

(12) International Application Status Report

Received at International Bureau: 12 November 2019 (12.11.2019)

Information valid as of: 18 May 2020 (18.05.2020)

Report generated on: 29 September 2020 (29.09.2020)

(10) Publication number:

WO2020/109896

(43) Publication date:

04 June 2020 (04.06.2020)

(26) Publication language:

English (EN)

(21) Application Number:

PCT/IB2019/059646

(22) Filing Date:

10 November 2019 (10.11.2019)

(25) Filing language:

English (EN)

(31) Priority number(s):

62/772,638 (US)

(31) Priority date(s):

29 November 2018 (29.11.2018)

(31) Priority status:

Priority document received (in compliance with PCT Rule 17.1)

62/795,575 (US)

23 January 2019 (23.01.2019)

Priority document received (in compliance with PCT Rule 17.1)

(51) International Patent Classification:

G01R 33/383 (2006.01); **H01F 7/02** (2006.01)

(71) Applicant(s):

EPSITAU LTD. [IL/IL]; 21 Mivtza Ovda Street 4075502 Ariel (IL) *(for all designated states)*

(72) Inventor(s):

HAHAM HAY, Noam; 21 Mivtza Ovda Street 4075502 Ariel (IL)

(74) Agent(s):

KLIGLER & ASSOCIATES PATENT ATTORNEYS LTD.; P.O. Box 57651 6157601 Tel Aviv (IL)

(54) Title (EN): LIGHTWEIGHT ASYMMETRIC MAGNET ARRAYS WITH THETA MAGNET RINGS

(54) Title (FR): RÉSEAUX D'AIMANTS ASYMÉTRIQUES LÉGERS À ANNEAUX MAGNÉTIQUES THÊTA

(57) Abstract:

(EN): A magnet array (700) includes multiple magnet rings (711-720) and a frame. The multiple magnet rings are positioned along a longitudinal axis and coaxially with the longitudinal axis, wherein at least one (712, 713, 719) of the magnet rings possesses rotational symmetry and has both a finite component of magnetization along an azimuthal (θ) coordinate, and a finite magnetization in a longitudinal-radial plane. The multiple magnet rings configured to jointly generate a magnetic field along a direction parallel to the longitudinal axis. The frame is configured to fixedly hold the multiple magnet rings in place.

(FR): Cette invention concerne un réseau d'aimants (700) comprenant de multiples anneaux magnétiques (711-720) et un cadre. Les multiples anneaux magnétiques sont positionnés le long d'un axe longitudinal et de manière coaxiale par rapport à l'axe longitudinal, au moins un (712, 713, 719) des anneaux magnétiques possédant une symétrie de rotation et ayant à la fois une composante finie de magnétisation le long d'une coordonnée azimutale (θ), et une magnétisation finie dans un plan longitudinal-radial. Les multiples anneaux magnétiques sont configurés pour générer conjointement un champ magnétique le long d'une direction parallèle à l'axe longitudinal. Le cadre est configuré pour retenir fixement en place les multiples anneaux magnétiques.

International search report:

Received at International Bureau: 19 February 2020 (19.02.2020) [EP]

International Report on Patentability (IPRP) Chapter II of the PCT:

Not available

(81) Designated States:

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

European Patent Office (EPO) : 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

African Intellectual Property Organization (OAPI) : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG

African Regional Intellectual Property Organization (ARIPO) : BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW

Eurasian Patent Organization (EAPO) : AM, AZ, BY, KG, KZ, RU, TJ, TM