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(54) **REBAR MOVEMENT-PREVENTION-TYPE ONE-TOUCH COUPLER**

(71) Applicant: **WELLSYSMETAL CO., LTD.**, Busan (KR)

(72) Inventors: **Myeong Shik Yoon**, Busan (KR); **Chul Sung Lee**, Gimhae-si (KR)

(73) Assignee: **WELLSYSMETAL CO., LTD.**, Busan (KR)

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CPC **E04C 5/165** (2013.01); **F16B 7/0406** (2013.01); **Y10T 403/5733** (2015.01); **Y10T 403/5793** (2015.01)

(58) **Field of Classification Search**

CPC Y10T 403/5733; Y10T 403/5793; E04C 5/165

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,764,071 A * 8/1988 Lawrence F16B 37/0864 411/433

FOREIGN PATENT DOCUMENTS

CN	108756075 A	11/2018	
JP	3-72142	* 3/1991	 E04C 5/02
KR	20-0341839 Y1	2/2004	
KR	10-0443594 B1	8/2004	
KR	10-2009-0009578 A	1/2009	
KR	10-2013-0143331 A	12/2013	
KR	10-1654145	* 8/2016	 E04C 5/165

(Continued)

OTHER PUBLICATIONS

International Search Report for PCT/KR2019/006917 mailed Feb. 28, 2020 from Korean Intellectual Property Office.

Primary Examiner — Michael P Ferguson

(74) *Attorney, Agent, or Firm* — Paratus Law Group, PLLC

(57) **ABSTRACT**

A rebar movement-prevention-type one-touch coupler is configured to allow rebars to be fixed without a movement of the rebars after performing a one-touch insertion. A fixation of the rebars is completed by performing an additional tightening operation to housing units into which the rebars are inserted. The coupler increases both the fixation stability of the rebar and the safety of a structure employing the rebar.

3 Claims, 6 Drawing Sheets

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