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(54) **METHOD AND APPARATUS FOR
OPTIMIZING VAGAL NERVE STIMULATION
USING LARYNGEAL ACTIVITY**

(75) Inventors: **Randy Westlund**, River Falls, WI (US);
Anthony V. Caparso, St. Louis Park,
MN (US); **Mark Bly**, Falcon Heights,
MN (US)

(73) Assignee: **Cardiac Pacemakers, Inc.**, St. Paul,
MN (US)

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patent is extended or adjusted under 35
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(51) **Int. Cl.**
A61N 1/36 (2006.01)

(52) **U.S. Cl.** **607/2; 607/46**

(58) **Field of Classification Search** **600/23;**
607/41, 47, 72, 1, 46
See application file for complete search history.

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Primary Examiner—Carl H Layno

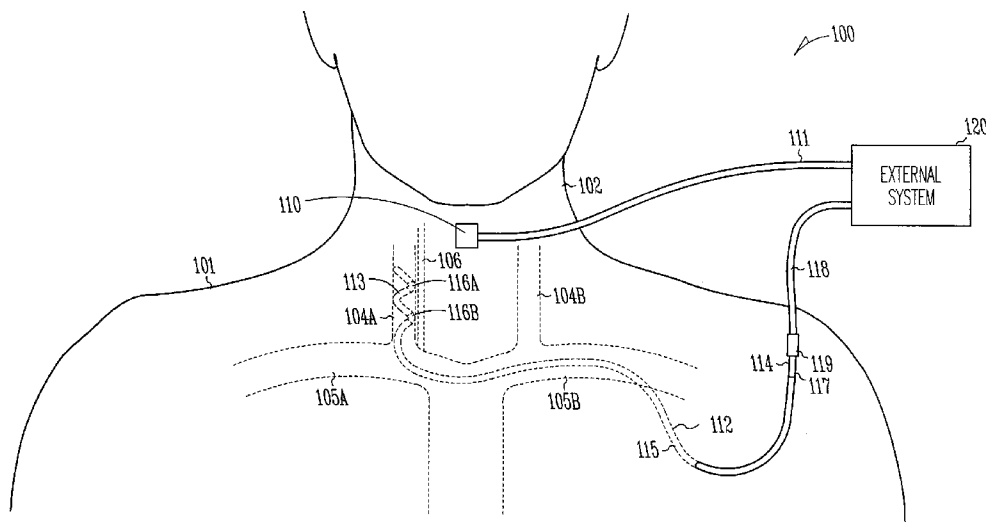
Assistant Examiner—Brian T Gedeon

(74) *Attorney, Agent, or Firm*—Schwegman, Lundberg &
Woessner, P.A.

(57) **ABSTRACT**

A neural stimulation system delivers neural stimulation to the
vagus nerve and senses a signal indicative of laryngeal activ-
ity resulting from the neural stimulation. The signal indicative
of laryngeal activity is used, for example, to guide electrode
placement, determine stimulation threshold, detect lead/elec-
trode problems, detect neural injury, and monitor healing
processing following the electrode placement inside the body
of a patient.

