

[54] MAGNETIC NEURAL STIMULATOR FOR NEUROPHYSIOLOGY

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

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

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Primary Examiner—William E. Kamm

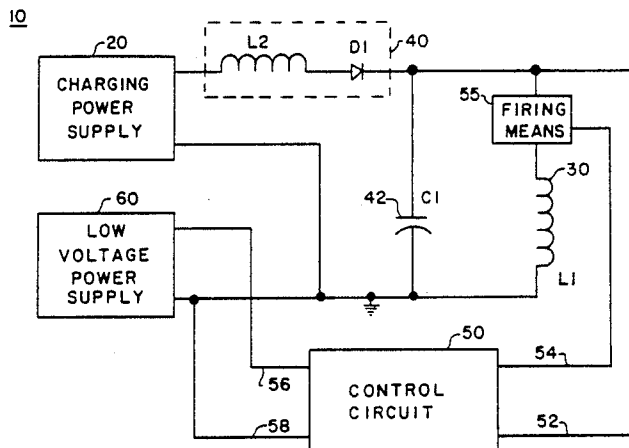
Assistant Examiner—Kevin Pontius

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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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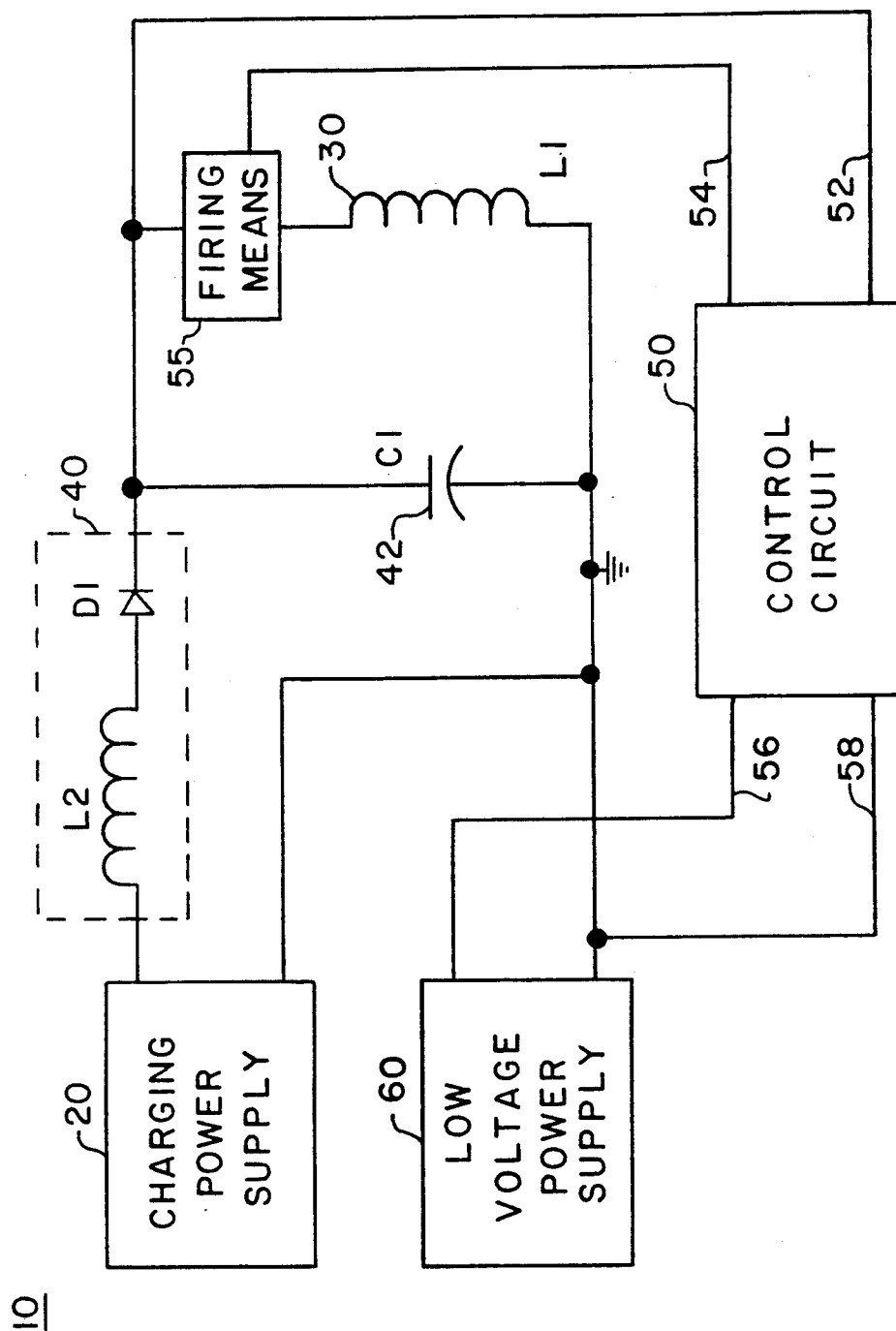


