

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0178763 A1 **Swamy**

May 30, 2024 (43) **Pub. Date:**

(54) POWER SUPPLY INCLUDING A RECONFIGURABLE ACTIVE FRONT END **CONVERTER**

(71) Applicant: MILWAUKEE ELECTRIC TOOL CORPORATION, Brookfield, WI (US)

Inventor: Mahesh M. Swamy, Gurnee, IL (US)

Appl. No.: 18/525,677

(22) Filed: Nov. 30, 2023

Related U.S. Application Data

(60) Provisional application No. 63/386,703, filed on Dec. 9, 2022, provisional application No. 63/385,421, filed on Nov. 30, 2022.

Publication Classification

(51) Int. Cl. H02M 7/217 (2006.01)H02M 3/155 (2006.01)

U.S. Cl. (52)CPC H02M 7/217 (2013.01); H02M 3/155 (2013.01)

ABSTRACT (57)

A portable power supply may include an internal power source and a active front-end converter connected to the internal power source. The active front-end converter includes a positive DC connector lead, a negative DC connector lead, a positive source side lead, a negative source side lead, and a plurality of switches. The active front-end converter is configured to operate as a DC-DC converter for DC input signals and an AC-DC inverter for AC input signals. The portable power supply also includes an AC source input, and a DC source input.

