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(54) Title: DIALYSATE REGENERATOR AND SYSTEM COMPRISING THE SAME

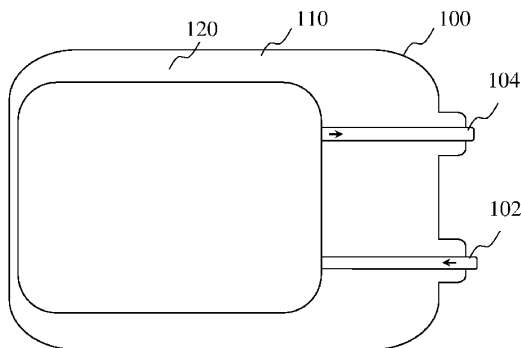


FIG. 1

(57) Abstract: An aspect of the disclosure relates to a dialysate regenerator for connecting to a dialysis apparatus, the dialysate regenerator including a regenerator inlet for receiving dialysate; a regenerator outlet for dispensing regenerated dialysate; a hydraulic circuit connected between the regenerator inlet and the regenerator outlet, and further including a fluid portioning system to divide a dialysate flow into uniform portions for sequential regeneration. An aspect of the disclosure relates to a dialysis system including a dialysis apparatus including: a fresh dialysate input; a spent dialysate output; and the dialysate regenerator, wherein the regenerator inlet may be coupled to the spent dialysate output for receiving spent dialysate, and wherein the regenerator outlet may be coupled to the fresh dialysate input for dispensing regenerated dialysate.

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