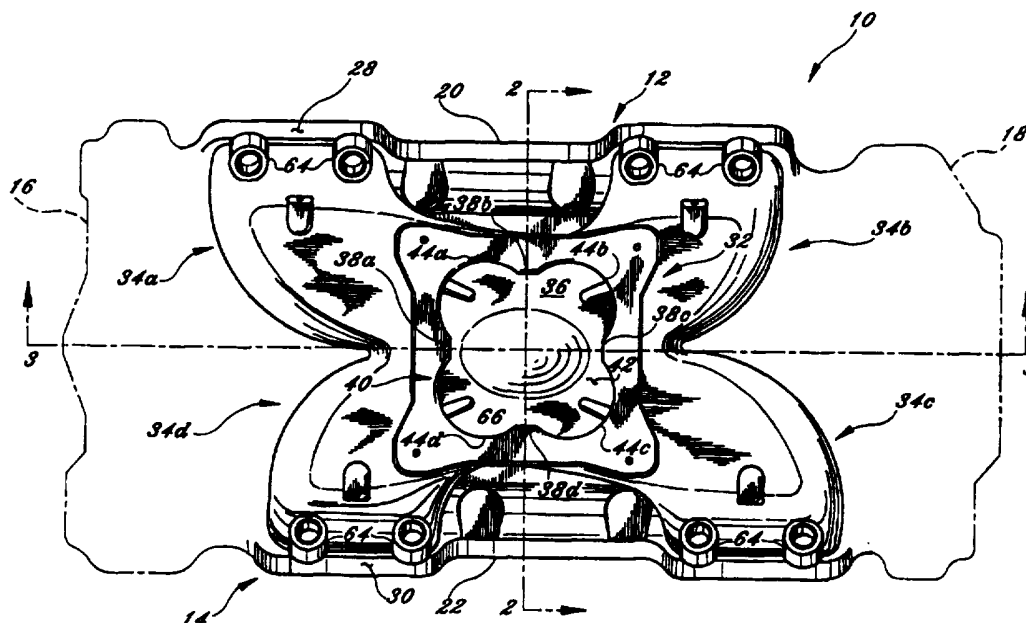




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(54) Title: AIR INTAKE MANIFOLD



(57) Abstract

An air intake manifold comprises a manifold body (12) having a plenum (32) formed with a convexly-curved floor (36), opposed sidewalls (38a-d) and a radiused inlet (40) which collectively define a plenum interior (42). A number of air passageways or runners (48) each have an inlet (60) at the plenum interior (42) and an outlet (62) connected to one cylinder of the internal combustion engine where a fuel injector is mounted to combine atomized fuel with the flow of air through such runners (48). An air guide (66) extends outwardly from the plenum floor (36) in a generally convexly arcuate shape which is effective to smoothly direct the flow of air entering the plenum interior (42) into each of the runners (48) so that turbulence within the runners (48) is substantially reduced thus allowing a maximum amount of air to flow into the cylinders of the engine at both low engine speeds and high engine speeds.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US95/13405

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :FO2M 35/10

US CL :123/184.34

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)

U.S. : 123/184.34,184.24, 184.42, 184.47

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
NONE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	US, A, 4,872,424 (CARNES) 10 October 1989, see cols. 5 and 6.	1 - 6 , 8 - 12 , 32, and 34 ----- 10,13, and 14
X --- Y	US, A, 5,063,885 (YOSHIOKA) 12 November 1991, see cols. 1 and 2.	15-22, 24-26, and 28-31
X --- Y	US, A, 4,210,107 (SHAFFER) 01 July 1980, see Fig. 2.	7, 23, 27, and 33

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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International application No.
PCT/US95/13405

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	US, A, 4,805,564 (HUDSON) 21 February 1989, see entire document.	1-34
A	US, A, 4,977,866 (WILKINS) 18 December 1990, see entire document.	1-34
A	US, A, 5,003,932 (DUNCAN) 02 April 1991, see entire document.	1-34
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A	US, A, 3,561,408 (WELAND) 09 February 1971, see entire document.	1-34
A	US, A, 2,892,453 (STOLL) 30 June 1959, see entire document.	1-34
A	US, A, 2,909,165 (DOLZA) 20 October 1959, see entire document.	1-34