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Sadakata et al.

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(54) **POWER FEED DEVICE OF INDUCTIVE CHARGING DEVICE**

(58) **Field of Classification Search**
CPC H02J 7/025; H02J 17/00; H02M 1/4208; H02M 1/14

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(Continued)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 351 days.

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Related U.S. Application Data

Primary Examiner — Jared Fureman

Assistant Examiner — Fan He

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(74) *Attorney, Agent, or Firm* — McDermott Will & Emery LLP

(30) **Foreign Application Priority Data**

(57) **ABSTRACT**

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A power feeding device of a non-contact charging device includes a power factor improvement circuit which converts an AC power supply to DC, and improves a power factor, a smoothing capacitor connected to an output end of the power factor improvement circuit, an inverter circuit which includes a plurality of switching elements, and generates an AC signal using a voltage of the smoothing capacitor as a power supply, a power feeding section which feeds power based on the AC signal to a power receiving device, and a control circuit which modulates a duty factor of each of the switching elements of the inverter circuit in synchronization

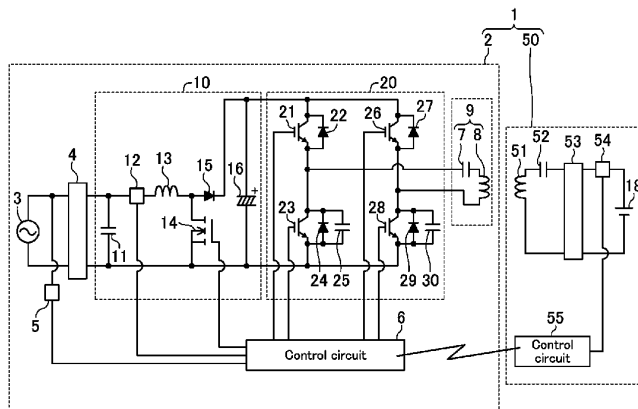
(51) **Int. Cl.**
H02M 1/14 (2006.01)
H02J 17/00 (2006.01)

(Continued)

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CPC **H02M 1/14** (2013.01); **H02J 7/025** (2013.01); **H02J 17/00** (2013.01); **H02J 50/10** (2016.02);

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with the AC power supply, wherein the control circuit controls the plurality of switching elements so that an increment of the modulated duty factor is not equal to a decrement of the modulated duty factor.

2 Claims, 7 Drawing Sheets

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H02J 7/02 (2016.01)
H02J 50/10 (2016.01)
H02J 50/80 (2016.01)
H02M 1/00 (2006.01)
- (52) **U.S. Cl.**
 CPC *H02J 50/80* (2016.02); *H02M 1/4208* (2013.01); *H02M 1/4225* (2013.01); *H02M 2001/007* (2013.01); *Y02B 70/126* (2013.01)
- (58) **Field of Classification Search**
 USPC 363/98, 40-41, 266
 See application file for complete search history.

