



(51) International Patent Classification:
G01N 23/04 (2006.01) *A61B 6/03* (2006.01)

(21) International Application Number:
PCT/IB2008/055317

(22) International Filing Date:
16 December 2008 (16.12.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/014,903 19 December 2007 (19.12.2007) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

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[Continued on next page]

(54) Title: A ROTOR AND X-RAY CT SCANNERS

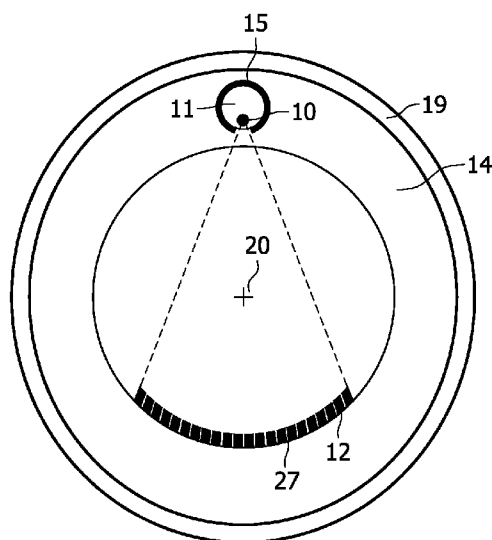


FIG. 2A

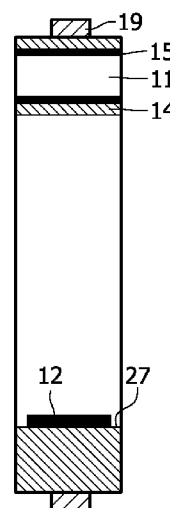


FIG. 2B

(57) Abstract: The invention relates to a rotor comprising a radiation source having a focal spot for radiating beam towards a subject, detection means for generating signals responsive to energy attenuation of said beam and a circular body having a cavity for housing the radiation source, and a circular arc-shaped surface on which the detection means are mounted. The circular arc-shaped surface is placed opposite to the cavity with respect to the subject, said cavity comprising an inside surface mounted with a shield for shielding the radiation not towards the subject. In this way, the conventional housing for radiation source and shielding are removed, resulting in reduction of focal spot motion caused by motion of the conventional housing. Furthermore, this invention proposes to mount the detection means directly on the circular body without an intermediate structural housing that reduces the detector modules motion relative to the focal spot.

WO 2009/081327 A3



Published:

(88) Date of publication of the international search report:

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

17 December 2009

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2008/055317

A. CLASSIFICATION OF SUBJECT MATTER
INV. G01N23/04 A61B6/03

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 G01N G01T

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 132 895 A (FROGGATT ROBERT J) 2 January 1979 (1979-01-02)	1
Y	the whole document	2-9
X	WO 99/19715 A (ANALOGIC CORP [US]) 22 April 1999 (1999-04-22)	1
Y	abstract page 3, line 13 - page 4, line 1 figure 2	2-9
Y	JP 2004 057507 A (TOKYO SHIBAURA ELECTRIC CO) 26 February 2004 (2004-02-26) abstract figures 1,7	2,4,9
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

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- *&* document member of the same patent family

Date of the actual completion of the international search

5 March 2009

Date of mailing of the international search report

12/03/2009

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INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2008/055317

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2005/096946 A (PHILIPS INTELLECTUAL PROPERTY [DE]; KONINKL PHILIPS ELECTRONICS NV [NL] 20 October 2005 (2005-10-20) abstract figure 1 -----	2,5-9
Y	US 4 101 768 A (LILL BRIAN HERBERT) 18 July 1978 (1978-07-18) abstract column 2, line 57 - line 60 figure 1 -----	3

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2008/055317

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4132895	A	02-01-1979	DE 2738045 A1 FR 2362614 A1 JP 53029690 A NL 7709517 A	09-03-1978 24-03-1978 20-03-1978 02-03-1978
WO 9919715	A	22-04-1999	AU 9025398 A CN 1273635 A EP 1019707 A1 JP 3595261 B2 JP 2001520375 T US 5937028 A	03-05-1999 15-11-2000 19-07-2000 02-12-2004 30-10-2001 10-08-1999
JP 2004057507	A	26-02-2004	NONE	
WO 2005096946	A	20-10-2005	CN 101027000 A JP 2007532168 T US 2008230706 A1	29-08-2007 15-11-2007 25-09-2008
US 4101768	A	18-07-1978	DE 2709600 A1 FR 2342707 A1 GB 1571509 A HK 37481 A HK 37581 A MY 5482 A NL 7702320 A US 4298799 A	08-09-1977 30-09-1977 16-07-1980 07-08-1981 07-08-1981 31-12-1982 06-09-1977 03-11-1981