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— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

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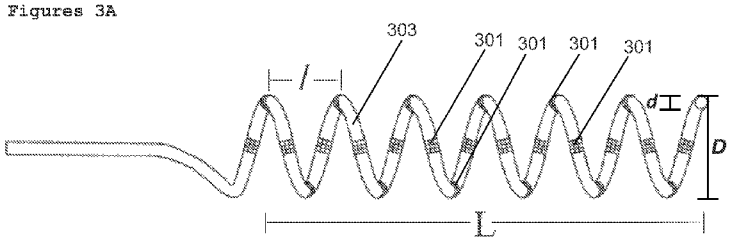
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(54) **Title**: SYSTEM AND METHOD FOR LOCATING AND IDENTIFYING FUNCTIONAL NERVES INNERVATING WALL OF ARTERIES AND CATHETERS FOR SAME

Figures 3A



(57) **Abstract**: System and method for locating and identifying nerves innervating the wall of arteries such as the renal artery are disclosed. The present invention identifies areas on vessel walls that are innervated with nerves; provides indication on whether energy is delivered accurately to a targeted nerve; and provides immediate post-procedural assessment of the effect of energy delivered to the nerve. The method includes at least the steps to evaluate a change in physiological parameters after energy is delivered to an arterial wall; and to determine the type of nerve that the energy was directed to (none, sympathetic or parasympathetic) based on the evaluated results. The system includes at least a device for delivering energy to the wall of blood vessel; sensors for detecting physiological signals from a subject; and indicators to display results obtained using said method. Also provided are catheters for performing the mapping and ablating functions.

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