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| (51) International Patent Classification: | | | (72) Inventors: BACKMAN, John ; 391 Wildwood Ridge, Colgate, WI 53017 (US). ANDERSON, Garry ; 176 Wollaston Road, Irchester, Northamptonshire NN29 7DH (GB). |
| <i>H02K 11/00</i> (2016.01) | <i>H02K 29/12</i> (2006.01) | | |
| <i>H02K 29/06</i> (2006.01) | <i>B66B 3/02</i> (2006.01) | | |
| <i>H02K 29/08</i> (2006.01) | | | |
| (21) International Application Number: | | | (74) Agent: SCHLEVENSKY, Eric, L. ; Boyle Fredrickson, S.C., 840 North Plankinton Avenue, Milwaukee, WI 53203 (US). |
| | PCT/US2014/045682 | | |
| (22) International Filing Date: | | | (81) Designated States (<i>unless otherwise indicated, for every kind of national protection available</i>): 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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, 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, 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. |
| | 8 July 2014 (08.07.2014) | | |
| (25) Filing Language: | | | |
| | English | | |
| (26) Publication Language: | | | |
| | English | | |
| (30) Priority Data: | | | |
| 13/940,497 | 12 July 2013 (12.07.2013) | US | |
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- (54) Title:** METHOD AND APPARATUS FOR DETERMINING POSITION FOR A PERMANENT MAGNET ELEVATOR MOTOR

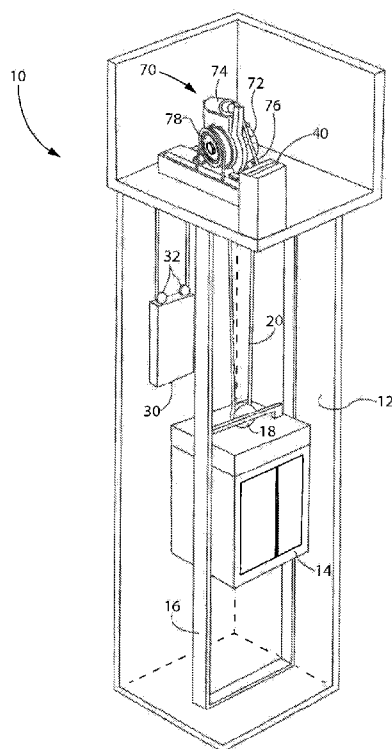


FIG. 1

- (57) Abstract:** A system for determining the angular position of a synchronous motor includes an encoder with a friction wheel engaging a rotating surface of the motor. The friction wheel is spun by the rotation of the motor, and the encoder generates a signal corresponding to the angular position of the friction wheel. An independent sensor is provided to generate a pulse once per revolution of the motor. The independent sensor detects the presence of a target on the rotating surface of the motor and generates the pulse when the target is proximate to the sensor. A controller receives the signal corresponding to the angular position of the friction wheel as well as the pulse generated by the independent sensor to determine the angular position of the motor. The controller compensates the angular position of the motor each time the pulse is generated, correcting accumulated position error.



(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, 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))*

(88) Date of publication of the international search report:

29 October 2015