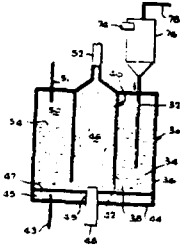


in the fluidized bed and bringing these coated particles into fuel elements or absorber elements. The cooling medium is solely gaseous and only the portion of the inlet tube for the nozzle tips of the gas inlet nozzles within the axis are cooled and the heat flow penetrating from outside is reduced by heat insulation. An apparatus for carrying out the process is also described.

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### FLUIDIZED COAL PYROLYSIS APPARATUS

Norman W. Green; assigned to Occidental Research Corporation



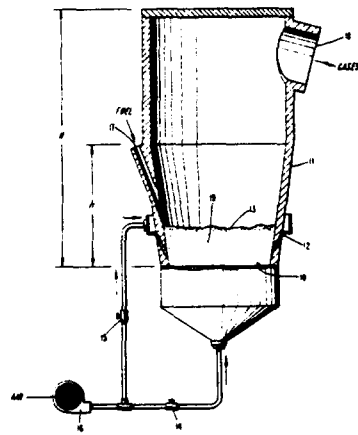
Method and apparatus for pyrolyzing agglomerative coals which comprises introducing a fluidized bed of hot char particles into a pyrolysis chamber or reactor, and injecting upwardly into the chamber a high velocity jet of agglomerative coal particles in a carrier gas, the fluidized hot char particles surrounding the high velocity coal jet and heating the coal particles to yield gaseous products and char. The hot char particles in the fluidized state and disposed around the coal jet are entrained in the upwardly expanding coal jet and mixed with the coal particles, so that by the time the coal particles contact the pyrolysis chamber wall, such coal particles being heated by the char have passed through the tacky state and are no longer tacky and so not adhere to the chamber wall. The gaseous products and char formed during pyrolysis are rapidly removed from the pyrolysis chamber, and such char can be separated, e.g. in a cyclone, reheated and introduced into the fluidized bed of char particles as a fresh

source of heat. The hot char particles from the fluidized bed which are entrained in the coal jet are removed from the pyrolysis chamber with the gaseous product, without any appreciable recirculation or mixing or mixing of such entrained char particles back into the fluidized char within the pyrolysis chamber.

4341515

### HIGH TURNDOWN RATIO FLUIDIZED BED REACTOR AND METHOD OF OPERATING THE REACTOR

Jako Korenberg; assigned to York-Shipley Inc.



A method of operating an adiabatic fluidized bed reactor, and an adiabatic fluidized bed reactor, including the step of providing pressurized air to an adiabatic fluidized bed reactor both through openings located in a support surface and through openings located in the reactor walls having outlets below the surface of the bed of granular material. The structure of the adiabatic fluidized bed reactor includes support surface air distribution nozzles extending through a support surface, reactor wall air distribution openings extending through the reactor walls having outlets below the surface of the bed of granular material, and separate control valves for controlling the flow of pressurized air to the support surface air