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(54) Title: MOMENTUM TRANSFER USING LIQUID INJECTION

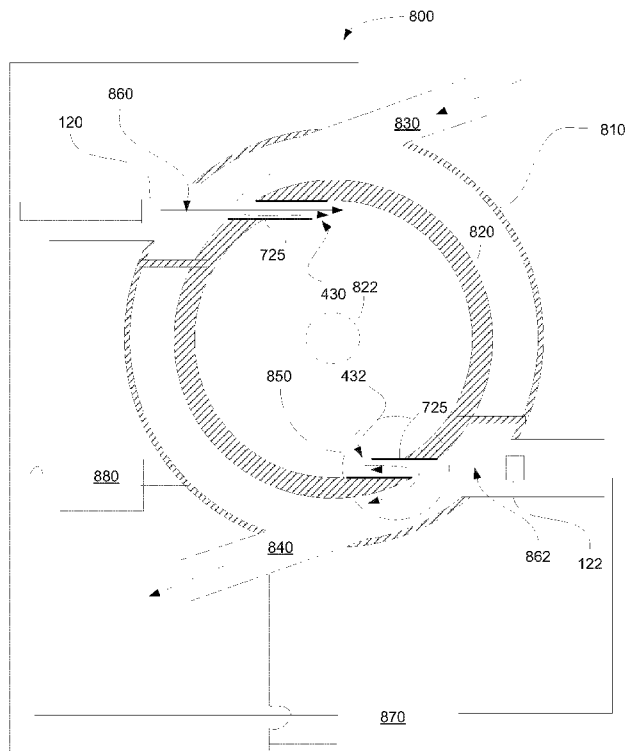


FIG. 8

(57) Abstract: Various apparatus provide for spraying high velocity droplets of liquid into a low velocity gas stream. Finely atomized droplets may quickly transfer their momentum, to the gas, resulting in deceleration of the spray and acceleration of the gas. A high, velocity spray of atomized liquid may transfer a substantial fraction of its kinetic energy to the gas before contacting a surface. In some aspects, suspended particles in the gas phase may be removed by high velocity liquid droplets passing through the gas. Certain aspects provide for controlling a gas flow by controlling the relative amounts of upstream and downstream momenta transferred to the gas by one or more liquid sprays.



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