

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 April 2009 (09.04.2009)

PCT

(10) International Publication Number
WO 2009/043230 A1

(51) International Patent Classification:
A61H 1/00 (2006.01)

(21) International Application Number:
PCT/CN2008/001629

(22) International Filing Date:
19 September 2008 (19.09.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/868,441 5 October 2007 (05.10.2007) US

(71) Applicant (for all designated States except US): **THE CHINESE UNIVERSITY OF HONG KONG** [CN/CN];
Shatin, N.T., Hong Kong (CN).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LEUNG, Kwok-Sui** [CN/CN]; Dept of O & T, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong (CN). **CHEUNG, Wing-Hoi** [CN/CN]; Dept of O & T, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong (CN). **TAM, Kam-Fai** [CN/CN]; Dept of O & T, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong (CN).

NG, Wai-Kin [CN/CN]; Dept of O & T, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong (CN).

(74) Agent: **INSIGHT INTELLECTUAL PROPERTY LIMITED**; 19 A, 19B, Tower A, InDo Building, No. 48A Zhichun Road, Haidian District, Beijing 100098 (CN).

(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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: MAGNETIC LEVITATION VIBRATION SYSTEMS AND METHODS FOR TREATING OR PREVENTING MUSCULOSKELETAL INDICATIONS USING THE SAME

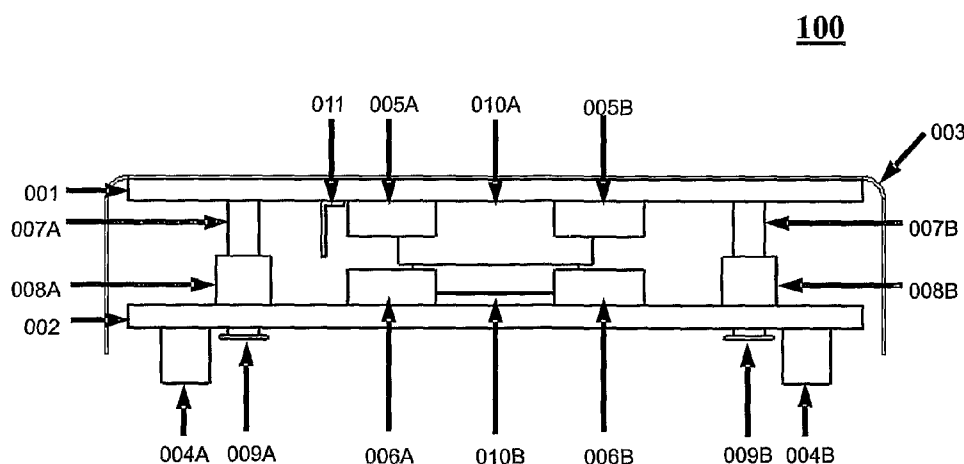


Fig. 1

(57) Abstract: A magnetic levitation vibration system (100) comprises a top plate (001), a base plate (002), at least one first magnet, at least one second magnet, at least one electromagnetic actuator (010) comprising an upper half (010A) and a lower half (010B), a controller, a sensor (011), and a control circuit. A method for the treatment or prevention of musculoskeletal indications comprises providing a top plate (001), providing a base plate (002), generating a first magnetic field to levitate the top plate (001), generating a second magnetic field to drive the top plate (001) into vibration, adjusting frequency of vibration of the top plate (001); and adjusting magnitude of vibration of the top plate (001).



Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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*