



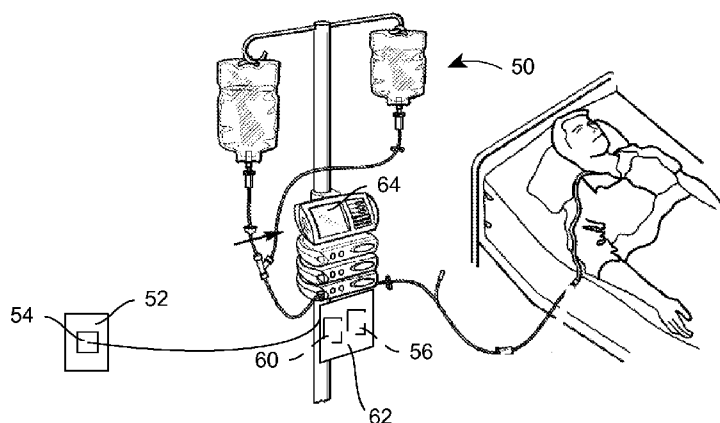
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**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) **Title:** BATTERY MANAGEMENT SYSTEM



**FIG. 1**

(57) **Abstract:** A battery management system is provided for one or more batteries. The system includes a display unit, and a controller coupled to the display unit and programmed to determine when a healthcare delivery system is coupled to the one or more batteries, to control the display unit to display an initial number corresponding to a time remaining on battery (TROB) when the healthcare delivery system is coupled to the one or more batteries, to determine if the TROB is within a reserve range extending up to a reserve range maximum, the reserve range maximum being less than a maximum TROB, to change the TROB according to an operational state of the healthcare delivery system if the TROB is greater than the reserve range maximum, and to decrease the TROB without regard for the operational state of the healthcare delivery system if the TROB is less than the reserve range maximum.

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# INTERNATIONAL SEARCH REPORT

International application No PCT/US2011/064374
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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> INV. A61M5/142      G01R31/36      H02J7/00      H02J9/06 ADD.				
According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b>				
Minimum documentation searched (classification system followed by classification symbols) A61M G01R H02J				
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 practicable, search terms used) EPO-Internal, WPI Data				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
Y	WO 97/13310 A1 (IVAC CORP [US]) 10 April 1997 (1997-04-10) page 9, line 22 - page 11, line 28; figures 1-3 -----	1-24		
Y	US 2010/198537 A1 (TAKEMORI YOSHIHARU [JP]) 5 August 2010 (2010-08-05) the whole document -----	1-24		
Y	EP 0 546 569 A1 (FUJITSU LTD [JP]) 16 June 1993 (1993-06-16) figures 5-7 paragraph [0032] - paragraph [0038]; figures 5-7 -----	9-12, 21-24		
Y	EP 0 792 001 A2 (UNIDEN KK [JP]) 27 August 1997 (1997-08-27) column 11, line 2 - column 14, line 27; figures 8-12 -----	9-12, 21-24		
<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 : <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;">                     "A" document defining the general state of the art which is not considered to be of particular relevance                      "E" earlier application or patent 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                 </td> <td style="width: 50%; border: none; vertical-align: top;">                     "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                      "&amp;" document member of the same patent family                 </td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent 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 family
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent 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 family			
Date of the actual completion of the international search	Date of mailing of the international search report			
6 June 2012	15/06/2012			
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  Ceccarelli, David			

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