



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
31.01.2007 Bulletin 2007/05

(51) Int Cl.:
E04C 2/292 (2006.01)

(43) Date of publication A2:
22.12.2004 Bulletin 2004/52

(21) Application number: **04102239.3**

(22) Date of filing: **21.05.2004**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL HR LT LV MK

- **Rantakylä, Kari**
20540 Turku (FI)
- **Nordström, Kjell**
21600 Parainen (FI)
- **Willberg, Jim**
21600 Parainen (FI)

(30) Priority: **19.06.2003 FI 20035101**

(71) Applicant: **Paroc Group Oy Ab**
01300 Vantaa (FI)

(74) Representative: **LEITZINGER OY**
Tammasaarenkatu 1
00180 Helsinki (FI)

(72) Inventors:
• **Karlsson, Dick**
21600 Parainen (FI)

(54) **Fastening device for attaching sandwich construction units to a support structure**

(57) The invention relates to a fastening device for attaching sandwich construction units (1) to a support structure. The fastening device comprises a plate-like fastening member (7), which extends in a longitudinal direction of the construction unit and is arranged on the construction unit's (1) one narrow side (13) provided with tongue-and-groove edges and which in its lateral direction extends over some of the width of said narrow side (13). The fastening member (7) is shaped in its outer edge portion to be adapted to engage under an outer surface sheet's (2) tongue edge (5). The fastening mem-

ber is formed with at least one recess (9) for passing a construction unit fastening element (12) therethrough to a support structure. The fastening device comprises a clamping member (14), which extends in a longitudinal direction of the construction unit (1) and which is attachable to the fastening member (7). The clamping member (14) is shaped in its outer edge (15) to be substantially complementary to the shape of the outer surface of the outer surface sheet's (2) tongue edge (5) and is engageable for a clamping attachment with said tongue edge for securing the fastening member (7) to the outer surface sheet (2).

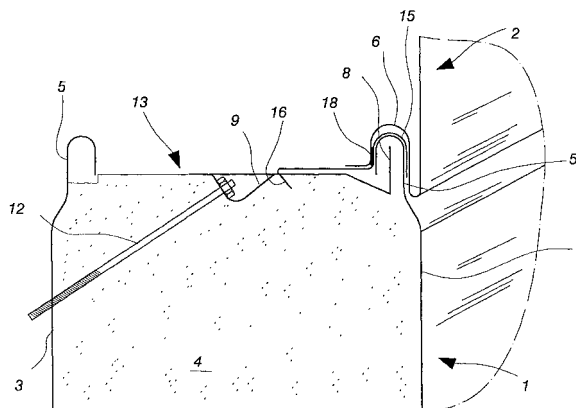


Fig. 3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 10 2239

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	EP 0 345 416 A1 (HOESCH STAHL AG [DE]) 13 December 1989 (1989-12-13) * the whole document *	1-4	INV. E04C2/292
A	DE 202 10 072 U1 (SCHMELZER KLAUS [DE]) 2 October 2002 (2002-10-02) * the whole document *	1-4	
A	DE 199 30 650 A1 (THYSSEN STAHL BAUELEMENTE GMBH [DE]) 18 January 2001 (2001-01-18) * page 10, line 9 - page 11, line 20; figure 1 *	1,2	
			TECHNICAL FIELDS SEARCHED (IPC)
			E04C F16B E04F
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		21 December 2006	Vrugt, Sietse
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			

1
EPO FORM 1503 03.82 (P04C01)

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

EP 04 10 2239

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.

21-12-2006

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0345416	A1	13-12-1989	DE 3819141 A1 07-12-1989
		WO 8912149 A1 14-12-1989	
		FI 892342 A 05-12-1989	
		JP 2504534 T 20-12-1990	
		JP 2755756 B2 25-05-1998	

DE 20210072	U1	02-10-2002	EP 1375770 A2 02-01-2004

DE 19930650	A1	18-01-2001	HU 1939 U 29-01-2001
		PL 341079 A1 15-01-2001	
