



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
17.09.2008 Bulletin 2008/38

(51) Int Cl.:
A47B 47/02 (2006.01) A47F 5/08 (2006.01)

(21) Application number: **07380073.2**

(22) Date of filing: **12.03.2007**

(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 RS

(72) Inventor: **Ortiz Alonso, Jose Antonio**
01009 Vitoria-Gasteiz (Araba) (ES)

(74) Representative: **Igartua, Ismael**
Dpto. Propiedad Industrial; Apdo. 213
20500 Mondragon (Gipuzkoa) (ES)

(71) Applicant: **Kider, S.A.**
01479 Murga (Araba) (ES)

Remarks:
The application is published incomplete as filed (Article 93 (2) EPC). Claim 9 appears to be missing.

(54) **Modular display assembly**

(57) Modular display assembly for the display of products that comprises a frame made up of two substantially vertical upright columns (3), an upper crossbar (2a), each end of said upper crossbar (2a) being fixed to one of the two vertical upright columns (3), a lower cross-

bar (2b), each end of said lower crossbar (2b) being fixed to one of the two vertical upright columns (3), and a back panel (7) fixed to said frame by fixing means (15). The modular display assembly comprises stiffening means (8,9) that fix the back panel (7) to said frame tightening said back panel (7).

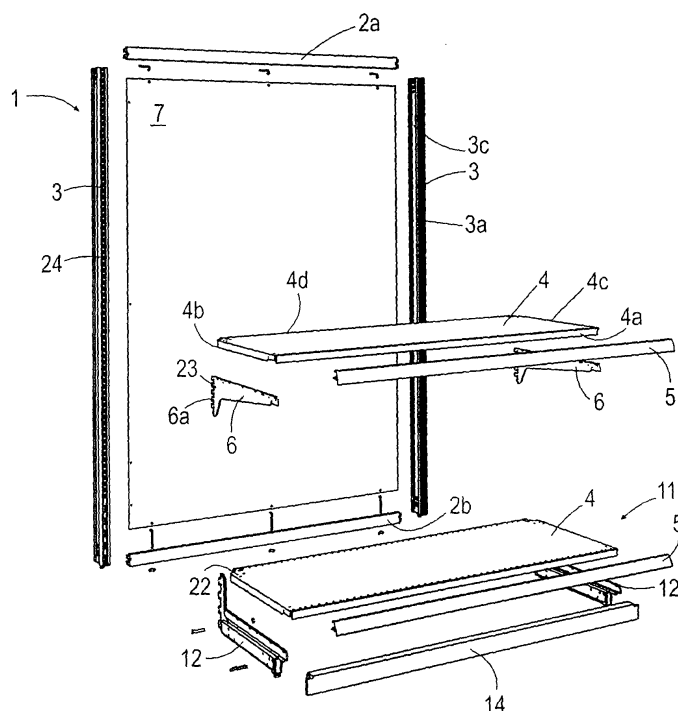


Fig. 1

Description

TECHNICAL FIELD

[0001] The present invention relates to a modular merchandising display assembly, of either the gondola type or the wall type, such as those used conventionally in food shops and superstores for displaying and storing goods in horizontal format.

PRIOR ART

[0002] They are known merchandising display assemblies that comprise vertical tubular upright columns provided with openings upon which are fixed brackets that support shelves, either horizontal or at a certain angle, upon which the products to be displayed are positioned. These display assemblies also comprise back panels, acting as visual dividers, supported on each side by a vertical upright column. In order to stiffen the vertical upright columns and limit the deformation of the back panel, said display assemblies generally comprise horizontal stiffening crossbars positioned at the ends of the vertical upright columns forming a frame.

[0003] EP 1629744 A discloses a shelving device for the presentation of articles that comprises at least one back panel of a substantially rectangular shape and comprising a flat plate, at least two tubular vertical upright columns with a substantially rectangular cross-section that support the back panel, said vertical upright columns being provided with openings upon the front and/or rear faces where arms are fixed for supporting shelves, and at least one stiffening element to stiffen the frame. The panel incorporates hooks on the lateral sides which are inserted into openings situated on the lateral internal faces of the vertical upright columns, said insertion being obtained by the bending of the panels, said curving being made possible by its flat plate form. It also discloses the process of assembling said back panel.

