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(54) **Title**: ELECTRODE ASSEMBLY AND PLASMA PROCESSING CHAMBER UTILIZING THERMALLY CONDUCTIVE GASKET

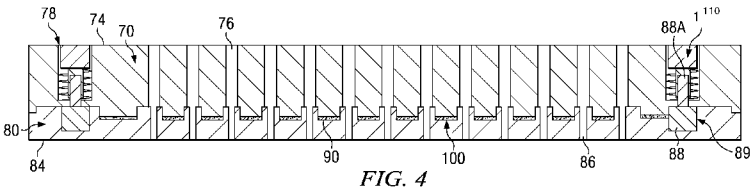

FIG. 4

(57) **Abstract**: The present invention relates generally to plasma processing and, more particularly, to plasma processing chambers and electrode assemblies used therein. According to one embodiment of the present invention, an electrode assembly is provided comprising a thermal control plate, a silicon-based showerhead electrode, and a thermally conductive gasket, wherein respective profiles of a frontside of the thermal control plate and a backside of the showerhead electrode cooperate to define a disjointed thermal interface comprising portions proximal to showerhead passages of the showerhead electrode and portions displaced from the showerhead passages. The displaced portions are recessed relative to the proximal portions and are separated from the showerhead passages by the proximal portions of the thermal interface. The gasket is positioned along the displaced portions such that the gasket is isolated from the showerhead passages and may facilitate heat transfer across the thermal interface from the showerhead electrode to the thermal control plate.

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