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(54) Title: PUMP WITH PUMPING CHAMBER CREATED BY TELESOPING ACTION DRIVEN BY FRICTION

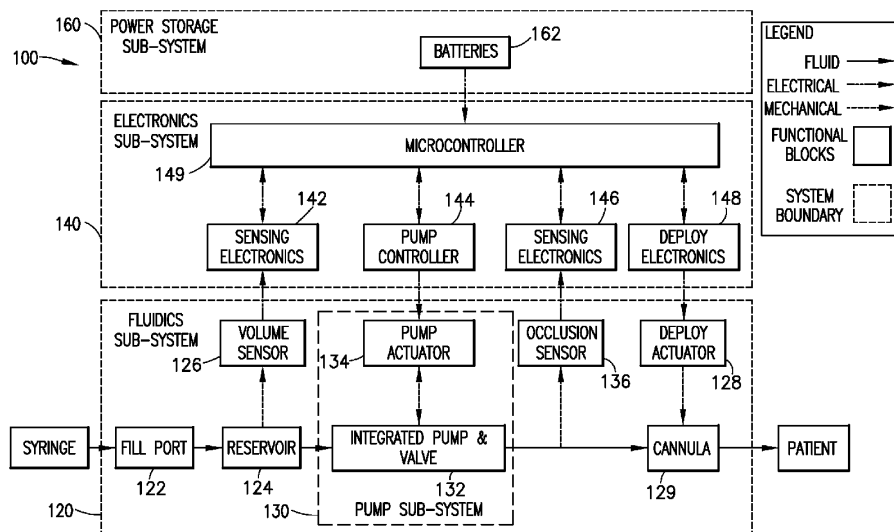


FIG. 1

(57) Abstract: A pump subsystem for fluid delivery (e.g., in a wearable patch pump) is provided wherein pumping action is generated by linear piston movement that pulls a plug, which is interconnected to the piston between two mechanical extremes or end stops in a telescopic or variable volume fluid chamber. Such interconnection enables piston and plug to move a certain distance with respect to each other that corresponds to a predefined swept volume of the pump subsystem. Telescoping-like effect of relative piston and plug movement provides for intake and discharge of fluid with respect to the fluid chamber. Movement of plug within piston can be enabled by the friction of seals placed on the plug, which serve to provide resistance to piston motion and therefore force translation motion of the plug to lag relative to the piston translation motion during portions of the pump cycle.

[Continued on next page]

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