

[54] **LIQUID SAMPLING SYSTEM**

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[58] **Field of Search** 73/863.81, 863.86, 864.34, 73/864.35

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[57] **ABSTRACT**

A conduit extends from a reservoir through a sampling station and back to the reservoir in a closed loop. A jet ejector in the conduit establishes suction for withdrawing liquid from the reservoir. The conduit has a self-healing septum therein upstream of the jet ejector for receiving one end of a double-ended cannula, the other end of which is received in a serum bottle for sample collection. Gas is introduced into the conduit at a gas bleed between the sample collection bottle and the reservoir. The jet ejector evacuates gas from the conduit and the bottle and aspirates a column of liquid from the reservoir at a high rate. When the withdrawn liquid reaches the jet ejector the rate of flow therethrough reduces substantially and the gas bleed increases the pressure in the conduit for driving liquid into the sample bottle, the gas bleed forming a column of gas behind the withdrawn liquid column and interrupting the withdrawal of liquid from the reservoir. In the case of hazardous and toxic liquids, the sample bottle and the jet ejector may be isolated from the reservoir and may be further isolated from a control station containing remote manipulation means for the sample bottle and control valves for the jet ejector and gas bleed.

18 Claims, 5 Drawing Figures

