



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
19.12.2007 Bulletin 2007/51

(51) Int Cl.:
A47G 9/02 (2006.01)

(21) Application number: **07109024.5**

(22) Date of filing: **28.05.2007**

(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 MT NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(71) Applicant: **Cignus S.N.C. di Ceccato Adriano & C.**
35010 Massanzago PD (IT)

(72) Inventor: **CECCATO, Adriano**
35010, MASSANZAGO PD (IT)

(74) Representative: **Modiano, Micaela Nadia et al**
Dr. Modiano & Associati SpA
Via Meravigli 16
20123 Milano (IT)

(30) Priority: **15.06.2006 IT PD20060245**

(54) **Double case for covering single side-by-side mattresses or internal structures of mattresses arranged side-by-side so as to provide the interior of a double mattress, and mattress using said case**

(57) A double case (10, 100, 200) for covering single mattresses (211) arranged side-by-side or internal structures (12) of mattresses (11) arranged side-by-side so as to provide the interior of a double mattress, the double case comprising a first central part (13) which surrounds both central portions (14) of the mattresses (211) or of the internal mattress structures (12) related to the region where the pelvis of the users is placed, and two second parts (15, 115), which are arranged side-by-side and mutually separate, each part surrounding the head portion

(16) of a respective mattress (211) or internal mattress structure (12) related to the region where the trunk of the users is placed. The second parts (15, 115), together with the corresponding head portions (16) of the mattresses (211) or internal mattress structures (12), are able to fold independently of each other for use with bases having adjustable tilt. The case (10, 100, 200) covers the side-by-side single mattresses (211) or the side-by-side internal mattress structures (12) at least on one face designed for supporting the user.

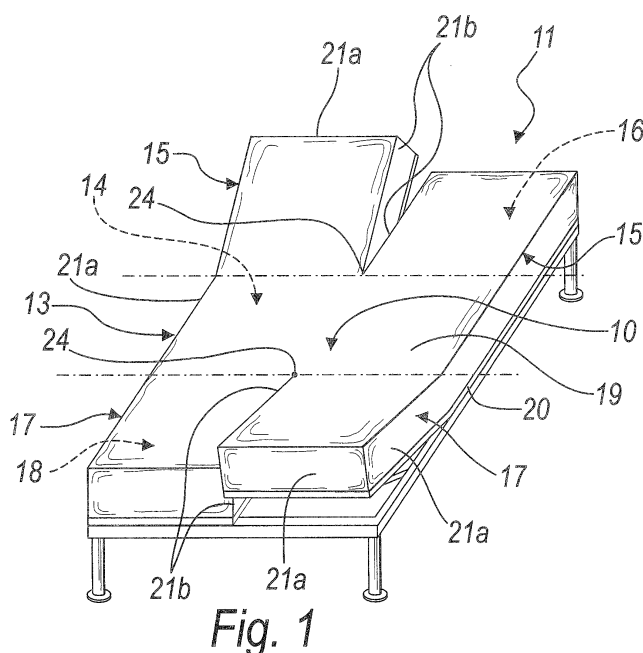


Fig. 1

Description

[0001] The present invention relates to a double case for covering single side-by-side mattresses (or interiors of single mattresses arranged side-by-side) so as to provide a double mattress to be used with nets of the type with adjustable inclination of the region designed to support the upper part of the trunk of the user and/or of the region designed to support the legs.

[0002] The present invention also relates to a double mattress which uses such double case.

[0003] As is known, there are no double mattresses which can be used with bases which can be adjusted in their inclination independently for each place.

[0004] Double mattresses are in fact provided by means of an internal structure (which can be composed in the most disparate manners and with the most disparate materials, from structures made of polyurethane materials, latexes, springs, or combinations thereof) which forms the two places of the bed and by an outer case which covers it and generally can be opened by means of zip fasteners in order to ventilate the internal structure.

[0005] When one wishes to adjust the inclination of a single place, this is substantially uncomfortable, since the continuity of the double mattress causes the adjacent place to tilt as well.

