Trials@uspto.gov
Tel: 571-272-7822

Paper No. 8
Entered: May 19, 2017

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INOGEN, INC.,
Petitioner,

v.

SEPARATION DESIGN GROUP IP HOLDINGS, LLC,
Patent Owner.

Case IPR2017-00300
Patent 8,894,751 B2

Before KRISTINA M. KALAN, CHRISTOPHER M. KAISER, and ELIZABETH M. ROESEL, *Administrative Patent Judges.*

KAISER, *Administrative Patent Judge*.

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

INTRODUCTION

A. Background

Inogen, Inc. ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting *inter partes* review of claims 22–32 of U.S. Patent No. 8,894,751 B2 (Ex. 1001, "the '751 patent"). Separation Design Group IP Holdings, LLC ("Patent Owner") filed a Preliminary Response (Paper 6, "Prelim. Resp.").

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless "there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition."

After considering the Petition and the evidence currently of record, we determine that Petitioner has demonstrated that there is a reasonable likelihood that it would prevail with respect to at least one of the claims challenged in the Petition. Accordingly, we institute *inter partes* review.

B. Related Matters

There is a pending petition for *inter partes* review of U.S. Patent No. 9,199,055 B2, which is related to the '751 patent. That proceeding has been assigned case number IPR2017-00453. Paper 4, 2–3. In addition, an action alleging infringement of the '751 patent is ongoing in *Separation Design Group IP Holdings, LLC v. Inogen, Inc.*, Case No. 2:15-cv-08323-JAK-JPR (C.D. Cal.). Pet. 6–7; Paper 4, 2.

C. The Asserted Grounds of Unpatentability

Petitioner contends that claims 22–32 of the '751 patent are unpatentable based on the following grounds (Pet. 11–51):[1]

Statutory Ground	Basis	Challenged Claim(s)
§ 103	McCombs,[2] Whitley,[3] and AAPA[4]	22–28, 31, and 32
§ 103	McCombs, Whitley, and Occhialini[5]	22–28, 31, and 32
§ 103	Jagger,[6] McCombs, and AAPA	22–28, 31, and 32
§ 103	McCombs, Whitley, AAPA, and Bliss[7]	29 and 30
§ 103	McCombs, Whitley, Occhialini, and Bliss	29 and 30
§ 103	Jagger, McCombs, AAPA, and Bliss	29 and 30

D. The '751 Patent

The '751 patent is directed to "[l]ightweight, portable oxygen concentrators that operate using an ultra rapid, sub one second, adsorption

[1] Petitioner also relies on a declaration from Brenton A. Taylor. Ex. 1011.
[2] McCombs et al., US 2006/0117957 A1, published June 8, 2006 (Ex. 1002, "McCombs").
[3] Whitley et al., US 2007/0137487 A1, published June 21, 2007 (Ex. 1003, "Whitley").
[4] Petitioner contends that statements in the '751 patent are Applicant Admitted Prior Art ("AAPA"). Pet. 23–25 (citing Ex. 1001, 1:49–55, 2:10–18, 10:57–59, 18:6–12, 18:33–44).
[5] Occhialini et al., U.S. Patent No. 7,279,029 B2, issued Oct. 9, 2007 (Ex. 1004, "Occhialini").
[6] Jagger et al., US 2006/0174874 A1, published Aug. 10, 2006 (Ex. 1005, "Jagger").
[7] Bliss et al., US 2006/0230931 A1, published Oct. 19, 2006 (Ex. 1006, "Bliss").

cycle based on advanced molecular sieve materials." Ex. 1001, at [57]. A portable oxygen concentrator ("POC") is a small device that provides therapeutic oxygen to patients who need it. *Id.* at 1:40–48. The POCs of the '751 patent operate by using a compressor to pressurize ambient air and forcing the pressurized air through beds of molecular sieve materials that adsorb nitrogen, allowing air with a higher concentration of oxygen to flow out of the device. *Id.* at 10:57–61. During a subsequent reduction in pressure, nitrogen is desorbed from the molecular sieve material and discharged from the device as a waste stream. *Id.* at 10:62. In the '751 patent, these swings of pressure take "less than one second." *Id.* at 10:53–56. The short duration of these cycles requires molecular sieve particles ranging in diameter from about 60 microns to 180 microns to allow rapid diffusion of gas in and out of the particles. *Id.* at 11:6–20. The '751 patent describes its POCs as having removable and replaceable adsorbent modules. *Id.* at 12:31–38.

E. Illustrative Claims

Claims 22–32 of the '751 patent are challenged. Claims 22 and 32 are independent, and claims 22 and 31 are illustrative:

22. A portable oxygen concentrator, comprising:

at least one removable module comprising

a housing;

at least one adsorbent bed contained in said housing;

wherein said adsorbent bed comprises at least one molecular sieve material;

wherein said molecular sieve material has a substantially spherical shape;

wherein the ratio of the length of said absorbent bed to the diameter of said absorbent bed is less than about 4.8:1; and

wherein said absorbent bed is capable of a ratio of product flow rate to mass of said molecular sieve material of greater than 3.3 ml/min/g;

a compressor;

a manifold to control gas flow into and out of said removable module;

at least one removable battery cell;

wherein said portable oxygen concentrator weighs less than about 5 kg; and

wherein said portable oxygen concentrator is capable of producing up to 3 liters of oxygen per minute at 22° C. and 1 atmosphere pressure.

Ex. 1001, 26:11–34.

31. A removable module of claim 22,

wherein said removable module is replaceable by a user.

Id. at 26:58–59.

ANALYSIS

A. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the

DOCKET ALARM

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.