US 20240235253A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2024/0235253 A1**

GOTTFRIED (43) **Pub. Date: Jul. 11, 2024**

(54) **UNINTERRUPTIBLE POWER SUPPLY SYSTEM WITH ENGINE START-UP**

(71) Applicant: **Potencia Industrial LLC**, Laredo, TX (US)

(72) Inventor: **Tomas GOTTFRIED**, Mexico City (MX)

(21) Appl. No.: **18/487,249**

(22) Filed: **Oct. 16, 2023**

Related U.S. Application Data

(63) Continuation-in-part of application No. 16/926,912, filed on Jul. 13, 2020, now Pat. No. 11,788,499, which is a continuation-in-part of application No. 16/353,744, filed on Mar. 14, 2019, now Pat. No. 10,855,141, which is a continuation-in-part of application No. 15/811,104, filed on Nov. 13, 2017, now abandoned.

Publication Classification

(51) **Int. Cl.**

H02J 9/08	(2006.01)
H02K 3/28	(2006.01)
H02K 19/26	(2006.01)

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

CPC ***H02J 9/08*** (2013.01); ***H02K 3/28*** (2013.01); ***H02K 19/26*** (2013.01)

(57) **ABSTRACT**

An uninterruptible power supply system has a regulated power source, an electrical generator electrically interconnected to the regulated power source, an engine having a main shaft integral with or coupled to the shaft of the electrical generator, a rotating rectifier mounted onto a shaft of the electrical generator, a mains power supply, a switch connected between the electrical generator, the mains power supply and a synchronous machine of the regulated power source, a synchronous generator, and an uninterruptible load. The regulated power source has a housing, a synchronous machine, a synchronous generator, and a flywheel sharing a common shaft. The electrical generator has a shaft coupled to a combustion engine. The switch transfers power from the synchronous machine to the electrical generator to cause the electrical generator to rotate its shaft or the main shaft of the engine. A short-stop load is supplied power from the electrical generator.