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(54) **Outdoor framework structure for awnings**

(57) The invention is a new outdoor framework structure, of the so-called "Sivigliana" type, with uprights (M) supporting one or more main cross members (TX) and secondary cross members (TY), integrally attached to one another by means of one or more "T" joints (GT) and/or cruciform joints (GC). Said "T" joints (GT) are integrally attached to said uprights (M) and are suitable for containing and supporting said main cross members (TX) in a substantially horizontal position. Said cruciform joints

(GC) are suitable for supporting said secondary cross members (TY) in a position substantially crosswise or orthogonal to said main cross members (TX). Said outdoor framework structure comprises one or more winding rollers (V) for vertically-sliding side sheets and one or more vertical profiles (C) or guides (TG), wherein the ends of the terminal rods of said side panels are slidingly engaged. The ends of said cross members (TX) and (TY) are each plugged with a cap (P).

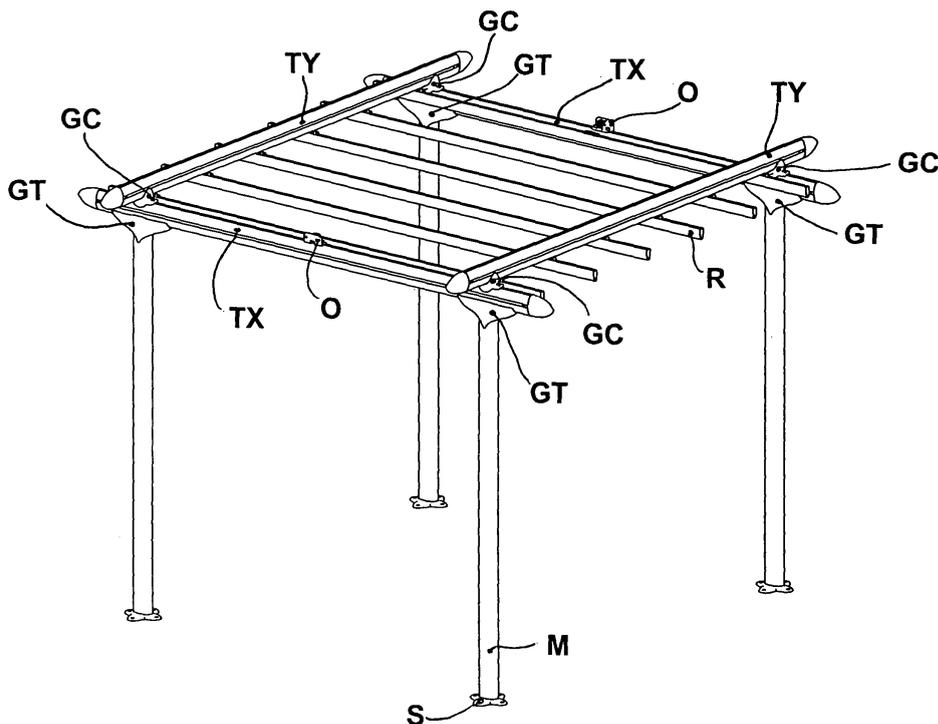


Fig. 1

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Description

[0001] The present patent relates to outdoor awnings and particularly concerns an outdoor framework structure particularly for the so-called "Sivigliana" type of awning.

[0002] There are known outdoor structures of the so-called "Sivigliana" type consisting of one or more vertical uprights supporting one or more substantially horizontal cross members.

[0003] The known "Sivigliana" structures commonly have a substantially box-like shape so as to create an enclosed space, with coverings on the top and at the sides.

[0004] Said structures are covered with flexible panels or with sheets of fabric or other suitable material, which may be fixed or suitable for opening and closing.

[0005] The panels may be placed over the supporting structure to provide a top covering, and also vertically to provide side coverings around the perimeter.

[0006] The known folding panels may be opened and closed by means of rods provided for said purpose, to which the terminal edges of said panels are attached.

[0007] Said rods can be displaced to deploy or to close the panels.

[0008] The subject of the present patent is a new type of "Sivigliana" outdoor framework structure for awnings with one or more "T" joints and one or more cruciform joints.

[0009] The main aim of the present invention is to obtain a safe and stable structure for one or more outdoor awnings.

[0010] Another object of the present invention is to obtain a structure that is straightforward and rapid to install.

