

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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ZHONGSHAN BROAD-OCEAN MOTOR CO. LTD.,  
Petitioner,

v.

NIDEC MOTOR CORPORATION,  
Patent Owner.

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Case IPR2015-00465  
Patent 8,049,459 B2

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Before BENJAMIN D. M. WOOD, JAMES A. TARTAL, and  
PATRICK M. BOUCHER, *Administrative Patent Judges*.

TARTAL, *Administrative Patent Judge*.

DECISION

Institution of *Inter Partes* Review  
37 C.F.R. § 42.108

Petitioner, Zhongshan Broad-Ocean Motor Co. Ltd., filed a Petition requesting an *inter partes* review of claims 1–7 and 16–18 of U.S. Patent No. 8,049,459 B2 (“the ’459 patent”). Paper 6 (“Pet.”). Patent Owner, Nidec Motor Corporation, filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). We have jurisdiction under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

Upon consideration of the Petition and the Preliminary Response, we conclude the information presented shows there is a reasonable likelihood that Petitioner would prevail in showing the unpatentability of some of the challenged claims. Accordingly, we authorize an *inter partes* review to be instituted as to claims 1–3, 7, and 18 of the ’459 patent. Our factual findings and conclusions at this stage of the proceeding are based on the evidentiary record developed thus far (prior to Patent Owner’s Response). This is not a final decision as to patentability of claims for which *inter partes* review is instituted. Our final decision will be based on the record, as fully developed during trial.

## I. BACKGROUND

### A. *The ’459 Patent (Ex. 1001)*

The ’459 patent, titled “Blower Motor for HVAC Systems” issued November 1, 2011, from U.S. Application No. 12/206,062, filed September 8, 2008. Ex. 1001. The ’459 patent describes a “blower motor assembly having a variable speed motor that is suitable for direct, drop-in replacement

in a residential HVAC (heating, ventilation, and air conditioning) system that employs a [permanent split capacitor] PSC motor.” *Id.* at Abstract. According to the ’459 patent, “HVAC systems traditionally use fixed speed or multiple speed permanent split capacitor (PSC) motors. These motors generally have two independent power connections to accommodate heating or cooling modes of operation.” *Id.* at 2:5–9. The ’459 patent explains that, when in circulation mode, the blower motor operates continuously, typically at the speed used for cooling, which is usually well in excess of the speed necessary to achieve air circulation, magnifying blower mode inefficiencies. *Id.* at 1:43–2:3. Due to inefficiencies with PSC motors, “many newer HVAC systems use variable speed motors such as brushless permanent magnet (BPM) motors and corresponding electronic variable speed motor controllers. The speed of a BPM can be electronically controlled and set specifically to match the airflow requirements for each application, thus permitting more efficient operation.” *Id.* at 2:66–3:5. According to the ’459 patent, replacing an existing PSC motor with a variable speed motor has required “costly, time-consuming, and complex changes in the mechanical, wiring, or control configuration of the system.” *Id.* at 3:14–18. With the intention of resolving such issues, the ’459 patent describes “a blower motor assembly broadly comprising a rectifier, a novel sensing circuit, a variable speed motor, and the motor’s associated motor controller and power converter.” *Id.* at 3:58–64.

*B. Illustrative Claim*

Claims 1, 16, and 18 of the '459 patent are independent. Claims 2–7 depend from claim 1 and claim 17 depends from claim 16. Claim 1 of the '459 patent is illustrative of the claims at issue:

1. A blower motor assembly comprising:  
a variable speed motor and motor controller;  
a power input coupled with the motor controller and comprising at least first, second, and third inputs for receiving AC power from an AC power source;  
at least two sensing circuits, each of said at least two sensing circuits operable for sensing which of at least one of the first, second, and third inputs power is applied to and for delivering a corresponding signal to the motor controller for selecting a corresponding operating parameter for the motor;  
wherein a first one of the sensing circuits senses power applied to the first and second inputs, a second one of the sensing circuits senses power applied to the second and third inputs, and wherein the motor controller is operable for determining that power is applied to the first input when the first sensing circuit senses power.

Ex. 1001, 17:37–53.

*C. Related Proceedings*

Petitioner states that the '459 patent is a subject of the following civil actions: (1) *Nidec Motor Corp. v. SNTech, Inc.*, Civ. Action No. 4:12-cv-00115-AGF (E.D. Mo.); and, (2) *Nidec Motor Corp. v. Broad Ocean Motor LLC*, Civ. Action No. 2:15-cv-00443-JRG-RSP (E.D. Tx.). Pet. 1; Paper 9, 2.

*D. Asserted Grounds of Unpatentability*

Petitioner contends that claims 1–7 and 16–18 are unpatentable based on the following grounds:

Reference[s]	Basis	Challenged Claims
Pant <sup>1</sup>	§ 102	1–3, 7, and 18
Pant and Nordby <sup>2</sup>	§ 103	4–6
Mullin <sup>3</sup>	§ 102	1–3, 7, and 18
Mullin and Nordby	§ 103(a)	4–6, 16, and 17
Rowlette <sup>4</sup>	§ 102	18

II. ANALYSIS

*A. Claim Construction*

The Board interprets claims of an unexpired patent using the broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1281 (Fed. Cir. 2015) (“We conclude that Congress implicitly adopted the broadest reasonable interpretation standard in enacting the AIA.”).

*1. “inputs for receiving AC power from an AC power source”*

Petitioner contends that “inputs for receiving AC power from an AC power source,” as recited in claims 1, 16, and 18, means “connections that

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<sup>1</sup> U.S. Application No. 2007/0069683 A1 (Ex. 1003, “Pant”), published March 29, 2007.

<sup>2</sup> U.S. Patent No. 5,818,194 (Ex. 1004, “Nordby”), issued October 6, 1998.

<sup>3</sup> U.S. Application No. 2008/0180048 A1 (Ex. 1006, “Mullin”), published July 31, 2008.

<sup>4</sup> U.S. Patent No. 5,397,970 (Ex. 1005, “Rowlette”), issued March 14, 1995.

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