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- (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, BN, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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).

[Continued on nextpage]

(54) **Title:** SECURE ELECTRICAL RECEPTACLE

Shown Inserted into Receptacle

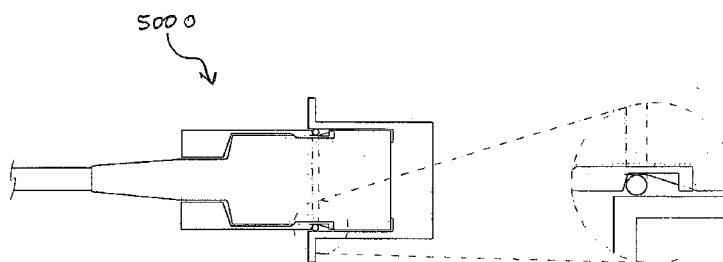


Fig 20

(57) **Abstract:** A method and apparatus ("utility") for securing an electrical connection formed by a mating structure including prongs of a male assembly and receptacles of a female assembly are provided. The utility includes a clamping mechanism whereby the very forces that would otherwise tend to pull the connection apart serve to actuate the clamping mechanism, thereby securing the mated pair. The apparatus may be integrated into a standard receptacle, or retrofitted to work with existing devices. In one embodiment, the clamping mechanism acts solely on the ground prong of a standard plug assembly, so that it is unnecessary to consider electrical potentials applied to the clamped prong in relation to the design of the clamping mechanism. Further, the withdrawing movement of the prongs of a plug may be translated into a rotational movement of a portion of the clamping mechanism into an abutting relationship with the clamped prong.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/054518**A. CLASSIFICATION OF SUBJECT MATTER****H01R 13/629(2006.01)i, H01R 13/639(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)

H01R 13/629; H01R 4/50; H01R 33/96; H01R 13/625

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 modelsElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keywords: receptacle, plug, insert**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 7041918 B1 (CHIA-CHEN WU) 09 May 2006 See abstract, columns 1-6 and figures 1-3.	1-50 51-53
X A	US 7172451 B1 (JASON DANIEL RATZLAFF) 06 February 2007 See abstract, columns 1-7 and figures 1-17B.	51-53 1-50
A	US 6193539 B1 (CHANG; CHI-TSAI) 27 February 2001 See abstract, columns 1-4 and figures 1-10.	1-53

☐ 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

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"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

27 March 2013 (27.03.2013)

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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