US 20220352803A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2022/0352803 A1**

Jagodzinski (43) **Pub. Date: Nov. 3, 2022**

(54) **ELECTROMAGNETIC ACTUATOR**

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(21) Appl. No.: **17/760,952**

(22) PCT Filed: **Sep. 10, 2020**

(86) PCT No.: **PCT/EP2020/075366**

§ 371 (c)(1),
(2) Date: **Mar. 16, 2022**

(30) **Foreign Application Priority Data**

Sep. 17, 2019 (DE) 20 2019 105 129.9

Publication Classification

(51) **Int. Cl.**
H02K 33/18 (2006.01)
H02K 33/16 (2006.01)

(52) **U.S. Cl.**
CPC ***H02K 33/18*** (2013.01); ***H02K 33/16*** (2013.01)

(57) **ABSTRACT**

An electromagnetic actuator including a first object comprising at least one magnet; and a second object comprising at least one magnet. The first object and the second object are movable relative to each other. The first object is an oscillator and the second object is a stator, or the first object is a stator and the second object is an oscillator. The first object is essentially arranged inside the second object. The actuator comprises at least one first actuator side where magnets of the first object and the second object are arranged opposite each other and act upon each other. On the at least one actuator side an uneven number of poles of the one object are arranged opposite an even number of poles of the other object.