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(54) Medical effector system

(57) A medical effector system comprised of a bedside unit and a procedure unit. The bedside unit contains connection points for an oral nasal cannula and for receiving inputs from a series of patient monitors. The procedure unit contains a patient monitoring and a medical effector program, and a drug delivery pump and drug

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cassette or a magnetic flux generator capable of delivering therapeutic energy to a patient. The medical effector program operates the pump or magnetic flux generator based upon at least some of the patient outputs and program inputs. A removable umbilical cable connects the two units and allows gases, the patient monitors as well as other information to travel between the two units.

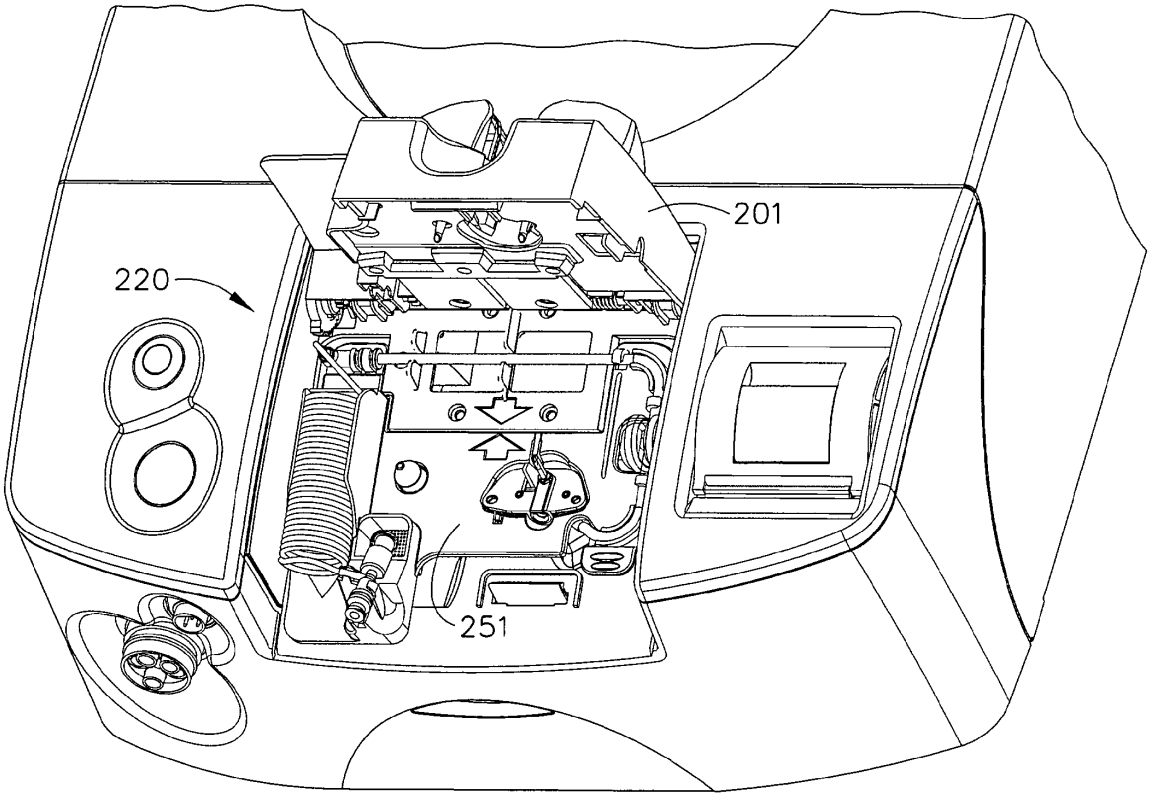

FIG. 45

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EUROPEAN SEARCH REPORT

Application Number
EP 12 15 7430

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 5 620 312 A (HYMAN OSCAR [US] ET AL) 15 April 1997 (1997-04-15) * column 2 - column 6; figures 1-6 *	1-14	INV. A61M31/00 A61M5/142 A61M5/172
Y	US 6 070 761 A (BLOOM NICOLE D [US] ET AL) 6 June 2000 (2000-06-06) * column 13 - column 18; figures 1-11 *	1,3,4,6	A61B5/083 A61M5/162 A61M5/168 A61B5/00
Y	US 2003/145854 A1 (HICKLE RANDALL S [US]) 7 August 2003 (2003-08-07) * paragraph [0205] *	1-14	A61M16/00 A61M16/08 A61M21/02 G06Q50/22
A	US 2003/040700 A1 (HICKLE RANDALL S [US] ET AL) 27 February 2003 (2003-02-27) * paragraph [0050]; figures 1,2 *	1-14	G06Q50/24 A61M16/10 A61M21/00 A61M16/04
A	US 6 241 704 B1 (PETERSON THOMAS L [US] ET AL) 5 June 2001 (2001-06-05) * column 3 - column 5; figures 1-3 *	1-14	A61M16/06
A	EP 0 372 863 A2 (PACESETTER INFUSION LTD [US]) 13 June 1990 (1990-06-13) * column 9 - column 16; figures 1-14 *	1-14	TECHNICAL FIELDS SEARCHED (IPC) A61M
A	US 5 482 446 A (WILLIAMSON MARK E [US] ET AL) 9 January 1996 (1996-01-09) * column 21 *	1-14	
A	JP H11 342199 A (CKD CORP) 14 December 1999 (1999-12-14) * paragraph [0019] - paragraph [0020]; figures 1-4 *	1-14	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	24 August 2016	Preller, D

