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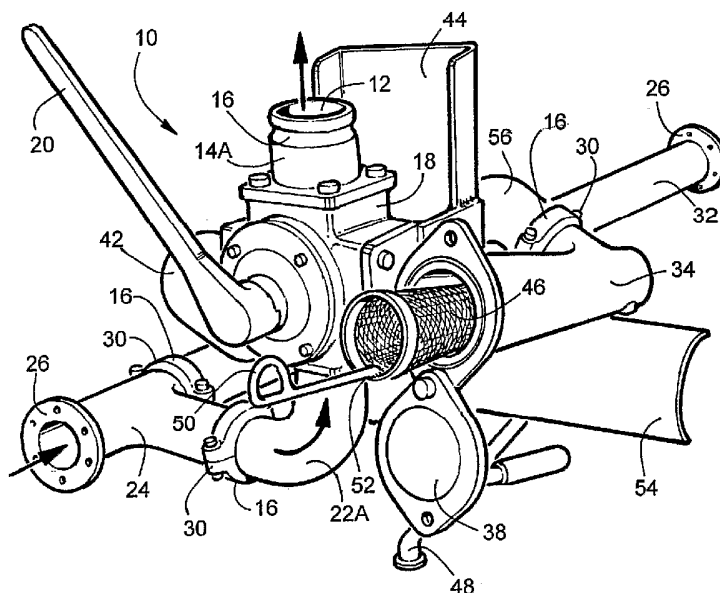
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(54) Title: MANUAL BULK LIQUID PUMP CONTROL AND DISTRIBUTION SYSTEM



(57) Abstract: The present invention is directed to a manual bulk liquid pump control and distribution system (10) that utilizes a single-handle manual formation for direction of flow and speed, along with providing a neutral position for standby. The system can be operated at a rate of 0 to 250 gallons per minute and be reversed with a single motion of the operating handle. The pump operates in one direction at a fixed RPM, resulting in longer pump life and safer operation. For added safety, the system utilizes the pump's relief valve for both discharge and suction operation. It has the ability of sucking the liquid out of the lines and hoses after each transfer operation. This system has an aluminum flow-reversing valve or two-way valve (18) at the center of the design. This valve allows the flow of the product to be precisely controlled in either direction, along with the flow rate and pressure.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/25363

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC: **B65B 1/04( 2006.01)**

USPC: 141/231

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. : 141/231,301,302,286,192,98; 417/231; 137/205

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)  
manual bulk liquid pump control and distribution system; mixing kneader; flow control valve with venturi

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,544,010 A (JURDYC) 01 December 1970, see entire document.	
A	US 2,800,365 A (HODGES) 23 July 1957, see entire document.	
A	US 3,677,284 A (MENDEZ) 18 July 1972, see entire document.	
A	US 3,971,400 A (THOMPSON) 27 July 1976, see entire document.	
A	US 6,499,670 B1 (BROWN ET AL.) 31 December 2002, see entire document.	
A, E	US 6,945,288 B1 (BRAKEFIELD ET AL.) 20 September 2005, see entire document.	

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	Symbol
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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