



(19)

Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 0 822 339 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
17.06.1998 Bulletin 1998/25

(51) Int Cl. 6: F04F 9/00

(43) Date of publication A2:
04.02.1998 Bulletin 1998/06

(21) Application number: 97305756.5

(22) Date of filing: 31.07.1997

(84) Designated Contracting States:
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE

• Sakhtah, Mohamad
Maiden, Massachusetts (US)

(30) Priority: 31.07.1996 US 690098

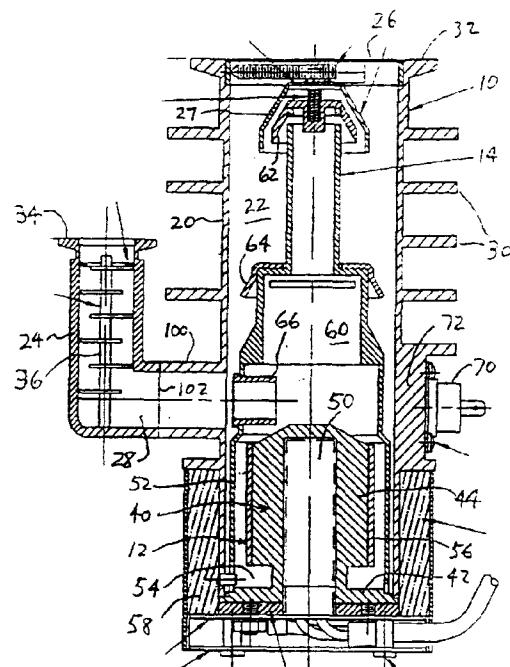
(74) Representative: Cline, Roger Ledlie et al
EDWARD EVANS & CO.
Chancery House
53-64 Chancery Lane
London WC2A 1SD (GB)

(71) Applicant: VARIAN ASSOCIATES, INC.
Palo Alto, California 94304 (US)

(72) Inventors:
• Nuzzi, Frank
Lawrence, Massachusetts (US)

(54) Vapor jet vacuum pump and method of manufacture

(57) A vapor jet vacuum pump includes a pump housing, a boiler sealed to the pump housing and a jet assembly mounted within the pump housing. The pump housing is a low porosity metal casting and has an inlet and a foreline. The boiler includes a boiler housing defining a reservoir for a liquid, and a heater for vaporizing the liquid to form a vapor. The jet assembly directs a vapor jet toward the housing. In a preferred embodiment, the boiler housing is a low porosity metal casting. A method for making the pump housing includes the steps of casting two or more low porosity housing blanks, machining the housing blanks to provide finished housing elements and attaching the finished housing elements together to form the pump housing.





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 30 5756

DOCUMENTS CONSIDERED TO BE RELEVANT							
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)				
A	FR 2 074 749 A (MERLIN GERIN) 8 October 1971 * page 2, line 28 - page 3, line 15; figure * ---	1,10-12, 19	F04F9/00				
A	DATABASE WPI Week 9031 Derwent Publications Ltd., London, GB; AN 90-237255 XP002063472 & SU 1 516 629 A (PUTILOVSKII) , 23 October 1989 * abstract * -----	12,19					
<table border="1"> <tr> <td colspan="2">TECHNICAL FIELDS SEARCHED (Int.Cl.6)</td> </tr> <tr> <td colspan="2">F04F B22D</td> </tr> </table>				TECHNICAL FIELDS SEARCHED (Int.Cl.6)		F04F B22D	
TECHNICAL FIELDS SEARCHED (Int.Cl.6)							
F04F B22D							
<p>The present search report has been drawn up for all claims</p>							
Place of search	Date of completion of the search		Examiner				
THE HAGUE	27 April 1998		Ernst, R				
CATEGORY OF CITED DOCUMENTS							
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document					