

Title (en)  
FIN-TYPE HEAT EXCHANGER.

Title (de)  
RIPPENWÄRMETAUSCHER.

Title (fr)  
ECHANGEUR THERMIQUE DU TYPE A AILETTES.

Publication  
**EP 0111538 A4 19850228 (EN)**

Application  
**EP 83902150 A 19830513**

Priority  
US 38722682 A 19820610

Abstract (en)  
[origin: WO8304432A1] A highly effective fin-type heat exchanger (A), which is easily reproduceable, versatile in application, low cost, comparatively compact, and light in weight. The construction provides for a low resistance to a flowing medium, by utilizing an array of highly heat conductive fins (3, 26), each fin (3) projecting in one continuous piece, through a partition (1, 23) of lower thermal conductivity, which separates two mediums. This intersection is sealed, to prevent cross-contamination between the two mediums. High thermal exchange ability is achieved by a configuration in which the flowing medium sequentially impacts the array of highly heat conductive fins (3), which extract the heat contained in this medium, and conduct the heat through the separating partition (1, 23), into the second medium. The apparatus and method have particular utility in a number of applications such as: waste heat recovery (Figs. 1-6, 9 and 12); water heaters (Fig. 8); a combination muffler and heater (Fig. 10); earth tubes (Fig. 7); solar thermal transfert (not shown); or numerous thermal dissipating applications, where the fins (3, 26) are either embedded into (Figs. 13 and 14) or project through (Fig. 11) a lesser conductive member (23, 28, 29), and extend outwardly into the ambient atmosphere.

IPC 1-7  
**F24B 7/02**; **F24H 1/00**; **F28D 7/10**; **F28F 1/42**; **F28F 9/22**; **F28F 9/24**; **F28F 13/06**

IPC 8 full level  
**F01N 5/02** (2006.01); **F16C 37/00** (2006.01); **F16D 65/10** (2006.01); **F16D 65/82** (2006.01); **F24H 1/20** (2006.01); **F28D 20/00** (2006.01); **F28D 21/00** (2006.01); **F28F 1/42** (2006.01)

CPC (source: EP)  
**F01N 5/02** (2013.01); **F16C 37/00** (2013.01); **F16D 65/10** (2013.01); **F16D 65/82** (2013.01); **F24H 1/205** (2013.01); **F28D 20/0052** (2013.01); **F28D 21/0003** (2013.01); **F28F 1/42** (2013.01); **Y02E 60/14** (2013.01); **Y02E 70/30** (2013.01); **Y02T 10/12** (2013.01)

Citation (search report)  
• [X] US 2579507 A 19511225 - MACCRACKEN CALVIN D  
• [Y] DE 850998 C 19520929 - MESSERSCHMITT BOELKOW BLOHM

Designated contracting state (EPC)  
AT BE CH DE FR GB LI LU NL SE

DOCDB simple family (publication)  
**WO 8304432 A1 19831222**; DK 59784 A 19840210; DK 59784 D0 19840210; EP 0111538 A1 19840627; EP 0111538 A4 19850228; NO 840483 L 19840209

DOCDB simple family (application)  
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