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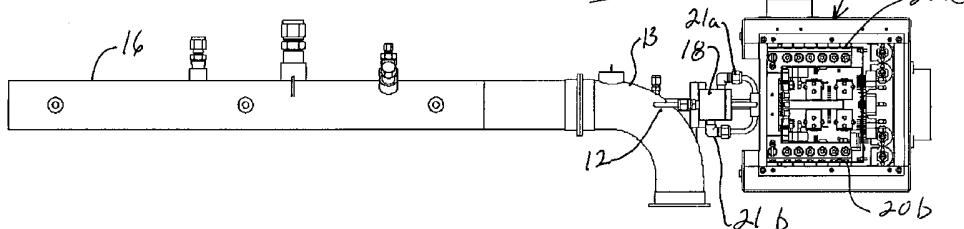
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(54) Title: FAST OPERATING DILUTION FLOW CONTROL SYSTEM AND METHOD FOR SAMPLING EXHAUST ANALYSIS



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(57) Abstract: A method and apparatus for proportional sampling of particulate material present in the exhaust gas emitted from an engine, in order to measure the mass of particulate material present in the exhaust gas, utilizes a mixing chamber for mixing a portion of the exhaust gas with a dilution gas. A flow control controls the flow rate of the portion of the exhaust gas as a function of exhaust gas flow by activating individual ones of a parallel array of solenoid valves, each defining a flow restriction.