[0011] A further object of the present invention is to obtain a structure that has an attractive and innovative appearance.

[0012] These and other direct and complementary objects are achieved by the new outdoor framework structure, particularly suitable for awnings.

[0013] The new outdoor framework structure mainly comprises one or more vertical uprights supporting one or more substantially horizontal cross members integrally attached to one another by means of one or more "T" joints and cruciform joints.

[0014] To be more precise, the new framework structure comprises one or more vertical uprights set into the ground and/or integrally attached to the ground by means of suitable fixtures.

[0015] At the upper end of said uprights there is a T-shaped joint comprising a seat on its underside for the purpose of containing said upper end of the upright.

[0016] The upper part of said "T" joint is shaped in such a way as to comprise a substantially semicylindrical concave seat having the function to house and support a main cross member, keeping it in a generically horizontal or slanting position.

[0017] Said main cross member may be supported at

both ends by such "T" joints so that, in combination with said uprights, it forms a vertical (i.e. substantially rectangular) "bridge" structure.

[0018] The new framework structure also comprises at least a further, secondary cross member, placed horizontally and crosswise to the previously-mentioned cross member, or preferably in a position orthogonal to the latter. To attach said main and said secondary cross members together in a stable manner, the present invention comprises a further, cruciform joint.

[0019] Said cruciform joint comprises a substantially semicylindrical concave horizontal seat on both its upper side and its underside. Said seats are obtained so that their positions are mutually orthogonal or crossed one over the other.

[0020] The lower seat is thus suitable for resting on and being attached to said main cross member contained in said "T" joint and thereby fixed to said upright, while said upper seat serves the purpose of containing and supporting said secondary cross member placed orthogonally, or at least crosswise thereto.

[0021] A three-dimensional structure is thus created, wherein said vertical upright and said main and secondary horizontal cross members preferably form 90° angles with respect to one another.

[0022] The new framework structure may, for instance, comprise four vertical uprights and four horizontal cross members, placed orthogonally two by two, so that together they form a substantially boxed structure.

[0023] Alternatively, the shape of the structure may be determined differently by the number and arrangement of its components.

[0024] For the purposes of the present invention, for instance, there may be only two vertical uprights with one main horizontal cross member resting thereon, while two further secondary cross members have each one end connected to said main cross member by means of said cruciform joints, while at the other end they are attached to a wall or other fixed supporting element by means of one or more brackets.

[0025] The assembly of the new framework structure thus entails the positioning of the vertical uprights and of said "T" joints, whereon said main cross members are laid and fixed in place.

[0026] Then, to complete the structure, it is necessary to place said cruciform joints and said additional, secondary cross members in position.

[0027] The present invention comprises further rods for supporting the top covering sheet, which may be drawn back concertina-wise, wherein said supporting rods lie substantially parallel to said main cross members.

[0028] Said supporting rods are themselves supported by said secondary cross members, each of which comprises at least one further seat or guide rail for said purpose, provided on its underside, in which hooks integrally attached to said supporting rods slidingly engage.

[0029] Said hooks and said guides underneath the

secondary cross members are shaped so that said hooks can slide inside said guides and thereby cause the displacement of said supporting rods and consequently of said top covering sheet.

[0030] The displacement of said supporting rods thus causes the deployment and closing of said top covering sheet, which can be folded back concertina-wise.

[0031] Provision is also made for the installation of pulleys for entraining the cords of the top covering sheets and the corresponding supporting rods.

[0032] Moreover, vertical side panels may also be attached to one or more sides of the new framework structure.

[0033] For said purpose, pairs of vertical profiles are attached to said vertical uprights to guide the downward and upward movement of the terminal rods on the side panels.

[0034] Said side panels are wound around one or more winding rollers supported by suitable brackets hooked onto said main cross members and/or said secondary cross members and/or said uprights.

[0035] Said winding rollers are complete with corresponding means for their rotation, such as cranks, spindles, etc.

[0036] The ends of the main and secondary cross members may be plugged by attaching caps of any shape (e.g. cigar-shaped or rounded) thereto, not only for aesthetic purposes, but also to prevent water, insects, dirt, and so on, from accumulating inside the structure.

