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(54) **Title:** MEASUREMENT SYSTEM

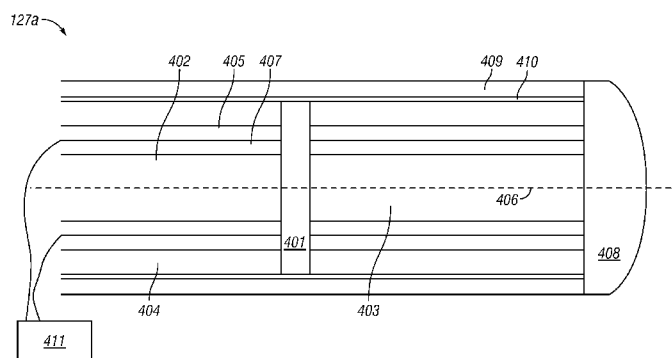


FIG. 4

(57) **Abstract:** A system for determining the location of a piston within an accumulator is provided in which a short circuit is created between elements in the accumulator and the piston which is movable within the accumulator. As the piston moves along the longitudinal axis of the accumulator, the circuit's electrical characteristics (e.g., voltage, resistance, current) vary in accordance with the length of the circuit. Measurement of these electrical characteristics allows for precise determination of the piston location relative to the accumulator. In a commercial embodiment, the invention can be utilized to determine fluid volumes in an accumulator by monitoring the location of the piston. This invention overcomes prior art systems because, *inter alia*, it does not require electrical sensory equipment, enables remote monitoring, maintains system integrity and functions irrespective of container wall thickness.

