

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PLANT SCIENCE, INC. and ENVIRO GRANULATION, LTD.,
Petitioners,

v.

THE ANDERSONS, INC.,
Patent Owner.

Case IPR2014-00939
Patent 6,884,756 B2

Before TONI R. SCHEINER, RAMA G. ELLURU, and
JO-ANNE M. KOKOSKI, *Administrative Patent Judges*.

KOKOSKI, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Plant Science, Inc. and Enviro Granulation, Ltd. (collectively, “Petitioners”) filed a Petition (“Pet.”) to institute an *inter partes* review of claims 1–38 of U.S. Patent No. 6,884,756 (“the ’756 patent,” Ex. 1001). Paper 3. The Andersons, Inc. (“Patent Owner”) filed a Preliminary Response (“Prelim. Resp.”). Paper 7. We have jurisdiction under 35 U.S.C. § 314.

Upon consideration of the Petition and Preliminary Response, we determine that Petitioners have not established a reasonable likelihood of prevailing with respect to any of the challenged claims of the ’756 patent. Accordingly, we deny the Petition, and do not institute an *inter partes* review.

A. *Related Proceedings*

Petitioners indicate that the ’756 patent is involved in a district court infringement action, to which they are parties, titled *The Andersons, Inc. v. Enviro Granulation*, Case No. 8:13-cv-3004-VMC-MAP (M.D. Fla.). Pet. 2.

B. *The ’756 Patent (Ex. 1001)*

The ’756 patent, titled “Water-Dispersible Pellets,” is directed to water-dispersible methylene urea particles for the delivery of biomolecules. Ex. 1001, 1:12–14. According to the ’756 patent, the claimed particles retain their size and shape during handling and application, then disperse into more than 100 pieces upon contact with water. *Id.* at 2:19–20, 49–52. The ’756 patent specification discloses that the components of the claimed particle include a bioavailable nitrogen ingredient (such as a methylene oligomer), and a binder (such as a lignin derivative). *Id.* at 3:18–19, 47–49,

4:12, 26–29. The '756 patent specification also describes methods of making and using the claimed particles. *See, e.g., id.* at 5:35–50, 7:14–30.

C. Illustrative Claim

Petitioners challenge claims 1–38 of the '756 patent. Claims 1, 28, and 35 are independent claims. Claim 1 is illustrative, and reads as follows:

1. A water-dispersible particle comprising:

a methylene urea bioavailable to a targeted desirable organism present in an amount ranging from 5% to 99.9% by weight of the total dry weight of the particle; and

a lignin derivative binder component, present in an amount ranging from 1% to 95% by weight of the total dry weight of the particle; the particle having a mean particle domain size; and

the methylene urea and the lignin derivative binder component present in a form such that contact with water causes particle dispersion into more than 100 pieces.

D. The Prior Art

Petitioners rely on the following prior art references:

Reference	Patent	Date	Exhibit No.
Ferguson	US 3,963,118	June 15, 1976	1007
Buchholz	US 5,501,720	March 26, 1996	1004
Sensibaugh	US 5,976,210	November 2, 1999	1006
Welshimer	US 6,231,660 B1	May 15, 2001	1002
Miele	US 6,387,145 B1	May 14, 2002	1005
Neyman	US 6,464,746 B2	October 15, 2002	1003

E. The Asserted Grounds of Unpatentability

Petitioners challenge the patentability of claims 1–38 of the '756 patent on the following grounds:

Reference[s]	Basis	Claims Challenged
Welshimer and Neyman	§ 103(a)	1–38
Buchholz	§ 102(b)	1–9, 14–21, 23–27, 29, and 35–38
Buchholz and Welshimer	§ 103(a)	10–12, 22, 28, and 30–34
Miele	§ 102(b)	1, 4, 5, 9, 10, 12, and 14–38
Miele and Neyman	§ 103(a)	2 and 3
Miele and Welshimer	§ 103(a)	6–8 and 11
Sensibaugh	§ 102(b)	1, 4, 5, 7–10, and 14–38
Sensibaugh and Neyman	§ 103(a)	2 and 3
Sensibaugh and Welshimer	§ 103(a)	6, 11 and 12
Welshimer, Neyman, and Ferguson	§ 103(a)	13
Buchholz, Welshimer, and Ferguson	§ 103(a)	13
Miele and Ferguson	§ 103(a)	13
Sensibaugh, Welshimer, and Ferguson	§ 103(a)	13

II. ANALYSIS

A. Claim Interpretation

We interpret claims of an unexpired patent using the “broadest reasonable construction in light of the specification of the patent in which

[the claims] appear[.]” 37 C.F.R. § 42.100(b). Based on the record before us, the terms in the challenged claims need not be construed expressly for purposes of this decision.

