



(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
19.07.2006 Bulletin 2006/29

(51) Int Cl.:
A47C 4/54 (2006.01)

(21) Application number: **06250116.8**

(22) Date of filing: **11.01.2006**

(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

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(30) Priority: **12.01.2005 GB 0500541**

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(54) Inflatable or partially inflatable item of furniture

(57) An item of furniture (2) that is convertible between two positions, preferably a couch or chair and a bed. The item of furniture (2) comprises two or more por-

tions (4B) that can be folded together to form a couch or chair, and unfolded into a relatively flattened position to form a bed. At least part of the furniture item is inflatable.

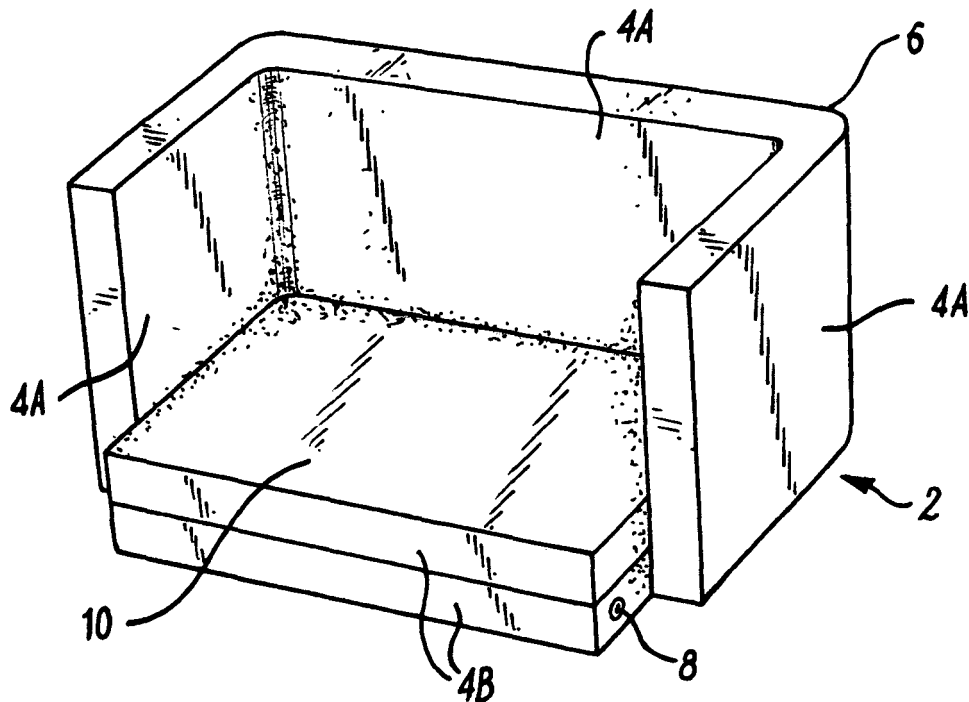


FIG. 1a

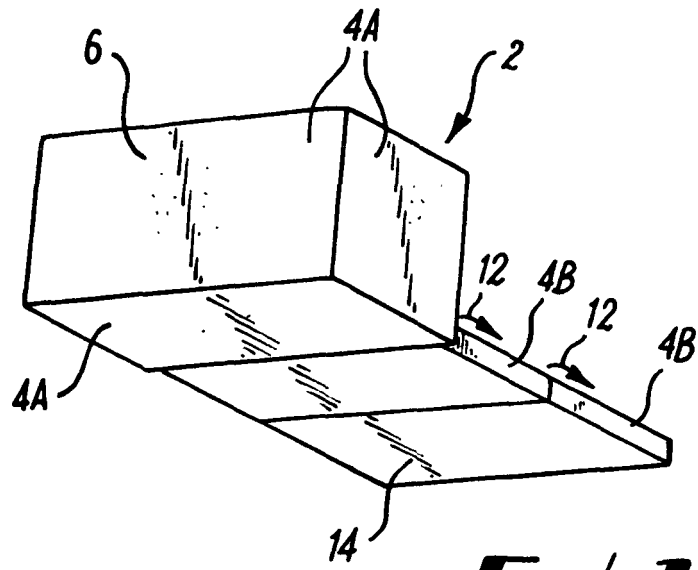


FIG. 1b

Description

[0001] The invention to which this application relates is an item of furniture of a form which is wholly or partially inflatable. Furthermore, the invention relates to the ability for the configuration of the item of furniture to be changed so as to allow the item of furniture to be used in a number of forms.

