

Title (en)  
TUNNEL MODULE FOR CREATING A CLEAN SPACE BY THE LAMINAR FLOW TECHNIQUE

Publication  
**EP 0340433 A3 19911121 (DE)**

Application  
**EP 89104834 A 19890317**

Priority  
DE 8805774 U 19880430

Abstract (en)  
[origin: EP0340433A2] A tunnel module consists of an upper part (1), which is downwardly delimited by high-performance filters (15), and two side walls (3, 4). The upper part (1) has three chambers (9, 10, 11) which are divided by two intermediate bottoms (7, 8) and lie on top of one another, a fan (16) and a return air opening (14). The chambers (9, 10, 11) are interconnected by means of openings (12, 13) arranged on alternate sides in the intermediate bottoms (7, 8), the opening (12) of the upper intermediate bottom (7) and the return air opening (14) being situated on opposite sides. In order to produce a low-turbulence airflow, which is provided with a high static pressure content, in the lower chamber (11) in front of the high-performance filters (15), with low energy expenditure, the fan (16) is arranged in the central chamber (10) below the opening (12) of the upper intermediate bottom (7). <IMAGE>

IPC 1-7  
**F24F 3/16**

IPC 8 full level  
**E04B 1/82** (2006.01); **B01L 1/04** (2006.01); **F24F 3/16** (2006.01); **F24F 7/06** (2006.01)

CPC (source: EP)  
**F24F 3/167** (2021.01); **F24F 13/24** (2013.01)

Citation (search report)  
• [A] US 4409889 A 19831018 - BURLESON MAURICE L [US]  
• [A] GB 2157765 A 19851030 - ENVIRONMENTAL AIR CONTROL  
• [A] US 2029610 A 19360204 - CAMPBELL HARRY E, et al  
• [A] FR 2560672 A1 19850906 - GMS SA [FR]  
• [A] US 3418915 A 19681231 - MARBLE ROBERT I  
• [A] PATENT ABSTRACTS OF JAPAN, Band 10, Nr. 281 (M-520)[2337], 25. September 1986; & JP-A-61 101 733 (SHIMIZU) 20-05-1986  
• [A] PATENT ABSTRACTS OF JAPAN, Band 12, Nr. 27 (M-662)[2874], 27. Januar 1988; & JP-A-62 182 540 (NITTA) 10-08-1987

Cited by  
EP0768498A3; DE4238595A1; DE4320162A1; DE102010001319A1; FR2700203A1; US2022098884A1; CN110594884A; US11549703B2; WO2011085726A2; WO2019234303A1; WO9411679A1; WO9309389A1; WO2018011462A1; TWI665413B

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