B. Obviousness over Welshimer (Ex. 1002) and Neyman (Ex. 1003)

Petitioners contend that claims 1–38 of the ’756 patent would have been obvious under 35 U.S.C. § 103(a) over the combination of Welshimer and Neyman. Pet. 15–32.

1. Overview of Welshimer

Welshimer is directed to a granular substrate for use as a chemical agent carrier, and to a method of producing the granular substrate. Ex. 1002, 1:12–15. According to Welshimer, “the granular substrate resists attrition during handling but is capable of breaking down once exposed to water.” *Id.* at 3:11–12. The granular substrate includes mineral components (such as dolomite and limestone), lightweight additives (such as wood flour and cellulose), and a binder (such as lignosulfate and sodium carbonate lignin). *Id.* at 4: 1–4, 33–36, 62–64. The chemical agents that can be used with the granular substrate include herbicides and other pesticides. *Id.* at 3:64–67.

2. Overview of Neyman

Neyman is directed to a process for making homogeneous fertilizer granules that include (1) a dry fertilizer that includes a slow-release nitrogen source, (2) a urea-formaldehyde binder, and (3) a moisturizer. Ex. 1003, 1:51–56. Neyman states that preferred sources of slow-release nitrogen are isobutylidene diurea and Meth-Ex 40[®] methylene urea. *Id.* at 2:23–31. The urea-formaldehyde binder preferably has a urea to formaldehyde ratio of about 1:1. *Id.* at 3:24–25. According to Neyman, the fertilizer granules

“deliver high levels of efficient slow-release nitrogen” and “readily disperse when contacted by moisture.” *Id.* at 1:58–60.

3. *Analysis*

Petitioners contend that the combination of *Welshimer* and *Neyman* discloses all the elements of claims 1–38, and provide argument and a claim chart setting forth where each of the limitations may be found. Pet. 15–32. Petitioners contend that *Welshimer* and *Neyman* are in the same field of endeavor (water-dispersible granular fertilizers), and that *Neyman* “evidences aspects of *Welshimer* and further provides aspects that one of ordinary skill in the art would find obvious to include or use to tailor *Welshimer* in an entirely predictable and effective fashion.” *Id.* at 16. According to Petitioners, *Neyman* “informs the skilled artisan” of ranges of components, additional additives, and “the importance of water dispersibility.” *Id.* at 17.

To support a showing of obviousness, there has to be an articulated reasoning with rational underpinning to support a motivation to combine prior art teachings. *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) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”)). As explained in *KSR*, an analysis regarding an apparent reason to combine known elements “should be made explicit.” *Id.*

Petitioners assert that *Welshimer* and *Neyman* are from the same field of endeavor. Pet. 16. That, however, does not constitute articulated reasoning with rational underpinnings as to why one of ordinary skill in the

art would combine some elements of Neyman with elements of Welshimer, and why one of ordinary skill in the art would modify the teachings of Welshimer in view of Neyman's teachings to arrive at the claimed invention.

Petitioners also assert that modifying Welshimer in view of Neyman "includes obvious changes for a skilled artisan to try" and that the skilled artisan "would have a reasonable expectation of success in doing so" because the modified components are operating in an "expected and established capacity." Pet. 17–18. These conclusory statements are nothing more than a restatement of basic tests identified by the Supreme Court for determining whether an invention would have been obvious. *See KSR*, 550 U.S. at 417 ("whether the improvement is more than the predictable use of prior elements according to their established functions"), 421 (when "there a finite number of identified, predictable solutions," and pursuing the known options leads to anticipated success, "the fact that a combination was obvious to try might show that it was obvious"). General principles on what may constitute a supporting rationale cannot substitute for specific application of those principles to the facts. Petitioners do not provide a persuasive, fact-based analysis to support the claimed combination of Welshimer and Neyman.

For these reasons, Petitioners have not demonstrated a reasonable likelihood that they would prevail on the ground that claims 1–38 of the '756 patent would have been obvious over the combination of Welshimer and Neyman.

C. *Anticipation by Buchholz (Ex. 1004)*

Petitioners contend that claims 1–9, 14–21, 23–27, 29, and 35–38 are unpatentable under 35 U.S.C. § 102(b) as anticipated by Buchholz. Pet. 32–33, 34–43.

