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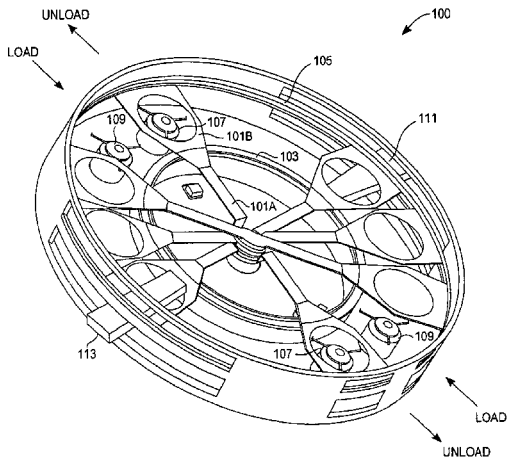


FIG. 1

(57) Abstract: A wafer cleaning chamber comprising a plurality of carrier arms each having concentrically-mounted midpoints between opposing ends of the carrier arms with a wafer carrier mounted on each of the opposing ends of the carrier arms. A hub includes a plurality of concentrically mounted drives where each of the plurality of drives is coupled near the midpoint of a respective one of the plurality of carrier arms. Each of the plurality of drives is configured to be controlled independently of the remaining plurality of concentrically-mounted drives. A respective motor is coupled to each of the concentrically mounted drives and is configured to move the coupled carrier arm in a rotary manner under control of a program containing a velocity profile. At least one cleaning chemical-supply head is positioned proximate to a path of the wafer carriers.

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