

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PIONEER PET PRODUCTS, LLC,
Petitioner,

v.

OIL-DRI CORPORATION OF AMERICA,
Patent Owner.

IPR2022-01138
Patent 11,026,397 B1

Before MICHAEL L. WOODS, RICHARD H. MARSCHALL, and
ALYSSA A. FINAMORE, *Administrative Patent Judges*.

MARSCHALL, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

Pioneer Pet Products, LLC (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–19 (the “challenged claims”) of U.S. Patent No. 11,026,397 B2 (Ex. 1001, “the ’397 patent”). Paper 1 (“Pet.”). Oil-Dri Corporation of America (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). With our authorization, Petitioner filed a Preliminary Reply (Paper 7, “Reply”), and Patent Owner filed a Preliminary Sur-reply (Paper 8, “Sur-reply”).

We have authority to determine whether to institute *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2021). *Inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Upon consideration of the evidence and arguments in the record, we institute *inter partes* review of the ’397 patent on all challenges set forth in the Petition.

BACKGROUND

A. Related Proceedings

The parties identify the following proceedings involving the ’397 patent or related patents: *Oil-Dri Corp. of America v. AMCOL International Corp.*, No. 1:21-cv-00991 (N.D. Ill.); IPR2022-00206; IPR2022-00691; and IPR2022-01107. Pet. 1; Paper 5 (Patent Owner’s Mandatory Notices), 1.

B. The ’397 Patent

The ’397 patent relates to “cat litter products” and, in particular, litter products using “[s]welling clay made of sodium bentonite” and various fillers. Ex. 1001, code (57), 1:40–46. The ’397 patent also states that

clumping cat litter products made of sodium bentonite have “the disadvantage of being relatively expensive” (*id.* at 1:40–46), but litter products made of sodium bentonite and fillers retain “substantially the same clumpability properties as a composition consisting of only the sodium bentonite” (*id.* at code (57)). According to the ’397 patent, based on a number of test results set forth in the specification, the key to achieving removably clumpable litter compositions involves including a specific amount of sodium bentonite in the litter blend—a minimum of 47% of the total external surface area of all particles in the litter must originate from the sodium bentonite. *See id.* at 45:41–46:2.

The ’397 patent provides 46 examples of various litter compositions having differing weight percentages of sodium bentonite and non-swelling clay used as a filler, different external surface areas of the components of the composition, and different bulk densities. Ex. 1001, 15:46–46:29. The examples also provide test data showing the clump strength for each composition. *See id.* In the “Examples 3-49” section, the ’397 patent discusses the preparation of the samples and the calculation method used to determine the external surface area for the various reported compositions. *See id.* at 15:46–16:57.

The ’397 patent describes one method for calculating the external surface area of the litter for the components in the litter compositions. The ’397 patent states that each blend of litter in the examples includes “various particle sizes of sodium bentonite and calcium bentonite clay combined at different ratios based on weight.” Ex. 1001, 16:17–20. The particle sizes are “provided by a supplier or screened using a Sweeco vibrating particle

separator with appropriate screens” and confirmed by using a Tyler RoTap mechanical sieve shaker with sieves ranging in size from 6 to 100 U.S. mesh. *Id.* at 16:20–25. To calculate the external surface area, each particle is assumed to be “a perfect sphere.” *Id.* at 16:31–33. Using this assumption and the weight for each particle size cut captured by a sieve, a particle count is determined using “ASTM Standard Test Method E 1520-99” and “multipliers for 4/6, 6/8, 8/10, 6/10 and <100 mesh particles” that “are extrapolated from a power trendline with the $R^2=0.9923$ for the plot of the U.S. mesh size versus ASTM multiplier.” *Id.* at 16:34–38. Next, the external surface area of a single particle for each cut is calculated, which is then multiplied by the number of particles in each cut. *See id.* at 16:41–43. These individual cut external surface areas are then added together to get a cumulative external surface area for that component. *See id.* at 16:44–46. The same calculation is then performed for each component present in the mixture. *See id.* Following these individual calculations, the cumulative external surface areas are added together, and each component’s external surface area is divided by the total to get an external surface area percentage. *See id.* at 16:48–50.

