



US 20240213849A1

(19) **United States**

(12) **Patent Application Publication**
CIRINCIONE, II

(10) **Pub. No.: US 2024/0213849 A1**

(43) **Pub. Date: Jun. 27, 2024**

(54) **MAGNETIC TRANSMISSION AND POWER
TOOL HAVING A MAGNETIC
TRANSMISSION**

H02K 1/2733 (2006.01)

H02K 1/276 (2006.01)

H02K 9/06 (2006.01)

(71) Applicant: **Black & Decker Inc.**, New Britain, CT
(US)

(52) **U.S. Cl.**
CPC *H02K 7/145* (2013.01); *B24B 23/028*
(2013.01); *H02K 1/2733* (2013.01); *H02K*
1/2766 (2013.01); *H02K 9/06* (2013.01)

(72) Inventor: **ROBERT JOHN CIRINCIONE, II**,
Cockeysville, MD (US)

(73) Assignee: **Black & Decker Inc.**, New Britain, CT
(US)

(57) **ABSTRACT**

(21) Appl. No.: **18/523,056**

(22) Filed: **Nov. 29, 2023**

Related U.S. Application Data

(60) Provisional application No. 63/477,065, filed on Dec.
23, 2022.

Publication Classification

(51) **Int. Cl.**
H02K 7/14 (2006.01)
B24B 23/02 (2006.01)

An electric hand-held power tool can include a motor shaft that includes an input portion that is configured to couple to a motor of the electric hand-held power tool and includes an output portion that is rigidly coupled to the input portion of the motor shaft. A magnetic transmission can be concentrically surrounding the motor shaft between the input portion of the motor shaft and the output portion of the motor shaft, to form a motor shaft channel through the magnetic transmission through which the motor shaft extends from the input portion of the motor shaft to the output portion of the motor shaft.

