

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF NORTH CAROLINA  
WESTERN DIVISION**

**VALENCELL, INC.,**

**Plaintiff,**

v.

**APPLE INC.,**

**Defendant.**

C.A. No. \_\_\_\_

**JURY TRIAL DEMANDED**

**PLAINTIFF'S ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Valencell, Inc. ("Valencell") files this Original Complaint against Apple Inc. ("Apple" or "Defendant") for infringement of U.S. Patent Nos. 8,923,941 ("the '941 patent"); 8,886,269 ("the '269 patent"); 8,929,965 ("the '965 patent"); and 8,989,830 ("the '830 patent") (collectively "the patents-in-suit").

**THE PARTIES**

1. Valencell is a Delaware corporation with its principal place of business at 4601 Six Forks Rd., Suite 103, Raleigh, North Carolina.

2. Apple is a California corporation with a principal place of business at 1 Infinite Loop, Cupertino, California 95014. Apple has designated CT Corporation System, 150 Fayetteville St., Box 1011 Raleigh, NC 27601-2957 as its agent for service of process.

**JURISDICTION AND VENUE**

3. This Court has subject matter jurisdiction of this action under 28 U.S.C. §§ 1331 and 1338(a), as an action arising under an Act of Congress relating to patents, 35 U.S.C. §§ 1 *et seq.*; under 28 U.S.C. § 1338(b), as an action arising under an Act of Congress relating to patents joined with a claim for unfair competition; and under this Court's supplemental jurisdiction. This

Court has personal jurisdiction over Apple. Apple is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the North Carolina long-arm statute, N.C.G.S. § 1-75.4 due at least to its substantial business in this State and judicial district, including: (A) at least part of their infringing activities alleged herein; and (B) regularly doing or soliciting business, engaging in other persistent conduct, and/or deriving substantial revenue from goods sold and services provided to North Carolina residents.

4. Venue is proper in this district pursuant to 28 U.S.C. §§ 1391(b), 1391(c) and 1400(b) because, among other things, Apple is subject to personal jurisdiction in this district, has regularly conducted business in this judicial district, and certain of the acts complained of herein occurred in this judicial district. Further, a substantial part of the acts giving rise to the allegations of this Complaint occurred in this District.

#### **FACTUAL ALLEGATIONS**

5. On information and belief, in or around February 2013, Apple assembled a team to develop and/or implement the Apple Watch. At that time, Apple intended to incorporate a heart sensor into the Apple Watch. Around that same time, Liang Hoe, a Senior Partnership Manager at Apple, contacted Valencell regarding a partnership opportunity. Apple expressed an interest in Valencell's heart sensor technology.

6. On information and belief, beginning in March 2013, Apple agents repeatedly accessed [www.valencell.com](http://www.valencell.com) (the "Valencell Website") from at least the following IP addresses: 17.202.109.239, 17.208.106.158, 17.114.122.4, 17.216.30.100, 17.88.158.254, 17.209.11.188, 17.208.31.179, 17.208.110.251, 17.221.47.91, 17.247.87.225 (collectively the "Apple IP Addresses"). Each of the Apple IP Addresses is assigned to Apple.

7. The Valencell Website contains various white papers, which relate to its biometric sensor solutions. Valencell offers such white papers in exchange for various identifying information regarding the downloader. On information and belief, Apple repeatedly accepted this offer, but obtained such white papers by providing fictitious information. On March 27, 2013 and May 5, 2014, one or more Apple agents downloaded the “PerformTek Precision Biometrics: Engaging the Burgeoning Mobile Health and Fitness Market” white paper from Valencell using fictitious names. On March 10, 2014 and April 23, 2015, one or more Apple agents downloaded the “Earbud-Based Sensor for the Assessment of Energy Expenditure, Heart Rate, and VO2 max” white paper from Valencell using fictitious names. On April 1, 2015 an Apple agent downloaded the “Earbud-Based Sensor for the Assessment of Energy Expenditure, Heart Rate, and VO2 max” white paper from Valencell using a fictitious name.

