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(54) **Structure of cylinder head of air cooling engine**

(57) Disclosed is a structure of cylinder head (52) of air cooling engine (3). The cylinder head (52) forms a longitudinal channel (7) between a valve driving member (522) and a combustion chamber (523) and extending completely therethrough in a direction of an intake port (524) and an exhaust port (525). The cylinder head (52) also forms a lateral channel (6) that is located between the exhaust port (525) and the intake port (524) and opening toward a spark plug seat (526) and communicates the longitudinal channel (7). The engine (3) is structured by arranging the exhaust port (525) of the cylinder head (52) toward a vehicle front side and arranging the intake port (524) toward a vehicle rear side. When a vehicle is moving, an external cooling air stream flows from the exhaust port (525) through the longitudinal channel (7) to reach and discharge through the intake port (524) side.

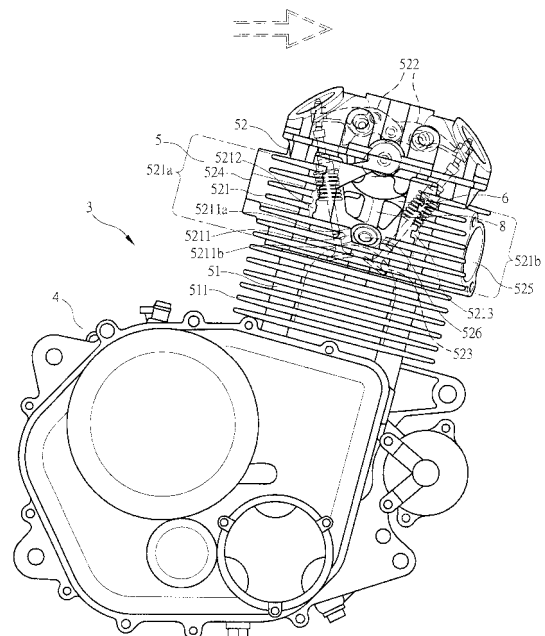


FIG.5



EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	EP 1 403 496 A1 (HONDA MOTOR CO LTD [JP]) 31 March 2004 (2004-03-31) * abstract * * figures *	1	INV. F02F1/06 F02F1/32
X	----- WO 2007/080653 A1 (HONDA MOTOR CO LTD [JP]; KUBOTA RYO [JP]; MIMURA MASAHIRO [JP]; FUNAYA) 19 July 2007 (2007-07-19) * abstract * * figures 10-11 *	1,3,8,12	ADD. F02B61/02
A	----- JP 2005 098249 A (HONDA MOTOR CO LTD) 14 April 2005 (2005-04-14) * abstract * * pages - *	1,8,12	
			TECHNICAL FIELDS SEARCHED (IPC)
			F02F F01P
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 4 September 2012	Examiner Matray, J
CATEGORY OF CITED DOCUMENTS 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 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 & : member of the same patent family, corresponding document			

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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(completely); 3-8, 12-15(partially)

Cylinder head with airflow conduction wall

2. claims: 2, 9-11(completely); 3-8, 12-15(partially)

Cylinder head with pegs

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

EP 11 16 8040

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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04-09-2012

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