

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

MASIMO CORPORATION,
Patent Owner.

IPR2020-01521
Patent 10,292,628 B1

Before JOSIAH C. COCKS, ROBERT L. KINDER, and
AMANDA F. WIEKER, *Administrative Patent Judges*.

COCKS, *Administrative Patent Judge*.

DECISION

Granting Institution of *Inter Partes* Review
35 U.S.C. § 314, 37 C.F.R. § 42.4

I. INTRODUCTION

A. Background

Apple Inc. (“Petitioner”) filed a Petition requesting an *inter partes* review of claims 1–30 (“challenged claims”) of U.S. Patent No. 10,292,628 B1 (Ex. 1001, “the ’628 patent”). Paper 2 (“Pet.”). Masimo Corporation (“Patent Owner”) waived filing a preliminary response. Paper 6 (“PO Waiver”).

We have authority to determine whether to institute an *inter partes* review, under 35 U.S.C. § 314 and 37 C.F.R. § 42.4. An *inter partes* review may not be instituted unless it is determined that “the information presented in the petition filed under section 311 and any response filed under section 313 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.” 35 U.S.C. § 314 (2018); *see also* 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director.”).

For the reasons provided below and based on the record before us, we determine that Petitioner has demonstrated a reasonable likelihood that Petitioner would prevail in showing the unpatentability of at least one of the challenged claims. Accordingly, we institute an *inter partes* review on all grounds set forth in the Petition.

B. Related Matters

The parties identify the following matters related to the ’628 patent: *Masimo Corporation v. Apple Inc.*, Civil Action No. 8:20-cv-00048 (C.D. Cal.) (filed Jan. 9, 2020);

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Apple Inc. v. Masimo Corporation, IPR2020-01520 (PTAB Aug. 31, 2020) (challenging claims of U.S. Patent No. 10,258,265 B1);
Apple Inc. v. Masimo Corporation, IPR2020-01521 (PTAB Sept. 2, 2020) (challenging claims of U.S. Patent No. 10,292,628 B1);
Apple Inc. v. Masimo Corporation, IPR2020-01523 (PTAB Sept. 9, 2020) (challenging claims of U.S. Patent No. 8,457,703 B2);
Apple Inc. v. Masimo Corporation, IPR2020-01524 (PTAB Aug. 31, 2020) (challenging claims of U.S. Patent No. 10,433,776 B2);
Apple Inc. v. Masimo Corporation, IPR2020-01526 (PTAB Aug. 31, 2020) (challenging claims of U.S. Patent No. 6,771,994 B2);
Apple Inc. v. Masimo Corporation, IPR2020-01536 (PTAB Aug. 31, 2020) (challenging claims of U.S. Patent No. 10,588,553 B2);
Apple Inc. v. Masimo Corporation, IPR2020-01537 (PTAB Aug. 31, 2020) (challenging claims of U.S. Patent No. 10,588,553 B2);
Apple Inc. v. Masimo Corporation, IPR2020-01538 (PTAB Sept. 2, 2020) (challenging claims of U.S. Patent No. 10,588,554 B2); and
Apple Inc. v. Masimo Corporation, IPR2020-01539 (PTAB Sept. 2, 2020) (challenging claims of U.S. Patent No. 10,588,554 B2).
Pet. 98, Paper 3, 1.

Patent Owner further identifies numerous issued and abandoned applications that are said to claim priority to, or share a priority claim with, the '628 patent. Paper 3, 3.

C. The '628 Patent

The '628 patent is titled “Multi-Stream Data Collection System for Noninvasive Measurement of Blood Constituents,” and issued on May 21, 2019, from U.S. Patent Application No. 16/261,326, filed January 29, 2019.

Ex. 1001, codes (21), (22), (45), (54). The '628 patent discloses a two-part data collection system including a noninvasive sensor that communicates with a patient monitor. *Id.* at 2:31–33. The sensor includes a sensor housing, an optical source, and several photodetectors, and is used to measure a blood constituent or analyte, e.g., oxygen or glucose. *Id.* at 2:55–3:5. The patient monitor includes a display and a network interface for communicating with a handheld computing device. *Id.* at 2:38–40.

Figure 1 of the '628 patent is reproduced below.

