



## (51) International Patent Classification:

A61M 11/00 (2006.01)

## (21) International Application Number:

PCT/US20 13/077996

## (22) International Filing Date:

27 December 2013 (27.12.2013)

## (25) Filing Language:

English

## (26) Publication Language:

English

## (30) Priority Data:

61/746,308 27 December 2012 (27.12.2012) US

(71) Applicant: KALEO, INC. [US/US]; 111 Virginia Street,  
Suite 300, Richmond, Virginia 23219 (US).(72) Inventors: EDWARDS, Eric S.; 6431 Burnt Mills Lane,  
Moseley, Virginia 23120 (US). EDWARDS, Evan T.; 21  
Old Farm Road, Charlottesville, Virginia 22903 (US).  
LICATA, Mark J.; 11504 Riveredge Road, Doswell, Vir-  
ginia 23047 (US). MEYERS, Paul F.; 11447 Niagara  
Drive, Fishers, Indiana 46037 (US).(74) Agents: MILCH, Erik B. et al; Cooley LLP, 1299  
Pennsylvania Avenue, NW; Suite 700, Washington, Dis-  
trict of Columbia 20004-2400 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,

[Continued on nextpage]

## (54) Title: SYSTEMS FOR LOCATING AND INTERACTING WITH MEDICAMENT DELIVERY DEVICES

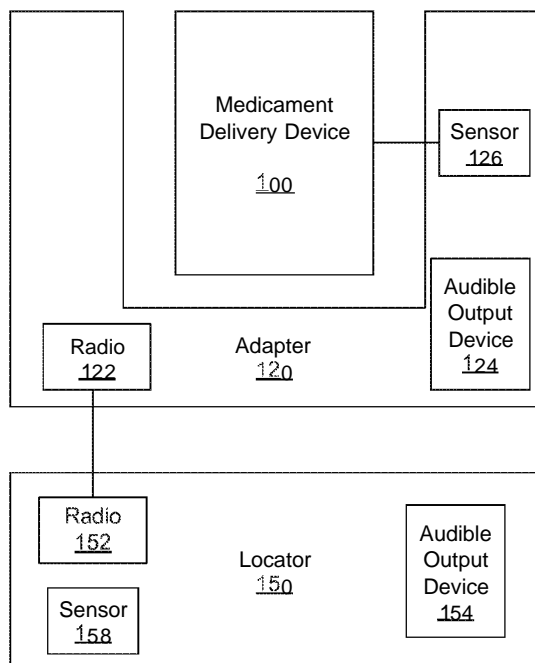


FIG. 35

(57) Abstract: In some embodiments, a method includes es-  
tablishing a communications link between a computing  
device and an adapter. The adapter is configured to receive  
at least a portion of a medicament delivery device. A wire-  
less signal is received to maintain the communications link.  
A relative position between the computing device and the  
adapter is determined. An alarm is produced when the wire-  
less signal is not received within a time period. The alarm  
is based on the relative position between the computing device  
and the adapter



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG). **Published:**

— with international search report (Art. 21(3))

**Declarations under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.1 7(H))

**(88) Date of publication of the international search report:**  
16 July 2015

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 13/77996

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61 M 11/00, 37/00

USPC - 128/200.14; 604/131

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(8): A61M 11/00, 37/00

USPC: 128/200.14; 604/131

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)

MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C.B, DE-A, DE-T, DE-U, GB-A, FR-A); Science.org; Google Scholar; Medline/PubMed; Search terms used: Edwards, Inetlject, computer. Laptop, phone, iphone, alarm, intensity, volume, level, position, location, distance, track, warning, GPS, global, positioning, injector, autoinjector, wireless, signal, sensor

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 81491 11 B2 (MONROE, ON) April 3, 2012; figures 2A-2D; column 3, lines 37-62; column 9, lines 37-57; column 10, lines 7-32; column 16, lines 39-40; column 17, lines 21-61; column 18, lines 1-7; column 20, lines 13-27; column 22, lines 25-53; claims 1, 5	1-3, 5-9, 11-13, 15-19 ----- 4, 10, 14, 20
Y	WO 2012/164402 A2 (MCLOUGHLIN, MJ) December 6, 2012; page 48, line 15	4, 10
Y	US 6360773 B1 (RHODES, ML) March 26, 2002; claims 1, 3, 6	14, 20



Further documents are listed in the continuation of Box C.



\* 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 application or patent 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

"&amp;"

document member of the same patent family

Date of the actual completion of the international search

05 March 2014 (05.03.2014)

Date of mailing of the international search report

25 MAR 2014

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents  
P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Shane Thomas

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774