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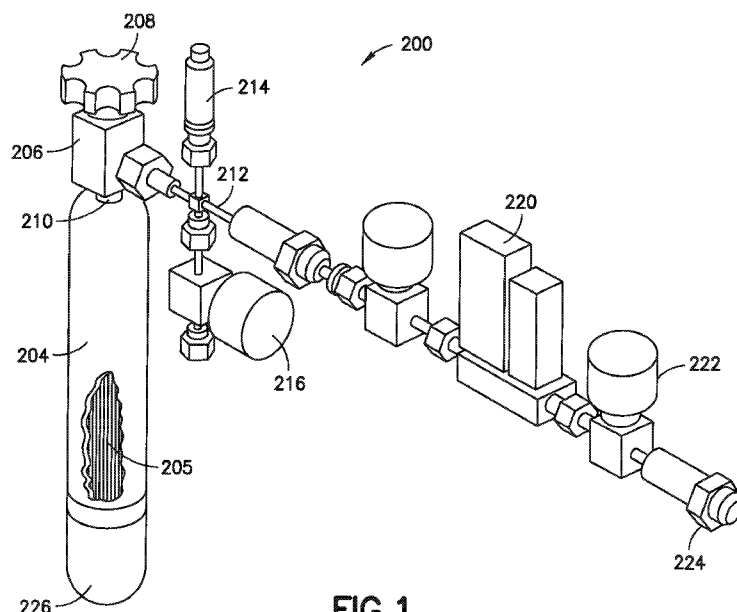
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- (54) Title: STORAGE AND STABILIZATION OF ACETYLENE

**FIG. 1**

(57) **Abstract:** A carbon adsorbent adapted for adsorptive storage and subsequent desorptive release of a decomposition-susceptible gas is described. Such carbon adsorbent comprises porosity in which mesopore volume is less than 0.25 cm³/gm of carbon adsorbent, in which the porosity comprises at least 80% by volume micropores, and at least 65% by volume of the micropores have pore diameter in a range of from 0.3 to 0.72 nm. The carbon adsorbent has a nitrogen adsorption BET surface area greater than 800 m²/g of carbon adsorbent, measured at 77°K, and a bulk density that is greater than 0.55 g/cc of carbon adsorbent. The carbon adsorbent can be utilized in gas storage and dispensing packages of varying type, to provide a safe and reliable source of decomposition-susceptible gas, e.g., acetylene for applications such as gas welding/cutting applications, atomic absorption spectroscopy applications, chemical synthesis and microelectronic products manufacturing.



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