



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 525 812 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
27.04.2005 Bulletin 2005/17

(51) Int Cl.7: **A41D 13/00, A41D 31/00**

(21) Application number: **04077906.8**

(22) Date of filing: **22.10.2004**

(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 PL PT RO SE SI SK TR**
Designated Extension States:
AL HR LT LV MK

(72) Inventor: **van Bakel, Marcus Ronaldus Maria**
2011 CL Haarlem (NL)

(74) Representative: **Uittenbogaart, Gustaaf Adolf**
Indeig B.V.
P.O. Box 3
NL-2050 AA Overveen (NL)

(30) Priority: **22.10.2003 NL 1024585**

(71) Applicant: **van Bakel, Marcus Ronaldus Maria**
2011 CL Haarlem (NL)

(54) **Inflatable waterproof coat**

(57) Waterproof coat (1) made from plastic foil whereby in accordance with the invention the coat (1) is made from two layers through melting weldable foil having one or more inflatable compartments (6) in between.

Such a coat (1) can be folded to a small and easy transportable size. During use a compartment (6) can be filled with air so that the waterproof coat (1) keeps the user dry and also protects the user from chilling.

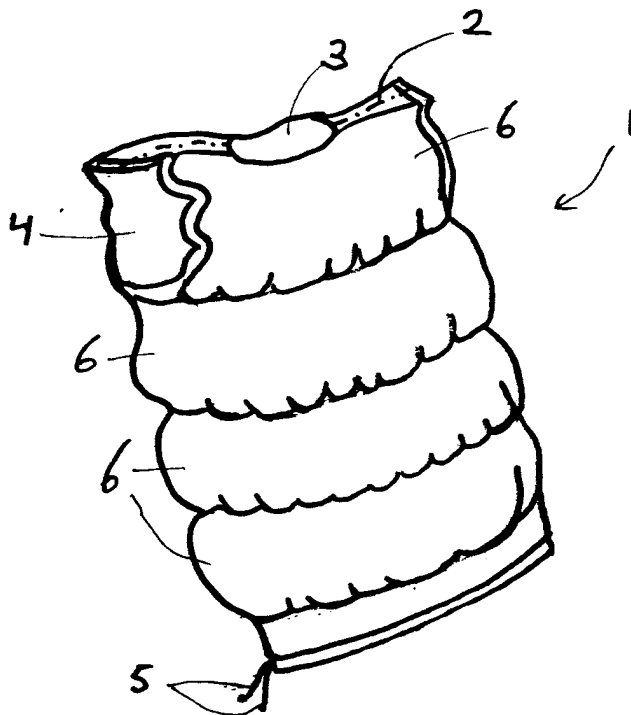


Fig. 1

Description

[0001] The invention concerns a waterproof coat in accordance with the preamble of claim 1. Such coats are easy to fold-up and can easily be taken along and are used to protect the user against soaking in suddenly coming up squalls. Such squalls occur often in summer, when the user is not wearing warm clothes. The disadvantage of the known waterproof coat is that it does not protect the user against cooling due to cold rain, causing the user indeed to stay dry in summer squalls, but may be troubled by supercooling due to chilling.

[0002] The waterproof coat according to the invention aims to avoid this disadvantage and therefore is in accordance with claim 1. By providing the coat with inflatable compartments after inflating an isolating air layer is created which prevents chilling of the user.

[0003] In the state of the art body warmers are known made from "fleece", a special type of fabric.

[0004] A known disadvantage of such body warmers is that fleece absorbs a lot of moist that reduces the isolation capacity of the body warmer. Also such a body warmer cannot be folded to a convenient item. The waterproof coat in accordance with the invention offers a solution for these two problems. Through stagnant air retained in the plastic foil, the waterproof coat has an isolation function and retains the body warmth. The plastic is airtight and water-repellent. Also it is foldable to a convenient item. This as opposed to a body warmer.

[0005] In accordance with an improved embodiment the waterproof coat is in accordance with claim 2. In this way a compartment can be inflated easily using a simple mouthpiece that hardly uses any space and that is easily closable by tying, folding or claspings.

[0006] In accordance with an improved embodiment the waterproof coat is in accordance with claim 3. This creates a waterproof coat that is simple and compact and by furling reducible to a small volume and weight which is put on over the head.