[0006] Therefore, to provide a bed with adjustable tilt it is necessary to use two single mattresses arranged side-by-side, so that they can be tilted independently of each other.

[0007] However, the two side-by-side mattresses tend to move mutually apart, thus forming a dividing hollow, which is particularly annoying in the central part of the bed (the part related to pelvis support).

[0008] Moreover, in order to turn the bed formed by two side-by-side mattresses into a double bed it is necessary to use a double mattress covering sheet, which tends to make the surface of the bed continuous; during the independent tilting of one place, the sheet tends to deform in the region of the place that is not tilted (or differently tilted), thus leading to a reduction in the comfort of the place.

[0009] The aim of the present invention is to provide a double case for covering single mattresses arranged side-by-side (or interiors of single mattresses arranged side-by-side) so as to provide a double mattress which solves the problems linked to use with bases having an adjustable tilt.

[0010] Within this aim, an object of the present invention is to provide a double case for covering single mattresses arranged side-by-side (or interiors of single mattresses arranged side-by-side) so as to provide a double mattress to be used with bases of the type with adjustable tilt which does not allow to form significant hollows at least in the central part of the bed.

[0011] Another object of the present invention is to provide a "bottom" double sheet which can be used conveniently with single mattresses in bases having an adjust-

able tilt or with a double mattress which uses a case according to the invention.

[0012] This aim and these and other objects, which will become better apparent hereinafter, are achieved by a double case for covering single mattresses arranged side-by-side or internal structures of mattresses arranged side-by-side so as to provide the interior of a double mattress, characterized in that it comprises a first central part which surrounds both central portions of said mattresses or of said internal mattress structures related to the region where the pelvis of the users is placed, and two second parts, which are arranged side-by-side and mutually separate, each part surrounding the head portion of a respective mattress or internal mattress structure related to the region where the trunk of the users is placed, said second parts, together with the corresponding head portions of said mattresses or internal mattress structures, being able to fold independently of each other for use with bases having adjustable tilt, said case covering said side-by-side single mattresses or said side-by-side internal mattress structures, at least on one face designed for supporting the user.

[0013] Advantageously, the invention also comprises a double mattress which is constituted by two internal structures, each of which forms a single place, which are arranged side-by-side and are both covered externally by said double case.

[0014] Further characteristics and advantages of the invention will become better apparent from the following detailed description of a preferred but not exclusive embodiment thereof, illustrated by way of non-limiting example in the accompanying drawings, wherein:

Figure 1 is a schematic perspective view of a double bed constituted by a base of the type with adjustable tilt and of a mattress according to the invention;

Figure 2 is a schematic plan view of the mattress of Figure 1, illustrating in broken lines the arrangement of zip fasteners for opening the case of the mattress; Figure 3 is a schematic plan view of a mattress with a case according to the invention, which can be tilted only in the region designed to support the trunk of a user, showing in broken lines the arrangement of zip fasteners for opening the case;

Figure 4 is a schematic transverse sectional view of the mattress of Figure 2, taken along the line IV-IV; Figure 5 is a schematic transverse sectional view of the mattress of Figure 2, taken along the line V-V; Figure 6 is a schematic perspective view of two single mattresses arranged side-by-side and rigidly coupled by means of a case according to the invention, which is a variation with respect to the one of the preceding figures.

[0015] It is noted that anything found to be already known during the patenting process is understood not to be claimed and to be the subject of a disclaimer.

[0016] With reference to the figures, a double case ac-

cording to the invention is generally designated by the reference numeral 10.

[0017] The double case 10 constitutes, in this example, the outermost part of a mattress, generally designated by the reference numeral 11, to be used on bases of the type with adjustable tilt of the region designed to support the upper part of the trunk of the user and of the region designed to support the legs.

[0018] The mattress 11 is composed, as shown schematically in Figures 4 and 5, of two internal structures 12 of a known type arranged side-by-side, each of which forms a single place, and by the double case 10, which covers externally both of the internal structures 12.

