

(43) International Publication Date
08 December 2022 (08.12.2022)



(10) International Publication Number
WO 2022/256062 A1



(51) International Patent Classification:

<i>B60L 58/18</i> (2019.01)	<i>H02J 7/00</i> (2006.01)
<i>B60L 58/10</i> (2019.01)	<i>B60W 10/26</i> (2006.01)

(21) International Application Number:

PCT/US2022/019562

(22) International Filing Date:

09 March 2022 (09.03.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/196,740	04 June 2021 (04.06.2021)	US
17/515,900	01 November 2021 (01.11.2021)	US

(72) **Inventor:** MILLER, Mark Adam; 76278 Stafford Road,
Covington, Louisiana 70435 (US).

(74) **Agent:** HULSEY, William N.; 812 Forest Oaks Circle, Woodway, Texas 76712 (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, IT, JM, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(54) Title: A POWER MANAGEMENT SYSTEM FOR A BATTERY-OPERATED VEHICLE AND A METHOD OF OPERATING THE SAME

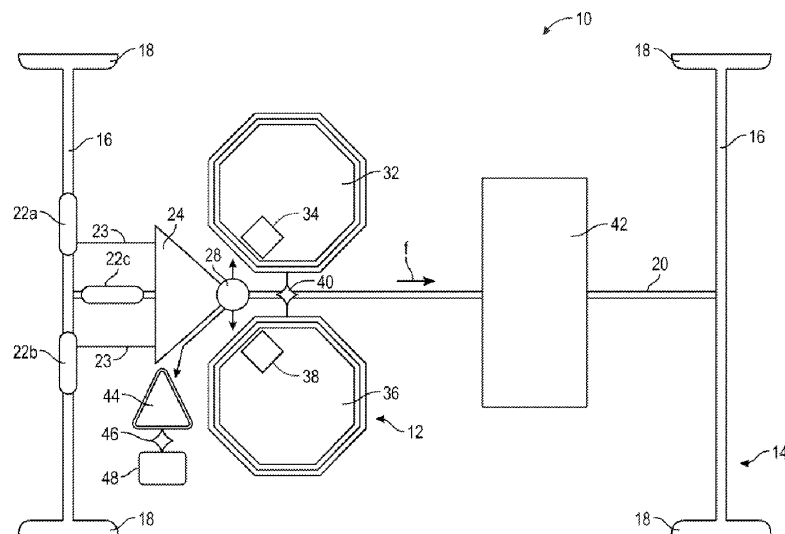


FIG. 1

(57) **Abstract:** Power management system for battery-operated vehicle including electric motor, and kinetic energy devices for capturing kinetic friction energy produced by moving parts in the vehicle. Central direct current (DC) supercharge component (CDCSC) converts kinetic friction energy into an electric current. The CDCSC connects to a current toggle that directs electric current to battery packs i.e., a first battery pack and second battery pack for powering the electric motor. The current toggle directs electric current to battery packs to recharge/ store power. The power management system governs power output from the battery packs, manages depletion/efficiency of the battery packs, and includes a parallel port that directs outgoing power feeds from the battery packs to the electric motor. The electric motor connects to a drive shaft of the vehicle. The power management system includes an additional battery pack that stores excess kinetic friction energy captured for external transfer.

[Continued on next page]

WO 2022/256062 A1

(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))