[0037] Outdoor framework structure comprising vertical uprights supporting one or more main cross members, wherein said cross members are integrally attached to said uprights by means of one or more "T" joints and/or cruciform joints.

[0038] The features of the present invention will be highlighted in greater detail in the following description, with reference to the attached drawings, which are provided merely as a non-restrictive example.

[0039] Figure 1 shows an application of the present invention, while Figure 2 shows a detail of the joint between an upright and cross members.

[0040] Figure 3 shows an exploded view of the main supporting structure also complete with pairs of profiles for guiding the side panels and with a winding roller for said side panels. The structure is completed with the application of the supporting rods, as illustrated in Figure 1.

[0041] The new framework structure comprises one or more vertical uprights (M), integrally attached to the ground by means of suitable fixtures (S), anchored to the ground.

[0042] At the top end of said uprights there is a "T" joint (GT) comprising a seat (GT1) on its underside, which contains said top end of said upright (M).

[0043] The upper side of said "T" joint (GT) is shaped so as to form a concave seat (GT2) for the purpose of containing and supporting a main cross member (TX), keeping it in a generically horizontal or slanting position.

[0044] The new framework structure also comprises

at least one further secondary cross member (TY) lying horizontally and crosswise to the previous cross member, or preferably at right angles to the latter.

[0045] The present invention comprises a further cruciform joint (GC) for attaching said main cross members (TX) and secondary cross members (TY) integrally to one another.

[0046] Each cruciform joint (GC) comprises a lower seat (GC1) and an upper seat (GC2). Said lower seat (GC1) and upper seat (GC2) are preferably obtained on substantially parallel planes, so that they are mutually orthogonal or at least cross over one another.

[0047] Thus, the lower seat (GC1) is suitable for resting on and fixing to said main cross member (TX) supported on said "T" joint (GT), which is in turn attached to said upright (M), while said upper seat (GC2) is for containing and supporting said secondary cross member (TY), lying preferably orthogonally thereon.

[0048] A three-dimensional structure is thus created, wherein said vertical upright (M) and said main cross members (TX) and secondary cross members (TY) preferably form 90° angles with respect to one another.

[0049] The new framework structure may, for instance, comprise four vertical uprights (M), two main cross members (TX) and two secondary cross members (TY), placed orthogonally two by two, so as to globally form a substantially boxed structure (Figure 1).

[0050] The present invention further comprises rods (R) for supporting the top covering sheet (T) which may be opened and closed concertina-wise, wherein said supporting rods (R) lie substantially parallel to said main cross members (TX).

[0051] Said supporting rods (R) are in turn supported by said secondary cross members (TY), each of which comprises for said purpose at least one further profile or guide (TR), attached to its underside, wherein hooks (R1) integrally attached to said supporting rods (R) slidingly engage.

[0052] Said hooks (R1) and said guides (TR) on the underside of said secondary cross members (TY) are shaped so that said hooks (R1) can slide inside said guides, thereby causing the displacement of said rods (R) for supporting the top covering sheets (T) and consequently opening and closing said sheets (T).

[0053] Provision is made for the installation of pulleys (O) for the cords used to entrain the top covering sheets (T) and the corresponding supporting rods (R).

[0054] Moreover, for the application of any vertically sliding side panels, the new invention provides for the use of pairs of vertical profiles (C), installed on said vertical uprights (M), for the purpose of guiding the downward and upward movement of the terminal rods of the panels.

[0055] Said side panels are wound onto one or more winding rollers (V), supported by suitable brackets (V1) hooked onto said main cross members (TX) and/or secondary cross members (TY) and/or said uprights (M).

[0056] To be more specific, said brackets (V1) for sup-

porting said winding rollers are attached to seats provided for said purpose in the lateral surface of said cross members (TX) and/or (TY) and/or of said uprights (M).

[0057] The ends of the main cross members (TX) and secondary cross members (TY) are plugged and covered by applying terminal caps (P), of any suitable shape, e.g. cigar-shaped or rounded.

[0058] Therefore, with reference to the above description and to the attached drawings, the following claims are expressed.