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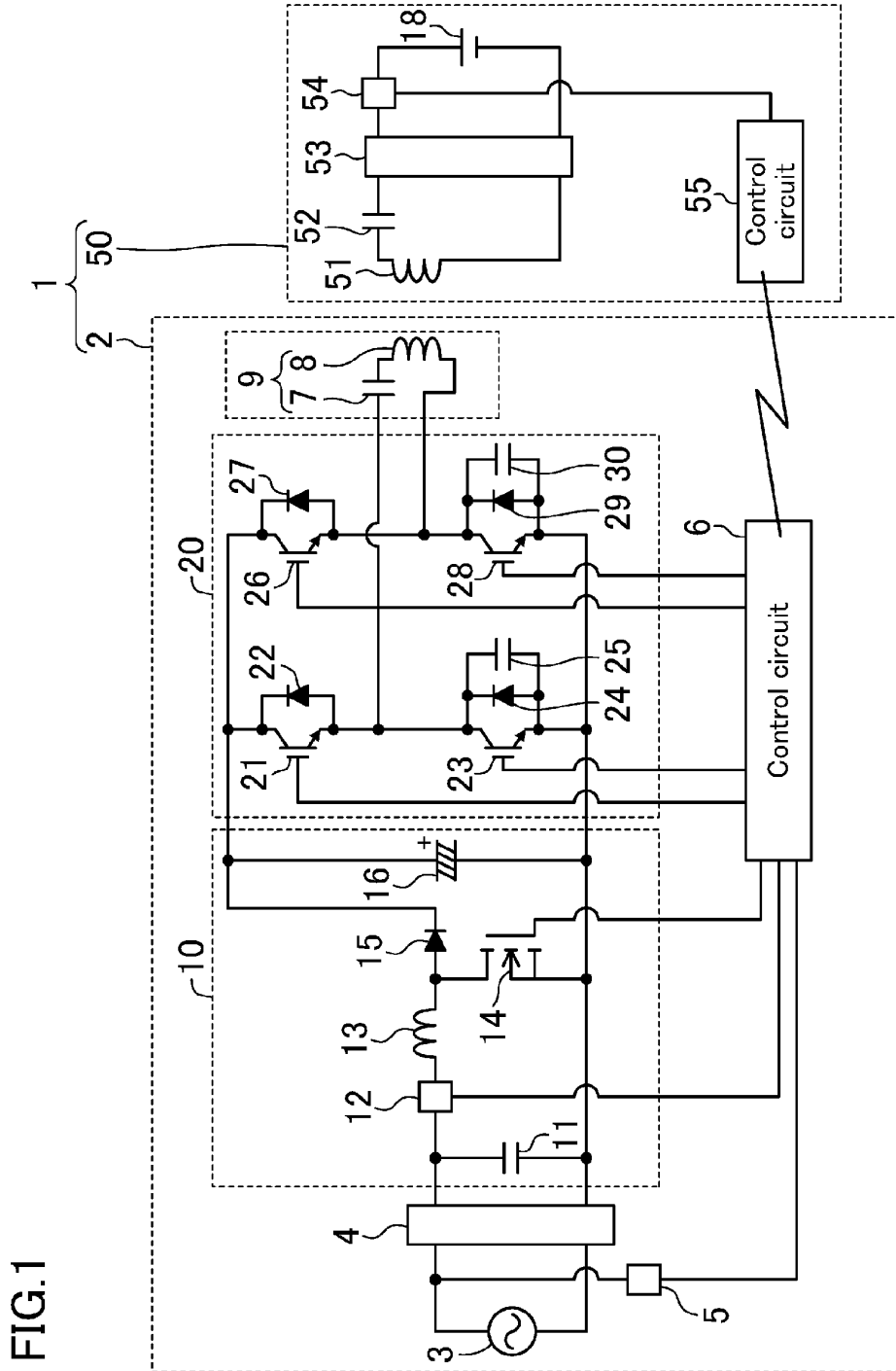


