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

(11) EP 1 597 980 A1

(12) **EUROPEAN PATENT APPLICATION**
published in accordance with Art. 158(3) EPC

(43) Date of publication:
23.11.2005 Bulletin 2005/47

(21) Application number: **03725204.6**

(22) Date of filing: **07.05.2003**

(51) Int Cl.[7]: **A41D 13/01**

(86) International application number:
PCT/ES2003/000205

(87) International publication number:
WO 2003/096830 (27.11.2003 Gazette 2003/48)

(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 RO SE SI SK TR

(30) Priority: **17.05.2002 ES 200201135**

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(54) REFLECTIVE HARNESS

(57) A reflective harness to be used by any person using a public thoroughfare, such as a pedestrian, cyclist, sportsperson, professional or other person who uses or remains in the thoroughfare, is described. The harness includes elements capable of being positioned on the front and back of the body of the user, carried out by way of a back piece, strap portions and belt portions produced with the incorporation of reflective material. Preferably, the back piece is shaped in a triangular or other design that simulates a danger sign. For their part, the belt portions incorporate sections made of elastic material, as well as means of quick attachment at their ends, such as straps made of Velcro or similar.

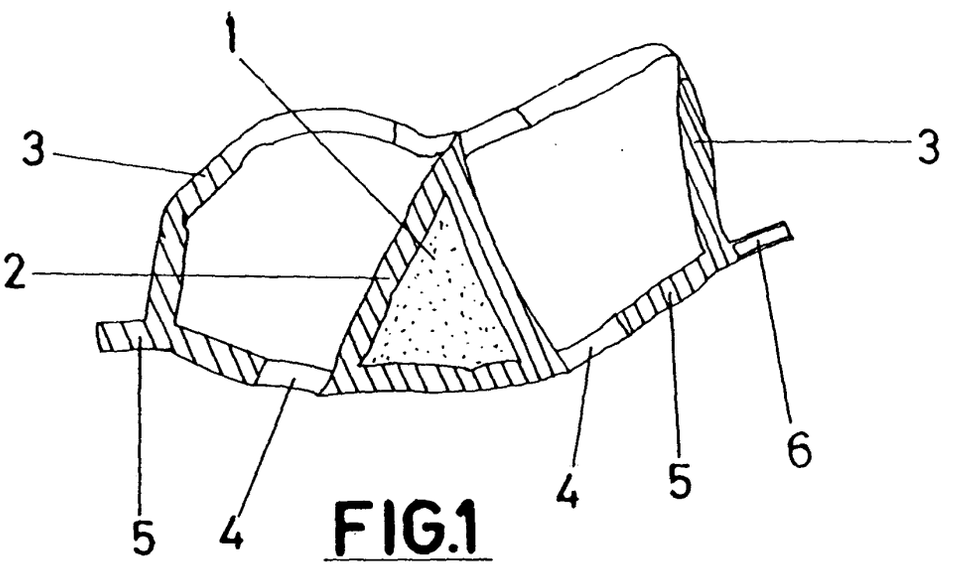


FIG.1

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Description

Technical Field

[0001] The present invention relates to a reflective harness, which provides new essential characteristics and notable advantages with respect to the means that are known and used for similar purposes under current state of the art.

[0002] In particular, the invention proposes the development of a harness capable of being used by a person for identification under any circumstances, during the day or the night, by virtue of the reflective nature of the material of which it is made, being designed, furthermore, in such a way that it can be worn comfortably by the user, with the use of portions configured like straps for its fixing to the shoulders, and with the use of portions capable of being fixed like a belt, and therefore capable of being adapted to the characteristics of each user. At the rear, the harness includes a substantially sized portion, capable of being positioned on the back of the user, for easy visualisation of the latter regardless of the sports or other activity being practised at any time.

[0003] The field of application of the invention is within the industrial sector dedicated to the production of identification objects and personal security.

Background of the invention and Summary

[0004] It is known that some activities routinely practised by a large number of people, whether for professional or leisure and relaxation reasons, involve a potential risk due to the fact that they must be practised in situations with reduced or zero visibility, as occurs, for example, in the case of operatives who work on public thoroughfares or roads, in the case of cyclists, pedestrians or sportspeople who use these same thoroughfares, civil protection staff, or even the traffic police themselves.