Claims

1. Outdoor framework structure comprising one or more substantially vertical uprights (M) supporting one or more main cross members (TX), **characterised in that** said main cross members (TX) are integrally attached to said uprights (M) by means of one or more jointing elements or "T" joints (GT).
2. Outdoor framework structure according to claim 1, **characterised in that** said "T" joints (GT) comprise a seat or hole (GT1) on their underside, wherein the top end of said uprights (M) is inserted, and a concave seat (GT2) on the upper side for containing and supporting said main cross member (TX) in a substantially horizontal position.
3. Outdoor framework structure according to claim 1, **characterised in that** one or more secondary cross members (TY) are integrally attached to said main cross members (TX) by means of one or more cruciform joints (GC).
4. Outdoor framework structure according to claims 1, 2, 3, **characterised in that** said cruciform joint (GC) comprises a lower seat (GC1) and an upper seat (GC2), positioned substantially crosswise to one another, and wherein said lower seat (GC1) rests on said main cross member (TX), while said upper seat (GC2) is suitable for containing said secondary cross member (TY) and for keeping it in a position crosswise to said main cross member (TX).
5. Outdoor framework structure according to claims 1, 2, 3, 4, **characterised in that** said seats (GC1) and (GC2) are orthogonal to one another and lie on parallel planes.
6. Outdoor framework structure according to previous claims, **characterised in that** it comprises one or more rods (R) for supporting top covering sheets (T), wherein said rods (R) are supported by one or more hooks (R1) inserted in profiles or guides (TR) installed along the underside of said secondary cross members (TY), wherein said hooks (R1) are free to slide and thereby cause the displacement of said

supporting rods (R) and the consequent deployment or closure of said top covering sheets (T) attached thereto.

7. Outdoor framework structure according to previous claims, **characterised in that** it comprises one or more vertical profiles (C), integrally attached to said uprights (M), wherein the ends of the terminal rods of folding or vertically-sliding winding side sheets are slidingly engaged.
8. Outdoor framework structure according to previous claims, **characterised in that** it comprises one or more winding rollers (V) for said folding or vertically-sliding winding side sheets, wherein said winding rollers (V) are supported by suitable brackets (V1) hooked to said main cross members (TX) and/or secondary cross members (TY) and/or said uprights (M).
9. Outdoor framework structure according to previous claims, **characterised in that** the ends of said main cross members (TX) and secondary cross members (TY) are each closed by means of a plug or cap (P).