FIG.2

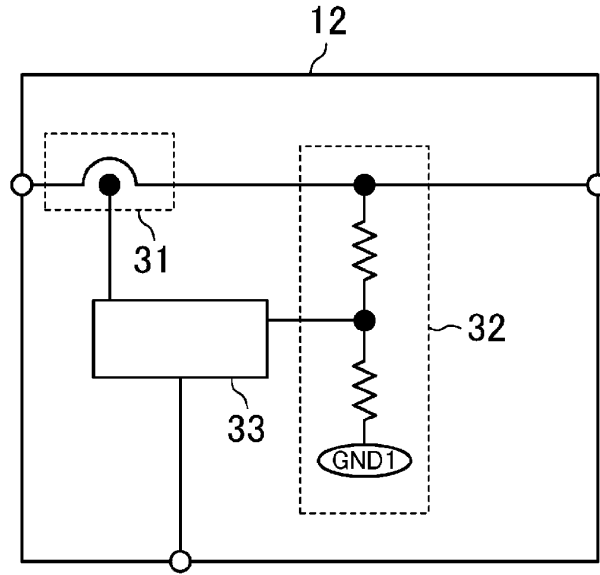
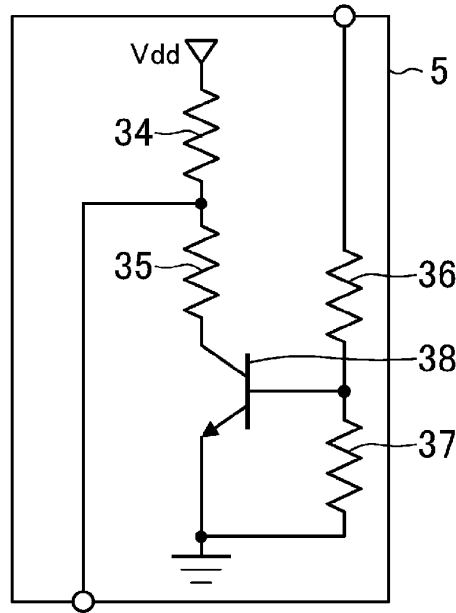
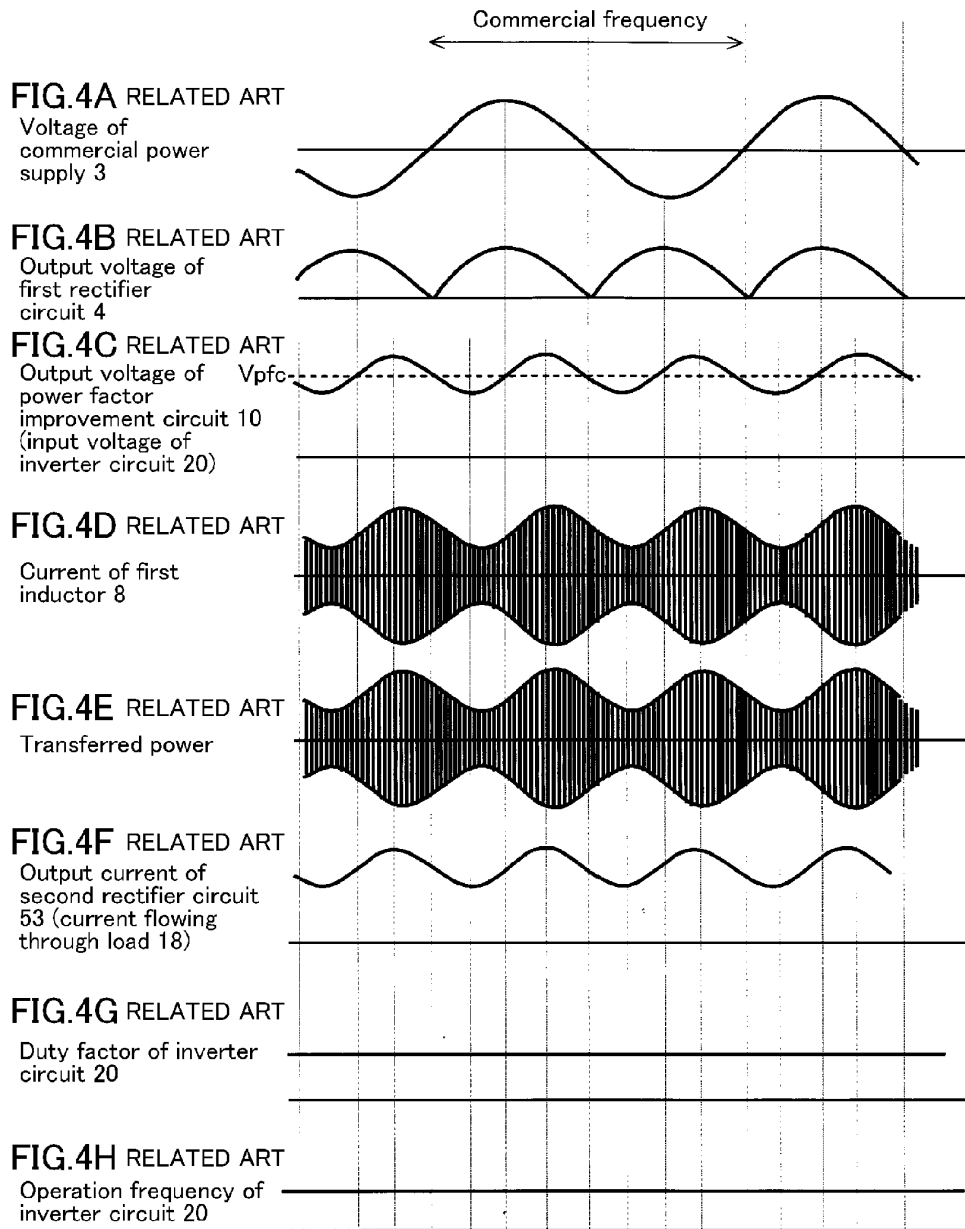


FIG.3





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