C. Challenged Claims

Petitioner challenges claims 1–19 of the ’397 patent, of which claims 1 and 7 are independent. Independent claim 1 is reproduced below:

1. A litter comprising:

45% to 80% by weight of sodium bentonite, **wherein the sodium bentonite comprises at least 47% of an external surface area of the litter** [the “surface area limitation”], and
20% to 55% by weight of a non-clumping filler material,

wherein the litter has a bulk density less than about 58 lb/ft³, wherein the litter when exposed to a wetting agent forms at least one clump, and wherein each at least one clump is mechanically separable from unwetted litter for disposal.

Ex. 1001, 49:56–50:6 (emphasis and annotation added).

D. Asserted Grounds of Unpatentability

Petitioner challenges claims 1–19 on the following grounds (Pet. 2):

Claims Challenged	35 U.S.C. §	References/Basis
1, 2, 7–12, 16–19	102	House ¹
1–19	103	Goss, ² House

Petitioner supports its challenges with a declaration from Marvin L. Raymond. Ex. 1004.

ANALYSIS

A. Legal Standards

Petitioner relies on both anticipation and obviousness in its challenges to the claims of the '397 patent. To anticipate a claim under 35 U.S.C. § 102, “a single prior art reference must expressly or inherently disclose each claim limitation.” *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1334 (Fed. Cir. 2008). “A prior art reference anticipates a patent’s claim under § 102(b) if it ‘discloses each and every element of the claimed invention arranged or combined in the same way as in the claim.’”

Monsanto Tech. LLC v. E.I. DuPont de Nemours & Co., 878 F.3d 1336,

¹ US 5,188,064, issued Feb. 23, 1993 (“House,” Ex. 1002).

² US 5,975,019, issued Nov. 2, 1999 (“Goss,” Ex. 1003).

1342–43 (Fed. Cir. 2018) (quoting *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1341 (Fed. Cir. 2016)).

As to obviousness, a claim is unpatentable as obvious under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). 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 skill in the art; and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. The Level of Ordinary Skill in the Art

The level of ordinary skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). The person of ordinary skill in the art is a hypothetical person presumed to have known the relevant art at the time of the invention. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). In determining the level of ordinary skill in the art, we may consider certain factors, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *Id.*

Petitioner contends that a person having ordinary skill in the art (“PHOSITA”) “would have at least a bachelor of science degree in chemistry, mineralogy, geological science, material science, chemical engineering, or mining engineering with at least two to five years of work experience relating to designing specific chemical mixtures including clay or other minerals, particularly absorbents.” Pet. 34 (citing Ex. 1004 ¶ 38). Patent Owner does not dispute Petitioner’s proposed definition of the level of ordinary skill in the art, which appears consistent with the record, including the prior art. *See* Prelim. Resp. 16; *GPAC Inc.*, 57 F.3d at 1579. We adopt the definition of the level of ordinary skill in the art proposed by Petitioner.

C. Claim Construction

In *inter partes* reviews, the Board interprets claim language using the same claim construction standard used in civil actions under 35 U.S.C. § 282(b), as described in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b). Under that standard, we generally give claim terms their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1313–14. Although extrinsic evidence, when available, may also be useful when construing claim terms under this standard, extrinsic evidence should be considered in the context of the intrinsic evidence. *See id.* at 1317–19.

Petitioner does not propose a construction for any claim terms, and Patent Owner believes “claim construction is unnecessary to resolve any

controversy in this proceeding.” Prelim. Resp. 16. Based on our review of the current record, we need not formally construe any claim terms to determine whether to institute an *inter partes* review. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (stating that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Discretion Under 35 U.S.C. § 325(d)

Patent Owner argues that we should exercise discretion to deny institution under 35 U.S.C. § 325(d). *See* Prelim. Resp. 17–22.

1. Legal Framework

Section 325(d) provides that, in determining whether to institute an *inter partes* review, “the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” The Board uses a two-part framework in determining whether to exercise its discretion under § 325(d): (1) determining whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of the first part of the framework is satisfied, determining whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims. *See Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential). If a condition in the first part of the

framework is satisfied, and absent a material error, the Director generally will exercise discretion not to institute *inter partes* review. *Id.* at Paper 6 at 8–9.