[0005] In order to enable the people to be seen and to avoid any kind of accident that may occur, it is necessary to indicate the position occupied by them, with something that is really effective and that at the same time permits sufficient advance visualisation so that, for example in the case of a vehicle, the driver can react in time or even stop prior to reaching the position of the cyclist, sportsperson, pedestrian or any other person involved. In this sense, the current technology uses a type of vest, made with reflective material, through which its user is identified when illuminated by the lights of a vehicle, for example.

[0006] This type of vest, although meeting the purpose for which it was developed, does have some disadvantages. In effect, the use of this garment is not always comfortable for the user, and furthermore, in times of high temperatures, its use becomes quite difficult to endure, which frequently leads the user to remove it. The safety characteristics intended to be provided by the use of the garment are not then guaranteed. Furthermore, the existing signalling vests tend to incorporate reflective straps directed horizontally or vertically, which means that, under certain conditions, and especially at night, they can be confused at times with horizontal or vertical signals that already exist on public thoroughfares, with the resulting risk for the user.

[0007] This invention has been proposed fundamentally to provide a means by which these current signalling and identification disadvantages can be effectively resolved, and proposes the creation of a harness, capable of being applied to the user directly, in a way that is easy to use, adapts comfortably to the body and incorporates different portions of reflective material that allow rapid visualisation of the wearer without any risk for them. These reflective portions are capable of being positioned at the back and chest of the user, and are shaped as a surface piece, straps and belt. The fitting of the belt is carried out with a rapid retention device, such as Velcro or similar, which permits an instantly comfortable adaptation to the characteristics of each user.

[0008] Furthermore, in other, alternative forms of embodiment, the harness of the invention can be shaped for adaptation to a backpack, bag, or other object, all maintaining the same constructive philosophy and the same operational effectiveness as in the case of the preferred embodiment previously described.

Brief description of the accompanying drawings

[0009] These and other characteristics and advantages of the invention are more clearly shown by the detailed description that follows of a preferred embodiment, given only by way of an illustrative and not restrictive example, with reference to the accompanying drawings, in which:

Figure 1 shows a simplified view of a reflective harness constructed in accordance with the preferred embodiment of the invention, and

Figures 2 and 3 show representations of the usage positions of the harness on the back and front of a user, respectively.

Description of the preferred embodiment

[0010] As indicated previously, the detailed description of the preferred embodiment of the invention will be described in what follows with reference to the accompanying drawings, using the same numerical references by way of the different Figures to designate the same or similar parts. Thus, looking firstly at Figure 1, a simplified representation of a reflective harness can be seen, shaped in a way that presents portion 1 for rear positioning, of substantial size, and which is preferably shaped as a triangle, although it could take any other

form capable of simulating a sign of danger of the type used for signposting on roads and similar. This rear portion 1 is surrounded by a perimeter border of reflective material, indicated with reference number 2, and with a striped surface in order to distinguish it from the rest of the piece.

[0011] The strap and belt portions extend, in the conventional way, from portion 1. The strap portions, indicated with reference number 3, begin at the top apex of the triangle, have reflective sections (also striped in order to distinguish them from the other bands), in particular those sections which have to stay situated at the front of the user once the harness is attached, while the belt portions, to which the straps are attached by their ends at the back of piece 1, begin in coincidence with the base of the triangle, by way of a first section 4 made of elastic on each side, followed on each side by a section 5 of reflective material. These sections also have mutual binding portions, joined at the opposing faces, preferably achieved by way of Velcro straps, as indicated in reference 6.

[0012] In accordance with the former, the harness of the invention is a simple conception and uses a general configuration similar to the conventional type, with the special features of the back piece 1 and the incorporation of portions made of reflective material.

[0013] During its use, the harness can be adjusted perfectly to the body of the user, with the aid of the elastic portions 4, as described in simple terms in Figures 2 and 3 of the drawings. In these, a user 7 appears, shown from the back and front, respectively, with the aim of facilitating a graphical appreciation of the operative position of each of the portions mentioned.

