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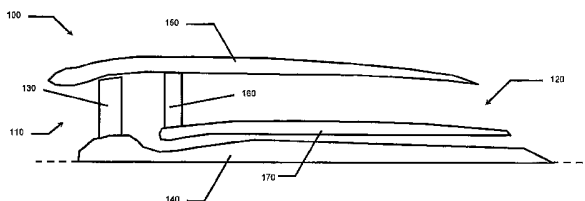
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(54) Title: LOW-NOISE FAN EXIT GUIDE VANES



(57) Abstract: Low-noise fan exit guide vanes are disclosed. According to the present invention a fan exit guide vane has an outer shell substantially shaped as an airfoil and defining an interior cavity. A porous portion of the outer shell allows communication between the fluctuations in the air passing over the guide vane and the interior cavity. At least one acoustically resonant chamber is located within the interior cavity. The resonant chamber is in communication with the porous portion of the outer perimeter. The resonant chamber is configured to reduce the noise generated at a predetermined frequency. In various preferred embodiments, there is a plurality of acoustically resonant chambers located within the interior cavity. The resonant chambers can be separated by one or more partitions within the interior cavity. In these embodiments, the resonant chambers can be configured to reduce the noise generated over a range of predetermined frequencies.

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B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 415/119, 46, 211.1, 208.1, 200; 416/223R, 224, 229R, 232, 500 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,820,117 A (LARRABEE et al.) 11 April 1989 (11.04.1989), the whole document.	1-13
Y	US 2,783,008 A (BODINE) 26 February 1957 (26.02.1957), the whole document.	1-3, 7, 8, 11
Y	US 6,224,341-B1 (FRICKE) 01 May 2001 (01.05.2001), column 1, lines 14-27, column 10, lines 48-58.	1, 4, 5, 7, 9-11, 13
A	US 3,346,174 A (LIEVENS et al.) 10 October 1967 (10.10.1976), column 2, lines 26-42.	1, 2, 4, 7, 9, 11, 12
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Y	US 3,602,333 A (KOBAYASHI) 31 August 1971 (31.07.1971), the whole document.	1-13
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