[0007] In accordance with an improved embodiment the waterproof coat is in accordance with claim 4. In this way the user can inflate the inflatable compartments after the coat is put on, which simplifies putting on the coat.

[0008] In accordance with an improved embodiment the waterproof coat is in accordance with claim 5. In this way after inflating the inflatable compartments will have a limited thickness and the waterproof coat remains in the desired shape after inflating.

[0009] In accordance with an improved embodiment the waterproof coat is in accordance with claim 6. In this way the back of the waterproof coat has planes of such dimension that they can be printed on easily for instance with a company name or an advertisement.

[0010] In accordance with an improved embodiment the waterproof coat is in accordance with claim 7. In this way after inflating the waterproof coat better retains its shape and can if necessary be tightened around the body by pulling a string.

[0011] The following descriptions give an impression of the waterproof coat. It is possible to inflate the waterproof coat through a mouthpiece near the neck. Both the front- and backside are inflated using the mouthpiece. In inflated condition the appearance of the waterproof coat is comparable to a body warmer. Through a lower strengthened border of the waterproof coat a string is guided which string can be tightened and fastened when necessary.

[0012] The invention is explained with reference to an embodiment using a drawing.

[0013] In the drawing shows

Figure 1 a three dimensional sketch of the waterproof coat, and

Figure 2 a top view of the plastic foil during production of the waterproof coat shown in figure 1.

[0014] In figure 1 a waterproof coat 1 is shown as it is worn during use. The waterproof coat 1 is without sleeves with armholes 4 and a top opening 3. A string 5 is placed at the underside, which makes it possible to tighten the waterproof coat 1 around the body. The waterproof coat 1 is provided with an inflatable compartment 6. The waterproof coat 1 is preferably made of sheet material that is joined at a top and at one side with seams 2 creating the suitable shape as shown in figure 1.

[0015] For the expert it will be clear that the waterproof coat in accordance with the invention can also be provided with several inflatable compartments, with sleeves, pockets, a hood and if required in other designs that are known for coats like these.

[0016] Figure 2 shows how the waterproof coat can be produced. From two layers plastic foil a circumference is cut, as shown as circumference in figure 2. The two foils are connected through melting on all sides so that the inflatable compartment 6 is created.

[0017] The inflatable compartment 6 is provided with a mouthpiece 7 whereby the two plastic foils near an edge 8 are not connected so that the inflatable compartment can be filled with air in a direction 9. The mouthpiece 7 can be closed airtight by clamping or knotting.

[0018] Close to the top opening 3 and the armholes 4 and if necessary at the under side, there is a strengthening seam 10 creating borders 11, that provide strengthening so that the waterproof coat 1 maintains its shape better when inflated. To maintain the inflatable compartment 6 in its shape and in limited thickness coupling seams 12 are provided. In the shown embodiment the coupling seams 12 are horizontal at the front- and backside, if necessary the coupling seams may be vertical. The coupling seams 12 on the backside are placed preferably at a distance of 0,20 to 0,30 m, so that there the waterproof coat 1 can be printed with advertisements. Seams 13 are placed at the underside, which create a conduit for the string 5.

[0019] After the two layers of plastic foil are assem-

bled in the above described way the foil is folded double along a foldline 14 and connected by melting along the seams 2.

5

Claims

1. Waterproof coat (1) made of plastic foil **characterised in that** the coat is made from two layers through melting weldable foil having one or more inflatable compartments (6) in between. 10
2. Waterproof coat (1) according to claim 1 whereby an inflatable compartment (6) is provided with a mouthpiece (7) made from the foil. 15
3. Waterproof coat (1) according to claim 1 or 2 whereby the coat is without sleeves and closed at the front- and backside. 20
4. Waterproof coat (1) according to one of the previous claims whereby the front- and backside are provided with an uninterrupted inflatable compartment (6) and the mouthpiece (7) is near the topside. 25
5. Waterproof coat (1) according to one of the previous claims whereby in an inflatable compartment (6) the weldable foils are locally connected by coupling seams (12). 30
6. Waterproof coat (1) in accordance with claim 5 whereby at the back the coupling seams (12) are horizontal and at a mutual distance of approximately 0,30 m. 35
7. Waterproof coat (1) in accordance with one of the previous claims whereby the weldable foils are locally connected with seams (10) for shaping reinforced borders (11) and/or a conduit for a string (5) . 40

