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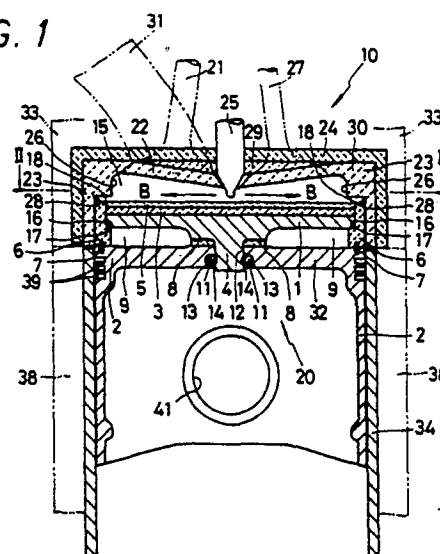
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Heat-insulating engine structure.

In order to improve the suction efficiency and the cycle efficiency, a heat-insulating engine structure (10) of the invention has a planar and thin-walled piston head surface portion (4) of a ceramics material to be exposed to combustion gases. A combustion chamber (15) is formed not on the side of the piston head but on the side of a cylinder head. Namely, the piston head is defined by the cooperation of a cylinder head bottom wall portion (26) having a lowered central portion and a raised outer peripheral portion (18) and a cylinder liner upper portion (28) including an upper tubular part of a substantially square cross-section and a lower cylindrical part. The cylinder head bottom wall portion has an inclined surface radially upwardly extending from the central portion to the outer peripheral portion. Intake and exhaust valves (21, 27) are associated with valve seats formed in the inclined surface. A fuel injection nozzle (25) is disposed substantially centrally of the cylinder head bottom wall portion. The sides of the square tubular part are operative to agitate a swirl to facilitate uniform mixture of fuel and air thereby assuring that the fuel and

air are mixed instantaneously in a zone adjacent to the top dead center of the piston.

FIG. 1





EP 88304742.5

DOCUMENTS CONSIDERED TO BE RELEVANT																	
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)														
A	<u>DE - A1 - 3 126 028</u> (KLÖCKNER-HUMBOLDT-DEUTZ AG) * Totality * --	1	F 02 F 1/24 F 02 F 7/00 F 02 B 77/11														
A	<u>EP - A2 - 0 163 241</u> (ALCAN ALUMINIUMWERK NÜRNBERG GMBH) * Fig. 2 * ----	1															
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)														
			F 02 F 1/00 F 02 B 77/00 F 02 F 3/00														
The present search report has been drawn up for all claims																	
Place of search VIENNA		Date of completion of the search 07-08-1989	Examiner THALHAMMER														
<table border="0"><tr><td>CATEGORY OF CITED DOCUMENTS</td><td>T : theory or principle underlying the invention</td></tr><tr><td>X : particularly relevant if taken alone</td><td>E : earlier patent document, but published on, or</td></tr><tr><td>Y : particularly relevant if combined with another</td><td>after the filing date</td></tr><tr><td>document of the same category</td><td>D : document cited in the application</td></tr><tr><td>A : technological background</td><td>L : document cited for other reasons</td></tr><tr><td>O : non-written disclosure</td><td>& : member of the same patent family, corresponding</td></tr><tr><td>P : intermediate document</td><td>document</td></tr></table>				CATEGORY OF CITED DOCUMENTS	T : theory or principle underlying the invention	X : particularly relevant if taken alone	E : earlier patent document, but published on, or	Y : particularly relevant if combined with another	after the filing date	document of the same category	D : document cited in the application	A : technological background	L : document cited for other reasons	O : non-written disclosure	& : member of the same patent family, corresponding	P : intermediate document	document
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