

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 1 371 895 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
19.07.2006 Bulletin 2006/29

(51) Int Cl.:
F17C 5/00 (2006.01)
F17C 6/00 (2006.01)

F17C 13/00 (2006.01)
F17C 13/02 (2006.01)

(43) Date of publication A2:
17.12.2003 Bulletin 2003/51

(21) Application number: 03384001.8

(22) Date of filing: 15.05.2003

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

(30) Priority: 16.05.2002 ES 200201113

(71) Applicant: SOCIEDAD ESPANOLA DE
CARBUROS METALICOS S.A.
08038 Barcelona (ES)

(72) Inventors:
• Saura Noguera, Pedro
08037 Barcelona (ES)
• Monge Sanz, Luis Alfonso
08015 Barcelona (ES)

(74) Representative: Ponti Sales, Adelaida et al
Consell de Cent, 322
08007 Barcelona (ES)

(54) Process and apparatus for filling bottles with gas

(57) Characterised in that the apparatus comprises a turner (1) on which the bottles (2,3,4) are placed, an actuator that causes the turner (1) to swivel, a pneumatic circuit that connects the aforesaid bottles (2,3,4) to a gas tank, pneumatic means (7 to 21) provided in said circuit for carrying out the venting, washing, vacuumising and filling operations, and control means that act on the ac-

tuator and on the pneumatic means (7 to 21) so as to permit automatic control of said operations. Filling of the bottles with gas is controlled by means of a mass flow meter. The gas can thus be dispensed into the bottles without removing them from the turner, thereby reducing the number of operations to be carried out for each bottle, and ensuring the quality of the bottled gas.

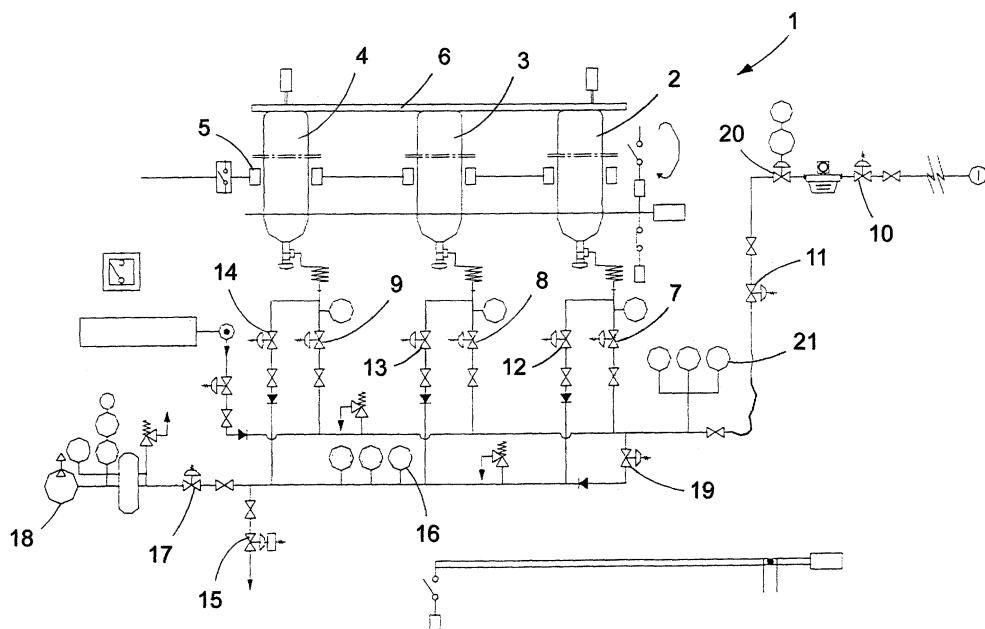


FIG. 1



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	FR 2 750 689 A (PROVENCAL D AUTOMATION ET DE) 9 January 1998 (1998-01-09) * the whole document * -----	1-17	INV. F17C5/00 F17C13/00 F17C6/00 F17C13/02
			TECHNICAL FIELDS SEARCHED (IPC)
			F17C
The present search report has been drawn up for all claims			
3	Place of search	Date of completion of the search	Examiner
	Munich	8 June 2006	Nicol, B
CATEGORY OF CITED DOCUMENTS		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	
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			

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

EP 03 38 4001

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.

08-06-2006

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 2750689	A 09-01-1998	NONE	