45

50

55

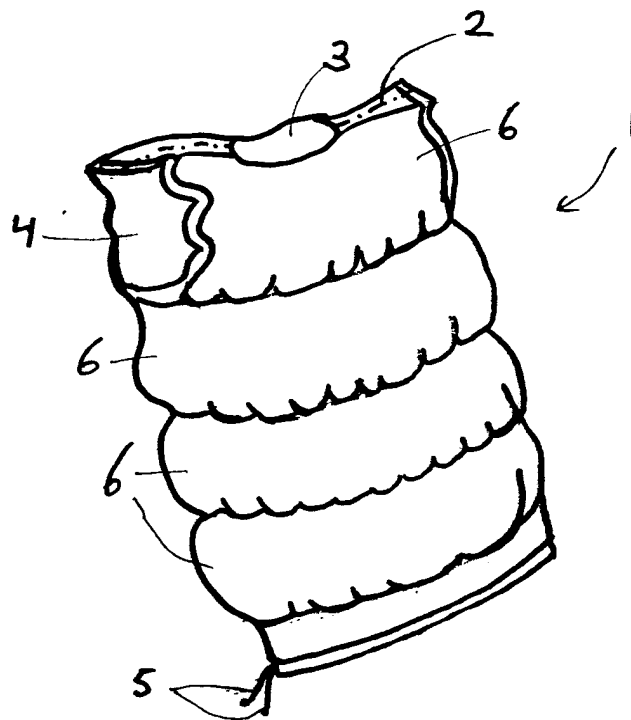
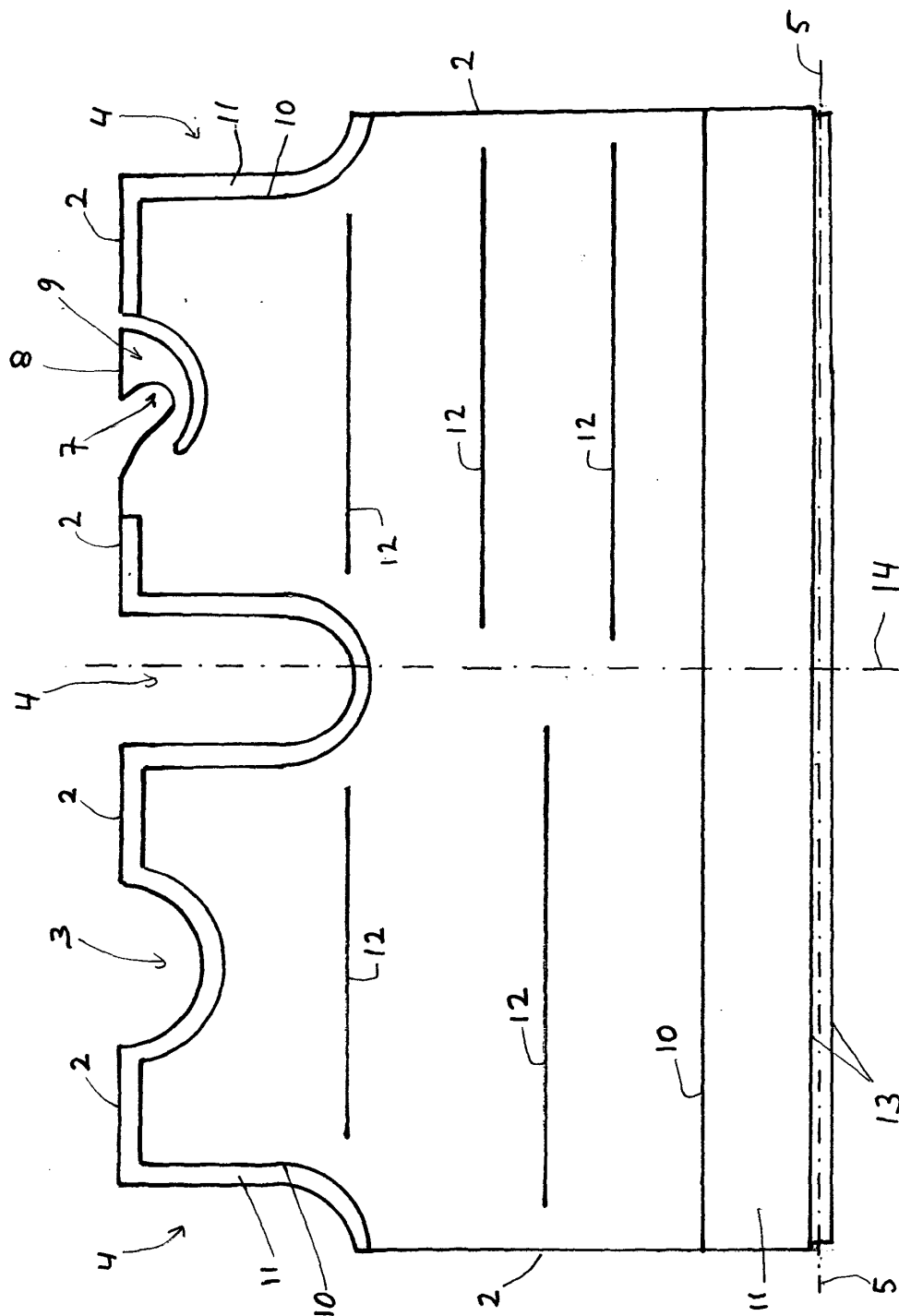