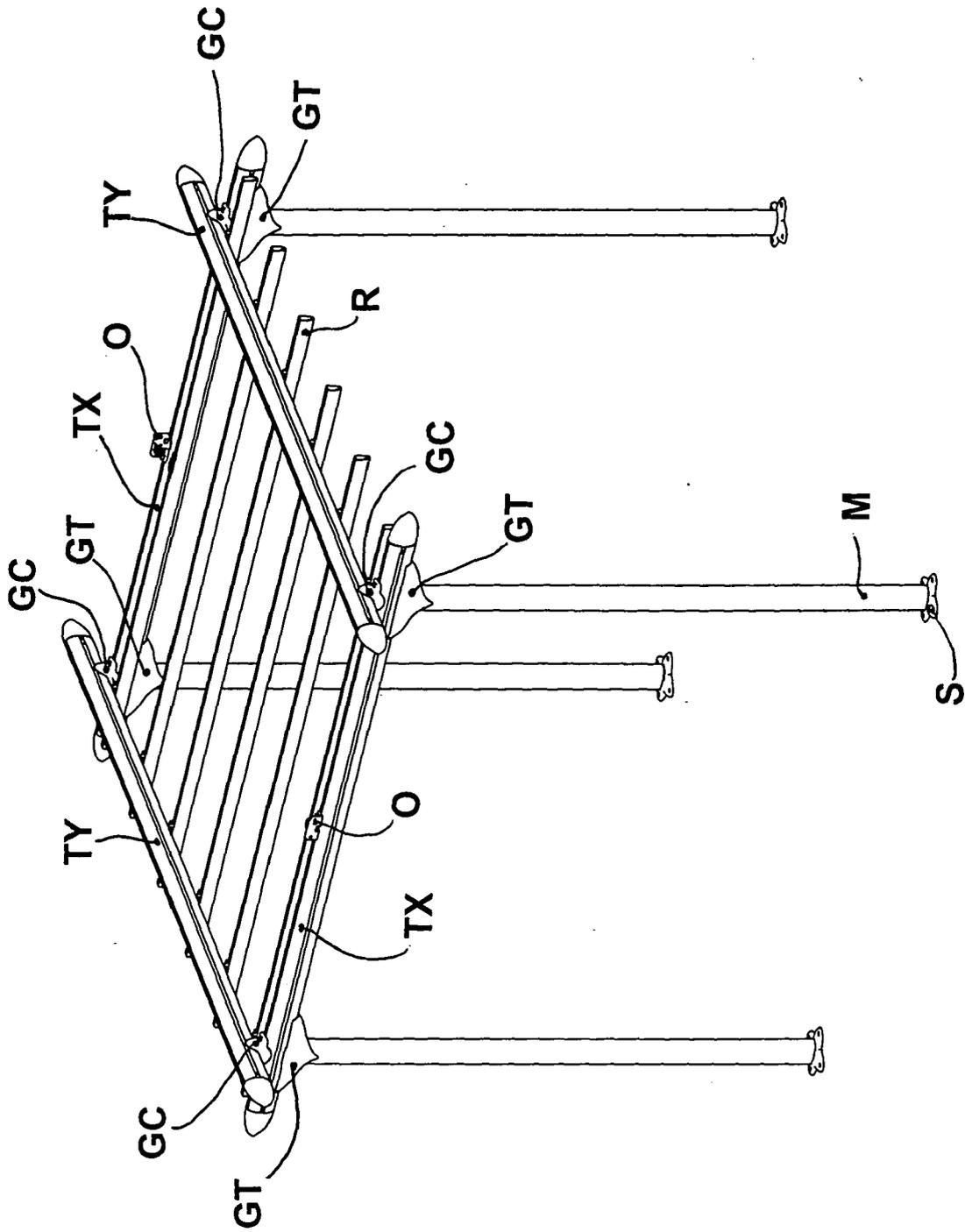


Fig. 1

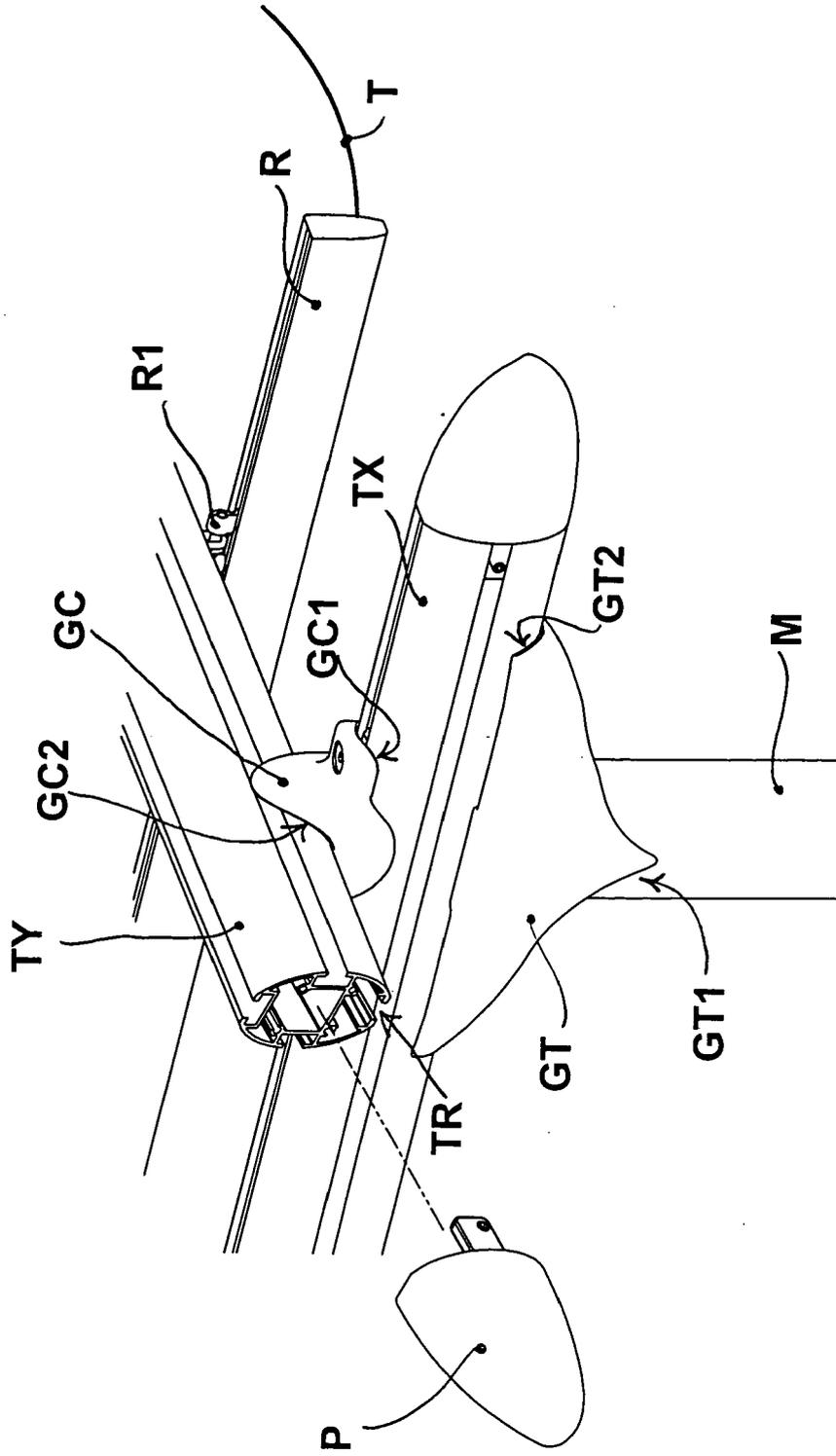


Fig. 2

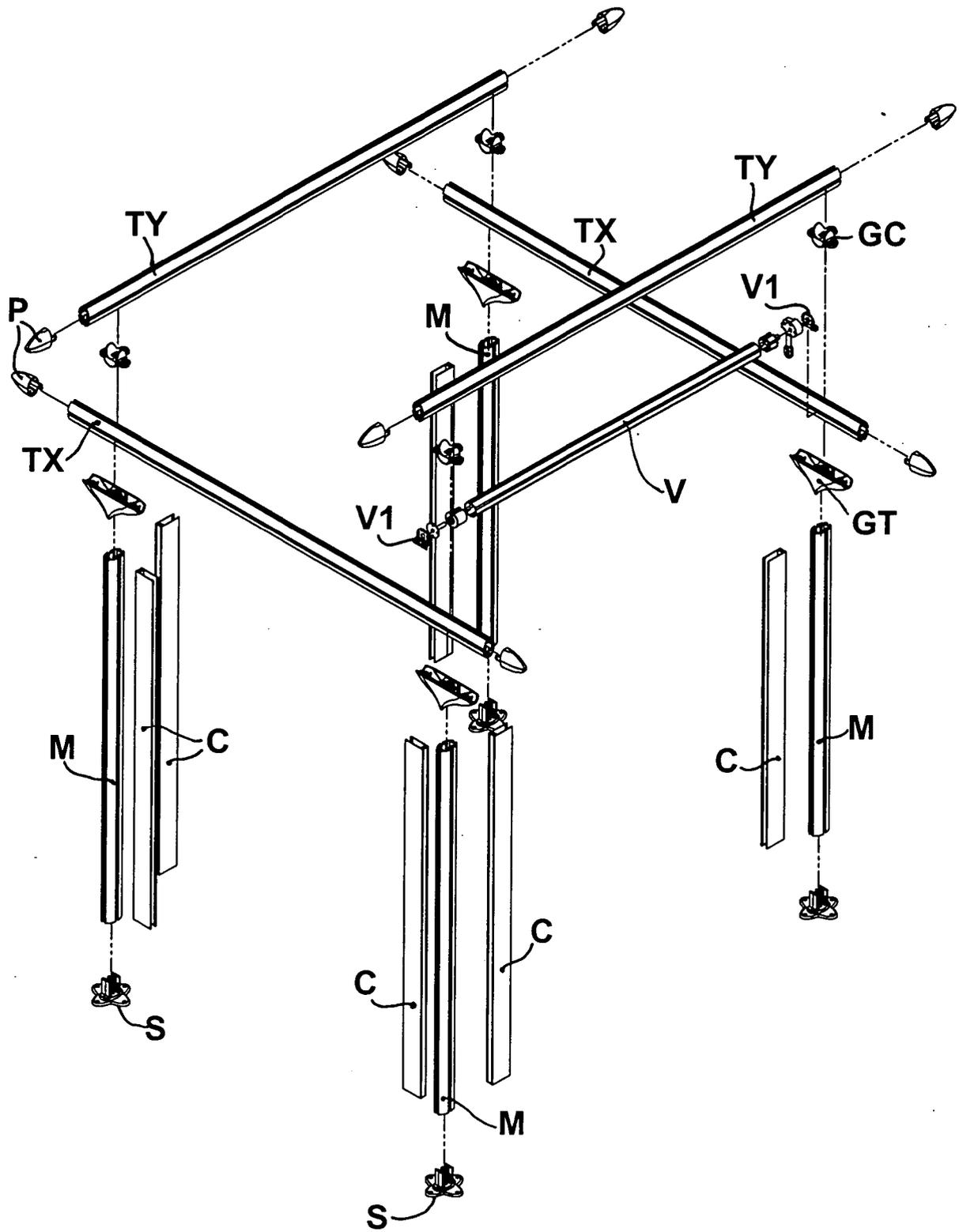


Fig. 3



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	AU 551 336 B2 (SALAMON J H) 24 April 1986 (1986-04-24) * the whole document *	1-9	INV. E04F10/06
A	FR 2 458 329 A1 (VESNIER PATRICK PENNEL JEAN FRANCOIS [FR]) 2 January 1981 (1981-01-02) * figures 1-8 *	2,4,5	
A	DE 36 36 639 A1 (ABR BAUSYSTEM AG [CH]) 5 May 1988 (1988-05-05) * figures 5,9,42 *	2,4,5	
X	DE 10 2004 032725 A1 (STOBAG MURI [CH]) 16 February 2006 (2006-02-16) * figure 1 *	1,3,8,9	
A	DE 85 07 015 U1 (RUDOLF DIEHL STAHL- UND APPARATEBAU, 7500 KARLSRUHE, DE) 25 April 1985 (1985-04-25) * figures 1,2 *	6	
X	WO 98/31912 A (MARVINGARDENS LTD [US]) 23 July 1998 (1998-07-23) * figure 1 *	1-9	TECHNICAL FIELDS SEARCHED (IPC) E04F E04H E06B F16B A01G