In applying this framework, we consider several non-exclusive factors, including:

(a) the similarities and material differences between the asserted art and the prior art involved during examination; (b) the cumulative nature of the asserted art and the prior art evaluated during examination; (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art; (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (precedential as to Section III.C.5, first paragraph). If, after review of factors (a), (b), and (d), we determine that the same or substantially the same art or arguments previously were presented to the Office, then we assess whether Petitioner demonstrates under factors (c), (e), and (f) that the Office erred in a manner material to the patentability of the challenged claims. *Advanced Bionics*, Paper 6 at 10.

2. Discussion

a. Whether the Same or Substantially the Same Art or Arguments Were Presented to the Office

Patent Owner argues that “the Examiner considered the same prior art during original prosecution that the Petition now relies on.” Prelim. Resp.

19. Patent Owner argues that House and Goss were presented to the Examiner because Patent Owner identified the references on an Information Disclosure Statement (“IDS”), and that the Examiner signed the IDS, indicating that the references were considered. *Id.* (citing Ex. 1005, 36, 38, 45). Petitioner does not address whether the references were before the Examiner during prosecution.

We agree with Patent Owner that both House and Goss were at least considered by the Examiner, even if the Examiner never discussed the references or relied on them in any manner. *See* Ex. 1001, code (56) (listing both House and Goss among the references cited, and identifying Goss as cited by the Examiner). Under these circumstances, we find the first part of the *Advanced Bionics* framework satisfied because the prior art before the Examiner and the prior art relied on in the Petition include the same prior art references.

b. Whether Petitioner Sufficiently Demonstrates that the Office Erred

Petitioner does not expressly address §325(d) in the Petition, but does argue that the claims were improperly allowed over Hughes because the applicant persuaded the Examiner that the limitation requiring a mixture wherein “sodium bentonite comprises at least 47% of the total external surface area of the mixture” (i.e., the surface area limitation) recited a result effective variable. Pet. 29–30 (citing Ex. 1006, 13–15). According to Petitioner, the examples and data in the ’397 patent do not support the applicant’s assertions. *Id.* at 30–31. Petitioner also argues that Goss, which the Examiner considered, discloses or renders obvious every limitation in claim 1. *Id.* at 46–51, 53–55.

Patent Owner argues that Petitioner fails to show Examiner error. *See* Prelim. Resp. 21–22. Patent Owner contends that Petitioner fails to show error due to the issuance of claims in a related application over Hughes. *Id.* at 21 (citing Pet. 30). According to Patent Owner, those claims could have been allowed due to limitations going to the surface area of the particles, and in any event, Hughes fails to disclose the surface area limitation. *See id.* at 21–22. As to Petitioner’s reliance on Goss, Patent Owner argues that Goss fails to disclose the surface area limitation. *See id.* at 30–33.

We need not reach the dispute as to the Examiner’s allowance of claims over Hughes in a related application or the related result effective variable issue because we find that Petitioner has shown that the Examiner erred in failing to find at least claim 1 of the ’397 patent unpatentable as obvious based on Goss. For the reasons provided in the discussion of the merits below, we determine on the current record that Petitioner establishes a reasonable likelihood that Petitioner would prevail in demonstrating that claim 1 would have been obvious based on Goss. Petitioner’s showing as to claim 1 shows sufficiently that the Examiner erred in overlooking the teachings of Goss and the examples disclosed therein as they relate to the ’397 patent.

3. Conclusion

Based on our review of the current record, we determine that Petitioner has demonstrated that the Examiner erred in a manner material to the patentability of the challenged claims and that the second part of the *Advanced Bionics* framework is not satisfied. Accordingly, we decline to exercise our discretion to deny institution pursuant to 35 U.S.C. §325(d).

E. Obviousness Challenge based on Goss and House

Petitioner argues that the combination of Goss and House renders claims 1–19 obvious. Pet. 2, 46–61. Patent Owner raises several arguments against this challenge. See Prelim. Resp. 29–36. We first provide a brief overview of the prior art, and then address the parties’ arguments.

