

Title (en)
Air conditioning apparatus

Title (de)
Klimaanlage

Title (fr)
Appareil de climatisation

Publication
EP 2148145 A1 20100127 (EN)

Application
EP 09009564 A 20090723

Priority
• JP 2008191883 A 20080725
• JP 2008191884 A 20080725

Abstract (en)
[Problem(s)] A disturbance of airflow of air that is heat-exchanged by a heat exchanger is prevented, and an airflow volume of air from two upper and lower outlets is appropriately distributed, stabilizing the airflow volume and restraining generation of noise. [Means for Solving the Problem(s)] Fan diameters of a pair of upper and lower cross-flow fans 4, 5 are made different from each other in an air conditioning apparatus 1, comprising: a heat exchanger 3; and a pair of upper and lower cross-flow fans 4, 5 in a housing 2 having a front inlet 8 and a side inlet 9 and an upper outlet 10 and a lower outlet 11, air flowing from the front inlet 8 and the side inlet 9 into the housing 2 being heat-exchanged by the heat exchanger 3, the heat-exchanged air being blown off from the upper outlet 10 and the lower outlet 11 by means of the pair of the upper and lower cross-flow fans 4, 5. A top portion 17C of an air trunk guide 17 is shifted downwardly of a central position between a center of the cross-flow fan 4 and a center of the cross-flow fan 5, and is shifted to a lower side with respect to a center of the air trunk guide 17.

IPC 8 full level
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CPC (source: EP US)
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F24F 13/081 (2013.01 - EP)

Citation (applicant)
JP S6159145 A 19860326 - SANYO ELECTRIC CO, et al

Citation (search report)
• [X] JP H08178338 A 19960712 - TOSHIBA CORP
• [X] KR 100644544 B1 20061110 - LG ELECTRONICS INC [KR]
• [X] JP S5596850 A 19800723 - MATSUSHITA ELECTRIC IND CO LTD
• [PX] EP 1953461 A1 20080806 - LG ELECTRONICS INC [KR]
• [A] JP H07233957 A 19950905 - TOSHIBA CORP
• [A] JP H03158630 A 19910708 - SANYO ELECTRIC CO
• [A] JP 2000234796 A 20000829 - MATSUSHITA ELECTRIC IND CO LTD

Cited by
CN104110812A; CN103574772A; CN105352153A; CN108870540A; CN104296351A; CN108916993A; CN106556066A; CN110160144A;
EP3168546A4; RU2683342C1; US10634384B2

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AL BA RS

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