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NGUYEN et al.(10) **Pub. No.: US 2022/0360114 A1**(43) **Pub. Date: Nov. 10, 2022**(54) **POWER SUPPLY APPARATUS AND POWER SUPPLY SYSTEM**(52) **U.S. Cl.**CPC *H02J 50/60* (2016.02); *H02J 50/40* (2016.02); *H02J 50/23* (2016.02)(71) Applicant: **OMRON Corporation**, Kyoto-shi, Kyoto (JP)(72) Inventors: **Manh Tai NGUYEN**, Kyoto-shi, Kyoto (JP); **Kentaro HAMANA**, Kyoto-shi, Kyoto (JP); **Akito MURAI**, Kyoto-shi, Kyoto (JP); **Yoshiki SUGIMOTO**, Kyoto-shi, Kyoto (JP)

(57)

ABSTRACT

A power supply apparatus according to the present invention includes a power supply antenna, a directivity control unit, a position information acquisition unit, and a control unit. The power supply antenna emits, to a plurality of power reception apparatuses, a radio wave that is based on a power supply signal. The directivity control unit controls directivity of the power supply antenna. The position information acquisition unit acquires position information indicating a position of a moving obstruction. The control unit determines, based on the position information, a power reception apparatus, among the plurality of power reception apparatuses, to which power is supplied while avoiding the obstruction. The control unit controls the directivity control unit to steer the radio wave toward the determined power reception apparatus.

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