

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 June 2000 (29.06.2000)

PCT

(10) International Publication Number
WO 00/37975 A3

(51) International Patent Classification⁷: **G02B 6/16**

(21) International Application Number: PCT/US99/28810

(22) International Filing Date: 4 December 1999 (04.12.1999)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/206,171 4 December 1998 (04.12.1998) US

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(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, 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, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

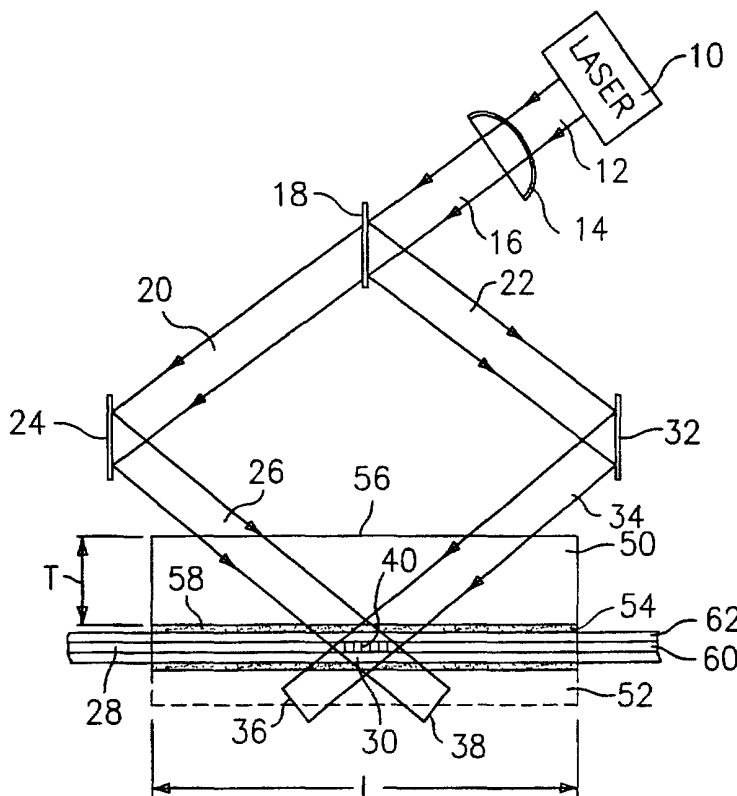
Published:
— With international search report.

(88) Date of publication of the international search report:
18 January 2001

(15) Information about Correction:
Previous Correction:
see PCT Gazette No. 47/2000 of 23 November 2000, Section II

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR FORMING A BRAGG GRATING WITH HIGH INTENSITY LIGHT



(57) Abstract: A method and apparatus for forming a Bragg grating using a high intensity light includes a pair of focussed writing beams (26, 34) that simultaneously intersect and interfere with each other at a region (30) of a photosensitive optical fiber (28). The beams (26, 34) have a high intensity (e.g., at least about 500 mjoules/cm²) and pass through an interface medium (50) that is substantially transparent to the wavelength of the writing beams (26, 34). The medium has a thickness T set such that the intensity of the beams at the surface (56) of the medium (50) is below a surface damage intensity such that no ablations occur on the fiber (28) or the surface (56) when the fiber (28) is exposed to the beams (26, 34).

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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.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 99/28810

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G02B6/16

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 7 G02B

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>ARCHAMBAULT J L ET AL: "100 % REFLECTIVITY BRAGG REFLECTORS PRODUCED IN OPTICAL FIBRES BY SINGLE EXCIMER LASER PULSES" ELECTRONICS LETTERS, GB, IEE STEVENAGE, vol. 29, no. 5, 4 March 1993 (1993-03-04), pages 453-455, XP000350820 ISSN: 0013-5194 cited in the application the whole document</p> <p style="text-align: center;">---</p> <p style="text-align: center;">-/--</p>	1, 12

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
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Date of the actual completion of the international search 26 June 2000	Date of mailing of the international search report 24/07/2000
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Lord, R
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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/28810

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	ASKINS C G ET AL: "FIBRE STRENGTH UNAFFECTED BY ON-LINE WRITING OF SINGLE-PULSE BRAGG GRATINGS" ELECTRONICS LETTERS, GB, IEE STEVENAGE, vol. 33, no. 15, 17 July 1997 (1997-07-17), pages 1333-1334, XP000734238 ISSN: 0013-5194 the whole document ----	1,12
A	MASANORI WATANABE ET AL: "FUNDAMENTAL-TRANSVERSE-MODE HIGH-POWER ALGAINP LASER DIODE WITH WINDOWS GROWN ON FACETS" IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS, US, IEEE SERVICE CENTER, vol. 1, no. 2, 1 June 1995 (1995-06-01), pages 728-733, XP000521131 ISSN: 1077-260X the whole document ----	1,12
A	US 5 680 412 A (DEMARIA ANTHONY J ET AL) 21 October 1997 (1997-10-21) column 1, line 56 -column 2, line 17 -----	1,12

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/US 99/28810

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