

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
20 September 2007 (20.09.2007)

PCT

(10) International Publication Number
WO 2007/105817 A1

(51) International Patent Classification:

G11B 7/26 (2006.01) *G11B 11/03* (2006.01)
G11B 9/10 (2006.01)

(21) International Application Number:

PCT/JP2007/055330

(22) International Filing Date: 12 March 2007 (12.03.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

2006-067977 13 March 2006 (13.03.2006) JP
2007-005045 12 January 2007 (12.01.2007) JP

(71) Applicants (for all designated States except US): **RICOH COMPANY, LTD.** [JP/JP]; 3-6, Nakamagome 1-chome, Ohta-ku, Tokyo, 1438555 (JP). **CRESTEC CORPORATION** [JP/JP]; 1-9-2, Owada-machi, Hachioji-shi, Tokyo, 1920045 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **OBARA, Takashi** [JP/JP]; 22-4, Nakatahigashi 2-chome, Izumi-ku, Yokohama-shi, Kanagawa, 2450013 (JP). **MIYAZAKI, Takeshi** [JP/JP]; c/o CRESTEC CORPORATION, 1-9-2, Owada-machi, Hachioji-shi, Tokyo, 1920045 (JP).

(74) Agent: **ITOH, Tadahiko**; 32nd Floor, Yebisu Garden Place Tower, 20-3, Ebisu 4-chome, Shibuya-ku, Tokyo 1506032 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

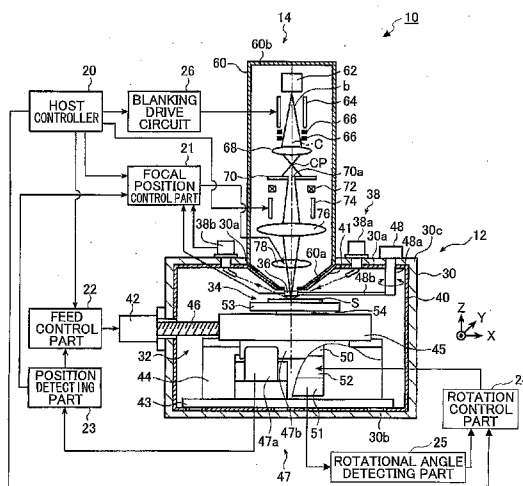
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: ELECTRON BEAM RECORDING APPARATUS



(57) Abstract: An electron beam recording apparatus is disclosed that records information onto the surface of a sample by using an electron beam. The electron beam recording apparatus includes an electron source that irradiates the electron beam, a magnetic detector that is configured to move onto and out of an irradiation axis and acquires magnetic information on the irradiation axis, a convergence position control part that calculates a convergence position correction amount for correcting a convergence position of the electron beam with respect to the surface of the sample based on the magnetic information, and a convergence position adjusting part that adjusts the convergence position of the electron beam with respect to the surface of the sample. The convergence position control part causes the convergence position adjusting part to adjust the convergence position of the electron beam with respect to the surface of the sample based on the convergence position correction amount.

WO 2007/105817 A1



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.