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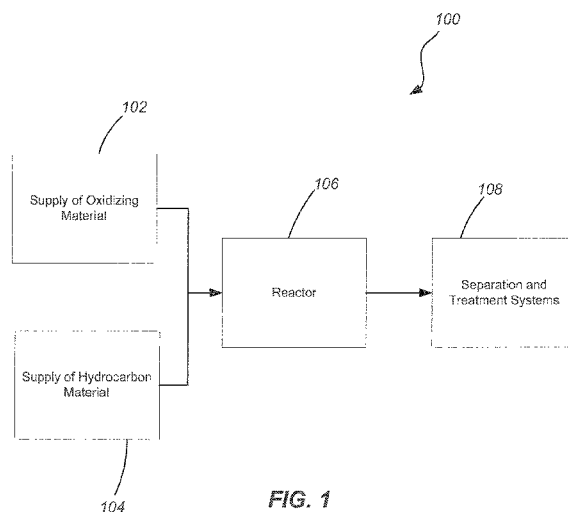
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(54) Title: BELL COLUMN DOWNTUBE, REACTORS UTILIZING SAME AND RELATED METHODS

**FIG. 1**

(57) **Abstract:** Reactors for carrying out a chemical reaction, as well as related components, systems and methods are provided. In accordance with one embodiment, a reactor is provided that includes a furnace and a crucible positioned for heating by the furnace. A downtube is disposed at least partially within the interior crucible along an axis. At least one structure is coupled with the downtube and extends substantially across the cross-sectional area of the interior volume taken in a direction substantially perpendicular to the axis. A plurality of holes is formed in the structure enabling fluid flow therethrough. The structure coupled with the downtube may include a lower body portion and an upper body portion coupled with the lower body portion, wherein the plurality of holes is formed in the lower body portion adjacent to, and radially outward from, a periphery of the upper body portion.