US 20230231417A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2023/0231417 A1**

Partovi et al. (43) **Pub. Date: Jul. 20, 2023**

(54) **SYSTEM AND METHOD FOR INDUCTIVE CHARGING OF PORTABLE DEVICES**

(71) Applicant: **Mojo Mobility Inc.**, Palo Alto, CA (US)

(72) Inventors: **Afshin Partovi**, Palo Alto, CA (US); **Michael Sears**, Ben Lomond, CA (US)

(21) Appl. No.: **18/189,468**

(22) Filed: **Mar. 24, 2023**

Related U.S. Application Data

Publication Classification

(51) **Int. Cl.**

H02J 50/10	(2006.01)
H02J 50/40	(2006.01)
H02J 50/70	(2006.01)
H02J 50/12	(2006.01)
H02J 7/00	(2006.01)
H02J 50/05	(2006.01)
H02J 50/90	(2006.01)
H02J 50/80	(2006.01)
G06F 1/16	(2006.01)

(52) **U.S. Cl.**

CPC ***H02J 50/10*** (2016.02); ***G06F 1/1683*** (2013.01); ***H02J 7/0013*** (2013.01); ***H02J 7/00041*** (2020.01); ***H02J 7/0047*** (2013.01); ***H02J 7/00714*** (2020.01); ***H02J 50/05*** (2016.02); ***H02J 50/12*** (2016.02); ***H02J 50/70*** (2016.02); ***H02J 50/80*** (2016.02); ***H02J 50/90*** (2016.02); ***H02J 50/402*** (2020.01); *H02J 2300/22* (2020.01)

(57) **ABSTRACT**

A system and method for variable power transfer in an inductive charging or power system. In accordance with an embodiment the system comprises a pad or similar base unit that contains a primary, which creates an alternating magnetic field. A receiver comprises a means for receiving the energy from the alternating magnetic field from the pad and transferring it to a mobile device, battery, or other device. In accordance with various embodiments, additional features can be incorporated into the system to provide greater power transfer efficiency, and to allow the system to be easily modified for applications that have different power requirements. These include variations in the material used to manufacture the primary and/or the receiver coils; modified circuit designs to be used on the primary and/or receiver side; and additional circuits and components that perform specialized tasks, such as mobile device or battery identification, and automatic voltage or power-setting for different devices or batteries.