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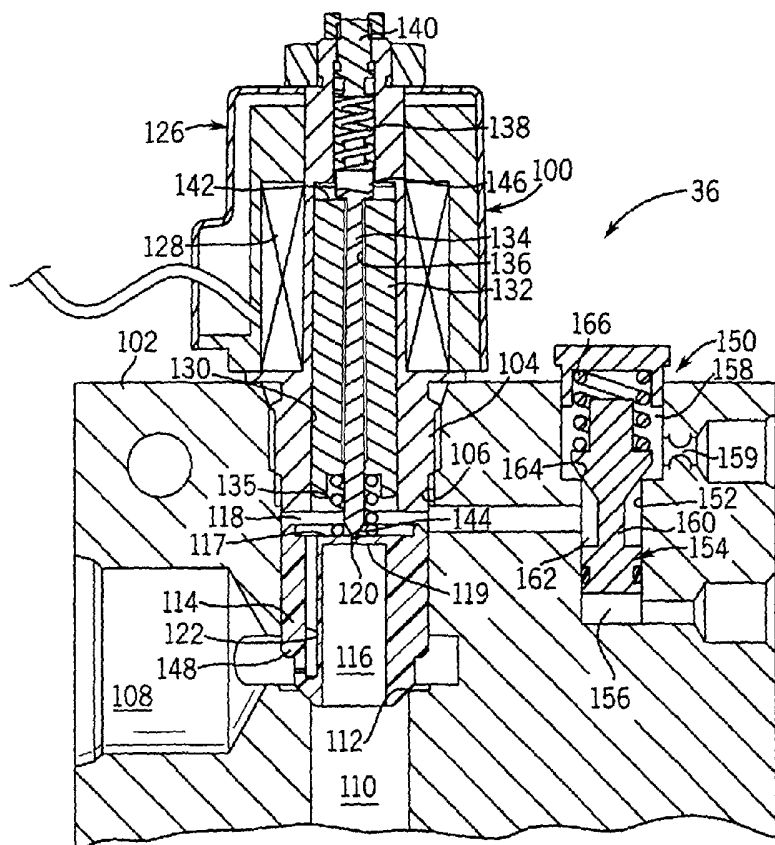
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(54) Title: PILOT SOLENOID CONTROL VALVE WITH AN EMERGENCY OPERATOR



(57) Abstract: A discharge valve (150) is provided to open an electrically controlled pilot valve (100) in emergency situations such as during an electrical or hydraulic failure. The discharge valve has a poppet (154) that operates in response to a pressurized control signal, which may be produced by a hand operated pump (154). When the poppet opens in response to the control signal, a path is established for fluid to flow from a control chamber (118) of the pilot valve, thereby opening the latter valve.



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INTERNATIONAL SEARCH REPORT

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PCT/US 01/23383

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 F15B13/01 F15B20/00

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 7 F15B

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 practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 159 872 A (PETERS BERND ET AL) 3 November 1992 (1992-11-03) column 2, line 10-40 column 4, line 33-64; figure 1 ---	1, 11, 15
A	US 4 848 721 A (CHUDAKOV STANISLAV) 18 July 1989 (1989-07-18) column 5, line 10 -column 7, line 45; figure 1 ---	1, 11, 15
A	US 4 017 053 A (MUCHOW JOHN D ET AL) 12 April 1977 (1977-04-12) abstract column 3, line 60 -column 6, line 51; figure 1 --- -/--	1, 11, 15

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Patent family members are listed in annex.

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International Application No

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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.
A	PATENT ABSTRACTS OF JAPAN vol. 010, no. 044 (M-455), 21 February 1986 (1986-02-21) & JP 60 196476 A (KOMATSU SEISAKUSHO KK), 4 October 1985 (1985-10-04) abstract -----	1,11,15

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Information on patent family members

International Application No

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