

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

SCRAMOGE TECHNOLOGY LTD.,
Patent Owner.

IPR2022-00118
Patent 10,804,740 B2

Before JAMESON LEE, KARL D. EASTHOM, and
BRIAN J. McNAMARA, *Administrative Patent Judges*.

McNAMARA, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
Dismissing Patent Owner's Motion to Amend
35 U.S.C. § 318(a)

I. BACKGROUND

On May 12, 2022, in response to a Petition (Paper 2, “Pet.”) we instituted an *inter partes* review of claims 6, 7, 16, 17, 19, and 20 of U. S. Patent No. 10,804,740 B2 (“the ’740 patent”). Paper 9 (“Dec. to Inst.”). Patent Owner filed a Patent Owner Response (Paper 17, “PO Resp.”) and a Motion to Amend (Paper 16). Petitioner filed a Petitioner Reply (Paper 22, “Reply”) and an Opposition to Patent Owner’s Motion to Amend (Paper 23, “Opp. to MTA”). On November 23, 2022, we entered Preliminary Guidance (Paper 26, “Prelim. Guid.”). Patent Owner filed a Sur-reply (Paper 28, “Sur-reply”) and a Revised Motion to Amend (Paper 28, “Rev’d. MTA”). Petitioner filed an Opposition to Patent Owner’s Revised Motion to Amend (Paper 34, “Rev’d. MTA Opp.”) and Patent Owner filed a Reply to Petitioner’s Opposition (Paper 37, “Reply to Rev’d. MTA Opp.”). A transcript of an oral hearing held on March 9, 2023 (Paper 43, “Hr’g. Tr.”) has been entered into the record.

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. §318(a). We base our decision on the preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

Having reviewed the arguments of the parties and the supporting evidence, we conclude that Petitioner has not demonstrated by a preponderance of the evidence that the challenged claims are unpatentable. Having determined that no challenged claims are unpatentable, we dismiss Patent Owner’s Revised Motion to Amend as moot.

II. THE ’740 PATENT

The ’740 patent concerns a wireless power receiver used for wireless power transmission, whose thickness is reduced by directly disposing a coil unit on a top surface of a magnetic substrate or inside the magnetic substrate.

Ex. 1001, 1:21–27, 1:54–56, 1:65–67. Figure 1 of the '740 patent is reproduced below.

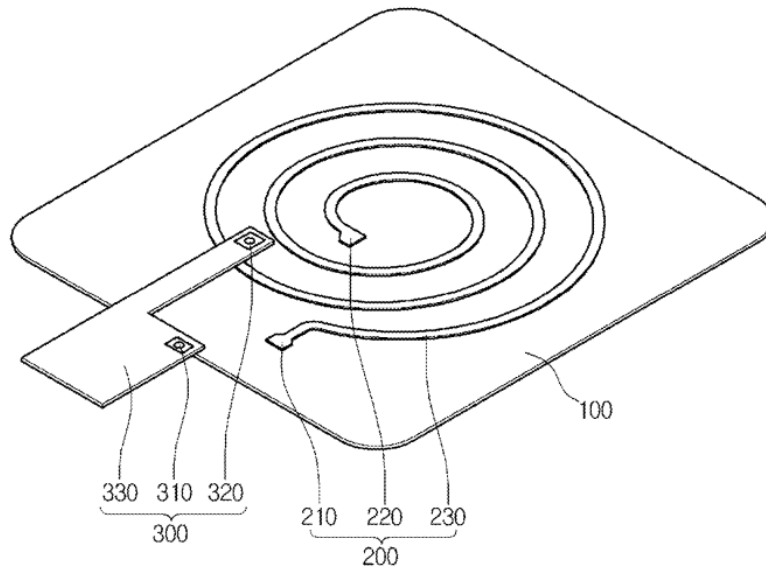


FIG. 1

As shown in annotated Figure 1, the wireless power receiver includes magnetic substrate 100 that concentrates a magnetic field received by electromagnetic induction or resonance from its transmission side into coil 200, which may adhere to the substrate via an adhesion layer (not shown). *See id.* at 4:23–5:37, Figs. 2–3. Connecting unit 300, which may be directly disposed on coil 200, connects coil 200 via terminals 210, 310 and 220, 320, to a wireless power receiving circuit that may include a rectifier and a smoothing circuit to convert AC to DC power to be transferred to a load (not shown). *Id.* at 5:19–37, 6:30–39. According to the '740 patent, “the thickness of the wireless power receiver can be remarkably reduced by directly disposing the coil unit on a top surface of the magnetic substrate.” *Id.* at 2:29–32.

