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(54) **Title**: DEVICE FOR INTERACTING WITH NEUROLOGICAL TISSUE AND METHODS OF MAKING AND USING THE SAME

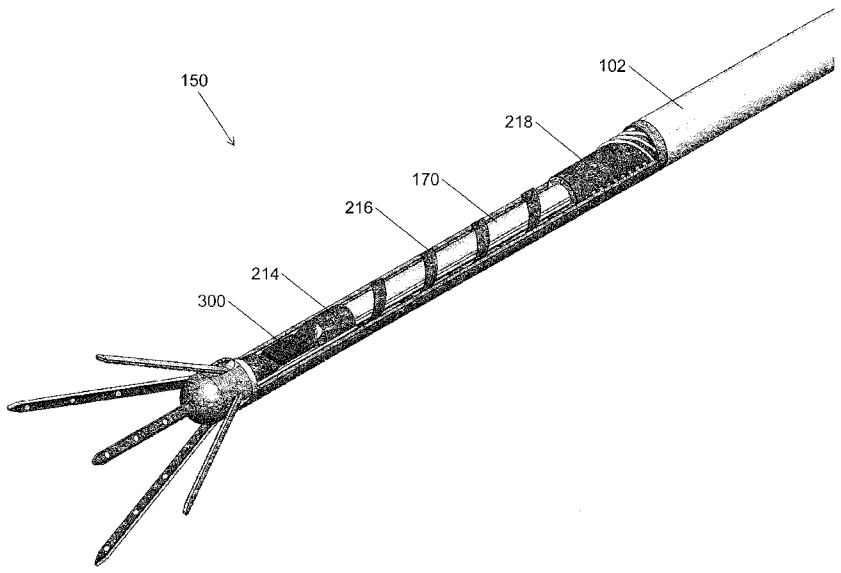



FIG. 20

(57) **Abstract**: Described herein are microelectrode array devices, and methods of fabrication, assembly and use of the same, to provide highly localized neural recording and/or neural stimulation to a neurological target. The device includes multiple microelectrode elements arranged protruding shafts. The protruding shafts are enclosed within an elongated probe shaft, and can be expanded from their enclosure. The microelectrode elements, and elongated probe shafts, are dimensioned in order to target small volumes of neurons located within the nervous system, such as in the deep brain region. Beneficially, the probe can be used to quickly identify the location of a neurological target, and remain implanted for long-term monitoring and/or stimulation.

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