



(51) International Patent Classification:
E04C 5/16 (2006.01) *E04C 5/18* (2006.01)

(21) International Application Number:
PCT/US2011/026070

(22) International Filing Date:
24 February 2011 (24.02.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/309,783 2 March 2010 (02.03.2010) US

(72) Inventor; and

(71) Applicant : ALFONSO, Jorge, R. [US/US]; 43 Rainey
Street Apartment 2803, Austin, TX 78701 (US).

(74) Agent: VOIGT, Robert, A., Jr.; Winstead PC, P.O. Box
50784, Dallas, TX 75201 (US).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,

KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,
NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD,
SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG,
ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,
LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments (Rule 48.2(h))

(88) Date of publication of the international search report:
22 December 2011

(54) Title: REBAR SUPPORT RINGS

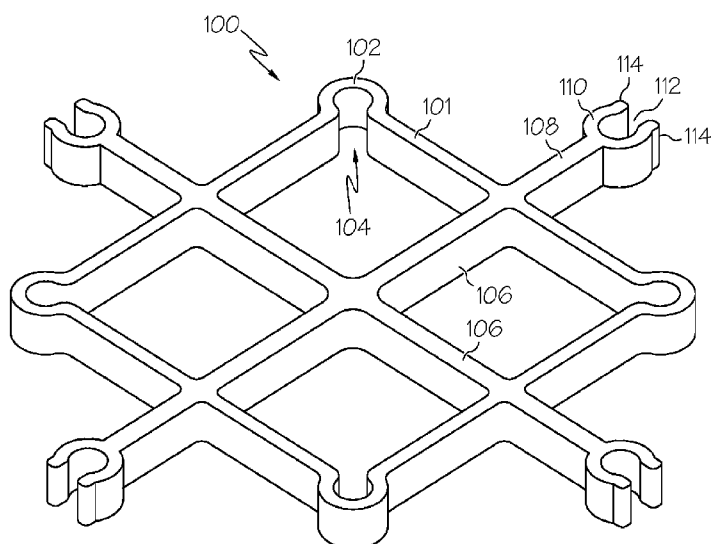


FIG. 1

(57) Abstract: Structures for supporting and aligning a reinforcing bar ("rebar") during the construction of a column, beam or other structure in which the rebar is laid out in parallel to an axis. One such structure includes a support structure having a square ring, where the corners of the square ring include a rebar receptacle configured to receive a reinforcing bar. The rebar receptacle includes an opening through which the reinforcing bar can be inserted, where the opening is configured to allow the reinforcing bar to enter the rebar receptacle and further configured to retain the reinforcing bar after the reinforcing bar has been seated due to the width of the opening being less than a diameter of the reinforcing bar.

A. CLASSIFICATION OF SUBJECT MATTER***E04C 5/16(2006.01)i, E04C 5/18(2006.01)i***

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)

E04C 5/16; E02D 27/00; E01D 19/12

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: support, opening, receptacle

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 05042218A A (NASCA; GERALD et al.) 27 August 1991 See abstract and figure 3.	1-9
A	US 05456051A A (QUEEN; FRANKIE A. R. et al.) 10 October 1995 See abstract and figure 1.	1-9
A	US 06161360A A (SMITH; EARL D.) 19 December 2000 See abstract and figure 1.	1-9
A	JP 06-027941 U (TODA CORPORATION) 15 April 1994 See abstract and figure 1.	1-9
A	KR 10-0696278 B1 (CHUNG, HYOI-KWAN) 19 March 2007 See abstract and figure 1.	1-9



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"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

03 NOVEMBER 2011 (03.11.2011)

Date of mailing of the international search report

03 NOVEMBER 2011 (03.11.2011)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 189 Cheongsa-ro,
Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

CHOI, Byoung Suk

Telephone No. 82-42-481-5797



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2011/026070**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 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 No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

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

Claims 1-7(Group 1), claim 8(Group 2), and claim 9(Group 3) comprise a receptacle that receives a reinforcing bar, which is their common feature. However, this feature is substantially the same as the invention disclosed in D4 and claims 1-9 lack unity of invention under PCT Rule 13.2.

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.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/026070Patent document
cited in search reportPublication
datePatent family
member(s)Publication
date

US 05042218A A

27.08.1991

None

US 05456051A A

10.10.1995

None

US 06161360A A

19.12.2000

None

JP 06-027941 U

15.04.1994

JP H0-627941 U

15.04.1994

KR 10-0696278 B1

19.03.2007

None