

Title (en)
DRIVE MOTOR WITH A GROOVE COVER

Title (de)
ANTRIEBSMOTOR MIT EINER NUTABDECKUNG

Title (fr)
MOTEUR D'ENTRAÎNEMENT DOTÉ D'UN ÉLÉMENT DE RECOUVREMENT DE RAINURE

Publication
EP 3963693 A1 20220309 (DE)

Application
EP 20723373 A 20200430

Priority
• DE 102019111336 A 20190502
• EP 2020062057 W 20200430

Abstract (en)
[origin: WO202221871A1] The invention relates to a drive motor for a suction tool (400) or a machine tool in the form of a hand-held power tool (200, 300) or a semi-stationary machine tool. The drive motor has a stator (80) with an excitation coil assembly (86) and a rotor (40, 140) with a motor shaft (30, 130) which is rotatably mounted on the stator or relative to the stator (80) about a rotational axis (D) by means of a bearing assembly (24A). The rotor (40, 140) is received in a rotor receiving area (82) of the stator (80), the inner circumference of said receiving area having grooves (89) which extend along longitudinal axes (L9) that run parallel to the rotational axis (D) in particular, and the receiving area has insertion openings (89D) which are open towards the rotational axis (D), are provided for inserting excitation coils (87) of the excitation coil assembly (86), and are closed by groove covers (180). The groove covers (180) are in engagement with rear-engagement contours (89E) of the grooves (89) at opposite groove cover longitudinal sides (195), each of which extends along the longitudinal axis (L9) of the respective groove (89), said longitudinal axis (L9) being transverse to a transverse spacing (Q) between the longitudinal sides, and the groove covers have a wall section (184) for covering the groove (89) between the longitudinal sides (195), wherein the rear-engagement contours (89E) support the groove cover (180) towards the rotational axis (D) and hold the groove cover in the respective groove (89). The transverse spacing (Q) between the longitudinal sides (195) of at least one groove cover (180) can be modified such that the groove cover (180) can be introduced into the groove (89) past the rear-engagement contours (89E) of the groove (89) in a movement direction radial to the rotational axis (D) of the rotor (40, 140) and can be brought into rear engagement with the rear-engagement contours (89E) of the groove (89) at the longitudinal sides (195) of the cover.

IPC 8 full level
H02K 3/487 (2006.01); **H02K 15/02** (2006.01)

CPC (source: EP US)
H02K 1/276 (2013.01 - EP); **H02K 3/487** (2013.01 - EP); **H02K 5/04** (2013.01 - US); **H02K 7/083** (2013.01 - US); **H02K 7/145** (2013.01 - US); **H02K 15/02** (2013.01 - EP); **H02K 15/14** (2013.01 - US); **H02K 21/16** (2013.01 - US); **H02K 3/325** (2013.01 - EP); **H02K 3/522** (2013.01 - EP)

Citation (search report)
See references of WO 2020221871A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
DE 102019111336 A1 20201105; CN 113711472 A 20211126; CN 113711472 B 20240308; EP 3963693 A1 20220309; JP 2022529897 A 20220627; JP 7500606 B2 20240617; US 11894747 B2 20240206; US 2022224184 A1 20220714; WO 2020221871 A1 20201105

DOCDB simple family (application)
DE 102019111336 A 20190502; CN 202080032729 A 20200430; EP 2020062057 W 20200430; EP 20723373 A 20200430; JP 2021559317 A 20200430; US 202017607212 A 20200430