

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
AUSTIN DIVISION**

**IFPOWER CO., LTD.,**

**Plaintiff,**

**v.**

**APPLE, INC.,**

**Defendant.**

**Civil Action No. 1:23-cv-00205-DII**

**Jury Trial Demanded**

**PLAINTIFF’S SECOND AMENDED COMPLAINT**

Plaintiff IFPower Co., Ltd. (“IFPower” or “Plaintiff”) hereby files its Second Amended Complaint against Apple, Inc. (“Apple” or “Defendant”) alleging infringement of U.S. Patent Nos. 7,298,361 (the “’361 Patent”); and 7,863,860 (the “’860 Patent”) (collectively, the “Patents-in-Suit”).

**I. PARTIES**

1. Plaintiff IFPower is a company existing under the laws of Taiwan, with its principal place of business located 1 F., No. 2, Ln. 18, Shuangyuan St., Wanhua Dist., Taipei City 10884, Taiwan (R.O.C.).

2. Upon information and belief, Defendant Apple, Inc. is a corporation organized under the laws of the State of California, with its principal places of business located at 1 Infinite Loop, Cupertino, California 95014. Apple, Inc. also has a place of business at 12545 Riata Vista Circle, Austin, Texas 78727. Upon information and belief, Defendant Apple, Inc. is authorized to do business in Texas. Apple, Inc. may be served by serving its registered agent CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136.

## II. JURISDICTION AND VENUE

3. This is an action for patent infringement which arises under 35 U.S.C. §§ 271, 281, 284 and 285. This Court has subject matter jurisdiction over this action under 28 U.S.C. §§1331 and 1338(a).

4. This Court has personal jurisdiction over Apple, and venue is proper in this Court pursuant to 28 U.S.C. §§1391(b), (c), and 1400. This Court has personal jurisdiction over Apple because, among other things, Apple has established minimum contacts within the forum such that the exercise of jurisdiction over Apple will not offend traditional notions of fair play and substantial justice. For example, Apple has placed products that practice and/or embody the claimed inventions of the Patents into the stream of commerce with the reasonable expectation and/or knowledge that purchasers and users of such products were located within this district.

5. Apple has an established place of business in this District with physical addresses at 12545 Riata Vista Circle, Austin, Texas 78727; 12801 Delcour Drive, Austin, Texas 78727; and 3121 Palm 4 Way, Austin, Texas 78758.

6. In addition, Apple has sold, advertised, marketed, and distributed products in this district that practice the claimed inventions of the Patents. Apple derives substantial revenue from the sale of infringing products distributed within the district, and/or expects or should reasonably expect its actions to have consequences within the district, and derives substantial revenue from interstate and international commerce.