Figure 11 of the '740 patent is reproduced below.

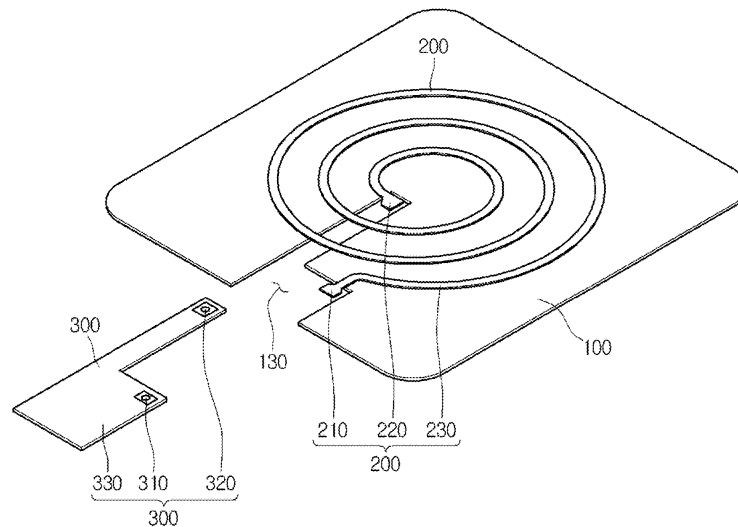


FIG. 11

Although similar to the embodiment in Figure 1, the Figure 11 embodiment includes receiving space 130 in magnetic substrate 100. *Id.* at 2:19–28, 8:30–57, 8:19–57. In the embodiment of Figure 11, connecting unit 300, which may be of equal or lesser thickness than magnetic substrate 100, may be disposed in receiving space 130. *Id.* at 8:44–49. Another difference between the Figure 1 and Figure 11 embodiments is that in the Figure 11 embodiment, connecting unit 300 may be disposed under coil 200. *Id.* at 8:32–39.

III. ILLUSTRATIVE CLAIM

Independent claim 6, reproduced below with the paragraph designations used in the Petition, is illustrative of the subject matter of the '740 patent.

- [6.0] A wireless power receiver, comprising:
 - [6.1] an adhesive layer comprising a receiving space;
 - [6.2] a coil on the adhesive layer;
 - [6.3] a first connection terminal connected to an outer end of the coil;

- [6.4] a second connection terminal connected to an inner end of the coil; and
- [6.5] a connecting unit overlapping the receiving space in a vertical direction perpendicular to the adhesive layer,
- [6.6] wherein the connecting unit comprises: a third connection terminal connected to the first connection terminal;
- [6.7] [wherein the connecting unit comprises:] a fourth connection terminal connected to the second connection terminal; and
- [6.8] [wherein the connecting unit comprises:] a wiring layer connected to the third connection terminal.

IV. GROUNDS OF INSTITUTION

Petitioner asserts that claims 6, 7, 16, 17, 19, 20 would have been unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
6, 7, 16, 17, 19, 20	103	Hasegawa ¹

V. CONSTRUCTION OF CHALLENGED CLAIMS

A. Introduction

Prior to Institution, neither party proposed a special definition or explicit construction of any claim term. PO Resp. 8. In its Patent Owner Response, Patent Owner identifies a claim construction dispute and proposes constructions for several terms, as discussed below. *Id.* at 8–23.

We interpret claim terms using “the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b) (2019). In this context, claim terms “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention.

¹ U.S. Patent Application Publication 2009/0021212 (Ex. 1005).

