



- (51) International Patent Classification:
H01M 2/10 (2006.01)
- (21) International Application Number:
PCT/US2013/048255
- (22) International Filing Date:
27 June 2013 (27.06.2013)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/664,882 27 June 2012 (27.06.2012) US
13/760,746 6 February 2013 (06.02.2013) US
- (71) Applicants: **EAGLEPICHER TECHNOLOGIES, LLC** [US/US]; C & Porter Streets, Joplin, Missouri 64801 (US). **CAMERON INTERNATIONAL CORPORATION** [US/US]; 1333 West Loop South, Suite 1700, Houston, Texas 77027 (US).
- (72) Inventors: **BENNETT, John**; c/o EaglePicher Technologies, LLC, C & Porter Streets, Joplin, Missouri 64801 (US). **MILLER, Greg**; c/o EaglePicher Technologies, LLC, C & Porter Streets, Joplin, Missouri 64801 (US). **PARROT, Mike**; c/o EaglePicher Technologies, LLC, C & Porter Streets, Joplin, Missouri 64801 (US). **FERRARO, Jim**; c/o EaglePicher Technologies, LLC, C &

Porter Streets, Joplin, Missouri 64801 (US). **KIRK, Greg**; c/o EaglePicher Technologies, LLC, C & Porter Streets, Joplin, Missouri 64801 (US). **BHAKTA, Dharmesh**; c/o EaglePicher Technologies, LLC, C & Porter Streets, Joplin, Missouri 64801 (US). **COONROD, Donald S.**; 26003 Silver Timbers Lane, Katy, Texas 77494 (US). **SMITH, Tyler**; 2513 Brentwood Drive, Mission, Texas 78572 (US). **SCHLANGER, Graham**; 21307 Lochmere Lane, Katy, Texas 77450 (US). **TUCKER, Amber**; 1915 Plum Falls Lane, Pearland, Texas 77581 (US). **CASTILLO, Adam**; 1494 Via Appia, El Paso, Texas 79912 (US). **GAINES, Jennifer**; 6834 Addicks Clodine Road, Houston, Texas 77083 (US). **HAVIS, Kevin**; 2845 5th Avenue, Fort Worth, Texas 76110 (US). **RIEMER, Michael**; 8333 Braesmain Drive, Apt. 1330, Houston, Texas 77025 (US). **PAPPAS, Michael**; 6 Pine Grove Circle, Houston, Texas 77024 (US). **VEST, Thomas**; 2004 Princeton Avenue, Midland, Texas 79701 (US). **BOYD, Michael**; 902 Apollo Street, New Caney, Texas 77357 (US). **SINGLETON, Kelvin**; 3818 North Texas Avenue, Bryan, Texas 77803 (US). **REDD, Derek**; 16215 Blossom Field Court, Cypress, Texas 77433 (US).

- (74) Agent: **ARMSTRONG, Joel S.**; c/o Oliff & Berridge, PLC, 277 South Washington Street, Suite 500, Alexandria, Virginia 22314 (US).

[Continued on next page]

- (54) Title: POWER SUPPLY APPARATUS AND METHOD FOR PROVIDING BACKUP POWER

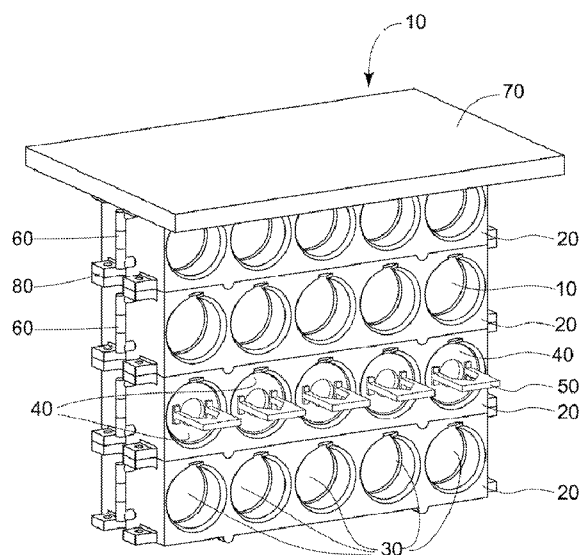


Fig. 1

(57) Abstract: A power supply apparatus has at least one modular reserve battery magazine with a plurality of compartments. A plurality of reserve battery modules may be respectively replaceably provided in corresponding ones of the plurality of compartments, each of the plurality of reserve battery modules being configured to provide power when a reserve battery provided therein is activated. Each reserve battery module of the plurality of reserve battery modules includes a sleeve and a reserve battery provided within the sleeve, the sleeve being configured to fit within one of the plurality of compartments in a predetermined orientation. Each sleeve may be detachably connectable within any compartment of the plurality of compartments and includes electrical connections so that each reserve battery module of the plurality of reserve battery modules is separately replaceable while the power supply apparatus remains remotely located.



(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, 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, 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, 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, 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))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))