8. On information and belief, the following Apple agents accessed the Valencell Website: Brian Land, Matt Last, Nancy “Wren” Dougherty, Roger Miller, Thomas Pham, Mark Bagnola, and Mitch VanBruggen. Each of these individuals was involved in the design and/or implementation of the Apple Watch. Moreover, each of these individuals was involved in the design and/or implementation of the heart sensor in the Apple Watch.

9. On information and belief, Apple accessed the Valencell Website to obtain information regarding the structure and operation of PerformTek-Powered products. In June 2013, Apple met with Valencell employees, including Dr. Steven LeBoeuf, to discuss incorporating PerformTek-Powered features into some of Apple’s products. The Valencell Website provides notice that PerformTek-Powered products require a license to Valencell’s patents, including the patents-in-suit. Apple reviewed this notice and requested Valencell provide it with PerformTek-Powered products.

10. On information and belief, in or around the summer of 2013, Valencell demonstrated a prototype PerformTek-Powered watch to approximately 15 Apple employees. The back of the watch included a heart-rate monitor that was substantially similar to the Apple Watch. One or more of the Apple employees in attendance was involved in the design and/or implementation of the Apple Watch.

11. On information and belief, in or around August 2013, Apple received PerformTek-Powered products. Between September 2013 and March 2014, Apple conducted detailed testing on these products, including an analysis of the product circuitry.

12. On information and belief, Apple expressed great interest in Valencell's wrist-based heart sensor technology. Throughout 2014, Apple repeatedly requested information from Valencell regarding such technology. Apple did not sell any wrist-based products at that time. The only wrist-based product that Apple sells is the Apple Watch. The Apple Watch was the only wrist-based product that Apple was working on in 2014. In December 2014, Apple met with Valencell employees, including Dr. LeBoeuf, to discuss Valencell's wrist-based technology.

13. On information and belief, Apple began shipping the Apple Watch on April 24, 2015. Since at least that date, Apple has sold the Apple Watch in the United States. The Apple Watch contains a heart rate sensor, which it uses to calculate the pulse of the end user.

14. On information and belief, Apple solicited technical information and know-how from Valencell on the false premise that it wished to license Valencell's PerformTek Technology. Apple did not have an intention of licensing Valencell's PerformTek Technology. Instead, Apple's interaction with Valencell was fueled by a business decision that the benefits of infringing upon Valencell's patented technology outweigh the risk of being caught and ultimately forced to pay damages. This practice is consistent with the statement by Apple CEO Steve Jobs that Apple has "always been shameless about stealing great ideas." Further,

Apple is knowingly using Valencell's patented technology in an effort to achieve a licensing rate that is below a reasonable royalty.

**COUNT I**  
**(Infringement of U.S. Patent No. 8,923,941)**

15. Valencell incorporates paragraphs 1 through 14 herein by reference.

16. Valencell is the assignee of the '941 patent, entitled "Methods and apparatus for generating data output containing physiological and motion-related information," with ownership of all substantial rights in the '941 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements. A true and correct copy of the '941 patent is attached as Exhibit A.

17. The '941 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

18. Apple has and continues to directly infringe one or more claims of the '941 patent in this judicial district and elsewhere in North Carolina and the United States without the consent or authorization of Valencell, by or through their making, having made, offering for sale, selling, importing, and/or using wearable devices incorporating a heart rate sensor, including, but not limited to the Apple Watch. Apple's infringement has been willful.

19. The Apple Watch directly infringes at least claim 14 of the '941 patent.

20. The Apple Watch is a wearable device and includes a housing and a chipset enclosed within the housing. The chipset includes at least one PPG sensor, one motion sensor, and one signal processor that is configured to process signals from the motion sensor and the PPG sensor to reduce motion artifacts from the PPG signals. The Apple Watch housing includes at least one window that optically exposes the at least one PPG sensor to a body of a subject

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