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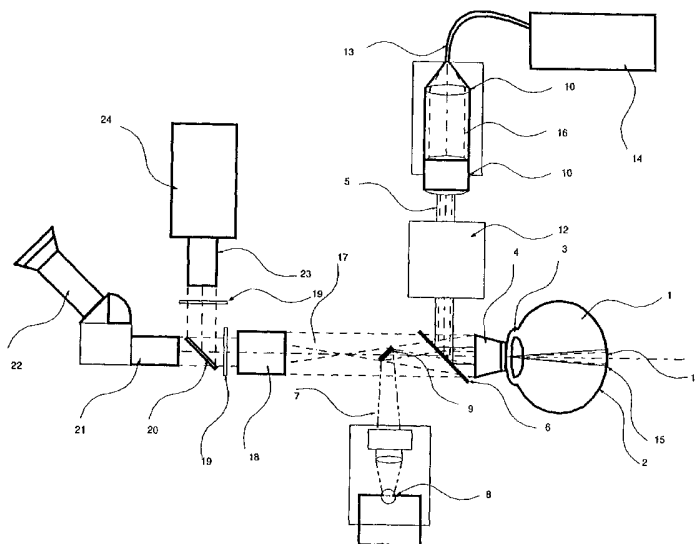
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- (72) Inventors: **PAWLOWSKI, Dirk**; Seidelstrasse 10, 01749 Jena (DE). **NEUBERGER, Wolfgang**; 22 Taman Jasa, 87000 F.T. Labuan (MY). For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ACCURATE OPTICAL TREATMENT OF AN EYE'S FUNDUS



(57) Abstract: A system and method are provided to accurately treat sites on an eye's retina (2) employing computer based image generation, processing and central control means in conjunction with diode laser sources (14) and optical fibers. The system and method accurately determine geometry of a treatment zone of a specific eye's fundus and adjust a treatment beam to irradiate the treatment zone with minimal coverage of adjacent well tissue. The treatment zone or zone is accurately determined with digital processing (24) of angiographic data and slit lamp image data. This information is integrated with information on the treatment beam characteristics to better match treatment beam coverage with minimal overlap with healthy areas of the funds. Additionally preferred embodiments also have the ability to automatically track eye (1) movement and switch the beam source depending on eye movement, adjusting the beam spot area in real time.

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/14781

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :A61B 18/18

US CL :606/004

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. : 606/004

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 practicable, 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.
X --- Y	US 5,311,224 A (Enomoto) 10 May 1994. See the entire document.	1,22 ----- 2-21, 23-34
Y	US 6,110,165 A (Ota) 29 August 2000. See the entire document.	2-21, 23-34
X,P ----- Y,P	US 6,312,422 B1 (Dubnack) 6 November 2001. See the entire document.	1, 22 ----- 2-21, 23-32
X --- Y	US 5,865,829 A (Kitajima) 2 February 1999. See the entire document.	1, 2, 6-12 ----- 3, 4, 13-34



Further documents are listed in the continuation of Box C.



See patent family annex.

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"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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