## III. FACTUAL BACKGROUND

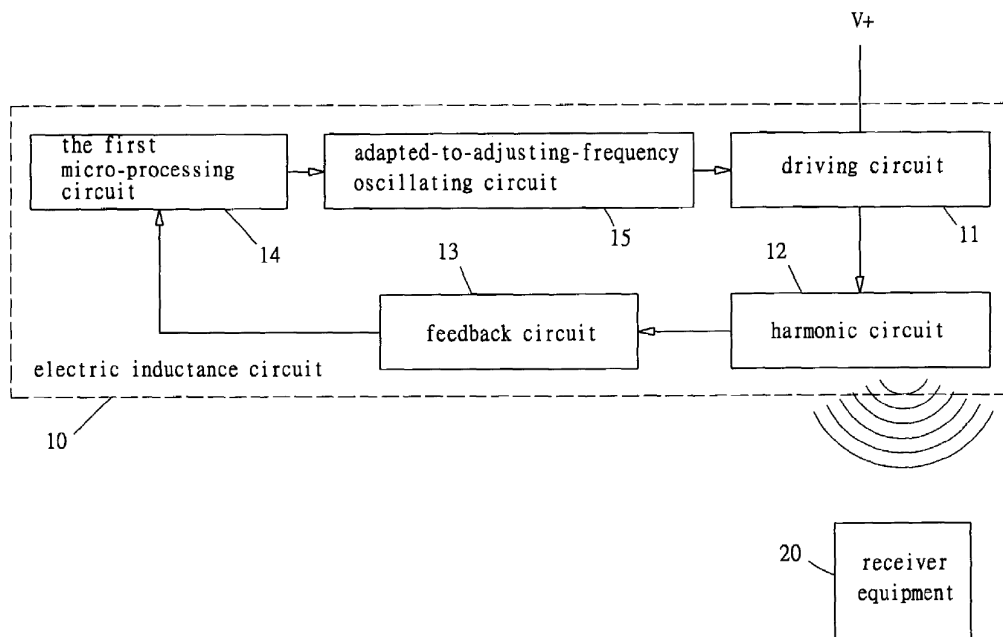
### PATENTS-IN-SUIT

7. IFPower is the owner of all right, title, and interest in and to U.S. Patent No. 7,298,361 (attached as **Exhibit 1**), entitled “Non-Contact Electric Inductance Circuit for Power Source,” issued on November 20, 2007.

8. IFPower is the owner of all right, title, and interest in and to U.S. Patent No. 7,863,860 (attached as **Exhibit 2**), entitled “Battery Cover,” issued on January 4, 2011.

TECHNICAL OVERVIEW

9. The '361 Patent is directed to a non-contact inductance circuit for a power source. The inductance circuit converts input alternating current into signals with a high-frequency harmonic vibration. The alternating electric current passes through an amplifier.



'361 Patent, Fig. 1.

10. During operation, a feedback circuit **13** transmits the voltage or current of the harmonic circuit to a processor to analyze the value of the detected voltage or current.

11. Conventional chargers for electronic devices with rechargeable batteries such as computer mice or smartphones required a physical cable connection between the power supply and the electronic device.

12. Prior art wireless chargers used harmonic vibration energy provided by alternating signals from a coil. That energy is converted into electrical energy by the receiving device. '361

patent, 1:17-24. This is accomplished through interoperations of an internal inductance and an internal capacitor. *Id.*, 1:38-43.

13. Even for inductors and capacitors with a given specification, however, there are practical operating ranges that reflect some differences during operation. As a result, mismatches between characteristics arise which reduce the efficiency of the circuit or require repeated and cumbersome adjustment. *Id.*, 1:43-56.

14. The inventions are thus directed to a nonconventional feedback and adapted-to-adjusting frequency oscillating circuit for physical, wireless chargers.

When in operation, the adapted-to-adjusting-frequency oscillating circuit generates alternating electric current that passes to the harmonic circuit after being amplified through the driving circuit, and the feedback circuit transmits the voltage or the current of the harmonic circuit to the microprocessing circuit that analyses the value of the voltage or the current detected, then the adapted-to-adjusting-frequency oscillating circuit adjusts the frequency of subsequent input alternating electric current, in order that the entire electric inductance circuit for the power source can generate the best harmonic frequency.

*Id.*, 2:5-15.

15. Additionally, in certain embodiments, the inductance circuit is further integrated with a signal processing circuit. In this way, the electric inductance circuit for the power source can be used for radio signal transmission. *Id.* 15 2:16-24.

16. The '860 Patent is directed to wireless charging, whereby a device incorporating the inventions claimed therein can be charged without a cable between the device and charger or removing internal batteries.

