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(54) **OBJECT DETECTION IN WIRELESS CHARGING SYSTEMS AND RELATED SYSTEMS, METHODS, AND DEVICES**

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See application file for complete search history.

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(57) **ABSTRACT**

Foreign object detection for wireless power transmission and related systems, methods, and devices are disclosed. A controller for a wireless power transmitter is to determine a transmit coil voltage potential at a transmit coil of the wireless power transmitter, determine an input power provided to the wireless power transmitter, determine a transmitter power loss, and determine a transmitted power of the wireless power transmitter to the wireless power receiver based, at least in part, on the input power and the transmitter power loss. The controller is also to compute a power loss responsive to the transmitted power and a received power indicated by the wireless power receiver, and determine that a foreign object is detected responsive to a determination that the power loss is greater than a predetermined threshold.

16 Claims, 11 Drawing Sheets