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 12 15 7430

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24-08-2016

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5620312 A	15-04-1997	NONE	
US 6070761 A	06-06-2000	AU 9026198 A	16-03-1999
		US 6070761 A	06-06-2000
		WO 9910027 A1	04-03-1999
US 2003145854 A1	07-08-2003	AU 2002364046 A1	24-07-2003
		CA 2472098 A1	17-07-2003
		CN 1622839 A	01-06-2005
		CN 105194756 A	30-12-2015
		EP 1467791 A1	20-10-2004
		JP 2005514122 A	19-05-2005
		MX PA04006417 A	10-11-2004
		US 2003145854 A1	07-08-2003
		WO 03057296 A1	17-07-2003
US 2003040700 A1	27-02-2003	AT 378080 T	15-11-2007
		CA 2455982 A1	13-02-2003
		CN 1561237 A	05-01-2005
		DE 60223549 T2	25-09-2008
		EP 1412003 A1	28-04-2004
		ES 2296981 T3	01-05-2008
		HK 1064967 A1	18-01-2007
		JP 4488339 B2	23-06-2010
		JP 2005503202 A	03-02-2005
		JP 2009279425 A	03-12-2009
		MX PA04001065 A	20-05-2004
		US 2003040700 A1	27-02-2003
		WO 03011377 A1	13-02-2003
US 6241704 B1	05-06-2001	US 6241704 B1	05-06-2001
		US 2001031944 A1	18-10-2001
		US 2002183693 A1	05-12-2002
		US 2008065007 A1	13-03-2008
		US 2008065016 A1	13-03-2008
		US 2008132844 A1	05-06-2008
EP 0372863 A2	13-06-1990	CA 2001942 A1	02-06-1990
		DE 68916196 D1	21-07-1994
		DE 68916196 T2	19-01-1995
		EP 0372863 A2	13-06-1990
		JP H02264666 A	29-10-1990
		US 5009641 A	23-04-1991
US 5482446 A	09-01-1996	US 5482446 A	09-01-1996
		US 5551850 A	03-09-1996

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 12 15 7430

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

24-08-2016

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP H11342199 A	14-12-1999	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	医疗效应器系统		
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[标]申请(专利权)人(译)	伊西康内外科公司		
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	WUENNEMANN, JEFFREY, J. COBB, NICHOLAS, E. MARTIN, JAMES F. BISHOP, GREGORY D. BURDORFF, MARK A. BURFORD, CHARLES B. COLLINS, WILLIAM, L., JR. CUSHING, TOMMY C. DAVIS, DEWAYNE A. DEROUEN, JASON P.
IPC分类号	A61M31/00 A61M5/142 A61M5/172 A61B5/083 A61M5/162 A61M5/168 A61B5/00 A61M16/00 A61M16/08 A61M21/02 G06Q50/22 G06Q50/24 A61M16/10 A61M21/00 A61M16/04 A61M16/06 G16H10/60
CPC分类号	A61B5/0836 A61B5/411 A61B5/6819 A61B5/682 A61B5/7495 A61M5/142 A61M5/14228 A61M5/162 A61M5/16831 A61M5/172 A61M16/0051 A61M16/024 A61M16/0493 A61M16/0672 A61M16/0677 A61M16/0688 A61M16/0808 A61M16/085 A61M16/0858 A61M21/02 A61M2016/0027 A61M2016/1025 A61M2021/0027 A61M2202/0208 A61M2202/048 A61M2202/062 A61M2205/05 A61M2205/12 A61M2205/123 A61M2205/13 A61M2205/14 A61M2205/273 A61M2205/3334 A61M2205/3553 A61M2205/3561 A61M2205/3584 A61M2205/505 A61M2205/6072 A61M2205/7536 A61M2209/084 A61M2210/0618 A61M2210/0625 A61M2210/0662 A61M2230/04 A61M2230/06 A61M2230/205 A61M2230/30 A61M2230/432 A61M2230/63 G06Q50/22 G06Q50/24
优先权	60/605717 2004-08-31 US 60/629137 2004-11-18 US 11/158161 2005-06-21 US
其他公开文献	EP2491969A2
外部链接	Espacenet

摘要(译)

一种医疗效应器系统，包括床边单元和手术单元。床边单元包含用于口腔鼻插管的连接点和用于接收来自一系列患者监视器的输入。该过程单元包括患者监测和医疗效应器程序，以及能够向患者输送治疗能量的药物输送泵和药物盒或磁通量发生器。医疗执行器程序基于至少一些患者输出和程序输入来操作泵或磁通量发生器。可拆卸的脐带电缆连接两个单元，允许气体，患者监护仪以及其他信息在两个单元之间传播。

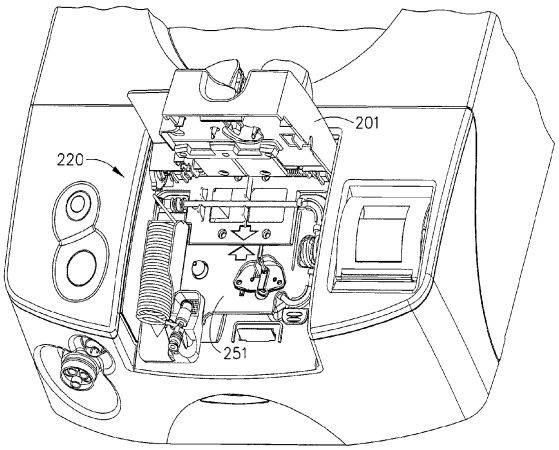

FIG. 45