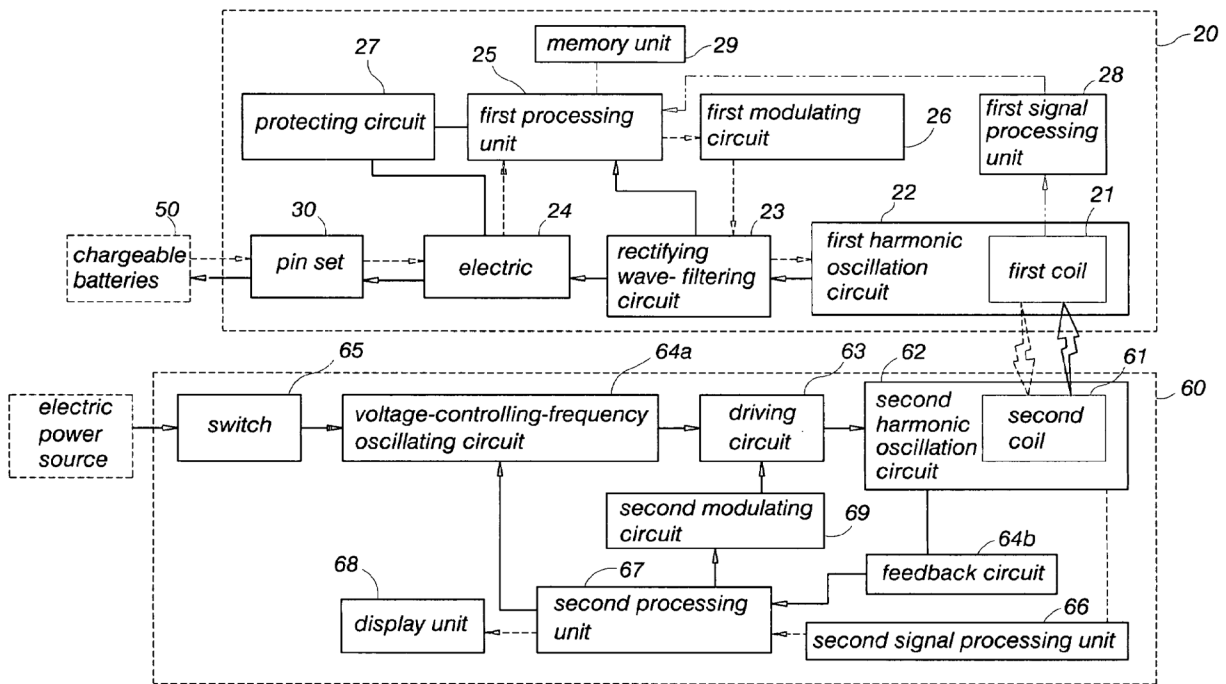
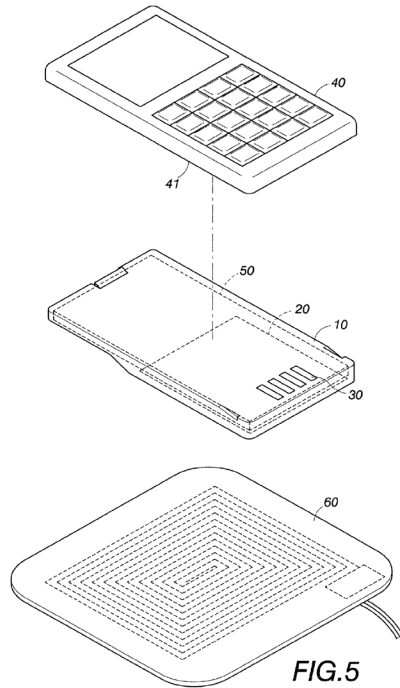


FIG. 4

'860 Patent, Fig. 4.

17. The invention provides a battery cover with circuitry adapted to wireless couple to an RF (radio frequency) emitter for generating electric power for charging a battery by a non-touch induction mode.



'860 Patent, Fig. 5.

18. The '860 Patent claims priority to a Taiwanese application filed on June 29, 2007.

19. The WPC published the Qi low-power specification over two years later, in August 2009.

#### DEFENDANT'S ACTS

20. Defendant is a provider of consumer electronics products offering wireless charging in accordance with certain WPC Qi wireless charging standards.

21. For example, Defendant's iPhone 8 and later iPhones and Apple Watches adopt and comply with the Qi wireless charging standard. Defendant represents compliance to its customers and instructs them how to wirelessly charge using the Qi charging standard.

# How to wirelessly charge your iPhone

Learn how to wirelessly charge your iPhone with Qi-certified charging accessories.

## What you need

You need an [iPhone 8 or later](#).

Your iPhone features integrated wireless charging that allows for an easy and intuitive charging experience. Your iPhone works with Qi-certified chargers that are available as accessories and in cars, cafes, hotels, airports, and furniture. Qi is an open, universal charging standard created by the Wireless Power Consortium (WPC).

Many Qi-certified chargers charge iPhone with the [latest version of iOS](#) at rates up to 7.5 watts. These chargers are available at the [Apple Online Store](#) and Apple Stores.

View a list of [Qi-certified chargers](#).

Other Qi-certified chargers might vary in functionality and performance. If you have questions, contact the manufacturer.

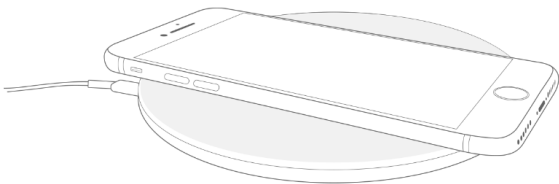
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<https://support.apple.com/en-us/HT208078>

22. Defendant further instructs and encourages its customers to wirelessly charge their products as it specifies in its documentation.

