

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2022/0352756 A1 Li et al.

Nov. 3, 2022 (43) **Pub. Date:**

(54) WIRELESS POWER TRANSFER APPARATUS FOR TWS PHONE

- (71) Applicant: Nuvolta Technologies (Hefei) Co., Ltd., Hefei (CN)
- Inventors: Zhengyu Li, Shanghai (CN); Zeng Li, Shanghai (CN)
- Appl. No.: 17/325,506 (21)(22) Filed: May 20, 2021
- (30)Foreign Application Priority Data

Apr. 29, 2021 (CN) 202110471796.9

Publication Classification

(51) Int. Cl. H02J 50/12 (2006.01)H02J 50/40 (2006.01)H02J 7/00 (2006.01)

(52) U.S. Cl.

CPC H02J 50/12 (2016.02); H02J 50/40 (2016.02); H02J 7/0013 (2013.01); H02J 7/0044 (2013.01); H02J 7/0047 (2013.01); H02J 7/007182 (2020.01); H02J 2207/20 (2020.01); H04R 2420/07 (2013.01)

(57)**ABSTRACT**

A wireless power transfer apparatus includes a first switching leg connected between a first voltage bus and ground, a first transmitter coil coupled between a midpoint of the first switching leg and ground, wherein the first transmitter coil is configured to provide power for a first charger through a first receiver, a second switching leg connected between a second voltage bus and ground, and a second transmitter coil coupled between a midpoint of the second switching leg and ground, wherein the second transmitter coil is configured to provide power for a second charger through a second receiver.

100 **Battery** Unit 105 First Second Second First First Second Full Bridge Charger Receiver Receiver Magnetic Magnetic Charger Switch Coupling Coupling Switch 116 Network 110 Network 126 112 122 114 124