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(54) Title: REACTOR WITH REACTOR HEAD AND INTEGRATED VALVE

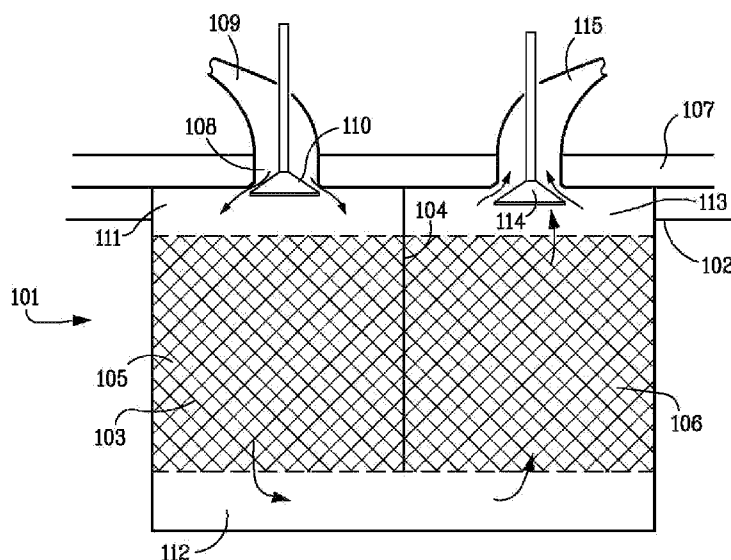


FIG. 1

(57) Abstract: A reactor with minimal dead volume especially suited to reverse-flow applications comprises: a) a reactor body; b) a first head engaged with said reactor body; c) a first conduit extending from outside said head to at least partially through said head; and d) a first valve in flow communication with said first conduit controlling fluid flow along a flow path extending from the first valve and through the reactor body. The reactor is especially suited for use in a process for rapid stream-switching of at least two streams in a reverse-flow reactor.



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