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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
06 February 2020 (06.02.2020)

WIPO | PCT

(10) International Publication Number
WO 2020/028883 A1

(51) International Patent Classification:
A63B 21/005 (2006.01) *A63B 22/06* (2006.01)
A63B 21/015 (2006.01)

(21) International Application Number:
PCT/US2019/045013

(22) International Filing Date:
02 August 2019 (02.08.2019)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/714,635 03 August 2018 (03.08.2018) US

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

(54) Title: BRAKING SYSTEMS AND METHODS FOR EXERCISE EQUIPMENT

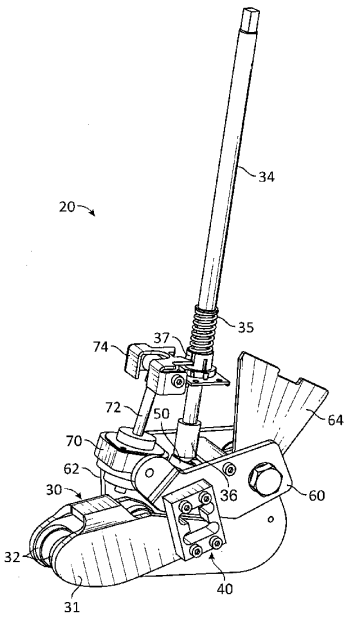


FIG. 4A

(57) Abstract: Systems and methods for adjusting resistance on an exercise apparatus include a first resistance apparatus having an adjusting bracket, magnetic members mounted on an inner surface of the adjusting bracket, a stepper motor having an adjusting shaft and operable to traverse a portion of the length of the adjusting shaft. At a first position, the magnetic members are disposed above a flywheel, and in a second position, the magnetic members are disposed on opposite sides of the flywheel, providing resistance thereto. A load cell couples the adjusting bracket to the frame and generates a signal corresponding to the movement of the adjusting bracket. A computing system calculates resistance, rpms, power from load cell signal, stepper motor position, shaft rotational position and other sensor inputs.

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