## Charge wirelessly

1. Connect your charger to power. Use the power adapter that came with your accessory or a power adapter recommended by the manufacturer.
2. Place the charger on a level surface or other location recommended by the manufacturer.
3. Place your iPhone on the charger with the display facing up. For best performance, place it in the center of the charger or in the location recommended by manufacturer.
4. Your iPhone should start charging a few seconds after you place it on your wireless charger.



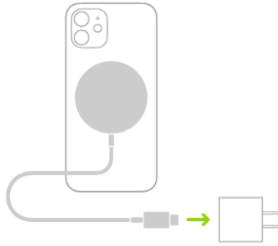
You should see ⚡ in the status bar.

<https://support.apple.com/en-us/HT208078>

23. Apple also offers a line of MagSafe products that use magnets to assist in aligning devices for wireless charging.

## Charge iPhone or AirPods with MagSafe Charger

1. Connect MagSafe Charger to power using the [Apple 20W USB-C power adapter](#) or another compatible power adapter (sold separately).



2. Do one of the following:

- *iPhone:* ([supported models](#)) Place MagSafe Charger on the back of iPhone or its MagSafe case or sleeve. The charging symbol appears when iPhone starts charging.  
*Note:* If iPhone Leather Wallet is attached, remove it before placing MagSafe Charger on the back of iPhone.
- *Other iPhone models:* Place iPhone face up on the center of MagSafe Charger. When iPhone is aligned properly with the charger,  appears in the status bar.
- *AirPods (2nd generation) with Wireless Charging Case, AirPods (3rd generation), and AirPods Pro:* Place your AirPods in the charging case, close the lid, then place the case with the status light facing up on the center of MagSafe Charger. When the case is aligned properly with the charger, the status light turns on for several seconds, then turns off while continuing to charge.

See the Apple Support article [How to use your MagSafe Charger](#).

<https://support.apple.com/guide/iphone/magsafe-chargers-and-battery-packs-iphac0f12e49/ios>

24. Apple participates in a leadership position at the Wireless Power Consortium (“WPC”). <https://www.wirelesspowerconsortium.com/about/leadership-of-wpc-inc.html>

25. Apple has promoted the adoption of the Qi wireless standards.

26. Apple has actively promoted the adoption of new versions of the Qi wireless standard, including Qi2.



27. In January 2023, the WPC announced Qi2, a replacement for the existing standard that will be based on Apple's MagSafe technology.

28. On information of belief, Defendant also implements contractual protections in the form of license and use restrictions with its customers to preclude the unauthorized reproduction, distribution, and modification of its products.

29. Moreover, on information and belief, Defendant implements technical precautions to attempt to thwart customers who would circumvent the intended operation of Defendant's products.

#### **IV. PATENT INFRINGEMENT**

##### **COUNT I — INFRINGEMENT OF U.S. PATENT NO. 7,298,361**

30. Apple has directly infringed and continues to infringe one or more claims of the '361 Patent in this judicial district and elsewhere in the United States by, among other things, making, having made, importing, using, offering for sale, and/or selling the claimed system and methods of the '361 Patent.

31. At a minimum, Apple has been, and now is, infringing claims of the '361 Patent by making, importing and/or using infringing systems and/or methods. Apple infringes at least claim 1 of the '361 Patent.

32. The infringing products include, but are not limited to, Apple's MagSafe, including when used in conjunction with iPhone version 8 and later and Apple Watches (the "'361 Infringing Products"). IFPower alleges that each and every element is literally present in the '361 Infringing Products. To the extent not literally present, IFPower reserves the right to proceed under the doctrine of equivalents.

33. More specifically, Apple’s MagSafe charger includes a non-contact electric inductance circuit for power source wherein a circuit amplifies an alternating current by an oscillator through a driving circuit and pass to a harmonic circuit. The Accused Instrumentalities use the “STWPSPA1” wireless charging IC which is custom made for Apple.

34. Apple claims that “[t]he MagSafe Charger makes wireless charging a snap. The perfectly aligned magnets attach to your iPhone 13, iPhone 13 Pro, iPhone 12, and iPhone 12 Pro and provide faster wireless charging up to 15W. The MagSafe Charger maintains compatibility with Qi charging, so it can be used to wirelessly charge your iPhone 8 or later, as well as AirPods models with a wireless charging case, as you would with any Qi-certified charger.”

