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**(54) Title:** METHOD OF DETECTING A PROPELLANT GAS

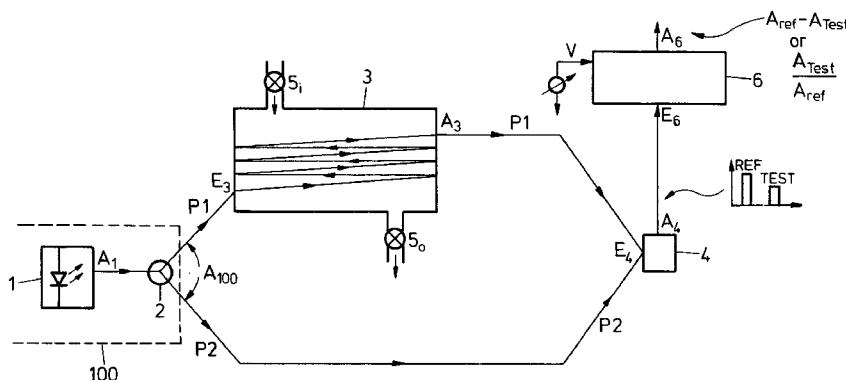


FIG. 4

**(57) Abstract:** The invention relates to a method and a system for detecting the presence of propellant gas in a gaseous sample exploiting laser light especially in the 3.30-3.5  $\mu\text{m}$  range. The propellant can be propane, n-butane, i- butane, dimethyl ether, methyl ethyl ether, HFA 134a, HFA 227, or any other propellant exhibiting absorption in the requisite wavelength range. The presence of said propellant is detected by comparing the amplitude of test light pulses with the amplitude of reference light pulses. The invention further relates to an application of this method in leak testing of propellant-containing containers such as aerosols or fuel canisters, permitting high-speed, high accuracy leak detection capable of replacing existing testing methods.