



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**03.06.2009 Bulletin 2009/23**

(51) Int Cl.:  
**A61B 1/05 (2006.01) A61B 8/12 (2006.01)**

(43) Date of publication A2:  
**24.09.2008 Bulletin 2008/39**

(21) Application number: **08005516.3**

(22) Date of filing: **25.03.2008**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR**  
 Designated Extension States:  
**AL BA MK RS**

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(30) Priority: **23.03.2007 JP 2007077654**

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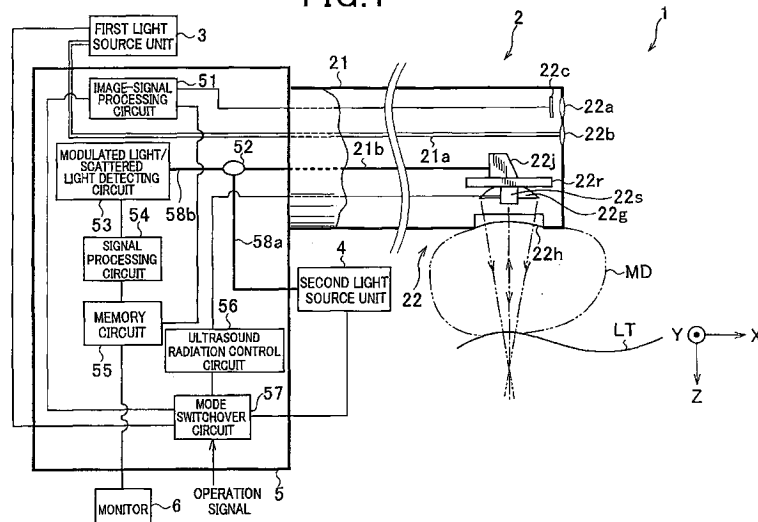
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(54) **Medical apparatus obtaining information indicative of internal state of an object based on interaction between ultrasound waves and light**

(57) In a medical apparatus (1), an ultrasound generator (22g) generates ultrasound waves to be radiated into the region, and an ultrasound radiating-direction changing member (22s) changes in the region a radiating direction of the ultrasound waves to be generated by the ultrasound generator. An ultrasound converging member (22h) converges in the region the ultrasound waves subjected to the change of the radiating direction. Light which

is reachable to the region is emitted from a light source unit (3,4). A light transmitting/receiving member (21a,b) radiates light emitted from the light source unit and receives light reflected in a converged region of the ultrasound waves in the region. Based on the reflected light, information showing the internal state in a desired deeper region in the membrana mucosa of the body tissue of the object.

**FIG. 1**





EUROPEAN SEARCH REPORT

Application Number  
EP 08 00 5516

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| Category  | Citation of document with indication, where appropriate, of relevant passages  | Relevant to claim  | CLASSIFICATION OF THE APPLICATION (IPC) |
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| Place of search<br>Berlin   |  | Date of completion of the search<br>23 April 2009  | Examiner<br>Abraham, Volkhard           |
| <b>CATEGORY OF CITED DOCUMENTS</b><br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |  | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding document |   |

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EPO FORM 1503 03.02 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT  
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EP 08 00 5516

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