[0002] The item of furniture will now be described with reference to the same in the form of a chair but it should be appreciated that this, while it is a preferred embodiment, is not meant to restrict the application from other forms of furniture.

[0003] The provision of an item of furniture formed of an inflatable cavity or cavities is known and there are many different designs of single seat chairs which can be inflated. The known form of designs tend to be relatively bulky in that the arm rests and back rests, and indeed the base, tend to be relatively large, when inflated. This in itself causes a problem in that there may be insufficient space in a room to accommodate the chair when inflated. A further problem with the size of the known designs is that the same tend to be unsuitable for use by children as the size of the chair, when inflated, means that the child is of an insufficient weight or size so as to present a risk of the chair toppling over when a child is on the same.

[0004] The aim of the present invention is to provide an item of furniture which is of a design which allows the same to be adapted and which can also be dimensioned to be particularly attractive for use by children.

[0005] In a first aspect of the invention, there is provided an item of furniture, said item of furniture formed from a series of portions, said portions connected together, with at least one of the portions provided to be inflatable and wherein at least one of the portions is movable so as to allow the configuration of the item to be altered to provide at least two different configurations for use of the item of furniture.

[0006] In one embodiment, the at least one portion which is movable, is inflatable.

[0007] In one embodiment, a plurality of portions are movable with respect to the item of furniture to allow the change in configuration of the item, and typically those portions which are movable are inflatable.

[0008] In one embodiment, the item of furniture includes a base formed from a series of interconnected portions, which portions remain in the same relative positions during use in any of the configurations. In one embodiment, the portions which are used to form the base are inflatable. In an alternative embodiment, the portions used to form the base are formed from other material such as portions of foam, rubber or another resilient material.

[0009] By providing the item of furniture with at least some portions which are inflatable, so the storage size of the item can be reduced and safety risks involved when using foam or other deformable materials, can be avoid-

ed or reduced.

[0010] When foam or other deformable materials are used to form portions of the item, then typically the same are enclosed within an envelope or housing, typically of fabric, which has a particular appearance to suit the intended use of the item. In one embodiment, the inflatable portions are enclosed within an envelope or housing of fabric when the same are inflated, thereby providing added comfort and/or improved appearance of the item.

[0011] In one embodiment, the item of furniture is movable between a first configuration in which the same can be used as a seat for one or more persons and a second configuration in which portions are relatively unfolded to a flattened condition to form a bed. In one embodiment, when the portions are unfolded, the same lie in-line on the surface which supports the item as a whole.

[0012] In a further aspect of the invention, there is provided an item of furniture in the form of a chair, said chair formed from a plurality of connected portions wherein at least one of the portions is formed to be inflatable to an in-use condition. In one embodiment, the item of furniture is a chair and includes a base which is formed from portions of foam or other deformable material which has a resilient characteristic, and a sitting area which is formed from one or more inflatable portions.

[0013] In an alternative embodiment, all of the portions of the chair are provided to be inflatable. In an alternative embodiment all of the portions of the chair are formed from a resilient material

[0014] Specific embodiments of the invention are now described with reference to the accompanying drawings, wherein:-

Figures 1a and b illustrate a first embodiment of an item of furniture in accordance with the invention in a first configuration;

Figures 2a-c illustrate the item of furniture of Figure 1 in a second configuration; and

Figure 3a and b illustrate an item of furniture in accordance with a further aspect of the invention.

[0015] Referring firstly to Figures 1a-b, there is illustrated an item of furniture 2. The item is formed from a series of portions 4 which are interconnected so as to allow the same to be used in the configuration shown in Figure 1a which is in the form of a seat and the configuration of Figure 1b in the form of a bed. In this embodiment, the portions 4A are formed of foam or another deformable material each portion held within an envelope or housing. These portions 4A are interconnected to form the base 6 of the item of furniture. The further portions 4B are inflatable, each portion defined by an outer layer or layers of material which define a cavity into which at least one valve 8 is connected to allow the entry and exit of air therefrom for the inflation or deflation of the same. In this embodiment, the portions 4B form the seating area

10 of the item.

