(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 26 January 2006 (26.01.2006)

(51) International Patent Classification:

F16K 25/00 (2006.01)

(21) International Application Number:

PCT/US2005/024338

(22) International Filing Date: 8 July 2005 (08.07.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/586,935 8 July 2004 (08.07.2004) US 11/178,227 7 July 2005 (07.07.2005) US

- (71) Applicant and
- (72) Inventor: BRENES, Arthur, J. [US/US]; c/o High Vacuum Apparatus, 12880 Moya Blvd., Reno, Nevada 89506 (US).
- (74) Agents: BREZNER, David, J. et al.; DORSEY & WHIT-NEY LLP, Suite 1000, 555 California Street, San Francisco, California 94104 (US).

(10) International Publication Number $WO\ 2006/010035\ A3$

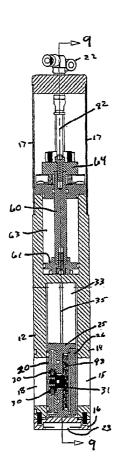
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

[Continued on next page]

(54) Title: GATE VALVE WITH FIRST AND SECOND ACUTUATORS



(57) Abstract: A gate valve includes a housing, a gate support positioned within the housing, a gate connected to the gate support, and first and second actuators that control movement of the gate support and gate. The housing defines a valve chamber having first and second aligned openings for passage of air between first and second housing side walls. The gate support is reciprocable between a first support position remote from said openings and a second support position between said openings. The gate is transversely reciprocable between a first gate position spaced from said openings and a second gate position sealing off the first opening. The actuators move the gate support between first and second support positions and move the gate between first and second gate positions. The gate support is spaced apart from the second side wall of the housing when the gate is in the first and second gate positions.

WO 2006/010035 A3



 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

23 November 2006

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/24338

A. CLAS	SIFICATION OF SUBJECT MATTER F16K 25/00(2006.01)		
USPC: 251/175,187,193 According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
Minimum documentation searched (classification system followed by classification symbols) U.S.: 251/175,187,193,326			
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)			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where a	ppropriate, of the relevant passages	Relevant to claim No.
X	US 4,157,169 A (NORMAN) 05 June 1979 (05.06.1979), figures 1-4.		1-2, 4-9, 12-15
Y			3, 10-11, 16-20
Y	US 4,647,005 A (HUNTER) 03 March 1987 (03.03.1987), column 2, lines 3-13.		3, 16-20
Y	US 5,975,492 A (BRENES) 02 November 1999 (02.	11.1999), figures 4-6.	10-11
Further	documents are listed in the continuation of Box C.	See patent family annex.	-
* Special categories of cited documents:		"T" later document published after the intern	
"A" document particular	defining the general state of the art which is not considered to be of relevance	date and not in conflict with the applicat principle or theory underlying the invent	
"E" earlier app	. plication or patent published on or after the international filing date	"X" document of particular relevance; the cl considered novel or cannot be considered when the document is taken alone	
	which may throw doubts on priority claim(s) or which is cited to the publication date of another citation or other special reason (as	"Y" document of particular relevance; the cl considered to involve an inventive step with one or more other such documents,	when the document is combined
"O" document	referring to an oral disclosure, use, exhibition or other means	obvious to a person skilled in the art	
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent family	
Date of the actual completion of the international search		Date of mailing of the international search report	
03 August 2006 (03.08.2006)		21 SEP 2006	
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer John Bastianelli Telephone No. (571) 272-3700	
	`		

Form PCT/ISA/210 (second sheet) (April 2005)