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(54) **Title**: COOLING SYSTEM FOR FUEL CELLS

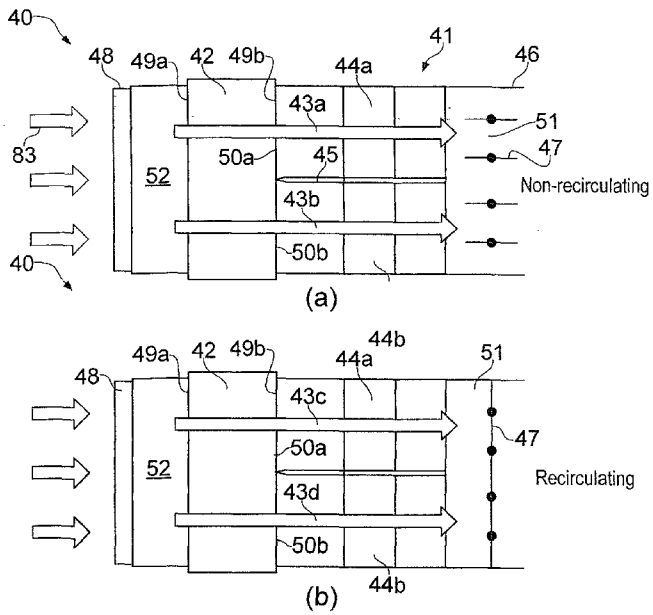

FIG. 9

(57) **Abstract**: A fuel cell stack assembly comprises a stack of fuel cells, each fuel cell having a cooling air conduit with an input / output ventilation aperture disposed on a ventilation face of the stack. The ventilation apertures form an array over said ventilation face of the stack. A first fan is configured to direct air flow through a first portion of the ventilation face and a second fan is configured to direct air flow through a second portion of the ventilation face. A reconfigurable plenum is in fluid communication with the first fan and the second fan and has a first configuration in which air is directed, by the first and second fans, through the first and second portions of the ventilation face in the same direction, and a second configuration in which air is directed, by at least one of the fans, respectively through the first and second portions of the ventilation face in opposing directions. When operating in the second configuration, the directions of air flow through the first and second portions of the ventilation face are periodically reversed.

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