<https://www.apple.com/shop/product/MHXH3AM/A/magsafe-charger>

35. The MagSafe charger is depicted below.



<https://www.apple.com/shop/product/MHXH3AM/A/magsafe-charger>

36. An X-ray of the MagSafe charger shows the coils of the inductance circuit.

<https://www.macrumors.com/2020/10/23/magsafe-charger-teardown-reveals-magnets-and-coil/>

37. In accordance with the WPC specification, the electric inductance circuit has a feedback circuit, a micro-processing circuit and an adapted-to-adjusting-frequency oscillating circuit integrated with one another.

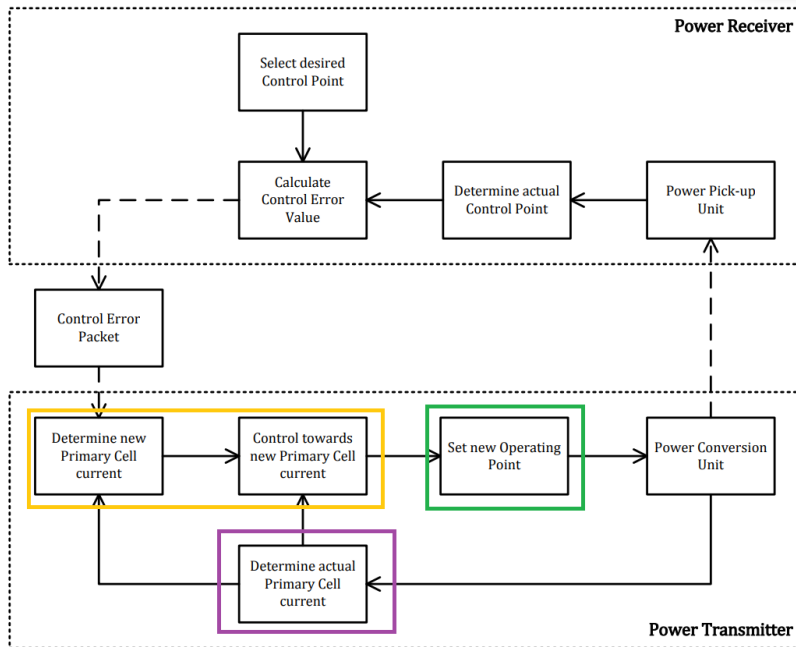
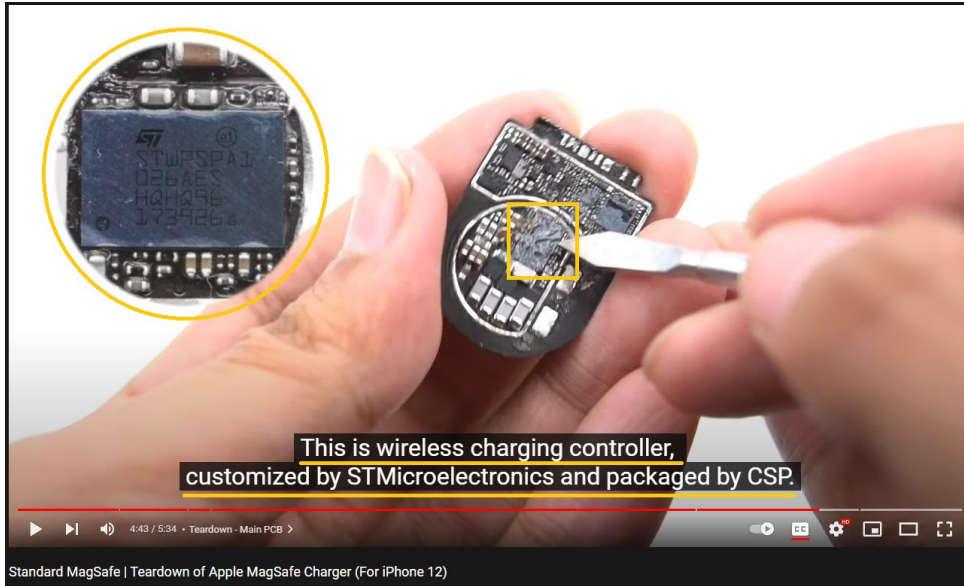


Figure 5-2: Power transfer control loop

<https://cupdf.com/document/wpc-specification.html>

38. The MagSafe charger further includes a wireless charging controller.



<https://www.youtube.com/watch?v=F45AJ81NG-o>

39. Apple claims that “the MagSafe Charger is designed to quickly and safely wirelessly charge your iPhone. The system intelligently adapts to conditions in order to optimize charging your iPhone at up to 15W of peak power delivery for faster wireless charging. The actual power delivered to the iPhone will vary depending on the wattage of the power adapter and system conditions. For iPhone 13 mini and iPhone 12 mini, the MagSafe Charger delivers up to 12W of peak power delivery.” <https://support.apple.com/en-us/HT211829>

