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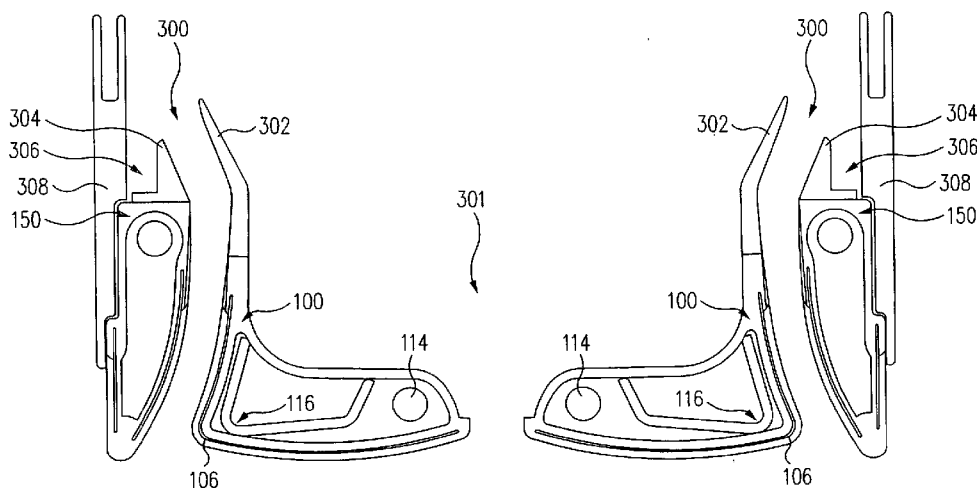
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(54) Title: PROTECTIVE SHIELD AND SYSTEM FOR GAS DISTRIBUTION



(57) Abstract: A protective shield (301) and system for gas distribution are provided for reducing film and process byproduct deposition on surfaces of a Chemical Vapor Deposition system. The present invention provides a volume insert (116) within the inert gas shield plenum (112), which reduces byproduct deposition buildup on the shield. In another embodiment, a vent guide (302, 304) for directing gaseous deposition byproducts to the center of a vent passageway (300), thus reducing particle deposits on the walls of the vent system. In another embodiment, partial plugs (220) installed in the injector purge passageway for the purpose of redirecting and metering inert gas, thus reducing byproduct deposition on the shield and at the ends of the injectors. In another embodiment, the present invention provides a CVD system having a full volume vent assembly (400) with a large capacity for powder buildup, thereby enhancing the runtime before cleaning maintenance is required.



WO 03/018866 A1



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