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(54) **ROBOT WHEEL DRIVING APPARATUS**

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ABSTRACT

A robot wheel driving apparatus includes a wheel configured to rotate to drive a robot, a motor housing positioned inside the wheel, a motor including a stator and a rotor configured to rotate about the stator to transmit a rotating force to the wheel, a sensor magnet connected to the rotor, and an encoder sensor configured to receive a change in a magnetic field caused by rotation of the sensor magnet to detect a rotation angle of the rotor. A first set distance is maintained between the sensor magnet and the encoder sensor.

