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[Continued on next page]

(54) Title: FORCE MULTIPLYING SOLENOID VALVE

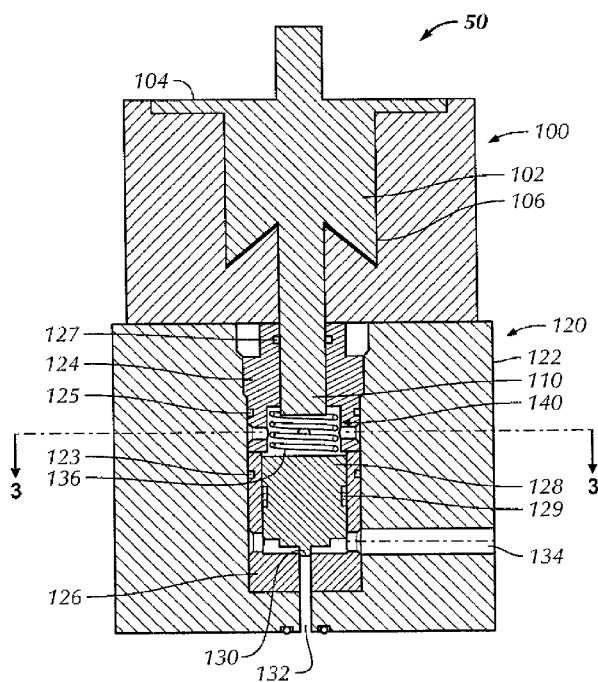


FIG. 2A

(57) Abstract: A solenoid actuated valve assembly includes a valve body (122) comprising a fluid inlet (132) and fluid outlet (134), a valve member (128) disposed within the valve body, wherein a position of the valve member controls a fluid flow between the fluid inlet and fluid outlet, and a fluid chamber (140) above the valve member, wherein the fluid chamber is fluidly isolated from the fluid inlet and outlet. The solenoid actuated valve assembly further includes a solenoid actuator coupled to the valve body comprising a solenoid plunger (102) proximate the fluid chamber, wherein a force multiplying ratio of a surface area of the valve member exposed to the fluid chamber to a surface area of the solenoid plunger exposed to the fluid chamber is at least 1.5:1.

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