Fig. 1





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 07 7906

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	AT 8 U1 (KOWATSCH CLAUDIA) 26 September 1994 (1994-09-26)	1,2,4-7	A41D13/00 A41D31/00
Y	* the whole document *	3	
A	----- US 4 646 366 A (SANO JYUNJI ET AL) 3 March 1987 (1987-03-03) * column 1, line 61 - line 66; figures 12,5 * * column 4, line 1 - line 6 *	1	
X	----- DE 297 06 481 U (SCHERBAUM WOLF DIETER) 26 June 1997 (1997-06-26) * page 1, line 19 - line 23 * * page 1, line 30 - line 39; claims 1,2; figure 1 *	1	
X	----- GB 847 747 A (REGINALD PARR WAINWRIGHT; RICHARD KIRKPATRICK MATTHEWS) 14 September 1960 (1960-09-14) * page 1, line 13 - line 19 * * page 1, line 54 - line 55; figures *	1,4,7	
Y	----- WO 00/42872 A (SECR DEFENCE ; FORSHAW PAULA LOUISE (GB)) 27 July 2000 (2000-07-27) * page 3, line 3 - line 8; figures 2,3 *	3	
A	----- GB 2 323 015 A (SECR DEFENCE) 16 September 1998 (1998-09-16) * page 4, paragraph 8; claim 11 * * page 5, paragraph 4; figure 5 *	1,4	
A	----- ANONYMOUS: "AirVantage Vest (BMW)" INTERNET ARTICLE, [Online] June 2003 (2003-06), XP002314538 Retrieved from the Internet: URL:www.ascycles.com/detail.aspx?ID=2273> [retrieved on 2005-01-21] * page 1 - page 2 *	1	
		-/--	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 17 February 2005	Examiner Uhlig, R
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	

EPO FORM 1503 03-82 (P04C01)



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 07 7906

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
L	-& ANONYMOUS: "Motorrad: Wärmeisolierende Weste von BMW" INTERNET ARTICLE, [Online] 4 July 2002 (2002-07-04), XP002314539 Retrieved from the Internet: URL: http://shortnews.stern.de/shownews.cfm?id=396418&news_archive=1 [retrieved on 2005-01-21] * the whole document * -----		
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 17 February 2005	Examiner Uhlig, R
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

2
EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 04 07 7906

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-02-2005

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
AT 8	U1	26-09-1994	NONE	
US 4646366	A	03-03-1987	JP 61142817 U JP 63032092 Y2 DE 3605677 A1	03-09-1986 26-08-1988 28-08-1986
DE 29706481	U	26-06-1997	DE 29706481 U1	26-06-1997
GB 847747	A	14-09-1960	NONE	
WO 0042872	A	27-07-2000	GB 2346581 A AU 3066600 A WO 0042872 A1	16-08-2000 07-08-2000 27-07-2000
GB 2323015	A	16-09-1998	NONE	