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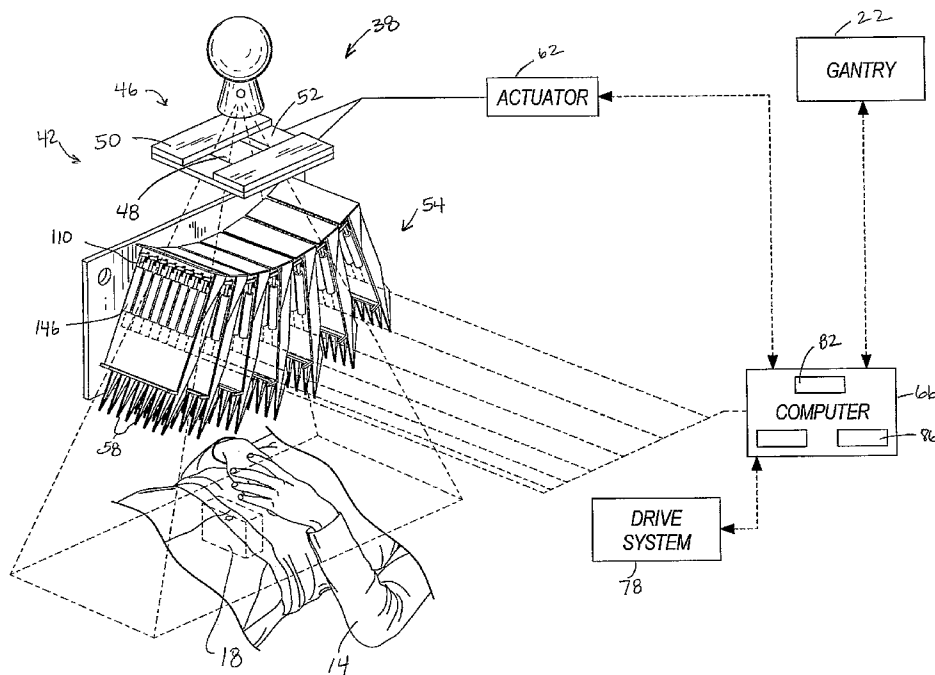
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(54) Title: METHOD AND APPARATUS FOR MODULATING A RADIATION BEAM



(57) Abstract: An apparatus and method to deliver intensity modulated radiation therapy by irradiating a treatment volume with rotation of the radiation beam. The system includes a collimation device comprising a two-dimensional array of pivoting attenuating leaves, which are temporarily placed into the radiation beam path as the gantry rotates around the patient. The leaves are independently movable between a first position and a second position. The radiation beam intensity is modulated by controlling the time that each leaf is present to attenuate the beam.

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## INTERNATIONAL SEARCH REPORT

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B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) <i>A61N 5/10</i> (2006.01) , <i>G21K 1/04</i> (2006.01)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used) USPTO WEST, Canadian Patent Database: Keywords: multileaf collimator, MLC, radiation treatment, cancer, x-ray, therapy, intensity modulated, leaf assembly		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US4868844 Nunam, (Varian Associates Inc.) 19 September, 1989 (19-09-1989) See col. 3, line 1 - col. 4, line 10, col. 6, lines 14 - 16 & 52 - 65, col. 7, lines 10 - 45, col. 8, lines 3 - 6.	1 - 7, 14 - 17, 22, 24
X	CA2091275 Swerdloff et al, (Wisconsin Alumni Research Foundation) 20 September, 1993 (20-09-1993) See page 11, line 1 - page 17, line 18.	22
A	CA2180227 Yao (Siemens Medical Systems Inc.) 31 December 1996 (31-12-1996)	1 - 24
A	US5802136 Carol (Nomos Corporation) 1 September, 1998 (01-09-1998)	1 - 24
<input type="checkbox"/> Further documents are listed in the continuation of Box C.		<input checked="" type="checkbox"/> See patent family annex.
* Special categories of cited documents :	"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	
"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	
"E" earlier application or patent but published on or after the international filing date	"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	
"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)	"&" document member of the same patent family	
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