

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC. and MOTOROLA MOBILITY LLC
Petitioner,

v.

GLOBAL TOUCH SOLUTIONS, LLC,
Patent Owner.

Case IPR2015-01172
Patent 7,498,749 B2

Before JUSTIN BUSCH, LYNNE E. PETTIGREW, and
BETH Z. SHAW, *Administrative Patent Judges*.

SHAW, *Administrative Patent Judge*.

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

INTRODUCTION

In this *inter partes* review, instituted pursuant to 35 U.S.C. § 314, Apple Inc. and Motorola Mobility LLC (collectively, “Petitioner”) challenge the patentability of claims 21 and 23 of U.S. Patent No. 7,498,749 B2 (Ex. 1001, “the ’749 patent”), owned by Global Touch Solutions, LLC

(“Patent Owner”). We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons discussed below, Petitioner has shown by a preponderance of the evidence that claims 21 and 23 of the ’749 patent are unpatentable.

A. Procedural History

Petitioner filed a Petition for *inter partes* review of claims 21 and 23 of the ’749 patent. Paper 4 (“Pet.”). Patent Owner did not file a Preliminary Response. On November 17, 2015, we instituted an *inter partes* review of claims 21 and 23 of the ’749 patent on the sole asserted ground of unpatentability. Paper 13 (“Institution Decision” or “Dec.”). After institution, Patent Owner filed a Patent Owner Response, Paper 19 (“PO Resp.”), and Petitioner filed a Reply to the Patent Owner Response, Paper 25 (“Pet. Reply”). A consolidated oral hearing was held for this case and several others on August 3, 2016. A transcript of the hearing has been entered into the record. Paper 54 (“Tr.”).

B. Related Matters

Petitioner identifies the following district court proceedings that may be affected by a decision in this proceeding: *Global Touch Solutions, LLC v. Toshiba Corp.*, No. 3:15cv2746-JD (N.D. Cal.); *Global Touch Solutions, LLC v. VIZIO, Inc.*, No. 3:15cv2747-JD (N.D. Cal.); *Global Touch Solutions, LLC v. Apple Inc.*, No. 3:15cv2748-JD (N.D. Cal.); *Global Touch Solutions, LLC v. Motorola Mobility LLC*, No. 3:15cv2749-JD; *Global Touch Solutions, LLC v. Microsoft Corp.*, No. 3:15cv2750-JD (N.D. Cal.).

Paper 8. Petitioner also identifies IPR2015-01148, which is a petition for *inter partes* review of the '749 patent filed by a different petitioner. *Id.*

C. The '749 Patent

The '749 patent is directed to portable electronic devices that operate on exhaustible power sources such as batteries. Ex. 1001, Abstract. A visible indicator such as a light emitting diode (LED) can be used to indicate the condition of the battery. *Id.* at 9:32–40, Fig. 11.

D. Claims

Independent claim 21 and dependent claim 23, which are the only challenged claims, read:

21. A method of implementing a user interface for a product comprising connections for a power supply and at least one energy consuming load, using at least a touch sensor user interface switch and a visible indicator, wherein the method includes the steps of:

- (a) activating the indicator in response to a user interface switch activation signal;
- (b) activating the indicator when the load is not activated by the user;
- (c) performing an automatic delayed deactivation of a function that was activated in response to an activation signal received via the user interface switch.

23. The method of claim 21, wherein the touch sensor switch sense pad is integral with the product housing.

Id. at 14:12–28.

E. Grounds of Unpatentability Instituted for Trial

We instituted a trial on the ground that claims 21 and 23 of the '749 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Beard¹ and Rathmann.²

II. DISCUSSION

A. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (holding that 37 C.F.R. § 42.100(b) “represents a reasonable exercise of the rulemaking authority that Congress delegated to the Patent Office”). Consistent with the broadest reasonable construction, claim terms are presumed to have their ordinary and customary meaning as understood by a person of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). An inventor may provide a meaning for a term that is different from its ordinary meaning by defining the term in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). Absent such a clear, deliberate and precise definition, it is one of the “cardinal sins” of patent law to import limitations from an embodiment in the specification into the claims. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1320 (Fed. Cir. 2005) (en banc).

¹ U.S. Patent 5,898,290, issued Apr. 27, 1999 (Ex. 1005, “Beard”).

² U.S. Patent 5,955,869, issued Sept. 21, 1999 (Ex. 1006, “Rathmann”).