[0019] As clearly shown in Figure 1, the double case 10 comprises a first central part 13, which wraps around both central portions 14 of the internal structures 12 related to the region where the pelvis of the user is placed, and two second parts 15 which are arranged side-by-side and are mutually separate, each wrapping around the head portion 16, related to the region where the trunk of the user is arranged, of a corresponding internal structure 12.

[0020] Further, the double case 10 also comprises two third parts 17 which are arranged side-by-side and are mutually separated; each third part surrounds the tail portion 18 (the figures do not show a cross-section of said third parts, since it is substantially similar to the second parts 15 shown in cross-section in Figure 5), related to the region where the feet of the user are arranged, of a respective internal structure 12.

[0021] In particular, the case 10 is constituted by an upper face 19, a lower face 20 and sides for joining the upper face 19 and the lower face 20.

[0022] Such sides are divided into outer sides 21a, related to the quadrangular contour formed by both of the internal structures 12 arranged side-by-side, and inner sides 21b, related to the region of separation 22 of the two second side-by-side parts 15 and third parts 17 of the case 10.

[0023] The inner sides 21b of the second parts 15 or third parts 17 are mutually joined along a substantially vertical joining line 24 so as to delimit in practice the borders for separating the second or third parts 15 and 17 with the first central part 13 that wraps around both internal structures 12, thus forming the tilting region of the mattress.

[0024] Advantageously, at the inner sides 21b the case is provided externally with material for reinforcement against friction, so as to ensure a longer life of the case, in view of the continuous contact of the inner sides.

[0025] In order to allow to remove the case from the mattress 11, opening means, such as for example two zip fasteners, are provided along the perimetric edges 25 of the case 10 with respect to the upper face 19 or lower face 20 (or both).

[0026] In particular, in this exemplary embodiment there is a first zip fastener 27 (shown in dashes in Figure 2), and a second zip fastener 28 (shown in dot-and-dash

lines in Figure 2), each arranged along the entire external border portion (for example of the upper face) of a single place of the mattress.

[0027] Each zip fastener 27 or 28 extends from the joining line 24 along the entire corresponding inner side 21b of the second part 15 (or, equivalently, the third part 17) and therefore on the border of all the outer sides of the corresponding place, to the corresponding inner side of the third part 17 (or second part 15).

[0028] In Figure 2, the distance between the portions of the first and second zip fasteners 27 and 28 related to a common region of separation between the second or third parts 15 or 17 is enlarged for reasons of graphic clarity: actually, said zip fasteners are in practice in contact.

[0029] Figure 3 illustrates a different embodiment of a mattress, designated by the reference numeral 111, which is provided with a case 100 with only the two second side-by-side parts 115 related to the regions where the trunk of the user is placed, but not third parts for the tilt related to the region where the legs of the user are placed.

[0030] In this case, there are still two fasteners 127 and 128, of which a first one 127 (shown in dashes) protrudes from an intermediate position 129 of the border of the outer side 121a related to the second part 115 of a place along all the outer sides 121a up to a symmetrical intermediate position 129 on the border of the outer side 121a related to the second part 115 of the other place.

[0031] A second zip fastener lies between the intermediate positions 129 formed on the outer sides 121a of the second parts 115, passing through the inner sides 121b.

[0032] It is evident that the case 10 (or 100) can be used not only to provide a double mattress which is composed internally of two internal single structures arranged side-by-side, but also to rigidly couple in practice two single mattresses (each constituted by its own internal structure and its own outer case) arranged side-by-side so as to provide in practice a double mattress to be used with bases having an adjustable tilt.

[0033] Figure 6 is a bottom view of a different embodiment of a case according to the invention, which covers two single mattresses arranged side-by-side.

[0034] As can be seen, the case, again designated generally by the reference numeral 200, has a lower face 220 which is constituted by a perimetric band 201 which covers only the peripheral region of the two mattresses 211.

[0035] Elastic borders 202 are associated with the perimetric band 201 in order to keep the case stretched on the mattresses.

