

# United States Patent [19]

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Harpman et al.

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[54] HOT FUEL GAS GENERATOR

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R, 25 P, 34 A

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[57]

ABSTRACT

A hot fuel gas generator for an internal combustion engine simultaneously vaporizes gasoline and water in a multi-chambered heated pressure vessel having built in regulators for controlling pressure and volume and delivers the resulting superheated steam and gaseous fuel to the internal combustion engine downstream from the usual carburetor. A single device operating at a very high temperature, for example 1600° F., is used for the simultaneous vaporization of the fuel and water to develop desirable working pressure and volume. The high temperature steam and gaseous fuel positions the fuel molecules at the greatest degree of separation from each other providing the greatest opportunity for contact of the oxygen, the reacting species in the gaseous condition as chemical reactions occur only between particles at the atomic or molecular level and it is necessary for the reacting species to be in actual contact at the time of reaction. The hot fuel gas produced therefore enables complete combustion and the elimination of the atmospheric pollutants common in the operation of internal combustion engines and increases the energy obtained from the fuel.

7 Claims, 3 Drawing Figures

