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(54) Title: HEAT EXCHANGE DEVICE WITH RING SHAPED THIN SLIT SECTION FOR USE IN LIQUID ADHESIVE SYSTEMS AND RELATED METHODS

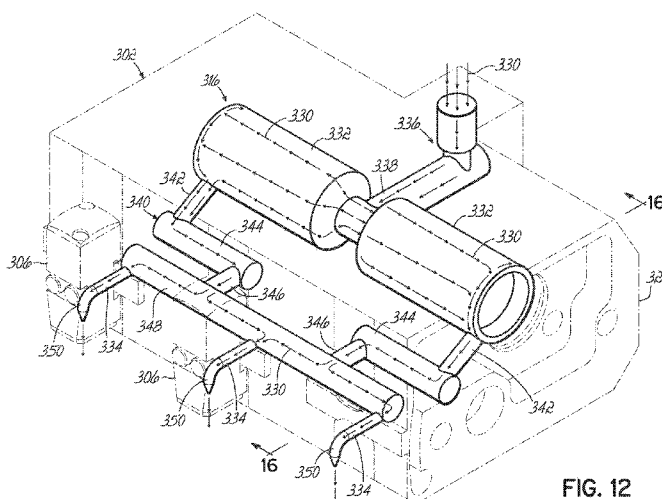


FIG. 12

(57) Abstract: A heat exchange device for heating liquid adhesive material to an application temperature suitable for an adhesive bonding application includes a body having an inlet configured to receive a flow of liquid adhesive material and an outlet configured to provide the liquid adhesive material to a dispensing device for the adhesive bonding application. A fluid passageway in the body connects the inlet and the outlet. The fluid passageway includes a thin slit section in the form of an elongated ring shape, having a length along a fluid flow direction between the inlet and the outlet, the thin slit section further having a first dimension and a second dimension transverse to the fluid flow direction. The first dimension and the length are substantially greater than the second dimension. The heat exchange device further includes a heating element for heating the liquid adhesive material flowing through the thin slit section.



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