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**ZHANG et al.**(10) **Pub. No.: US 2023/0231453 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **SALIENT POLE TYPE HYBRID  
EXCITATION MOTOR**(30) **Foreign Application Priority Data**

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(2) Date: **Aug. 26, 2022**(57) **ABSTRACT**

A salient pole type hybrid excitation motor, belonging to the field of motors, and including a rotor assembly, where the rotor assembly includes: an electromagnetic rotor with radial salient poles and constructed in an annular shape and sleeving a magnetic yoke; a permanent magnet rotor installed on one side of the electromagnetic rotor; and axial salient pole blocks installed on one side of the permanent magnet rotor away from the electromagnetic rotor and arranged alternately with the radial salient poles, a plurality of axial salient pole blocks being matched with a plurality of radial salient poles of the electromagnetic rotor, and a polarity of the axial salient pole blocks being opposite to that of permanent magnet steels corresponding to the radial salient poles of the electromagnetic rotor. Electric excitation and permanent magnet excitation are combined to adjust an air gap magnetic field of a motor.