[0014] As has been shown, the triangular piece 1 is located in an approximately central position on the back of the user 7, and the strap portions are made to pass over the shoulders of the user, while the belt portions are tightened to the waist of the user, as has been said with the aid of the elastic sections 4. Figure 3 shows the user with the belt adjusted to the their physical characteristics, so that the reflective sections 5 have frontal continuity, once the Velcro strap 6 has been attached to the one attached to the internal face of the opposite end.

[0015] As will be understood, the harness of the invention allows for comfortable use, at any time of the year, while its operational ability is greater than that of the vests of current state of the art. In effect, the form adopted by the back portion 1 means that once visualised it is quickly associated with a pedestrian, with a dangerous situation, or with any other situation that requires special attention. With its use, sportspeople, cyclists, professionals or other people who need to enter and/or remain in the road, are much safer than with the use of current methods. Furthermore, the harness has the additional advantage that it is made of foldable material and can be easily folded and kept in any place when not in use.

[0016] It is not considered necessary to make the content of this description more extensive so that an expert in the subject may understand its range and the advantages derived from the invention, as well as how to develop the object and bring it into use.

[0017] However, it must be understood that the invention has been described according to its preferred embodiment, for which reason it may be subject to modifications without constituting any alteration of the foundations of the invention, such modifications being able to affect, in particular, the form, the size and/or the materials of production of the whole or of the parts of which it is composed.

Claims

1. A reflective harness, intended to distinguish the location of a pedestrian, cyclist, professional or other person who for whatever reason must use and/or remain on a road, public thoroughfare or in any other place with reduced or zero visibility, so that the user can be visualised with complete quickness and safety, **characterised in that** a portion (1) is provided with rear positioning, preferably shaped as a triangle simulating a danger signal, which includes a perimeter band (2) of reflective material, with strap portions (3) capable of being connected to the shoulders of a user (7), running from the top apex of the triangle, fitted with reflective portions in correspondence with the portions positioned at the rear, and joined by the opposing ends to belt portions (5), also made of reflective material, extending to both sides of the triangular piece (1), as a continuation of the base of the latter.

2. A harness as claimed in claim 1, that is **characterised** due to the joining of the belt sections (5) to the triangular piece (1), is carried out with the placing of elastic sections (4), and because the incorporation of means of attachment associated with the opposing faces of the ends of both portions of the belt (5) have been envisaged, carried out by way of quick fixing straps (6), such as of Velcro or similar.