Phillips v. AWH Corp., 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (citations omitted) (en banc). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317 (citations omitted). Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

B. Whether the “coil” and “connecting unit” should be construed as separate components (claims 6 and 16)

“Patent Owner respectfully requests that the Board construe independent claims 6 and 16 to require two separate and distinct components for the ‘coil unit’ and ‘connecting unit.’” PO Resp. 8. According to Patent Owner, the ’740 patent discloses a “coil unit” consisting of a coil, a first connection terminal and a second connection terminal, and a separate connecting unit that constitutes a third connection terminal, a fourth connection terminal and a wiring layer that connects the third and fourth connection terminals. *Id.*

Petitioner argues that the claims do not recite a coil unit, but a coil connected to first and second connection terminals, indicating that the first and second connection terminals are not associated with the coil. Reply 2. Petitioner further contends that nothing in the claims precludes the first and second terminals from being part of the claimed connecting unit. *Id.*

1. *Coil v. coil unit*

As an initial matter, Petitioner correctly points out that the term “coil unit” in Patent Owner’s proposed construction is not found in any of the challenged claims. Reply 2. Notwithstanding Patent Owner’s references to “coil unit,” we focus on the construction of the term “coil on the adhesive layer” (i.e., “coil”). The Specification explicitly distinguishes “coil unit 200” that is not recited in the claims from the claimed “coil 230.” *See, e.g.*, Ex. 1001, 4:57–5:17. The ’740 patent describes coil unit 200 as including coil 230, first connection terminal 210, and second connection terminal 220. *See, e.g.*, Ex. 1001, 4:57–59 (describing Fig. 1), 19:5–8 (describing Fig. 14), 5:34–36 (describing Fig. 26).

The Specification describes coil 230 as a “conductive layer or a conductive pattern” that “is obtained by winding a conductive line several times.” *Id.* at 4:59–60, 4:66–67. The claimed adhesive layer is not shown in the drawings. Ex. 1001, 5:6–9. The patent confuses matters by its description stating “coil unit 200 can be directly disposed on the top surface of magnetic substrate 100” and “an adhesive layer (not shown) may be disposed between the coil unit 200 and the magnetic substrate 100.” *Id.* at 5:5–9. Even further confusing the matter is the patent’s description that “coil unit 200 may include a conductor.” *Id.* at 5:10. We understand the ’740 patent’s claim language to distinguish the coil from the adhesive layer and, by its reference to the coil unit as *including* a conductor, to mean that the coil unit can also include other components, thereby distinguishing the coil unit from the coil itself.

In view of the patent’s explicit distinction between coil unit 200 and coil 230, we do not consider the terms to be interchangeable. The claims recite specific connection terminals connected to a coil, not to a coil unit.

As the term “coil unit” does not appear in the claims, we do not attempt to construe “coil unit.” We limit our analysis to the coil and the connecting unit, as claimed.

2. “Coil” and “connecting unit” as separate components

Patent Owner first argues that, because the challenged claims separately recite the coil and the connecting unit (e.g., claim limitations 6.2 and 6.3 as designated by Petitioner), under well-settled law, the separately recited elements are presumed to be distinct components. *See* PO Resp. 9–10.

Patent Owner argues that the challenged claims support the presumption that the coil and the connecting unit are separate and distinct. *Id.* at 10–12. Patent Owner emphasizes that the claims recite the coil is connected through the first and second connection terminals (*see* claim limitations 6.3 and 6.4), to the third and fourth connection terminals, respectively, (*see* claim limitations 6.6. and 6.7) of the connecting unit (*see* claim limitation 6.5). *See id.* at 10–11. The claim language does not limit the location of the first and second connection terminals themselves.

Patent Owner argues that, for each embodiment, the Specification describes the coil (part of the coil unit) and the connecting unit as separate components. *Id.* at 12 (citing Ex. 1001, Figs. 1, 11, 14, 26). Patent Owner notes that the Specification of the ’740 patent describes an embodiment in which first connection terminal 210 of coil unit 200 is connected to first connection terminal 310 of connecting unit 300 through a via hole in the first solder 10 and second connection terminal of coil unit 200 is connected to second connection terminal 320 of connecting unit 300 through a via hole of the second solder 20. PO Resp. 12; Ex. 1001, 4:54–60. Patent Owner’s argument that the Specification supports the presumption that the “coil unit”

and the “connecting unit” are separate components fails to consider that claim language does not recite a “coil unit.” *Id.* at 12–16. Because the claims separately recite the connecting unit and the coil and, without further limitation, that the coil is on the magnetic substrate, we find that the coil and the connecting unit are separate elements.

