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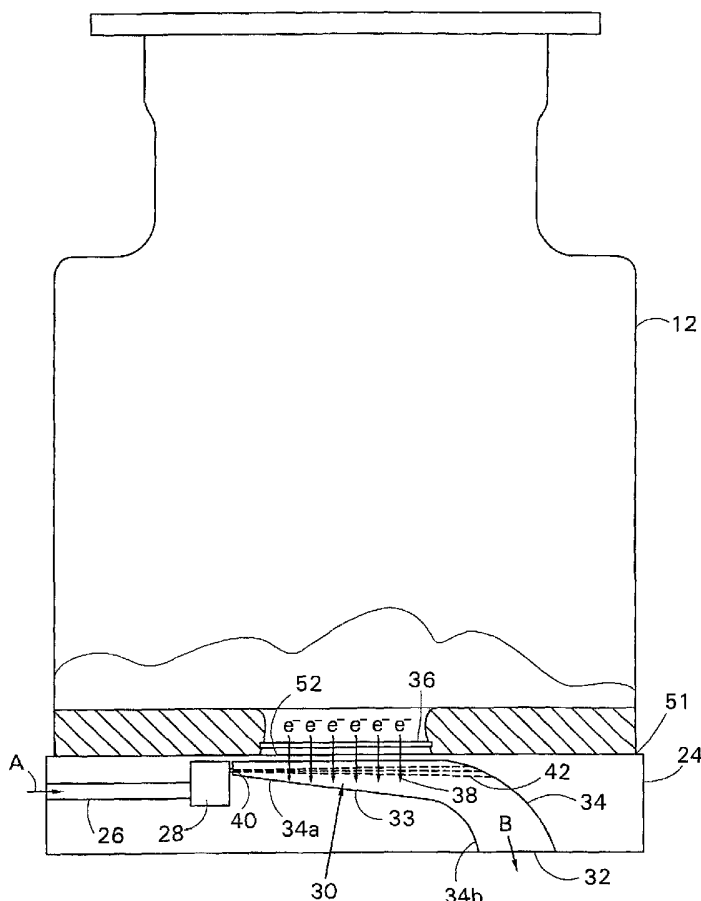
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[Continued on next page]

(54) Title: FLUID STERILIZATION APPARATUS



(57) Abstract: A fluid sterilization apparatus including a sterilization chamber having a cavity therein, and a nozzle for receiving pressurized fluid and directing a spray of the fluid into the cavity. An electron beam generator having an exit window is mounted to the sterilization chamber for directing a beam of electrons through the exit window and into the cavity of the sterilization chamber to irradiate the spray of fluid. The nozzle is configured to direct the spray of fluid substantially parallel and proximate to the exit window.



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INTERNATIONAL SEARCH REPORT

International Application No

PCT 01/46376

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 A61L2/08 C02F1/30 G21K5/00 H01J37/00 H01J33/00

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 A61L C02F G21K H01J

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, 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	US 5 530 255 A (LYONS BERNARD J ET AL) 25 June 1996 (1996-06-25) column 18, line 11 - line 16 column 20, line 62 - column 21, line 61; figures 5,11,12	1-6,9, 10, 14-19, 22-27
A	US 3 655 965 A (ICRE PIERRE ET AL) 11 April 1972 (1972-04-11) column 1, line 22 - line 53	1,9,14, 22

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	"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 document 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 29 May 2002	Date of mailing of the international search report 02.09.02
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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, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Jochheim, J
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 01/46376

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, 9, 14, 22

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: 1,9,14,22

Sterilization of a spray of a pressurized fluid coming from a nozzle by electron beam irradiation

2. Claims: 11,31,34

Sterilization of a film of fluid on the circumferential surface of a wheel system by electron beam irradiation

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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