



(19) Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 1 079 044 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
06.11.2002 Bulletin 2002/45

(51) Int Cl. 7: E04G 23/02

(43) Date of publication A2:
28.02.2001 Bulletin 2001/09

(21) Application number: 00307351.7

(22) Date of filing: 25.08.2000

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE

Designated Extension States:
AL LT LV MK RO SI

(30) Priority: 25.08.1999 GB 9920091

(71) Applicant: H & H Property Management Limited
Hitchin, Hertfordshire SG4 9SP (GB)

(72) Inventor: Hare, John Oswald
Ashwell, Hertfordshire SG7 5RA (GB)

(74) Representative: Britter, Keith Palmer
Britter & Co.
Enterprise House,
14b Whitehorse Street
Baldock Hertfordshire SG7 6QN (GB)

(54) Structural support

(57) Method of pre-stressing two spaced components (2,10), such as a structural steel member (2) and a flat roof panel (10), wherein an expandable element (20'), preferably in the form of an inflatable tube of given length, is inserted in the space between the two components (2,10) and is expanded to generate a force acting between the two components (2,10), to pre-stress at least one of the components (2,10). Once the two components (2,10) have been pre-stressed, rigid spacing means (6) may be placed in at least part of the remainder of the space not occupied by the non-expanded element (20') and in engagement with both components (2,10). An inflatable tube (20) may be used as the expandable element (20') and may have its opposed ends (21) sealed in a fluid-tight manner by folding and clamping (22).

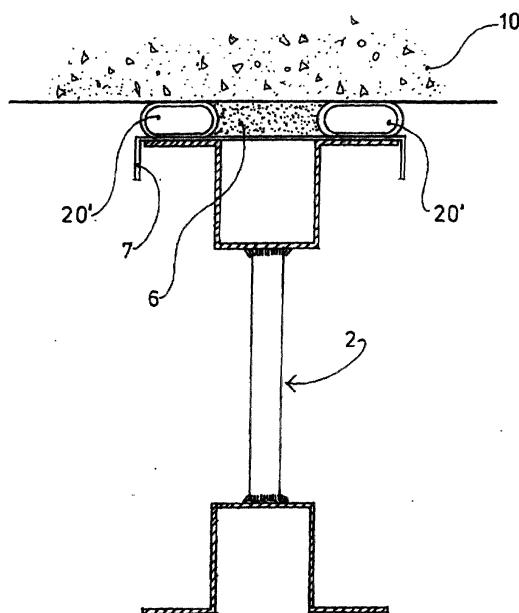


FIG.6



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	FR 2 722 819 A (HEDIN JEAN LUC ;BESNAINOU MAURICE (FR)) 26 January 1996 (1996-01-26) * claims; fig. 2 * -----	1,2,4-7, 9,10, 12-15, 17-21, 23,25	E04G23/02
X	US 5 397 103 A (WATSON ALAN R) 14 March 1995 (1995-03-14) * claims ; fig. 1A, 3-5 * -----	1-3, 9-11,17, 18,25	
X	US 4 191 496 A (BECKER ROBERT F) 4 March 1980 (1980-03-04) * claims; fig. 2, 4, 5 * -----	1,2,4-7, 9,10, 12-15, 17-21, 23-25	
X	WO 95 07400 A (EDSCER WILLIAM GEORGE) 16 March 1995 (1995-03-16) * claims * -----	1,9,17	TECHNICAL FIELDS SEARCHED (Int.Cl.7) E04G B66F
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search		Examiner
MUNICH	13 September 2002		Vratsanou, V
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	

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

EP 00 30 7351

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.

13-09-2002

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
FR 2722819	A	26-01-1996	FR	2722819 A1	26-01-1996
US 5397103	A	14-03-1995	US AU WO	5232202 A 3124593 A 9410078 A1	03-08-1993 24-05-1994 11-05-1994
US 4191496	A	04-03-1980	CA	1081975 A1	22-07-1980
WO 9507400	A	16-03-1995	AU WO	7618494 A 9507400 A1	27-03-1995 16-03-1995