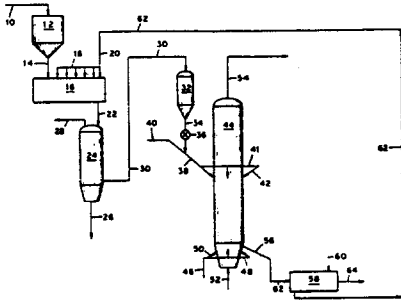


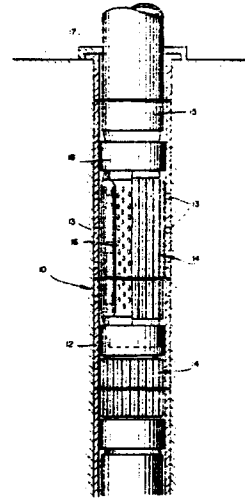
4432773

**FLUIDIZED BED CATALYTIC COAL GASIFICATION PROCESS**

Charles A Euker, Robert Wesselhoft, John J Dunkleman, Dolores C Aquino, Toby R Gouker



Coal or similar carbonaceous solids impregnated with gasification catalyst constituents (16) are oxidized by contact with a gas containing between 2 volume percent and 21 volume percent oxygen at a temperature between 50 degrees C. and 250 degrees C. in an oxidation zone (24) and the resultant oxidized, catalyst impregnated solids are then gasified in a fluidized bed gasification zone (44) at an elevated pressure. The oxidation of the catalyst impregnated solids under these conditions insures that the bed density in the fluidized bed gasification zone will be relatively high even though the solids are gasified at elevated pressure and temperature.

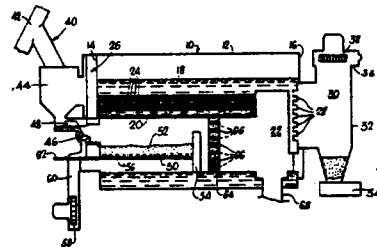


to maintain the fibrous mass in its desired shape, and to function as a base for accumulating retained solids.

4434723

**FLUIDIZED-BED COMBUSTION APPARATUS**

Leslie Brealey, John H Wilson, Niyaz Demircan, Derby, United Kingdom assigned to Northern Engineering Industries Plc



A fluidized bed shell boiler for producing steam or hot water or a fluidized bed hot gas generator or incinerator in which the position at which bed material is deposited downstream of the bed is controlled. A baffle of firebrick with gas-flow passages extending through the baffle is positioned in the tube downstream of the bed. Gas velocities are distributed across the tube so that bed material is preferentially deposited in the combustion chamber downstream of the furnace tube. Deposition in the furnace tube is reduced to zero or to a negligible amount and deposition downstream of the combustion chamber is reduced.

4434054

**FILTER FOR SEPARATING DISCRETE SOLID ELEMENTS FROM A FLUID STREAM**

Declan B Livesey, Petre Toma, Calgary, Canada assigned to Texaco Canada Resources Ltd

A filter element which is physically capable of withstanding adverse operating conditions in a subterranean environment. The filter element comprises a durable, yet fluid pervious casing through which a particulate carrying fluid is radially passed after leaving the substrate. An annular bed within the casing, is formed of a metallic fibrous mass which defines multitudinous flow passages that retain the solid particles, yet pass the residual fluid therethrough. A fluid pervious sheath surrounds the metallic mass to form an initial particle retention phase,