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(54) **Title**: NEURAL INTERFACE SYSTEM

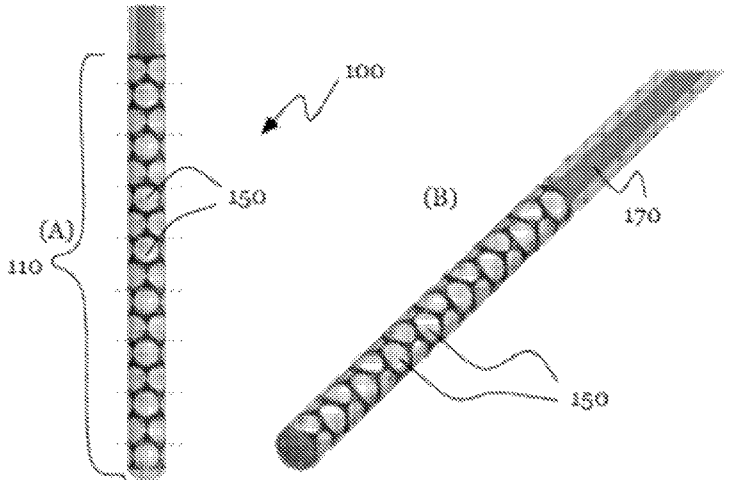


FIGURE 1

(57) **Abstract**: A neural interface system including an electrode array and a carrier that supports the electrode array, in which the electrode array includes a substrate rolled into a three- dimensional shape, a plurality of conductive traces patterned on the substrate and adapted to transmit electrical signals, and a plurality of elliptically shaped, externally facing electrode sites coupled to the plurality of conductive traces that electrically communicate with their surroundings. The plurality of electrodes are arranged in a triangular lattice circumferentially around and axially along the carrier, and the substrate includes an edge that extends axially along the carrier and is constrained between a first axial row portion of the plurality of electrode sites and a second axial row portion of the plurality of electrode sites adjacent to the first axial row portion.

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