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Captain's Landing, Newington, NH 03801 (US). LITKA, Anthony, F.; 1288 Main Street, Hanover, MA 02339 (US). BECKER, Fred, E.; 46 Beaver Road, Reading, MA 01867 (US).

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(74) Agent: FRENCH, Timothy, A.; Fish & Richardson P.C., 225 Franklin Street, Boston, MA 02210-2804 (US).

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(71) Applicant: THERMO POWER CORPORATION  
[US/US]; 45 First Avenue, Waltham, MA 02254-9046 (US).

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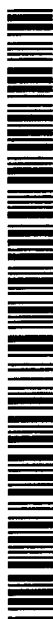
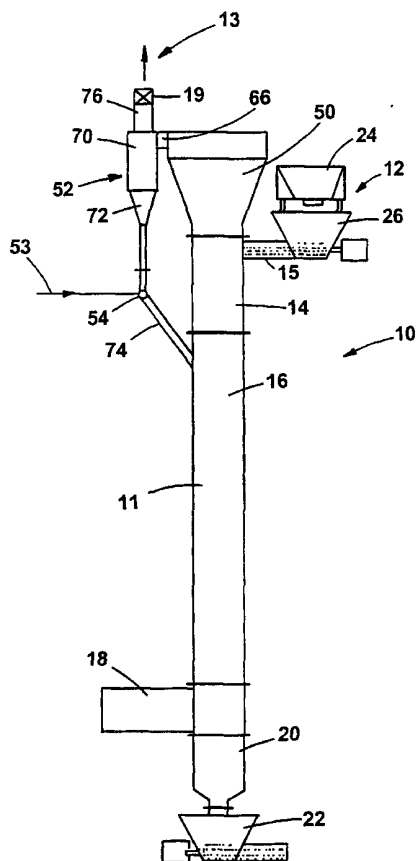
(72) Inventors: MCCLAIN, Andrew, W.; 30 York Street, Lexington, MA 02173 (US). BREAU, Ronald, W.; 16

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(54) Title: RAINING BED HEAT EXCHANGER AND METHODS OF USE

(57) Abstract: A raining bed heat exchanger includes: a hollow stack (10); a feed inlet (15) located near the top of the stack for introducing particulate material into the stack so that the material falls through the stack; a gas inlet (18) located near the bottom of the stack for introducing rising gases into the stack so that the gases flow counter to the falling material; a plurality of baffles supported within the stack between the feed and gas inlets for retarding the falling material and prolonging its exposure to the gases; and a disengagement section (50) located near the top of the stack for separating from the gases particulates entrained by the rising gases.



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## INTERNATIONAL SEARCH REPORT

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(7) : F26 B 17/12 US CL : 34/168, 172, 174, 181; 432/95, 96 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 34/168, 172, 174, 181; 432/95, 96 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,875,919 (DESARO ET AL) 24 OCTOBER 1989, SEE ENTIRE DOCUMENT.	1, 10-12, 19, 28, 29, 31
Y	US 4,289,481 (YANO) 15 SEPTEMBER 1981, FIGURE 1.	10-12, 25-27
Y	US 5,125,943 (COLE) 30 JUNE 1992, COLUMNS 3-5.	25-27
Y	US 4,256,451 (JOHNSON JR.) 17 MARCH 1981, COLUMN 4.	29
Y	FR 1,151,535 (AKTIENGESELLSCHAFT) 31 JANUARY 1958, FIGURE 1.	1, 19, 28, 31
<input type="checkbox"/> Further documents are listed in the continuation of Box C.		<input type="checkbox"/> See patent family annex.
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