[0016] In accordance with the invention, the item can be moved to the second configuration, as shown in Figure 1b, wherein the portions 4A which form the base 6, are held in the same relative positions. However in order to achieve the second configuration the portions 4B are moved as indicated by arrows 12 in Figure 1b. This second configuration allows the item to take the form of a bed 14, with the base 6 forming the headboard of the bed.

[0017] In a further embodiment of the invention, illustrated in Figures 2a-c, all of the portions 4 are formed to be inflatable. The portions 4 can be moved between the first, chair, configuration as shown in Figure 2a and the second, bed, configuration as shown in Figures 2b-c. In this embodiment, there is provided a further advantage that the item can be moved to a completely flattened condition by deflation of all of the portions thereby allowing reduced storage space to be required both for the purposes of retail and subsequent storage.

[0018] In one embodiment, certain or all of the portions of the item can be interconnected to allow air to pass therethrough during the deflation and inflation thereby allowing a reduced number of valves to be provided on the apparatus.

[0019] Figures 3a-b illustrate a further aspect of the invention wherein there is provided an item of furniture in the form of a single seat chair 20 which, in this case, need not be convertible to a further configuration but still in Figure 3b has the advantages of each of the portions being provided to be inflatable.

[0020] It should be appreciated that the items of furniture as herein described can be provided of a suitable scale for a selected use. However it is apparent that the item of apparatus is particularly useful for use by children and can be provided of a size which allows the same to be structurally safe and stable for use by children while still ensuring that the item can be moved between the first and second configurations.

[0021] The ability to convert the same between the first and second configurations makes the item particularly attractive for use in, for example, a child's bedroom such that in the first configuration the item can be used as a chair and in a second configuration can be used as somewhere for a child to sleep such as, for example, if a child has a friend to stay over then the item is convertible to provide sleeping space.

Claims

1. An item of furniture comprising two or more connected portions, wherein at least one of said portions is inflatable, and wherein at least one of said portions is movable between at least two positions such that the item of furniture has at least two possible configurations.
2. An item of furniture as claimed in claim 1, wherein

said at least one portion that is movable is also inflatable.

3. An item of furniture as claimed in claim 1, further comprising a plurality of portions that are movable.
4. An item of furniture as claimed in claim 3, wherein the plurality of portions that are movable are also inflatable.
5. An item of furniture as claimed in claim 1, further comprising a base formed from a series of interconnected portions.
6. An item of furniture as claimed in claim 5, wherein the series of interconnected portions remain in the same position regardless of the configuration of the item of furniture.
7. An item of furniture as claimed in claim 6, wherein the series of interconnected portions is inflatable.
8. An item of furniture as claimed in claim 6, wherein the series of interconnected portions is made from a deformable material.
9. An item of furniture as claimed in claim 1, further comprising an envelope that covers at least one of said portions.
10. An item of furniture as claimed in claim 9, wherein the envelope has an appearance that is compatible with the intended use of the item of furniture.
11. An item of furniture as claimed in claim 1, wherein at least one of said configurations is a seat for one or more persons.
12. An item of furniture as claimed in claim 1 or 11, wherein at least one of said configurations is a bed.
13. An item of furniture is claimed in claim 12, wherein at least one of said portions is unfolded into a flattened position to form the bed.
14. An item of furniture as claimed in claim 13, said item of furniture positioned on a support surface, wherein at least two unfolded portions lie in a plane along the support surface.
15. An item of furniture for use as a chair, comprising two or more connected portions, wherein at least one of said portions is inflatable.
16. An item of furniture as claimed in claim 15, further comprising a base portion and a sitting portion.
17. An item of furniture as claimed in claim 16, wherein

the base portion comprises a deformable material and the sitting portion is inflatable.