Although we find that the coil and the connecting unit are distinct elements, our inquiry does not end there, as Petitioner contends that the claims do not require the first and second connection terminals to be part of the coil and there is nothing that precludes the first and second connection terminals from being part of the claimed connecting unit. Reply 2.

C. Whether the “first connection terminal” and the “second connection terminal” are precluded from being part of the “connecting unit”

Patent Owner contends that, as properly construed, the claimed “first connection terminal” and the claimed “second connection terminal” are not part of the claimed “connecting unit.” PO Resp. 19–23. Petitioner contends that the claims do not require the first and second connection terminals be separate and distinct from the connecting unit, i.e., nothing in the claim precludes the first and second connection terms from being part of the connecting unit. *Id.* at 8–12; *see also* Reply 4 (citing *Regents of Univ. of Minn. v. AGA Med. Corp.*, 717 F.3d 929, 935–36 (Fed. Cir. 2013)). In *Regents*, the court found that the claims and specification supported a finding that two occluding disks were structurally separate and dictionary definitions supported the conclusion that when a physical object is described as having been affixed, joined, connected, or conjoined to another object, it means the objects were previously separate. *Regents*, 717 F.3d at 935–936, 938.

Petitioner cites the '740 patent Specification as not referring to the first and second connection terminals as part of the claimed coil, but only as part of the non-recited coil unit. Reply 4. Noting that the Specification describes the first and second connection terminals as located at the ends of the coil and the claims recite the coil is “connected to” the first and second terminals, Petitioner argues that the claims are not limited to embodiments in which the first and second connection terminals are part of the coil.

Petitioner is correct that the claim does not facially exclude the first and second connection terminals from being located within the connecting unit, and the Specification is not inconsistent with that scope by not expressly excluding the first and second connection terminals from within the connecting unit. However, the U.S. Court of Appeals for the Federal Circuit held that the correct interpretation of a claim “is not whether the specification proscribes or precludes some broad interpretation of the claim,” and “not simply an interpretation that is not inconsistent with the specification,” but “is an interpretation the corresponds with what and how the inventor describes his invention in the specification, i.e., an interpretation that is ‘consistent with the specification.’” *In re Smith International, Inc.*, 871 F.3d 1375, 1383 (Fed. Cir. 2017) (citing *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997)).

In *Smith*, where the claim recited a body of a drilling tool, the Appellant argued that the specification consistently referred to and depicted the drilling tool as a component distinct from other separately identified components, such as a mandrel or piston that reside inside the drilling tool, but not mentioned in the claim. *Id.* at 1382. The court found that the Board’s construction of the body to include a mandrel and cam sleeve

described in the reference was unreasonably broad under general claim construction principles. *Id.*

We turn first to the language of the claim. Claim 6 recites a coil, a first connection terminal connected to an outer end of the coil and a second connection terminal connected to an inner end of the coil (claim limitations 6.1, 6.2, and 6.3). Claim 6 further recites a connecting unit (claim limitation 6.5) comprising a third connection terminal connected to the first connection terminal, a fourth connection terminal connected to the first connection terminal, and a wiring layer connected to the third connection terminal (claim limitations 6.6, 6.7, and 6.8). Claim 6 does not explicitly recite a connection between the coil and the connecting unit, except through the first and second terminals, i.e., the first and second connection terminals are connected to the outer and inner ends of the coil and the third and fourth connection terminals of the connecting unit, respectively.