[0036] It is evident that this embodiment of the case 200, if it is constituted by a single layer of fabric, can also be considered as a double "bottom" sheet to be used with a double mattress such as the one described (which is composed of the case 10 or 100 which wraps around two internal structures 12 arranged side-by-side or the

case 10 or 100 which wraps around two single mattresses arranged side-by-side) or also with two simple single mattresses arranged side-by-side in order to allow its use on bases having an adjustable tilt.

[0037] In practice it has been found that the invention thus described solves the above mentioned problems linked to the use of double mattresses on bases with adjustable tilt.

[0038] In particular, the present invention provides a double case which allows the composition of a double mattress or the connection of two single mattresses in the form of a double mattress which can be used with bases having an adjustable tilt, since independent tilting for each place of the parts related to the support of the trunk and/or of the legs of the user is allowed.

[0039] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims; all the details may further be replaced with other technically equivalent ones.

[0040] In practice, the materials employed, so long as they are compatible with the specific use, as well as the dimensions, may be any according to requirements and to the state of the art.

[0041] The disclosures in Italian Patent Application No. PD2006A000245 from which this application claims priority are incorporated herein by reference.

[0042] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A double case (10, 100, 200) for covering single mattresses (211) arranged side-by-side or internal structures (12) of mattresses (11) arranged side-by-side so as to provide the interior of a double mattress, **characterized in that** it comprises a first central part (13) which surrounds both central portions (14) of said mattresses (211) or of said internal mattress structures (12) related to the region where the pelvis of the users is placed, and two second parts (15, 115), which are arranged side-by-side and mutually separate, each part surrounding the head portion (16) of a respective mattress (211) or internal mattress structure (12) related to the region where the trunk of the users is placed, said second parts (15, 115), together with the corresponding head portions (16) of said mattresses (211) or internal mattress structures (12), being able to fold independently of each other for use with bases having adjustable tilt, said case (10, 100, 200) covering said side-by-side single mattresses (211) or said side-by-side internal

mattress structures (12), at least on one face designed for supporting the user.

2. The double case according to claim 1, **characterized in that** it comprises two third mutually separate parts arranged side-by-side (17), each part wrapping around the tail portion (18) of a respective mattress (211), or internal mattress structure (12), related to the region where the legs of a user are placed.
3. The double case according to one of the preceding claims, **characterized in that** it is constituted by an upper face (19), a lower face (20) and sides (21a, 21b) for connecting said upper face (19) and said lower face (20), said sides (21a, 21b) being divided into outer sides (21a) related to the quadrangular shape formed by both of said mattresses (211), or internal mattress structures (12), and into inner sides (21b), related to the region of separation of said two second parts arranged side-by-side (15, 115), said inner sides (21b) of said second parts (15, 115) being mutually joined along a connecting line (24) which is substantially vertical so as to delimit in practice the borders for separation between said second parts (15) with said first central part (13).
4. The double case according to claims 2 and 3, **characterized in that** it comprises inner sides (21b) also for said two third parts arranged side-by-side (17) which relate to the region where the legs of a user are placed, said inner sides (21b) related to said third parts (17) being mutually joined along a substantially vertical connecting line (24) so as to delimit in practice the borders for separation between said third parts (17) with said first central part (13).
5. The double case according to claim 3 or 4, **characterized in that** said lower face (20) and said upper face (19) with said sides (21a, 21b) cover completely the surface of said mattresses (211), or of said internal mattress structures (12).
6. The double case according to claims 3 or 4, **characterized in that** said case (200) has a lower face (220), which is constituted by a perimetric band (201) which covers only the peripheral region of the two single mattresses (211) arranged side-by-side.
7. The double case according to claim 6, **characterized in that** elastic borders (202) are associated with said perimetric band (201).
8. The double case according to claims 3 or 4, **characterized in that** it comprises, at both of said mutually opposite inner sides (21b) of said second parts (15, 115) and/or said third parts (17) arranged side-by-side, material for reinforcement against friction.