1. Overview of Goss

Goss discloses a “clumping animal litter” containing up to 60% sodium bentonite and a non-swelling clay filler. Ex. 1003, code (57). Patent Owner is the assignee of Goss, and Goss discloses similar approaches as the ’397 patent. See *id.* at code (73). For example, Goss not only emphasizes the weight percentages of sodium bentonite and filler material, but also the “judicious selection of particle size distribution” of each material. *Id.* at code (57), 4:64–5:33 (particle size analysis of sodium bentonite). Goss also discloses examples containing sodium bentonite and a non-swelling clay in various mean particle size ratios and various particle size distributions. *Id.* at 6:39–65. For each example, Goss discloses a clump strength rating based on a scale of 1 to 5 after conducting a drop test, with 1 indicating a clump that remained substantially intact after the test. *Id.* at 6:6–38. Several test results show a successful clump strength of 1 or 1.3 at 30 seconds and 24 hours after wetting the litter. *Id.*

Goss discloses 17 sample litter compositions comprised of a clay filler and sodium bentonite. Ex. 1003, 6:44–64. Each litter uses a different composition of a “particulate non-swelling clay material and swelling clay.” *Id.* at 3:10–11. Goss discloses that the particulate non-swelling clay filler materials can include “any of the commonly known clays” and states that

these are “frequently referred to in the trade under designations as Mississippi Grey, Mississippi Tan, Blue Mountain, and Georgia White.” *Id.* at 3:38–39, 4:1–3. Goss further discloses that the “clay constituent of the present compositions is in the form of discrete particles” and “[t]hese particles preferably are rounded in shape.” *Id.* at 4:5–8. The clays in the reported Goss examples “were run through a particle sizing table using screen sizes from 6 mesh to 100 mesh, United States Sieve Series.” *Id.* at 4:13–15. As to the sodium bentonite components, Goss discloses that “[a]n example of a well known swelling clay is sodium bentonite, also called Wyoming bentonite.” *Id.* at 4:50–51. Goss discloses that “[t]he sodium bentonite material used in the embodiments of the present invention was subjected to particle size analyses.” *Id.* at 4:64–66. For each of the samples disclosed, Goss discloses the particle size analysis using sieves of various sizes. *See id.* at 4:11–40, Table I. The size analysis includes the sieve analysis of the components, the mean particle size, the ratio of particle sizes, the weight percentage of the components, and the clump strength for the samples. *See id.* at 2:58–63, 4:11–40, 4:64–5:33, 6:39–65, Tables I–III.

2. Overview of House

House relates to a clumping cat litter comprising certain mixtures of clay and cellulose materials within certain ranges of “bulk densit[ies].” Ex. 1002, code (57), 3:3–10. House states that it seeks “to provide a clumping sorbent having superior sorption capacity and sufficient cohesiveness when wetted with an aqueous liquid, such as urine, to be easily separated from the nonwetted sorbent particles.” *Id.* at 2:66–3:2. According to House, its invention provides a sorbent that, “when wetted with urine

forms a mass of sorbed, wetted sorbent that can be scooped out or otherwise removed from the litter box.” *Id.* at 6:43–46. House discloses using between 5% and 70% “cellulosic material” in its litter mixture. *Id.* at 4:54–5:13; 8:1–9. House discloses that the remainder of the mixture is made of “smectic clays which exhibit osmotic swelling . . . when contacted with water, or like aqueous liquid such as urine” and that “the most particularly preferred” smectic clays are “Wyoming bentonite or western bentonite.” *Id.* at 4:20–32. House further discloses that the bulk densities of the disclosed sorbents are “in the range of from about 0.54 g/cc to about 0.96 g/cc, preferably from about 0.60 g/cc to about 0.90 g/cc, and most preferably from about 0.66 g/cc to about 0.90 g/cc.” *Id.* at 7:3–15, code (57); 3:3–10.