DESCRIPTION OF THE INVENTION

[0004] It is an object of this invention to provide a modular merchandising display assembly for the display of products in food shops and/or superstores, as it is defined in the claims.

[0005] The modular display assembly of the invention comprises two substantially vertical upright columns and two crossbars, one upper and one lower, each ends of said crossbars being fixed to the vertical upright columns, so that the two vertical upright columns along with the two upper and lower crossbars form a rigid frame.

[0006] The modular merchandising display assembly also comprises a back panel that is fixed to said rigid frame through fixing means, said back panel being tightened through stiffening means which besides fixing said back panel to the frame, tighten it in respect to it. In this way, a substantially flat and rigid back panel is obtained,

the stress supported by the back panel being adjusted by the stiffening means. Moreover, any possible bending caused by an incorrect assembly or by time going by is avoided, and the use of another type of non-rigid material for the back panel such as canvas or plastic, is made possible. The stiffening means as much the fixing means of the back panel to the rigid frame of the invention are easy to assemble and maintain, with neither complex assembly operations nor special tools for their assembly and adjustment being necessary.

[0007] These and other advantages and characteristics of the invention will be made evident in the light of the drawings and the detailed description thereof.

DESCRIPTION OF THE DRAWINGS

[0008]

Fig. 1 is an exploded view of an embodiment of a modular display embodiment according to the invention.

Fig. 2 is a tridimensional view of the modular display assembly of Fig. 1 assembled.

Fig. 3 is a detailed view of the fixing of the upper crossbar to the vertical upright column and of the fixing means of the back plate to the upper crossbar of Fig. 1.

Fig. 4 is a detailed view of the fixing of the lower crossbar to the vertical upright column and of the stiffening means of the back plate of Fig. 1.

Fig. 5 is a detailed view of the geometry of the shelf of Fig. 1 for its assembly on the upright column.

Fig. 6 is a detailed view of the geometry of a second shelf option for its assembly on the upright column.

DISCLOSURE OF THE INVENTION

[0009] Figures 1 and 2 show a modular display assembly for displaying goods, comprising a frame made up of two metallic vertical upright columns 3 with a substantially rectangular cross-section, an upper crossbar 2a arranged substantially horizontally and fixed by its ends to the upper ends of the vertical upright columns 3, and a lower crossbar 2b arranged substantially horizontally, whose ends are fixed to the bottom ends of the upright columns 3, a back panel 7 fixed to said frame by fixing means 15, and stiffening means 8,9 which besides fixing said back panel 7 to the frame, tighten it in respect to it. The member elements of the frame, ie the upright columns 3, the crossbars 2a and 2b and the back panel 7 are disassemblable elements.

[0010] Each vertical upright column 3 is of the rack type and is made up of a front surface 3b and a rear

surface 3a, both of which incorporate equidistant bracket slots 24 all the way along its length, and two lateral surfaces 3c that incorporate, on their upper and lower ends, lateral slots 18.

[0011] The upper and lower crossbars 2a and 2b are hollowed metallic profiles of a substantially rectangular cross-section, which brace the frame, and comprise at their respective ends, as shown in figures 3 and 4, flanges 17 that are introduced into the lateral slots 18 of the respective upright columns 3, locking flanges 19 that are folded towards the interior of the corresponding upper 2a or lower crossbar 2b once the flanges 17 have been inserted into the corresponding lateral slots 18 to prevent an accidental disassembly of the respective crossbar 2a and 2b, and fixing through holes 21 equidistant along its length for the fixing of the back panel 7. Each upright column 3 includes a connection hole 26 that connects two lateral slots 18 which are parallel to each other, housing and enabling the locking flanges 19 to be folded towards the interior of the upper 2a or lower crossbar 2b.

