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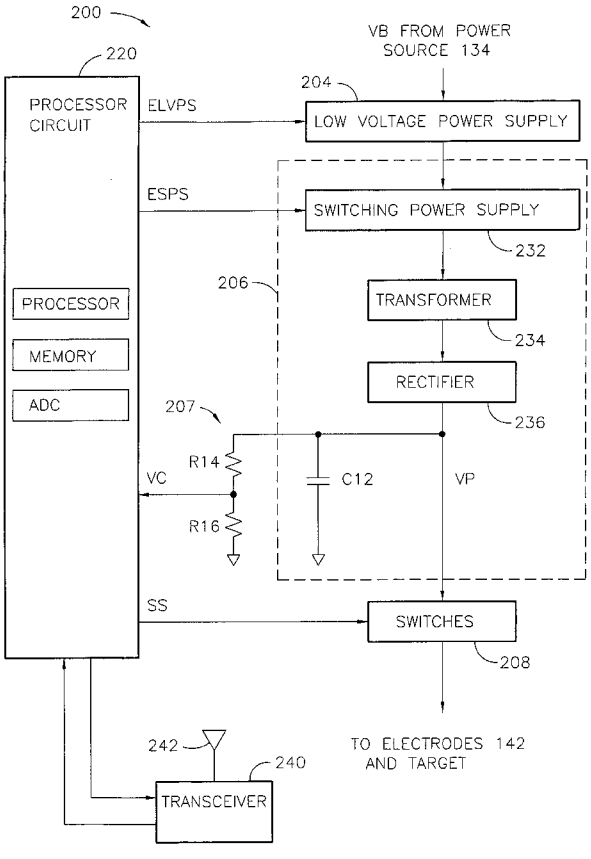
(54) Title: SYSTEMS AND METHODS FOR IMMOBILIZATION USING SELECTED ELECTRODES



(57) Abstract: Systems and methods for immobilizing a target such as a human or animal with a stimulus signal coupled to the target via numerous electrodes select particular electrodes to use for the stimulus signal. Subsets of electrodes may be tested by applying a test signal and monitoring the energy or charge delivered during a prescribed time. If the delivered energy or charge using a particular subset of electrodes as indicated by monitoring test pulse amplitude suitably compares to a limit, then the particular subset is selected for applying the stimulus signal. A first stimulus signal may be applied to a first subset of electrodes to prompt movement of the target toward an electrode that, when better coupled to the target as a consequence of movement of the target will provide a more effective subset of electrodes for further stimulus. For example, a projectile with closely spaced electrodes may stimulate a burning sensation to attract the target to impale the target's hand on a rear facing electrode of the projectile. Use of the rear facing electrode and one or more of the closely spaced electrodes may provide a more effective stimulus circuit through tissue of the target.

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