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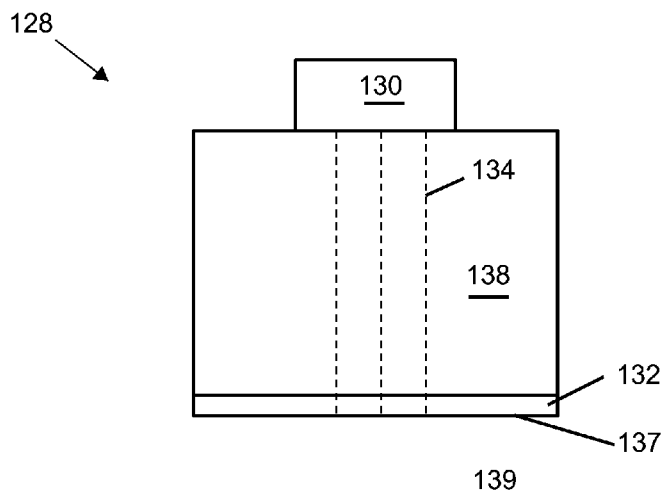


Figure 1

(57) **Abstract:** An apparatus includes a flow chamber having at least one inlet and at least one outlet. At least one ultrasonic transducer is located on a wall of the flow chamber, which operates to create a multi-dimensional acoustic standing wave in the flow chamber. A reflector is located on the wall on the opposite side of the flow chamber from the at least one ultrasonic transducer. The reflector is formed from a thin structure that provides a pressure release boundary, such as a plastic film/air interface.

