



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
26.11.2008 Bulletin 2008/48

(51) Int Cl.:
A47B 47/04 (2006.01)

(21) Application number: **08155933.8**

(22) Date of filing: **08.05.2008**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT
RO SE SI SK TR
Designated Extension States:
AL BA MK RS

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(30) Priority: **09.05.2007 IT BO20070338**

(54) **Piece of furniture**

(57) A piece of furniture (1; 21) is provided with at least three substantially vertical upright members (2) defining a substantially horizontal supporting surface (P1) limited laterally by a plurality of substantially horizontal

cross members (14a, 14b), each of which extends between two adjacent upright members (2), and is slidingly coupled to the relative upright members (2); a supporting panel (17) being mounted on the supporting surface (P1) between the cross members (14a, 14b).

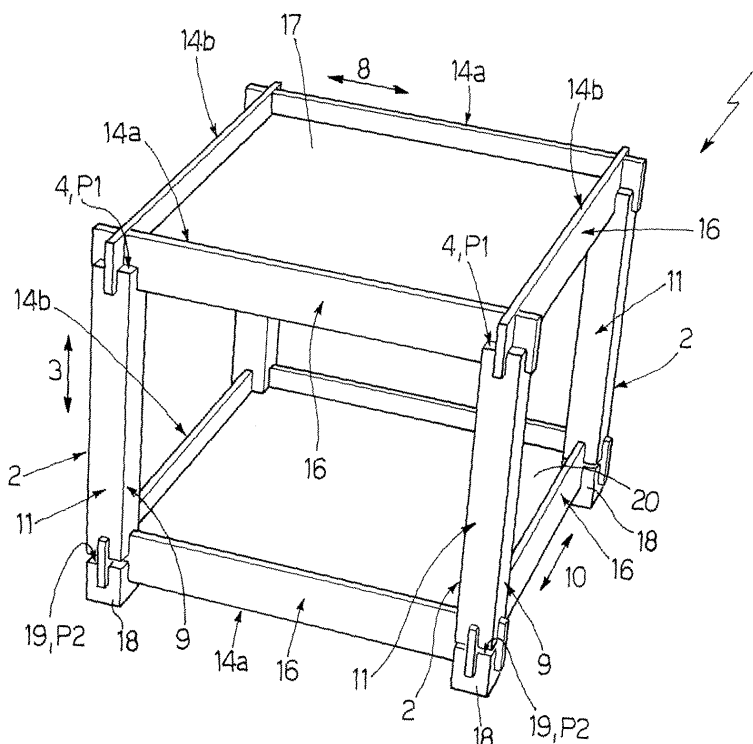


Fig.1

Description

[0001] The present invention relates to a piece of furniture.

[0002] In particular, the present invention relates to a piece of furniture of the type comprising at least three substantially vertical upright members joined together two by two by means of substantially horizontal connecting cross members fixed to said upright members, for example by means of relative fastening screws housed in respective holes obtained through the upright members and the cross members.

[0003] The piece of furniture also comprises a plurality of supporting members, which are housed in respective seats obtained in the upright members and/or in the cross members, and project from the relative seats to support at least one supporting panel mounted between said cross members.

[0004] The known pieces of furniture of the type described above have some drawbacks mainly deriving from the fact that manufacturing such pieces of furniture involves the use of fastening screws and supporting members, the creation of the relative holes and the relative seats, and relatively complex and expensive assembly operations.

[0005] It is an object of the present invention to provide a piece of furniture that overcomes the drawbacks described above and that is simple and inexpensive to manufacture.

[0006] According to the present invention there is provided a piece of furniture according to that set forth in the appended claims.

[0007] The present invention will now be described with reference to the attached drawings, illustrating a nonlimiting embodiment thereof, in which:

figure 1 is a perspective view of a preferred embodiment of the piece of furniture according to the present invention;

figure 2 is an exploded perspective view of the piece of furniture of figure 1; and

figure 3 is a perspective view of an alternative embodiment of the piece of furniture of figure 1.

