

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

NIDEC MOTOR CORPORATION,
Patent Owner.

Case IPR2015-00465
Patent 8,049,459 B2

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

TARTAL, *Administrative Patent Judge*.

FINAL WRITTEN DECISION

35 U.S.C. § 318(A) and 37 C.F.R. § 42.73

I. INTRODUCTION

Petitioner, Zhongshan Broad-Ocean Motor Co. Ltd., filed a corrected Petition requesting an *inter partes* review of claims 1–7 and 16–18 of U.S. Patent No. 8,049,459 B2 (Ex. 1001, “the ’459 patent”). Paper 6 (“Pet.”). Patent Owner, Nidec Motor Corporation, filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). We instituted an *inter partes* review of claims 1–3, 7, and 18 as anticipated under 35 U.S.C. § 102 by Mullin¹ and by Pant.² Paper 10 (“Inst. Dec.”).

After institution of trial, Patent Owner filed a Response (Paper 14, “PO Resp.”), to which Petitioner replied (Paper 20, “Pet. Reply”). Patent Owner also filed a Motion to Amend (Paper 16, “Mot.”), proposing a substitute claim to claim 18. Petitioner, in turn, filed an Opposition to the proposed amended claim (Paper 19, “Pet. Opp.”), and Patent Owner followed with a Reply (Paper 23, “PO Reply”). The Petition is supported by the Declaration of Mr. Joseph C. McAlexander (Ex. 1007) and the Second Declaration of Mr. Joseph C. McAlexander (Ex. 1011). The Response is supported by the Declaration of Dr. Mark N. Horenstein (Ex. 2001). An oral hearing was held on March 22, 2016. Paper 31 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6(c). In this Final Written Decision, issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73, we determine, based on the record before us, that Petitioner has shown by a preponderance of the evidence that claims 1, 3, 7, and 18 are unpatentable.

¹ U.S. Application No. 2008/0180048 A1 (Ex. 1006, “Mullin”), published July 31, 2008 (also referred to as “the ’048 Publication” in the Petition).

² U.S. Application No. 2007/0069683 A1 (Ex. 1003, “Pant”), published March 29, 2007 (also referred to as “the ’683 Publication” in the Petition).

Additionally, Patent Owner concedes that claim 18 is unpatentable. *See* PO Resp. 4 (not disputing claim 18 is anticipated by Mullin); *see also* Tr. 17:15–16 (Counsel for Patent Owner states “I believe we have conceded that claim 18 is unpatentable without an amendment.”). Petitioner has not shown by a preponderance of the evidence that claim 2 is unpatentable. We further determine that Patent Owner has not met its burden of showing that the proposed substitute claim to claim 18 is patentably distinct over the prior art of record, and thus, we *deny* the Motion to Amend.

II. 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. Figure 2 of the ’459 patent is reproduced below.

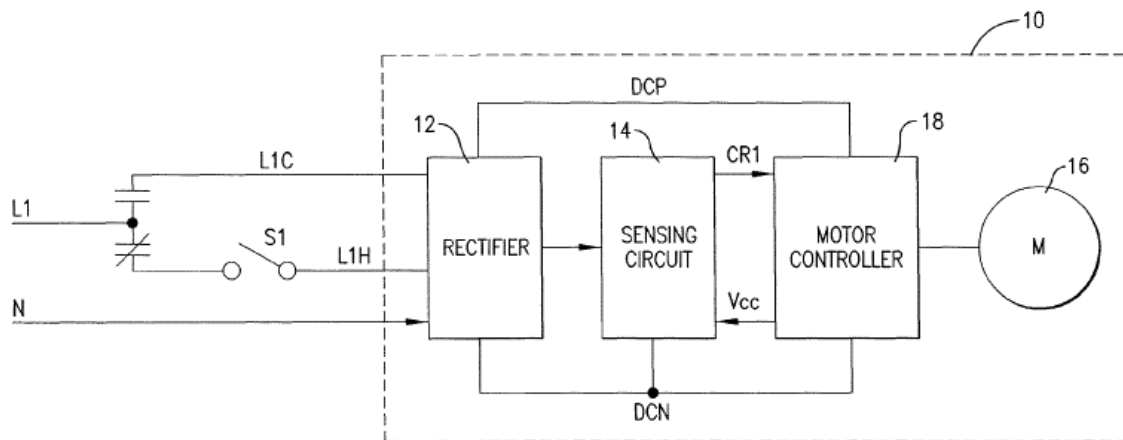


Fig. 2.

