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(54) **ELECTROMAGNETIC INDUCTION HEATING APPARATUS FOR HEATING AN AEROSOL-FORMING ARTICLE OF AN ELECTRONIC CIGARETTE AND DRIVING METHOD THEREOF**

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(57) **ABSTRACT**

An electromagnetic induction heating apparatus for heating an aerosol-forming article of an electronic cigarette includes: a power supply unit configured to supply DC power; a power amplifier including a switch unit comprising a pair of transistor switches having a differential structure and receiving DC power from the power supply unit, and a parallel-structured LC resonant network including a resonant inductor connected to an output terminal of the switch unit and electromagnetically inductively coupled with an inductor component of a heat-generating body for heating the aerosol-forming article of the electronic cigarette, and a resonant capacitor connected in parallel to the resonant inductor; and a driving unit configured to adjust a temperature of the heat-generating body by adjusting an operating frequency of the switch unit of the power amplifier to control an amount of current of the resonant inductor electromagnetically inductively coupled with the inductor component of the heat-generating body.