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(54) Title: POLISHING CARRIER HEAD WITH PIEZOELECTRIC PRESSURE CONTROL

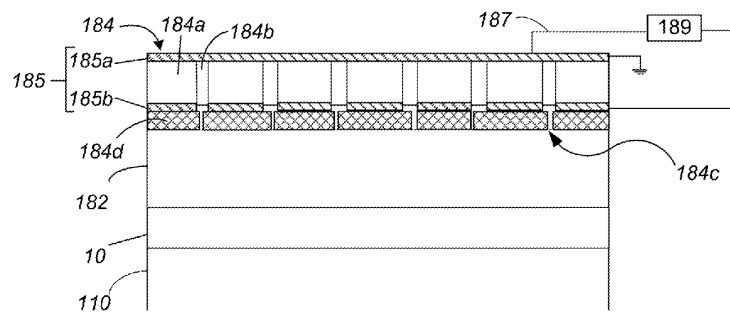


FIG. 2A

(57) Abstract: A carrier head for holding a substrate in a polishing system has a housing including a carrier plate, a first flexible membrane secured to the housing, and a plurality of independently operable piezoelectric actuators secured to the carrier plate. The first flexible membrane has an upper surface and having a lower surface that provides a substrate mounting surface. The piezoelectric actuators are positioned above the first flexible membrane so as to independently adjust compressive pressure on the upper surface of the first flexible membrane.

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