United States Patent [19]

Chaney

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[54] **MAGNETIC NEURAL STIMULATOR FOR NEUROPHYSIOLOGY**

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[73] Assignee: **Corteks, Inc.**, Chappaqua, N.Y.

[21] Appl. No.: **411,932**

[22] Filed: **Sep. 25, 1989**

[51] **Int. Cl.**[5] **A61N 2/04**

[52] **U.S. Cl.** **600/14**

[58] **Field of Search** 600/13–15; 361/156

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Assistant Examiner—Kevin Pontius
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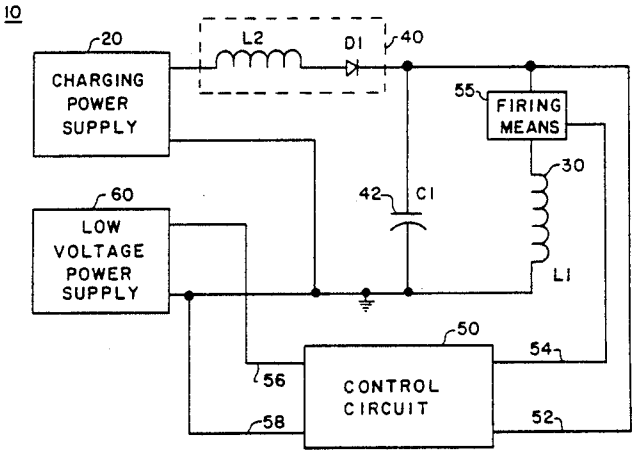
[57] **ABSTRACT**

A magnetic neural stimulator is disclosed for the stimulation of biological tissue. The stimulator includes an inductive stimulation coil, an energy storage capacitor, a firing device and a charging circuit. The energy storage capacitor is charged by the charging circuit to a voltage level which is greater than the voltage level supplied to the charging circuit. The energy storage capacitor is partially discharged into the stimulation coil thereby producing a magnetic pulse. The charging and discharging of the capacitor is continuously performed so as to produce a plurality of high frequency magnetic pulses. The stimulation coil and the energy storage capacitor operate in a resonant manner under a control circuit which performs timing and gating functions.

8 Claims, 7 Drawing Sheets



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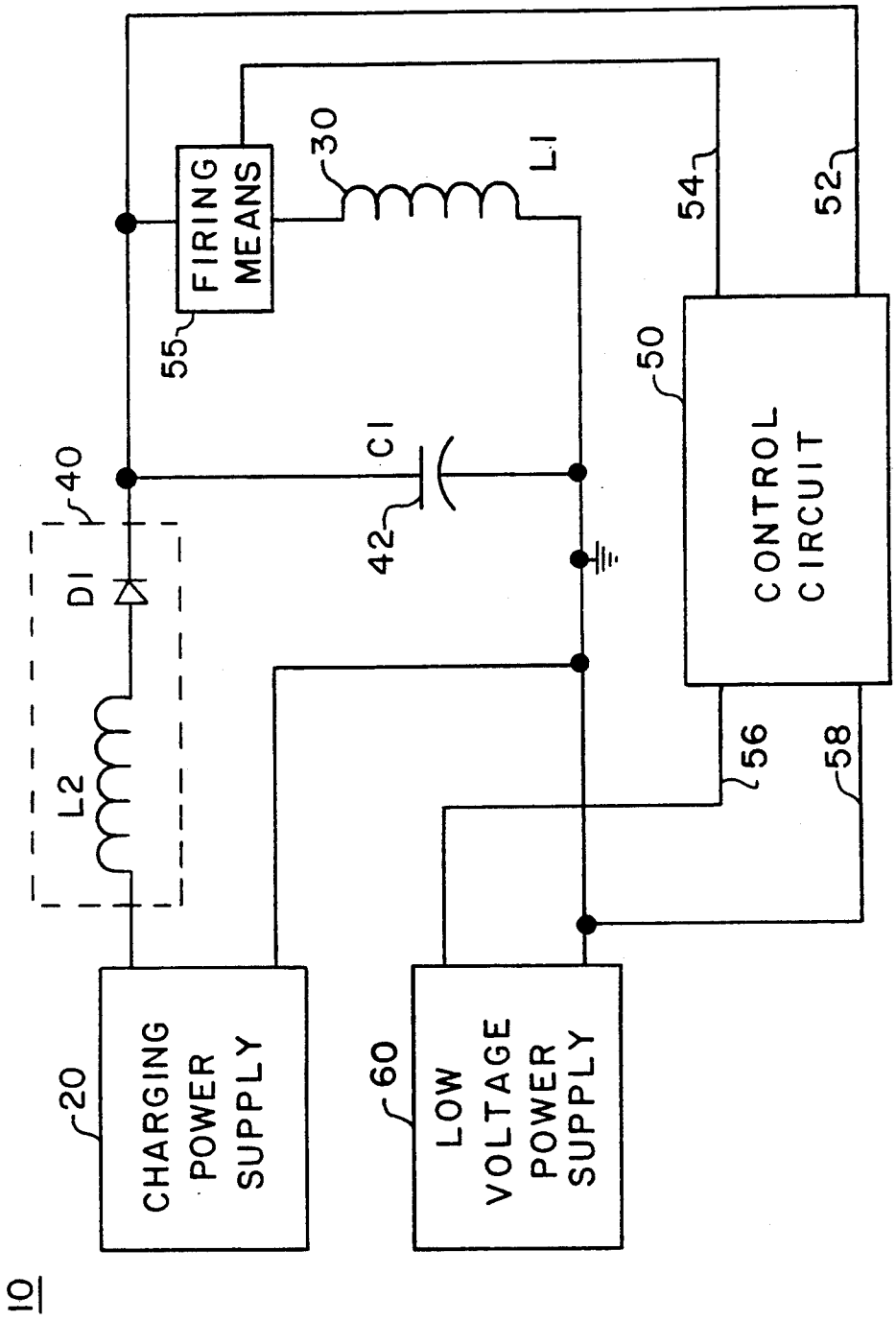

