



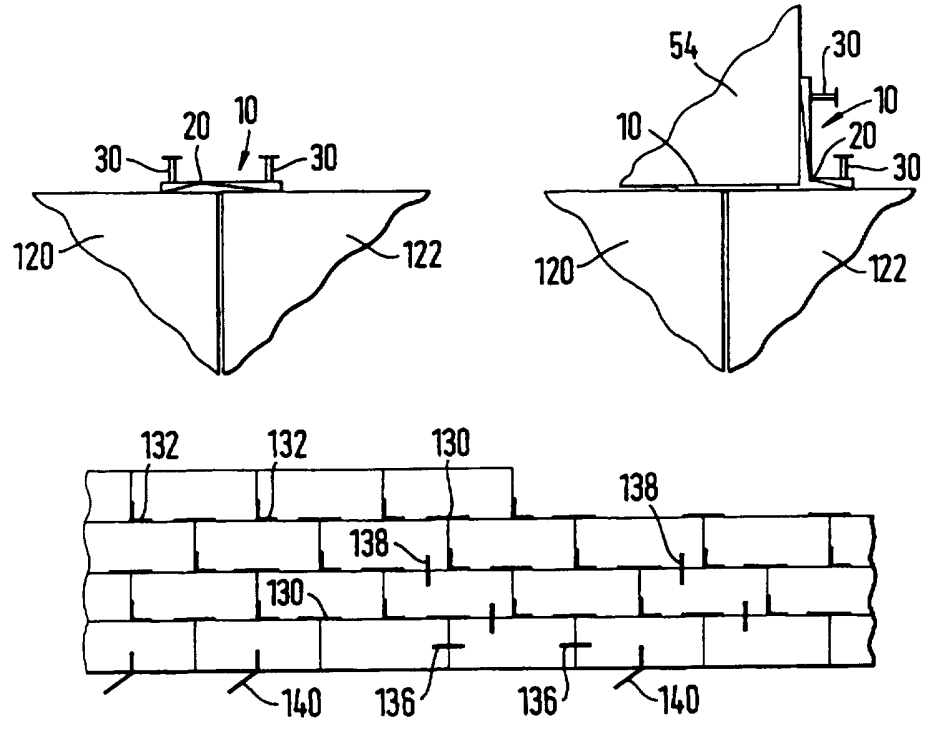
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<p>(21) International Application Number: PCT/GB95/02358 (22) International Filing Date: 5 October 1995 (05.10.95) (30) Priority Data: 9420044.1 5 October 1994 (05.10.94) GB 9420049.0 5 October 1994 (05.10.94) GB (71) Applicant (for AU NZ only): RYLAND, Charles, Henry [AU/AU]; Danegate, Maroske Road, Mary Smokes Creek, QLD 4514 (AU). (71)(72) Applicant and Inventor: DUNKLEY, David, Dennis [GB/GB]; 35 Marlborough Park Avenue, Sidcup, Kent DA15 9DL (GB). (71)(72) Applicants and Inventors (for all designated States except AU NZ): KENNY, Michael [GB/GB]; 42 Walton Road, Sidcup, Kent DA14 4LN (GB). GILLHAM, Anthony [GB/GB]; 157 Westbrook Road, Welling, Kent DA16 1QS (GB). (74) Agent: MAGUIRE & CO.; 5 Crown Street, St Ives, Cambridge PE17 4EB (GB).</p>		<p>(81) Designated States: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 13 June 1996 (13.06.96)</p>

(54) Title: DEVICES FOR USE IN BUILDING AND METHODS OF USING SAME

(57) Abstract

A device fixable to blockwork has the form of a tie (10) with first and second elongate body parts joined one to the other at their first ends whilst their second ends are apertured to receive fixing means for fixing the tie to blockwork. The body parts may be coplanar or be disposed at right angles one to the other. The tie as described (Fig. 1) is of moulded plastics material and the body parts are joined by a live hinge. Edges of each body part carry walls (16, 17) extending normally of the plane of the tie and these walls are of increasing height in moving from the hinge (20) to the ends (12, 14) of the tie. Fixture of the tie to blockwork is achieved by driving the body of fixing means (30, Fig. 2; 54, Fig. 3; 74, Fig. 4; 94, Fig. 5) into blockwork through the apertures (22, 24) such that the bevelled undersurfaces of heads of the fixing means bear on bevelled edges (26) of the apertures. Various fixing means are described all of which are of moulded glass fibre reinforced plastics material, are rectangular in section along their length and taper inwardly in moving from their trailing to their leading ends. One described fixing means (30, Fig. 2) is slotted to form a pair of legs (18) when driven into blockwork, whilst others (Figs. 4, 5) are formed with lands running along at least part of their lengths. A method of bonding blockwork, joining adjacent blocks of material, to form a wall is described.



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INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 95/02358

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 E04B2/06 E04B1/41

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 E04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A A	US,A,4 779 393 (JONG) 25 October 1988 see the whole document --- GB,A,2 174 122 (HARRIS & EDGAR) 29 October 1986 see the whole document -----	1-3,8 4,6,14, 24 1,3,4

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

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- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

1 February 1996

Date of mailing of the international search report

17.04.96

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+ 31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+ 31-70) 340-3016

Authorized officer

VANDEVONDELE, J

INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB95/02358

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

- 1.- claims 1-8,14,24-27: Device fixable to blockwork and method of bonding blockwork with these devices.
- 2.- claims 9-13,15-23 : Means for fixing articles to blockwork.

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-8, 14, 24-27

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 95/02358

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US-A-4779393	25-10-88	NONE	
GB-A-2174122	29-10-86	NONE	