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(54) Title: WIRELESS CHARGING SYSTEM WITH INVERTER INPUT POWER CONTROL

(57) Abstract: A wireless power transmitting device transmits wireless power signals to a wireless power receiving device using a wireless power transmitting coil. The wireless power receiving device has a rectifier and a wireless power receiving coil that receives wireless power signals. The rectifier supplies an output power to a battery charger integrated circuit. The wireless power transmitting device measures input power supplied to an inverter. The inverter supplies drive signals to the wireless power transmitting coil with a duty cycle. The transmitting device uses information on the input power, output power, and a power level demanded by the battery charger integrated circuit to make duty cycle adjustments. The duty cycle adjustments are used to identify a duty cycle setting at which the input power is minimized while the power demanded by the battery charger integrated circuit is satisfied by the output power.

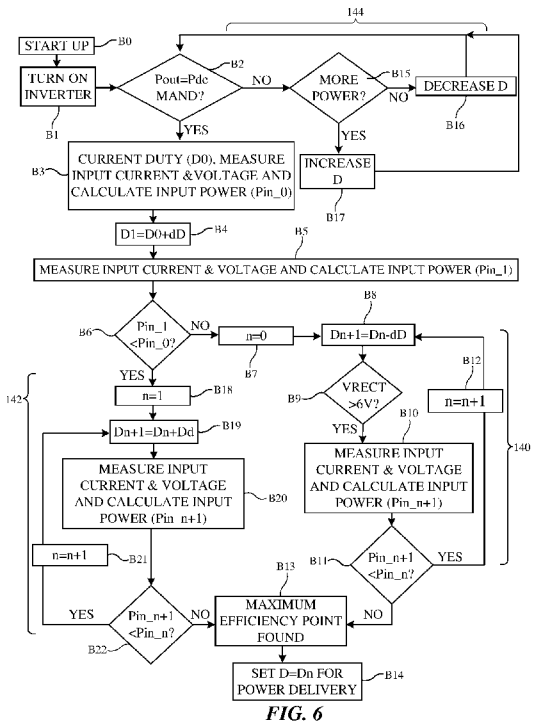

FIG. 6

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