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(54) **Title**: RADIO FREQUENCY (RF) GROUND RETURN ARRANGEMENTS

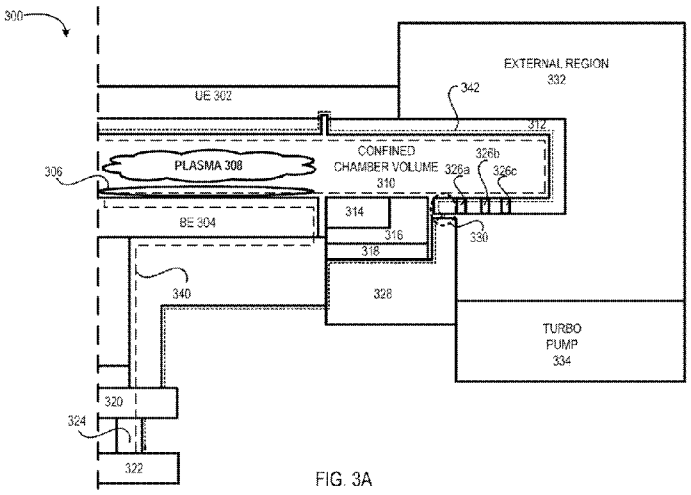


FIG. 3A

(57) **Abstract**: A radio frequency (RF) ground return arrangement for providing a low impedance RF return path for a RF current within a processing chamber of a plasma processing chamber during processing of a substrate is provided. The RF ground return arrangement includes a set of confinement rings, which is configured to surround a confined chamber volume that is configured for sustaining a plasma for etching the substrate during substrate processing. The RF ground return arrangement also includes a lower electrode support structure. The RF ground return arrangement further includes a RF contact-enabled component, which provides a RF contact between the set of confinement rings and the lower electrode support structure such that the low impedance RF return path facilitates returning the RF current back to an RF source.

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