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[Continued on next page]

(54) Title: AUTONOMOUS VACUUM CLEANER WITH SEPARATING APPARATUS

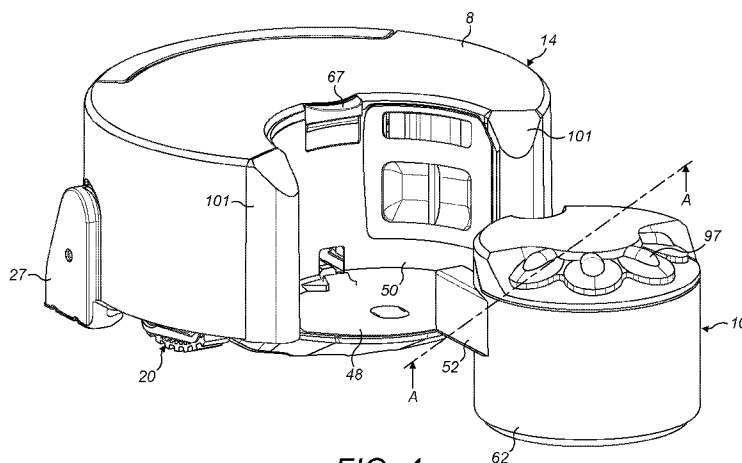


FIG. 4

(57) Abstract: An autonomous vacuum cleaner comprising a main body having a dirty air inlet, a clean air outlet, an airflow path between the dirty air inlet and the clean air outlet and a primary separating apparatus arranged in the air flow path between the dirty air inlet and the clean air outlet, the primary separating apparatus comprising at least one cyclone, wherein the main body further includes a secondary separating apparatus in the airflow path downstream of the primary separating apparatus, the secondary separating apparatus comprising a container and a filter element, wherein the container is arranged in the air flow such that air flows through the container and the filter element, wherein the secondary separating apparatus is removable from the main body independently of the primary separating apparatus.



**(84) Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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9 January 2014

INTERNATIONAL SEARCH REPORT

International application No  
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A. CLASSIFICATION OF SUBJECT MATTER  
INV. A47L9/12 A47L9/16  
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)  
A47L  
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 practicable, 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	JP 2003 236410 A (MITSUBISHI ELECTRIC CORP; MITSUBISHI ELECTRIC HOME APPL) 26 August 2003 (2003-08-26) the whole document	1,7,8
A	US 2005/278888 A1 (REINDLE MARK E [US] ET AL) 22 December 2005 (2005-12-22) abstract paragraph [0002] paragraph [0033] - paragraph [0037] figures 1,2	1,8-11
X	US 7 128 770 B2 (OH JANG-KEUN [KR] ET AL) 31 October 2006 (2006-10-31) the whole document	14-18, 20-24
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Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"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</p> <p>"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</p> <p>"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</p> <p>"&amp;" document member of the same patent family</p>
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Date of the actual completion of the international search  13 November 2013	Date of mailing of the international search report  25/11/2013
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  Baumgärtner, Ruth

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/GB2013/051218

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 2 085 011 A2 (SAMSUNG KWANGJU ELECTRONICS CO [KR]) 5 August 2009 (2009-08-05)	14-17,23
A	paragraph [0008] - paragraph [0028] paragraph [0041] - paragraph [0050] figures 5-7 -----	20,24

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB2013/051218

## 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: 1-13

autonomous vacuum cleaner comprising a primary separating apparatus comprising at least one cyclone, and a secondary separating apparatus

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2. claims: 14-24

cyclonic separating apparatus comprising a separating chamber and a shroud

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/GB2013/051218
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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