



US 20220368175A1

(19) **United States**(12) **Patent Application Publication**
Hunstable(10) **Pub. No.: US 2022/0368175 A1**(43) **Pub. Date: Nov. 17, 2022**(54) **MULTI-TUNNEL ELECTRIC
MOTOR/GENERATOR**(71) Applicant: **Linear Labs, LLC**, Granbury, TX (US)(72) Inventor: **Fred E. Hunstable**, Granbury, TX (US)(21) Appl. No.: **17/825,616**(22) Filed: **May 26, 2022****Related U.S. Application Data**

(63) Continuation of application No. 16/566,132, filed on Sep. 10, 2019, now Pat. No. 11,374,442, which is a continuation of application No. 16/374,132, filed on Apr. 3, 2019, now Pat. No. 10,439,452, which is a continuation of application No. 15/657,173, filed on Jul. 23, 2017, now Pat. No. 10,256,680, which is a continuation of application No. 15/492,529, filed on Apr. 20, 2017, now Pat. No. 9,729,016, which is a continuation-in-part of application No. PCT/US2016/026776, filed on Apr. 8, 2016, said application No. 15/492,529 is a continuation-in-part of application No. 14/866,788, filed on Sep. 25, 2015, now Pat. No. 10,263,480, which is a continuation-in-part of application No. 13/848,048, filed on Mar. 20, 2013, now Pat. No. 9,419,483.

(60) Provisional application No. 62/173,349, filed on Jun. 9, 2015, provisional application No. 62/167,412, filed on May 28, 2015, provisional application No. 62/144,654, filed on Apr. 8, 2015, provisional application No. 62/056,389, filed on Sep. 26, 2014, provisional appli-

cation No. 62/055,615, filed on Sep. 25, 2014, provisional application No. 62/055,612, filed on Sep. 25, 2014, provisional application No. 61/613,022, filed on Mar. 20, 2012.

Publication Classification(51) **Int. Cl.****H02K 1/02** (2006.01)**H02K 3/12** (2006.01)**H02K 21/12** (2006.01)**H02K 21/24** (2006.01)**H02K 1/27** (2006.01)**H02K 3/18** (2006.01)(52) **U.S. Cl.**

CPC **H02K 1/02** (2013.01); **H02K 3/12** (2013.01); **H02K 21/12** (2013.01); **H02K 21/24** (2013.01); **H02K 1/27** (2013.01); **H02K 3/18** (2013.01); **H02K 21/14** (2013.01)

(57)

ABSTRACT

Disclosed are various embodiments for a new and improved electrical motor/generator, specifically a motor/generator comprising: a plurality of coils radially positioned about a coil assembly, a plurality of magnetic tunnels forming a relative rotational path for the coil assembly, wherein the all of plurality of magnets forming each magnetic tunnel have like poles facing inward toward the interior of the magnetic tunnel or facing outward away from the interior of the magnetic tunnel such that each magnetic field of any magnetic tunnel is of an opposite polarity to the magnetic field of an adjacent magnetic tunnel.