40. Apple has indirectly infringed and continues to infringe the '361 Patent by inducing the infringement of the '361 Patent. With knowledge of the '361 Patent, Apple directs and aids its customers in using the '361 Infringing Products by the provision of its products and software, and related equipment and provision of instruction (including, by way of example, the tutorials, user guides, product guides, and other documentation located at <https://support.apple.com/manuals/>) to customers as well as functionality embedded in the '361 Infringed Products (including firmware and source code) with knowledge that the induced acts constitute patent infringement. When a

user of one of the '361 Infringing Products uses MagSafe for wireless charging, the '361 Infringing Product operates in an infringing manner. Apple possesses specific intent to encourage infringement by its customers.

41. Apple has contributed to the infringement of, and continues to contribute to the infringement of, one or more claims of the '361 Patent under 35 U.S.C. § 271(c) and/or 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '361 Infringing Products. Apple knows that the components of the '361 Infringing Products: constitute a material part of the inventions claimed in the '361 Patent; are especially made or adapted to infringe the '361 Patent; and are not staple articles or commodities of commerce suitable for non-infringing use, but rather the Components are used for or in systems that infringe one or more claims of the '361 Patent. The hardware and/or software Components are not a staple article or commodity of commerce because they are specifically designed to perform the claimed functionality. These products are specifically designed for their infringing purpose, namely wireless charging in accordance with the claims of the '361 Patent. Any other use of the hardware and/or software Components would be unusual far-fetched, illusory, impractical, occasional, aberrant, or experimental.

42. IFPower has been damaged as a result of Apple's infringing conduct. Apple is thus liable to IFPower in an amount that adequately compensates it for Apple's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT II — INFRINGEMENT OF U.S. PATENT NO. 7,863,860

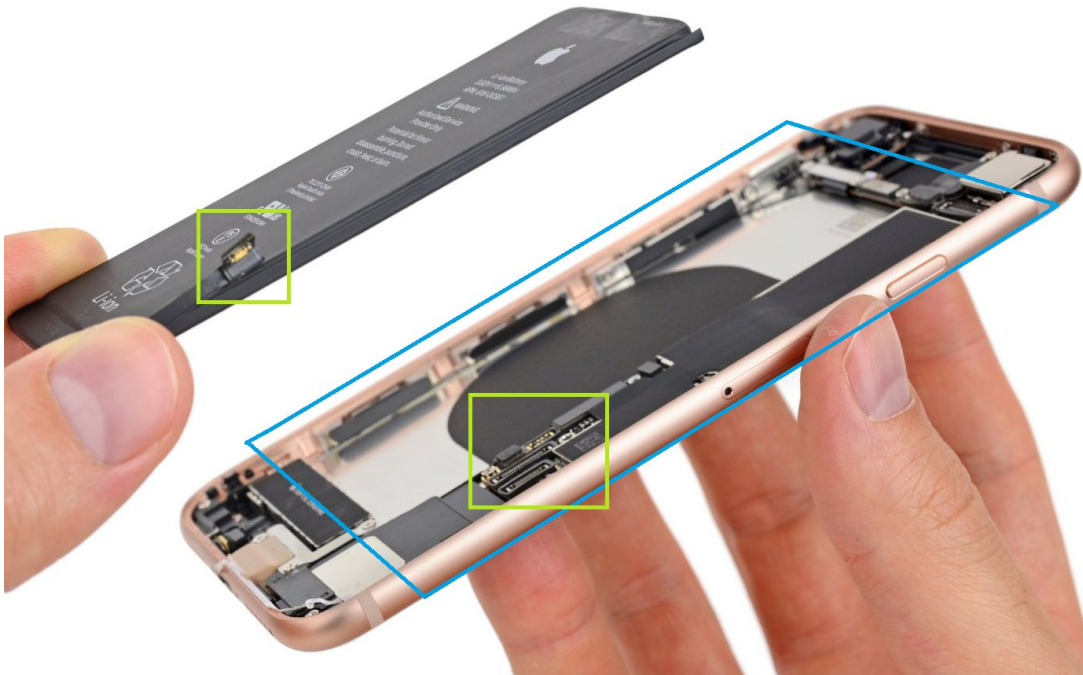
43. Apple has directly infringed and continues to infringe one or more claims of the '860 Patent in this judicial district and elsewhere in the United States by, among other things,

making, having made, importing, using, offering for sale, and/or selling the claimed system and methods of the '860 Patent.

