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(54) **SEIZURE SENSING AND DETECTION USING AN IMPLANTABLE DEVICE**

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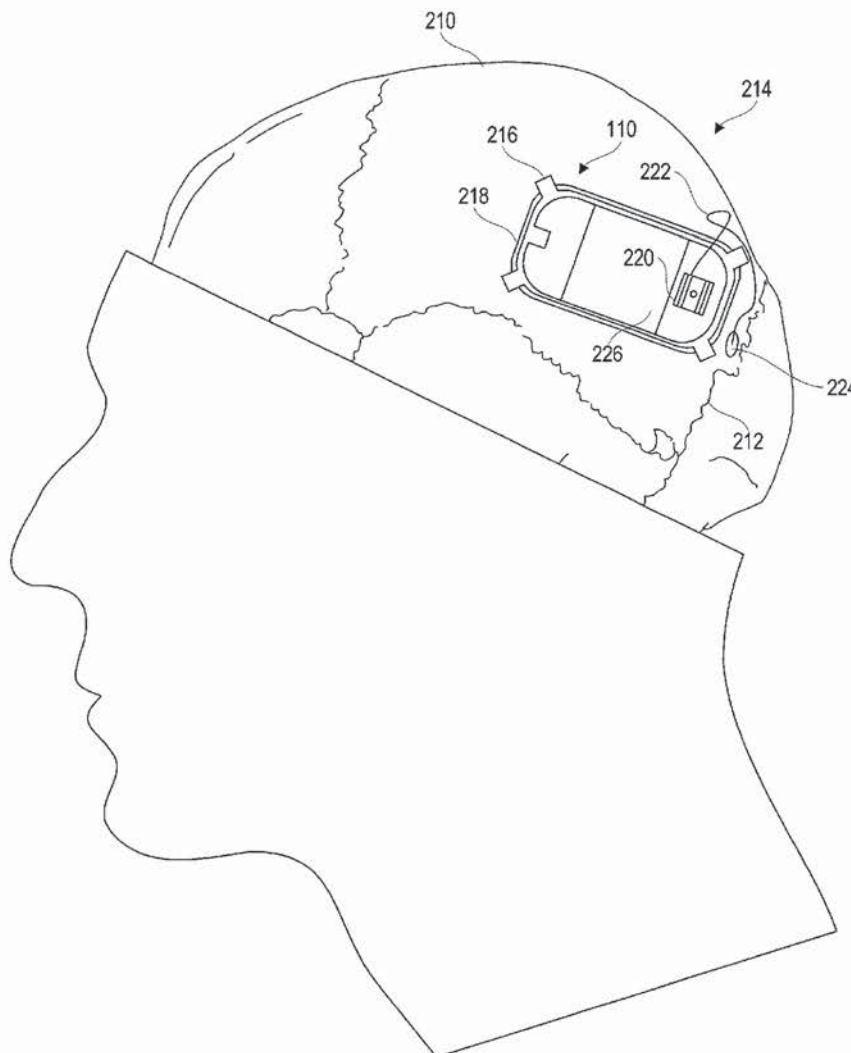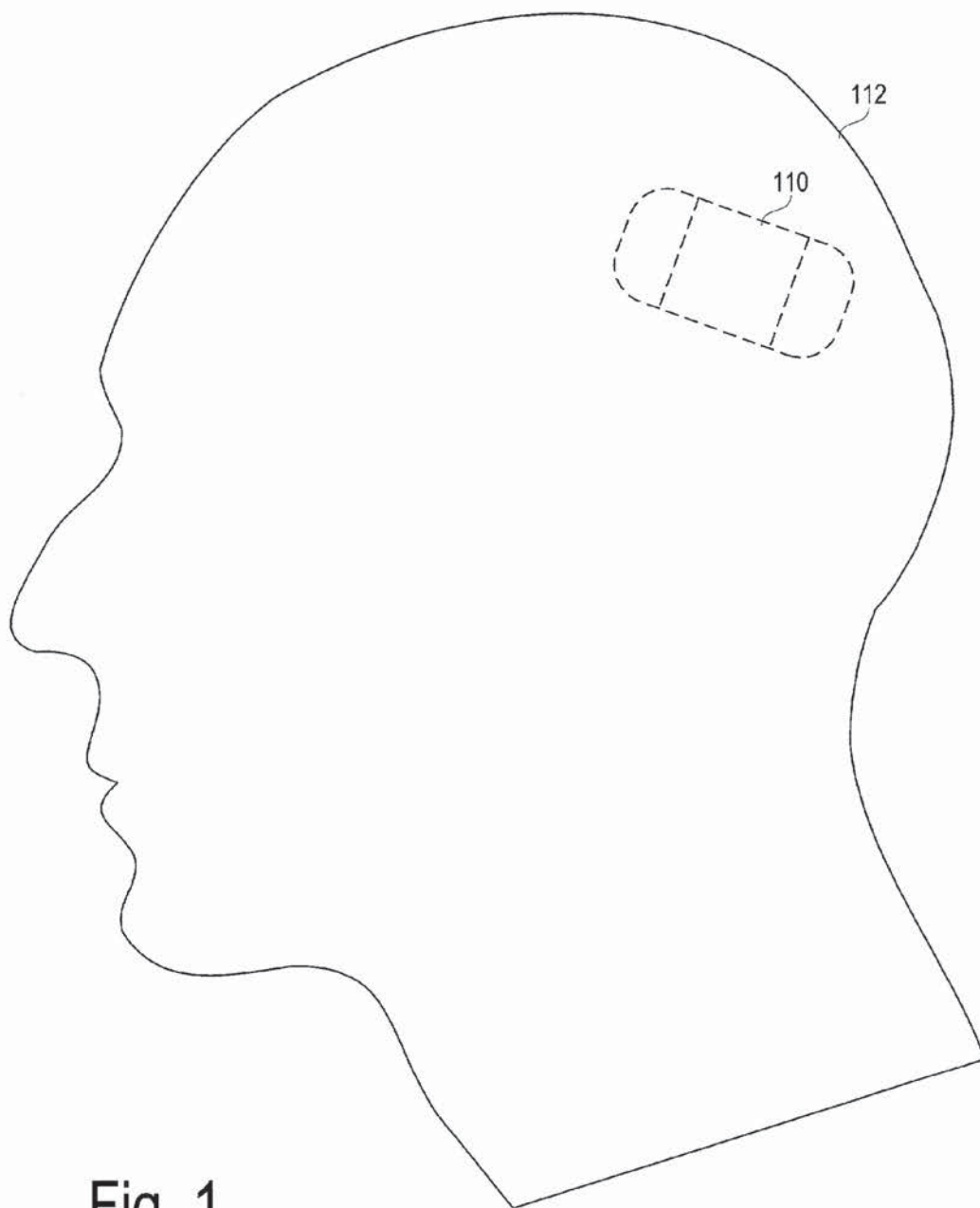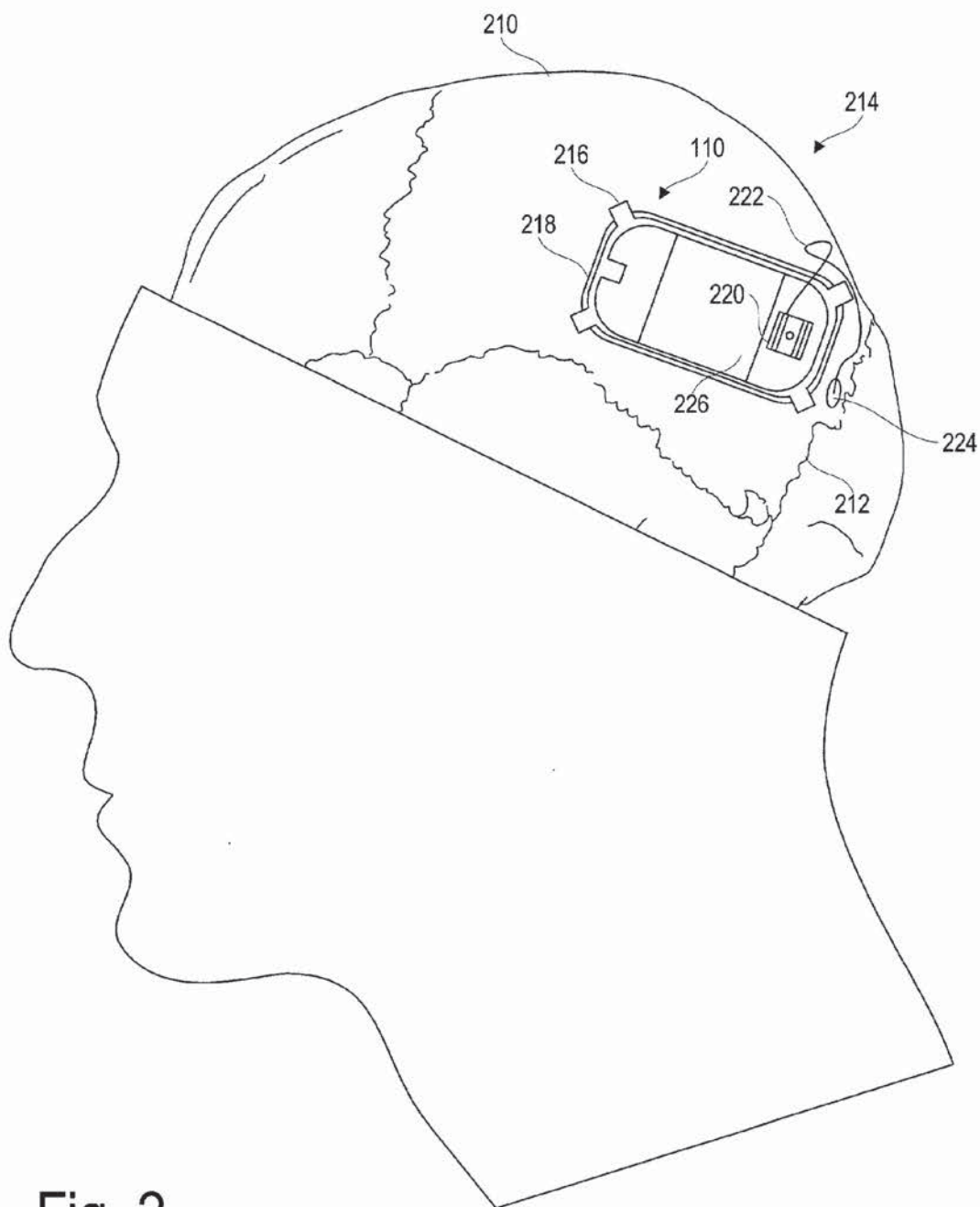(52) U.S. Cl. 600/544

