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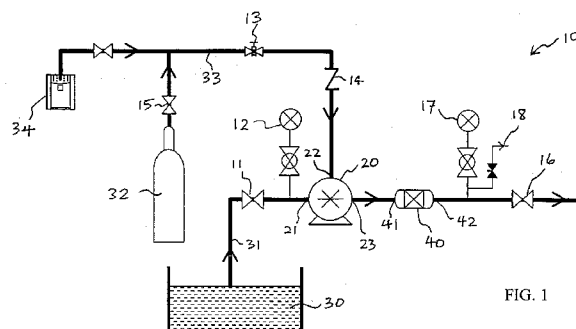


FIG. 1

(57) Abstract: A microbubble generator comprising a pump configured to mix a liquid and a gas to form a pressurized gas-liquid mixture therein; a contact chamber in fluid connection with the pump and configured to enhance dissolution of the gas in the pressurized gas-liquid mixture therein; and a valve in fluid connection with the contact chamber and configured to discharge a microbubble emulsion comprising the liquid and microbubbles of the gas.