

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

APPLE INC.,
Appellant

v.

MASIMO CORPORATION,
Appellee

2022-1890

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2020-01523.

Decided: January 12, 2024

THOMAS GREGORY SPRANKLING, Wilmer Cutler Pickering Hale and Dorr LLP, Palo Alto, CA, argued for appellant. Also represented by MICHAEL JOHN BALLANCO, LAUREN ANN DEGNAN, CHRISTOPHER DRYER, WALTER KARL RENNERT, Fish & Richardson P.C., Washington, DC.

STEPHEN C. JENSEN, Knobbe, Martens, Olson & Bear, LLP, Irvine, CA, argued for appellee. Also represented by JAROM D. KESLER, JOSEPH R. RE, JOSHUA STOWELL.

Before LOURIE, PROST, and REYNA, *Circuit Judges*.

REYNA, *Circuit Judge*.

Apple Inc. appeals a final written decision of the United States Patent and Trademark Office Patent Trial and Appeal Board, which determined that claims 1–7, 9–18, and 20–24 of U.S. Patent No. 8,457,703 were not unpatentable as obvious. We affirm.

BACKGROUND

A. U.S. Patent No. 8,457,703

Masimo Corporation (“Masimo”) is the assignee of U.S. Patent No. 8,457,703 (“703 patent”), which relates to reducing power consumption of a pulse oximeter. ’703 patent, Abstract. The patent discloses regulating power consumption by intermittently changing the number of samples received and processed by the oximeter. *Id.* at 6:9–11. Based on physiological measurements and signal statistics, the oximeter determines whether to increase or decrease sampling. *Id.* at 6:25–39. In one embodiment, the patent discloses controlling sampling by intermittently changing the duty cycle of the current supplied to drive the LEDs that project light onto the patient’s tissue. *Id.* at 5:55–66, 6:56–7:8.

Claim 1 is representative and recites,

1. A method of managing power consumption during continuous patient monitoring by adjusting behavior of a patient monitor, the method comprising:

driving one or more light sources configured to emit light into tissue of a monitored patient;

receiving one or more signals from one or more detectors configured to detect said light after attenuation by said tissue;

continuously operating a patient monitor at a lower power consumption level to determine measurement values for one or more physiological parameters of a patient;

comparing *processing characteristics* to a predetermined threshold; and

when said processing characteristics pass said threshold, transitioning to continuously operating said patient monitor at a higher power consumption level,

wherein said continuously operating at said lower power consumption level comprises reducing activation of an attached sensor,

said sensor positioning said light sources and said detectors proximate said tissue.

Id. at 11:32–51 (emphasis added).

B. Prior Art References

Two references are relevant to this appeal: Diab (U.S. Patent No. 5,632,272) and Amano (U.S. Patent No. 6,293,915).

Diab discloses a pulse oximeter that includes a sensor, a digital signal processing system, and a display. Diab, 34:11–26, Fig. 11. The digital signal processing system provides several outputs to be displayed, including “blood oxygen saturation, heart rate, and a clean plethysmographic waveform.” *Id.* at 34:26–28. Within the digital signal processing system, as shown in Figure 20, heart rate module 410 includes motion artifact suppression module 580. *Id.* at 47:30–38, Fig. 20 (below).

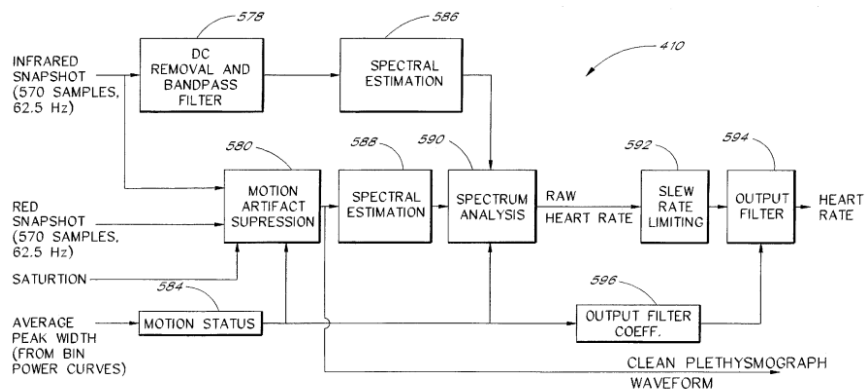
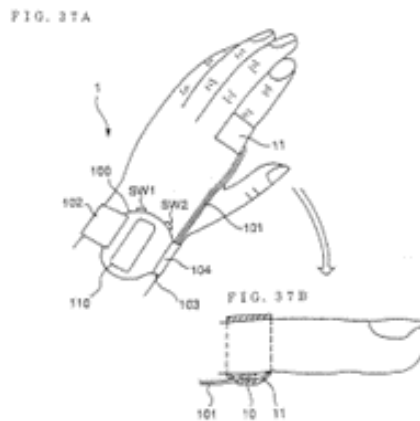


FIG. 20

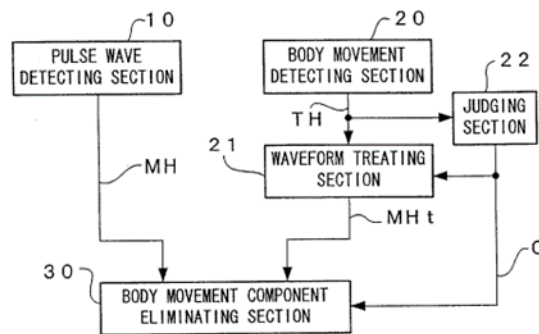
In case of motion, motion artifact suppression module 580 suppresses motion artifacts, namely, artifacts introduced by patient movement that may distort the measured signal. *Id.* at 3:6–9, 47:55–56. “If motion is not detected, spectral estimation on the signals is carried out directly without motion artifact suppression.” *Id.* at 47:52–54.

Amano discloses a wristwatch type of pulse wave detector mounted on a finger. *See* Amano, Figs. 37A and 37B (below).



In the embodiment illustrated in Figure 1, pulse wave detecting section 10 detects a pulse waveform and outputs the detected signal to body movement component eliminating section 30. *Id.* at 21:5–8, Fig. 1 (excerpt below).

FIG. 1



The device also includes body movement detecting section 20 and waveform treating section 21. *Id.* at 21:9–12. If no body movement is present, the operations of waveform treating section 21 and body movement component eliminating section 30 are suspended. *Id.* at 21:65–22:2. According to Amano, this suspension reduces the power consumption of the device. *Id.* at 22:4–6.

C. Procedural History

After Masimo sued Apple Inc. (“Apple”) for infringing the ’703 patent, Apple petitioned for *inter partes* review (“IPR”) of claims 1–7, 9–18, and 20–24 of the ’703 patent.

The Patent Trial and Appeal Board (“Board”) construed the claimed “processing characteristics” as “determined from a signal received from one or more detectors configured to detect light.” J.A. 14. Based on this construction, the Board assessed Apple’s eight obviousness grounds, each of which addressed either or both of Diab and Amano. Ultimately, the Board concluded that Apple failed to show obviousness of the challenged claims.

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