

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
6 November 2003 (06.11.2003)

PCT

(10) International Publication Number
WO 03/090956 A1

- (51) International Patent Classification⁷: **B22F 1/00**, H01M 4/42 (74) Agent: **STERNAGEL, FLEISCHER, GODEMEYER & PARTNER**; An den Gärten 7, 51491 Overath (DE).
- (21) International Application Number: PCT/EP03/03083 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 25 March 2003 (25.03.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 02009501.4 25 April 2002 (25.04.2002) EP
- (71) Applicant (*for all designated States except US*): **GRILLO-WERKE AG** [DE/DE]; Weseler Strasse 1, 47169 Duisburg (DE).
- (72) Inventors; and (75) Inventors/Applicants (*for US only*): **MELZER, Armin** [DE/DE]; Schlossstrasse 63, 46535 Dinslaken (DE). **SPRIESTERSBACH, Jochen** [DE/DE]; Waldsteige 22, 47058 Duisburg (DE). **MERKEL, Petra** [DE/DE]; Untere Krodostrasse 1, 38667 Bad Harzburg (DE). **KUBE, Rudi** [DE/DE]; Am Wildpark 17, 38667 Bad Harzburg (DE). **SCHULZ, Norbert** [DE/DE]; Viehweide 1a, 38667 Bad Harzburg (DE).
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ZINC POWDER OR ZINC ALLOY POWDER FOR ALKALINE BATTERIES

(57) Abstract: The invention is directed to a zinc powder or zinc alloy powder for alkaline batteries, which powder has a grain size distribution wherein 60 to 100 wt.-% of the particles, relative to the zinc powder or zinc alloy powder, have a diameter of from 40 to 140 µm. The invention is also directed to an alkaline battery.



WO 03/090956 A1