39 Claims, 12 Drawing Sheets



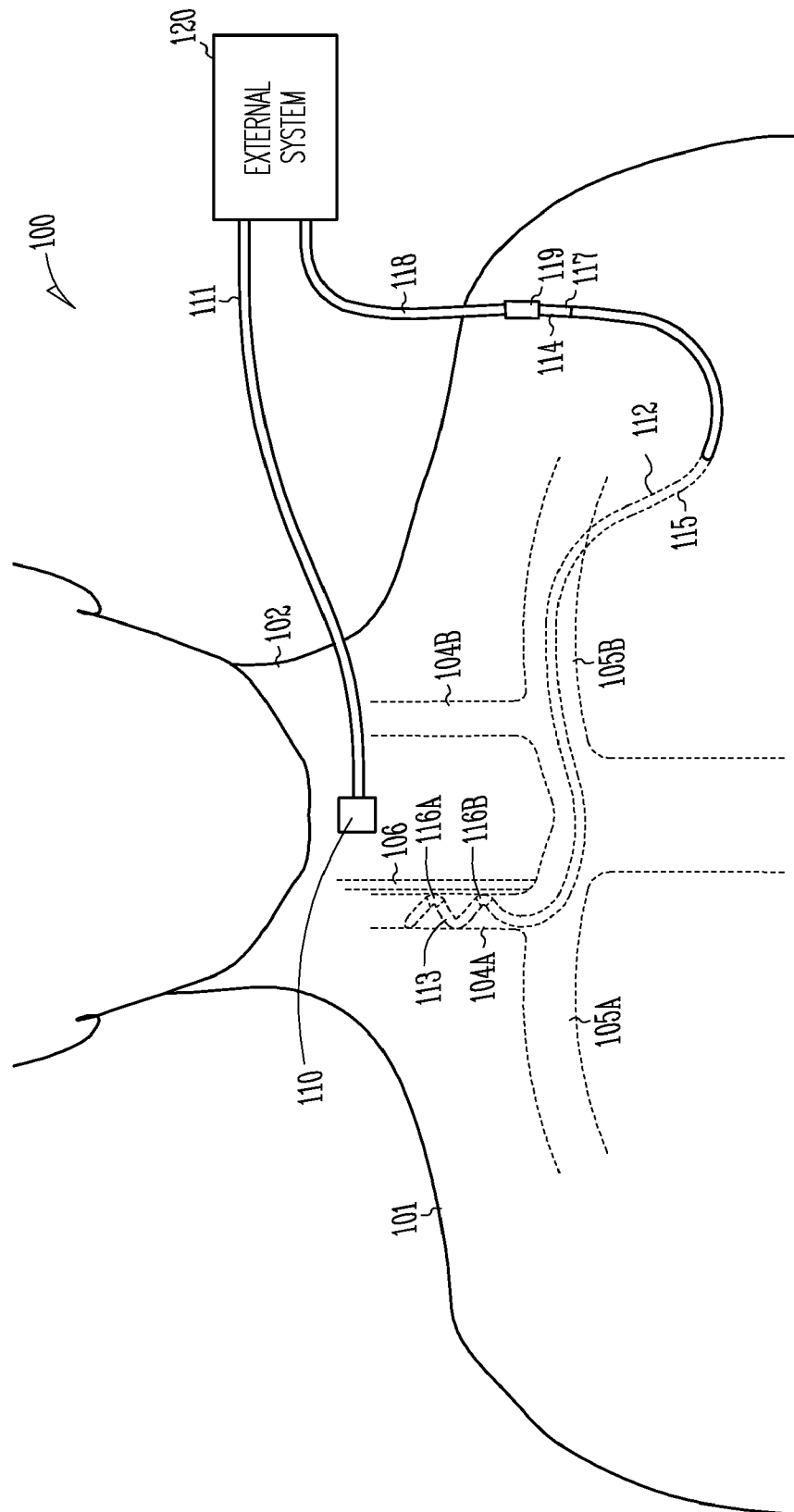


Fig. 1

