

Title (en)
Impeller for fan, fan using the same, and air conditioner using the same

Title (de)
Lüfterrotor, Lüfter und Klimaanlage mit diesem Rotor

Title (fr)
Rotor d' un ventilateur, ventilateur et conditionneur d' air avec un tel rotor

Publication
EP 1087146 A3 20020403 (EN)

Application
EP 00119461 A 20000915

Priority
JP 27083099 A 19990924

Abstract (en)
[origin: EP1087146A2] It is intended to lessen the effect of the blade end vortex of air generated on the negative pressure surface near the outer circumference of a rotating blade given to the influent air state on other blade rotating behind when it is separated from this blade and flows away. As a result, disturbance of influent air on each succeeding blade is reduced. The influent air coming into each blade is smooth. Unstable phenomena in the succeeding rotating blade such as air separation and decline of speed hardly take place. Accordingly, the blade noise is lowered and the static pressure is enhanced. An impeller (1, 15, 16, 40) has a hub (3, 13) and two blades (2, 14) disposed in the hub. Specifically, each blade has a shape with an aspect ratio (b/L) defined in a range of $b/L \leq 1$ where "L" is the chord length of the blade at a representative square mean radius (Rr) position of each blade of the two blades and "b" is the representative actual length in the radial direction.

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IPC 8 full level
F04D 29/32 (2006.01); **F04D 29/34** (2006.01); **F04D 29/38** (2006.01)

CPC (source: EP)
F04D 29/384 (2013.01)

Citation (search report)
• [XY] US 4893990 A 19900116 - TOMOHIRO TERUHIKO [JP], et al
• [A] GB 2198190 A 19880608 - COOK FRANK L
• [Y] FR 2723150 A1 19960202 - MORIN PHILIPPE [FR]
• [Y] US 1807397 A 19310526 - FECHHEIMER CARL J
• [A] US 4138859 A 19790213 - PIETSCH JOSEPH A

Cited by
CN110513329A; EP1512918A3; GB2372785A; GB2372785B; US9682348B2; US9863423B2

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