

Title (en)  
CENTRIFUGAL BLOWER, BLOWER DEVICE, AIR CONDITIONER, AND REFRIGERATION CYCLE DEVICE

Title (de)  
ZENTRIFUGALGEBLÄSE, BLASVORRICHTUNG, KLIMAANLAGE UND KÄLTEKREISLAUFVORRICHTUNG

Title (fr)  
SOUFFLANTE CENTRIFUGE, DISPOSITIF DE SOUFFLAGE, CLIMATISEUR, ET DISPOSITIF À CYCLE DE RÉFRIGÉRATION

Publication  
**EP 3904696 A4 20220216 (EN)**

Application  
**EP 18944300 A 20181227**

Priority  
JP 2018048063 W 20181227

Abstract (en)  
[origin: EP3904696A1] A centrifugal air-sending device includes an impeller having a main plate having a disk shape and blades and a fan casing having a bell mouth. The bell mouth has an inlet port and an air-suction portion having an opening having a diameter gradually decreasing from an upstream end toward a downstream end of the air-suction portion in a direction of a flow of gas to be suctioned into the fan casing. In a vertical section of the bell mouth, in a case in which the upstream end is defined as one of a vertex of a major axis and a vertex of a minor axis of a virtual ellipse, the downstream end is defined as the other one of the vertex of the major axis and the vertex of the minor axis of the virtual ellipse, an intersection of the major axis and the minor axis is defined to be further away from a rotation shaft of the impeller than is the downstream end, and a part of an outline of the virtual ellipse having a shortest distance connecting the upstream end and the downstream end along the outline of the virtual ellipse is defined as a first outline, and in a range defined by a virtual first tangent of the virtual ellipse touching the upstream end, a virtual second tangent of the virtual ellipse touching the downstream end, and the first outline, the air-suction portion has a wall extending between the upstream end and the downstream end, and the wall of the air-suction portion extends away from the intersection in a direction from the intersection across the first outline.

IPC 8 full level  
**F04D 29/42** (2006.01); **F04D 29/44** (2006.01)

CPC (source: EP)  
**F04D 29/4213** (2013.01); **F04D 29/4226** (2013.01); **F04D 29/441** (2013.01); **F05D 2250/51** (2013.01)

Citation (search report)

- [A] US 5478201 A 19951226 - AMR YEHIA M [US]
- [A] US 6042335 A 20000328 - AMR YEHIA M [US]
- [A] US 5215437 A 19930601 - TEVELDE JOHN A [US], et al
- See references of WO 2020136788A1

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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3904696 A1 20211103; EP 3904696 A4 20220216; EP 3904696 B1 20230426**; CN 113195903 A 20210730; CN 113195903 B 20230203; ES 2945787 T3 20230707; JP 7130061 B2 20220902; JP WO2020136788 A1 20210909; WO 2020136788 A1 20200702

DOCDB simple family (application)  
**EP 18944300 A 20181227**; CN 201880100304 A 20181227; ES 18944300 T 20181227; JP 2018048063 W 20181227; JP 2020562037 A 20181227