In the Petition, Petitioner proposed a construction for “energy consuming load.” Pet. 9. Patent Owner did not file a Preliminary Response. In the Institution Decision, we determined the term “energy consuming load” did not require express construction, and we did not expressly construe any other claim terms. Dec. 4.

Patent Owner proposes a construction for “energy consuming load” and for “function.” PO Resp. 7–11, 14–16.

1. “*energy consuming load*”

Both Petitioner and Patent Owner agree that the “energy consuming load” of the preamble is limiting. Pet. 23; PO Resp. 4–7; Pet. Reply at 4 n.2. Patent Owner argues that “energy consuming load” means only a “load that is under the control of the microchip.” *Id.* at 8. Petitioner disagrees, and argues that the claim does not even recite a microchip, let alone one that somehow controls power to the load. Pet. Reply 3 (citing Ex. 1032). Thus, Petitioner argues, Patent Owner’s construction attempts to improperly import limitations from the Specification into the claims. *Id.* at 4–5. Moreover, Petitioner argues that Patent Owner’s own expert confirms that the ordinary meaning of “energy consuming load” is any part of the product that consumes energy when the product is used. *Id.* at 4 (citing Ex. 1033, 102:1–5).

For the following reasons, we agree with Petitioner that, under the broadest reasonable construction, the term “energy consuming load” means any part of the product that consumes energy when the product is used.

We begin our analysis with the language of the claims. As Petitioner points out, claims 21 and 23 do not even recite or require a microchip. Patent Owner’s expert agrees that nothing in the claim language requires the

energy consuming load to receive power under control of the microchip. Ex. 1032, 94:14–95:2.

We turn now to the written description. Patent Owner argues that “everywhere an ‘energy consuming load’ is referred to, it is a load that is under control of the microchip.” PO Resp. 8. This argument is unconvincing because “energy consuming load” is not explicitly referred to anywhere in the written description. At oral argument, counsel for Patent Owner acknowledged that there is “no explicit lexicography definition” for the term energy consuming load. Tr. 93:15. Rather, the written description merely refers to a “load,” which is also not defined explicitly. See Ex. 1001, 6:52–57.

Thus, we must determine whether the patentee limited the meaning of a term that is not even mentioned in the written description, through statements made in the written description. A specification may only be used to limit a claim if a patentee has disavowed or disclaimed scope of coverage, by using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002).

We have reviewed Patent Owner’s references to the Specification as presented in the Patent Owner Response and do not find any expressions of manifest restriction requiring us to limit the claims. First, Patent Owner argues that the ’749 patent’s description of an intelligent flashlight “identifies the bulb as the source of a load so significant that it needs to be put under the control of a microchip.” PO Resp. 11 (citing Ex. 1001, 6:53–57). The cited portion of the Specification contains no such statement. Rather, the cited excerpt merely reads “Microchip 103 also transfers

sufficient power through means of a current switch (not shown in FIG. 1) to load 105 which can be, for example, a resistor-type bulb in the case of a flashlight to provide illumination.” Ex. 1001, 6:53–57. This sentence merely states that the microchip transfers sufficient power through a current switch to a load, which can be a resistor-type bulb. We are unpersuaded that this sentence in the Specification indicates that the patentee intended to limit claim 21’s recited “energy consuming load” to a load that must be under control of the microchip.

The only other portion of the Specification that Patent Owner directs us to is the ’749 patent’s discussion of prior art flashlights, regarding which Patent Owner argues “the bulb is often mentioned . . . but never referred to as an ‘energy consuming load’ because these bulbs are not under the control of a microchip.” PO Resp. 11 (citing Ex. 1001, 1:53, 2:6, 2:53, cols. 2–3). We are not persuaded that the Specification’s discussion of prior art flashlights is sufficient expression of manifest restriction requiring us to limit claim 21 in the manner Patent Owner proposes.

Patent Owner argues that a load under the control of the microchip is the “very character of the invention” that requires us to limit the claims. PO Resp. 11–12 (citing *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1370 (Fed. Cir 2003)). However, we cannot redraft the claims for the Patent Owner to try to cover unclaimed features described in the Specification, even if the feature was found in every embodiment. See *Ventana Med. Sys., Inc. v. BioGenex Labs., Inc.*, 473 F.3d 1173, 1181 (Fed. Cir. 2006) (refusing to read limitation found in all embodiments in the specification into the claims because “[w]hen the claim addresses only some of the features disclosed in the specification, it is improper to limit the claim to other,

unclaimed features”); *see also E-Pass Techs., Inc. v. 3COM Corp.*, 343 F.3d 1364, 1370 (Fed. Cir. 2003) (refusing to read feature of every embodiment from specification into the claims because “[a]n invention may possess a number of advantages or purposes, and there is no requirement that every claim directed to that invention be limited to encompass all of them”).

