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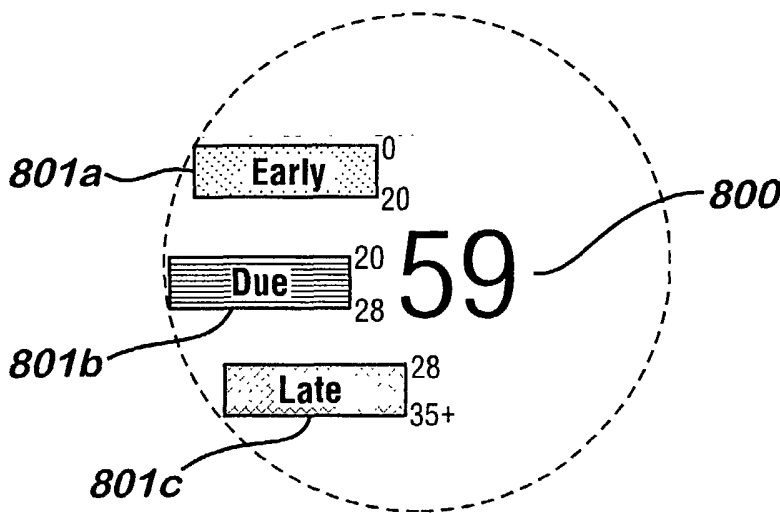
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(54) Title: ALERTING SYSTEM



(57) Abstract: Many conditions are treated by ingestion, inhalation or injection of drugs at regular intervals, and the success of the drugs to treat and/or control a particular condition is largely dependent on the ability of the user to comply with the regimen associated with the drug. Personal management of user compliance with the regimen is assisted by various reminding devices and systems, which either generate an alarm at certain specified times or inform the user whether or not a dose is due in response to a request for medication. The invention provides an alerting system for use in generating an alert in respect of usage of a device, the alerting system including a detector (104,106) capable of detecting an event that is indicative

of usage of the device, the alerting system being arranged to invoke a selected alert state prior to the activation of a forthcoming said event by a user, the alert state being selectable from a plurality of different alert states, wherein each of the different alert states represents a different stage of elapsed time since a previous said event, and wherein the alerting system is arranged to select an alert state in dependence on the elapsed time. The alerting system can be used in conjunction with a medicament dispenser (10,20,30,), in which case the event indicative of usage of a device may be an event relating to the dispensing of medication, such as taking a dose of medication. When integrated with a medicament dispenser (10,20,30,), the user can review the stage of elapsed time since a previous dose - i.e. whether it is too early to take a dose, time to take a dose or whether the dose time has been missed - before deciding whether to initiate dispensing of the medicament.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/04406

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61J7/04

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)
IPC 7 A61J 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.
X	US 4 588 303 A (WIRTSCHAFTER JONATHAN D ET AL) 13 May 1986 (1986-05-13)	1, 2, 6-8, 10-22
Y	column 3, line 18 - column 4, line 28 column 4, line 67 - column 5, line 13 column 6, line 55 - line 62 column 14, line 44 - column 15, line 56 claims 1-5, 13, 16; figures 1, 2B, 3	3-5, 9
Y	US 4 223 801 A (CARLSON TORSTEN S) 23 September 1980 (1980-09-23) column 1, line 64 - line 67 column 4, line 43 - line 55	3-5
Y	US 5 412 372 A (PARKHURST LARRY E ET AL) 2 May 1995 (1995-05-02) column 1, line 6 - line 12 column 7, line 46 - line 60	9
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Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance	*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
E earlier document but published on or after the international filing date	*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
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)	*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.
O document referring to an oral disclosure, use, exhibition or other means	*&* document member of the same patent family
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 7 January 2004	Date of mailing of the international search report 19. 01. 04
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Borowski, A
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INTERNATIONAL SEARCH REPORT

International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 583 832 A (DEPONTY ERNEST) 10 December 1996 (1996-12-10) column 5, line 33 - line 60 column 6, line 17 - line 20 column 19, line 20 - line 38 ----	1
A	US 6 012 450 A (RUBSAMEN REID M) 11 January 2000 (2000-01-11) column 1, line 58 - line 67 column 4, line 36 - line 48 column 4, line 64 - column 5, line 5 column 6, line 43 - line 59 ----	1-22
X	US 6 252 494 B1 (HOWELL MICHAEL D) 26 June 2001 (2001-06-26) page 1, line 14 - line 65 page 1, line 107 - page 2, line 18 figures 1,3,8 -----	23,24,26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/04406

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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.: 25
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 therapy: use of a medicament dispenser for dispensing medicament.
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 II Observations where unity of invention is lacking (Continuation of item 2 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 all searchable claims.
2. 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.:
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.:

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: 1-22

Claims 1-22 essentially define an alerting system.

2. Claims: 23-24

Claims 23-24 essentially define a medicament dispenser.

3. Claim : 26

Claim 26 essentially defines a medicament dispenser.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/04406

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4588303	A	13-05-1986	NONE
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