

Title (en)
FUME HOOD HAVING A BI-STABLE VORTEX

Title (de)
RAUCHABZUG MIT BISTABILER WIRBELSTRÖMUNG

Title (fr)
HOTTE A TURBULENCES BISTABLES

Publication
EP 0954390 A4 20000419 (EN)

Application
EP 98902812 A 19980116

Priority
• US 9800956 W 19980116
• US 3599797 P 19970122

Abstract (en)
[origin: WO9831481A1] The flow of air through a fume hood (78) is optimized by producing a bi-stable vortex within the vortex chamber of the fume hood regardless of sash (18) movement. A bi-stable fume hood optimizes capture face velocity to minimize backflow of fume laden air through the hood sash opening. This bi-stable vortex fume hood utilizes a vortex pressure control system to reposition top, center, and bottom slot openings (32, 34, 36) of a baffle in the hood. This baffle moves the bi-stable vortex away from the face when the sash is fully opened and creates a clearing action near the work surface as the sash is closed. An airfoil (76) is placed inside the fume hood chamber and the airfoil has multiple entry pattern, one of which turns the vortex up and away from the open sash window. The other creates flow which washes the work surface of the hood. The interior portion of the vortex chamber utilizes a turning vane (65) in order to decrease dynamic losses and increases bi-stable vortex stability.

IPC 1-7
B08B 15/02

IPC 8 full level
B08B 15/02 (2006.01); **F24F 7/007** (2006.01)

CPC (source: EP)
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Citation (search report)
• No further relevant documents disclosed
• See references of WO 9831481A1

Cited by
CN108237132A; US2023278081A1

Designated contracting state (EPC)
BE DE DK ES FR GB NL SE

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WO 9831481 A1 19980723; WO 9831481 A8 19990422; AU 5961698 A 19980807; DE 69814036 D1 20030605; DE 69814036 T2 20040408; DK 0954390 T3 20030728; EP 0954390 A1 19991110; EP 0954390 A4 20000419; EP 0954390 B1 20030502; ES 2197460 T3 20040101; JP 2001518174 A 20011009

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