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[Continued on next page]

(54) Title: TOILET BOWL CLEANING AND/OR DEODORIZING DEVICE

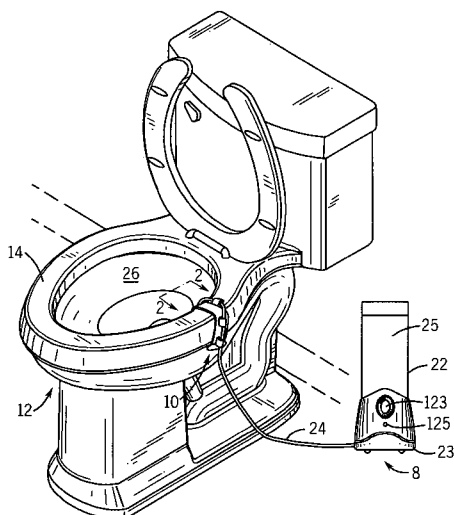


FIG. 1

(57) Abstract: A device for spraying an inner surface of a toilet bowl with a cleaning fluid is disclosed. The device includes a container (22) for the fluid, a fluid sprayer (20) through which the fluid can be sprayed on the inner surface of the wall of the enclosure, a pumping apparatus (200) for delivering fluid from the container to the fluid sprayer (20), a sensor (98) for detecting the presence of an object near the fluid sprayer, and a controller. The controller executes a stored program that activates the sensor at a beginning time of a time interval before a scheduled spraying time stored in the controller, monitors electrical signals from the sensor during the time interval to determine if an object is near the fluid sprayer, and if the controller determines that an object has not been near the sensor during the time interval, activates the pumping apparatus for delivering fluid from the container to the fluid sprayer.

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- *with international search report (Art. 21(3))*
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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER INV. E03D9/03 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) E03D				
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.		
A	US 2007/240252 A1 (LEONARD STEPHEN B [US] ET AL) 18 October 2007 (2007-10-18) paragraphs [0048]; [0056]	1, 11, 23		
A	EP 0 695 834 A (GEOPAT PRODUCTS PTE LTD [SG]) 7 February 1996 (1996-02-07) abstract	1		
A	EP 0 338 825 A (WELLCOME FOUND [GB]) 25 October 1989 (1989-10-25) the whole document	1		
X	US 2007 0136 937 A1 (SAWALSKI ET AL.) 21 June 2007 (2007-06-21) paragraph [0251] - paragraph [0252]	1-16, 23-27		
A	paragraph [0215] paragraph [0185] paragraph [0174]	17-22		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.				
* Special categories of cited documents : <table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"> "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "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) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed </td> <td style="width:50%; border:none;"> "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 "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. "&" document member of the same patent family </td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "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) "O" document referring to an oral disclosure, use, exhibition or other means "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 "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. "&" document member of the same patent family
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "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) "O" document referring to an oral disclosure, use, exhibition or other means "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 "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. "&" document member of the same patent family			
Date of the actual completion of the international search 10 June 2010		Date of mailing of the international search report 18/06/2010		
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 Flygare, Esa		

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/003610

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.:
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 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:

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 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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16, 23-27

Dispenser spraying when a user is not detected

2. claims: 17-22

Dispenser with controlled pumping in accordance with
monitored voltage

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2009/003610

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