[0008] With reference to figures 1 and 2, number 1 indicates as a whole a piece of furniture comprising, in this embodiment, four upright members 2 which are parallel to one another, each of which extends in a substantially vertical direction, has a substantially parallelepiped shape and a substantially square cross-section, and is limited by two end faces 4, 5 which are substantially flat and orthogonal to said direction 3, of which the face 4 is an upper face that is substantially in the same plane as the faces 4 of the other upright members 2 and the face 5 is a lower face that is substantially in the same place as the faces 5 of the other upright members 2.

[0009] Each upright member 2 comprises two upper cavities 6, 7 perpendicular to one another, which open

outwards in correspondence with the face 4, are arranged with their concavity facing upwards, are obtained in correspondence with intermediate points of said face 4, and are of substantially the same height measured in the direction 3.

[0010] The cavity 6 is obtained through the upright member 2 in a horizontal direction orthogonal to the direction 3, and opens outwards in correspondence with two flat side faces of the upright member 2 substantially orthogonal to said direction 8; while the cavity 7 is obtained through the upright member 2 in a horizontal direction 10 orthogonal to the directions 3 and 8, and opens outwards in correspondence with two flat side faces 11 of the upright member 2 substantially perpendicular to the faces 9 and to said direction 10.

[0011] The upright member 2 also comprises two lower cavities 12, 13 perpendicular to one another, which open outwards in correspondence with the face 5, are arranged with their concavity facing downwards, are obtained in correspondence with intermediate points of said face 5, and are of substantially the same height measured in the direction 3.

[0012] The cavity 12 is obtained through the upright member 2 in the direction 8, is parallel to the cavity 6, and opens outwards in correspondence with the faces 9; while the cavity 13 is obtained through the upright member 2 in the direction 10, is parallel to the cavity 7, and opens outwards in correspondence with the faces 11.

[0013] The upright members 2 are joined to one another both in correspondence with their upper extremities and in correspondence with their lower extremities by means of two groups of cross members 14 each comprising four respective substantially flat cross members 14, two of which (hereinafter indicated with 14a) are mounted parallel to the direction 8 and two (hereinafter indicated with 14b) are mounted parallel to the direction 10 to laterally limit a supporting surface P1 defined by the upper faces 4 of the upright members 2.

[0014] Each cross member 14a is slidably coupled to the cavities 6 or 12 of two relative upright members 2 in the direction 3, projects from the relative cavities 6, 12 in the direction 3 and is blocked in the relative cavities 6, 12 in the direction 10; while each cross member 14b is slidably coupled to the cavities 7 or 13 of two relative upright members 2 in the direction 3, projects from the relative cavities 7, 13 in the direction 3, and is blocked in the relative cavities 7, 13 in the direction 8.

[0015] Each cross member 14a, 14b is provided with two relative lateral slits 15, each of which has one extremity open outwards in the direction 3, and opens outwards in correspondence with two bigger lateral faces 16 of said cross member 14a, 14b, and slidably engages a corresponding slit 15 of an adjacent cross member 14b, 14a in the direction 3. In this way, the cross members 14a are blocked in the relative cavities 6, 12 in the direction 8, and the cross members 14b are blocked in the relative cavities 7, 13 in the direction 10.

[0016] With regard to that set forth above, it is important to point out that the height of each slit 15, measured parallel to the direction 3, is substantially equal to half of the height of a cross member 14a, 14b, also measured parallel to the direction 3 in order to allow the cross members 14a, 14b of each group of cross members 14 to define a frame having a uniform height.

[0017] The piece of furniture 1 also comprises an upper supporting panel 17 mounted on the surface P1 and between the upper cross members 14a, 14b; a plurality of lower supporting feet 18, each of which is arranged beneath a respective upright member 2, has a substantially cubic shape, is superiorly limited by a flat upper face 19 orthogonal to the direction 3, and is provided with two cavities the same as the cavities 6, 7 of an upright member 2 and engaged by two relative lower cross members 14a, 14b; and a lower supporting panel 20, which is mounted between the lower cross members 14a, 14b on a supporting surface P2 defined by the faces 19, and is inserted between the upright members 2 and the feet 18.