(57) **ABSTRACT**

A system and method for detecting and predicting neuro-
logical events with an implantable device uses a relatively
low-power central processing unit in connection with signal
processing circuitry to identify features (including half
waves) and calculate window-based characteristics (includ-
ing line lengths and areas under the curve of the waveform)
in an electrographic signal received from a patient's brain.
The features and window-based characteristics are combin-
able in various ways according to the invention to detect and
predict neurological events in real time, enabling responsive
action by the implantable device.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

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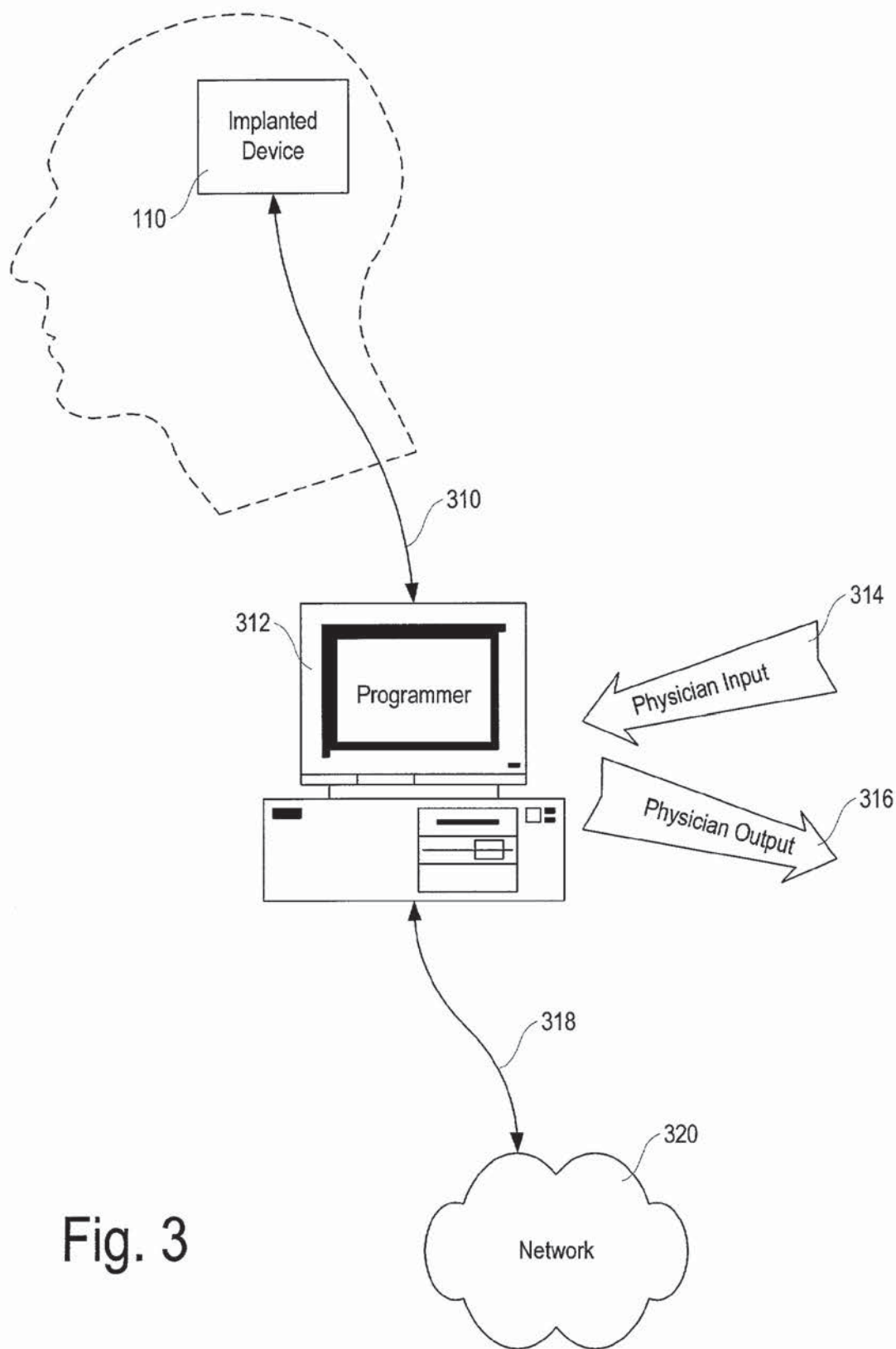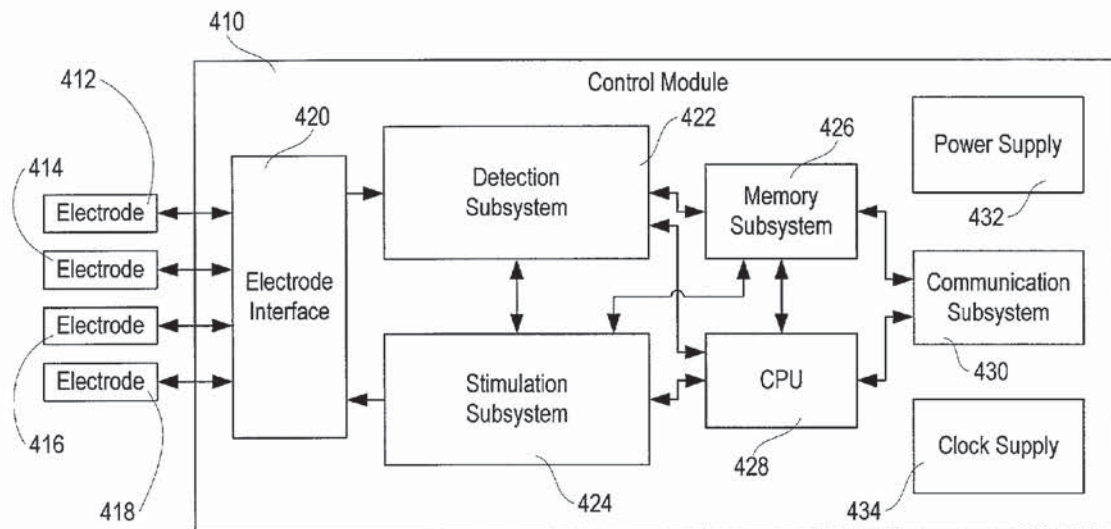
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