FIG. 1

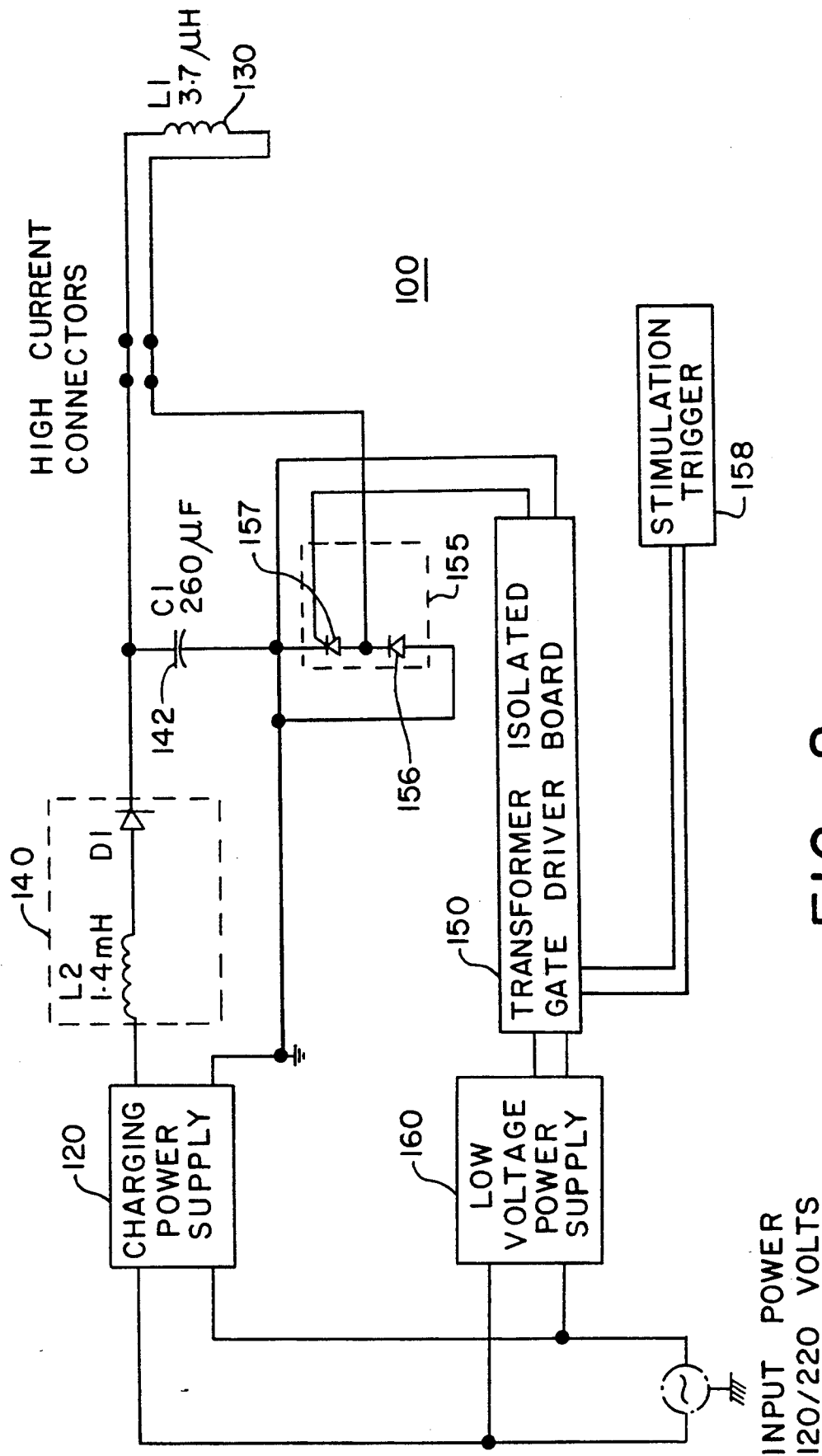


FIG. 2

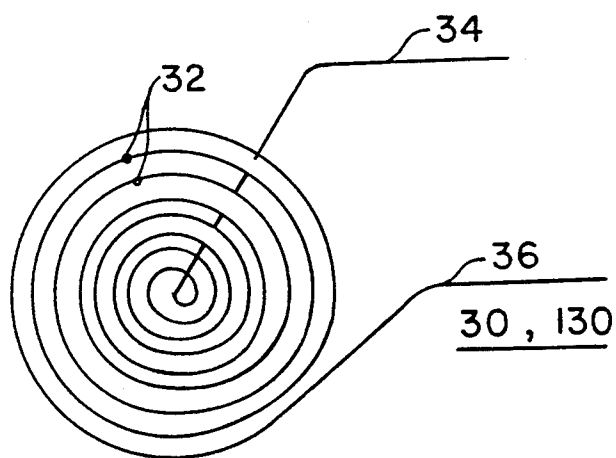


FIG. 3



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