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(54) Title: ELECTRONIC PRESSURE REGULATOR

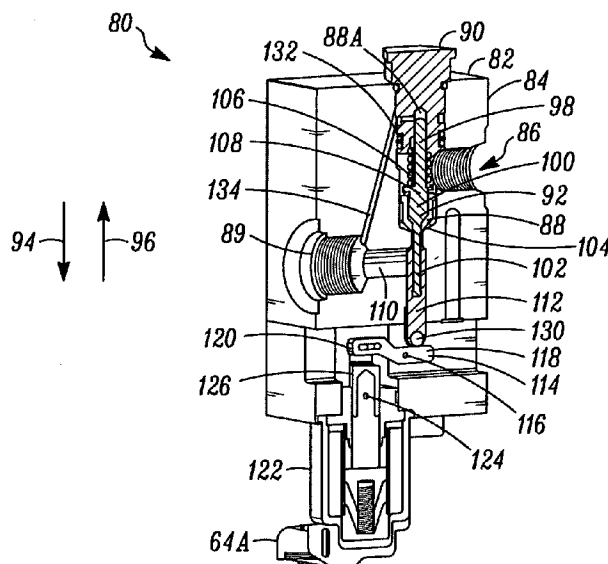


FIG. 3

(57) Abstract: A pressure regulator includes a valve, mechanical advantage device, actuator, controller and pressure sensor. The valve is disposed between an inlet port and an outlet port. The valve includes a pintle and seat. An actuator is provided to move the pintle away from the seat to allow the flow of gas from the inlet port to the outlet port and a pintle return spring is provided to bias the pintle towards seat. The actuator is configured to move the pintle in response to the magnitude of a control signal. A control system is provided to receive a gas pressure signal from a pressure transducer at the outlet port which detects the gas pressure at the outlet port and generate a control signal having a magnitude proportional to the detected gas pressure.



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B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) IPC and ECLA: F16K 17/all, F16K 31/all, F17C 13/all, G05D 16/all, B60K 15/all		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used) Epoque (EPODOC), Total Patent, Canadian Patents Database Keywords: single stage, pressure regulator, pressure reducing valve, actuator, rotary, cam, lever, pin, tapered slider, solenoid, electromag+, pressure sensor, natural gas, tank		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6955160 B1 (KONOPACKI, J.M. et al.) 18 October 2005 (18-10-2005) - The whole document -	1-7, 10-13
Y	US 6422256 B1 (BALAZY, R.D. et al.) 23 July 2002 (23-07-2002) - The whole document -	1-7, 10-13
A	US 7353834 B2 (CHILDERS, R.E.) 08 April 2008 (08-04-2008) - Figure 1; col. 6, lines 49 to 52 -	1
A	US 6131552 A (PAIELLI, P.M. et al.) 17 October 2000 (17-10-2000) - Figure 7 -	1
A	US 4268009 A (ALLEN, W., Jr.) 19 May 1981 (19-05-1981) - The whole document -	1
A	US 4413607 A (BATCHELOR, W.H. et al.) 08 November 1983 (08-11-1983) - The whole document -	1
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
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Information on patent family members

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Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
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