

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC. and FITBIT, INC.,  
Petitioner,

v.

VALENCELL, INC.  
Patent Owner.

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IPR2017-00318<sup>1</sup>  
Patent 8,886,269 B2

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Before BRIAN J. McNAMARA, JAMES B. ARPIN, and  
SHEILA F. McSHANE, *Administrative Patent Judges*.

McSHANE, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
*35 U.S.C. § 318(a) and 37 C.F.R. § 42.73*

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<sup>1</sup> *Fitbit, Inc. v. Valencell, Inc.*, Case IPR2017-01554, has been joined with this proceeding.

## I. INTRODUCTION

### A. Background

Apple Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–10 (“the challenged claims”) of U.S. Patent No. 8,886,269 B2 (Ex. 1001, “the ’269 patent”) pursuant to 35 U.S.C. §§ 311–319. Paper 2 (“Pet.”). *Fitbit, Inc. v. Valencell, Inc.*, Case IPR2017-01554, has been joined with this proceeding. Paper 30, 5–6. Valencell, Inc. (“Patent Owner”) filed a Preliminary Response to the Petition. Paper 6 (“Prelim. Resp.”). Pursuant to 35 U.S.C. § 314, we instituted an *inter partes* review as to claims 1–10 of the ’269 patent on June 5, 2017 on all of the asserted grounds, which are:

| Ground | Claim(s)   | Reference(s)                    |
|--------|------------|---------------------------------|
| § 103  | 1, 2, 6, 7 | Asada <sup>2</sup>              |
| § 103  | 3          | Asada and Hicks <sup>3</sup>    |
| § 103  | 4, 5       | Asada and Hannula <sup>4</sup>  |
| § 103  | 8          | Asada and Delonzor <sup>5</sup> |
| § 103  | 9, 10      | Asada and Al-Ali <sup>6</sup>   |
| § 103  | 1, 2       | Goodman <sup>7</sup>            |

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<sup>2</sup> H. Harry Asada, *Mobile Monitoring with Wearable Photoplethysmographic Biosensors*, IEEE ENGINEERING IN MEDICINE AND BIOLOGY MAGAZINE, 22:3, 28–40, May–June 2003 (Ex. 1005).

<sup>3</sup> U.S. Patent No. 6,745,061 B1 (issued June 1, 2004) (Ex. 1008).

<sup>4</sup> U.S. Patent No. 7,190,986 B1 (issued March 13, 2007) (Ex. 1009).

<sup>5</sup> U.S. Patent No. 5,797,841 (issued August 25, 1998) (Ex. 1010).

<sup>6</sup> U.S. Publication No. 2007/0123763 A1, published May 31, 2007 (Ex. 1011).

<sup>7</sup> U.S. Patent No. 4,830,014 (issued May 16, 1989) (Ex. 1007).

| Ground | Claim(s) | Reference(s)                |
|--------|----------|-----------------------------|
| § 103  | 3        | Goodman and Hicks           |
| § 103  | 4        | Goodman and Hannula         |
| § 103  | 5        | Goodman, Hannula, and Asada |
| § 103  | 6, 7     | Goodman and Asada           |
| § 103  | 8        | Goodman and Delonzor        |
| § 103  | 9, 10    | Goodman and Al-Ali          |

Paper 7 (“Dec.” or “Institution Decision”), 25–26.

During the course of trial, Patent Owner filed a Corrected Patent Owner Response (Paper 22, “PO Resp.”), and Petitioner filed a Reply to the Patent Owner Response (Paper 32, “Pet. Reply”). Petitioner submitted the Declaration of Brian W. Anthony, Ph.D. (Ex. 1003) and the Declaration of Brian W. Anthony, Ph.D. in Support of Petitioner’s Reply (Ex. 1102). Patent Owner submitted the Declaration of Albert H. Titus, Ph.D. (Ex. 2007).