Moreover, we are unpersuaded by Patent Owner’s argument that the energy consuming load being a load that is under the control of the microchip is the “very character of the invention” because, as discussed above, we determine that Patent Owner does not direct us to any statements in the Specification that support this conclusion.

Patent Owner does not allege that any prosecution history is helpful to ascertain the meaning of the “energy consuming load.” *See* Tr. 72:9–14. Petitioner points out that claims of Patent Owner’s related patents in fact contradict Patent Owner’s proposed construction. When the patentee wanted to include a requirement that the microchip control the flow of power, it did so expressly and without leaving it implied in the term “energy consuming load.” For example, claim 52 of related U.S. Patent No. 7,329,970 recites “using the microchip to control the connection of the power source to the load.” Ex. 1034 (claim 52).

We have considered all of the parties’ arguments and supporting evidence regarding the construction of “energy consuming load” as recited in claim 21. For the reasons discussed, we agree with Petitioner that the scope of “energy consuming load” is not limited to a load that is under the control of the microchip, as asserted by Patent Owner.

2. “*function*”

Claim 21 includes:

- (a) activating the indicator in response to a user interface switch activation signal;
- (b) activating the indicator when the load is not activated by the user; and
- (c) performing an automatic delayed deactivation of a function that was activated in response to an activation signal received via the user interface switch.

Ex. 1001, 14:17–21. The parties dispute whether “a function” can be the visible indicator or whether “a function” must be a function other than the activation of the indicator. Patent Owner argues that it “is not necessary to confine the ‘function’ . . . to any specific function.” PO Resp. 15. Patent Owner argues further that the function “simply is not the visible indicator function.” *Id.* at 15–16. To support this argument, Patent Owner refers to the Specification and argues that “[t]he illustrated embodiment for a function to be the subject of delayed deactivation following activation is turning off the radio.” *Id.* at 14 (citing Ex. 1001, 10:3–8). Patent Owner also refers to the language of the claim itself, arguing that the function must be a function “other than the already noted activation of the visible indicator” because “to suggest otherwise would be to render the discussion of steps (a) and (b) superfluous because if the delayed deactivation of step (c) was intended to be the deactivation of the visible indicator, those steps would be unnecessary.” *Id.* (citing Ex. 2002 ¶ 47).

Petitioner contends, and we agree, that a plain reading of the claim language shows that Patent Owner’s proposed construction is incorrect. Pet. Reply 15. Specifically, step (a) states that the indicator is activated “in response to a user interface switch activation signal” and step (c) explicitly

ties the function that is deactivated to one “that was activated in response to an activation signal received via the user interface switch.” Thus, the claim itself states that the activated indicator is one of the functions that can be deactivated in step (c). Petitioner argues, and we agree, that “function” is a broad term that encompasses any type of function, while “activating the indicator” is a specific type of function. *Id.* at 16. Petitioner cites Patent Owner’s expert testimony for support. *Id.* at 16–17 (citing Ex. 1032, 118:21–119:3). Moreover, the Specification refers to “battery strength monitoring” as one example of a function. *Id.* at 17 (citing Ex. 1001, 8:49, 1:41–43). Additionally, an original claim in the application from which the ’749 patent claims priority shows that when the patentee wished to include a requirement that related to an “*other* function,” it did so expressly. *Id.* (citing Ex. 1038 at 25, claim 1, 29–30, claims 28 and 36).

We agree with Petitioner that Patent Owner’s attempt to narrow the term “function” to exclude activation of a visible indicator is contrary to the claims, Specification, and the testimony of Patent Owner’s expert witness. We have considered all of the parties’ arguments and supporting evidence regarding the construction of “function” as recited in claim 21. For the reasons discussed, we agree with Petitioner that the broadest reasonable interpretation of “function” is not limited to a function other than activating the visible indicator, as asserted by Patent Owner.

B. Obviousness of Claims 21 and 23 over the Combination of Beard and Rathmann

Petitioner contends that claims 21 and 23 are unpatentable under 35 U.S.C. § 103(a) as obvious over Beard and Rathmann. Pet. 23–35. Relying on the testimony of Mr. Beard, who is one of the inventors of the

Beard reference, Petitioner explains how the combination of Beard and Rathmann allegedly teaches all the claim limitations. *Id.* (citing Ex. 1003).

