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— with international search report (Art. 21(3))

[Continued on next page]

(54) Title: CONTACT LASER ABLATION OF TISSUE

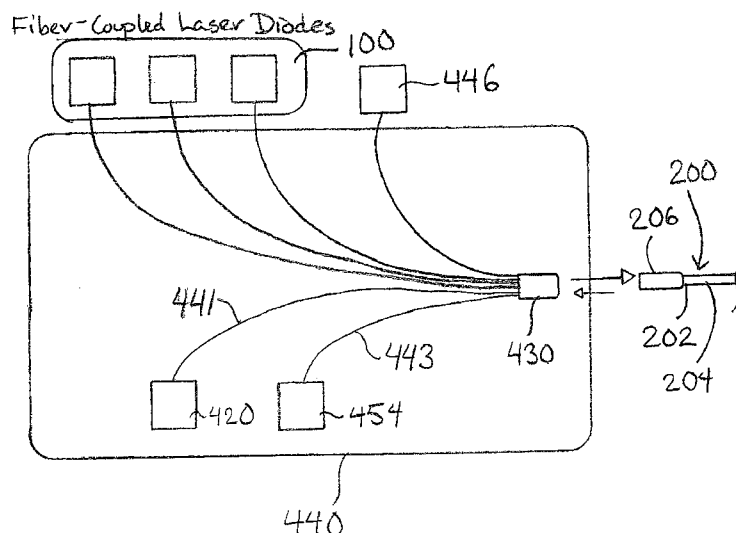


FIG 4B

(57) Abstract: Apparatus and methods are described for laser ablation of tissue. The apparatus and methods utilize a laser source coupled to a fiberoptic laser delivery device and a laser driver and control system with features for protection of the laser delivery device, the patient, the operator and other components of the laser treatment system. Advantageously, the laser source may utilize laser diodes operating at approximately 975 nm, 1470 nm, 1535 nm or 1870 nm wavelengths with a laser power output of at least 60 watts, preferably greater than 80 watts and most preferably 120-150 watts or higher. The invention, which has broad medical and industrial applications, is described in relation to a method for treatment of benign prostatic hyperplasia (BPH) by contact laser ablation of the prostate (C-LAP).



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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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A. CLASSIFICATION OF SUBJECT MATTER*A61B 18/22(2006.01)i, A61B 18/20(2006.01)i, A61N 5/067(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 A61B, A61N

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ==== Y ==== A	US 5,057,099 A(JOHN L. RINK) 15 OCTOBER 1991 See abstract, column 2 lines 8-40, column 3 line 12-column 4 line 11, claims 1-3	1-14, 17-21, 32-41 51-54 ===== 31 ===== 15, 16, 22-30, 42-50 55-62
Y ==== A	US 2005/288653 A1(MING LAI et al.) 29 DECEMBER 2005 See abstract, paragraphs [19], [31], [38], [53], claim 1	31 ===== 1-30, 32-62
A	US 2003/135205 A1(SCOTT A. DAVENPORT et al.) 17 JULY 2003 See figs. 1, 5, paragraphs [32], [48], [52], [55], [56], [57], [59], [62], [78], [80], claims 59-62, 69	1-62
A	US 2007/219601 A1(WOLFGANG NEUBERGER) 20 SEPTEMBER 2007 See abstract, paragraphs [26]-[30], claims 11, 15	1-62

 Further documents are listed in the continuation of Box C. See patent family 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 application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

20 OCTOBER 2009 (20.10.2009)

Date of mailing of the international search report

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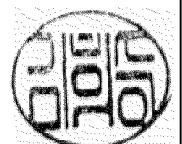
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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Group 1 : Claims 1-54 are directed to an apparatus for laser treatment of tissue comprising an optical fiber protection system having an infrared detector.

Group 2 : Claims 55-58 are directed to an endoscope protection system comprising a photodetector to detect visible light.

Group 3 : Claims 59-62 are directed to an apparatus for indicating an operating condition of a laser system comprises means for modulating an aiming beam to indicate the operating condition of the laser system.

Since the abovementioned groups of claims do not share any of the technical features identified, a technically special relationship between the inventions does not exist. Accordingly the claims do not relate to one invention or to a single inventive concept, a priori.

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2009/001417

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