[0018] With regard to that set forth above, it is important to point out that the height of each cross member 14a, 14b, measured parallel to the direction 3, is substantially equal to the sum of the thickness of a supporting panel 17, 20 and twice the height of a cavity 6, 7, 12, 13, also measured parallel to the direction 3.

[0019] The variant illustrated in figure 3 relates to a piece of furniture 21 comprising nine upright members 2, which are aligned three by three in the directions 8 and 10, are each provided with a supporting foot 18, and are joined to one another by means of two groups of cross members 22 each comprising six respective flat cross members 22, three of which (hereinafter indicated with 22a) are mounted parallel to the direction 8 in the cavities 6 or 12 of three relative upright members 2 and three (hereinafter indicated with 22b) are mounted parallel to the direction 10 in the cavities 7 or 13 of three relative upright members 2.

[0020] Each cross member 22a, 22b is provided, in this embodiment, with three slits 15 obtained in correspondence with the extremities and an intermediate point of said cross member 22a, 22b.

[0021] According to alternative embodiments which are not illustrated, the number and arrangement of the upright members 2 and the number and length of the cross members 14, 22 can clearly differ from those described above so that the pieces of furniture can be selectively arranged in the directions 3 and/or 8 and/or 10.

Claims

1. Piece of furniture comprising at least three substantially vertical upright members (2), which extend in a first direction (3), and are limited longitudinally by respective end faces (4) in the same plane as one another to define a supporting surface (P1) that is substantially horizontal and orthogonal to the first

direction (3); at least three substantially horizontal cross members (14a, 14b) to join the upright members (2) to one another; and a supporting panel (17) mounted on the supporting surface (P1); and **characterized in that** each upright member (2) comprises two cavities (6,7), which open outwards in correspondence with the relative end face (4), are arranged with respect to one another at a given angle, and each of which is suitable to receive a relative said cross member (14a, 14b); each cross member (14a, 14b) projecting from the relative cavity (6, 7) in the first direction (3) to laterally limit the supporting surface (P1).

2. Piece of furniture according to claim 1, wherein each cross member (14a, 14b) is slidably coupled to the adjacent cross members (14a, 14b) in said first direction (3).

3. Piece of furniture according to claim 1 or 2, wherein each cross member (14a, 14b) is slidably coupled to the relative upright members (2) in said first direction (3).

4. Piece of furniture according to any one of the previous claims, wherein each cross member (14a, 14b) is blocked on the relative upright members (2) in a second direction (8, 10) substantially orthogonal to said cross member (14a, 14b).

5. Piece of furniture according to any one of the previous claims, wherein the height of each cross member (14a, 14b), measured in the first direction (3), is greater than the height of a said cavity (6, 7) also measured in the first direction (3).

6. Piece of furniture according to any one of the previous claims, wherein the height of each cross member (14a, 14b), measured in the first direction (3), is substantially equal to the sum of the thickness of the supporting panel (17) and twice the height of one of said cavities (6, 7), also measured in the first direction (3).

7. Piece of furniture according to any one of the previous claims, wherein each cross member (14a, 14b) is blocked on the adjacent cross members (14a, 14b) in a third direction that is substantially parallel to said cross member (14a, 14b).

8. Piece of furniture according to any one of the previous claims, wherein each cross member (14a, 14b) comprises at least two slits (15), each of which extends through the cross member (14a, 14b) in the first direction (3), has one extremity that opens outwards in the first direction (3), and is suitable to slidably receive in the first direction (3) a corresponding slit (15) of an adjacent cross member (14a, 14b) to

block the adjacent cross member (14a, 14b) in a third direction (8, 10) substantially parallel to said adjacent cross member (14a, 14b).

9. Piece of furniture according to claim 8, wherein the height of each slit (15), measured parallel to the first direction (3), is substantially equal to half the height of a cross member (14a, 14b) also measured parallel to the first direction (3).

