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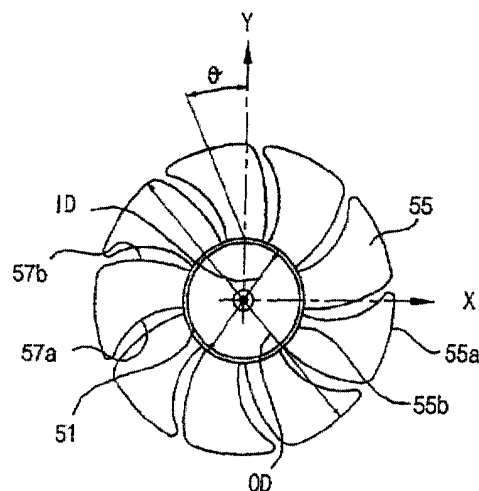
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(54) **Axial flow fan**

(57) An axial flow fan for refrigerators is disclosed. In the axial flow fan of this invention, a hub(51) is mounted to the rotating shaft of a drive motor, with a plurality of blades(55) regularly fixed around the hub(51). A variety of designing factors of the blades, such as the number of blades, hub ratio, sweep angle, pitch angle and maximum camber ratio, are optimally designed to allow a smooth flow of cool air agreeable with both the large pressure loss and complex flow passage of refrigerators while accomplishing a reduction in air flow noise of the refrigerators.

A vortex prevention means is provided on the concave back surface of the annular rim formed of the shroud for preventing discharged air from forming a vortex stream in back of the fan.

FIG.7a





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EUROPEAN SEARCH REPORT

Application Number
EP 00 11 4849

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The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 16 May 2002	Examiner Fistas, N
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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**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
EP 00 11 4849

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-8

An axial flow fan for refrigerators comprising a hub mounted to the rotating shaft of a drive motor, with a plurality of blades having a specific hub ratio.

2. Claims: 9-14

An axial flow fan for refrigerators comprising a hub mounted to a rotating shaft of a motor, with a plurality of blades and a shroud installed around the blades to guide an air current, wherein the shroud consists of an annular rim formed closely around the blades and wherein vortex means are provided on a concave back surface of said annular rim.

**ANNEX TO THE EUROPEAN SEARCH REPORT
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