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The Director

of the United States Patent and Trademark Office has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this United States

Patent

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Anders Ivarsson

DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE



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Dolgov et al.

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(54) **IN-WHEEL MOTOR FOR A VEHICLE AND A VEHICLE COMPRISING THE MOTOR**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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See application file for complete search history.

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(57) **ABSTRACT**

The present invention relates to a motor wheel for a vehicle and a vehicle comprising the motor wheel. The motor wheel comprises a wheel, an electric motor, a reduction gear transmitting rotation from the electric motor to the wheel, and a dampening structure connecting the wheel to a vehicle bearing member. The electric motor comprises an electric motor case. The reduction gear comprises a reduction gear case coupled to the electric motor case and rotatably mounted within the wheel hub. The electric motor case is connected to the bearing member of the vehicle and is displaceable relative to the bearing member. The invention improves dynamic properties to the vehicle, reduces vibrations transmitted to the vehicle body, and provides a more comfortable drive.

15 Claims, 7 Drawing Sheets

