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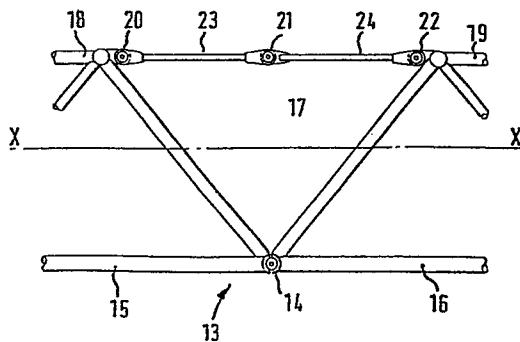
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**54 Portal frame structures.**

57 A portal frame structure is provided comprising a horizontal truss (10) and vertical supports (11, 12) secured to the respective ends of the truss (10), the truss (10) being provided with a joint arrangement (13) intermediate its end, said joint arrangement (13) being such that outside elements (15, 16) of the truss (10) on one side of its neutral axis (X-X) are maintained in compression in both directions of load on the truss, and that outside truss elements (18, 19) on the other side of said neutral axis are subjected to predetermined tension, such that as the load increases in one of said load directions the tension is reduced, and to tension exerted in the other of said load directions. The predetermined tension may be zero, such that the joint arrangement collapses immediately a compressive load is applied. Alternatively, it may have a value such that it reaches zero at any point up to the maximum designed load for a particular building application. The portal frames are for use with cladding secured to the inner side of the frames.





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. <sup>3</sup> )
A	FR-A-1 174 251 (HÜNNEBECK)  * Page 1, left-hand column, lines 1-6; left-hand column, line 31 - righthand column, line 29; page 4, left-hand column, lines 23-37; page 5, left-hand column, line 32 - righthand column, line 4; page 8, righthand column, lines 35-47; figures 1,2,15-17,33,52 *	1-4,6-10	E 04 C 3/40 E 04 B 1/344
A	--- CH-A- 395 163 (HÜNNEBECK)  * Page 3, lines 19-76; figures 5,6,11 *	1,2,4,10	
A	--- BE-A- 507 322 (ALTET) * Page 1, lines 1-7; page 2, lines 17-19,32-35; figures 1,4,6,7 *	1,7,10	TECHNICAL FIELDS SEARCHED (Int. Cl. <sup>3</sup> )
A	--- DE-A-2 439 868 (FREDRIKSSON & RIBRING) * Page 2, line 8 - page 3, line 2; figures 1-4 *	1,10	E 04 C E 04 B
A	--- FR-A- 807 217 (OLLIVIER)		
A	--- GB-A- 134 630 (GUEST)		
	--- -/-		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 12-08-1983	Examiner SPIEGEL R.P.
CATEGORY OF CITED DOCUMENTS		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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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. <sup>3</sup> )
A	FR-A-1 477 768 (SEMET)  -----		
			TECHNICAL FIELDS SEARCHED (Int. Cl. <sup>3</sup> )
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<b>CATEGORY OF CITED DOCUMENTS</b> 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	