The Specification informs us that “the coil unit 200 (subject matter not recited in the claim) may include first connection terminal 210, a second connection terminal 220 and a coil 230” and that “first connection terminal 210 is located at one end of the coil 230 and the second connection terminal is provided at the other end of the coil 230.” Ex. 1001, 4:57–63. The Specification further states “[t]he first and second connection terminals 210 and 220 are necessary for connection with the connecting unit 300.” *Id.* at 4:66–67. The claim recites the first and second connection terminals are connected to the coil; and the Specification describes the first and second connection terminals 210, 220 as being part of coil unit 200, a structure different from coil 230. The Specification does not describe an embodiment in which the first and second connection terminals are not part of a coil unit that is separate from the connecting unit. Therefore, we do not read claim 6

to encompass an embodiment in which the first and second connection terminals are part of the coil itself or are part of a connecting unit that is directly connected to the coil without a separate coil unit in between them.. A reading of the claim that is consistent with the claim language and the Specification also requires we read claim 6 to require that the coil and the connecting unit are separate.

We are not persuaded that claim 6 encompasses an embodiment that assigns the first and second connection terminals to the connecting unit, which already has connection terminals, i.e., the third and fourth connection terminals. The Specification does not describe a connecting unit including all four connecting terminals, i.e., that first, second, third, and fourth connecting terminals. Similarly, claim 1 does not recite that the connecting unit comprises all four connecting units. Rather, it recites “the connecting unit . . . comprises[] a third connection terminal . . . [and] a fourth connection terminal.” Even though claim 1 also recites the “third connection terminal [is] connected to the first connection terminal” and the “fourth connection terminal [is] connected to the second connection terminal,” the connecting unit does not “comprise” the first and connection terminals. Rather, claim 1 introduces the first and second terminals prior to, and separate from, the “connecting unit . . . comprises.”

The facts before us are even more compelling than those in *Smith* because, unlike in *Smith*, the connection unit, the coil, and the terminals are all separately recited in the claim. In addition, we apply the *Phillips* standard, whereas *Smith* was decided under the broadest reasonable interpretation standard.

Having reviewed the evidence and arguments of record, we construe the claim to require that the coil and the connecting unit are separate and

distinct components, and that the first and second connecting terminals to be structurally separate from the connecting unit and the coil. We analyze Petitioner's challenge to the patentability of the claims over Hasegawa accordingly.

VI. ANALYSIS OF CHALLENGED CLAIMS

A. Introduction

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

Additionally, the obviousness inquiry typically requires an analysis of “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)); *see In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1333 (Fed. Cir. 2016) (citing *DyStar*

Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co., 464 F.3d 1356, 1360 (Fed. Cir. 2006)).

An obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 550 U.S. at 418; *accord In re Translogic Tech., Inc.*, 504 F.3d 1249, 1259 (Fed. Cir. 2007). Petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). Instead, Petitioner must articulate a reason why a person of ordinary skill in the art would have combined the prior art references. *In re NuVasive*, 842 F.3d 1376, 1382 (Fed. Cir. 2016).

A reason to combine or modify the prior art may be found explicitly or implicitly in market forces; design incentives; the “interrelated teachings of multiple patents”; “any need or problem known in the field of endeavor at the time of invention and addressed by the patent”; and the background knowledge, creativity, and common sense of the person of ordinary skill. *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1328–29 (Fed. Cir. 2009) (quoting *KSR*, 550 U.S. at 418–21 (2007)).

Before determining whether a claim is obvious in light of the prior art, we consider any relevant evidence of secondary considerations of non-obviousness. *See Graham*, 383 U.S. at 17. Notwithstanding what the teachings of the prior art would have suggested to one of ordinary skill in the art at the time of the invention, the totality of the evidence submitted, including objective evidence of non-obviousness, may lead to a conclusion that the challenged claims would not have been obvious to one of ordinary

