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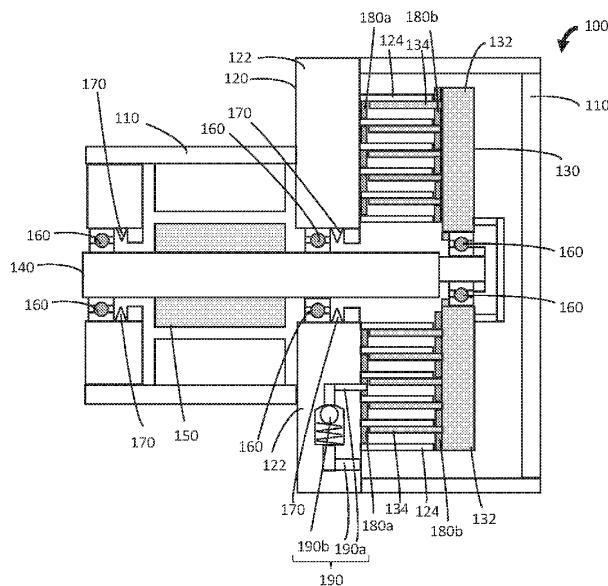


FIG. 1

(57) **Abstract:** Scroll pump comprising an inlet and an outlet, a fixed scroll (120) intermeshed with an orbiting scroll (130) to define a space therebetween for pumping fluid from the inlet to the outlet, a biasing apparatus (170) configured to bias the orbiting scroll (130) against the fixed scroll (120), a fluid recirculation channel (190a) extending from the space to the inlet through either the fixed scroll (130) or the orbiting scroll (120), and a fluid recirculation valve (190b) disposed in the fluid recirculation channel (190a). The fluid recirculation valve (190b) is configured to permit flow of fluid from the space to the inlet through the fluid recirculation channel (190a), when in an open state, and to block flow of fluid through the fluid recirculation channel (190a), when in a closed state, and to switch from the closed state to the open state when a pressure differential across the fluid recirculation valve (190b) is equal to or exceeds a certain threshold value.

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