

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
15 January 2009 (15.01.2009)

PCT

(10) International Publication Number
WO 2009/008002 A3

(51) International Patent Classification:

F16K 1/00 (2006.01) *E03C 1/00* (2006.01)

(21) International Application Number:

PCT/IN2008/000290

(22) International Filing Date: 9 May 2008 (09.05.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

896/MUM/2007 10 May 2007 (10.05.2007) IN

(71) Applicant and

(72) Inventor: **VISHNUPANT, Rashingkar Laxmikant**
[IN/IN]; D-12, Ashirwad Apartments, S.No.9, Kothrud,
Pune 411 038 (IN).

(74) Agent: **DEWAN, Mohan; R.K. Dewan & Company,**
Trade Marks & Patent Attorneys, Podar Chambers, S.A.
Brelvi Road, Fort, Mumbai 400 001 (IN).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE,
EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID,
IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC,
LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN,
MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV,
SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL,
NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG,
CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- as to the applicant's entitlement to claim the priority of the
earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

Published:

- with international search report

[Continued on next page]

(54) Title: A LIQUID SAVING FLOW CONTROL DEVICE

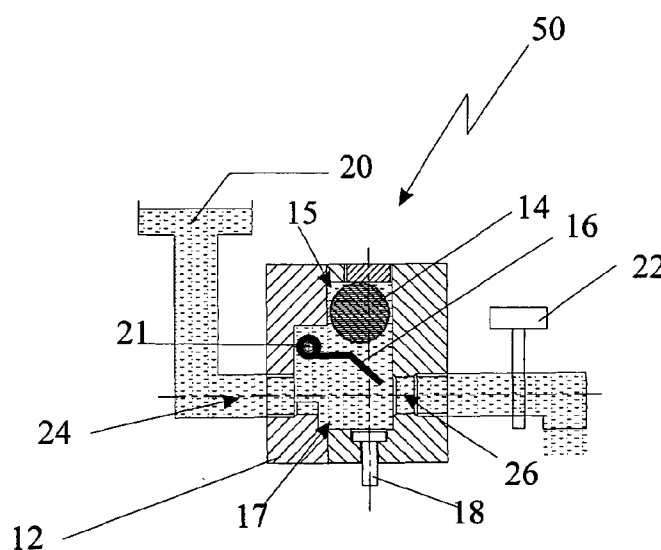


FIGURE - 1

(57) Abstract: A liquid saving flow control device (50) for use in a system having liquid stored in an elevated tank (20), comprises: a valve (12), a floating element (14), a restrainer (16), and an ejector means (18). The valve (12) includes a chamber defined by an upper portion (15) and a lower portion (17). The floating element (14) is adapted to be displaced between an inoperative configuration in which the floating element is located in the upper portion (15) and an operative configuration in which the floating element engages an egress means (26) to block egress of liquid through said chamber. The ejector means (18) can disengage the floating element (14) from the egress means (26) manually to reset the control device (50).

WO 2009/008002 A3



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

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

2 April 2009

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IN2008/000290

A. CLASSIFICATION OF SUBJECT MATTER

See extra sheet

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)

IPC: E03C1/00,E03C1/02,E03C1/23,E03C1/22,E03D1/33,E03D1/30,F16K1/00,F16K1/14,F16K5/06, F16K5/00,F16K5/14, F16K11/00,F16K13/00, F16K17/00,F16K21/04,F16K33/00

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)

WP,LEPODOC,PAJ,CPRS (2D060/BC09 OR 2D060/BC23)/FT, float+,valve,saving,leaking,close,disengag+,restrain+,spring,water

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 2038182 U (REN,Zhonghui et al) 24 May 1989 (24.05.1989) see the whole document	1-16
A	CN 2349425 Y (BAI,Hengyuan) 17 Nov.1999 (17.11.1999) see the whole document	1-16
A	CN 2057981 U (CHEN,Xiaoping) 06 Jun. 1990 (06.06.1990) see the whole document	1-16
A	CN 2168129 Y (QIN,Mingde et al) 08 Jun.1994 (08.06.1994) see the whole document	1-16

☐ 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 international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim (S) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 31 Dec.2008 (31.12.2008)	Date of mailing of the international search report 22 Jan. 2009 (22.01.2009)
Name and mailing address of the ISA/CN The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. 86-10-62019451	Authorized officer SUN,Lanxiang Telephone No. (86-10)62085064

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/IN2008/000290

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN 2038182 U	24.05.1989	None	
CN 2349425 Y	17.11.1999	None	
CN 2057981 U	06.06.1990	None	
CN 2168129 Y	08.06.1994	None	

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IN2008/000290

CLASSIFICATION OF SUBJECT MATTER

F16K1/00 (2006.01) i

E03C1/00 (2006.01) i