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(54) Title: FLOW DAMPENER IN FLOW MEASUREMENT SYSTEM

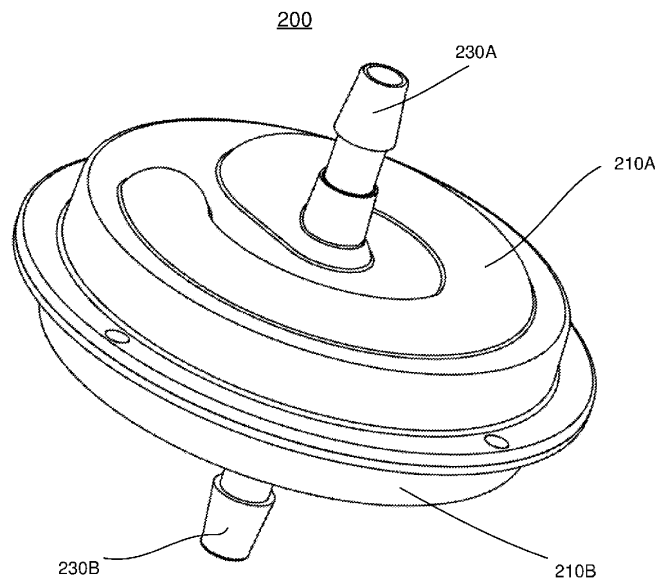


FIG. 2A

(57) Abstract: A flow dampener for dampening pulsation in a fluid flow includes a body shell, a flexible membrane, and two flow ports. The body shell has an interior surface and an elongate groove formed on the interior surface. The flexible membrane is sealed to the interior surface of the body shell and covers the elongate groove. In some embodiments, the flexible membrane is over-molded onto the body shell. The flexible membrane cooperates with the elongate groove to form an elongate flow path for the fluid flow. The flexible membrane has a thickness in a range from 0.5 mm to 6 mm. As the membrane is flexible, it vibrates as the fluid flows through the elongate flow path, absorbs kinetic energy in the fluid flow, and thereby dampens pulsation in the fluid flow.

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