- 18.** An item of furniture as claimed in claim 16, wherein both the base portion and the sitting portion are inflatable. 5
- 19.** An item of furniture as claimed in claim 16, wherein both the base portion and the sitting portion comprise a deformable material. 10

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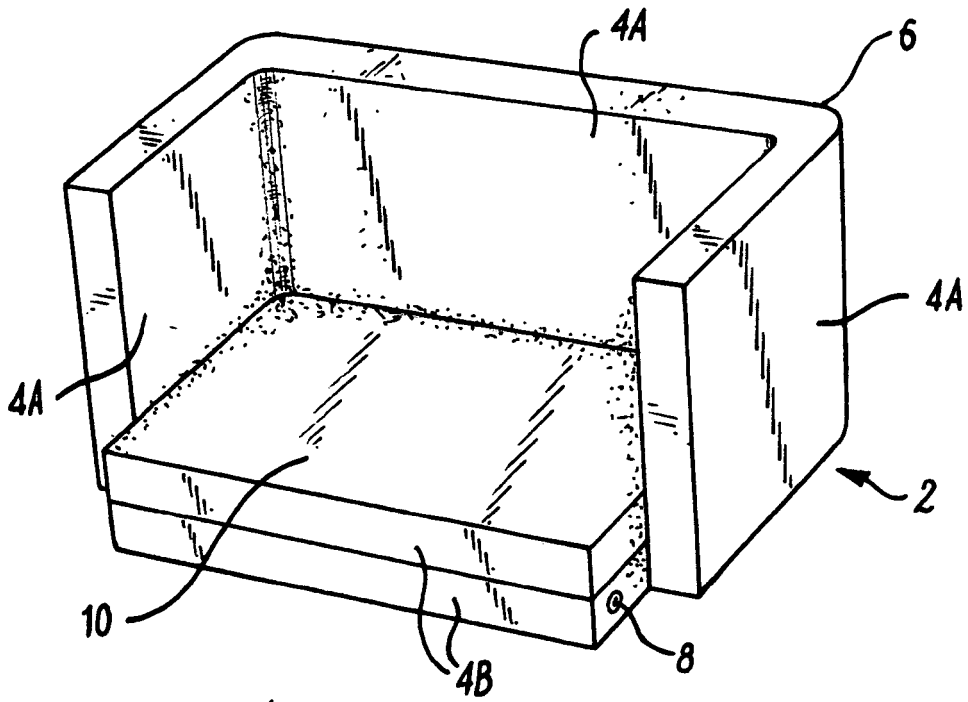