Patent Owner filed a Motion for Observations on the cross-examination of Dr. Anthony (Paper 42), and Petitioner filed a response thereto (Paper 45). Petitioner filed a Motion to Exclude Evidence (Paper 44, “Mot. Ex.”), with Patent Owner filing an Opposition the Motion to Exclude (Paper 47, “Mot. Ex. Opp.”), and Petitioner filing a Reply thereto (Paper 48, “Mot. Ex. Reply”). In support of Patent Owner’s Opposition to the Motion to Exclude, the Declaration of Alex Wong (Ex. 2154) and the Declaration of Nathan L. Levenson (Ex. 2155) were submitted.

In addition, Patent Owner filed a Motion to Amend (Paper 21, “Mot.”), which was opposed by Petitioner (Paper 33, “Opp.”). Patent Owner submitted a Reply in Support of its Motion to Amend (Paper 37, “PO

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Reply”), and Petitioner filed a Sur-Reply supporting its Opposition (Paper 39, “Sur-Reply”). In support of the Motion to Amend, Patent Owner submitted the Declaration of Dr. Titus (Ex. 2110), as well as the Supplemental Declaration of Dr. Titus (Ex. 2151). Petitioner submitted the Declaration of Dr. Anthony in support of the Opposition (Ex. 1103).

We held a consolidated oral hearing on February 27, 2018, in relation to this proceeding and that in Case IPR2017-00317. A transcript (Paper 53, “Tr.”) of the oral hearing has been entered into the record.

We have jurisdiction to hear this *inter partes* review under 35 U.S.C. § 6, and this Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–10 of the ’269 patent are unpatentable. We deny Patent Owner’s Motion to Amend. Additionally, we deny Petitioner’s Motion to Exclude.

### *B. Related Proceedings*

The parties indicate that the ’269 patent is at issue in *Valencell, Inc. v. Apple Inc.*, Case No. 5:16-cv-00001 (E.D.N.C), and *Valencell, Inc. v. Fitbit, Inc.*, Case No. 5:16-cv-00002 (E.D.N.C). Pet. 3; Paper 5, 1. Patent Owner indicates the ’269 patent is also at issue in *Valencell, Inc. v. Bragi Store, LLC*, Case No. 5:16-cv-00895 (E.D.N.C.). Paper 5, 1.

In addition to this Petition, Petitioner indicates that it filed other *inter partes* review petitions challenging claims of U.S. Patent No. 8,989,830 B2 (IPR2017-00316 (institution denied) and IPR2017-00317 (instituted)). Pet. 3. U.S. Patent No. 8,989,830 B2 is a continuation of the ’269 patent. *Id.*

*C. The '269 Patent*

The '269 patent is entitled “Wearable Light-Guiding Bands For Physiological Monitoring” and issued on November 11, 2014, from an application filed on February 19, 2014. Ex. 1001, [22], [45], [54]. The '269 patent claims priority to the following applications: (1) U.S. Patent Application No. 12/691,388, filed on January 21, 2010 (now U.S. Patent No. 8,700,111); (2) U.S. Provisional Patent Application No. 61/208,567, filed on February 25, 2009; (3) U.S. Provisional Patent Application No. 61/208,574, filed on February 25, 2009; (4) U.S. Provisional Patent Application No. 61/212,444, filed on April 13, 2009; and (5) U.S. Provisional Patent Application No. 61/274,191, filed on August 14, 2009. *Id.* at [63], [60].

The '269 patent is directed to monitoring devices capable of encircling a portion of the body of a subject. Ex. 1001, Abstract. The monitoring devices may include physiological sensors to measure, for example, heart rate, pulse rate, breathing rate, and a variety of other physical parameters. *Id.* at 4:31–65. Monitoring devices may be configured to be attached to earlobes, fingers, toes, and other digits. *Id.* at 27:59–61. The '269 patent discloses various embodiments of the monitoring devices, such as that depicted in Figures 22A and 22B, reproduced below.

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