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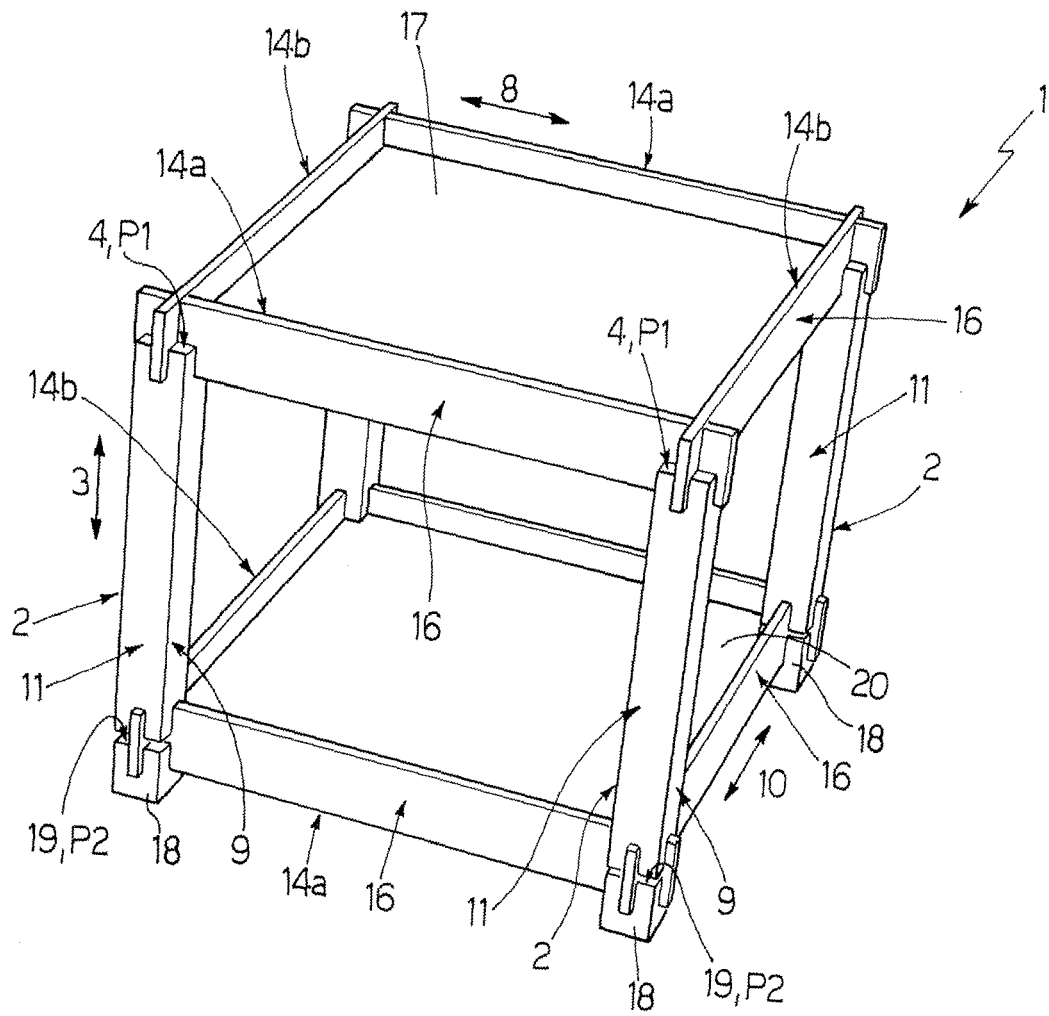