3. Discussion

We focus our analysis on Petitioner’s argument that independent claims 1 and 7 would have been obvious over Goss and House. *See* Pet. 46–50, 53–55. For each limitation in claims 1 and 7, Petitioner points to specific portions of the references that support its position, and declarant testimony addressing each limitation. *See id.* (citing Ex. 1004). Patent Owner argues that Petitioner fails to establish that Goss or House discloses the surface area limitation and that Petitioner fails to provide an adequate motivation to combine Goss and House. Prelim. Resp. 30–36.

a. Surface Area Limitation

Petitioner argues that Goss discloses the surface area limitation and relies specifically on Goss Examples G and H and their alleged similarity to the example compositions disclosed in the ’397 patent that meet the surface area limitation. Pet. 47–48. For example, Petitioner notes that Example 6

from the '397 patent has a “50% sodium bentonite to 50% calcium bentonite weight ratio, with a calcium bentonite particle size of 905 microns and a sodium bentonite particle size of 484 microns and an SB Surface Area of 54%” and that this example has a clump strength of 1.0 at two time periods. *Id.* at 47. Petitioner argues that Examples G and H from Goss have the “same weight ratio of sodium bentonite to clay and very similar particle sizes” as Example 6 from the '397 patent and that these examples in Goss also demonstrate similar clump test results. *Id.* at 47–48 (citing Ex. 1004 ¶ 81). Petitioner also argues that the sodium bentonite and non-swelling clay in Example 6 of the '397 patent “appear to be virtually identical to the materials used in the Goss patent examples.” Pet. 47–48 n.37 (citing Ex. 1001, 15:48–51; Ex. 1003, 4:11–13; 4:64–5:4; 6:43–65). Petitioner contends that because the “material, particle sizes and weight ratios” are so similar between the '397 patent and Goss, that the resulting external surface areas that are derived from these properties would meet this limitation. Pet. 48. Petitioner relies on declarant testimony in support of its arguments. *See* Ex. 1004 ¶ 81. Petitioner also relies on a chart summarizing the Goss examples and related bulk density data. *See* Pet. 48; Ex. 1010.³

³ Petitioner contends that it mistakenly cited to Ex. 1011 (Hughes) rather than Exhibit 1010 at several places in the Petition. *See* Reply 1–2 (citing Pet. 54, 58). We agree with Petitioner that the citation to Exhibit 1011 rather than Exhibit 1010 constitutes a readily apparent typographical error, and we consider Exhibit 1010 in our analysis of the Petition. Although Patent Owner does not dispute that Petitioner relies on Exhibit 1010 in the Petition, Patent Owner disputes Petitioner’s arguments on the merits as to the import of Exhibit 1010 and whether it supports Petitioner’s arguments based on Goss. *See id.* at 2–3; Sur-reply 1–3. Because our review of the Petition and

Patent Owner argues that Petitioner's analysis lacks support because none of the prior art references expressly disclose the total surface area of sodium bentonite and that Petitioner's reliance on the similarities between "the materials, particle sizes and weight ratios" fails to establish the surface area of that component. Prelim. Resp. 30–31. Patent Owner argues that the calculation method discussed in the '397 patent "requires particle size distribution data" and that Goss fails to disclose this data, making a surface area calculation impossible. *Id.* Patent Owner further contends that Petitioner's reliance on the similarity between the examples of Goss and the examples '397 patent lacks objective evidence or rational inference for support. *Id.* at 31–33. Patent Owner also argues that Petitioner fails to support its argument with any calculation based on the examples in Goss. *Id.*

Based on the current record, Petitioner establishes adequately that Goss discloses a mixture where "sodium bentonite comprises at least 47% of an external surface area of the litter." Petitioner, with currently un rebutted declarant support, relies on the similarity in density of Goss's sodium bentonite and clay fillers to those same components in Example 6 of the '397 patent, and contends that using Goss's 50%-50% weight ratio of sodium bentonite to filler meets the limitation. *See* Pet. 47–48; Ex. 1004 ¶ 81. Although Petitioner's analysis may have been more persuasive if it

related declaration support institution without the need to rely on Exhibit 1010, we need not address the parties' arguments as to Exhibit 1010 in the Reply and Sur-reply, and invite the parties to further address these issues during trial.

also included representative calculations of the relative surface areas, based on the current record, Petitioner's argument and evidence carry its burden at this stage of the proceeding. As noted above, the parties can explore these issues further at trial.

b. Motivation to Combine

As to motivation to combine, Petitioner argues that "Goss and House plainly disclose cat litter, and PHOSITA would understand that there is a rational underpinning to combine the teachings of Goss and House as required under patent law because both are related to cat litter having similar characteristics." Pet. 46.