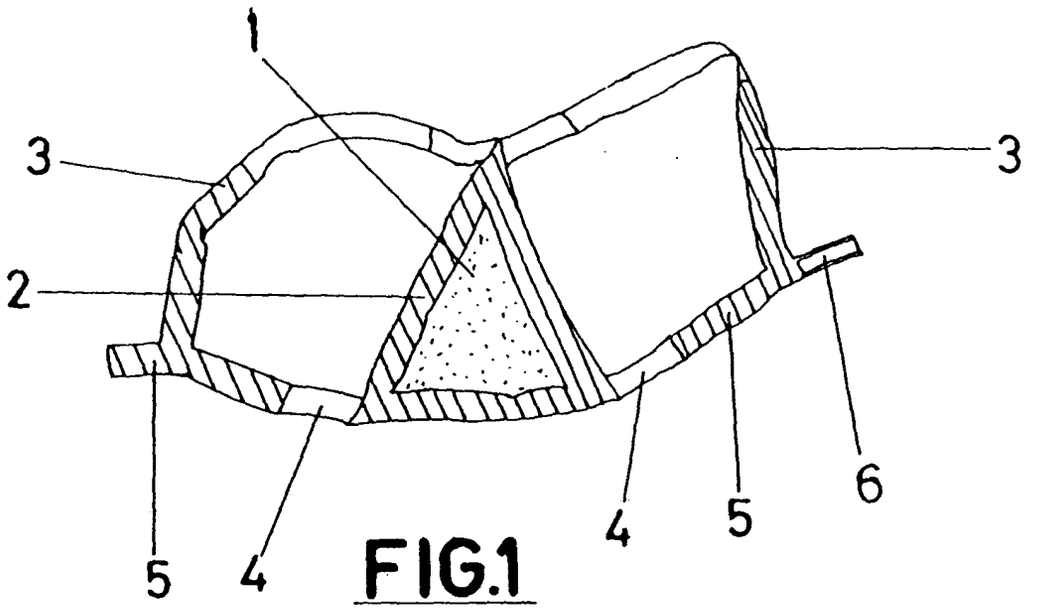


FIG.1

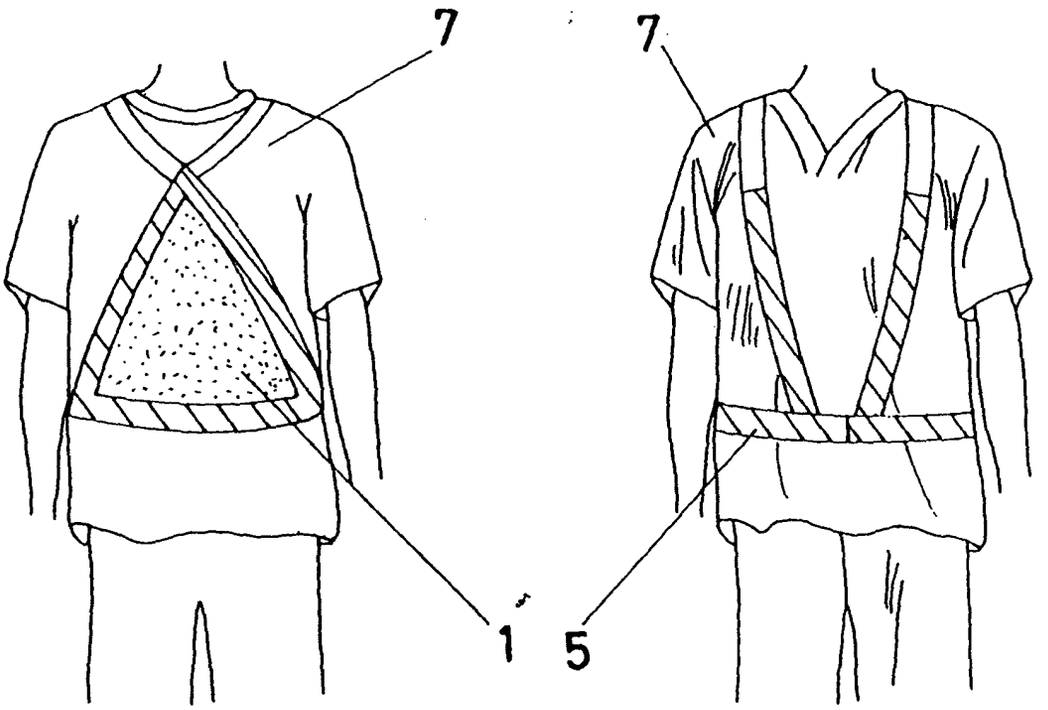


FIG.2

FIG.3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ ES 03/00205

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 A41D 13/01

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 A41D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CIBEPAT, EPODOC, WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5477998 A (RECKLER) 26.12.1995,figura 1; **column** 3, **lines** 9-33.	1, 2
X	US 4479267 A (RADOWSKY) 30.10.1984	1, 2
A	US 4534619 A (BEDFORD) 13.08.1985	

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
17 July 2003 (17.07.2003)	**29 August 2003 (29.08.2003)**
Name and mailing address of the ISA/ **S.P.T.O**	Authorized officer
Facsimile No.	Telephone No.

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International Application No
PCT/ ES 03/00205

Patent document cited in search report	Publication date	Patent familiy member(s)	Publication date
US 5477998 A	26.12.1995	CA 2125905 AC	16.12.1995
US 4479267 A	30.10.1984	NONE	
US 45344619 A	13.08.1985	US 4653853 A	31.03.1987

Form PCT/ISA/210 (patent family annex) (July 1992)