FIG. 1

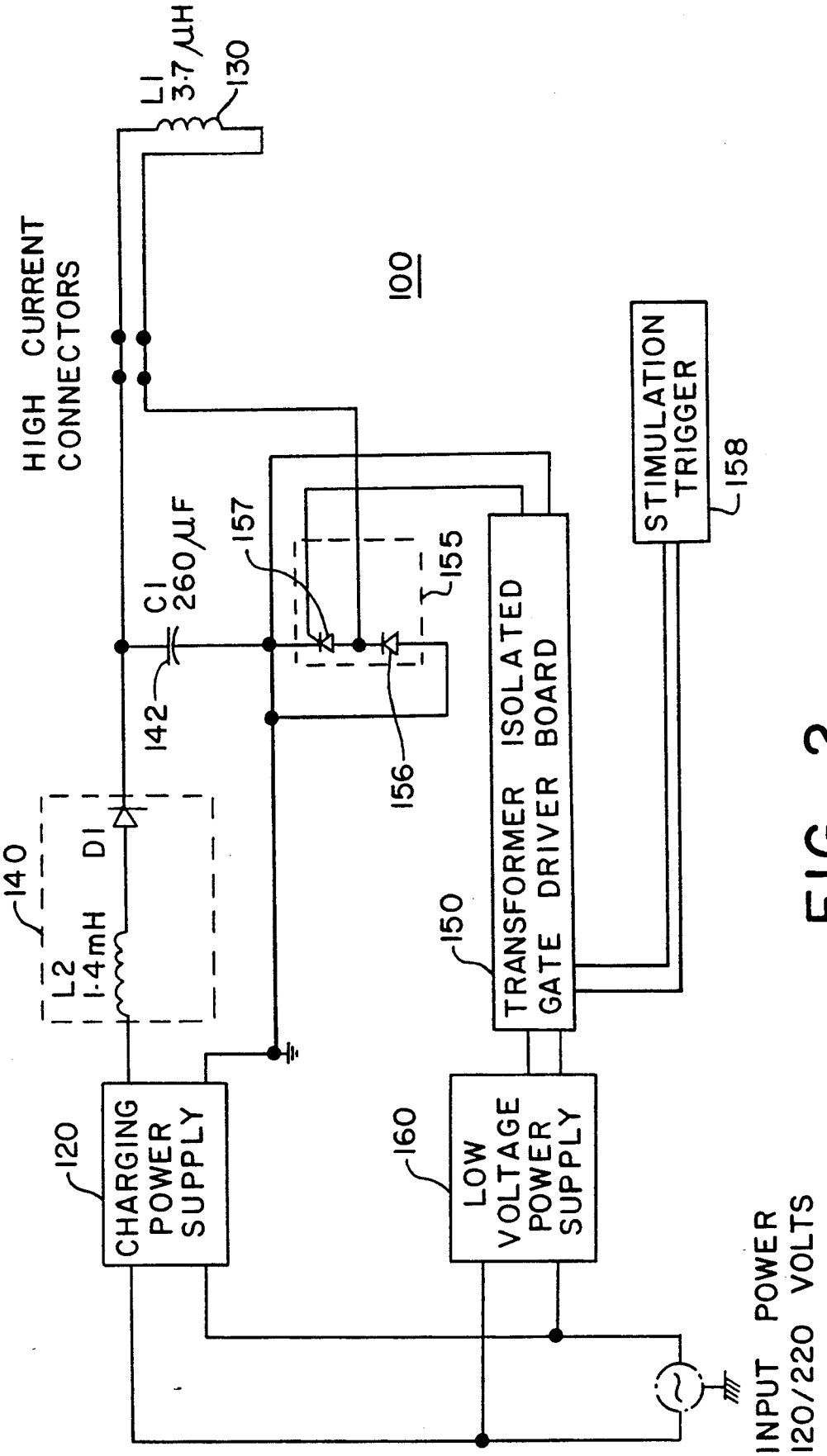

FIG. 2

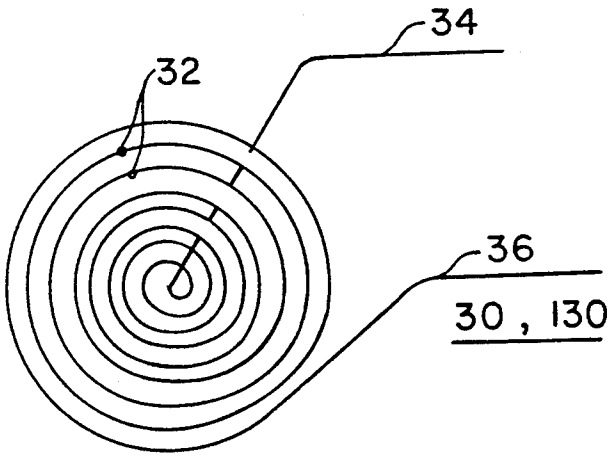

FIG. 3

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