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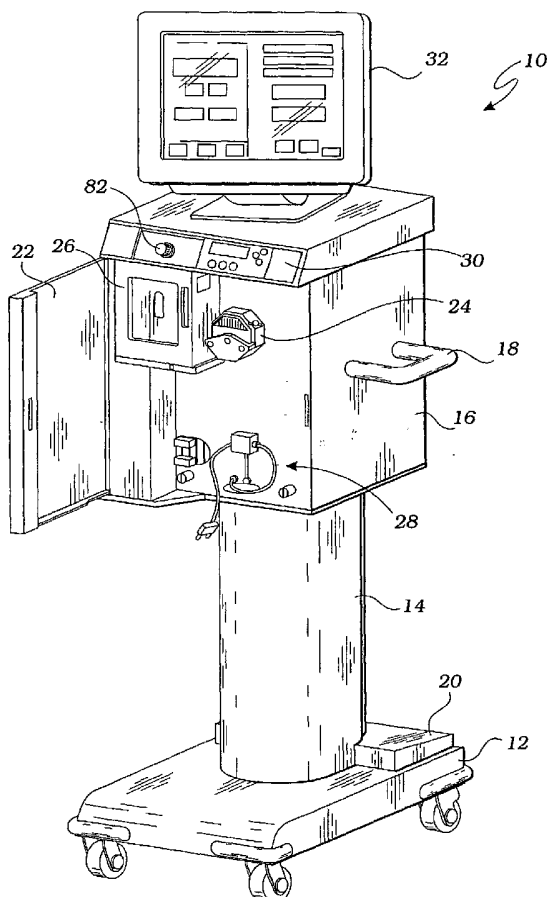
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(54) Title: SYSTEM FOR ENRICHING A BODILY FLUID WITH A GAS



(57) Abstract: A system utilizes an oxygenation device to generate a gas-enriched physiologic fluid and to combine it with a bodily fluid to create a gas-enriched bodily fluid. The oxygenation device may take the form of a disposable cartridge, which is placed within an enclosure. An electronic controller manages various aspects of the system, such as the production of gas-enriched fluids, flow rates, bubble detection, and automatic operation and shut down.

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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.

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INTERNATIONAL SEARCH REPORT

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PCT/US 02/08542

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61M1/36 A61M1/32

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 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 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.
X	WO 99 08733 A (THEROX INC) 25 February 1999 (1999-02-25)	1-9,18, 31-33
Y	page 9, line 29 -page 10, line 26 page 13, line 11 -page 14, line 10 ---	35,36
Y	US 5 730 720 A (ROMAN THOMAS A ET AL) 24 March 1998 (1998-03-24)	35,36
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X	US 5 618 441 A (PETERSON PREBEN A ET AL) 8 April 1997 (1997-04-08)	58-68
Y	column 8, line 42 - line 57 column 9, line 9 - line 29 ---	35,36
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☒ 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

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"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

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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	page 25, line 6 -page 26, line 11 page 44, line 16 -page 47, line 20 ---	11-17, 31-37
A	WO 97 26308 A (UNIV WAYNE STATE) 24 July 1997 (1997-07-24) ---	
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A	US 5 893 838 A (DAOUD ADIB G ET AL) 13 April 1999 (1999-04-13) -----	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 02/08542

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.: 38-57, 69-99
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
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.:
1-18, 31-37, 58-68

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: 1-18, 31-37, 58-68

A system for enriching a body fluid with gas by mixing it with a gas enriched physiological fluid, as well as an automated blood pump circuit

2. Claims: 1, 19-30

A body fluid circuit comprising a flowmeter

INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern: al Application No

PCT/US 02/08542

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