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(54) **ELECTRICALLY ACTUATED VARIABLE PRESSURE CONTROL SYSTEM**

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See application file for complete search history.

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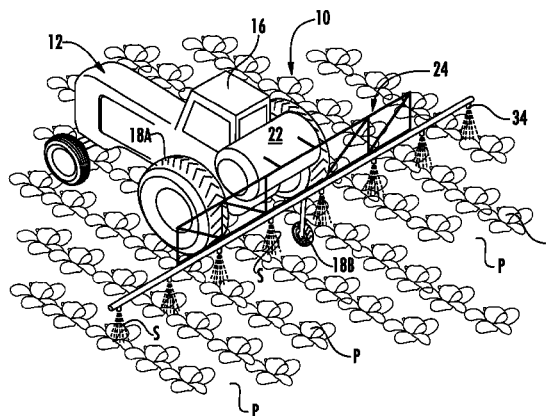
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(57) **ABSTRACT**

An electrically-actuated variable pressure control system for use with flow-controlled liquid application systems. Direct acting solenoid valves are pulsed at varying frequencies and duty cycles to change the resistance to flow encountered by the flow-controlled liquid application system. This pulsing solenoid valve technique preserves a high degree of accuracy and uniformity through a wide range of pressure control. This wide range of pressure control indirectly allows the flow-controlled liquid application system to operate over a wider range of flow control, yielding indirect benefits to performance and productivity. When the solenoid valves are attached to pressure-atomization spray nozzles, control over spray pattern and droplet size is further achieved.

**22 Claims, 8 Drawing Sheets**



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