[0012] The back panel 7 is a rectangular sheet metal plate, although it can also be of wood, plastic, canvas or fabric, and it has equidistant holes 16 all the way along its periphery, through which is fixed said back panel 7 to the upper crossbar 2a by fixing means 15.

[0013] As it is shown in Figure 3, the fixing of the back panel 7 to the upper crossbar 2a is carried out through upper hooks 15, each one of which has a central part 15b, a first part 15a from one end of the central part 15b and whose axis of axial symmetry is coplanar with the axis of axial symmetry of the central part 15b and is inclined at a certain angle in relation to said axis of axial symmetry of the central part 15b, and a second part 15c, from the other end of the central part 15b, which is longer than the previous parts 15a y 15b and whose axis of axial symmetry is perpendicular to the plane defined by the axis of axial symmetry of the central part 15b and the first part 15a. In the assembly, the second part 15c, of smaller length than the length of the fixing hole 21, is introduced into said fixing hole 21 and rotated to its substantially horizontal position in the interior of the upper crossbar 2a, thereby preventing its accidental disassembly. The back panel 7 is then fixed to the first part 15a of the upper hook 15 through the holes 16, the back panel 7 being centred in relation to the two vertical upright columns 3.

[0014] The modular display assembly 1 comprises the stiffening means 8,9 and the back plate 7 to the frame, with the object being that after the assembly, said back panel 7 keeps substantially flat and aligned in relation to the two upright columns 3. The stiffening means 8,9 comprise tie-rods 8 that have a threaded end 8a, which crosses the bottom crossbar 2b through the fixing holes 21, and an unthreaded curved end 8b, and nuts 9 through which is fixed each tie-rod 8 to the bottom crossbar 2b. In the assembly, once the back panel 7 has been fixed to the upper crossbar 2a and the tie-rods 8 have been inserted into the corresponding fixing holes 21, the curved end 8b of each tie-rod 8 is inserted into the holes

16 situated in the lower part of the back panel 7, so that the back panel 7 is fixed to the frame. Finally, the nut 9 enables the stress exerted on the back panel 7 to be adjusted.

[0015] In other embodiments, the back panel 7 may be fixed to the lower crossbar 2b through the upper hooks 15 and tightened in relation to the upper crossbar 2a.

[0016] The modular display assembly 1 comprises substantially rectangular sheet metal shelves 4 that are positioned on two brackets 6, which have, on one of their branches 6a, bracket flanges 23 that are inserted into the bracket slots 24 of the vertical upright columns 3. Said brackets 6 are height adjustable every 25 mm on said upright columns 3.

[0017] The shelf 4, which can also be of glass, wood, plastic, etc, has a front 4a upon which is fixed a label holder 5, two sides 4b and 4c where the brackets 6 are inserted, and a rear part 4d on whose ends a bit 22, shown in Figure 4, has been formed in order to house part of the cross-section of the vertical upright columns 3 and so that a maximum shelf surface up to the back panel 7 is obtained. The shelf 4 arranges micro-perforated links 32 which can be broken in the event that more free space is needed to add an accessory between the upright column 3 and the shelf 4.

[0018] The shelf 4 may be a piece which has a bit 22 in the two rear ends to safeguard the upright column 3, as shown in Figure 5, or it may be made up of a rectangular piece 30 and a dummy piece 31 of a smaller length than the rectangular piece 30 so that the rear ends of the shelf 4 are freed for their assembly in the upright columns 3 (see Figure 6).

[0019] Finally, the modular display assembly 1 has a base unit 11 made up of two lateral bases 12 with horizontal arms 12a that are supported on the ground and with vertical arms 12b that incorporate base flanges 10 for their fixing to the upright columns 3, a shelf 4 that is supported on the two lateral bases 12 being fixed to them, and a skirt 14 that closes the front part of the base unit 11 to prevent dirt and/or unwanted elements from introducing themselves in the interior.

