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(54) **Title**: SUBSTRATE EDGE TUNING WITH RETAINING RING

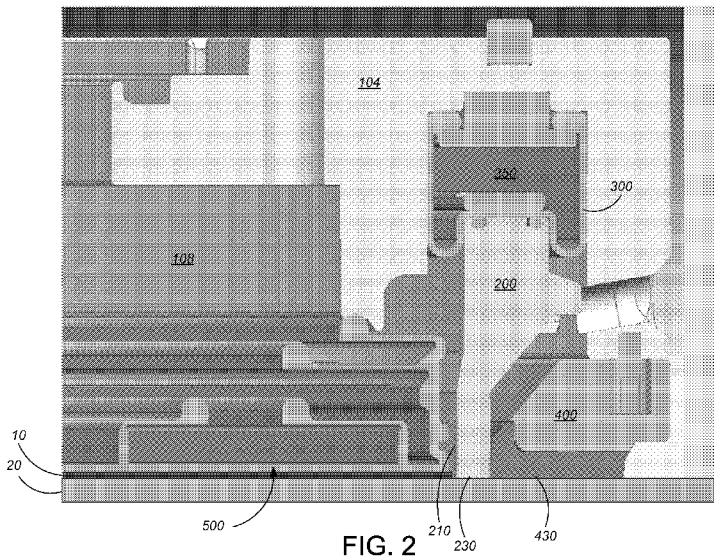


FIG. 2

(57) **Abstract**: A carrier head for a chemical mechanical polisher includes base, a substrate mounting surface, an annular inner ring, and an annular outer ring. The inner ring has an inner surface configured to circumferentially surround the edge of a substrate positioned on the substrate mounting surface, an outer surface, and a lower surface to contact a polishing pad. The inner ring is vertically movable relative to the substrate mounting surface. The outer ring has an inner surface circumferentially surrounding the inner ring, an outer surface, and a lower surface to contact the polishing pad. The outer ring is vertically movable relative to and independently of the substrate mounting surface and the inner ring. The lower surface of the inner ring has a first width, and the lower surface of the outer ring has a second width greater than the first width.

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