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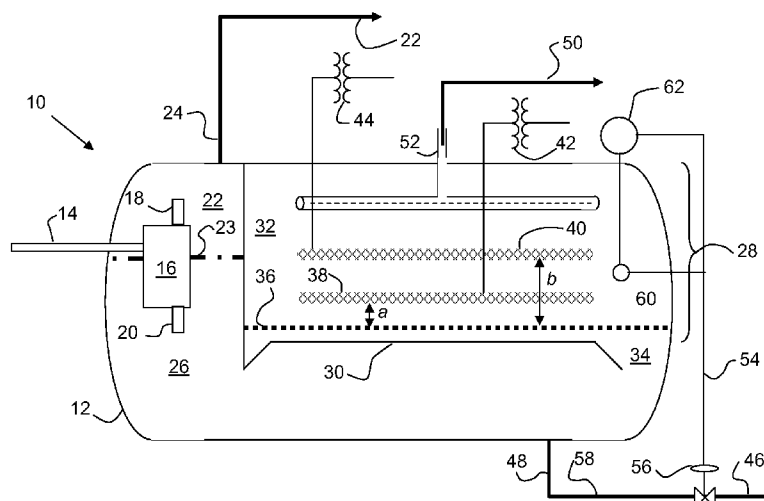


FIG. 1

(57) Abstract: An electrostatic dehydrator or separator having at least two generally horizontal electrodes will function as a separator for water and oil, and also for gas, water and oil. Gas/liquid separation occurs in the front section of the vessel. Oil/water separation takes place in a subsequent section of the vessel which may have two or three independent generally horizontal electrodes or grids spaced at different distances above the generally horizontal oil/water interface. The two or three independent electrodes or grids will each have their own transformer. The higher grid(s) will continue to operate even if the lower grid(s) short out.