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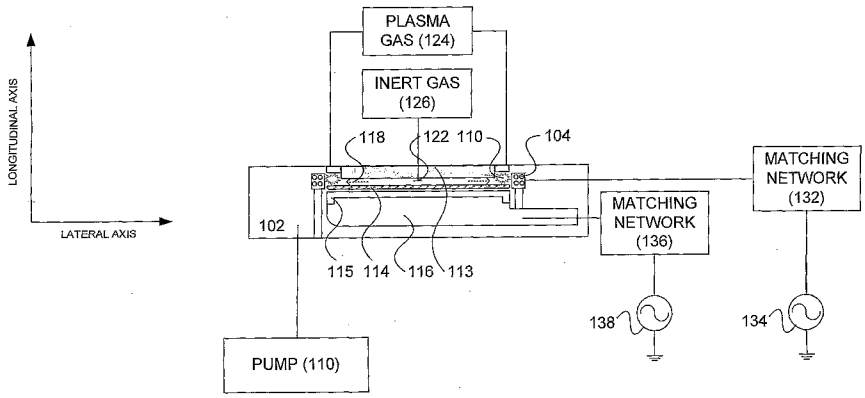
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(54) **Title:** APPARATUS FOR THE REMOVAL OF A SET OF BYPRODUCTS FROM A SUBSTRATE EDGE AND METHODS THEREFOR



(57) **Abstract:** A plasma processing system including a plasma chamber for processing a substrate is disclosed. The apparatus includes a chuck configured for supporting a first surface of the substrate. The apparatus also includes a plasma resistant barrier disposed in a spaced-apart relationship with respect to a second surface of the substrate, the second surface being opposite the first surface, the plasma resistant barrier substantially shielding a center portion of the substrate and leaving an annular periphery area of the second surface of the substrate substantially unshielded by the plasma resistant barrier. The apparatus further includes at least one powered electrode, the powered electrode operating cooperatively with the plasma resistant barrier to generate confined plasma from a plasma gas, the confined plasma being substantially confined to the annular periphery portion of the substrate and away from the center portion of the substrate.

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