

Title (en)  
VERTICAL GAS PASS FOR A HEAT EXCHANGER

Publication  
**EP 0135664 A3 19851227 (DE)**

Application  
**EP 84105357 A 19840511**

Priority  
CH 477383 A 19830831

Abstract (en)  
[origin: US4537156A] The heat exchanger is constructed with a vertical gas flue and a hopper at the bottom end of the flue. The gas flue is shaped to have more than four sides. The hopper walls meet the wall-forming tubes of the gas flue around a boundary edge which extends over the entire periphery of the gas flue. All of the wall-forming tubes of the gas flue are bent at the boundary edge while the tubes in the walls of the hopper extend in parallel relationship to one another.

IPC 1-7  
**F22B 37/14**

IPC 8 full level  
**F22B 37/10** (2006.01); **F22B 37/14** (2006.01); **F22B 37/20** (2006.01); **F22B 37/24** (2006.01)

CPC (source: EP US)  
**F22B 37/146** (2013.01 - EP US)

Citation (search report)

- [X] FR 1416901 A 19651105 - COMBUSTION ENG
- [A] DE 1105429 B 19610427 - KOHLENSCHIEDUNGS GMBH
- [A] DE 1031057 B 19580529 - KOHLENSCHIEDUNGS GMBH
- [A] BE 562910 A
- [A] US 3457903 A 19690729 - HUGE ERNEST C

Cited by  
EP0217079A1; EP0543564A1; DE9412875U1; US6793013B2; WO2004063626A1

Designated contracting state (EPC)  
DE FR IT

DOCDB simple family (publication)  
**EP 0135664 A2 19850403; EP 0135664 A3 19851227; EP 0135664 B1 19880727**; CA 1247949 A 19890103; DE 3473026 D1 19880901; JP H0652121 B2 19940706; JP S6060403 A 19850408; PL 248385 A1 19850409; US 4537156 A 19850827

DOCDB simple family (application)  
**EP 84105357 A 19840511**; CA 458157 A 19840705; DE 3473026 T 19840511; JP 14077084 A 19840709; PL 24838584 A 19840625; US 64379484 A 19840824