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[Continued on next page]

## (54) Title: MOBILE X-RAY IMAGING SYSTEM

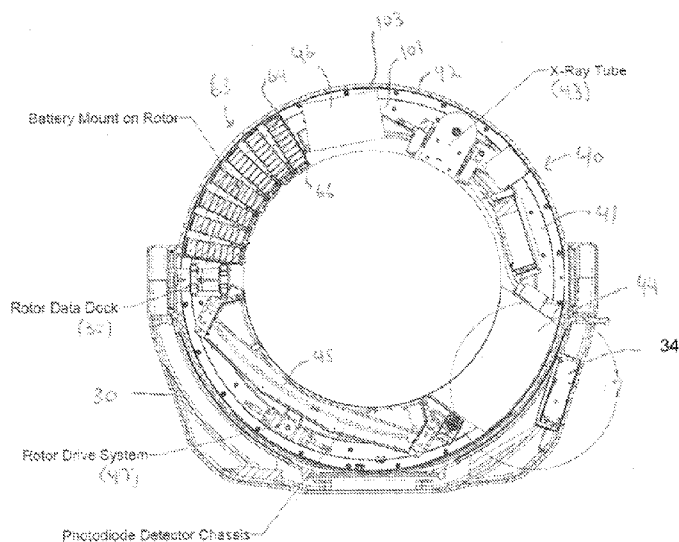


FIG. 3A

(57) Abstract: A mobile diagnostic imaging system includes a battery system and charging system. The battery system is located in the rotating portion of the imaging system, and includes one or more battery packs, each comprising one or more electrochemical cells. Each battery pack further includes a control circuit that monitors and/or alters the state of charge of each of the electrochemical cells, and implements a control scheme that causes the electrochemical cells have a similar charge state. The charging system is located on the non-rotating portion of the system. The battery system communicates with the charging system to terminate charge when one or more of the electrochemical cells reach a full state of charge. The imaging system also includes a docking system that electrically connects the charging system to the battery system for charging of the battery system and temporarily electrically disconnects the rotating and non-rotating portions of the system during imaging. The imaging system further includes a drive mechanism for rotating the rotating portion relative to the non-rotating portion.



SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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**A. CLASSIFICATION OF SUBJECT MATTER***A61B 6/03(2006.01)i, A61B 5/055(2006.01)i*

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 6/03; H05G 1/24; H05G 1/64; A61B 6/08; H05G 001/06; H01R 039/46; H05G 1/60; G01N 23/04

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) &amp; Keywords: rotor, gantry, battery, dock

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category*       | Citation of document, with indication, where appropriate, of the relevant passages                                                       | Relevant to claim No.                                                                      |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| X<br>Y<br><br>A | US 2010-0119043 A1 (YAKUBOVSKY LEONID et al.) 13 May 2010<br>See abstract, paragraphs [0002]-[0033], claim 1 and figure 1.               | 1, 11, 15-18, 21, 33<br>2-10, 14, 19, 34<br>, 86-87<br>12-13, 20, 22-32<br>, 35-85, 88-102 |
| X<br>Y<br><br>A | US 2010-0172468 A1 (GREGERSON EUGENE A.) 08 July 2010<br>See abstract, paragraphs [0006]- [0061], claims 20, 33, 36 and figure 8.        | 83, 85<br>2-10, 14, 19, 34<br>, 86-87<br>1, 11-13, 15-18<br>, 20-33, 35-82, 84<br>, 88-102 |
| Y<br>A          | US 2010-0220837 A1 (BRESSEL WOLFGANG) 02 September 2010<br>See abstract, paragraphs [0005]-[0035], claim 1 and figure 1.                 | 19<br>1-18, 20-102                                                                         |
| A               | EP 0125879 B1 (KABUSHIKI KAISHA TOSHIBA) 23 April 1997<br>See abstract, column 4, line 30 - column 7, line 21, claim 1 and figures 1, 2. | 1-102                                                                                      |



Further documents are listed in the continuation of Box C.



See patent family annex.

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

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| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s)                                                                                           | Publication<br>date                                                                            |
|-------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
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| US 2010-0172468 A1                        | 08.07.2010          | EP 2384143 A1<br>EP 2384398 A2<br>US 8118488 B2<br>WO 2010-078481 A1                                                 | 09.11.2011<br>09.11.2011<br>21.02.2012<br>08.07.2010                                           |
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