

(19)



(11)

**EP 2 011 990 A3**

(12)

**EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**04.02.2009 Bulletin 2009/06**

(51) Int Cl.:  
**F02M 35/02 (2006.01)**

(43) Date of publication A2:  
**07.01.2009 Bulletin 2009/02**

(21) Application number: **08159560.5**

(22) Date of filing: **02.07.2008**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR  
HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT  
RO SE SI SK TR**  
Designated Extension States:  
**AL BA MK RS**

(71) Applicant: **OFFICINE METALLURGICHE G.  
CORNAGLIA S.p.A.**  
**10092 Beinasco (IT)**

(72) Inventor: **Cornaglia, Umberto**  
**10027 Moncalieri (TO) (IT)**

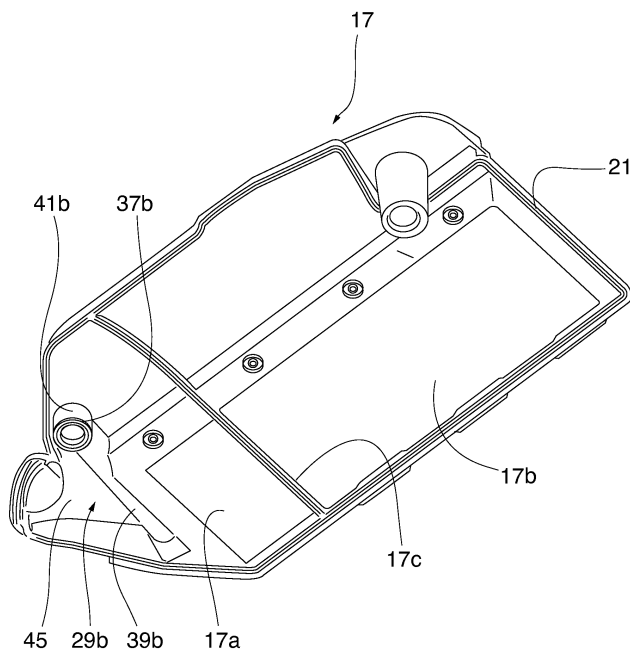
(30) Priority: **06.07.2007 IT TO20070493**

(74) Representative: **Robba, Pierpaolo**  
**Interpatent**  
**Via Caboto 35**  
**10129 Torino (IT)**

**(54) Housing for air filters of internal combustion engines and method for its production**

(57) A housing (11) for the air filter of an internal combustion engine comprises a shell (13) having an inlet opening (25) and an outlet opening (23) for the inflow of air to be filtered and the outflow of filtered air, respective-

ly, and is **characterised in that** it further comprises at least one duct (29), which is associated with said shell (13) and can be employed in the circuit for recovering blow-by gases.



**Fig. 4**

**EP 2 011 990 A3**



## EUROPEAN SEARCH REPORT

Application Number  
EP 08 15 9560

| 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 2003/226553 A1 (YASUI HISAKAZU [JP])<br>11 December 2003 (2003-12-11)                                                                                                           | 1-3,9-13                                                                                                                                                                                                                                                                              | INV.<br>F02M35/02                          |
| Y                                                                                                                                                                                                                                                      | * paragraph [0028] - paragraph [0038];<br>figures 6-8 *                                                                                                                            | 4-8,14                                                                                                                                                                                                                                                                                |                                            |
| Y                                                                                                                                                                                                                                                      | -----<br>EP 1 447 533 A (NISSAN MOTOR [JP]; AICHI<br>MACHINE IND [JP]; RENAULT SAS [FR])<br>18 August 2004 (2004-08-18)<br>* paragraph [0017] - paragraph [0020];<br>figures 1-3 * | 4-8,14                                                                                                                                                                                                                                                                                |                                            |
| X                                                                                                                                                                                                                                                      | -----<br>US 4 653 457 A (STEGE JEFFREY J [US])<br>31 March 1987 (1987-03-31)<br>* column 3, line 20 - column 4, line 46;<br>figures 1-4 *                                          | 1-3,9-13                                                                                                                                                                                                                                                                              |                                            |
| X                                                                                                                                                                                                                                                      | -----<br>EP 0 741 242 A (RENAULT [FR])<br>6 November 1996 (1996-11-06)<br>* column 3, line 24 - column 3, line 58;<br>figures 1,2 *                                                | 1-3,9-13                                                                                                                                                                                                                                                                              |                                            |
| X                                                                                                                                                                                                                                                      | -----<br>FR 1 544 415 A (GEN MOTORS LTD)<br>31 October 1968 (1968-10-31)<br>* page 2, column 1, line 1 - page 2,<br>column 1, line 65; figure 1 *                                  | 1-3,9-13                                                                                                                                                                                                                                                                              | TECHNICAL FIELDS<br>SEARCHED (IPC)<br>F02M |
| The present search report has been drawn up for all claims                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                       |                                            |
| Place of search<br>Munich                                                                                                                                                                                                                              |                                                                                                                                                                                    | Date of completion of the search<br>22 December 2008                                                                                                                                                                                                                                  | Examiner<br>Marsano, Flavio                |
| CATEGORY OF CITED DOCUMENTS<br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |                                                                                                                                                                                    | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or 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 document |                                            |

 1  
EPO FORM 1503 03.02 (P04C01)

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

EP 08 15 9560

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.

22-12-2008

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|-------------------------------------------|---------------------|----------------------------|---------------------|
| US 2003226553 A1                          | 11-12-2003          | BR 0300849 A               | 17-08-2004          |
|                                           |                     | JP 4015475 B2              | 28-11-2007          |
|                                           |                     | JP 2004011558 A            | 15-01-2004          |
| -----                                     |                     |                            |                     |
| EP 1447533 A                              | 18-08-2004          | CN 1526921 A               | 08-09-2004          |
|                                           |                     | DE 602004001889 T2         | 14-12-2006          |
|                                           |                     | JP 2004245148 A            | 02-09-2004          |
|                                           |                     | KR 20040073981 A           | 21-08-2004          |
|                                           |                     | US 2004159314 A1           | 19-08-2004          |
| -----                                     |                     |                            |                     |
| US 4653457 A                              | 31-03-1987          | CA 1275603 C               | 30-10-1990          |
| -----                                     |                     |                            |                     |
| EP 0741242 A                              | 06-11-1996          | FR 2733799 A1              | 08-11-1996          |
| -----                                     |                     |                            |                     |
| FR 1544415 A                              | 31-10-1968          | NONE                       |                     |
| -----                                     |                     |                            |                     |