

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 December 2005 (29.12.2005)

PCT

(10) International Publication Number
WO 2005/124885 A3

(51) International Patent Classification:

H01L 41/08 (2006.01)

(21) International Application Number:

PCT/US2005/020311

(22) International Filing Date: 9 June 2005 (09.06.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/578,451 9 June 2004 (09.06.2004) US

(71) Applicant (for all designated States except US): **THE CREST GROUP, INC.** [US/US]; Scotch Road, P.O. Box 7266, Trenton, NJ 08628 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **GOODSON, J., Michael** [US/US]; 92 Rolling Hill Road, Skillman, NJ 08558 (US).

(74) Agents: **EVERETT, Stephen, M.** et al.; Preston Gates & Ellis LLP, 55 Second Street, Suite 1700, San Francisco, CA 94104 (US).

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

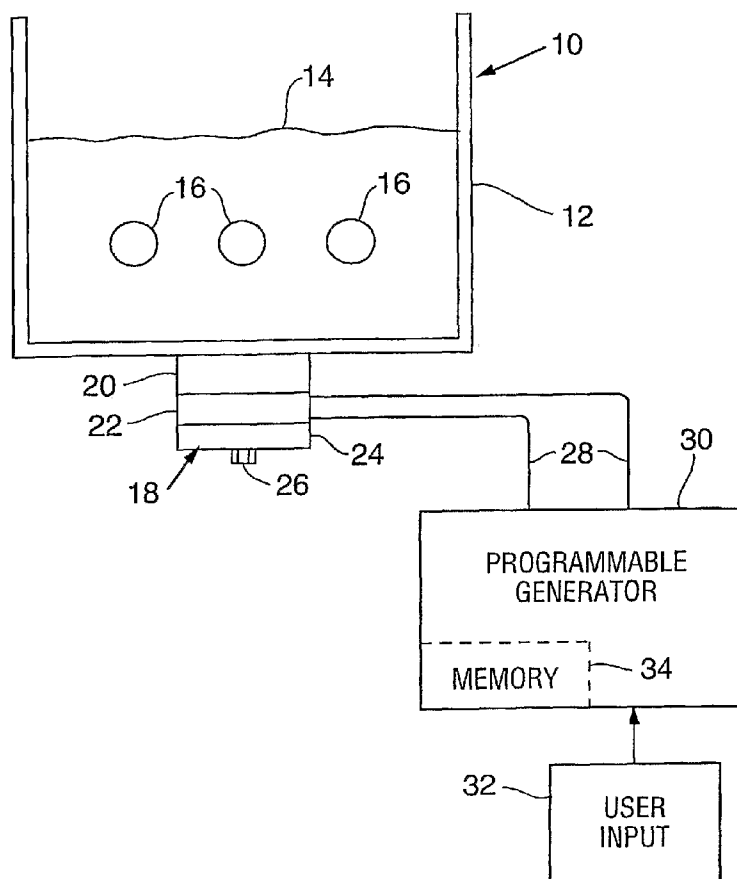
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: ULTRASONIC PROCESS AND APPARATUS WITH PROGRAMMABLE SWEEP FREQUENCY



(57) Abstract: An ultrasonic generator includes a user interface adapted for a user to specify parameters that define a frequency range and a sweep rate for the driving signal, a programmable memory coupled to the user interface for storing the frequency range and sweep rate parameters, and an output circuit responsive to the frequency range and sweep rate parameters for generating the driving signal in the frequency range and at the sweep rate specified by the user. An ultrasonic process includes the steps of programming an ultrasonic generator with parameters specifying a frequency range and a sweep rate of a driving signal output by the generator to one or more ultrasonic transducers used in the ultrasonic process, storing the frequency range and sweep rate parameters in a memory or storage device, and generating a driving signal having a frequency within the specified frequency range and varying at the specified sweep rate.



— *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 May 2007