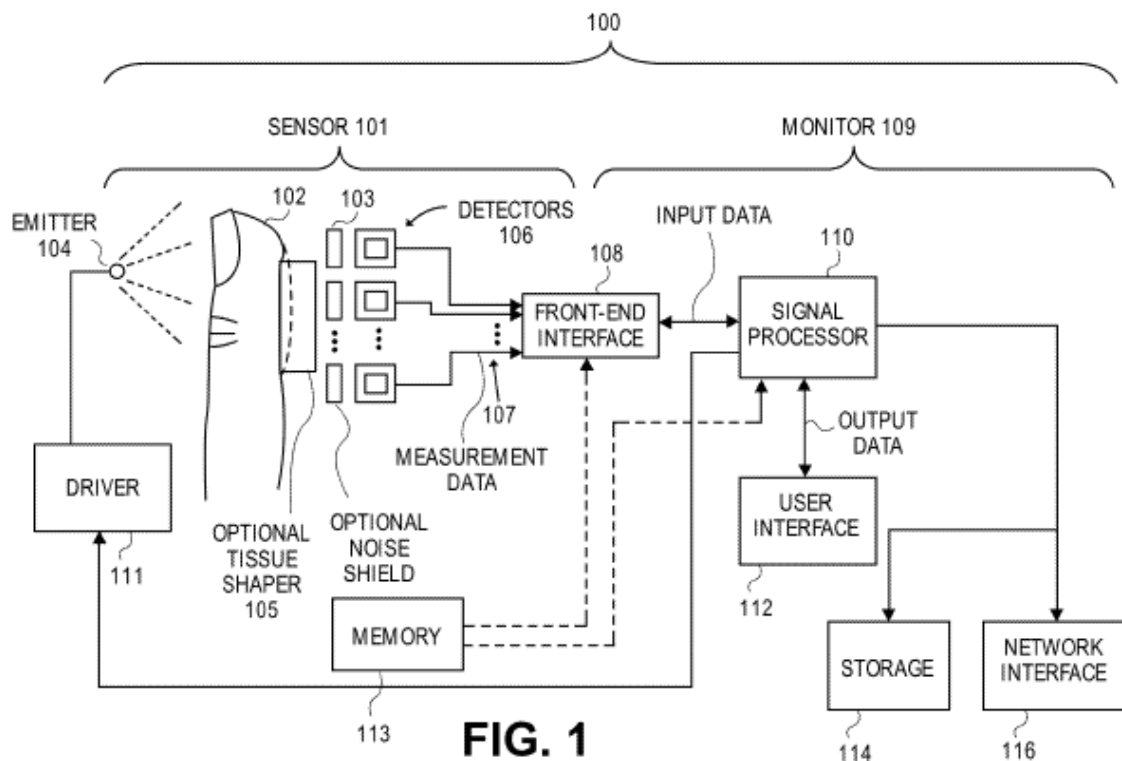


Figure 1 illustrates a block diagram of data collection system 100 including sensor 101 and monitor 109. *Id.* at 5:26–29, 11:36–37. Sensor 101 includes optical emitter 104 and detectors 106. *Id.* at 11:48–50. Emitters 104 emit light that is attenuated or reflected by the patient's tissue at measurement site 102. *Id.* at 13:60–64. Detectors 106 capture and measure the light attenuated or reflected from the tissue. *Id.* In response to the measured

light, detectors 106 output detector signals 107 to monitor 109 through front-end interface 108. *Id.* at 13:64–67, 14:16–22. Sensor 101 also may include tissue shaper 105, which may be in the form of a convex surface that: (1) reduces the thickness of the patient’s measurement site; and (2) provides more surface area from which light can be detected. *Id.* at 10:51–11:3.

Monitor 109 includes signal processor 110 and user interface 112. *Id.* at 15:6–8. “[S]ignal processor 110 includes processing logic that determines measurements for desired analytes . . . based on the signals received from the detectors 106.” *Id.* at 15:10–14. User interface 112 presents the measurements to a user on a display, e.g., a touch-screen display. *Id.* at 15:38–42. The monitor may be connected to storage device 114 and network interface 116. *Id.* at 15:52–16:3.

The ’628 patent describes various examples of sensor devices. Figures 14D and 14F, reproduced below, illustrate sensor devices.

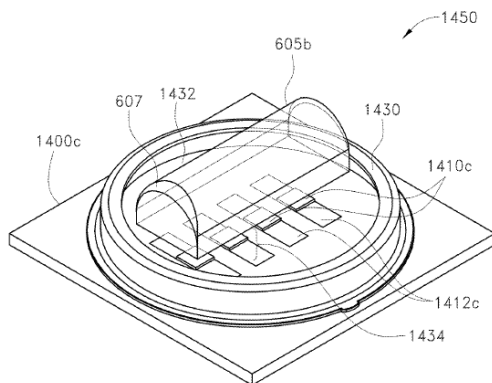


FIG. 14D

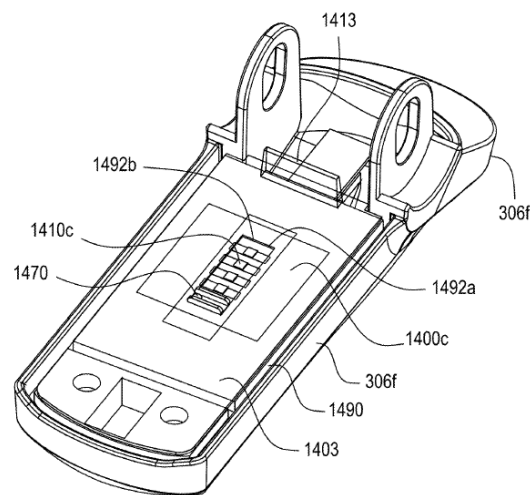


FIG. 14F

Figure 14D illustrates portions of a detector submount and Figure 14F illustrates portions of a detector shell. *Id.* at 6:34–37. As shown in Figure 14D, multiple detectors 1410c are located within housing 1430 and

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