risks of microabrasions of the surfaces the garment adheres to, especially if worn in a substantially compressed position, e.g. in those configurations wherein it is used as an underhelmet cap;
- the garment is sometimes difficult to wear.

[0010] It has also been observed that garments made of unidirectional-behavior fabric are not very resistant to washing, i.e. the fabric tends to lose its elastic behavior after many washings.

[0011] Another drawback is the fact that the print quality of the outer surfaces of the known garment sometimes cannot reach good or even acceptable levels for selling the product to the public, i.e. some printing techniques have several technical problems as concerns their application on these typologies of fabrics.

[0012] Another drawback derives from the fact that the known garments need to have a cuff or hem at the ends of the substantially cylindrical surface, and therefore a seam on the edges, so as to prevent the ends from fraying when the garment is used and washed. The seam and the cuff however contribute to cause an imperfect adhesion of the garment to the surfaces on which it is worn and, last but not least, they increase the production costs of the garment.

[0013] The present invention aims at eliminating the above-mentioned drawbacks and at providing a multipurpose garment having a substantially cylindrical, open shape and being suitable for being deformed in order to be worn on peripheral parts of the body, such as head and/or neck, arms and legs, which is improved compared to the known solutions.

[0014] In this frame, an object of the present invention is to provide a multipurpose garment appropriately adhering to the surfaces on which it is worn, i.e. whose fabric adheres perfectly to the surfaces to which it is applied.

[0015] Another object is to provide optimum transpiration characteristics for the surfaces the garment adheres to, at the same time limiting the risks of microabrasions.

[0016] Another object is to offer the user wearing the garment a higher perceived quality and improved comfort.

[0017] Another object of the multipurpose garment according to the invention is to make it easier to wear, being for this purpose more suited to handling.

[0018] Another object is then to make it more wash-resistant, its fabric losing its elasticity to a lesser extent.

[0019] Another object is to obtain an improved behavior during the process for printing its outer surfaces.

[0020] Another object is to allow for a production being more flexible to the different shapes to be given to the invention. Furthermore, its mass production is also faster and cheaper.

[0021] In order to achieve these objects, the present invention provides a multipurpose garment having a substantially cylindrical, open shape and being suitable for being deformed in order to be worn on peripheral parts of the body, such as head and/or neck, arms and legs, incorporating the features of the annexed claims, which form an integral part of the present description.

[0022] Further objects, features and advantages of the

present invention will become apparent from the following detailed description and annexed drawings, which are supplied by way of nonlimiting example, wherein:

- Figs. 1 to 5 show perspective views of a multipurpose garment according to the invention, i.e. of a type as specified above, in five different application configurations;
- Fig. 6 shows a perspective view of a multipurpose garment according to the invention in its non-deformed configuration.

[0023] Figs. 1 to 5 have already been described above; since the fashions and methods for wearing the garment are known, they will not be detailed any further in the following.

[0024] Fig. 6 shows a multipurpose garment according to the present invention in its non-deformed configuration, indicated as a whole with 1.

[0025] As shown, it has a substantially cylindrical shape being open at the cylinder bases. Such a shape is typically obtained without any need for longitudinal seams on the side surface of the garment 1, which surface is indicated as a whole with 2.

[0026] At the edges, i.e. the cylinder bases, said surface 2 has cuffs or hems 3 and a seam 4 for fastening the same cuffs or hems 3.

[0027] The fabric of the garment 1 according to the invention consists of a yarn whose weft is suitably woven in such a way as to ensure that the fabric has a substantially elastic behavior in two distinct directions being typically orthogonal.

[0028] The above-described fabric typology is defined as a fabric having a substantially bielastic behavior, or simply bielastic fabric.

[0029] Said bielastic fabric consists of a set of yarns comprising microfiber and/or elastomer (like elastpan®) and/or cotton and/or viscose and/or wool and/or polyester and/or polyamide and/or polyethylene and/or polypropylene and/or silk and/or rayon and/or acrylic yarn or its derivatives.

[0030] The original inventive idea at the basis of the present invention is to form and make the garment 1, which can be worn as shown in Figs. 1-5, by using a fabric having a substantially bielastic behavior.

[0031] Such an application leads to a number of practical advantages being substantially due to the fact that such a fabric typology copies very well the shapes of the surfaces it gets in contact with, in that its stitches can expand in two directions.

[0032] The advantages obtained are as follows:

- higher comfort and value perceived to the touch by the user,
- better transpiration of the skin and quick evaporation of any sweat,
- less risks of abrasions due to rubbing between fabric and skin;
- improved capacity of being handled by the user, resulting in the garment being worn more quickly,
- production being more flexible to the different shapes to be given to the invention, i.e. higher practicality in obtaining said shapes.

[0033] Furthermore, the presence of bielastic fabric facilitates most printing operations to be carried out on the outside of the side surface 2 of the garment 1; this fabric is also less prone to losing its elasticity after many washings and is less subject to fraying at the ends.

[0034] In a preferred embodiment, the bielastic-behavior fabric the garment 1 is made of is composed of yarns substantially consisting of microfiber and a variable percentage of 5 to 15% of elastomer (like elastpan®), more specifically around 10%.

[0035] Such a particular mixture of components of the fabric advantageously provides adequate elasticity as well as a very good adhesion to the surface on which the garment 1 is worn.

[0036] Advantageously, the use of bielastic-behavior fabric for making the garment 1 results in a simpler and therefore cheaper production of the same.

[0037] According to this variant, which represents the most advantageous embodiment or "best mode" of the present invention, the side surface 2 neither has any hems and related seams nor needs any other type of working aiming at prevent the fabric from fraying, so that the fabric terminates with potentially free threads. In fact, bielastic-behavior fabrics are less easily frayed, in that they are made of yarns having a higher quantity of elastic material — typically an elastomer like elastpan® - which improves the compactness among the threads of the fabric stitches.

