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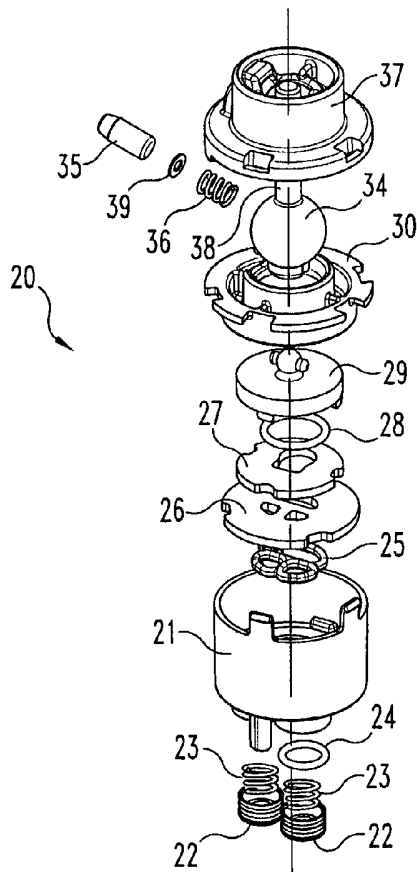
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[Continued on next page]

(54) Title: FLUID CONTROL VALVE



(57) Abstract: A fluid control valve for the mixing of hot and cold water and delivery at a selected flow rate is described wherein an upper housing and lower housing are clamped together by a snap-fit connection thereby enclosing other fluid control valve component parts. A ball stem is manually movable in two separate and independent directions of motion. There is frictional loading on the ball stem such that movement in one direction to control the water temperature has a frictional loading that is higher than the frictional loading in the other direction to control the flow rate. A spring-biased guide pin is used to increase the frictional loading in the one direction.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/25124

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **F16K 11/078(2006.01)**

USPC: 137/625.4

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. : 137/625.4, 625.41, 625.17, 636.2, 636.3; 251/297

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)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, E --- Y, E	US 6,920,899 B2 (HAENLEIN ET AL.) 26 July 2005, see entire document.	17-21,24,46,47,58-62,72,75-78,84-87 ----- 17-21,24,26-32,35,36,38-47,55,56,58-62,64-87
X --- Y Y	US 5,100,565 A (FUJIWARA ET AL.) 31 March 1992, see entire document.	79-81 ----- 17-21,24,26-32,35,36,38-47,55,56,58-62,64-87
	US 4,554,943 A (CLANEY ET AL.) 26 November 1985, see entire document.	17-21,24,26-32,35,36,38-47,55,56,58-62,64-87

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"O" document referring to an oral disclosure, use, exhibition or other means		
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C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,517,006 B1 (KNAPP) 11 February 2003, see entire document.	17-21,24,26-32,35,36,38-
Y	US 5,171,136 A (PACHT) 15 December 1992, see entire document.	47,55,56,58-62,64-87
A	US 3,667,503 A (FARRELL ET AL.) 06 June 1972, see entire document.	17-21,24,26-32,35,36,38-
A	US 3,543,799 A (HAYMAN) 01 December 1970, see entire document.	47,55,56,58-62,64-87