

Title (en)  
Outlet with a vortex flow.

Title (de)  
Dralldurchlass.

Title (fr)  
Sortie à écoulement en spirale.

Publication  
**EP 0414022 B1 19940223 (DE)**

Application  
**EP 90115040 A 19900804**

Priority  
DE 8910061 U 19890823

Abstract (en)  
[origin: US5016525A] An air passage or outlet for imparting a spin flow to air passing therethrough, is economically produced of only two basic sheet metal components. The sheet metal has a good fire resistance capability and can be easily coated with an individual paint color. One sheet metal component is a sheet metal plate (4) with punched-out tongue-shaped air guide vanes (2) that are arranged at a spacing concentrically around a central axis perpendicular to the plane of the plate (4). A central hub area (3) remains connected to an outer area of plate (4) by spoke-type lands separating the air flow holes. The other sheet metal component of the air passage is a connector piece (5) having, e.g., a cylindrical neck (6) surrounded at its lower end by a collar (7). The inner diameter of the connector piece (5) is so dimensioned that radially outer edges of the guide vanes (2) are held in place by a press-fit against the inner sides of the cylindrical neck of the connector piece (5). The side of the sheet metal plate (4) facing the connector piece (5) bears rigidly against the edge of the neck (6) of the connector piece (5) when the two components are connected to each other.

IPC 1-7  
**F24F 13/06**

IPC 8 full level  
**F24F 13/06** (2006.01)

CPC (source: EP US)  
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Cited by  
EP0505739A1; FR2673456A1; EP4001793A1; WO2022101056A1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**US 5016525 A 19910521**; AT E101914 T1 19940315; DD 297226 A5 19920102; DE 59004665 D1 19940331; DE 8910061 U1 19891019; EP 0414022 A2 19910227; EP 0414022 A3 19920226; EP 0414022 B1 19940223; ES 2049375 T3 19940416

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**US 57013990 A 19900820**; AT 90115040 T 19900804; DD 34355690 A 19900821; DE 59004665 T 19900804; DE 8910061 U 19890823; EP 90115040 A 19900804; ES 90115040 T 19900804