[0038] As proven by experience, such a solution, i.e. without cuffs at the edges and with the fabric having potentially free threads on the edges, is particularly valid if the above-mentioned mixture of microfiber and elastomer (like elastpan®) is employed.

[0039] This solution is worked on circular looms and/or looms of the so-called "seamless" type, i.e. looms being suitable for producing finished seamless yarns.

[0040] Advantageously, the invention increases the user's comfort, because the user no longer feels the disturbing action of cuffs and seams on the skin and/or hair, in particular when the garment is worn very tight, e.g. is used as an underhelmet cap.

Claims

1. Multipurpose garment having a substantially cylindrical, open shape and being suitable for being deformed in order to be worn on peripheral parts of the body, in particular head and/or neck, arms and legs. **characterized in that** it is made of a material having a substantially bielastic behavior.

2. Multipurpose garment according to claim 1, **characterized in that** said garment (1) is of a typology being also suitable for being positioned in such a way as to substantially adhere to the peripheral parts on which it is worn.

3. Multipurpose garment according to the previous claim, **characterized in that** said garment (1) is of a typology being suitable for being worn in contact with the skin and/or hair.

4. Multipurpose garment according to one of the previous claims, **characterized in that** it is made of a material having a substantially bielastic behavior and comprising microfiber and/or elastomer (like elastpan®) and/or cotton and/or viscose and/or wool and/or polyester and/or polyamide and/or polyethylene and/or polypropylene and/or silk and/or rayon and/or acrylic yarn or its derivatives.

5. Multipurpose garment according to the previous claim, **characterized in that** the fabric said garment (1) is made of substantially consists of microfiber and a variable percentage of 5 to 15% of elastomer (like elastpan®), more in particular said percentage being around 10%.

6. Multipurpose garment according to one of the previous claims, **characterized in that** it comprises a side surface (2) terminating at the edges with fabric having potentially free threads, i.e. without any cuffs (3) and/or seams (4) or any other type of working.

7. Multipurpose garment according to the previous claim, **characterized in that** it is manufactured on circular looms and/or looms of the so-called "seamless" type, i.e. looms being suitable for producing finished seamless yarns.

Fig. 3

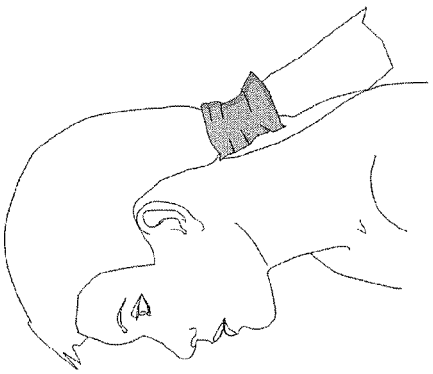

Fig. 2

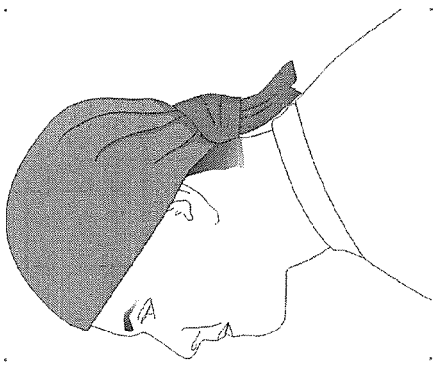

Fig. 1

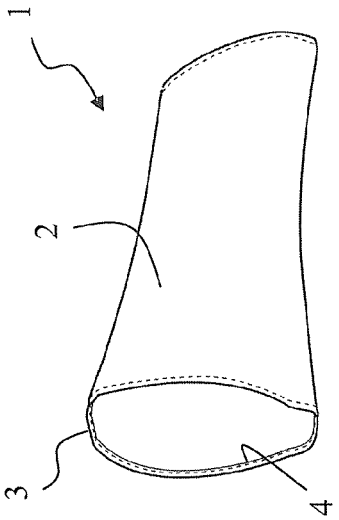

Fig. 6

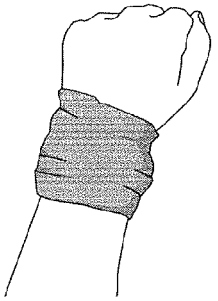

Fig. 5

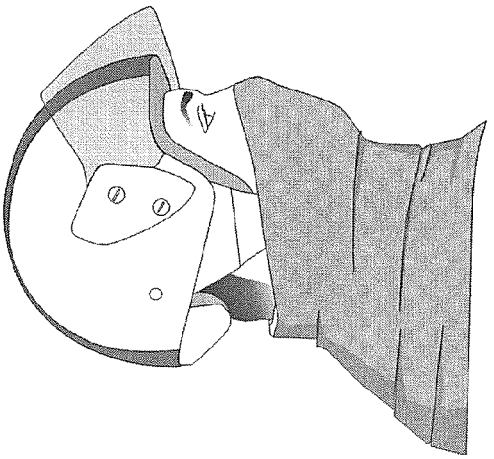

Fig. 4

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 05 10 9913

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
L	XP002355120 FAQ page from originalbuff.com Retrieved from the Internet: URL:www.originalbuff.com> [retrieved on 2005-11-21] * paragraphs [0004], [0005], [0007] *	1-7	A41D23/00 A42B1/04
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TECHNICAL FIELDS SEARCHED (IPC)

A41D
A42B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	21 November 2005	Monné, E

CATEGORY OF CITED DOCUMENTS

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21-11-2005

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