Patent Owner argues that Petitioner fails to support its obviousness argument with a reason to combine based on rational underpinnings. Prelim. Resp. 33–36. In the context of the challenge based on Goss and House, Patent Owner argues that "the Petition simply cites to House and/or Goss for each claim limitation." *Id.* at 34. Patent Owner also argues that Petitioner fails to articulate a sufficient rationale for combining Goss and House, and at best assumes that a PHOSITA could modify Goss in view of House without adequately explaining why a PHOSITA would make the modifications or which modifications would be made. *Id.* at 34–35. Patent Owner further argues that "Petitioner's expert similarly fails to explain why or how the teachings of House and Goss would be combined." *Id.* at 35.

Petitioner provides very little argument or evidence in support of its motivation to combine argument in the Petition. *See* Pet. 46. We note that Petitioner does not explain why a "PHOSITA would understand that there is a rational underpinning to combine" Goss and House or cite to any declarant support for its argument. *See id.* Based on the limited argument, evidence,

and explanation provided by Petitioner, on the current record, we question whether Petitioner establishes sufficiently that one of ordinary skill in the art would have had a reason to modify Goss with the teachings of House.

Even if Petitioner fails to establish adequately a motivation to combine the references, that does not end our analysis. A “patent can be obvious in light of a single prior art reference if it would have been obvious to modify that reference to arrive at the patented invention.” *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361 (Fed. Cir. 2016); *see also Game & Tech Co. v. Activision Blizzard Inc.*, 926 F.3d 1370, 1381 (Fed. Cir. 2019). For the limitations in independent claims 1 and 7, Petitioner does rely on House, but only as an additional reason why the references disclose a limitation in question. *See* Pet. 46–61 (relying on Goss for every limitation in claims 1, 3–8, 10–16, and 18). Based on our review of the Petition, Petitioner sets forth an analysis based on Goss alone for at least claims 1 and 7, within the context of its second challenge based on Goss and House. *See id.* Although Petitioner may not need to rely on a combination of Goss and House for the limitations of independent claims 1 and 7, the additional reliance on House may buttress Petitioner’s arguments as to these and other claims. Consequently, the motivation to combine issue may impact whether Petitioner ultimately prevails as to this challenge. The parties may address the motivation to combine issue further during trial.

c. Conclusion

Based on the foregoing, we determine that Petitioner establishes adequately that Goss discloses the surface area limitation. We have also reviewed Petitioner’s arguments and evidence as to the remaining limitations

of claims 1 and 7. Based on our review of the current record, Petitioner establishes sufficiently that Goss discloses or renders obvious all of the limitations of claims 1 and 7 for the reasons provided by Petitioner. *See* Pet. 46–51, 53–55. Accordingly, Petitioner establishes a reasonable likelihood that independent claims 1 and 7 would have been obvious based on Goss alone.

We have also reviewed Petitioner’s arguments and evidence as to dependent claims 2–6 and 8–19. *See* Pet. 62–68. Patent Owner does not separately address the dependent claims. Prelim. Resp. 29–36. Because we institute *inter partes* review as to the independent claims 1 and 7, we also institute *inter partes* review as to dependent claims 2–6 and 8–19. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018). Because Petitioner relies on Goss for every limitation in dependent claims 3–6, 8, 10–16, and 18, the Petition sets forth a challenge based on Goss alone for these claims as well as claims 1 and 7. *See* Pet. 49–61. These challenges, as well as the challenge to claims 1–19 based on a combination of Goss and House set forth in the Petition, are part of the instituted grounds at issue during the trial. *See id.* at 46–61; *SAS*, 138 S.Ct. at 1359–60. We note that Petitioner relies exclusively on House for dependent claims 2, 9, 17, and 19, and any deficiency in Petitioner’s showing as to the motivation to combine Goss and House may impact whether Petitioner can establish the obviousness of those claims, apart from whether House discloses the limitations in question. *See* Pet. 51, 53, 55, 60–61 (relying on House as disclosing the limitations in dependent claims 2, 9, 17 and 19).