Figure 2 shows blower motor assembly 10, including rectifier 12, sensing circuit 14, variable speed motor 16, and the motor’s associated motor controller and power converter 18. *Id.* at 6:44–49. As explained by Mr. McAlexander, “sensing circuit 14 monitors L1C or L1H inputs and generates a logic level signal CR1 whenever AC power is detected in either

of these inputs.” Ex. 1007 ¶ 14 (citing Ex. 1001, 7:21–23). If sensing circuit 14 senses power in L1C, the motor controller 18 causes the motor 16 to drive the blower fan at a speed selected for the cooling mode of operation of the HVAC system. *Id.* (citing Ex. 1001, 8:9–12). Alternatively, motor controller 18 causes motor 16 to drive the blower fan at a speed selected for the heating mode of operation of the HVAC system if no power is detected on L1C by sensing circuit 14. *Id.* (citing Ex 1001, 8:12–17).

The '459 patent further discloses embodiments with additional power input connections and sensor circuits to provide for additional fan blower speeds. Figure 6 of the '459 patent is reproduced below.

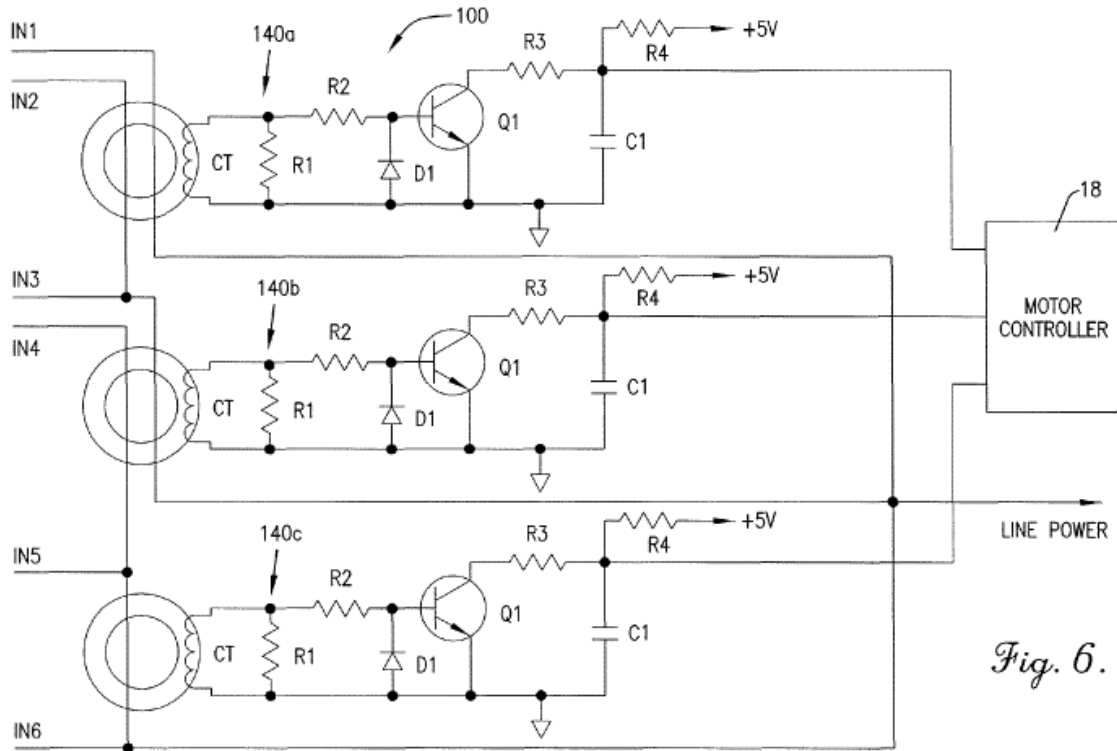


Figure 6 shows blower motor assembly 100, including six power connections IN1 to IN6, and three sensing circuits 140a, 140b, and 140c that provide signaling to motor controller 18. *Id.* ¶ 15 (citing Ex. 1001, 8:65–

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.