44. At a minimum, Apple has been, and now is, infringing claims of the '860 Patent by making, importing and/or using infringing systems and/or methods. Apple infringes at least claim 1 of the '860 Patent.

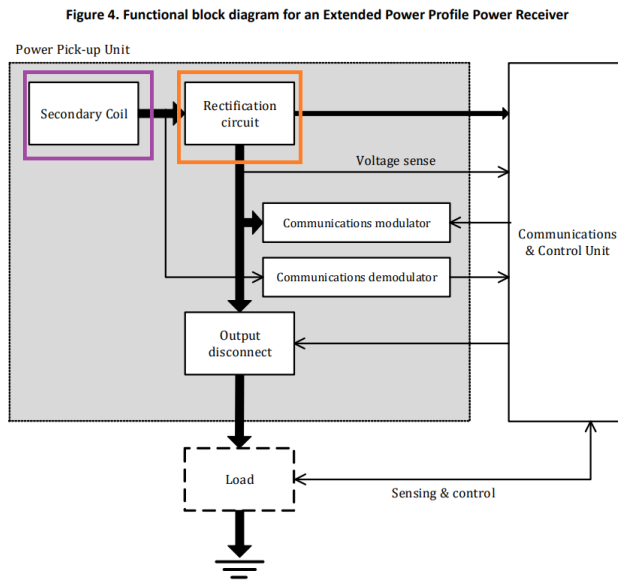
45. Apple's infringing products include, but are not limited to, Apple's iPhone 8 and later and Apple Watch product lines that are compliant with or use the Qi wireless charging protocol (the "'860 Infringing Products").

46. For example, the iPhone8 includes a cover to cover a battery groove of an electrical appliance and having set of pins to electrically connect with chargeable batteries.



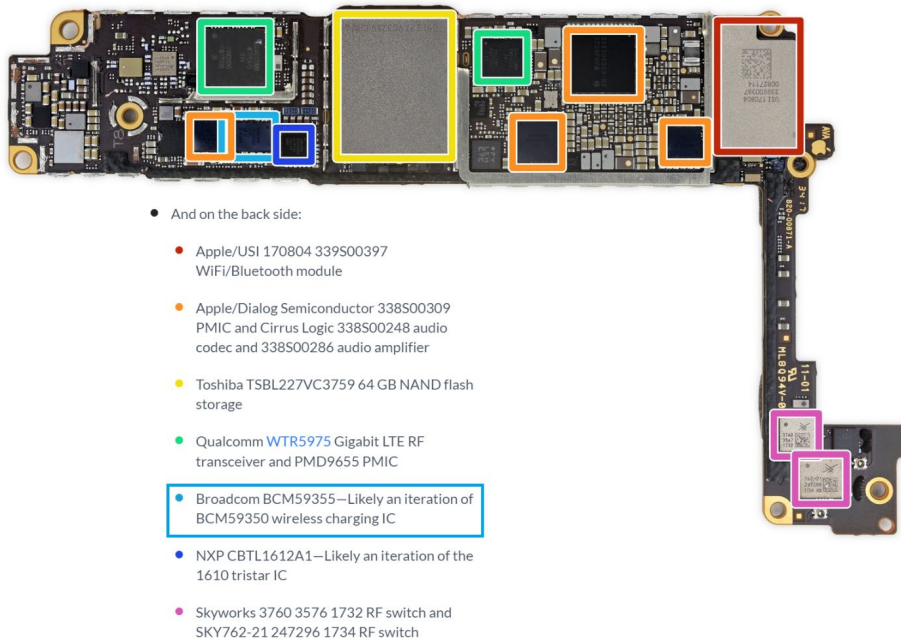
<https://www.ifixit.com/Teardown/iPhone+8+Teardown/97481>

47. In accordance with the WPC specification, the iPhone 8 includes a rectifying wave filtering circuit.



<https://www.wirelesspowerconsortium.com/data/downloadables/3/3/2/3/qi-v13-public.zip>

48. The iPhone 8 also includes a processing unit to detect the state of chargeable batteries.



<https://www.ifixit.com/Teardown/iPhone+8+Teardown/97481>

49. IFPower alleges that each and every element is literally present in the '860 Infringing Products. To the extent not literally present, IFPower reserves the right to proceed under the doctrine of equivalents.

