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- (71) **Applicant (for all designated States except US):** **CARMIL ENERGY, INC.** [—/US]; 30798 US Highway 19 North, Palm Harbor, Florida 34684 (US).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **MILLS, Michael J.** [US/US]; 4050 NE 12th Terrace, Ft. Lauderdale, Florida 33334 (US). **CARTAGENA, Richard A.** [US/US]; 355 Coco Plum Court, Oldsmar, Florida 34677 (US).
- (74) **Agent:** **URCIA, Benjamin E.**; Bacon & Thomas, PLLC, 625 Slaters Lane, 4th Floor, Alexandria, Virginia, 22314 (US).
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(54) **Title:** OSCILLATING SHUTTLE FEEDBACK CIRCUIT AND METHOD FOR USE IN ELECTRICITY GENERATION

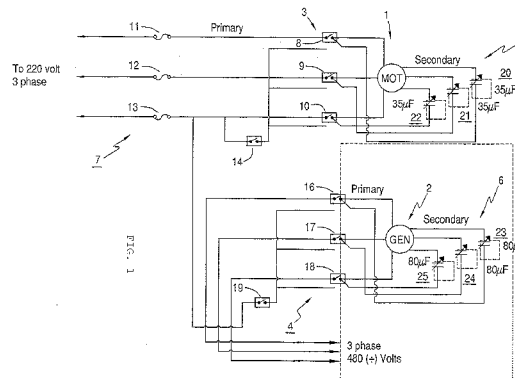


Fig. 1

(57) **Abstract:** An oscillating shuttle feedback circuit includes two electrical machines, one of which is operable as motor to drive the other electrical machine to generate electricity. Each electrical machine has one part that forms a magnetic circuit and includes a primary and a secondary winding. The primary and secondary windings of the electrical machines are connected exclusively by capacitors to form the oscillating shuttle circuit, the capacitors being tunable to optimize energy accumulation when the driven electrical machine is operable at a predetermined frequency. A method of designing and/or constructing a floating ground, capacitor-based nonlinear oscillating-shuttle feedback circuit, includes the steps of operating one electrical machine to drive the other electrical machine, and tuning capacitors in the circuit connecting the primary and secondary windings of the driven electrical machine to optimize the oscillating shuttle effect.



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INTERNATIONAL SEARCH REPORT

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PCT/US2012/030079**A. CLASSIFICATION OF SUBJECT MATTER****H02K 57/00(2006.01)i, H02N 11/00(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)

H02K 57/00; B60L 11/18; H02K 53/00; H04B 7/14

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: oscillating shuttle circuit, primary and secondary windings, motor, generator

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-0152456 B1 (PARK, CHUL KYU) 15 December 1998 See abstract, page 3, claim 1 and figure 1.	1-8
A	KR 10-0994218 B1 (KIM, SANG JIN) 19 November 2010 See abstract, claim 1 and figure 1.	1-8
A	KR 10-2001-0089643 A (NISSAN DIESEL MOTOR CO.,LTD.) 08 October 2001 See abstract, claim 1 and figure 1.	1-8
A	JP 11-341786 A (TAKEMOTO YUJI) 10 December 1999 See abstract, claim 1, paragraph 0006 and figures 1-3.	1-8
A	US 05493691A A (BARRETT; TERENCE W.) 20 February 1996 See abstract and claim 1.	1-8

 Further documents are listed in the continuation of Box C. See patent family annex.

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Authorized officer

Lee Woo Ri

Telephone No. 82-42-481-8460



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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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