

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
31 July 2003 (31.07.2003)

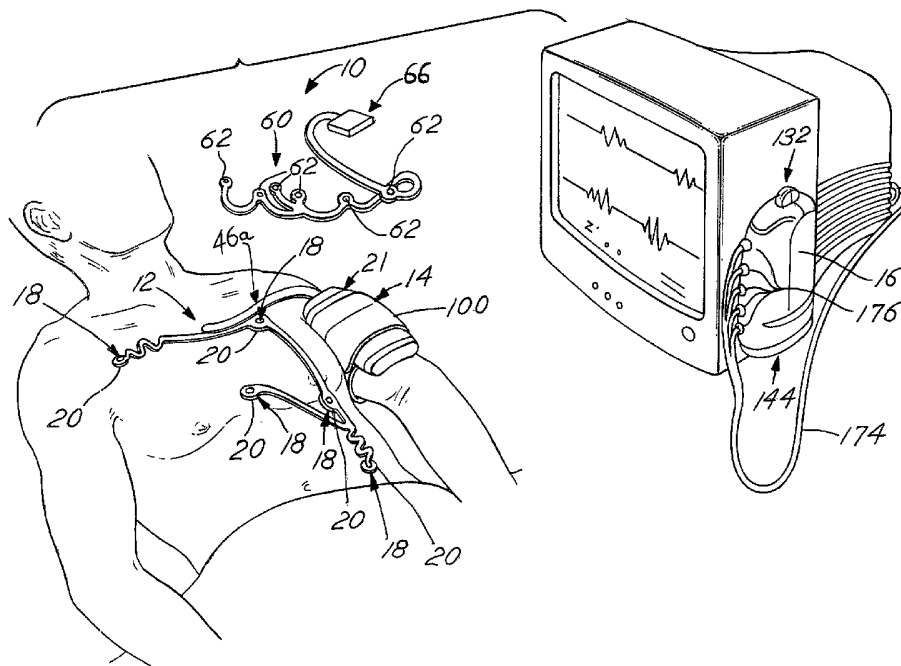
PCT

(10) International Publication Number  
WO 03/061465 A3

- (51) International Patent Classification<sup>7</sup>: A61B 5/00
  - (21) International Application Number: PCT/US03/01875
  - (22) International Filing Date: 22 January 2003 (22.01.2003)
  - (25) Filing Language: English
  - (26) Publication Language: English
  - (30) Priority Data:  
60/350,840 22 January 2002 (22.01.2002) US
  - (71) Applicant: GMP COMPANIES, INC. [US/US]; One East Broward Boulevard, Suite 1701, Fort Lauderdale, CA 33301 (US).
  - (72) Inventors: ISTVAN, Rud; One East Broward Boulevard, Suite 1701, Fort Lauderdale, FL 33301 (US). GREGORY, Bill; 1200 SE 11 Court, Fort Lauderdale, FL 33316 (US). SOLOVAY, Kenneth; 16732 Diamond Drive, Weston, FL 33331 (US). CHASTAIN, David, Paul; 21 Washington Drive, Acton, MA 01720 (US). GUNDLACH, John, David; 28 Conant Street, Acton, MA 01720 (US). HOPMAN, Nicholas, C.; 310 Eric Court, Lake Zurich, IL 60047 (US). WILLIAMS, Daniel, L.; 180 Prospect Street, Norwell, MA 02061 (US). LODATO, Franco; 1816 Harbor View Circle, Weston, FL 33327 (US).
  - (74) Agent: SHULL, Jason, S.; BANNER & WITCOFF, LTD., Ten South Wacker Drive, Suite 3000, Chicago, IL 60606 (US).
  - (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
  - (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
- with international search report
  - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: WIRELESS ECG SYSTEM



(57) Abstract: A system for detecting physiological data from a patient and, more particularly, a system for detecting electrocardiograph (ECG) information from a patient and transmitting the information to a central monitoring station via telemetry.