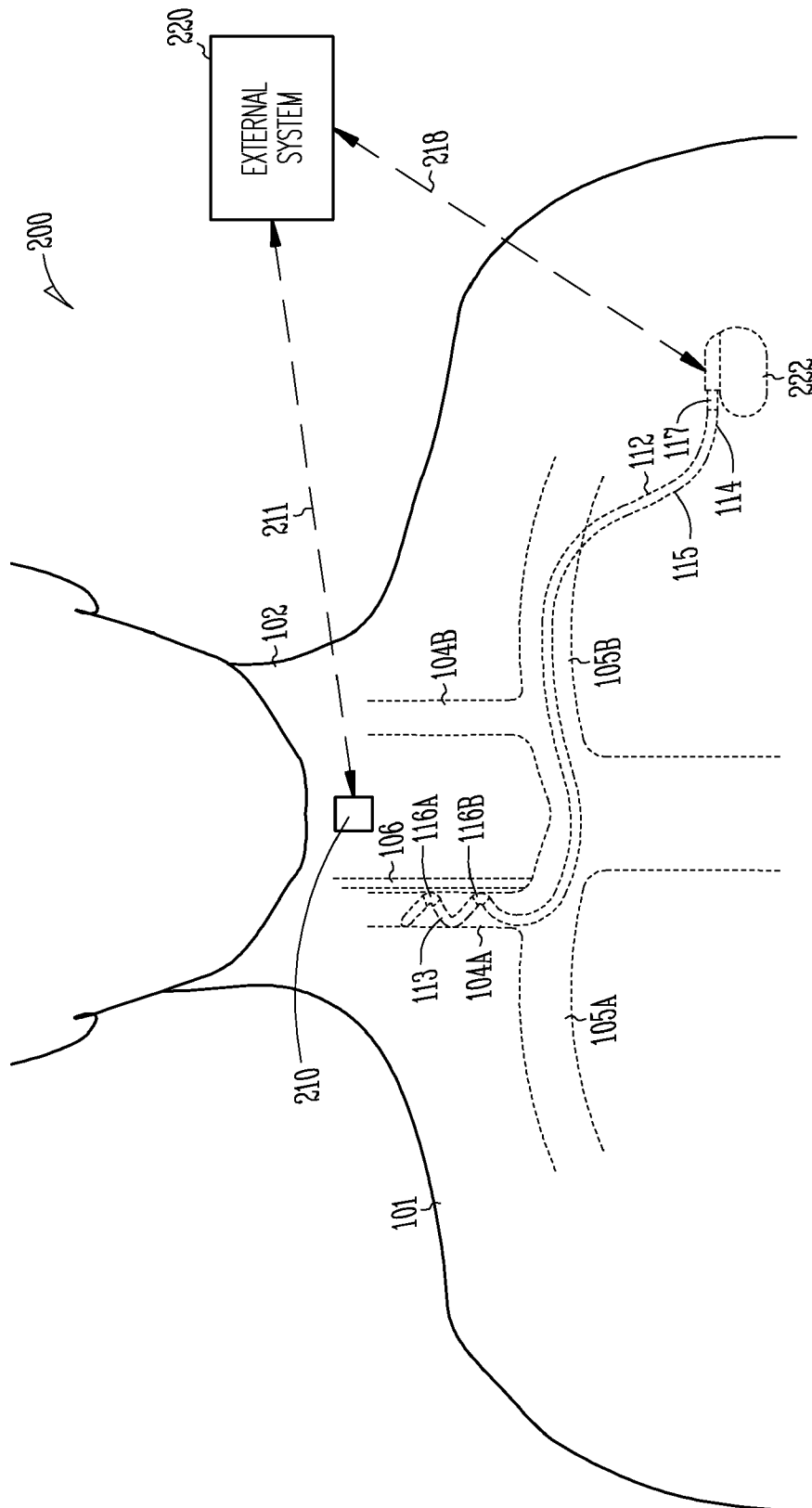
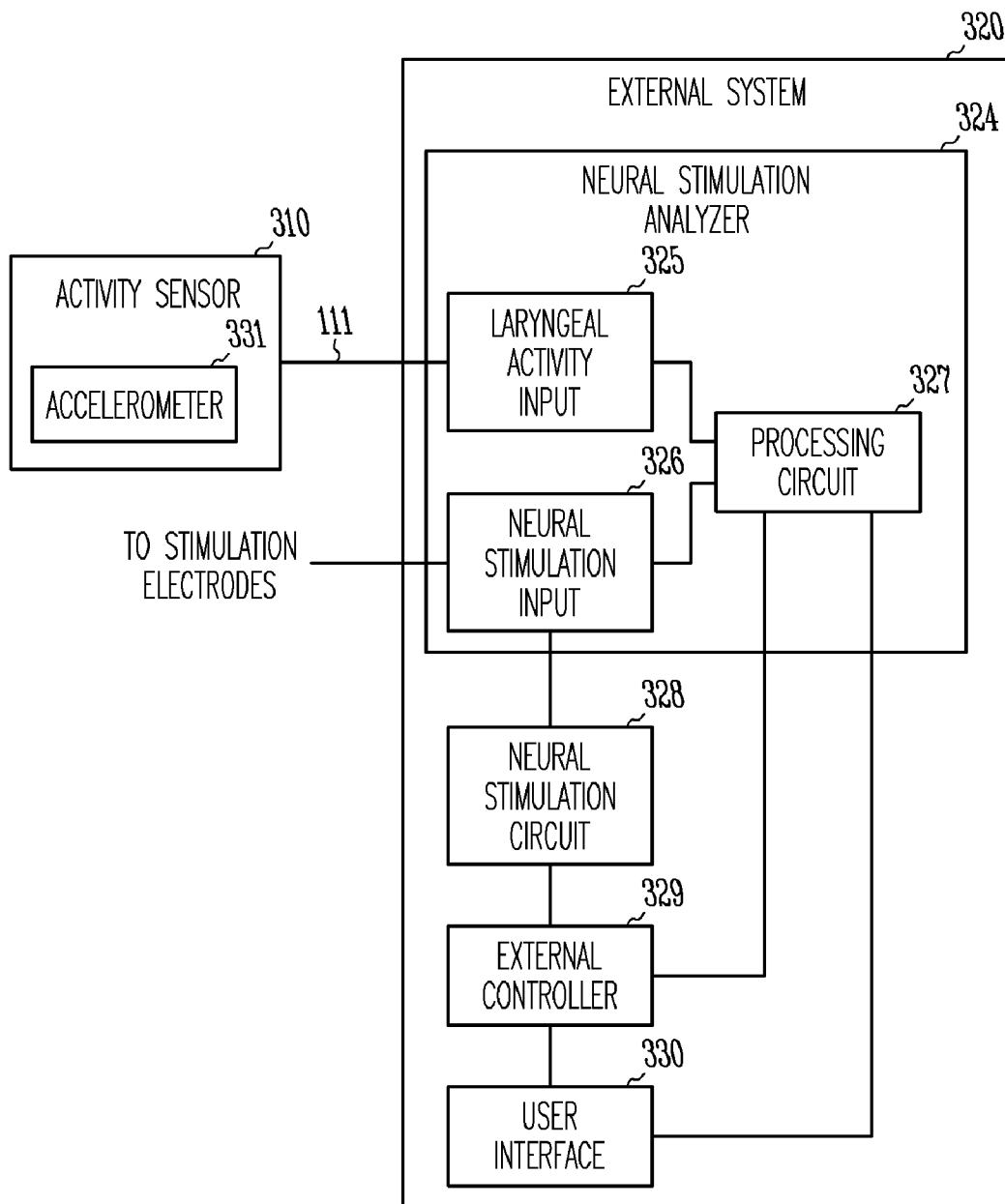
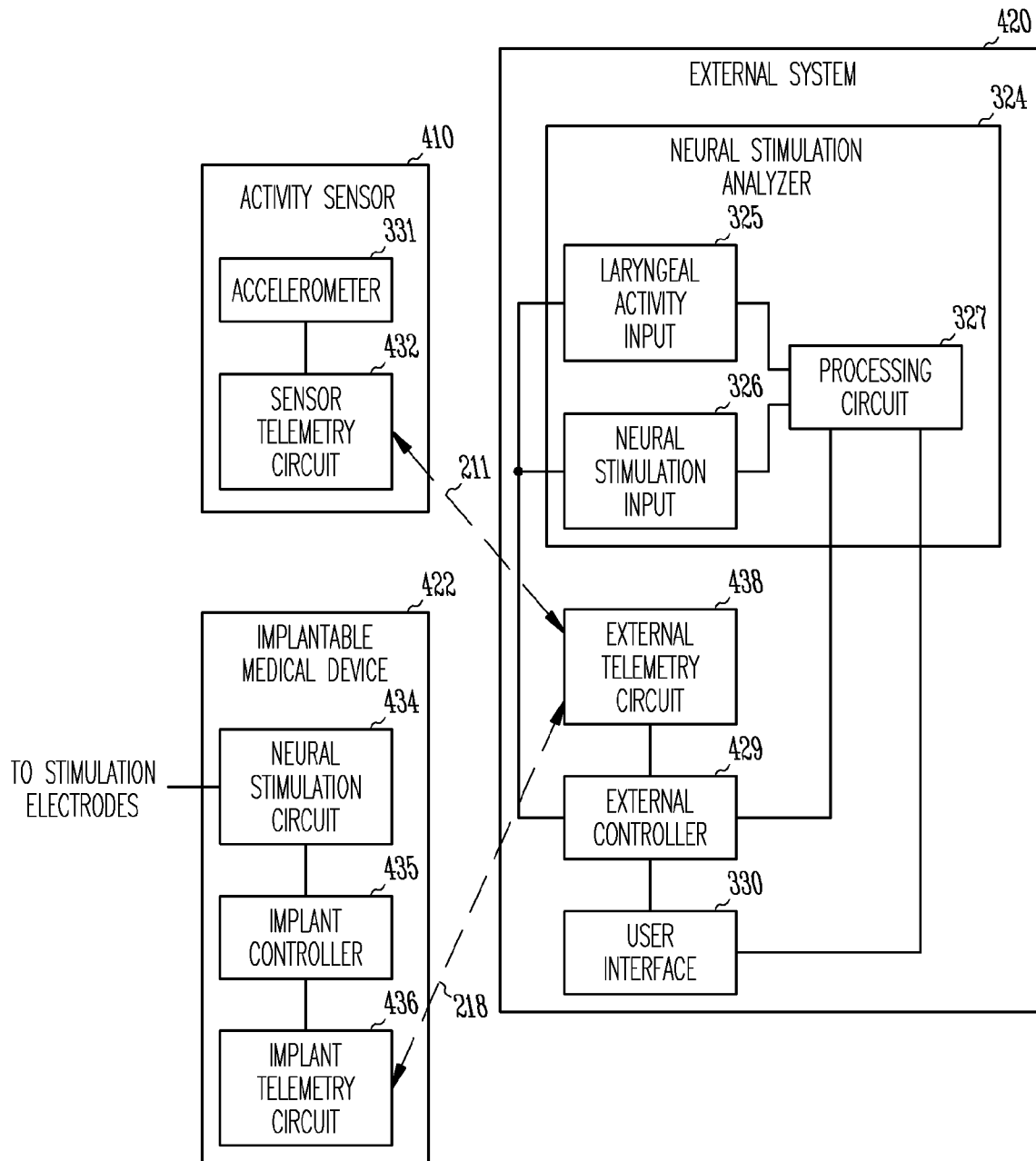


Fig. 2

*Fig. 3*

*Fig. 4*

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