1. Beard

Beard describes an intelligent battery pack with a microcontroller and battery indicators for use with a portable electronic device. Ex. 1005, 1:18–21; *see also* Ex. 1003 ¶ 68. The microcontroller responds to a touch-sensing circuit that detects changes in impedance or capacitance when an operator touches one or two contacts. Ex. 1005, 11:12–16; *see also* Ex. 1003 ¶ 68. Figure 11 of Beard is reproduced below.

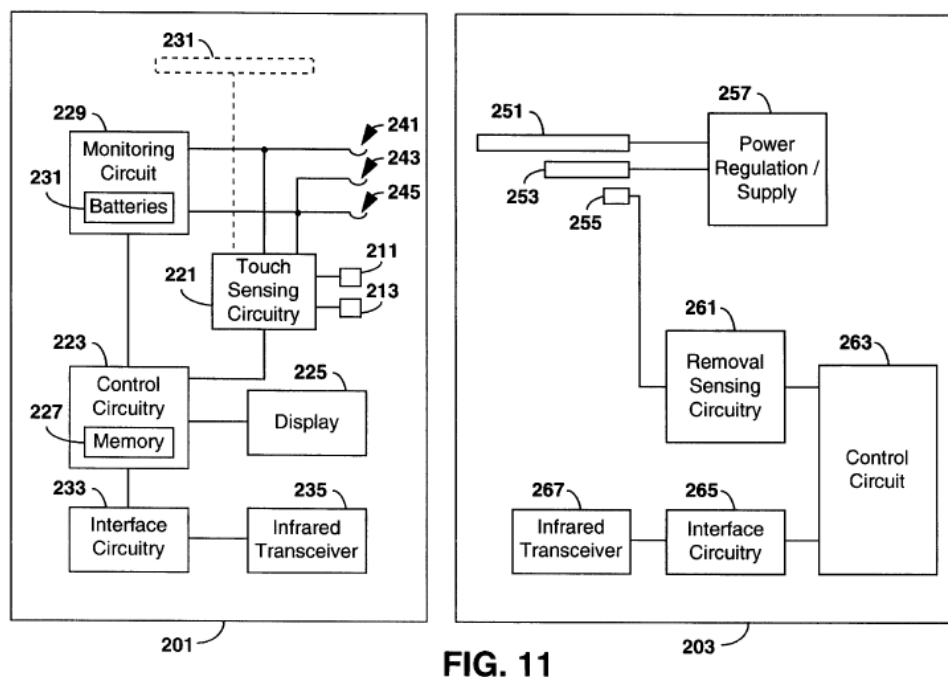


FIG. 11

Figure 11 depicts a battery pack 201 that provides an operator with an indication of battery capacity whether or not it is inserted into portable electronic device 203. Ex. 1005, 11:10–13. When fully inserted, the battery pack contacts 241, 243 and 245 engage the corresponding contacts 251, 253 and 255, and, if sufficient power is available, the device 203 may enter a fully operational state when the operator desires. *Id.* at 11:67–12:4.

2. *Rathmann*

Rathmann describes a “smart battery for use in an intelligent device having power management capabilities.” Ex. 1006, 1:12–16; 1:65–3:30. Rathmann’s indicator is comprised of LEDs. In response to a signal from the battery pack’s user interface, four LEDs illuminate sequentially to indicate remaining battery charge. Ex. 1006, Fig. 3, 16:24–36; *see also* Ex. 1003 ¶ 87.

3. *Claim 21*

Petitioner asserts that the combination of Beard and Rathmann teaches all of the limitations of independent claim 21. First, Petitioner contends that Beard discloses the claimed “method of implementing a user interface for a product” because Beard teaches that an operator touches a pair of contacts 211 and 213, and a touch sensing circuit 221 detects the resultant impedance change across the contacts and activates a control circuit 223 to service the request. Pet. 23–24 (citing Ex. 1005, 11:12–22). Patent Owner does not dispute that Beard discloses this limitation.

