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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

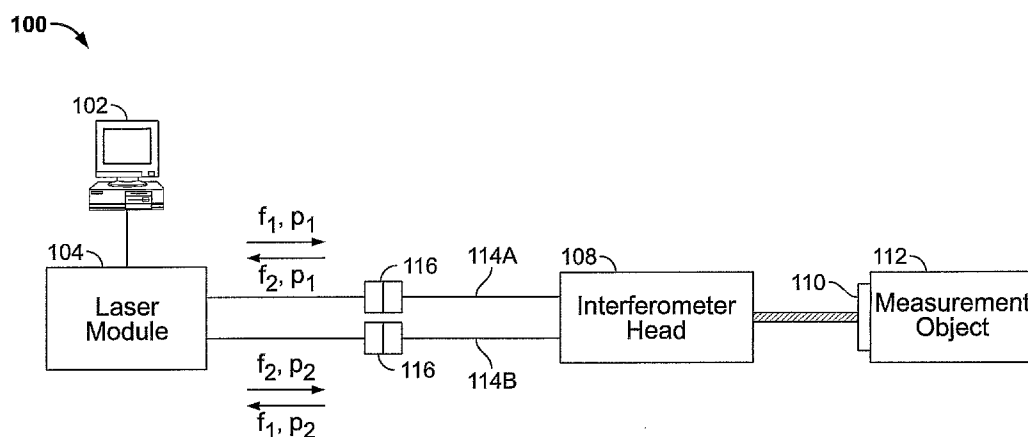
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(54) Title: OPTICAL CONNECTION FOR INTERFEROMETRY



(57) Abstract: A method including: (i) directing a beam to an interferometer head using an optical connection, the beam including a first beam component having a first polarization and a first frequency and a second beam component having a second polarization different from the first polarization and a second frequency; (ii) rotating the polarization of the first beam component to the second polarization; (iii) rotating the polarization of the second beam component to the first polarization; and (iv) returning the beam with the rotated polarizations from the interferometer head using the optical connection. For example, the step of directing may include: directing the first beam component into a first fiber of the optical connection; and directing the second beam component into a second fiber of the optical connection. The first beam component may be returned using the second fiber, and the second beam component may be returned using the first fiber.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/40154

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **G01B 9/02**(2007.01)

USPC: 356/487

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)

U.S. : 356/484-490, 493, 73.1; 385/11; 73/655-657

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
NONE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,784,490 A (WAYNE) 15 November 1988 (15.11.1988), Figures 1-2.	6, 15
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A		36, 39-42
Y	US 5,648,848 A (AIYER) 15 July 1997 (15.07.1997), Figures 1-2.	1-6, 8, 10-16, 18
Y	US 6,331,912 B1 (AU-YEUNG et al) 18 December 2001 (18.12.2001), Figures 3-4.	1-6, 8, 10-16, 18
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A		37, 38
X	US 2002/0186914 A1 (LI) 12 December 2002 (12.12.2002), Figure 2A; paragraphs 0001-0010.	30-35
A	US 2003/0174921 A1 (NEVIS) 18 September 2003 (18.09.2003), paragraphs 0003, 0005, 0009.	7

☒ Further documents are listed in the continuation of Box C.

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C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,806,962 B2 (HILL) 19 October 2004 (19.10.2004), column 1, lines 11-23.	9, 17, 19-29