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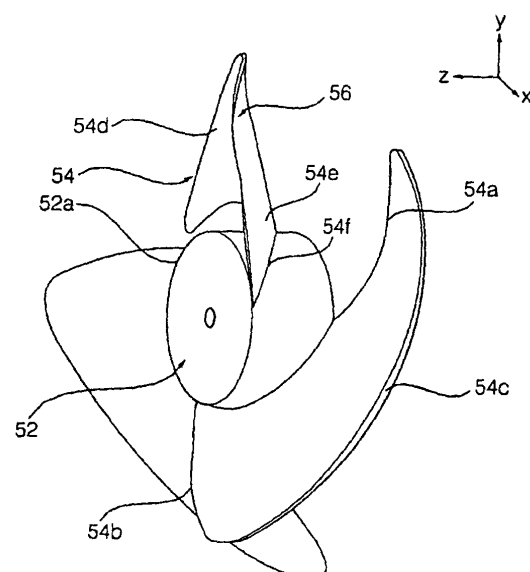
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(54) **Axial-flow fan**

(57) Disclosed is an axial-flow fan comprising a hub (52) and a plurality of blades (54) located on an outer circumference of the hub so as to axially blow air. Each blade (54) includes a positive pressure side (54d) to which high pressure of the air is applied, a negative pressure side (54e) to which low pressure of the air is applied, and a protuberance (56) formed on the positive pressure side (54d) so as to reduce the difference of pressure between the positive and negative pressure sides. The axial-flow fan reduces the amount of an air-flow flowing along the positive pressure sides (54d) at blade tips (54c), and causes air to effectively flow at the blade tips (54c), thereby reducing the difference of pressure between the positive pressure sides (54d) and the negative pressure sides (54e) at the blade tips (54c) and preventing the occurrence of a vortex generated at the blade tips (54c). Further, the axial-flow fan slows down the restoration to the static pressure of air flowing between the positive pressure sides to the negative pressure sides at the blade tips of blades, thereby reducing the noise generated by the operation of the fan.

FIG. 3





European Patent
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EUROPEAN SEARCH REPORT

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			F04D
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		24 November 2004	Teerling, 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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**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.
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