1. *Overview of Buchholz*

Buchholz is directed to a delayed-release fertilizer composition containing a mixture of urea-formaldehyde resin and a lignosulfonate. Ex. 1004, Abstract. The composition is prepared by spray-drying an aqueous mixture of lignosulfonate and a water-soluble or water-dispersible urea formaldehyde resin. *Id.* at 2:17–21. According to Buchholz, upon spray-drying, the mixture becomes water insoluble, and is, therefore, useful as a slow-release fertilizer. *Id.* at 2:34–39. The resulting spray-dried powder is free-flowing and can absorb up to 50% water by weight without caking. *Id.* at 2:54–57. The spray-dried powder can be pelletized or granulated. *Id.* at 2:64–66.

2. *Analysis*

Petitioners assert that Buchholz discloses all of the elements of claims 1–9, 14–21, 23–27, 29, and 35–38, and provide argument and a claim chart setting forth where each limitation may be found. Pet. 32–43. Petitioners contend that when the spray-dried powder in Buchholz is pelletized or granulated, the resulting pellets or granules will inherently disperse into more than 100 pieces. *Id.* at 33. According to Petitioners, this is because the Buchholz pellets or granules have the same compounds and are formed the same way as the particles in the '756 patent. *Id.*

Patent Owner argues that Petitioners have not established that pellets or granules made from the Buchholz spray-dried powder would necessarily

disperse into more than 100 pieces when contacted with water. Prelim. Resp. 27. Patent Owner argues that, due to the number of possible combinations of components, amounts, physical states, and processing conditions, it is “impossible to state that a specific particle embodiment would inherently” disperse into more than 100 pieces upon contact with water. *Id.* at 26.

We agree with Patent Owner that Petitioners have not demonstrated that the limitation “contact with water causes particle dispersion into more than 100 pieces” is inherently disclosed by Buchholz. Inherency requires that the claim limitation in question is necessarily present in the reference. *In re Montgomery*, 677 F.3d 1375, 1379–80 (Fed. Cir. 2012). “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (quotation omitted).

The information presented does not show sufficiently that Buchholz inherently describes pellets or granules that disperse into more than 100 pieces upon contact with water as required by every challenged claim. Petitioners state that pellets or granules made from the Buchholz spray-dried powder “comprise the same materials” and are “formed in the same way” as the ’756 patent, but provide no explanation or evidence supporting this statement. Pet. 33. Likewise, Petitioners fail to provide evidence to support their conclusion that the pellets or granules made from the Buchholz spray-dried powder would inherently disperse into more than 100 pieces upon contact with water. *Id.*

Accordingly, we determine that the record before us does not establish a reasonable likelihood that Petitioners would prevail in showing that claims 1–9, 14–21, 23–27, 29, and 35–38 are unpatentable as anticipated by Buchholz.

D. Obviousness over Buchholz and Welshimer

Petitioners contend that claims 10–12, 22, 28, and 30–34 of the '756 patent would have been obvious under 35 U.S.C. § 103(a) over the combination of Buchholz and Welshimer. Pet. 33–34. Petitioners contend that “[o]ne skilled in the art would predictably manufacture the granules of *Buch[holz]* in the dispersible form of *Welshimer*, which has the same dispersibility of the '756 Patent, as well as include any of the additional features of *Welshimer* in an entirely predictable fashion.” *Id.* at 34.

As discussed with respect to the obviousness ground based on Welshimer and Neyman, that Buchholz and Welshimer are “[i]n the same field of endeavor, namely granular fertilizers” (Pet. 34), does not constitute articulated reasoning with rational underpinnings as to why one of ordinary skill in the art would combine some elements of Buchholz with elements of Welshimer, and why one of ordinary skill in the art would modify the teachings of Buchholz in view of Welshimer’s teachings to arrive at the claimed invention. Petitioners’ conclusory statements that a person having ordinary skill in the art would “would predictably manufacture” the Buchholz granules in Welshimer’s dispersible form, and would predictably include other, unidentified features of Welshimer, also do not establish a supporting rationale for the claimed combination.

For these reasons, Petitioners have not demonstrated a reasonable likelihood that they would prevail on the ground that claims 10–12, 22, 28,

and 30–34 of the '756 patent would have been obvious over the combination Buchholz and Welshimer.

E. Anticipation by Miele (Ex. 1005)

Petitioners contend that claims 1, 4, 5, 9, 10, 12, and 14–38 are unpatentable under 35 U.S.C. § 102(b) as anticipated by Miele. Pet. 43–45, 47–55.

1. Overview of Miele

Miele is directed to a granulated fertilizer composition for use during sowing or transplanting. Ex. 1005, Abstract. The composition includes an organic nitrogenous substance of natural origin (such as meat meal or wildfowl feathers) and slow-release synthesis organic nitrogenous substance (such as urea-formaldehyde). *Id.* at 2:54–59, 3:17–21. Miele further discloses that inert substances, including lignin derivatives, can be included in the composition because of their “aggregating action during formulation,” and because they “also favour rapid and complete dissolving of the microgranule in the ground, owing to the increase in its wettability and surface activity.” *Id.* at 4:27–33.

