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(54) Title: ACOUSTIC FLOW SENSOR FOR CONTINUOUS MEDICATION FLOW MEASUREMENTS AND FEEDBACK CONTROL OF INFUSION

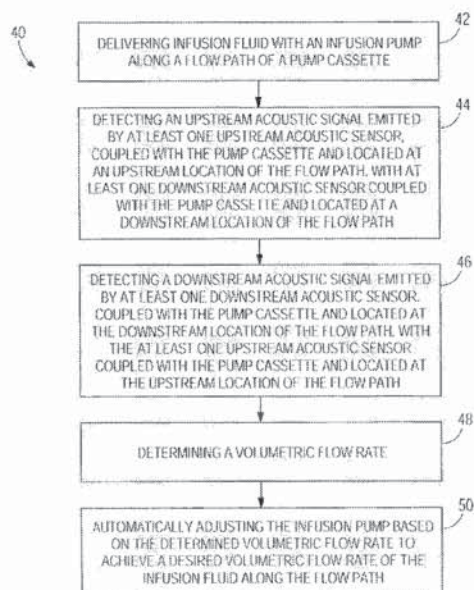


FIG. 6A

(57) Abstract: An infusion system determines a volumetric flow rate of infusion fluid delivered by an infusion pump along a flow path based on: an upstream acoustic signal emitted by at least one upstream acoustic sensor and detected by at least one downstream acoustic sensor; a downstream acoustic signal emitted by the downstream acoustic signal and detected by the upstream acoustic sensor; and a phase delay between the upstream acoustic signal and the downstream acoustic signal either upstream or downstream. The infusion system automatically adjusts the infusion pump based on the determined volumetric flow rate to achieve a desired volumetric flow rate of the infusion fluid along the flow path.

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