A FLUID METERING SYSTEM FOR PREVENTING FLOOD DAMAGE OR FLUID LEAKAGE

A household fluid flow-rate monitor and control system is provided to prevent flood damage, fluid leakage and loss of fluid. The system includes a plurality of alarm units (EFM 2) for monitoring fluid flow in the system; an automatic electrically operated valve (SOLENOID O/P) for shutting off the fluid flow to prevent damage; a fluid meter (30) for sending to a monitor an electrical signal for every unit of fluid flowing through the system; and a controller unit including a microprocessor unit (MICRO PROCESSOR) and a memory unit connected to the automatic valve to shut off the system. The monitor receives input from the fluid meter or from a flood sensor and sends alarm signals (BUZZER, LED & BUTTON) for several types of events, such as burst flow, leakage, flood, etc., to the controller unit. The unit also has a manual override switch to bypass the electronics.
International application No.
PCT/US03/11694

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : G08B 21/00
US CL : 340/603, 605, 606
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. : 340/603, 605, 606, 870.16, 539.1; 137/1, 78.1

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

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 5,913,236 A (WOIDESAVSKY) 15 June 1999, figures 1 and 6, column 8, lines 30-38.</td>
<td>10, 12-17</td>
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<td></td>
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<td>1-9, 11</td>
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<tr>
<td>Y</td>
<td>US 5,920,265 A (JOHNSON, Jr. et al) 06 July 1999, fig. 1-2, col. 4, lines 40-45.</td>
<td>11, 8</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C. See patent family annex.

- *A* document defining the general state of the art which is not considered to be of particular relevance
- **X** 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
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- "E" document member of the same patent family

Date of the actual completion of the international search: 24 November 2003 (24.11.2003)
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