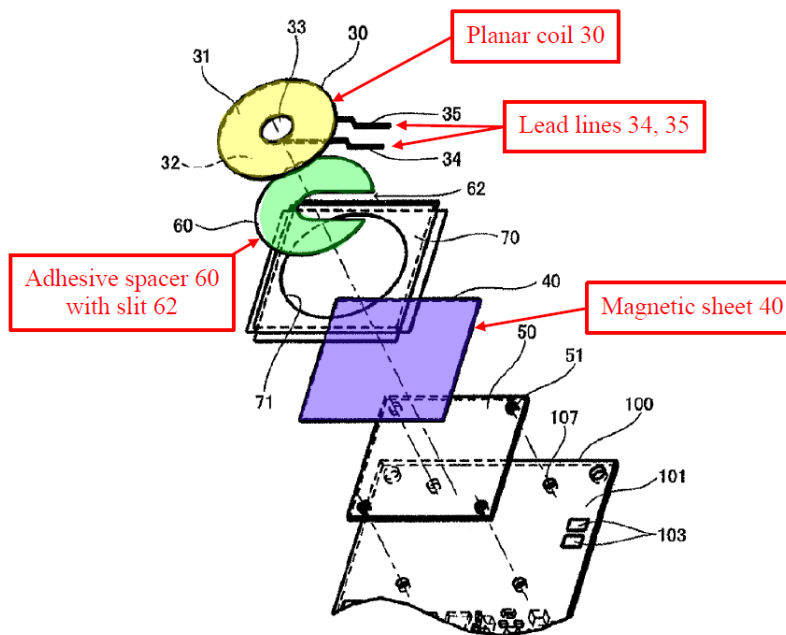
skill. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). No evidence of secondary considerations has been presented in this proceeding.

We analyze the asserted grounds of unpatentability in accordance with these principles to determine whether Petitioner has met its burden to establish unpatentability by a preponderance of the evidence at trial.

B. Claims 6, 7, 16, 17, 19, and 20 as obvious under 35 U.S.C. § 103(a) over Hasegawa

1. Hasegawa – Ex. 1005

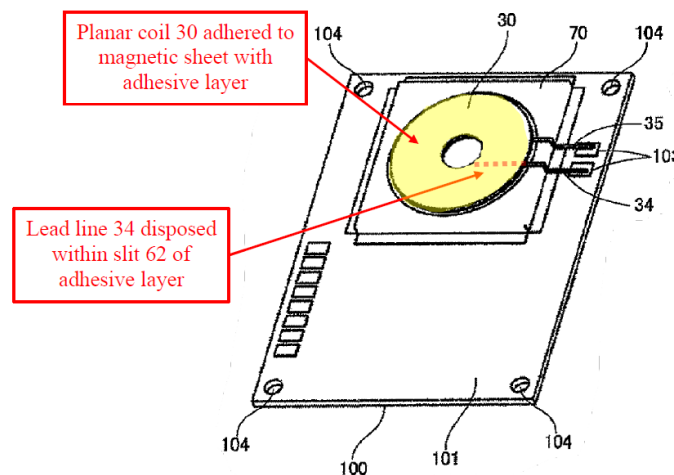
Hasegawa discloses a coil unit for non-contact power transmission using the coil. Ex. 1005 ¶ 2. Petitioner’s annotated version of Figure 2 of Hasegawa is reproduced below.



Pet. 17. Hasegawa’s coil unit includes planar coil 30 with transmission side 31 and non-transmission side 32, magnetic sheet 40 over non-transmission side 32 of the planar coil, and heat sink/magnetic shield plate 50 stacked on the side of the magnetic sheet opposite the side that faces planar coil 30. Ex. 1005 ¶¶ 66–67, Figs. 2, 3A, 3B. Planar coil 30, e.g., an air coil formed by a single core or multi-core coated wire in a plane, has an inner end lead line 34

connected to the inner end of the spiral and an outer end lead line 35 connected to the outer end of the spiral. *Id.* ¶ 68. This arrangement allows transmission side 31 of planar coil 30 to be made flat, so that the primary and secondary coils are adjacent when performing non-contact power transmission. Magnetic sheet 40, made of soft magnetic ferrite material or a soft metal, receives magnetic flux from planar coil 30 to increase the inductance of planar coil 30. *Id.* ¶ 69. Circular spacer member 60, e.g., a double-sided adhesive sheet with almost the same diameter as that of planar coil 30, placed between planar coil 30 and magnetic sheet 40 is substantially the same thickness as inner end lead line 34. *Id.* ¶ 72. Spacer 60 also has slit 62 to avoid at least the inner end lead line 34. *Id.*

Figure 3A of Hasegawa, as annotated by Petitioner, is reproduced below.