A	EP 1 113 120 A (HMZ SONNENSCHUTZTECHNIK GMBH [DE] MHZ SONNENSCHUTZTECH GMBH [DE]) 4 July 2001 (2001-07-04) * figures 1,5 *	6,8	
X	DE 94 21 250 U1 (DOKA IND GMBH [AT]) 31 August 1995 (1995-08-31) * figures 1-6 *	1-5	
X	DE 42 06 343 A1 (HEID MICHAEL CURT [DE]) 26 November 1992 (1992-11-26) * figures 1-3 *	1,3,8	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 20 March 2007	Examiner Severens, Gert
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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ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 06 42 5716

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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20-03-2007

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
AU 551336	B2	24-04-1986	AU 9074182 A	24-05-1984
FR 2458329	A1	02-01-1981	BE 896991 A7	07-12-1983
			CA 1154480 A1	27-09-1983
			US 4440519 A	03-04-1984
			US 4512176 A	23-04-1985
DE 3636639	A1	05-05-1988	AU 1156088 A	25-05-1988
			WO 8803203 A2	05-05-1988
			EP 0333772 A1	27-09-1989
			JP 2500851 T	22-03-1990
DE 102004032725	A1	16-02-2006	NONE	
DE 8507015	U1	25-04-1985	NONE	
WO 9831912	A	23-07-1998	AU 730485 B2	08-03-2001
			AU 5823698 A	07-08-1998
			CA 2277989 A1	23-07-1998
			EP 0953096 A1	03-11-1999
			NZ 336987 A	26-01-2001
			US 6006809 A	28-12-1999
			US 5794679 A	18-08-1998
EP 1113120	A	04-07-2001	DE 19963862 A1	26-07-2001
DE 9421250	U1	31-08-1995	AT 169081 T	15-08-1998
			CA 2147406 A1	22-10-1995
			DE 4413931 C1	14-12-1995
			EP 0678637 A1	25-10-1995
			JP 7292971 A	07-11-1995
			US 6176463 B1	23-01-2001
DE 4206343	A1	26-11-1992	NONE	

EPO FORM P0459

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