



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 0 992 736 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
21.03.2001 Bulletin 2001/12

(51) Int. Cl.⁷: **F17C 13/04**

(43) Date of publication A2:
12.04.2000 Bulletin 2000/15

(21) Application number: **99307535.7**

(22) Date of filing: **23.09.1999**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **24.09.1998 GB 9820701**

(71) Applicant: **Gogas (UK) PLC**
Stockport, SK3 0AJ (GB)

(72) Inventors:
• **Oakes, Malcolm Campbell**
Macclesfield, Cheshire SK10 4TW (GB)
• **Burgess, John James**
Crewe, Cheshire CW2 7UQ (GB)

(74) Representative:
Downey, William Gerrard et al
Wilson, Gunn, M'Caw,
41-51 Royal Exchange,
Cross Street
Manchester M2 7BD (GB)

(54) **An adapter for releasably attaching a cartridge to an appliance**

(57) An adapter for use with a gas cartridge comprises a housing having two interengageable parts (12, 14) to enable the housing to be opened and closed about a gas cartridge (26). The upper part (12) incorporates a piercing pin (16), spring loaded sealing piston (17), valve (20), and screwthread (24) to allow an appliance to be fixed thereto. On engaging the parts about a gas cartridge, the sealing piston (17) seals on the surface and the pin (16) pierces the cartridge. Flow of gas from the cartridge is controlled by the valve (20). The adapter enables appliances to be removed from a pierceable cartridge after piercing and to be used with both pierceable and valved cartridges.

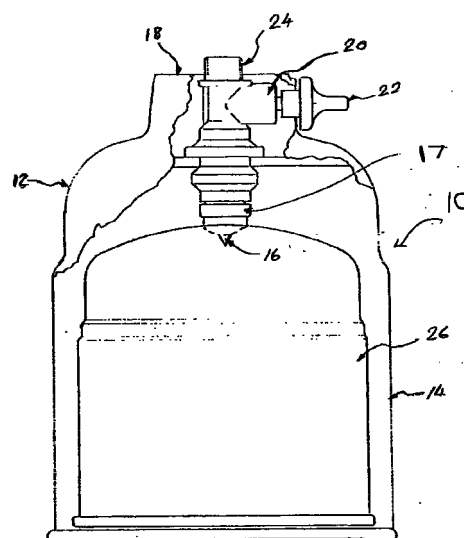


FIG. 2.

EP 0 992 736 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 30 7535

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.7)
Y	US 3 907 490 A (SCHALLER PIERRE ANDRE) 23 September 1975 (1975-09-23) * column 1, line 10 - line 17; claims; figures * * column 1, line 34 - line 38 * * column 3, line 26 - line 34 *	1-7	F17C13/04
Y	US 4 043 744 A (SVENSSON KARL ERNST) 23 August 1977 (1977-08-23) * column 1, line 4 - line 17; claims; figures * * column 2, line 50 - line 65 *	1-7	
A	US 4 461 271 A (JUANG BOR L) 24 July 1984 (1984-07-24) * column 2, line 53 - line 57; claims; figures * * column 3, line 7 - line 17 *	1-7	
A	FR 1 133 075 A (DESSINS, ÉTUDES, OUTILLAGE MÉCANIQUE (D.E.O.M.) S.A.) 20 March 1957 (1957-03-20) * page 1, column 1, paragraph 4; claims; figures * * page 1, column 2, paragraph 3 * * page 2, column 2, paragraph 2 * * page 3, column 1, paragraph 2 *	1-7	TECHNICAL FIELDS SEARCHED (Int.Cl.7) F17C F24C
A	US 4 105 013 A (VACHE MARCEL) 8 August 1978 (1978-08-08) * column 3, line 52 - column 4, line 4; claims; figures *	1-7	
A	FR 1 295 539 A (SOCIÉTÉ D'APPLICATION DES GAZ, PRODUITS ROUTIERS ET MATÉRIAUX) 31 October 1962 (1962-10-31) * the whole document *	1-7	
		-/--	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26 January 2001	Examiner Lapeyrere, J
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	

EPO FORM 1503 03 82 (P04C01)



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 30 7535

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.7)
A	US 4 082 993 A (OAKES MALCOLM CAMPBELL) 4 April 1978 (1978-04-04) * column 1, line 50 - line 65; claims; figures * * column 2, line 21 - line 27 * -----	1-7	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26 January 2001	Examiner Lapeyrere, J
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			

EPO FORM 1503 03 82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 30 7535

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

26-01-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3907490 A	23-09-1975	FR 2208087 A	21-06-1974
		DE 2359380 A	06-06-1974
		GB 1445459 A	11-08-1976
		HK 49481 A	23-10-1981
		IT 1006653 B	20-10-1976
US 4043744 A	23-08-1977	SE 389964 B	29-11-1976
		FR 2283651 A	02-04-1976
		SE 7411187 A	05-03-1976
US 4461271 A	24-07-1984	NONE	
FR 1133075 A	20-03-1957	NONE	
US 4105013 A	08-08-1978	FR 2325343 A	22-04-1977
		ES 451782 A	16-08-1977
		GB 1561105 A	13-02-1980
		IT 1068528 B	21-03-1985
FR 1295539 A	31-10-1962	NONE	
US 4082993 A	04-04-1978	GB 1551243 A	30-08-1979
		DE 2623711 A	09-12-1976
		DE 7616959 U	21-06-1979
		FR 2312709 A	24-12-1976
		IT 1061915 B	30-04-1983
		JP 51148577 A	20-12-1976
		NL 7605715 A	02-12-1976
		SE 7606080 A	01-12-1976