(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 September 2004 (10.09.2004)

PCT

(10) International Publication Number
WO 2004/077031 A1

(51) International Patent Classification[7]: G01N 21/47, 21/64

(21) International Application Number: PCT/AU2004/000264

(22) International Filing Date: 1 March 2004 (01.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003900924 28 February 2003 (28.02.2003) AU

(71) Applicant *(for all designated States except US)*: **MEDSAIC PTY LTD** [AU/AU]; Suite 145, National Innovations Centre, Garden Street, Australian Technology Park, Eveleigh, Victoria 1430 (AU).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **ALEXANDER, John** [AU/AU]; 18 Gardiner Street, Berwick, Victoria 3806 (AU). **CHANDLER, Michael Bruce** [AU/AU]; 18 Gale Street, Brunswick East, Victoria 3057 (AU).

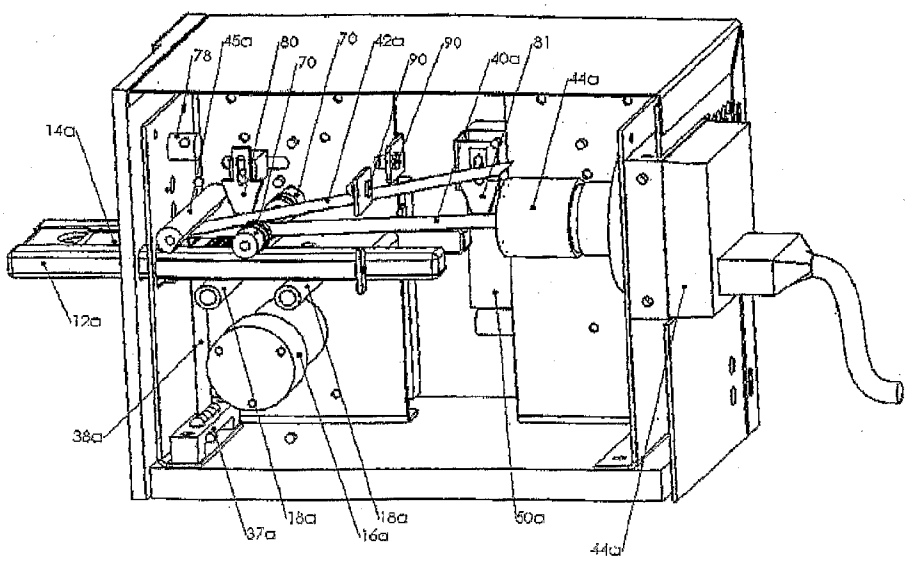
(74) Agent: **FREEHILLS CARTER SMITH BEADLE**; Level 32, Mlc Centre, 19-29 Martin Place, Sydney, New South Wales 2000 (AU).

(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, 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, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, 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, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,

[Continued on next page]

(54) Title: IMAGING DEVICE



(57) Abstract: An imaging device (46) comprises a carrier stage (12a) for carrying a sample slide (14a) including a micro-array of cellular binding event samples, a linear light source (37a) for illuminating the sample slide (14a), and a motor drive (16a) for moving the carrier stage (12a) relative to the sample slide (14a) such that successive portions of the sample slide (14a) are illuminated by the light source (37a). A digital opitical line scan camera system (44a) is disposed such that, in use, it captures substantially only the successive portions of light rays (40a) which emerge from the sample slide at an offset angle relative to light rays (42a) from light source transmitted through and emerging from the sample slide (14a) to generate a series of linear dark field images arranged to be reconstructed into a composite image of the sample slide or array of samples.

WO 2004/077031 A1

TR), OAPI (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.