50. Apple has indirectly infringed and continues to infringe the '860 Patent by inducing the infringement of the '860 Patent. With knowledge of the '860 Patent, Apple directs and aids its customers in using the '860 Infringing Products by the provision of its products and software, and related equipment and provision of instruction (including, by way of example, the tutorials, user guides, product guides, and other documentation located at <https://support.apple.com/manuals/>) to customers as well as functionality embedded in the '860 Infringed Products (including firmware and source code) with knowledge that the induced acts constitute patent infringement. When a user of one of the '860 Infringing Products charges the phone or watch, the '860 Infringing Product operates in an infringing manner. Apple possesses specific intent to encourage infringement by its customers.

51. Apple has contributed to the infringement of, and continues to contribute to the infringement of, one or more claims of the '860 Patent under 35 U.S.C. § 271(c) and/or 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '860 Infringing Products. Apple knows that the components of the '860 Infringing Products: constitute a material part of the inventions claimed in the '860 Patent; are especially made or adapted to infringe the '860 Patent; and are not staple articles or commodities of commerce suitable for non-infringing use, but rather the Components are used for or in systems that infringe one or more claims of the '860 Patent. These products are specifically designed for their infringing purpose, namely wireless charging in accordance with the claims of the '860 Patent. The hardware and/or software Components are not a staple article or commodity



of commerce because they are specifically designed to perform the claimed functionality. Any other use of the hardware and/or software Components would be unusual far-fetched, illusory, impractical, occasional, aberrant, or experimental.

52. IFPower has been damaged as a result of Apple's infringing conduct. Apple is thus liable to IFPower in an amount that adequately compensates it for Apple's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

#### **V. WILLFULNESS**

53. IFPower alleges upon information and belief that Apple has knowingly or with reckless disregard willfully infringed the '860 Patent. IFPower notified Apple of its infringement on multiple occasions, including on November 30, 2012; March 13, 2013; September 19, 2013; May 25, 2015; October 4, 2017; and November 10, 2017.

54. Apple was further provided notice of IFPower's claims by way of the Original Complaint filed on February 24, 2023.

55. Apple acted and continues to act with knowledge of the '860 Patent and despite an objectively high likelihood that its actions constituted infringement of IFPower's valid patent rights.

56. This objectively defined risk was either known or so obvious that it should have been known to Apple. IFPower seeks enhanced damages pursuant to 35 U.S.C. §284.

#### **VI. JURY DEMAND**

57. IFPower demands a trial by jury of all matters to which it is entitled to trial by jury, pursuant to FED. R. CIV. P. 38.

## VII. PRAYER FOR RELIEF

WHEREFORE, Plaintiff IFPower prays for judgment and seeks relief against Defendant as follows:

- a. Judgment that one or more claims of the Patents-in-Suit have been infringed, either literally and/or under the doctrine of equivalents;
- b. Award Plaintiff past and future damages together with prejudgment and post-judgment interest to compensate for the infringement by Defendant of the Patents in accordance with 35 U.S.C. §284, and increase such award by up to three times the amount found or assessed in accordance with 35 U.S.C. §284;
- c. That the Court declare this an exceptional case and award Plaintiff its reasonable attorney's fees and costs in accordance with 35 U.S.C. § 285; and
- d. That Plaintiff be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: July 14, 2023

Respectfully submitted,

/s/ Andrew G. DiNovo

Andrew G. DiNovo

Texas State Bar No. 00790594

Christopher V. Goodpastor

Texas State Bar No. 00791991

Michael D. French

Texas State Bar No. 24116392

**DiNovo Price LLP**

7000 N. MoPac Expressway, Suite 350

Austin, Texas 78731

Telephone: (512) 539-2626

Telecopier: (512) 539-2627

[adinovo@dinovoprice.com](mailto:adinovo@dinovoprice.com)

[cgoodpastor@dinovoprice.com](mailto:cgoodpastor@dinovoprice.com)

[mfrench@dinovoprice.com](mailto:mfrench@dinovoprice.com)

**ATTORNEYS FOR PLAINTIFF  
IFPOWER**

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system on July 14, 2023.

/s/ Andrew G. DiNovo  
Andrew G. DiNovo