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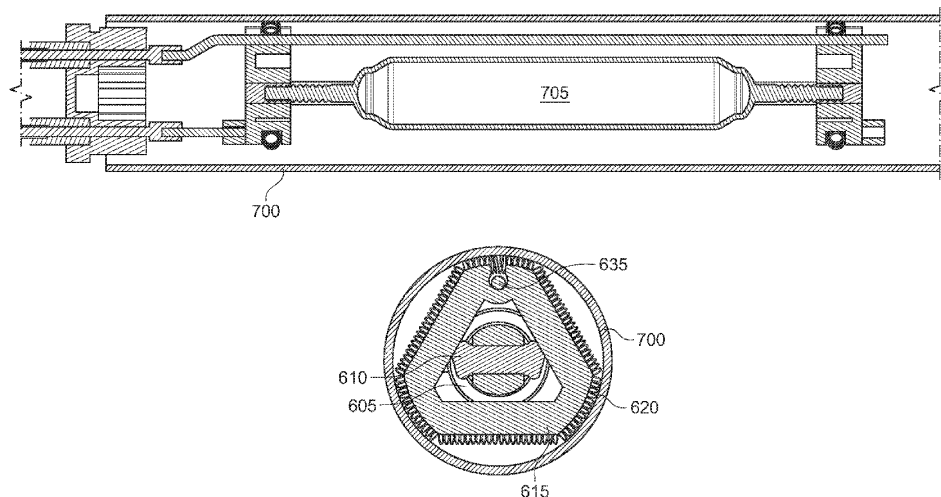


FIG. 7

(57) Abstract: A water treatment system includes an actinic radiation reactor and at least one ultraviolet (UV) lamp disposed within a quartz tube within the actinic radiation reactor. The at least one UV lamp includes a lamp tube including a gas that emits ultraviolet light responsive to electrical excitation, a first pinch extending from a first end of the lamp tube and a second pinch extending from a second end of the lamp tube, and a first end cap coupled to the first pinch and a second end cap coupled to the second pinch. The first end cap and second end cap are dimensioned to center the lamp tube coaxially within the quartz tube.

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