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(54) Title: TUBULAR FIBER MEMBRANE WITH NANOPOROUS SKIN

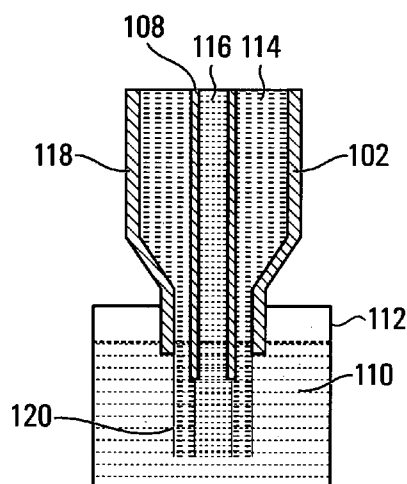


FIG. 1B

(57) Abstract: A wet spinning process for forming a tubular fiber membrane is provided. The tubular fiber membrane has a nanoporous skin layer and a microporous lumen layer. The skin layer defines an outer surface of the fiber membrane and the lumen layer defines a lumen surface of the fiber membrane. The pores in the skin layer may have an average pore size of less than about 7 nm, and pores in the lumen layer may have an average pore size of from about 0.5 to about 3 μm . The fiber membranes may be used in artificial renal proximal tubules, artificial kidneys, bioreactors, or fiber cartridges.



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