Additionally, Petitioner contends that Beard discloses battery pack 201 of Figure 11 and electrical connections that connect the battery pack to the energy consuming part of device 203, which teaches the claimed “product comprising connections for a power supply,” as recited in claim 21. Pet. 24. Petitioner contends that Beard discloses the product comprises “at least one energy consuming load” because Beard discloses that the battery pack delivers electric charge energy to portable electronic device 203, which includes a load, such as any of the exemplary energy consuming components depicted in device 203 in Figure 11. Pet. 25 (citing Ex. 1005, 11:57–61). We agree with and adopt Petitioner’s contentions regarding Beard’s

teachings of this limitation. *Id.* Patent Owner’s first argument with respect to claim 21 is that Beard does not teach at least one “energy consuming load” because the energy demands of the data terminal in Figure 3 of Beard are not under the control of a microchip of Beard’s battery pack. PO Resp. 12–13. Patent Owner’s argument, however, depends on its proposed construction of “energy consuming load” as limited to a load under the control of a microchip, a construction which we have not adopted. *See id.* at 13.

“activating the indicator in response to a user interface switch activation signal” and “activating the indicator when the load is not activated by the user”

Petitioner further contends that Beard describes “activating the indicator in response to a user interface switch activation signal,” and “activating the indicator when the load is not activated by the user.” Pet. 27–30. Patent Owner does not specifically address these limitations. We agree with and adopt Petitioner’s contentions regarding Beard’s teachings of these limitations. *Id.* In particular, Beard discloses that “battery pack 201 provides an operator with an indication of battery capacity *whether or not it is inserted* into a portable electronic device 203.” Ex. 1005, 11:10–12 (emphasis added). Thus, Beard’s battery pack indicator is activated without affecting the load of the device and without requiring that the user has activated the load of the device. *See* Ex. 1003 ¶ 77. Rathmann also discloses additional detail about activating a visible indicator (between one and four LEDs that illuminate to indicate battery capacity in successive 25% intervals relative to a full charge of 100%) in response to a user interface switch activation signal when the load is not activated by the user. Pet. 30 (citing Ex. 1006, 16:24–29).

“performing an automatic delayed deactivation of a function that was activated in response to an activation signal received via the user interface switch”

Petitioner also contends that Beard describes “performing an automatic delayed deactivation of a function that was activated in response to an activation signal received via the user interface switch.” Pet. 31, 32. For the following reasons, we agree with and adopt Petitioner’s contentions regarding Beard and Rathmann’s teachings of these limitations. *Id.*

Patent Owner argues that Beard and Rathmann do not teach this limitation. In particular, Patent Owner argues that the delayed deactivation must be some function other than the activation of the visible indicator. PO Resp. 15. Patent Owner argues that while it “is not necessary to confine the ‘function’ . . . to any specific function. . . . it simply is not the visible indicator function.” *Id.* at 15–16. Patent Owner’s argument, however, depends on its proposed construction of “function” as limited to a function other than activation of the visible indicator, a construction which we have not adopted. *See id.* at 13.

Beard discloses the activation, and automatic deactivation 10 seconds later, of at least two functions: (1) the display of battery capacity information and (2) the display of remaining time in response to a user pressing the touch sensor, thus disclosing this limitation. Ex. 1005, Fig. 9, 10:37–56; *see also* Ex. 1003 ¶¶ 132–133. Beard discloses that the function of displaying battery charge status is activated in response to an activation signal of a single touch contact in Figure 9 received from the user interface. *See, e.g.*, Ex. 1005, Fig. 9, 10:48–50 (“[T]he battery pack 155 utilizes a single touch contact 155 to initiate the delivery of charge status to an LCD display 157 for viewing.”); *see also* Ex. 1003 ¶ 132. Beard discloses that the battery pack of Figure 9

displays charge status information in the form of *both* (1) available capacity and (2) projected remaining time estimates of battery life in response to an activation signal from the user interface. *See, e.g., id.* at 10:37–40 (“FIG. 9 is a perspective view illustrating a further embodiment of the battery pack of FIG. 8 which includes an LCD (Liquid Crystal Display) screen that is used to display both available capacity and remaining time estimates.”). Beard also discloses that the charge status information display functions in Figure 9 automatically deactivate the indication after 10 seconds. *See, e.g.,* Ex. 1005, 10:51–56 (“Moreover, a timing circuit prevents the contact 155 from holding the display 157 and associated circuitry in an active state for more than a ten (10) second interval. After the ten second display period, deactivation occurs whether or not the contact 155 is being touched.”); *see also* Ex. 1003 ¶ 133. Petitioner points out that Patent Owner’s expert agrees that these two features are each different “functions.” Pet. Reply at 18–19 (citing Ex. 1032, 124:6–9, 126:2–22). This conclusion is consistent with Beard’s description of calculating and displaying battery capacity as a feature different from calculating and displaying a remaining time estimate. Ex. 1005, Abstract, 10:37–45, 11:45–48, 12:59–65. For example, Beard states that instead of—or in addition to—displaying the percentage of available battery capacity, the control circuitry interacts with the display to deliver the time estimates to the operator. *Id.* at 11:45–48. The fact that Beard describes that battery capacity can be displayed *instead* of time estimates evidences that the (1) calculation and display of battery capacity and (2) calculation and display of time estimates are different functions. Thus, even under Patent Owner’s proposed construction of “function” as something