F. Anticipation Based on House

Petitioner argues that House anticipates claims 1–19 of the ’397 patent. Pet. 2, 34–46. We institute *inter partes* review as to this challenge because we institute *inter partes* review as to claims 1 and 7 based on Petitioner’s obviousness challenge. *See SAS*, 138 S. Ct. at 1359–60. We provide the following brief analysis of the parties’ arguments to guide the parties during trial.

Petitioner argues that House discloses each limitation in claims 1–19. Pet. 2, 34–46. For each limitation, Petitioner points to specific portions of House that support its position, and declarant testimony addressing each limitation. *See id.* (citing Ex. 1004). As to the surface area limitation, Petitioner argues that “[b]y virtue of House disclosing its litter contains a maximum of 80% by weight of sodium bentonite SCWEOS, a PHOSITA would have recognized that House at least inherently meets the claim limitation of ‘at least 47% of the total external surface of the litter.’” *Id.* at 36 (citing Ex. 1004 ¶ 55). Petitioner relies on declarant testimony that essentially repeats the arguments from the Petition. *See* Ex. 1004 ¶ 55.

For this challenge, Patent Owner argues that House does not expressly or inherently disclose the surface area limitation in independent claims 1 and 7. *See* Prelim. Resp. 23–29. As to inherency, Patent Owner argues that Petitioner and its declarant improperly conflate percent by weight with percent surface area of sodium bentonite. *Id.* at 26–29.

We question whether Petitioner adequately establishes that House’s composition inherently discloses the surface area limitation because it discloses compositions with 80% by weight sodium bentonite. Petitioner

provides no analysis or calculations that show that a composition formulated with House's 80% SCWEOS and 20% filler materials would result in a composition wherein the sodium bentonite comprises at least 47% of the external surface area. *See* Pet. 34–46. In addition, in contrast to its obviousness challenge based on Goss, Petitioner does not identify any analogous examples in the '397 patent that support its interpretation of House. *See id.* Although we question whether Petitioner makes an adequate showing on the current record as to the surface area limitation, the parties may address this issue further during trial.

G. Remaining Arguments

As to the surface area limitation, the parties dispute (1) whether the limitation meets the definition of a result effective variable, and (2) whether the specification of the '397 patent overstates the relevance of the 47% figure due to a number of inaccuracies and omissions in the specification. *See* Pet. 3–30; Prelim. Resp. 3–11. These arguments present close factual issues that are best addressed after full development of the record during trial.

Based on our review of the '397 patent specification, the examples using the claimed mixture of sodium bentonite and a filler show no support for identifying the 47% surface area limitation as a meaningful line between successful and unsuccessful clump strength results. Patent Owner argues that the 47% limitation finds support in Figure 10, but Patent Owner admits that Figure 10 includes numerous inaccuracies and omits data that tends to undermine that conclusion. *See* Prelim. Resp. 8–9. It remains unclear how these test results in the examples can support the criticality of the 47%

surface area limitation in the claims directed to a mixture of sodium bentonite and a filler material. In addition, although the specification of the '397 patent appears to include errors and misstatements, it remains unclear the extent to which those errors impact the merits of Petitioner's challenges. The parties should address these issues in the context of both of the instituted grounds, to the extent relevant.

CONCLUSION

For the reasons above, we grant institution of *inter partes* review.

ORDER

Accordingly, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted for claims 1–19 of the '397 patent on the unpatentability grounds asserted in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which commences on the entry date of this decision.

IPR2022-01138

Patent 11,026,397 B2

For PETITIONER:

Michael T. Griggs

Brad Meyer

David Stein

Adam Brookman

BOYLE FREDRICKSON, S.C.

mtg@boylefred.com

blm@boylefred.com

dds@boylefred.com

alb@boylefred.com

For PATENT OWNER:

Binal Patel

Matthew P. Becker

BANNER & WITCOFF, LTD.

bpatel@bannerwitcoff.com

mbecker@bannerwitcoff.com