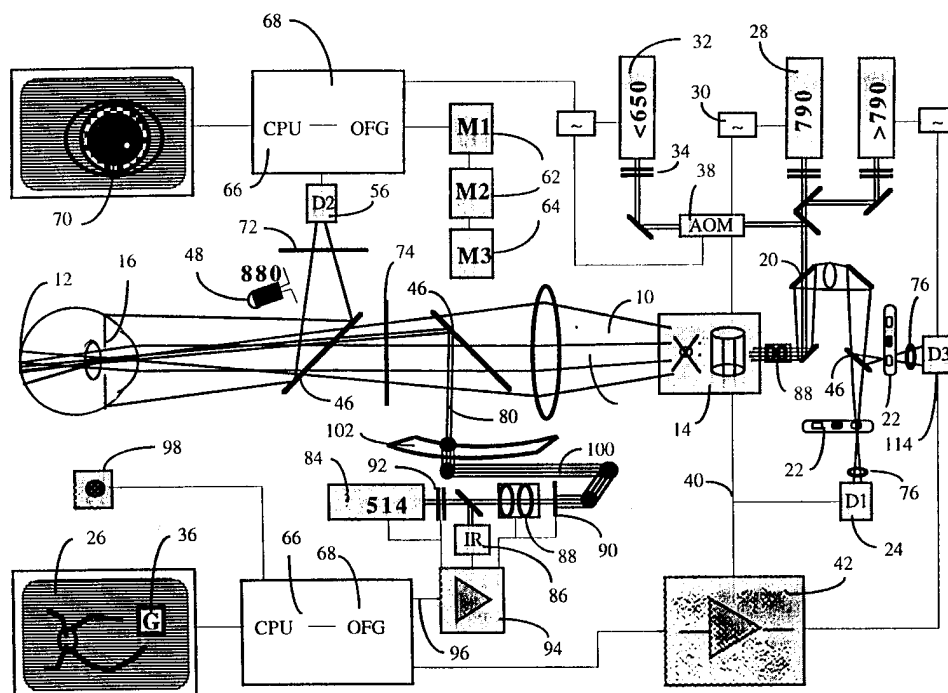


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(54) Title: SCANNING LASER OPHTHALMOSCOPE OPTIMIZED FOR RETINAL MICROPHOTOCOAGULATION



(57) Abstract

A combination of scanning laser ophthalmoscope and photocoagulator expands the range of clinical applications of the conventional scanning laser ophthalmoscope, being able of simultaneous imaging and microperimetry with the delivery of therapeutic laser applications to the retina (12) in a preferred non-contact mode. The device, including a therapeutic laser source (80), optic-mechanical Maxwellian view coupling, Maxwellian view control, and real-time electronic registration of the therapeutic beam location, permits precise positioning and dose of the retina applications. Additional safety mechanisms include concurrent temperature measurement of retina application and shutter activation based on digital image processing techniques.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US97/21453

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : A61B 3/10, 3/00

US CL : 351/205, 221, 246

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. : 351/205, 221, 246, 200, 206, 208, 210; 359/237, 238

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)

Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,568,208 A (VAN DE VELDE) 22 October 1996 (22.10.96), see entire document.	1-10
A	US 5,308,919 A (MINNICH) 03 May 1994 (03.05.94), see entire document.	1-10
A	US 5,152,295 A (KOBAYASHI et al) 06 October 1992 (06.10.92), see entire document.	1-10

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

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HUY MAI

Telephone No. (703) 308-4874

INTERNATIONAL SEARCH REPORT

International application No.

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B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

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search terms: scanning laser ophthalmoscope, photocoagulator, retina, detect?, therapeutic laser source, micromanipulator, coupling, filter, synchronizing, modulating