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[Continued on next page]

(54) Title: SEGMENTED RADIATION DETECTOR AND APPARATUS AND METHOD FOR USING SAME

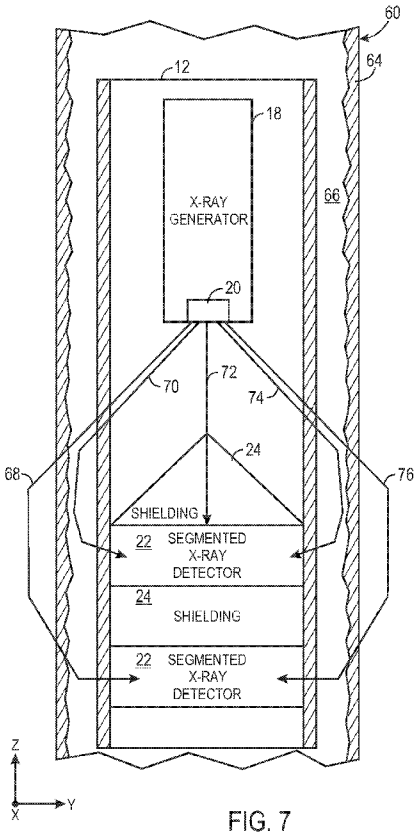

FIG. 7

(57) Abstract: Systems, methods, and devices involving segmented radiation detectors are provided. For example, a segmented radiation detector may include a segmented scintillator and an optical-to-electrical converter. The segmented scintillator may have several segments that convert radiation to light, at least one of which may detect radiation arriving from an azimuthal angle around an axis of the segmented scintillator. The optical-to-electrical converter may be coupled to the segmented scintillator. The optical-to-electrical converter may receive the light from the segments of the segmented scintillator and output respective electrical signals corresponding to the amount of radiation detected by each segment.

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A. CLASSIFICATION OF SUBJECT MATTER

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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)

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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

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: radiation detector, scintillator, converter, azimuthal, x-ray, photomultiplier

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6781115 B2 (STOLLER, CHRISTIAN et al.) 24 August 2004 See abstract, columns 4-7, claims 1,10-11, and figures 2-3,8	1-23
A	US 04743755 A (WILLIAMS, THOMAS M.) 10 May 1988 See abstract, columns 2-4, claim 1, and figures 2-3	4,10,16,23
A	US 05065016 A (SUPERNAW, IRWIN R. et al.) 12 November 1991 See abstract, columns 2-3, and figures 2-3	4,10,16,23
A	US 7339172 B2 (ROWLAND, MARK S. et al.) 04 March 2008 See abstract, column 3, and figures 1-2	4,10,16,23
A	US 7634059 B2 (WRAIGHT PETER) 15 December 2009 See abstract, columns 2-3, and figure 1	4,10,16,23

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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"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	Date of mailing of the international search report
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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