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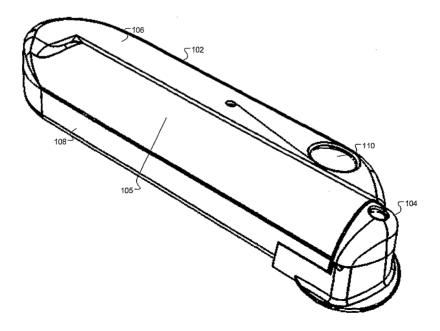
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Declarations under Rule 4.17:

- 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: METHOD AND SYSTEM FOR MANUAL AND AUTONOMOUS CONTROL OF AN INFUSION PUMP



(57) Abstract: A method and system for both autonomous and manual control of an infusion pump for delivering medication to a patient is provided.



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INTERNATIONAL SEARCH REPORT

International application No PCT/US2006/043845

| A CLASSII | FICATION OF SUBJECT MATTER | | |
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| According to | International Patent Classification (IPC) or to both national classifica | tion and IPC | |
| B. FIELDS | | | |
| | cumentation searched (classification system followed by classificatio ${\sf A61M}$ | n symbols) | |
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| Documentat | ion searched other than minimum documentation to the extent that su | uch documents are included in the fields se | arched |
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| | ata base consulted during the International search (name of data base | se and, where practical, search terms used) | |
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| | ENTS CONSIDERED TO BE RELEVANT | | |
| Category* | Citation of document, with indication, where appropriate, of the rele | evant passages | Relevant to claim No. |
| х | US 2005/095063 A1 (FATHALLAH MARW | AN A [US] | 1-7 |
| | ET AL) 5 May 2005 (2005-05-05) paragraphs [0022], [0055]; figur | 00.2.24 | |
| | | es 2,2A | |
| Х | US 5 338 157 A1 (BLOMQUIST MICHAE BLOMQUIST MICHAL L [US]) | L L [US] | 1-7 |
| | 16 August 1994 (1994-08-16) | | |
| | column 2, line 64 - column 4, lin | e 18; | |
| | figures 1,2 | | |
| Х | EP 0 612 004 A1 (IVAC CORP [US] A | LARIS | 1-7 |
| | MEDICAL SYST INC [US]) 24 August 1994 (1994-08-24) | | |
| | the whole document | | |
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| Furth | ner documents are listed in the continuation of Box C. | X See patent family annex. | |
| * Special c | ategories of cited documents : | T" later document published after the inter | mational filing date |
| | ent defining the general state of the art which is not ered to be of particular relevance | or priority date and not in conflict with cited to understand the principle or the invention | the application but |
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| which | nt which may throw doubts on priority claim(s) or is cited to establish the publication date of another | involve an inventive step when the doc "Y" document of particular relevance; the cl | cument is taken alone |
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| | an the priority date claimed actual completion of the international search | "&" document member of the same patent f Date of mailing of the international sear | |
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| | 6 March 2007 | 22/08/2007 | |
| Name and n | nailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 | Authorized officer | |
| i | NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016 | Ceccarelli, David | |
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International application No. PCT/US2006/043845

INTERNATIONAL SEARCH REPORT

| Box 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: | | | | | | | |
| Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely: | | | | | | | |
| 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 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 | | | | | | | |
| As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims. | | | | | | | |
| As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee. | | | | | | | |
| 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.: | | | | | | | |
| A. 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.: see additional sheet(s) | | | | | | | |
| Remark on Protest The additional search fees were accompanied by the applicant's protest. 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: 1-7

Method for transferring operating parameters from one infusion pump device to a second infusion pump device.

2. claims: 8-13

Method of entering food information into an infusion pump system using device assisted data entry to enter foodstuff identification.

3. claims: 14-15

Infusion pump system with an infusion pump body, a control system and an RFID reader.

4. claims: 16-19

Method for temporarily disabling a disruptive alert of an infusion pump system.

5. claims: 20-31

Method of determining a treatment amount for an infusion pump system comprising determining a recommended bolus amount.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2006/043845

| | tent document in search report | | Publication date | | Patent family member(s) | Publication date |
|----|-----------------------------------|----|---------------------|----------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------|
| US | 2005095063 | A1 | 05-05-2005 | AU CA EP US WO | 2004285557 A1 2543976 A1 1684829 A1 2005135047 A1 2005042071 A1 | 12-05-2005 12-05-2005 02-08-2006 23-06-2005 12-05-2005 |
| US | 5338157 | A1 | | NONE | | |
| EP | 0612004 | A1 | 24-08-1994 | DE DE HK JP US | 69402231 D1 69402231 T2 1006041 A1 7039580 A 5719761 A | 30-04-1997 25-09-1997 05-02-1999 10-02-1995 17-02-1998 |