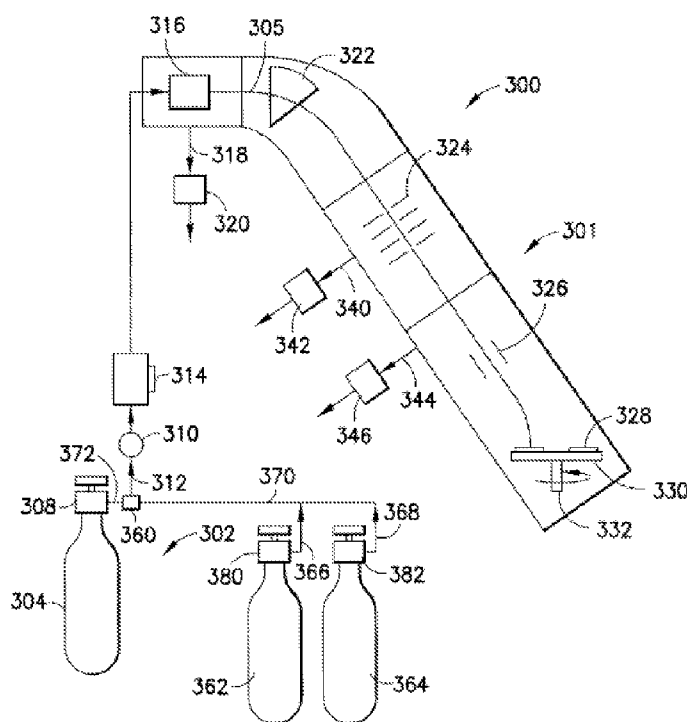




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[Continued on next page]

(54) Title: ENRICHED SILICON PRECURSOR COMPOSITIONS AND APPARATUS AND PROCESSES FOR UTILIZING SAME

**FIG. 1**

(57) Abstract: Isotopically enriched silicon precursor compositions are disclosed, as useful in ion implantation to enhance performance of the ion implantation system, in relation to corresponding ion implantation lacking such isotopic enrichment of the silicon precursor composition. The silicon dopant composition includes at least one silicon compound that is isotopically enriched above natural abundance in at least one of Si, Si, and Si, and may include a supplemental gas including at least one of a co-species gas and a diluent gas. Dopant gas supply apparatus for providing such silicon dopant compositions to an ion implanter are described, as well as ion implantation systems including such dopant gas supply apparatus.



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