9. The double case according to one or more of the preceding claims, **characterized in that** means for opening said case (10, 100) are provided along at least part of their perimetric borders (25). 5
10. The double case according to one or more of the preceding claims 3 to 9, **characterized in that** said means for opening said case are constituted by at least one zip fastener (27, 28, 127, 128) for joining the borders (25) of said outer sides (21a) and inner sides (21b) with the borders of said upper face (19) and/or lower face (20). 10
11. The double case according to claims 4 and 10, **characterized in that** it comprises a first said zip fastener (27) and a second said zip fastener (28), each arranged along the entire outer border portion of a single place of the mattress or internal structure (11), each of said zip fasteners (27, 28) extending from said joining line (24) along all of the corresponding said inner side (21b) of the second part (15) and then on the border of all of the outer sides (21 a) of the corresponding place up to the corresponding inner side (21b) of said third part (17). 15
20
25
12. The double case according to claims 3 and 10, **characterized in that** it comprises two of said zip fasteners (127, 128), of which a first fastener (127) runs from an intermediate position (129) of the border of said outer side (121 a) related to said second part (115) of a place along all of said outer sides (121a) up to a symmetrical intermediate position (129) on the border of the outer side (121 a) related to said second part (115) of the other place, and a second said zip fastener (128) runs between said intermediate positions (129) formed on the outer sides (121a) of said second parts (115), passing through said inner sides (121b). 30
35
13. A double mattress, **characterized in that** it comprises two internal side-by-side structures (12), each of which forms a single place, said structures being both covered externally by a double case (10, 100) according to one or more of the preceding claims. 40
45

