

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
5 June 2003 (05.06.2003)

PCT

(10) International Publication Number
WO 03/047071 A3

(51) International Patent Classification⁷: **H02K 1/18**,
11/00, 21/22, B60L 11/18, H02K 21/24

Street, Fairfax, VA 22032 (US). **SOGHOMONIAN, Zareh**; 22340 Great Trail Terrace, Sterling, VA 20164 (US).

(21) International Application Number: PCT/US02/32666

(74) Agents: **RUBINS, Gene, Z.** et al.; McDermott, Will & Emery, 600 13th Street, N.W., Washington, DC 20005-3096 (US).

(22) International Filing Date: 15 October 2002 (15.10.2002)

(25) Filing Language: English

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
09/993,596 27 November 2001 (27.11.2001) US

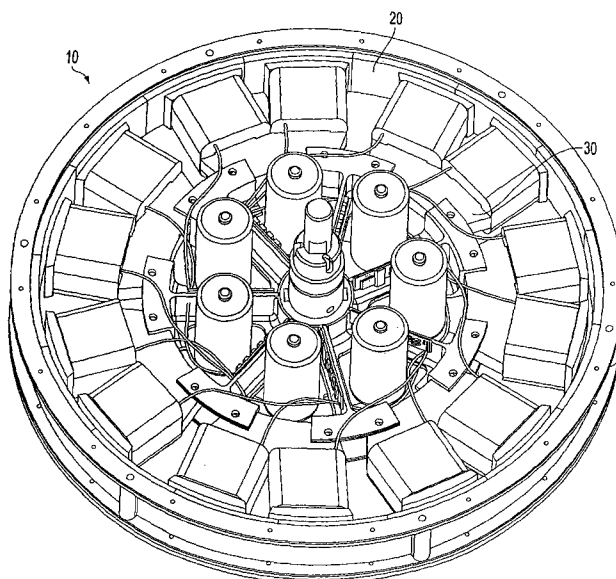
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant: **WAVECREST LABORATORIES, LLC**
[US/US]; 45600 Terminal Drive, Dulles, VA 20166 (US).

(72) Inventors: **PYNTIKOV, Alexander, V.**; 21538 Tithables Circle, Ashburn, VA 20190 (US). **MASLOV, Boris, A.**; 12096 Chancery Station Circle, Reston, VA 20190 (US). **BENSON, Mark, A.**; 18260 Oak Lake Court, Leesburg, VA 20176 (US). **GLADKOV, Alexander, A.**; 9808 Laurel

[Continued on next page]

(54) Title: ROTARY ELECTRIC MOTOR HAVING SEPARATE CONTROL MODULES FOR RESPECTIVE STATOR ELECTROMAGNETS



(57) Abstract: A rotary brushless electric motor is formed within a cylindrical rotor housing structure that surrounds an annular stator ring. The stator is formed of a plurality of individual power modules and corresponding core segments, each module comprising electrical control and drive elements supplied by a power source incorporated within the stator. Such parallel architecture provides relatively independently controlled functionality for each module. Each module and stator core segment can be individually installed and removed without disturbing the other units. Should a particular module or stator core segment fail, it can be easily removed for repair or replacement and reinstallation.



WO 03/047071 A3



Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

18 September 2003