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(19) **United States**(12) **Patent Application Publication****Vogt et al.**(10) **Pub. No.: US 2024/0213839 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **STATOR OF AN ELECTRIC MACHINE**(71) Applicant: **Robert Bosch GmbH**, Stuttgart (DE)(72) Inventors: **Bastian Vogt**, Backnang (DE); **Daniel Kuehbacher**, Stuttgart (DE); **Daniel Gremmel**, Hohenhameln (DE); **Felix Bensing**, Stuttgart (DE)(21) Appl. No.: **18/557,637**(22) PCT Filed: **Mar. 28, 2022**(86) PCT No.: **PCT/EP2022/058102**

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(57)

ABSTRACT

The invention relates to a stator (1) of an electric machine (23) having a stator axis (2) and having a laminated core (3) on which stator teeth (4) and stator slots (5) located between the stator teeth (4) are formed and which has a large number of laminations (6), wherein the stator teeth (4) are interconnected via an annular stator yoke (7), wherein a single conductor (9) or a conductor bundle (10) comprising a plurality of conductors (9), in particular a stack of flat-wire conductors, is provided in each of the stator slots (5) in order to form an electrical stator winding (8), wherein a plurality of support points (11) which are spaced apart from one another in the axial direction with respect to the stator axis (2) are formed in each of the stator slots (5) in order to clamp the conductor (9) or conductor bundle (10) in each stator slot (5), wherein at least one slot gap (19) is formed between the walls (4.2, 5.1) of each stator slot (5) and the conductor or conductor bundle (9, 10) arranged in the stator slot (5), which slot gap forms a slot gap channel (20) which extends in the axial direction and through which a cooling medium, in particular oil, can flow, characterized in that

the support points (11) are each formed by twisting individual or a plurality of laminations (6) of the laminated core (3), in particular a group (12) or a plurality of groups (12) of laminations (6).