50

55

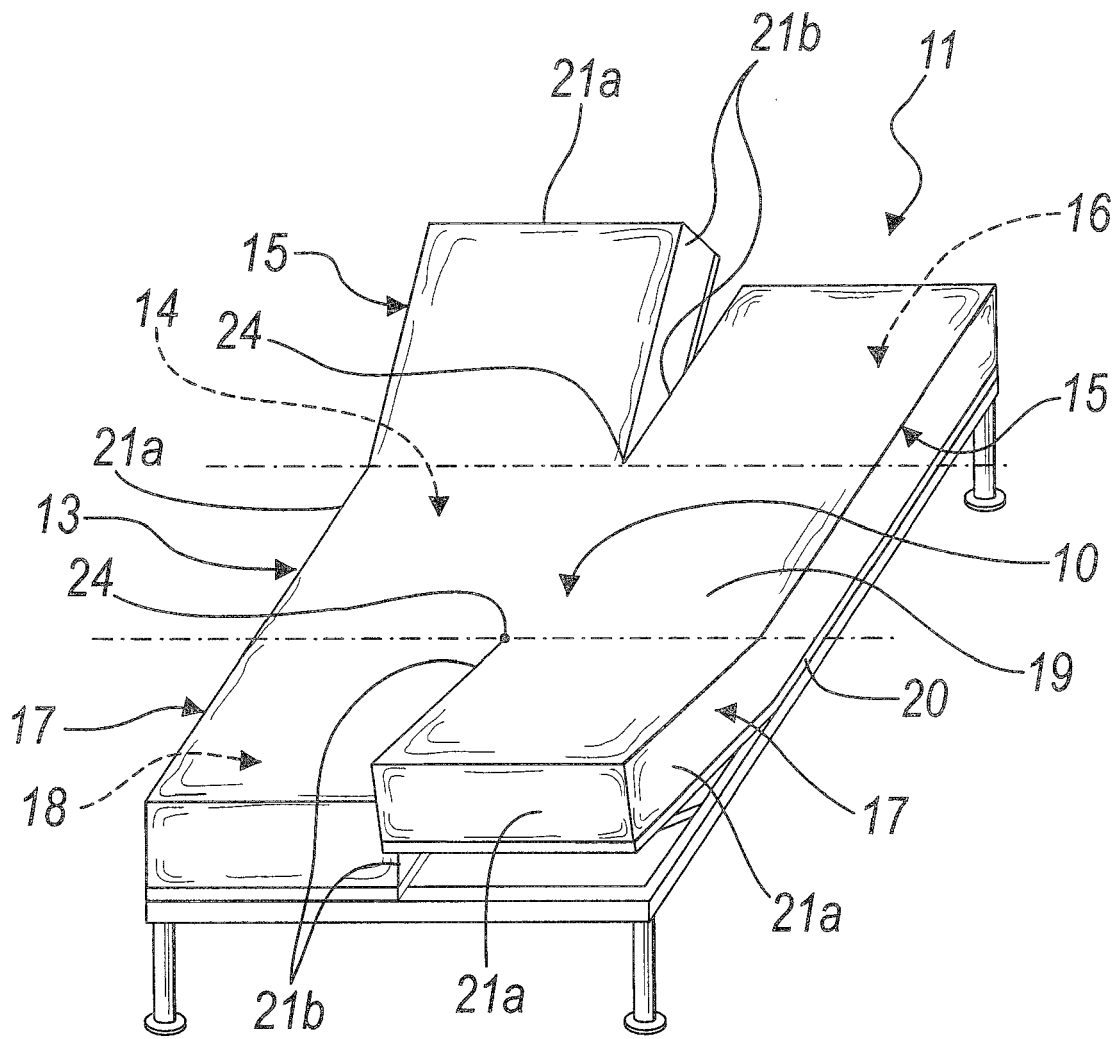
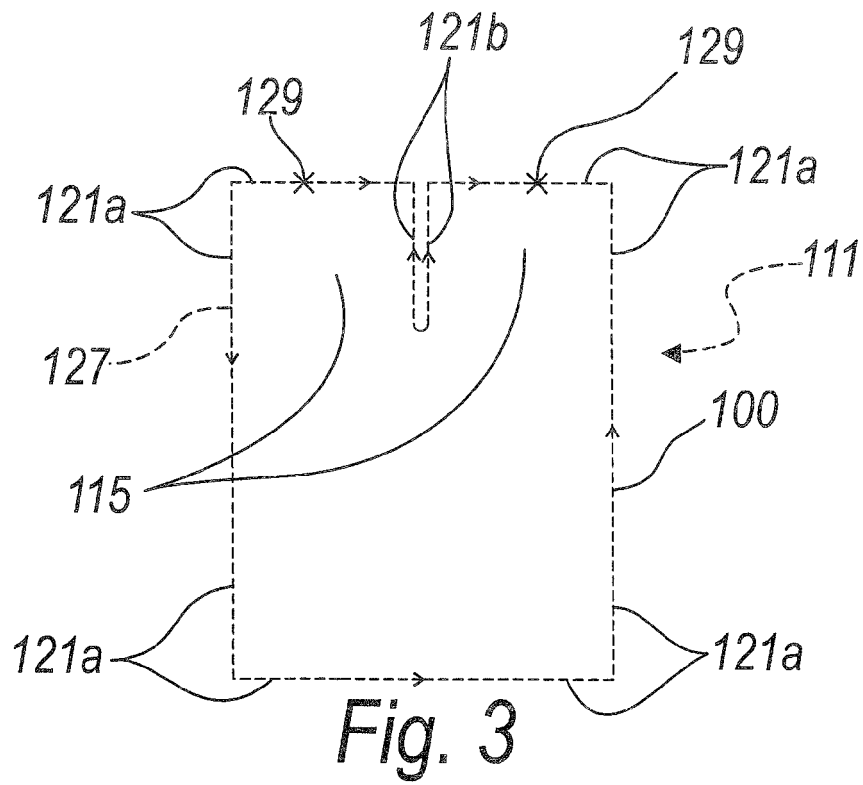
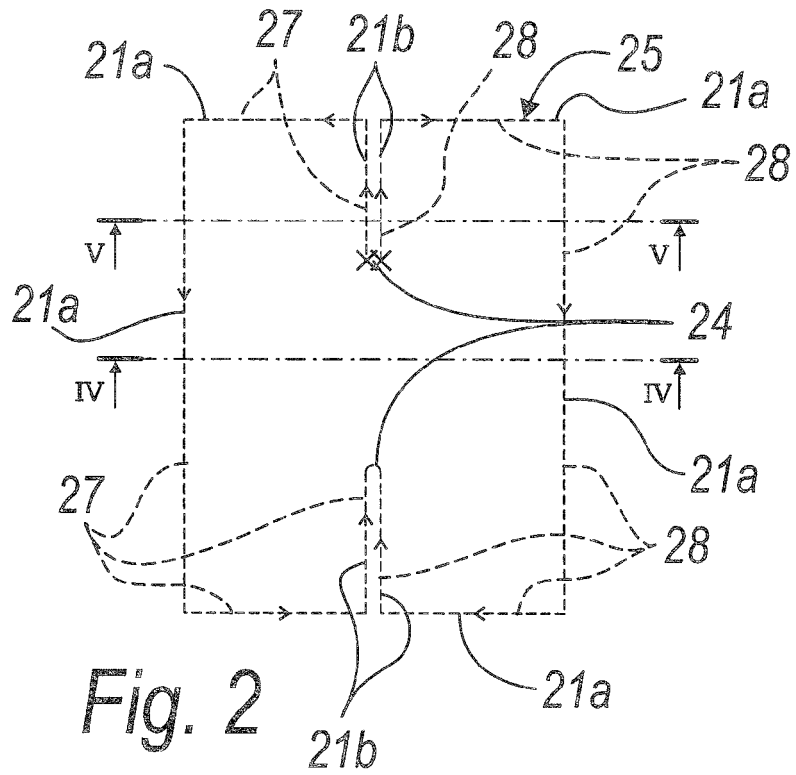
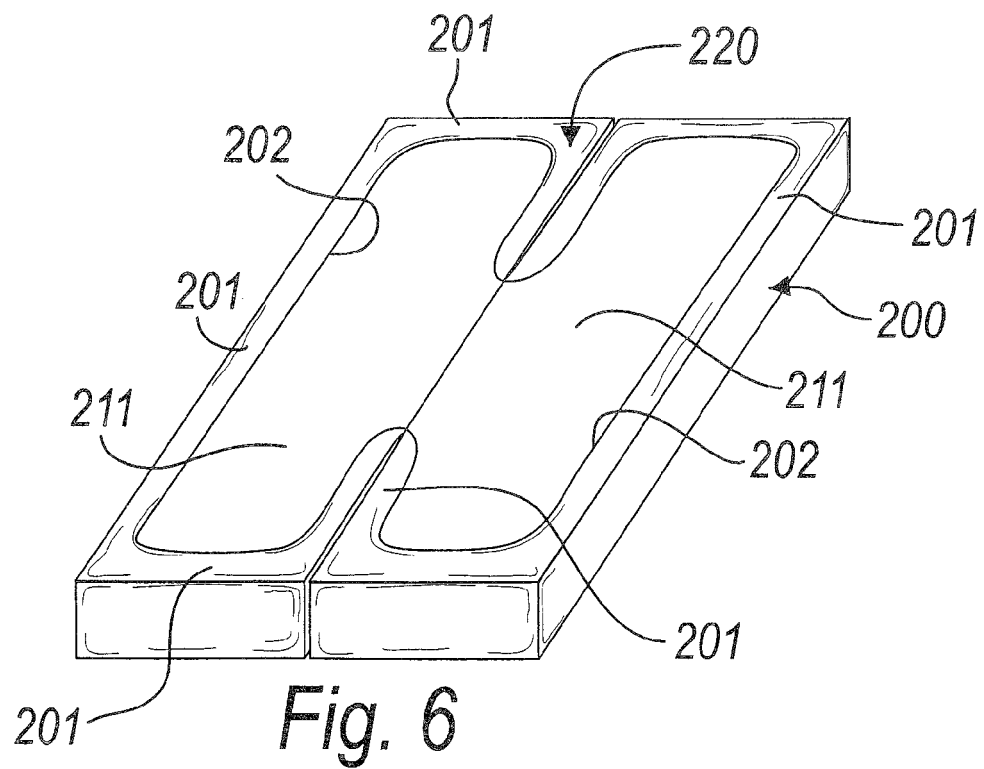
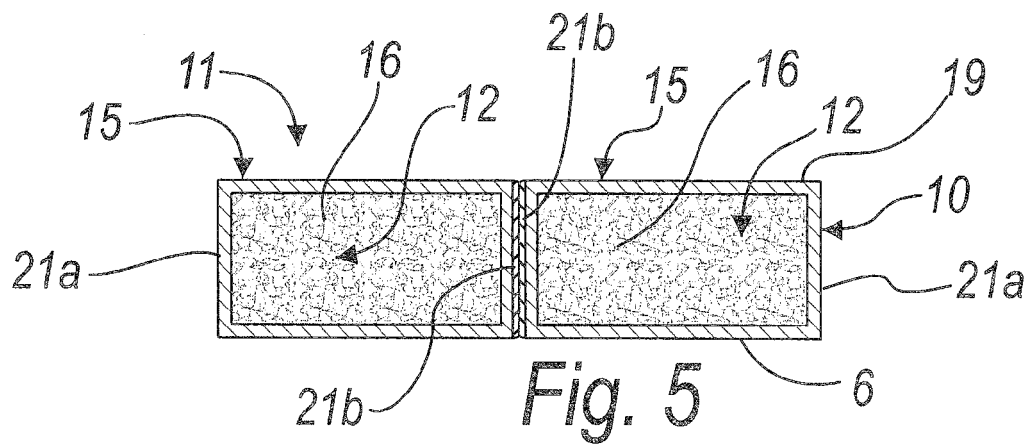
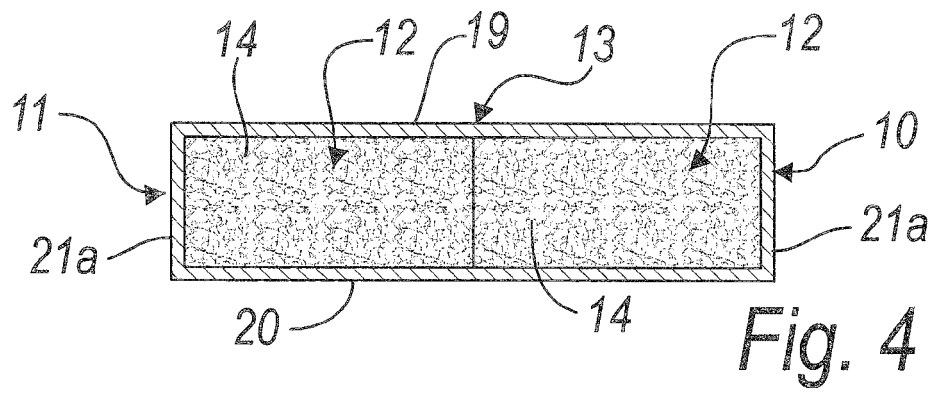


Fig. 1







European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 10 9024

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	BE 1 004 044 A3 (VERHAEGEN A & L) 15 September 1992 (1992-09-15) * claims 1,8; figures *	1-4,6-8, 13	INV. A47G9/02
A	-----	5,9-12	
X	FR 2 618 660 A (HACOT COLOMBIER [FR]) 3 February 1989 (1989-02-03) * claims; figures *	1-4,6-8, 13	
X	-----		
X	US 3 795 019 A (FRAGAS R) 5 March 1974 (1974-03-05) * claims; figures *	1	
A	-----		
A	US 2004/139552 A1 (WALTERS ROBERT G [US]) 22 July 2004 (2004-07-22) * paragraph [0069]; figures 13,14 *	5,9-12	

			TECHNICAL FIELDS SEARCHED (IPC)
			A47G A47C
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 18 October 2007	Examiner Amghar, Norddin
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 (P04001)

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

EP 07 10 9024

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.

18-10-2007

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
BE 1004044	A3	15-09-1992	NONE
FR 2618660	A	03-02-1989	NONE
US 3795019	A	05-03-1974	NONE
US 2004139552	A1	22-07-2004	NONE

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- IT PD20060245 A [0041]