Pet. 18. Figure 3A shows planar coil 30 adhered to magnetic sheet 40 and heat sink 50 assembled to substrate 100. Ex. 1005 ¶¶ 73–74. Petitioner notes that Figure 3A illustrates lead line 34 disposed in slit 62 of adhesive layer 60 connected to one of coil connection pads 103 of substrate 100. Pet. 18; Ex. 1005 ¶ 75.

2. *Independent Claim 6*

a) *Claim limitations 6.0–6.4*

Claim limitations 6.0–6.4 recite a structure for a wireless power receiver (limitation 6.0) in which a coil (limitation 6.2) having a first connection terminal at its outer end (limitation 6.3) and a second connection at its inner end (limitation 6.4) is placed on an adhesive layer having a receiving space (limitation 6.1). *See* Ex. 1001, 19:61–67. Petitioner cites Hasegawa as disclosing a wireless power receiver in a portable phone 20 in which coil unit 22 (the claimed wireless power receiver) receives power from coil unit 12 within a charger 10. *Pet.* 20–21. Citing Figure 2 of Hasegawa, Petitioner notes that coil unit 22 includes double sided adhesive spacer member 60 (the claimed adhesive layer) with slit 62 (the claimed receiving space) configured to avoid at least the inner end lead line 34 when planar coil 30 (the claimed coil) is adhered to magnetic sheet 40. *Id.* at 21–22. Petitioner further asserts that Hasegawa’s outer lead line 35 and inner lead line 34 correspond to the claimed connection terminals because they connect the outer and inner ends of coil 30 to connection terminals 103 on substrate 100. *Id.* at 24–28.

Patent Owner does not explicitly dispute that Hasegawa discloses claim limitations 6.0–6.4. We find that Petitioner has demonstrated that Hasegawa discloses claim limitations 6.0–6.4.

b) *Claim limitations 6.5–6.8*

Claim limitation 6.5 recites “a connecting unit overlapping the receiving space in a vertical direction perpendicular to the adhesive layer.” Claim limitations 6.6 and 6.7 recite that the connecting unit comprises third and fourth terminals connected to the first and second terminals, respectively; claim limitation 6.8 recites that the connecting unit comprises a

wiring layer connected to the third and fourth terminals. Petitioner cites Hasegawa as teaching “lead lines 34 and 35 (*first and second connection terminals*), coil connection pads 103, and the wiring pattern of substrate 100 [of the coil unit] (together the *connecting unit*).” Pet. 29 (citing Ex. 1005 ¶ 62).

Noting that Hasegawa does not use the term “connecting unit,” Petitioner contends that “lead lines 34 and 35, coil connection pads 103 and the wiring pattern on substrate 100 of the coil unit together render obvious the claimed *connecting unit* because these components together form an electrical connection between the power-receiving planar coil and the portable telephone.” Pet. 31 (citing Ex. 1003, Phinney Decl. ¶ 67). Petitioner identifies one coil connection pad 103 as the third connection terminal and another coil connection pad 103 as the fourth connection terminal. *Id.* at 33–34. Petitioner further notes that the ’740 patent does not attribute any specific meaning to the claimed “connecting unit” other than the collection of claimed components that transfer power for coil unit 200 to the load. *Id.*

Patent Owner contends that Hasegawa does not disclose the claimed first and second connection terminals connected to the coil as separate and distinct from the claimed “connecting unit” that overlaps the receiving space. PO Resp. 23. According to Patent Owner, Petitioner’s reliance on Hasegawa fails because Petitioner relies on the same structural elements in Hasegawa, i.e., lead lines 34 and 35, to show these separate claim limitations. *Id.* at 23–24, 30 (“Petitioner and Dr. Phinney identify *the same components* in Hasegawa, lead lines 34 and 35 to satisfy **both** the ‘first connection terminal’/‘second connection terminal’ **and** the ‘connecting unit’ limitations in the claims of the ’740 Patent.”).

Noting that Petitioner does not combine Hasegawa with any other references or articulate any modifications to Hasegawa, Patent Owner contends that Hasegawa does not teach or disclose first and second connection terminals that are separate from the connection unit. *Id.* at 24–25.

