

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 July 2003 (24.07.2003)

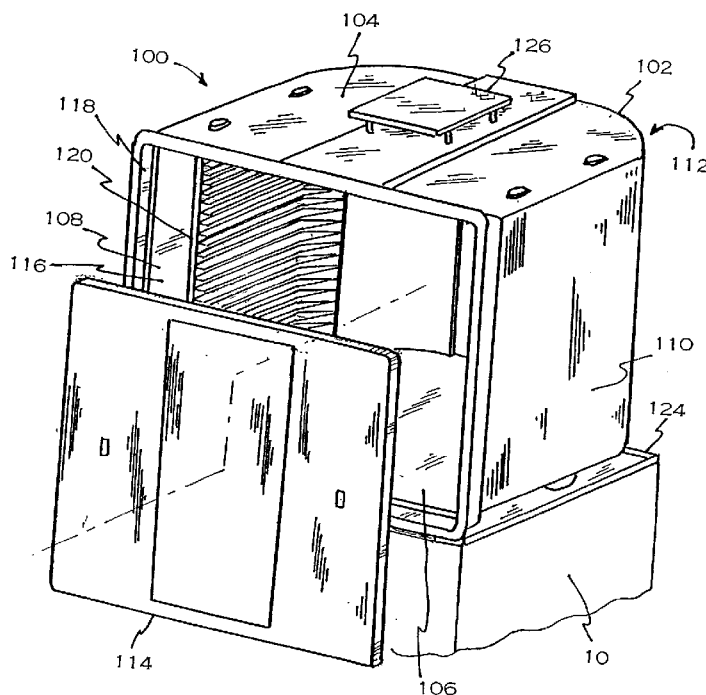
PCT

(10) International Publication Number
WO 03/059782 A1

- (51) International Patent Classification⁷: **B65D 85/48**
- (21) International Application Number: PCT/US03/00964
- (22) International Filing Date: 14 January 2003 (14.01.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/349,166 15 January 2002 (15.01.2002) US
10/307,894 2 December 2002 (02.12.2002) US
- (71) Applicant (for all designated States except US): **ENTE-GRIS, INC.** [US/US]; 3500 Lyman Boulevard, Chaska, MN 55318 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **EGGUM, Shawn** [US/US]; 6823 Jackson Avenue, Lonsdale, MN 55046 (US).
- (74) Agents: **CHRISTENSEN, Douglas, J.** et al.; Patterson, Thunte, Skaar & Christensen, P.A., 4800 IDS Center, 80 South Eight Street, Minneapolis, MN 55402-2100 (US).
- (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, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (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, 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

[Continued on next page]

(54) Title: WAFER CARRIER DOOR AND LATCHING MECHANISM WITH HOURGLASS SHAPED KEY SLOT



(57) Abstract: A door (114) for a wafer carrier (100) having a latching mechanism (160, 200) with rotatable actuating member (170). The rotatable actuating member is actuated from outside the wafer carrier using a key (220) inserted into a key slot (222) in the rotatable actuating member. The key slot is formed in an hourglass shape and comprised of an abrasion resistant material to reduce generation of particulate contaminants.



WO 03/059782 A1



— *with amended claims*

Date of publication of the amended claims: 21 August 2003

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.