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**COPPER-CATALYZED FLUID-BED
ETHYLENE
OXYHYDROCHLORINATION
PROCESS**

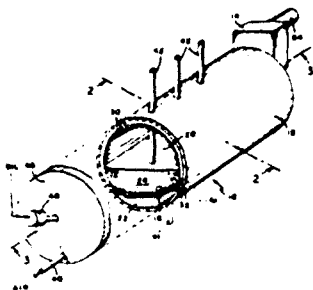
Joseph A. Cowfer; Jamal S. Eden; Angelo Magistro; assigned to The B F Goodrich Company

There is disclosed a method and composition for improving the fluidization characteristics and alleviating or inhibiting stickiness in a supported cupric chloride catalyst used as fluid bed catalyst in oxyhydrochlorinations reactions. The method involves the in situ preparation of the supported cupric chloride catalyst by addition of bare support on which no cupric chloride is deposited to the supported cupric chloride catalyst in the fluidized bed, or the use in the bed as the initial charge or as addition to the bed as makeup, of a composition which is a mixture of supported cupric chloride catalyst and bare support. In either event, as the oxyhydrochlorination proceeds, a portion of the cupric chloride on the supported catalyst becomes released therefrom and deposited in situ on the bare support, and stickiness of the cupric chloride containing catalyst particles to one another in the fluid bed is alleviated or inhibited.

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**LOW PROFILE FLUID BED HEATER
OR VAPORIZED**

Albert M. Leonp; assigned to Dorr-Oliver Incorporated

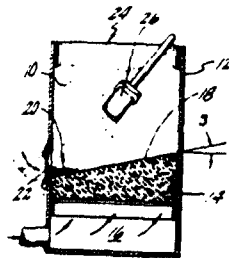


A fluid bed heater or vaporizer unit has a generally cylindrical configuration with its major axis horizontally disposed. A mixture of coal and limestone is fed into the elongated fluidized bed within the unit for combustion; the limestone being present to minimize sulfur emissions due to the sulfur present in the coal. The wall of the unit in the region of the freeboard is lined with horizontally disposed heat exchange tubing. The delivery of air to the fluidized bed is regulated so as to establish a combustion zone of high turbulence and one or more heat transfer zones of lower turbulence. A plurality of heat exchange tubes are located in the heat transfer zone or zones and within the expanded bed level of the fluidized bed but above the region occupied by the slumped bed. Economizer heat exchange coils may be located in the passageway for exhaust gases.

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**FLUIDIZED BED WITH SLOPED
APERTURE PLATE**

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A fluidized bed has an aperture plate which is inclined to the horizontal, to cause excessively large or dense particles to migrate to a collection point from which they may be removed from the particulate mass. Disruption of fluid flow through the aperture plate due to settled out particles is thus avoided. Preferably the aperture plate is made of a material which has the same permeability as the fluidized mass, thus inherently providing