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Azancot et al.(10) **Pub. No.: US 2023/0231416 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **PINLESS POWER COUPLING**

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H01F 27/28 (2006.01)(73) Assignee: **POWERMAT TECHNOLOGIES LTD.**, Petah Tikva (IL)(52) **U.S. Cl.**
CPC **H02J 50/10** (2016.02); **H01F 38/14** (2013.01); **H02J 50/90** (2016.02); **H01F 27/2804** (2013.01); **H01F 27/2885** (2013.01); **H01F 2027/2809** (2013.01)(21) Appl. No.: **18/186,415**(22) Filed: **Mar. 20, 2023****Related U.S. Application Data**

(63) Continuation of application No. 17/902,393, filed on Sep. 2, 2022, now Pat. No. 11,611,240, which is a continuation of application No. 17/467,382, filed on Sep. 6, 2021, now Pat. No. 11,437,852, which is a continuation of application No. 16/828,410, filed on Mar. 24, 2020, now Pat. No. 11,114,895, which is a continuation of application No. 15/499,335, filed on Apr. 27, 2017, now abandoned, which is a continuation of application No. 14/024,051, filed on Sep. 11, 2013, now Pat. No. 9,666,360, which is a continuation of application No. 12/524,987, filed on Mar. 10, 2010, now Pat. No. 8,629,577, filed as application No. PCT/IL2008/000124 on Jan. 28, 2008.

(60) Provisional application No. 60/897,868, filed on Jan. 29, 2007, provisional application No. 60/935,694,

(57) **ABSTRACT**

A pinless power plug for receiving wireless power from a pinless power jack is disclosed. The pinless power plug may comprise at least one secondary coil for inductively coupling with a primary coil. The primary coil may be associated with the pinless power jack. The primary coil may be shielded behind an insulating layer. The pinless power plug may comprise an annular magnetic anchor arranged around a perimeter of the at least one secondary coil concentric and non-overlapping with the at least one secondary coil. The annular magnetic anchor may be configured to magnetically couple with an annular magnetic snag in the pinless power jack. The pinless power plug may comprise at least one magnet spaced away from and outside of the annular magnetic anchor. The at least one magnet may be configured to magnetically couple with a magnet in the pinless power jack at a particular orientation or angle.