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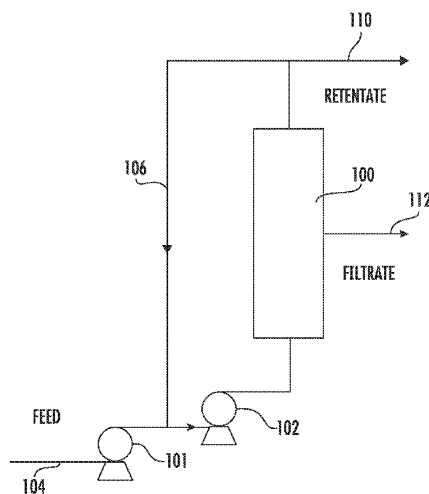


FIG. 1
(PRIOR ART)

(57) Abstract: The present disclosure relates to tangential flow filters, membranes, and ultrafiltration membranes, for various applications, including bioprocessing and pharmaceutical applications, systems employing such filters, and methods of filtration using the same. In an aspect, an alternating tangential flow system for continuous processing may include a feed line containing a fluid. A retentate line may be in fluid communication with the feed line. A first diaphragm may be at an inlet of the retentate line configured to pump fluid toward an outlet of the retentate line. A second diaphragm may be at the outlet of the retentate line configured to pump fluid toward the inlet of the retentate line. A membrane may be in fluid communication with the retentate line between the first diaphragm and the second diaphragm. A retentate pump may be at the retentate outlet configured to pump the fluid out of the retentate line.

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