(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
23 January 2020 (23.01.2020)

WIPO | PCT

(10) International Publication Number
WO 2020/018594 A2

(51) International Patent Classification:
A61N 1/02 (2006.01)

(21) International Application Number:
PCT/US2019/042081

(22) International Filing Date:
16 July 2019 (16.07.2019)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
NC2018/0007468 16 July 2018 (16.07.2018) CO

(71) Applicant: **PANACEA QUANTUM LEAP TECHNOLOGY LLC** [US/US]; 1801 N. Griffin, Dallas, Texas 75202 (US).

(72) Inventor: **VLEASCO VALCKE, Francisco Javier**; Carrera 5 # 34 - 03, Bogota (CO).

(74) Agent: **MORALES, Joseph**; The Morales Law Firm, 6628 Walnutwood Cir., Baltimore, Maryland 21212 (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, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, SA, 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, ST, 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, KM, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*

(54) **Title:** APPLICATION OF JERK ELECTROMAGNETIC FIELDS FOR MATERIAL AND TISSUE STIMULATION

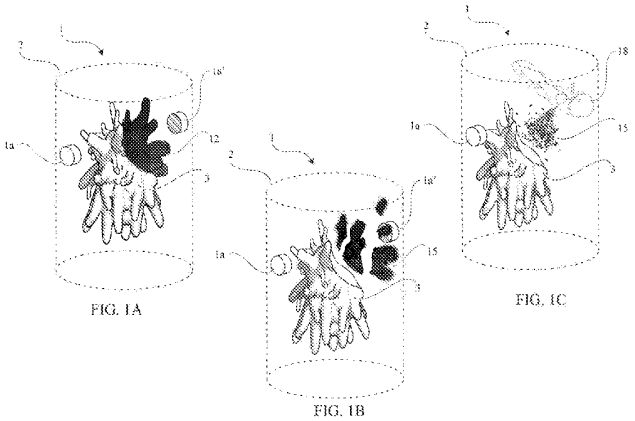


FIG. 1A FIG. 1B FIG. 1C

(57) **Abstract:** The present disclosure relates to methods and devices for applying electromagnetic field jerk to materials and tissues. A first method comprises the following steps: A) generating an activation signal having a waveform that generates electromagnetic field jerk; and B) applying the activation signal to the arrangement of electromagnetic transducers. A second method comprises the following steps: a) generating a carrier signal with a series of pulses by a computing unit; b) generating a modulating signal that generates jerk; c) generating an activation signal that modulates the carrier signal using the modulating signal that generates jerk; d) applying the activation signal to the arrangement of electromagnetic transducers. Some embodiments of the disclosed methods and devices are used for fracturing, pulverizing and reducing particle size of material and tissues.

WO 2020/018594 A2