

Title (en)
FAN IMPELLER

Publication
EP 0463385 A3 19920212 (DE)

Application
EP 91108569 A 19910527

Priority
DE 4020742 A 19900629

Abstract (en)
[origin: EP0463385A2] 2.1 In order to achieve the greatest possible output from a fan it is desirable to arrange as many rotor blades as possible on an impeller, for example of a cooling fan. In order to avoid overlapping of adjacent blade feet in the case of such an arrangement, that end of the blade surface of each rotor blade assigned to the outlet side is inclined in the area of the hub towards the blade centre and adjacent fan blades are so arranged that, viewed in the axial direction, the inclined end of a blade and the intake edge of the adjacent blade do not overlap. On semi-axially functioning fans of motor vehicle engines this leads to output losses owing to the wake behind the rotor blades. 2.2 It is proposed to design the inclined end of the blade surfaces radially with just sufficient length for it to correspond to the wake area. This overall wake area can also be separated off by the arrangement of a wall extending on the boundary between wake and blade flow so that no disturbances of the outlet flow are to be anticipated. 2.3 Use on one-piece, plastic impellers for motor vehicle cooling fans.

IPC 1-7
F04D 29/32

IPC 8 full level
F04D 29/32 (2006.01)

CPC (source: EP)
F04D 29/329 (2013.01); **F04D 29/384** (2013.01); **F05D 2240/304** (2013.01)

Citation (search report)
• [X] DE 3304296 A1 19830915 - SUEDEDEUTSCHE KUEHLER BEHR [DE]
• [X] DE 1926326 B2 19720727
• [X] GB 1593939 A 19810722 - AISIN SEIKI
• [AD] US 4142844 A 19790306 - BRATTSTROM EDWARD H

Cited by
US6830434B2; US11767761B2; USD860427S; WO2012049220A1; US9447791B2

Designated contracting state (EPC)
DE ES FR GB IT SE

DOCDB simple family (publication)
EP 0463385 A2 19920102; EP 0463385 A3 19920212; EP 0463385 B1 19960814; DE 4020742 A1 19920102; DE 59108065 D1 19960919; ES 2091263 T3 19961101

DOCDB simple family (application)
EP 91108569 A 19910527; DE 4020742 A 19900629; DE 59108065 T 19910527; ES 91108569 T 19910527