

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
16 July 2009 (16.07.2009)

(10) International Publication Number
WO 2009/089538 A3

(51) International Patent Classification:

G02B 21/00 (2006.01) G02B 3/00 (2006.01)
G02B 25/00 (2006.01) G02B 13/00 (2006.01)
G02B 21/02 (2006.01) G02B 9/00 (2006.01)

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(21) International Application Number:

PCT/US2009/030758

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(22) International Filing Date:

12 January 2009 (12.01.2009)

(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, BR, BW, BY, BZ, CA, CH, 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, KM, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

12/008,486 11 January 2008 (11.01.2008) US

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(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: GRIN LENS MICROSCOPE SYSTEM

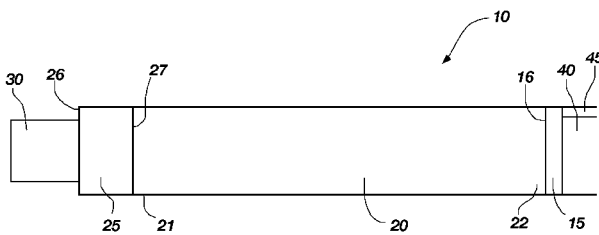


FIG. 1a

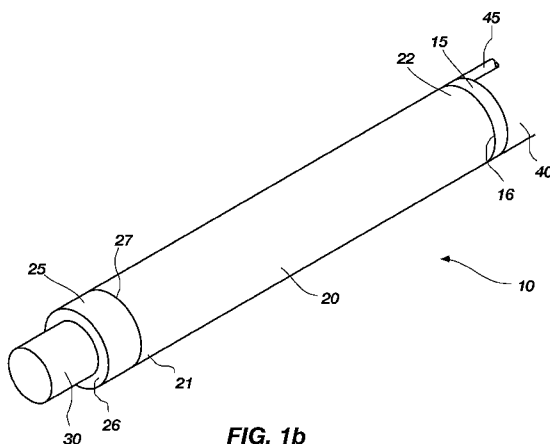


FIG. 1b

(57) Abstract: A device for magnifying an object comprising an SSID (15) having at least one imaging array disposed on a distal end (16) thereof. The device further comprises a first optical element (20) disposed on the distal end (16) of the SSID (15) wherein the first optical element (20) has a distal end (21) and a proximal end (22) defining a first longitudinal length. A GRIN lens (25) is disposed on the distal end (21) of the first optical element (20) and a second optical element (30) is disposed on the distal end (21) of the GRIN lens (25) defining a second longitudinal length. The first longitudinal length and the second longitudinal length are configured such that when viewing the object at a predetermined wavelength of light, the object is magnified at a predetermined level of magnification and the focal plane of the magnified object is aligned at the proximal end (22) of the first optical element (20).



WO 2009/089538 A3

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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, 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 (Art. 21(3))*

(88) Date of publication of the international search report:

19 November 2009

A. CLASSIFICATION OF SUBJECT MATTER**G02B 21/00(2006.01)i, G02B 25/00(2006.01)i, G02B 21/02(2006.01)i, G02B 3/00(2006.01)i, G02B 13/00(2006.01)i, G02B 9/00(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 8 G02B 21/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models since 1975
Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS (KIPO internal) & keywords: "microscope", "GRIN", "lens", and "SSID"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	HIROFUMI TSUCHIDA, et al. Design of Imaging Lens Systems that Use Low Dispersive Radial Gradient-Index Rod, Jpn. J. Appl. Phys. Volume 37, No. 6B, 30 June 1998, Pages 3633-3637 see pages 3633-3635, and figures 1,7,9	1-28
A	J. KNITTEL, et al. Endoscope-compatible confocal microscope using a gradient index-lens system, Optics Communications, Volume 188, Issues 5-6, 15 February 2001, Pages 267-273 see pages 267-269	1-28
A	US 6643071 B2 (MARK J SCHNITZER) 4 November 2003 see columns 2-5, and figures 2-6	1-28
A	US 2005-0234345 A1 (CHANGHUEI YANG) 20 October 2005 see pages 1-2, and figures 1-4	1-28

 Further documents are listed in the continuation of Box C. See patent family annex.

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Date of the actual completion of the international search

20 AUGUST 2009 (20.08.2009)

Date of mailing of the international search report

20 AUGUST 2009 (20.08.2009)

Name and mailing address of the ISA/KR



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Government Complex-Daejeon, 139 Seonsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2009/030758

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6643071 B2	04.11.2003	None	
US 2005-0234345 A1	20.10.2005	US 07261687 B2	28.08.2007
		US 07364543 B2	29.04.2008
		US 2007-0066871 A1	22.03.2007
		WO 2007-038682 A2	05.04.2007
		WO 2007-038682 A3	05.04.2007