different from activation of the visible indicator, Beard teaches the limitations of claim 21.

Thus, Petitioner has shown sufficiently that the combination of Beard and Rathmann teaches all the limitations of claim 21. We agree with and adopt Petitioner's articulated reasoning with rational underpinning for combining the references. Pet. 17–22. For the foregoing reasons, we conclude that Petitioner has shown by a preponderance of the evidence that claim 21 would have been rendered obvious by the combination of Beard and Rathmann.

4. Claim 23

Petitioner further contends that Beard discloses the additional limitation of dependent claim 23, which recites “wherein the touch sensor switch sense pad is integral with the product housing.” Ex. 1001, 14:27–28; Pet. 33.³ Figure 8 of Beard is reproduced below.

³ Petitioner notes there is no “touch sensor switch sense pad” recited in claim 21, from which claim 23 depends. For purposes of assessing claim 23 in view of the prior art referenced herein, the Petition assumes that “touch sensor switch sense pad” refers back to the “touch sensor user interface switch” recited in claim 21. Pet. 33.

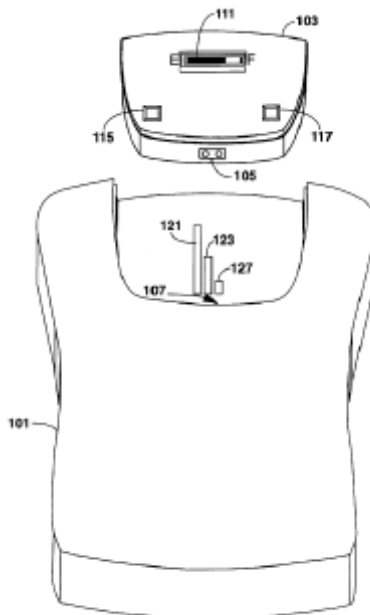


FIG. 8

Figure 8 of Beard depicts battery pack 103 that may be inserted in a slot in the bottom of portable terminal 101 to power the terminal. Ex. 1005, Fig. 8, 11:10–12. Thus, Petitioner contends, contacts 115 and 117 are located on the back of the product, integral with the product housing. Pet. 34 (citing Ex. 1005, Fig. 8, 9:17–23; Ex. 1003 ¶ 138). Petitioner contends that contacts 115 and 117 teach the claimed touch sensor switch sense pad. See Pet. 33–34. We agree with and adopt Petitioner’s contentions regarding Beard’s teaching of this limitation. See *id.* at 32–34.

Patent Owner presents no additional arguments for claim 23 beyond its arguments with respect to claim 21. For the foregoing reasons, we conclude that Petitioner has shown by a preponderance of the evidence that claim 23 of the ’749 patent would have been obvious in view of Beard and Rathmann.

III. CONCLUSION

Based on the evidence and arguments, Petitioner has demonstrated by a preponderance of the evidence that claims 21 and 23 of the '749 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Beard and Rathmann.

IV. ORDER

Accordingly, it is:

ORDERED that claims 21 and 23 of U.S. Patent No. 7,498,749 B2 have been shown to be unpatentable; and

FURTHER ORDERED that, because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

FOR PETITIONER:

Bob Steinberg
Matthew Moore
Gabriel Gross
James R. Bender
Dorris Hines
Luke McCammom
bob.steinberg@lw.com
matthew.moore@lw.com
gabe.gross@lw.com
James.bender@lw.com
Dori.hines@finnegan.com
Luke.mccammon@finnegan.com

Phillip Morton
DeAnna Allen
LATHAM & WATKINS LLP
pmorton@cooley.com
dallen@cooley.com

FOR PATENT OWNER:

William Mandir
Peter Park
Fadi N. Kiblawi
SUGHRUE MION, PLLC
wmandir@sughrue.com
pspark@sughrue.com
fkiblawi@sughrue.com