Claims

1. Modular display assembly for the display of products that comprises a frame made up of two substantially vertical upright columns (3), an upper crossbar (2a), each end of said upper crossbar (2a) being fixed to one of the two vertical upright columns (3), a lower crossbar (2b), each end of said lower crossbar (2b) being fixed to one of the two vertical upright columns (3), and a back panel (7) fixed to said frame by fixing means (15), **characterised in that** it comprises stiffening means (8,9) that fix the back panel (7) to said frame, tightening said back panel (7).

2. Modular display assembly according to claim 1, wherein the stiffening means (8,9) comprise at least one tie-rod (8) that has a threaded end (8a) and a curved end (8b) that is inserted into holes (16) in the back panel (7), and at least one nut (9) through which said tie-rod (8) is fixed to the frame. 5

3. Modular display assembly according to claim 2, wherein the tie-rod (8) is fixed by the nut (9) to one of the crossbars (2a,2b) in the frame. 10

4. Modular display assembly according to any of claims 2 to 3, wherein the nut (9) adjusts the stress to which the back panel (7) is subjected. 15

5. Modular display assembly according to any of the preceding claims, wherein the fixing means comprise an upper hook (15) that connects one of the holes (16) in the back panel (7) to one of the fixing holes (21) of the crossbars (2a,2b). 20

6. Modular display assembly according to any of the preceding claims, wherein the holes (16) of the back panel (7) and the fixing holes (21) are equidistant along its perimeter and length respectively. 25

7. Modular display assembly according to any of claims 5 to 6, wherein the upper hook (15) has a central part (15b), a first part (15a) whose axis of axial symmetry is coplanar with the axis of axial symmetry of the central part (15b) and is inclined at an angle in relation to said axial axis of symmetry of the central part (15b), and a second part (15c) whose axis of axial symmetry is perpendicular to the plane defined by the axis of axial symmetry of the central part (15b) and by the axis of axial symmetry of the first part (15a). 30 35

8. Modular display assembly according to any of the preceding claims, wherein the frame is disassemblable. 40

10. Method for the assembly of a back panel in a modular display assembly according to any of the preceding claims, **characterised in that** it comprises the following steps: 45

- insertion of the fixing means (15) in the frame,
- insertion of the stiffening means (8,9) in the frame, 50
- hooking of the fixing means (15) to the back panel (7),
- hooking of the stiffening means (8,9) to the back panel (7), and
- adjustment of the stress exerted on the back panel (7) fixed to the frame, by the stiffening means (8,9). 55

