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(54) **ODOR EXTRACTION SYSTEM FOR A SANITARY APPLIANCE HAVING A FLUSHING TANK, AND FLUSHING TANK COMPRISING SUCH AN ODOR EXTRACTION SYSTEM**

(57) An odor extraction system (1) for a sanitary appliance having a flushing tank (3) comprises: a powered fan (14) having a suction inlet (16) and a delivery outlet (17); a suction pipe (18), connected to the suction inlet (16) of the fan (14); and a delivery pipe (19) connected to the delivery outlet (17) of the fan (14); the delivery pipe (19) is shaped so as to be inserted, in use, into the flushing tank (3) with a free end (23), provided with an air outlet (24), immersed in the water contained in the flushing tank (3).

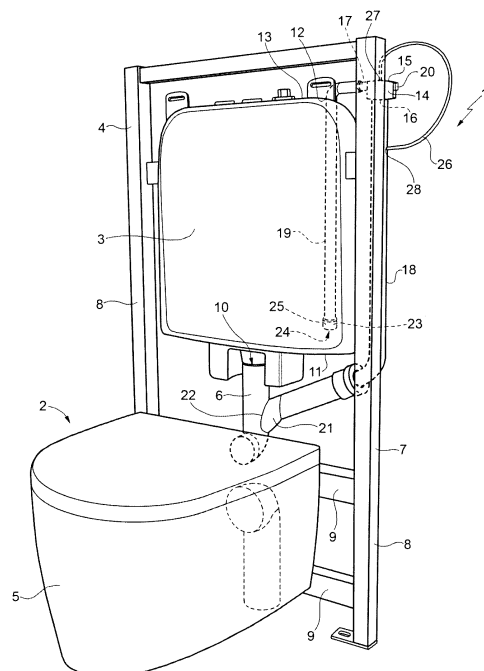


FIG. 2

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## EUROPEAN SEARCH REPORT

Application Number  
EP 15 39 8005

| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                        |                                                                                                                                                             |                                                                                                                                                                                                                                                                                             |                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| Category                                                                                                                                                                                                                   | Citation of document with indication, where appropriate, of relevant passages                                                                               | Relevant to claim                                                                                                                                                                                                                                                                           | CLASSIFICATION OF THE APPLICATION (IPC) |
| X                                                                                                                                                                                                                          | US 2006/107449 A1 (LAN CHIH-MING [TW])<br>25 May 2006 (2006-05-25)<br>* paragraphs [0014], [0021] *<br>-----                                                | 1-5,8                                                                                                                                                                                                                                                                                       | INV.<br>E03D9/052<br>E03D9/05           |
| X                                                                                                                                                                                                                          | GB 2 334 042 A (CORFIELD JOHN ERNEST<br>FREDERICK [GB])<br>11 August 1999 (1999-08-11)<br>* the whole document *<br>-----                                   | 1,6,8                                                                                                                                                                                                                                                                                       |                                         |
| A                                                                                                                                                                                                                          | GB 2 379 462 A (FLETCHER JOHN KENNEDY<br>[GB]; ROSSI PAUL ANTHONY [GB]; FLETCHER<br>CAMPBELL) 12 March 2003 (2003-03-12)<br>* the whole document *<br>----- | 7                                                                                                                                                                                                                                                                                           |                                         |
| A                                                                                                                                                                                                                          | US 5 813 060 A (KLOPOCINSKI STANISLAW<br>[US]) 29 September 1998 (1998-09-29)<br>* column 10, line 26 - line 35; figure 21<br>*<br>-----                    | 7                                                                                                                                                                                                                                                                                           |                                         |
| The present search report has been drawn up for all claims                                                                                                                                                                 |                                                                                                                                                             |                                                                                                                                                                                                                                                                                             | TECHNICAL FIELDS<br>SEARCHED (IPC)      |
|                                                                                                                                                                                                                            |                                                                                                                                                             |                                                                                                                                                                                                                                                                                             | E03D                                    |
| Place of search                                                                                                                                                                                                            |                                                                                                                                                             | Date of completion of the search                                                                                                                                                                                                                                                            | Examiner                                |
| Munich                                                                                                                                                                                                                     |                                                                                                                                                             | 27 November 2015                                                                                                                                                                                                                                                                            | Geisenhofer, Michael                    |
| CATEGORY OF CITED DOCUMENTS                                                                                                                                                                                                |                                                                                                                                                             | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or<br>after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>.....<br>& : member of the same patent family, corresponding<br>document |                                         |
| X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another<br>document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |                                                                                                                                                             |                                                                                                                                                                                                                                                                                             |                                         |

EPO FORM 1503 03/02 (P04C01)



Application Number

EP 15 39 8005

**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION  
SHEET B**

Application Number  
EP 15 39 8005

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-5, 8

Details of the air outlet  
STF: diffuser with a plurality of nozzles or a piece of porous material  
E: generation of small bubbles  
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2. claim: 6

details of where the air is drawn off  
STF: suction pipe is connectable to a tube which in turn connects flushing tank and bowl  
E: efficient piping  
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3. claim: 7

details of the fan  
STF: fan is driven by engine which is housed in a casing having a cooling outlet and a recirculation conduit to produce a stream of recirculating air  
E: cooling of the fan's engine  
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ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 15 39 8005

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

27-11-2015

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|-------------------------------------------|---------------------|----------------------------|---------------------|
| US 2006107449 A1                          | 25-05-2006          | NONE                       |                     |
| GB 2334042 A                              | 11-08-1999          | NONE                       |                     |
| GB 2379462 A                              | 12-03-2003          | NONE                       |                     |
| US 5813060 A                              | 29-09-1998          | NONE                       |                     |