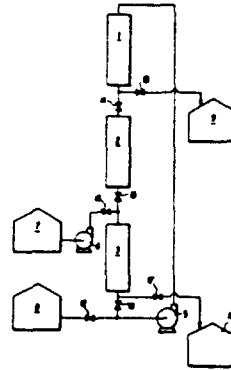


Disclosed is an improved solar air heater which comprises an air fluidized bed unit having; (a) an inlet for incoming cool air; (b) an outlet for heated air; (c) a clear coverplate; (d) a solar heat collector element disposed within said unit for absorbing heat from solar energy entering said unit through said cover plate; and (e) a fluidization zone disposed within said unit wherein a bed of particles is fluidized by said incoming cool air, said bed and said fluidizing cool air absorbing heat from solar energy entering said unit through said cover plate and/or from said solar heated collector element; said particles being resistant to appreciable attrition and substantially non-dusting.



4332835

#### PLENUM MOUNTED GRID FOR ELECTROSTATIC FLUIDIZED BED

Walter G. Knudsen; assigned to Electrostatic Equipment Corp.

An apparatus, system and method are provided for the fluidized bed electrostatic coating of workpieces, especially those of continuous length, such as metal wires. The apparatus includes a control grid spanning the plenum chamber and establishing an electrical effect by which deposits of improved uniformity can be produced at lower operating voltages.

4332623

#### ADSORPTION SEPARATION METHOD AND APPARATUS THEREOF

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A method for separating a starting fluid containing at least one component which is easy to adsorb and at least one component which is hard to adsorb into the respective components by the use of an adsorption separator which comprises a packed bed where an adsorbent for such components is packed and a fluid passage connecting the front and rear ends of said packed bed so that the fluid is able to be circulated, the method comprising the first step of feeding the starting fluid to an intermediate portion of the packed bed while withdrawing from the separator and fluid rich with either of the components in an amount equal to the feed of the starting fluid from a position downstream of the feed port, the second step of stopping the feed of the fluid to and the withdrawal of the fluid from the separator and moving the fluid remaining in the separator toward the downward direction, and the third step of feeding a desorbent fluid to the separator and simultaneously withdrawing from the separator a fluid rich with either of the components in an amount equal to the feed of the desorbent fluid from a position downstream of the desorbent feed port, the respective withdrawals of fluid from the separator being conducted at least two different positions, the adsorption bands being left in part of the packed bed in the third step. Apparatus for carrying out the method is disclosed.