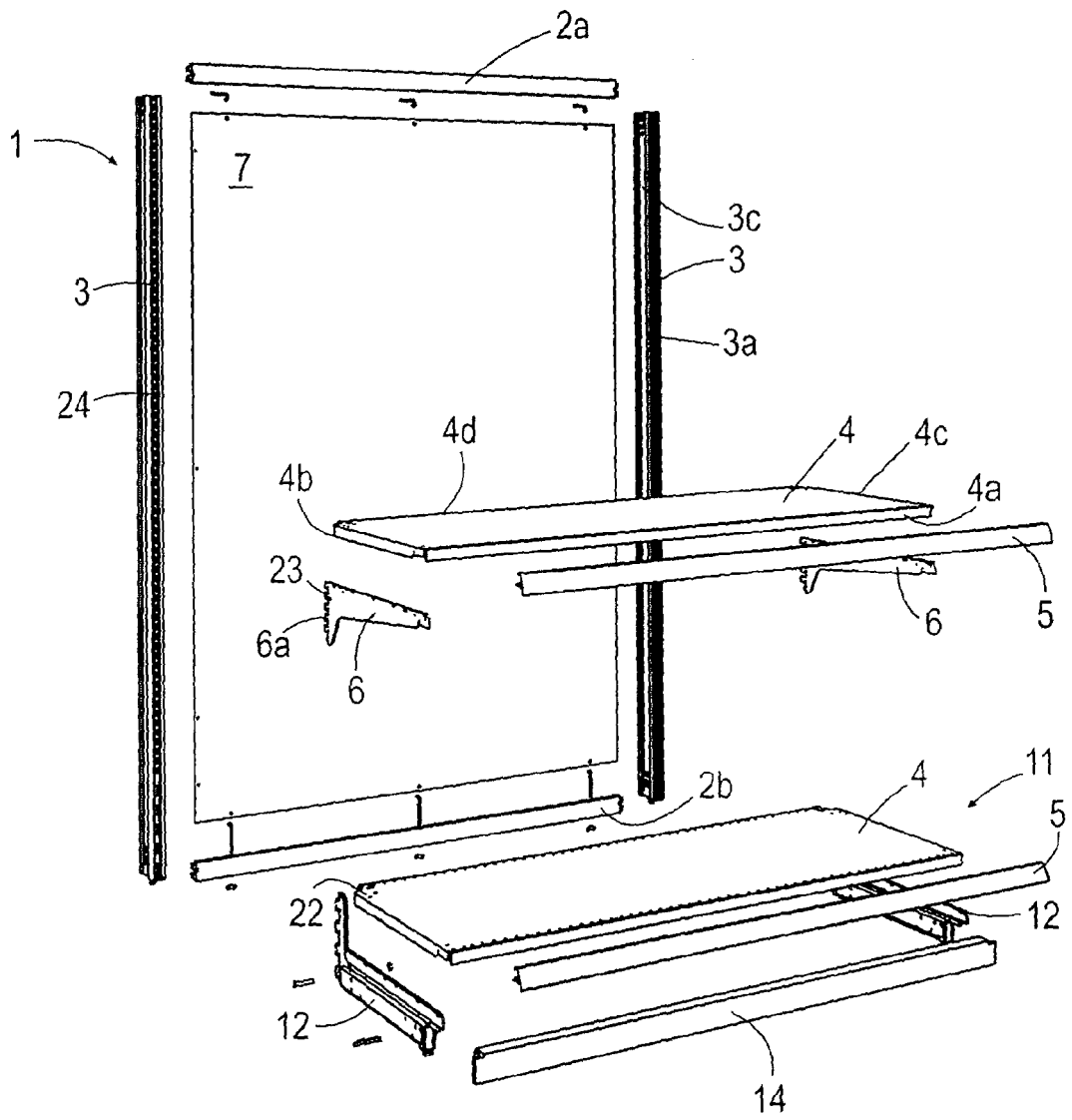


Fig. 1

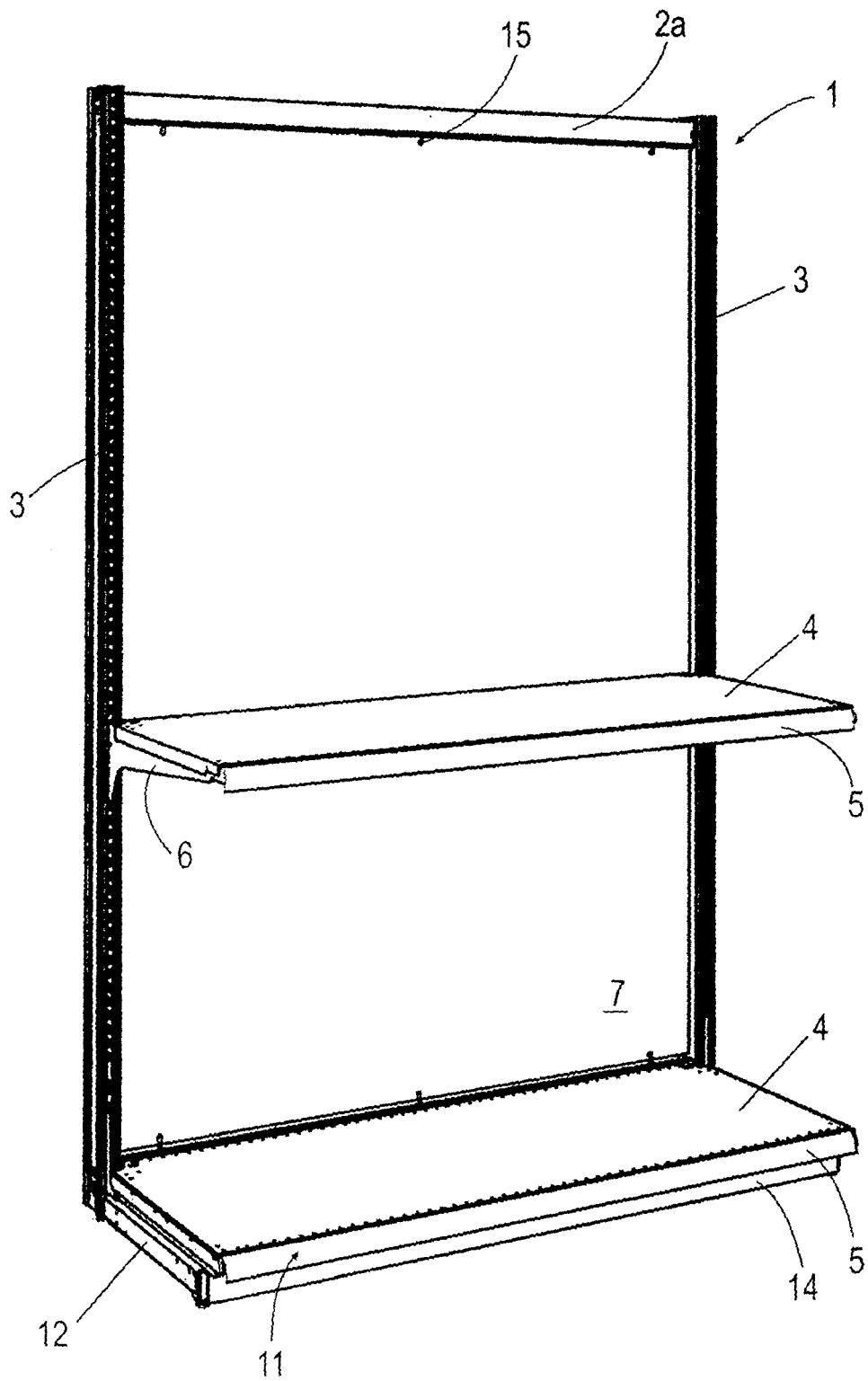


Fig. 2

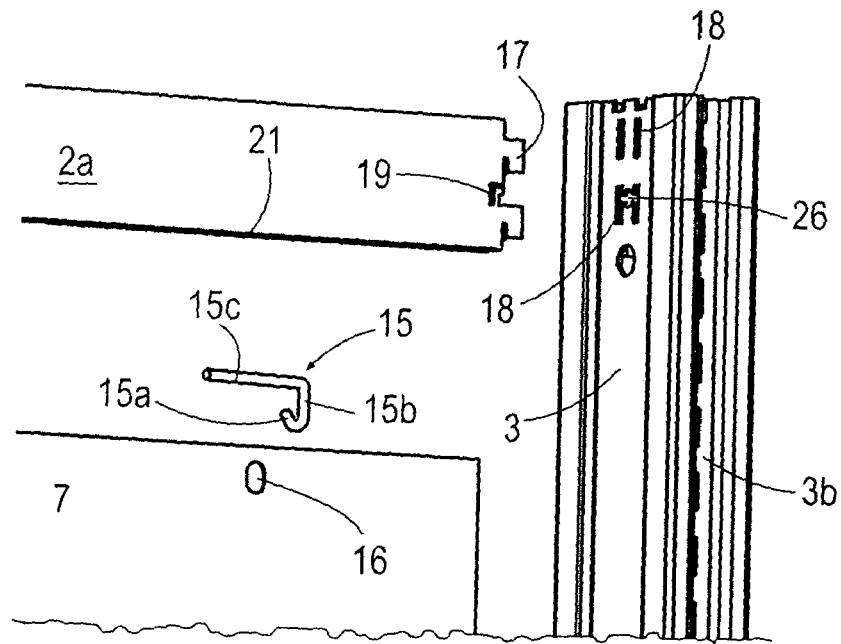


Fig. 3

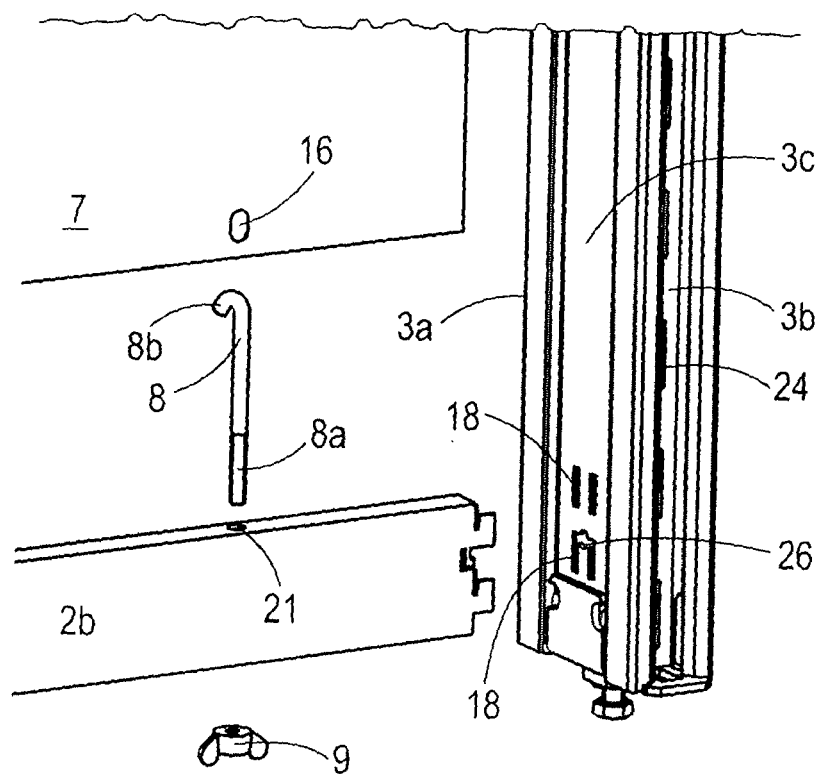


Fig. 4

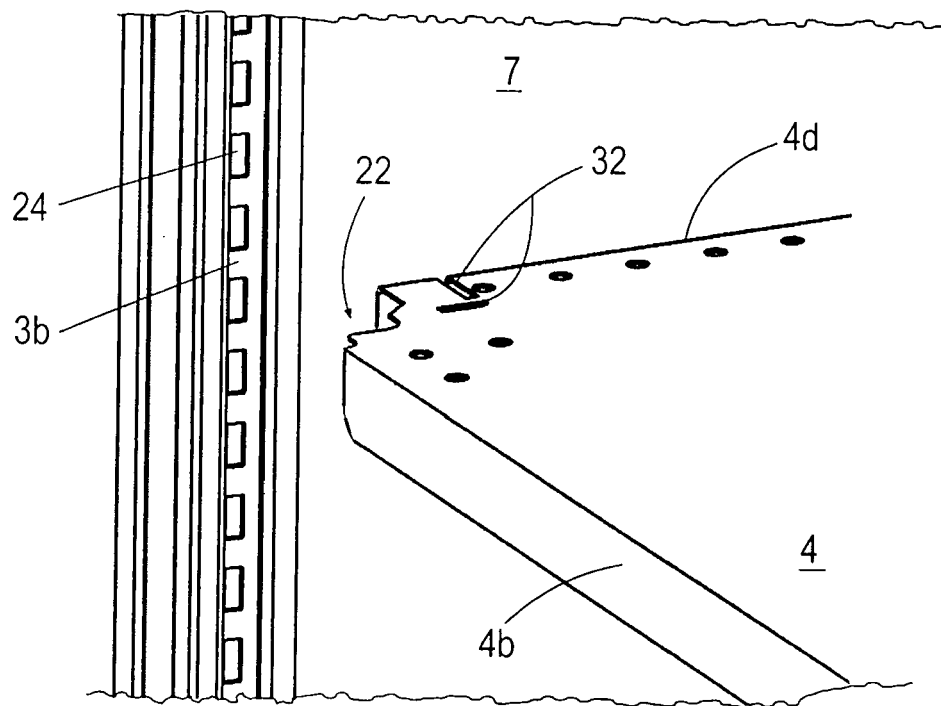


Fig. 5

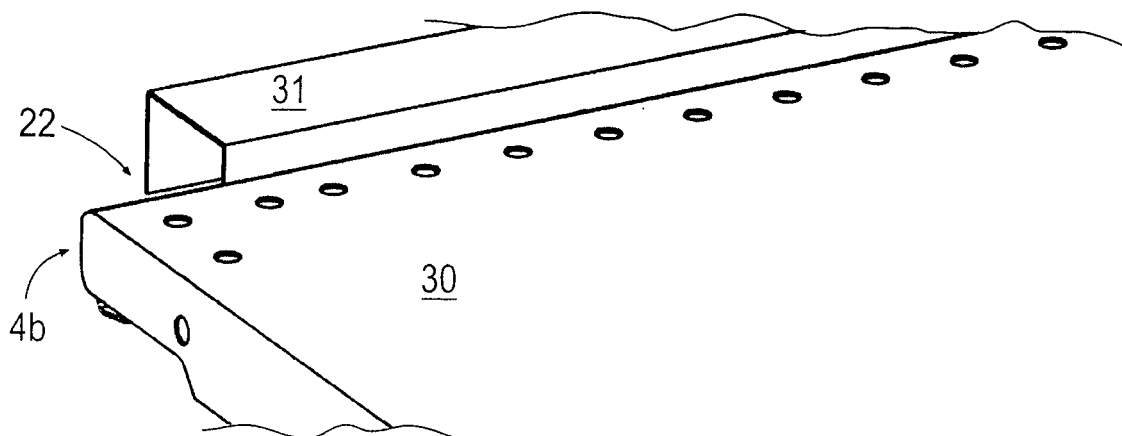


Fig. 6



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 38 0073

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 1 781 277 A (GAMMETER