The fundamental premise of Petitioner’s argument is inconsistent with our claim construction. Section V *supra*. Petitioner acknowledges that in Hasegawa the entire line 34, 35 (not just the ends) is a part of the connecting unit. Pet. 31; Reply 2; Hr’g. Tr. 10:1–14:15. In Hasegawa, then, all the connection terminals (the first, second, third and fourth terminals) are on the connecting unit. Thus, we agree with Patent Owner that Hasegawa does not disclose the claimed first and second connection terminals connected to the coil as separate and distinct from the claimed “connecting unit” that overlaps the receiving space. Petitioner has thus failed to establish by a preponderance of the evidence that claim 6 is unpatentable.

3. *Independent Claim 16*

Independent claim 16 is similar to claim 6, except that instead of limiting the location of the connecting unit to “overlapping the receiving space in a vertical direction perpendicular to the adhesive layer,” as recited in claim 6, claim 16 recites only that the connecting unit is “disposed corresponding to the receiving space.” The difference between claims 6 and 16 does not bear on the parties’ arguments or on the substance of our analysis concerning the disclosures in Hasegawa. *See* Pet. 38–42. Therefore, we determine that Petitioner has failed to establish by a preponderance of the evidence that challenged claim 16 is unpatentable over Hasegawa.

4. *Claims 7 and 17*

Claims 7 and 17 depend from claims 6 and 16, respectively, and recite that “the receiving space extends from inside the coil to outside the coil.” Petitioner cites slit 62 in adhesive member 60 of Hasegawa as disclosing a receiving region that extends from inside to outside of the planar coil. Pet. 37–38. Although Patent Owner does not address the additional limitations recited in claims 7 and 17 explicitly, for the same reasons as those discussed above with respect to independent claims 6 and 16, we find that Petitioner has failed to establish by a preponderance of the evidence that challenged claims 7 and 17 are unpatentable over Hasegawa.

5. *Claim 19*

Claim 19 depends from claim 16 and recites that the connecting unit has first and second regions on which the third and fourth terminals, respectively are disposed, and a third region on the coil. Petitioner cites Hasegawa as disclosing substrate 100 as part of the claimed connecting unit with corresponding first and second regions on which coil connection terminals 103 (the claimed third and fourth terminals) are disposed. Pet. 33–34. Petitioner cites inner lead 34 as corresponding to the claimed third region on the coil. *Id.* at 34. Although Patent Owner does not address the additional limitations recited in claim 19 explicitly, for the same reasons as those discussed above with respect to independent claim 16, we find that Petitioner has failed to establish by a preponderance of the evidence that challenged claim 19 is unpatentable over Hasegawa.

6. *Claim 20*

Claim 20 depends from claim 19 and recites that the connecting unit comprises “a fourth region which is not disposed on the adhesive layer.” Citing Figures 3A and 4 of Hasegawa as disclosing a wiring layer on

substrate 100, Petitioner notes that any portion of the wiring pattern in the lower half of the from side 1010 of substrate 100 as disclosing this limitation. Although Patent Owner does not address the additional limitations recited in claims 20 explicitly, for the same reasons as those discussed above with respect to independent claim 6 and 16, we find that Petitioner has failed to establish by a preponderance of the evidence that challenged claims 7 and 17 are unpatentable over Hasegawa.

VII. CONCLUSION

Having considered the evidence and arguments of record, we conclude that Petitioner has not demonstrated by a preponderance of the evidence that the challenged claims are unpatentable.

In summary:

Claims	35 U.S.C. §	Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
6, 7, 16, 17, 19, 20	103	Hasegawa		6, 7, 16, 17, 19, 20

Motion to Amend Outcome	Claims
Original Claims Cancelled by Amendment	
Substitute Claims Proposed in Amendment	21–23
Substitute Claims: Motion to Amend Granted	
Substitute Claims: Motion to Amend Denied	
Substitute Claims: Not Reached	21–23

VIII. ORDER

In consideration of the above it is:

ORDERED that claims 6, 7, 16, 17, 19, and 20 have not been shown to be unpatentable;

FURTHER ORDERED that Patent Owner's Revised Motion to Amend is *dismissed*; 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.

IPR2022-00118
Patent 10,804,740 B2

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