Fig.1

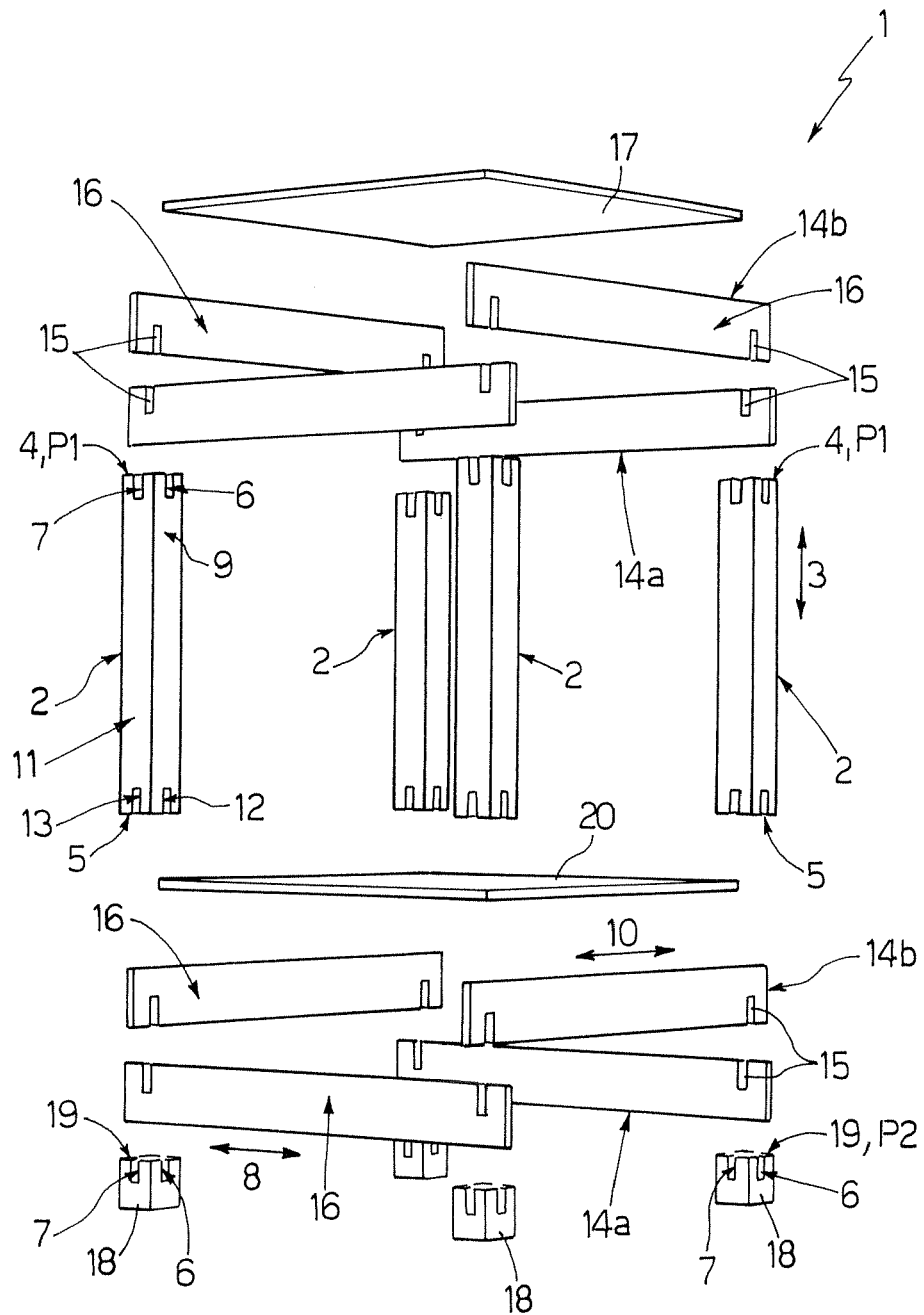


Fig.2

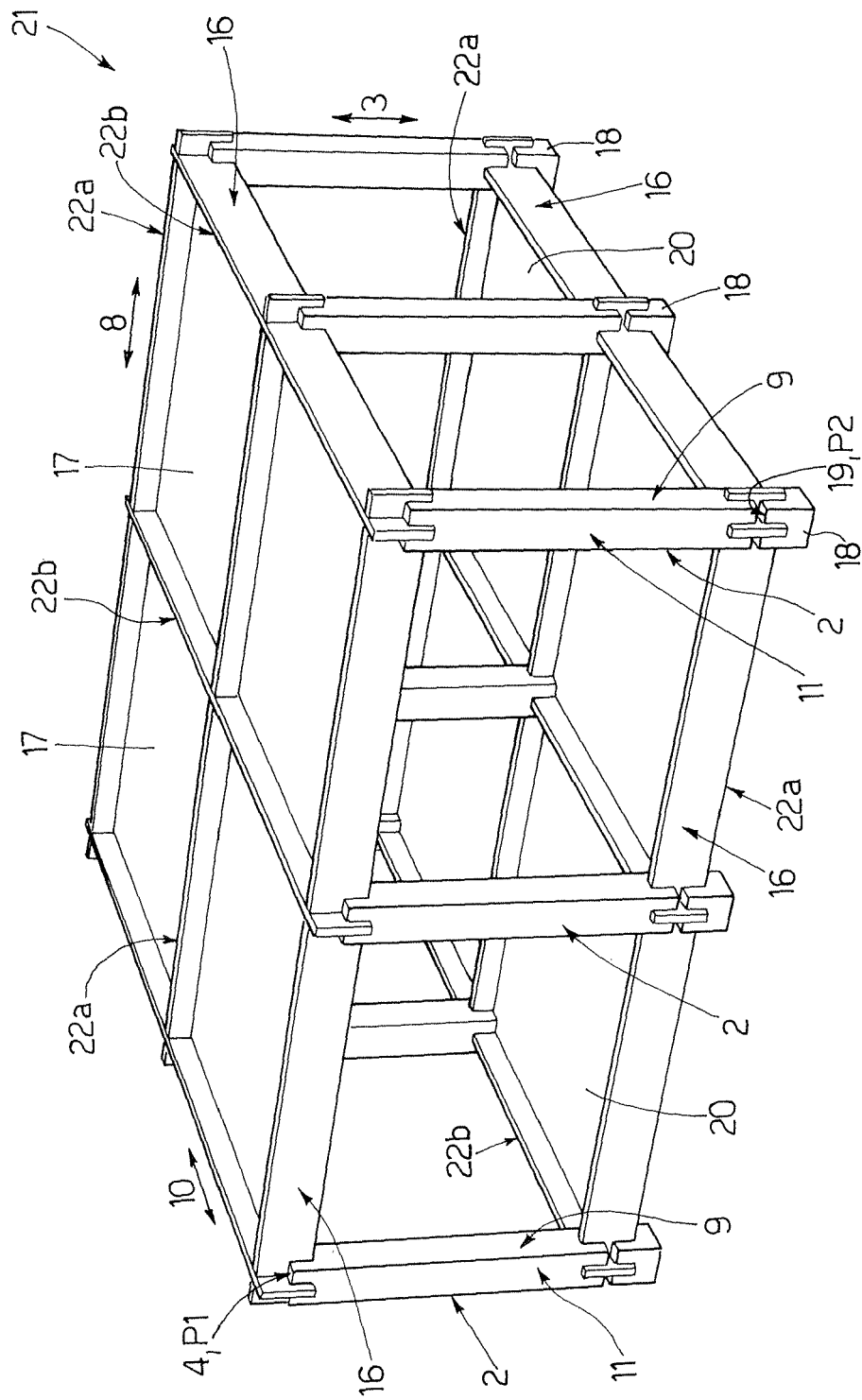


Fig. 3



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 08 15 5933

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	DE 75 16 704 U (LIEBICH M HOLZWARENFABRIK) 13 November 1975 (1975-11-13) * page 4 - page 6; figures 1-9 *	1-9	INV. A47B47/04
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			A47B F16B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 10 September 2008	Examiner Klintebäck, Daniel
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	

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EPO FORM 1503 03/02 (P04C01)

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

EP 08 15 5933

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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10-09-2008

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