

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
14 August 2003 (14.08.2003)

PCT

(10) International Publication Number  
**WO 03/066128 A3**

(51) International Patent Classification<sup>7</sup>: **A61M 31/00**

(21) International Application Number: PCT/US03/03536

(22) International Filing Date: 7 February 2003 (07.02.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/355,195 8 February 2002 (08.02.2002) US  
10/131,268 23 April 2002 (23.04.2002) US

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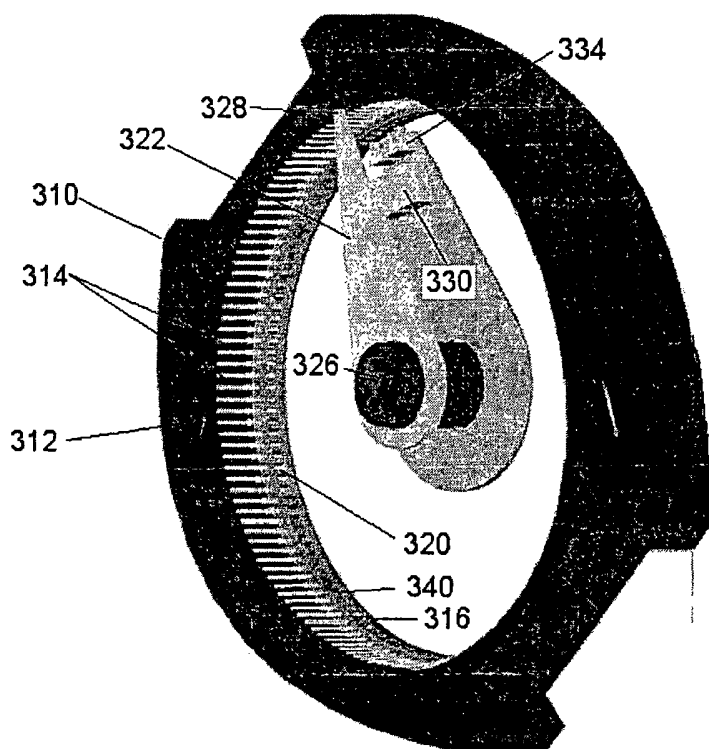
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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, 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, US, 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,

[Continued on next page]

(54) Title: AUTONOMOUS, AMBULATORY ANALYTE MONITOR OR DRUG DELIVERY DEVICE



(57) Abstract: The invention relates to analyte monitoring/drug (pharmaceutical agent) delivery device (10). The invention is suited for monitoring various blood constituents such as glucose. The device has a housing (12) that at least partially encloses a plurality of microneedles (14) disposed on a carrier (16) and an electronics portion (18). Each microneedle (14) is in fluid communication with a corresponding microchannel (20). Each microneedle (14) is individually addressable. That is, each microneedle (14) can be extended and retracted individually via an actuator (22). The electronics portion (18) includes a processor (30) and associated circuitry (e.g., memory, supporting electronics and the like), a motor (32) or the like, a sensor (34), a power supply (e.g., battery) (36) and optionally an interface (38). In general, the processor (30) controls the operation of the device (10) and is data communication with the actuator (22), motor (34) and interface.



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SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations 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, 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)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

**Published:**

- with international search report

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

11 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/US03/03536

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61M 31/00

US CL : 604/65

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)

U.S. : 604/65, 27, 43, 44, 48, 93, 244, 256, 264, 272, 280, 284, 541, 174, 180; 600/345, 247, 372, 373, 377

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)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, E	US 6,537,243 B1 (HENNING et al) 25 March 2003, see entire patent.	1-59
A	US 6,254,586 B1 (MANN et al) 3 July 2001, see entire document.	1-59
A	US 5,951,521 A (MASTROTOTARO et al) 14 September 1999, see entire patent.	1-59
A	US 5,586,553 A (HALILI et al) 24 December 1996, see entire patent.	1-59
A	US 5,482,473 A (LORD et al) 9 January 1996, see entire patent.	1-59
A	US 5,390,671 A (LORD et al) 21 February 1995, see entire patent.	1-59
A	US 5,299,571 A (MASTROTOTARO) 5 April 1994, see entire patent.	1-59

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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"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

14 July 2003 (14.07.2003)

Date of mailing of the international search report

15 AUG 2003

Name and mailing address of the ISA/US

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