HARRY C) 11 November 1930 (1930-11-11) * page 1, line 48 - page 2, line 9 * * figures 1-5 *	1-8	INV. A47B47/02 A47F5/08
X	US 5 507 109 A (RINZLER LYONS K [US]) 16 April 1996 (1996-04-16) * column 3 - column 4 * * figures 1-5 *	1,10	
X	FR 2 831 582 A1 (BARBIER JACQUES [FR]) 2 May 2003 (2003-05-02) * abstract; figures 1-4 *	1,10	
A	EP 0 642 754 A (BERNARDIN DIDIER [FR]) 15 March 1995 (1995-03-15) * abstract * * figure 5 *	1-8	
A	US 2004/182809 A1 (CALLEJA MICHAEL J [US]) 23 September 2004 (2004-09-23) * abstract; figure 1 *	1-8	TECHNICAL FIELDS SEARCHED (IPC)
A	FR 2 874 487 A (HMY INVESTISSEMENTS SA [FR]) 3 March 2006 (2006-03-03) * abstract; figures *	1-8	A47B A47F G09F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 22 August 2007	Examiner MacCormick, Duncan
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			

4

EPO FORM 1503 03.82 (P04C01)

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

EP 07 38 0073

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.

22-08-2007

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 1781277	A	11-11-1930	NONE	
US 5507109	A	16-04-1996	NONE	
FR 2831582	A1	02-05-2003	NONE	
EP 0642754	A	15-03-1995	FR 2709053 A1 US 5566844 A	24-02-1995 22-10-1996
US 2004182809	A1	23-09-2004	NONE	
FR 2874487	A	03-03-2006	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

- EP 1629744 A [0003]