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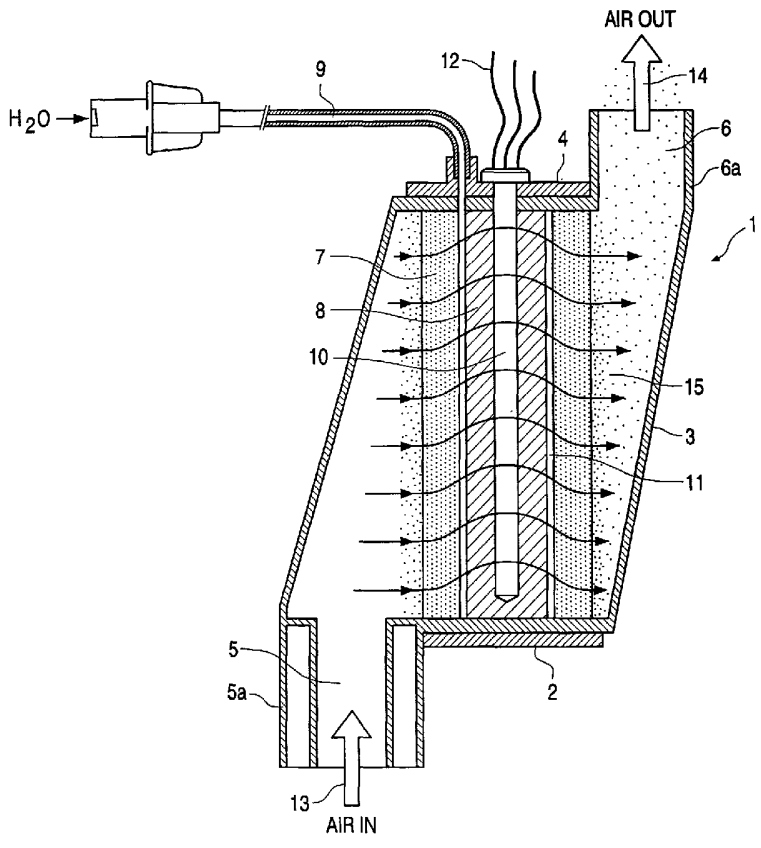
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[Continued on next page]

(54) **Title:** DEVICE FOR HEATING AND MOISTENING A BREATHING GAS



(57) **Abstract:** A device for conditioning medical gas comprising a housing (1) provided with an inlet (5) for non treated medical gas and an outlet (6) for the treated medical gas, wherein in said housing (1) conditioning means are provided for the humidification and warming of said medical gas, comprising a rigid evaporating body (7), a water supply inlet (9) and a heating device (8), wherein said rigid evaporating body (7) and said heating device (8) are arranged in a concentric way forming a space (11) between them and wherein said water supply inlet (9) is connected to the housing (1) such that a thin layer of water is able to be inserted in said space (11) between the heating device (8) and the rigid evaporating body (7). A method for the conditioning of medical gas is also disclosed wherein said gas is humidified and warmed, comprising the steps of supplying through an inlet (5) opening non treated medical gas, humidifying and warming said supplied gas through the action of evaporated water forced through a micro-porous rigid body (7) by heating up a small layer of water.

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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/EP 03/05557

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61M16/16

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 Y	EP 0 567 158 A (FISHER & PAYKEL) 27 October 1993 (1993-10-27) column 4, line 49 - column 7, line 6; figure 1 -----	1-4, 6-11,43 5,12-37
Y	EP 1 138 341 A (FISHER & PAYKEL) 4 October 2001 (2001-10-04) paragraph [0022] - paragraph [0024]; figure 1 paragraph [0033]; figure 3 -----	5,14-37
Y	BE 1 003 559 A (PONNET GILMAN EN ANTHONY) 21 April 1992 (1992-04-21) page 3, line 1 - line 35; figure 1 -----	12,13
A	US 5 769 071 A (TURNBULL CHRISTOPHER STRATTON) 23 June 1998 (1998-06-23) -----	
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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance

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"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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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
11 September 2003	16. 01. 2004

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Zeinstra, H

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/05557

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 095 505 A (MILLER KENNETH G) 1 August 2000 (2000-08-01)	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/05557

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.:
because they relate to subject matter not required to be searched by this Authority, namely:

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.:

1-37, 39, 42, 43

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: 1-37, 39, 42, 43

Device, use of it, and method for conditionning medical gas.

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2. claim: 38

Use of a device with a heat and moisture exchanger.

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3. claim: 40

Use of a device in a breathing apparatus.

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4. claim: 41

Use of a device in laparascopic surgery.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP 03/05557

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