WO 03/061465 A3



---

**(88) Date of publication of the international search report:**

4 December 2003

*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/US 03/01875

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 A61B5/00

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 A61B G11B

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.
Y	US 6 073 046 A (ALHUSSINY KARIM ET AL) 6 June 2000 (2000-06-06) column 6, line 8 -column 6, line 46 column 10, line 56 -column 10, line 67 column 13, line 7 -column 13, line 25 column 15, line 18 -column 15, line 35 column 15, line 59 -column 16, line 15 figure 4	1-27
Y	US 5 704 351 A (MORTARA DAVID W ET AL) 6 January 1998 (1998-01-06) column 4, line 46 -column 4, line 63; figure 1	1-27

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
- \*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

19 September 2003

Date of mailing of the international search report

- 1. 10. 2003

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

Lomme1, A

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/01875

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2001/034475 A1 (FLACH TERRY E ET AL) 25 October 2001 (2001-10-25) * abstract * page 3, paragraph 57 -page 5, paragraph 67 page 6, paragraph 74 -page 6, paragraph 75 page 7, paragraph 89 -page 8, paragraph 99 ---	1-27
A	US 5 305 384 A (ASHBY JAMES C ET AL) 19 April 1994 (1994-04-19) * abstract * column 10, line 37 -column 10, line 47 ---	2,15
A	US 5 748 103 A (FLACH TERRY E ET AL) 5 May 1998 (1998-05-05) ---	
Y	US 4 353 372 A (AYER GEORGE E) 12 October 1982 (1982-10-12) column 2, line 3 -column 2, line 8 column 3, line 46 -column 4, line 6 column 5, line 11 -column 5, line 39 column 5, line 57 -column 6, line 7 figures 1,2,4-6 ---	1,8,9, 14,23,24
A	DE 198 09 930 A (WINKLER ;WAGNER (DE)) 9 September 1999 (1999-09-09) column 2, line 47 -column 2, line 58; figure 4 ---	8,23
A	US 5 660 567 A (MERCHANT ADNAN I ET AL) 26 August 1997 (1997-08-26) column 2, line 43 -column 2, line 46 column 3, line 22 -column 3, line 59 figures 1-4 ---	8,23
A	WO 00 76396 A (PLATT HARRY LOUIS ;SHELL ALLAN MICHAEL (AU); JANKOV VLADIMIR (AU)) 21 December 2000 (2000-12-21) page 3, line 2 -page 3, line 18 -----	8,23

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 03/01875

## 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.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
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: 1-7, 10-22, 25-27

transmission of information to a central monitoring station  
via telemetry

2. Claims: 1, 8, 9, 14, 23, 24

sensor assembly

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/01875

Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
US 6073046	A	06-06-2000	AU 2588499 A WO 9955227 A1	16-11-1999 04-11-1999
US 5704351	A	06-01-1998	NONE	
US 2001034475	A1	25-10-2001	US 6589170 B1 US 6213942 B1 US 5944659 A US 2001023315 A1 AU 3129297 A WO 9800056 A1 AU 7116896 A WO 9718639 A1 US 5748103 A US 5767791 A	08-07-2003 10-04-2001 31-08-1999 20-09-2001 21-01-1998 08-01-1998 05-06-1997 22-05-1997 05-05-1998 16-06-1998
US 5305384	A	19-04-1994	US 5150401 A	22-09-1992
US 5748103	A	05-05-1998	AU 7116896 A WO 9718639 A1 US 6213942 B1 US 6589170 B1 US 5944659 A US 5767791 A US 2001023315 A1 US 2001034475 A1	05-06-1997 22-05-1997 10-04-2001 08-07-2003 31-08-1999 16-06-1998 20-09-2001 25-10-2001
US 4353372	A	12-10-1982	NONE	
DE 19809930	A	09-09-1999	DE 19809930 A1	09-09-1999
US 5660567	A	26-08-1997	AU 7720896 A WO 9717890 A1	05-06-1997 22-05-1997
WO 0076396	A	21-12-2000	WO 0076396 A1 AU 5055100 A EP 1199982 A1	21-12-2000 02-01-2001 02-05-2002