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(54) **Actively controlled induction noise using a quadrapole inlet**

(57) An active noise attenuation assembly for an air induction system of an internal combustion engine is located in an air inlet duct leading to the engine. A fairing body is concentrically mounted within the duct and defines an annular space with the duct through which air travels. A loud speaker is mounted on the fairing body facing outwardly from the duct. A controller generates an electrical signal amplified and phase shifted from a noise field emanating from the engine. The signal is ap-

plied to the loudspeaker for broadcasting a sound field phase shifted from the noise field for attenuating the noise field. A transition housing having an outlet opening and an inlet opening forms a first pair of opposing channels and a second pair of opposing channels. The housing mates to the open end of the inlet duct. The first pair of opposing channels communicates with the speaker and the second pair of opposing channels communicates with the annular space.

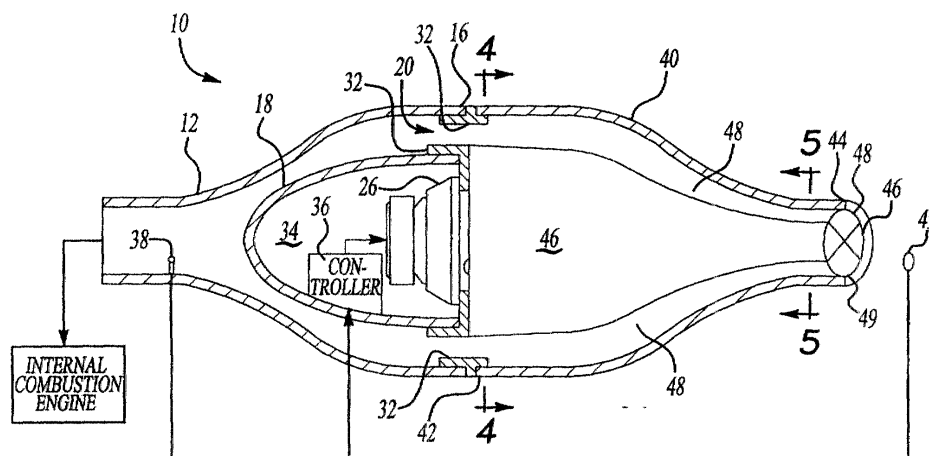


Fig-1



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 00 11 9167

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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			F02M G10K F16L
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 14 September 2001	Examiner Van Zoest, A
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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**ANNEX TO THE EUROPEAN SEARCH REPORT
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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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