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(54) **Title:** POROUS PLUG FOR ELECTROSTATIC CHUCK GAS DELIVERY

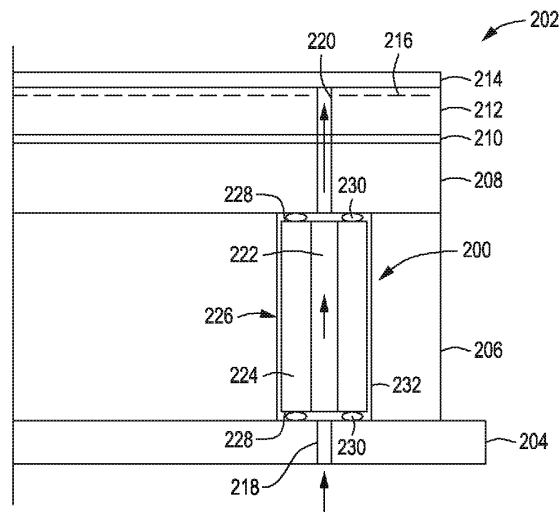


FIG. 2

(57) **Abstract:** Porous plugs for gas delivery in substrate supports and substrate supports and substrate processing chambers incorporating same are provided herein. In some embodiments, a porous plug for use in a substrate support includes: a porous central passageway; and a solid outer shell bonded to and surrounding the porous central passageway such that there is no continuous gap between the porous central passageway and the solid outer shell along an entire length of the porous plug, wherein the solid outer shell includes sealing surfaces disposed on ends of the solid outer shell to facilitate forming a seal along the sealing surface and surrounding the porous central passageway. In some embodiments, one or more o-ring retaining grooves can be formed about the outer surface of the solid outer shell.

[Continued on next page]

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