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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))

Published:

- with international search report

[Continued on next page]

(54) **Title:** POWER MANAGEMENT TECHNIQUES FOR AN INFUSION PUMP SYSTEM

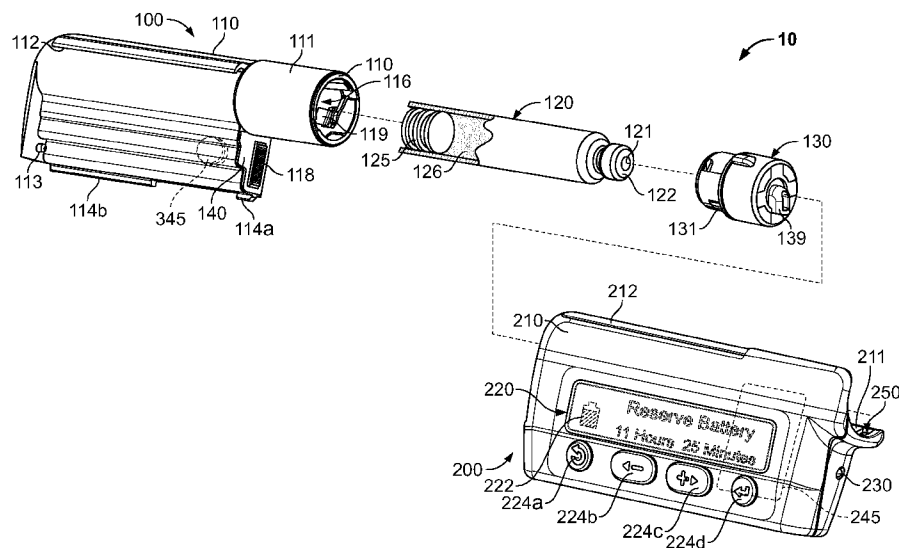


FIG. 1

(57) **Abstract:** Some embodiments of an infusion pump system (10) can employ a number of power management techniques to avoid using substantially excessive power during operation of the pump drive system. Thus, the infusion pump system can draw upon the energy supply in an efficient manner that extends the useful life on the power supply. Furthermore, the infusion pump system can be configured estimate an amount of power remaining to operate the pump system without the requirement of directly detecting the remaining charge on power supply device (e.g., without detecting the remaining charge on a battery (345)). As such, the infusion pump system can readily inform a user of a particular estimated amount of time remaining for medicine dispensing operations.

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. H02J7/00 A61M5/142

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)
H02J A61M

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 2007/145951 A (MEDTRONIC MINIMED INC [US]) 21 December 2007 (2007-12-21) paragraph [0042]; figures	1-12
Y	US 5 717 308 A (NISHITANI YASUHIRO [JP] ET AL) 10 February 1998 (1998-02-10) column 6, line 11 - line 66; figures 5,8,10	1-12
Y	EP 0 275 213 A (PACESETTER INFUSION LTD [US]) 20 July 1988 (1988-07-20) abstract	1-12
X	WO 01/23277 A (CARTLEDGE RICHARD G [US]; SMISSON HUGH F III [US]; BROWN JEFFEREY O [U]) 5 April 2001 (2001-04-05) abstract; figures	1

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document 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

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INTERNATIONAL SEARCH REPORT

International application No.
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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: 13-21, 28-31, 35, 36
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery and Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy
2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-12

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12

A wearable infusion pump system having a main battery which is rechargeable and an auxiliary battery which is non rechargeable

2. claims: 22-27, 32-34

A wearable infusion pump system having a controller device to initiate the medicine dispensing operation by supplying a pattern of voltage pulses being correlated to the energy requirement profile of the drive system

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2008/069642

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