

Title (en)

PROPELLER FAN AND AIR CONDITIONER OUTDOOR UNIT PROVIDED WITH PROPELLER FAN

Title (de)

PROPELLERGEBLÄSE UND MIT EINEM PROPELLERGEBLÄSE VERSEHENE AUSSENEINHEIT EINER KLIMAANLAGE

Title (fr)

VENTILATEUR À HÉLICE ET UNITÉ EXTÉRIEURE DE CLIMATISEUR DOTÉE D'UN VENTILATEUR À HÉLICE

Publication

EP 3798451 A4 20211103 (EN)

Application

EP 19810828 A 20190524

Priority

- JP 2018103741 A 20180530
- JP 2019020593 W 20190524

Abstract (en)

[origin: EP3798451A1] Provided is a propeller fan capable of improving performance. The propeller fan includes: a shaft portion that rotates about a center axial line; and a plurality of blades that have roots connected to an outer periphery of the shaft portion and extend in a radial direction, trailing edge side surface area increased regions (S2) and leading edge side surface area increased regions (S1) are included such that dimensions in an axial line direction parallel to the center axial line are larger on a side of tips than on a side of the roots in a case in which projection to a meridional plane including a blade center axial line is performed, and the trailing edge side surface area increased regions (S2) are larger than the leading edge side surface area increased regions (S1). A blade stagger angle with respect to a direction of the center axial line locally increases such that an amount of change from distribution that substantially linearly increases from the side of the roots toward the side of tips of the blades has a maximum value at a center position of a blade height with reference to the distribution.

IPC 8 full level

F04D 29/38 (2006.01); **F04D 29/66** (2006.01); **F24F 1/0029** (2019.01); **F24F 1/38** (2011.01)

CPC (source: EP)

F04D 29/386 (2013.01); **F04D 29/667** (2013.01); **F24F 1/0029** (2013.01); **F24F 1/38** (2013.01); **F05D 2240/303** (2013.01); **F05D 2240/304** (2013.01); **F05D 2240/307** (2013.01); **F05D 2250/90** (2013.01)

Citation (search report)

- [X1] JP 5079063 B2 20121121
- [X1] US 2015044058 A1 20150212 - HAMADA SHINGO [JP], et al
- [X1] JP 2014058902 A 20140403 - DAIKIN IND LTD
- [X1] JP S62265499 A 19871118 - MITSUBISHI HEAVY IND LTD
- [X1] JP H08284887 A 19961029 - TOYO RADIATOR CO LTD

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 3798451 A1 20210331; **EP 3798451 A4 20211103**; **EP 3798451 A8 20210519**; JP 2019206958 A 20191205; JP 7150480 B2 20221011; WO 2019230582 A1 20191205

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