



- (51) **International Patent Classification:**
A61M 5/168 (2006.01) *A61M 5/36* (2006.01)
- (21) **International Application Number:**
PCT/TR2014/000081
- (22) **International Filing Date:**
20 March 2014 (20.03.2014)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
2013/03468 22 March 2013 (22.03.2013) TR
- (72) **Inventor; and**
- (71) **Applicant :** ÖZEL, Erkan [TR/TR]; Ayvalı Mahallesi Gümüşgöze Sokak, 4/2 Etlık-Keçiören, 06010 Ankara (TR).
- (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, 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))

[Continued on next page]

- (54) **Title:** INFUSION SET COMPRISING A BYPASS LINE FOR RECIRCULATING THE INFUSION FLUID AND REMOVING GAS BUBBLES

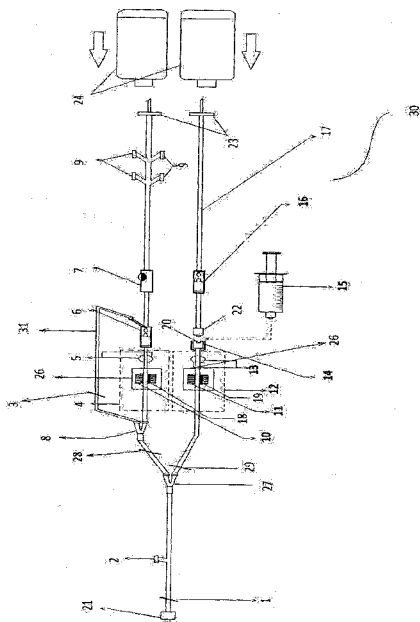


Figure 1

(57) **Abstract:** The invention is related to a system wherein the flow of air is sensed by means of the infusion pump 1st channel air sensor (5) and/or the infusion pump 2nd channel air sensor (13) located on the infusion pump (25), following the passage of air, clamp 3 (28) on the infusion set (30) is closed and the usually closed clamp 2 (3) is opened; the command to fill the infusion set (30) or to operate it is given to the infusion pump (25) and following this the infusion set (30) traps the air inside the drip cup 1 (6); wherein fluid can be transferred with a method, using an injector (15) without the need to use a different infusion pump (25) and infusion set (30).



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:
31 December 2014

INTERNATIONAL SEARCH REPORT

International application No
PCT/TR2014/000081

A. CLASSIFICATION OF SUBJECT MATTER
 INV. A61M5/168 A61M5/36
 ADD.

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)
 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 practicable, search terms used)
 EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2011/128850 A2 (CORE MEDICAL LTD Q [IL]; ROTEM SHACHAR [IL]; EITAN BOAZ [IL]; EITAN SH) 20 October 2011 (2011-10-20) paragraphs [0019], [0051] - [0055]; figure 1A	1-5
X	US 5 211 201 A (KAMEN DEAN L [US] ET AL) 18 May 1993 (1993-05-18) column 4, line 34 - column 5, line 2; figure 2	1-5
X	US 2012/172800 A1 (DUDAR THOMAS [US] ET AL) 5 July 2012 (2012-07-05) figures 4,5	1-5
A	US 4 946 439 A (EGGERS PHILIP N [US]) 7 August 1990 (1990-08-07) figure 1	1-5
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Further documents are listed in the continuation of Box C. See patent family 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 application or patent 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 11 November 2014	Date of mailing of the international search report 19/11/2014
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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, Fax: (+31-70) 340-3016	Authorized officer Krassow, Heiko
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/TR2014/000081

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 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.: 6
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210

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 No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

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 fees, this Authority did not invite payment of additional fees.

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 and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No
PCT/TR2014/000081

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	AU 2010 100 693 A4 (MEDICAL AUSTRALIA LTD) 19 August 2010 (2010-08-19) figure 1 -----	1-5
A	WO 2006/122903 A1 (BRAUN MEDIZINELEKTRONIK GMBH & [DE]; STEINKOGLER ALEXANDER [DE]) 23 November 2006 (2006-11-23) figure 1 -----	1-5

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/TR2014/000081

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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			JP 2011206571 A 20-10-2011
			US 2009177188 A1 09-07-2009
			WO 2006122903 A1 23-11-2006

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Claims Nos.: 6

Claim 6 defines subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT, and no search report has been drawn up on said claim. The subject-matter defined comprises methods for treatment of the human body by therapy, in particular closed-loop control of infusion of medical fluid an stopping the infusion in order to prevent the infusion of air into the patient.