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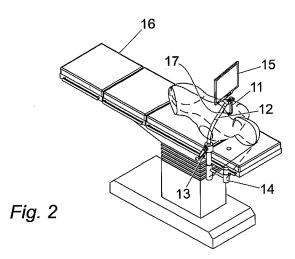
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Published:

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12 November 2009

(54) Title: RETRACTOR



(57) **Abstract**: Apparatus for use in an operating theatre equipped with a surgical table, comprises a lifting frame (12) attachable to the surgical table and adapted for lifting a body part of a subject undergoing a surgical procedure upon the surgical table, and comprising an upright support post (18) incorporating a jack (54), and a lifting arm (17) pivotally mounted upon the post, whereby the arm can be turned about the upright support post on thrust bearing (57) to either overhang the surgical table, or be pivoted away to permit access to the surgical table. The arm is adapted to support a retractor that comprises a blade portion incorporating a plurality of independent lighting devices positioned in light ports (71, 72, 73) and configured to provide discrete illumination selectively to zones within the surgical field according to (a) a predetermined sequence programme, or (b) a sequence determined by a user of the retractor.



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A. CLASSIFICATION OF SUBJECT MATTER INV. A61B17/02 ADD. A61B17/00 A61B19/00

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) $A61B \,$

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 practical, search terms used)

EPO-Internal, WPI Data

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 634 883 A (CHIN ALBERT K [US] ET AL) 3 June 1997 (1997-06-03)	1-5, 15-17,
Y	column 7, line 1 - line 7; figure 20	19-22 7-9,12, 14
X	US 6 015 378 A (BORST CORNELIUS [NL]; MANSVELT BECK HENDRICUS J [NL]; GRUNDEMAN PAUL F) 18 January 2000 (2000-01-18) column 13, line 7 - line 61	23-24
X Y	WO 03/017847 A (HUSSIEN MAGED [GB]) 6 March 2003 (2003-03-06) page 6, line 13 - line 15 page 9, line 18 - line 24 page 12, line 18 - page 13, line 6	22-23, 27-28 9,12,14
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X Further documents are listed in the continuation of Box C.	X 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 document 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 another 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 femily
Date of the actual completion of the international search	Date of mailing of the international search report
9 September 2009	18/09/2009
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Angeli, Markus

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C(Continua	tion). DOCUMENTS CONSIDERED TO BE RELEVANT	TC1/GB200	
Category*	Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.
Y	US 2008/002426 A1 (VAYSER ALEX [US] ET AL) 3 January 2008 (2008-01-03) paragraph [0030]		7–8
A	US 2006/217597 A1 (VAYSER ALEX [US] ET AL) 28 September 2006 (2006-09-28) paragraph [0027]; claim 1		1 .
A	US 5 967 971 A (BOLSER JEFFREY WILLIAM [US]) 19 October 1999 (1999-10-19) the whole document		6
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International application No. PCT/GB2009/000097

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:
Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
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:
see additional sheet
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 fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers only those claims for which fees were paid, specifically claims Nos.:
A D No are included the control of t
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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-8, 15-22, 29-31

A retractor directed to independent programmable lightning devices for illumination of a surgical field.

2. claims: 9-14

A retractor directed to a viewing device for displaying the surgical field.

3. claims: 23-28

An apparatus directed to a lifting frame for supporting a retractor.

Information on patent family members

International application No
PCT/GB2009/000097

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