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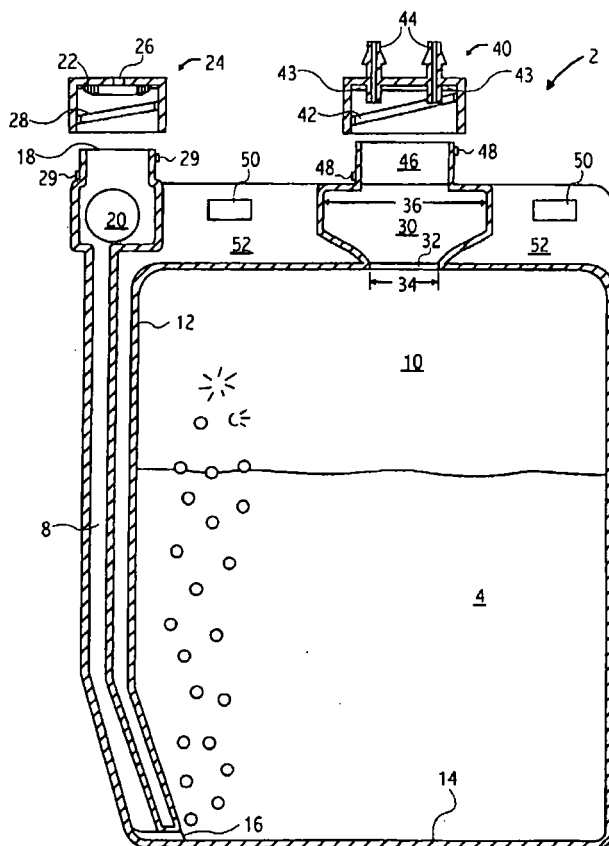
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(54) Title: DELIVERY SYSTEM FOR LIQUID CATALYSTS



(57) Abstract: A delivery system for generating a sparging gas containing catalyst particles and delivering them to a flame zone (62) of a combustion reaction is disclosed. A catalyst mixture receptacle (2) for the delivery system includes a floating ball check valve (20) on an air inlet (18) to an inlet tube (8) of the receptacle (2) which is spaced from a vertical wall (12) of the receptacle (2). A secondary splash chamber (30) having an opening smaller than the body of the chamber (2) and the sparging gas outlet for the receptacle to reduce the opportunity for catalyst mixture (4) in liquid form to reach the sparging gas outlet. An enrichment circuit is disclosed including a controller (74), pump (72), and a one-way check valve (87) for adding additional sparging gas to a flame zone (62) of a combustion process in times of added load.

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