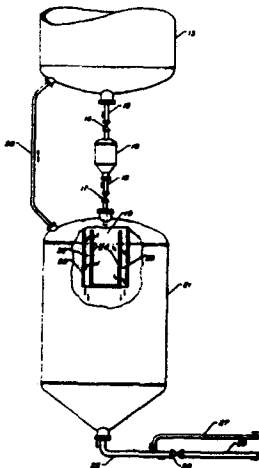


thermal cracking of the liberated hydrocarbons to increase the recovery of condensable hydrocarbons. The retorted material can be conveyed to a dilute phase lift pipe and combustor vessel where carbon residue in the retorted material is combusted leaving hot spent material that can be fed into the mixing chamber as heat carrier material.

4403909

**METHOD FOR DISCHARGING CATALYST PARTICLES FROM A MOVING BED SYSTEM AT A SUBSTANTIALLY STEADY FLOW RATE**

Arthur R Greenwood assigned to UOP Inc

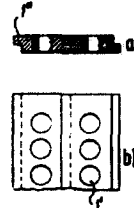


A method for discharging a periodic flow of a measured volume of hot regenerated catalyst particles from a moving bed regeneration system into a catalyst hopper at a substantially steady particle flow rate thus eliminating pressure surges in the hopper.

4402143

**BOTTOM FOR FLUIDIZED BED**

Peter Schulz, Knut Vaupel, Jurgen Klein, Essen, Federal Republic Of Germany assigned to Bergwerksverband GmbH

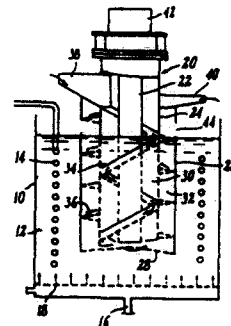


A bottom for a fluidized bed conveyor is composed of a plurality of members provided with openings and located in contact with each other so that their points of contact are gas impermeable at least during operation of a fluidized bed. The openings may be formed as circumferentially closed holes and/or as laterally open recesses. The members may laterally abut against each other, or may be provided with interengaging lateral projections. The members may be located so that at cold temperatures small intermediate spaces remain therebetween, which spaces are closed during operation as a result of thermal expansion of the members under the action of high working temperatures. Bracing element or elements may be provided which urge the members toward one another.

4399984

**AUTOMATIC INSTALLATION FOR THE HEAT TREATMENT OF WORKPIECES IN FLUIDIZED BEDS**

Jean-Claude Bouchon, Poissy, France assigned to Midland-Ross Corporation



Workpieces are heat treated in a fluidized bed contained within a vessel having a central well surrounded by helical ramps along which the