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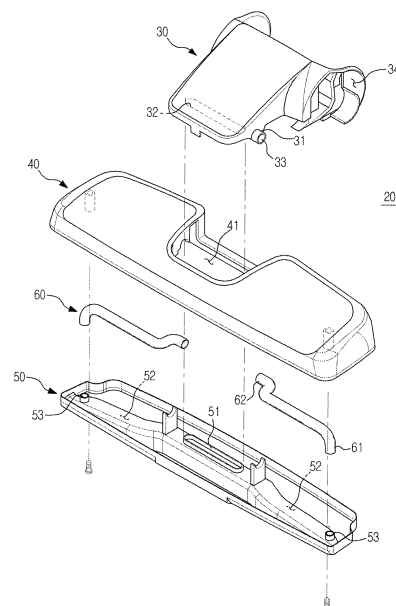
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(54) **Vacuum cleaner**

(57) Disclosed herein is a vacuum cleaner constructed in a structure to reduce the generation of noise due to air flowing along a guide channel. The vacuum cleaner includes a suction plate having a main suction port to suction dust from a surface to be cleaned and a guide channel to guide air to the main suction port, a suction duct communicating with the main suction port, and a connection unit to allow the guide channel to communicate with the suction duct such that some of the air introduced into the guide channel is bypassed to the suction duct.

FIG. 2



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## EUROPEAN SEARCH REPORT

Application Number  
EP 08 15 7946

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	DE 10 2005 023406 A1 (SAMSUNG KWANGJU ELECTRONICS CO [KR]) 4 May 2006 (2006-05-04) * paragraphs [0029], [0047], [0082] - [0090]; figures 2-4 *	1-12	INV. A47L9/00 A47L9/02
A	US 4 747 179 A (BERFIELD ROBERT C [US]) 31 May 1988 (1988-05-31) * the whole document *	1-12	
A	EP 1 803 381 A2 (SAMSUNG ELECTRONICS CO LTD [KR]) 4 July 2007 (2007-07-04) * the whole document *	1-12	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47L
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 13 March 2014	Examiner Trimarchi, Roberto
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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EPO FORM 1503 03.82 (P04C01)



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**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

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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: 1-6

A vacuum cleaner comprising a suction plate, a main suction port and a guide channel, in which a connection unit bypasses some air from the guide channel.

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2. claims: 7-9

A vacuum cleaner comprising a suction unit, a suction port and a guide channel, in which step protrusion are formed at the edge of the guide channel.

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3. claim: 10

A vacuum cleaner with a suction plate, a guide channel and a main suction port, in which the n suction port is formed in the middle of the guide channel, and having an auxiliary suction port, a suction duct having first and second openings.

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4. claims: 11, 12

A vacuum cleaner having a suction plate, a guide channel, a main suction port formed on the guide channel, a suction duct including an auxiliary port spaced apart a distance from the main suction port to reduce noise.

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

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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  
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13-03-2014

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