FIG. 1a

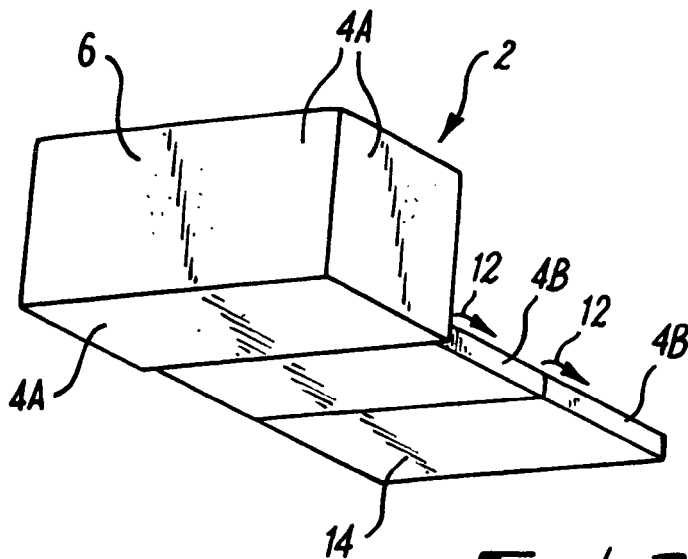


FIG. 1b

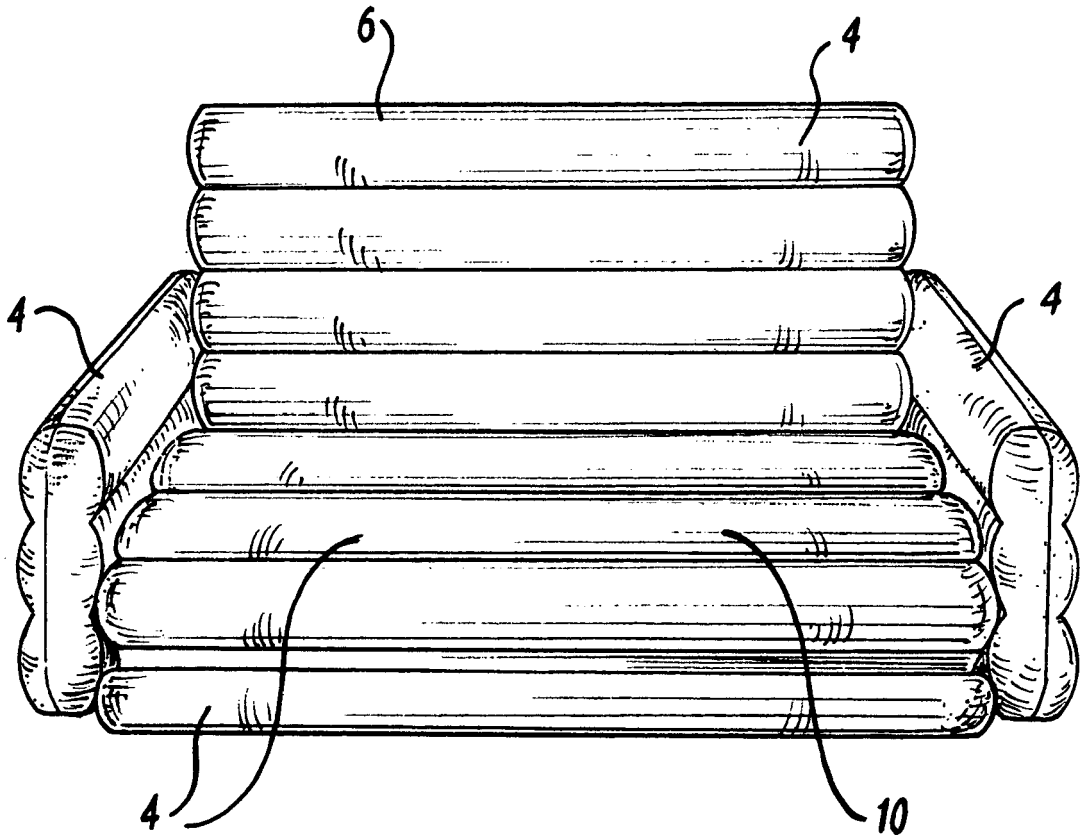


FIG. 2a

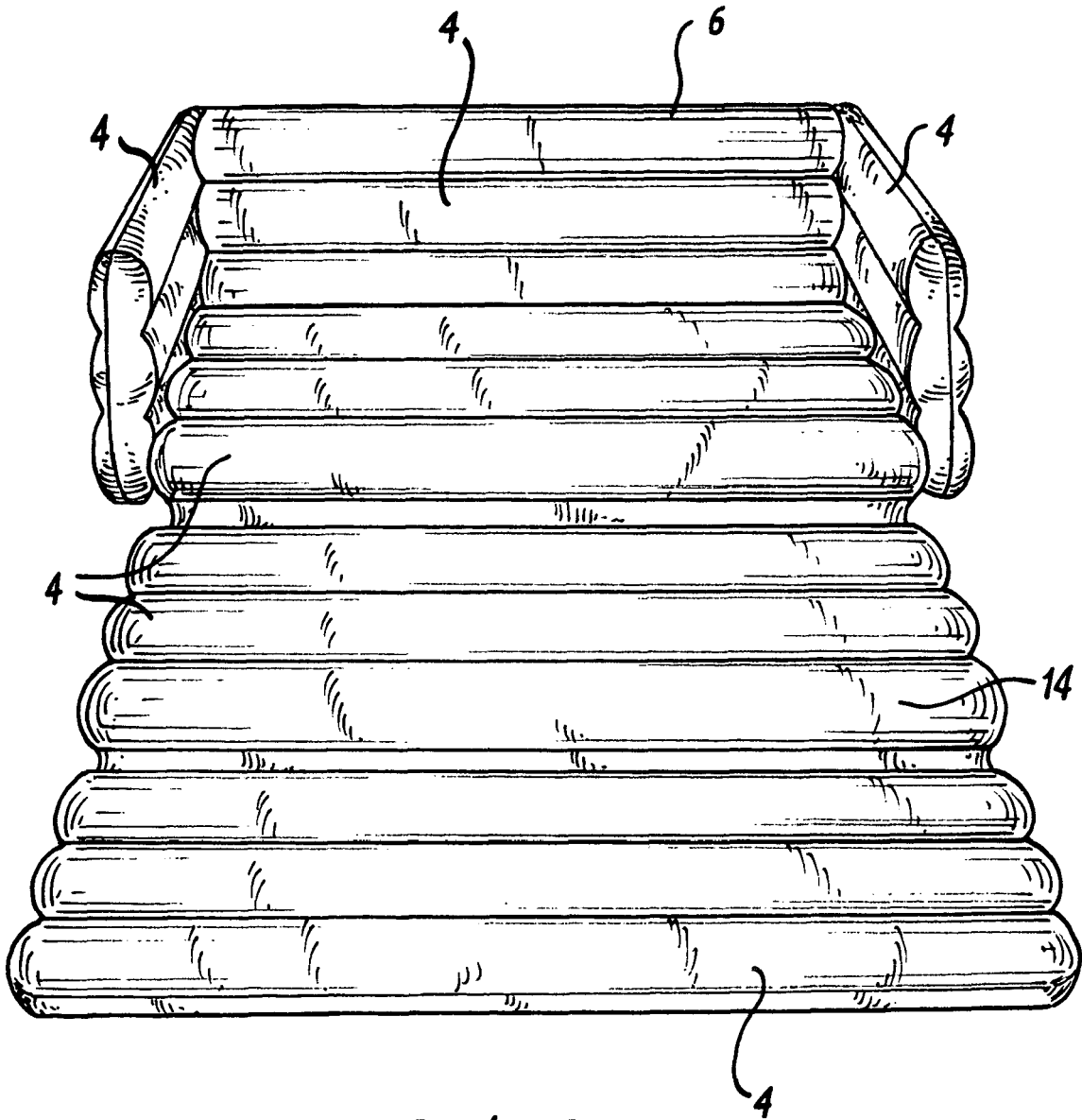


Fig. 2b

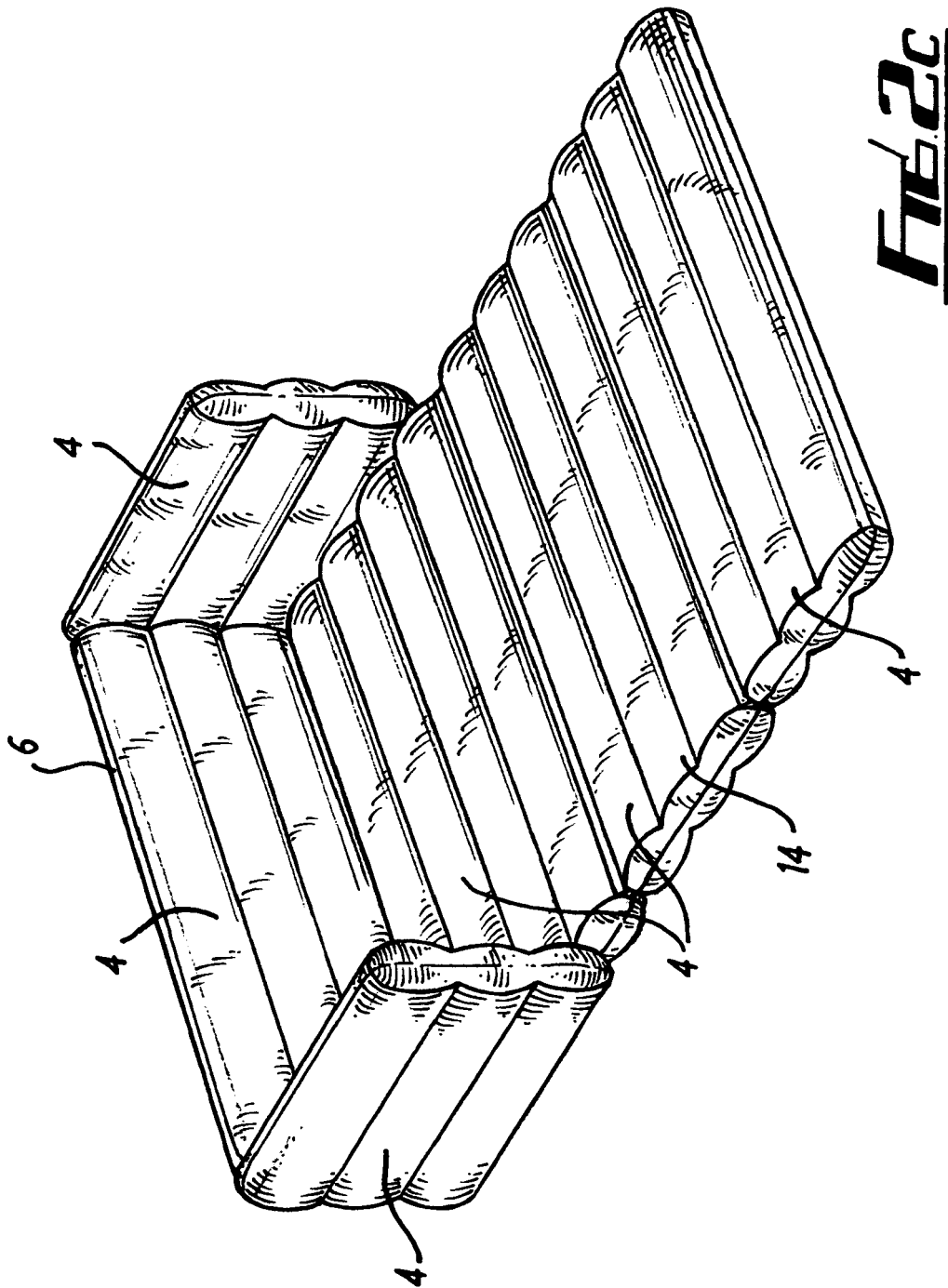


Fig. 2c

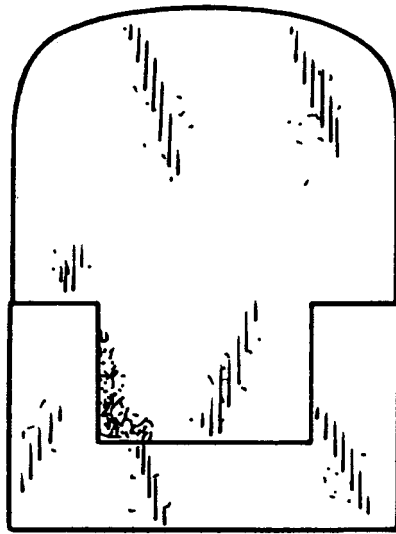


Fig. 3a

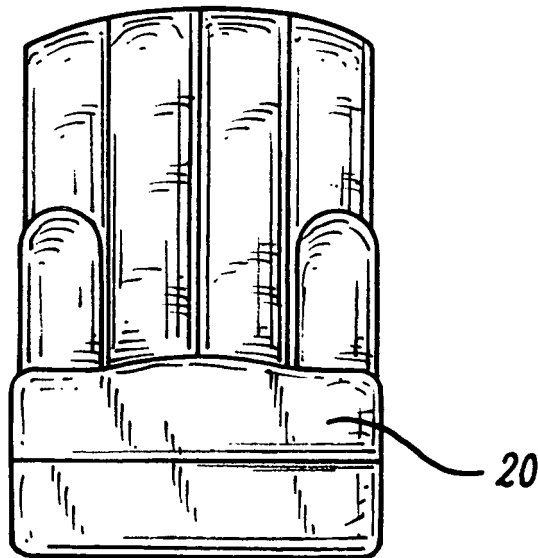


Fig. 3b



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	US D 434 243 S1 (DOUGLAS R. CASTO) 28 November 2000 (2000-11-28)	1-7, 11-16,18	INV. A47C4/54
Y	* the whole document *	8-10,17, 19	
X	----- FR 2 588 737 A (MORDACQ DIANE) 24 April 1987 (1987-04-24)	1,5,6, 8-10,15, 16	
	* page 2, lines 10-13; figures *		
Y	----- US 6 042 186 A (KOJIC ET AL) 28 March 2000 (2000-03-28)	9,10	
	* sentences 33-39; figures *		
Y	----- GB 2 147 202 A (* DUNLOP LIMITED) 9 May 1985 (1985-05-09)	8,17,19	
	* page 1, left-hand column, paragraph 2; figures *		

			TECHNICAL FIELDS SEARCHED (IPC)
			A47C A47D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 25 April 2006	Examiner Amghar, N
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p> <p>..... & : member of the same patent family, corresponding document</p>			

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EPO FORM 1503 03-02 (P04C01)

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

EP 06 25 0116

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
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25-04-2006

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FR 2588737	A	24-04-1987	NONE

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82