



(51) International Patent Classification:
G01N 27/07 (2006.01) *A47J 37/12* (2006.01)

(21) International Application Number:
PCT/US2011/048701

(22) International Filing Date:
22 August 2011 (22.08.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
13/215,158 22 August 2010 (22.08.2010) US
61/375,851 22 August 2010 (22.08.2010) US

(72) Inventors; and

(71) Applicants : BURKETT, Douglas, A. [US/US]; c/o Henry Penny Corporation, 1219 U.S. Route 35 West, P.O. Box 60, Eaton, OH 45320 (US). PHILLIPS, Edmond, L. [US/US]; c/o Henry Penny Corporation, 1219 U.S. Route Corporation, P.O. Box 60, Eaton, OH 45320 (US).

(74) Agent: ARPIN, James, R.; Baker Botts L.L.P., The Warner, 1299 Pennsylvania Avenue, N.W., Washington, DC 20004-2400 (US).

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

[Continued on next page]

(54) Title: ELECTRODE UNIT FOR USE IN A FRYER AND FRYER COMPRISING A SAID ELECTRODE UNIT

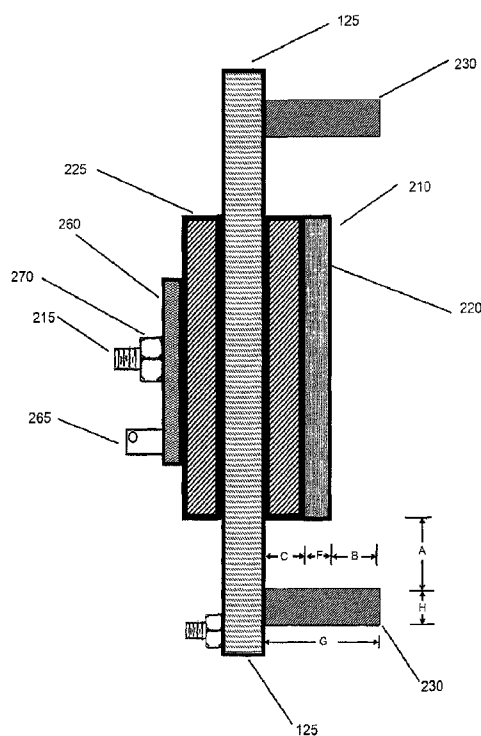


FIG. 2A

(57) Abstract: A fryer (100) measures cooking medium quality, and includes a cooking vessel (110) configured to store a cooking medium (115), an electrode plate (210) completely immersed in the cooking medium, an insulator (220) comprising a first side and a second side, wherein the first side of the insulator is fixed to the electrode plate, and a second side of the insulator is attached to a wall (125) of the cooking vessel, a guard ring (230) fixed to the cooking vessel and surrounding the electrode plate and insulator. The guard ring extends further away from the wall of the cooking vessel than the electrode plate. A size (A) of a gap between the guard ring and the electrode plate is based on a height (E), a width (D), and a thickness (F) of the electrode plate and substantially defines a gain of the electrode. A signal conditioning circuit (600) measures the conductivity of the cooking medium applied to the electrode.

WO 2012/027304 A1



SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, **Published:**
GW, ML, MR, NE, SN, TD, TG).

— *with international search report (Art. 21(3))*