2. Analysis

Petitioners assert that Miele discloses all of the elements of claims 1, 4, 5, 9, 10, 12, and 14–38, and provide argument and a claim chart setting forth where each limitation may be found. Pet. 43–45, 47–55. Petitioners contend that the Miele granulated fertilizer composition “would inherently disperse into more than 100 pieces following contact with water, as the same components are used as in the '756 patent, the granulated fertilizer is formed in the same way, and a compound and its properties are inseparable.” *Id.* at 45. Patent Owner contends that Petitioners have not established that the

Miele granulated fertilizer composition inherently disperses into more than 100 pieces upon contact with water, as is required by all of the '756 patent claims. Prelim. Resp. 33–34.

We agree with Patent Owner that the information presented does not show sufficiently that Miele inherently describes pellets or granules that disperse into more than 100 pieces upon contact with water as required by every challenged claim. Petitioners state that the Miele granulated fertilizer composition uses the same components, and is formed in the same way, as described in the '756 patent. Pet. 45. Petitioners do not provide any explanation or evidence to support this statement, nor do Petitioners provide evidence to support the conclusion that the Miele composition would inherently disperse into more than 100 pieces upon contact with water. *Id.*

Accordingly, we determine that the record before us does not establish a reasonable likelihood that Petitioners would prevail in showing that claims 1, 4, 5, 9, 10, 12, and 14–38 are unpatentable as anticipated by Miele.

F. Obviousness over Miele and Neyman

Petitioners contend that claims 2 and 3 of the '756 patent would have been obvious under 35 U.S.C. § 103(a) over the combination of Miele and Neyman. Pet. 45–46. Petitioners contend that Miele and Neyman are “[i]n the same field of endeavor” and that a person having ordinary skill in the art would predictably manufacture the Miele fertilizer granules in the dispersible form taught in Neyman, and would also include “any of the additional features of *Neyman* in an entirely predictable fashion.” *Id.* at 45.

For the same reasons discussed with respect to the other obviousness grounds, Petitioners have not provided sufficient supporting rationale as to why one skilled in the art would combine Miele and Neyman. Accordingly,

we determine that Petitioners have not established a reasonable likelihood of prevailing on their assertion that claims 2 and 3 of the '756 patent would have been obvious over the combination of Miele and Neyman.

G. Obviousness over Miele and Welshimer

Petitioners contend that claims 6–8 and 11 of the '756 patent would have been obvious under 35 U.S.C. § 103(a) over the combination of Miele and Welshimer. Pet. 46–47. Petitioners contend that Miele and Welshimer are “[i]n the same field of endeavor,” and that a person having ordinary skill in the art would predictably manufacture the Miele fertilizer granules in the dispersible form taught in Welshimer, and would also include “any of the additional features of *Welshimer* in an entirely predictable fashion.” *Id.* at 46.

For the same reasons discussed with respect to the other obviousness grounds, Petitioners have not provided sufficient supporting rationale as to why one skilled in the art would combine Miele and Welshimer. Accordingly, we determine that Petitioners have not established a reasonable likelihood of prevailing on their assertion that claims 6–8 and 11 of the '756 patent would have been obvious over the combination of Miele and Welshimer.

H. Obviousness over Welshimer, Neyman, Miele, and Ferguson (Ex. 1007)

Petitioners contend that claim 13 of the '756 patent would have been obvious under 35 U.S.C. § 103(a) over the combinations of Welshimer, Neyman, and Ferguson, Buchholz, Welshimer, and Ferguson, and Miele and Ferguson. Pet. 5, 58–59. In support thereof, Petitioners state that Ferguson is in the same field of endeavor, and that including polybutene as a sticking agent or adhesive, as disclosed in Ferguson, “with any of the preceding

documents or document combinations would predictably provide the same adhesive effect as described.” *Id.* For the same reasons discussed with respect to the other obviousness grounds, Petitioners have not provided sufficient supporting rationale as to why one skilled in the art would make the combinations described. Accordingly, we determine that Petitioners have not established a reasonable likelihood of prevailing on their assertion that claim 13 of the ’756 patent would have been obvious over the combinations of Welshimer, Neyman, and Ferguson, Buchholz, Welshimer, and Ferguson, and Miele and Ferguson.

I. Unpatentability Grounds Based on Sensibaugh

Petitioners contend that claims 1, 4, 5, 7–10, and 14–38 of the ’756 patent are unpatentable under 35 U.S.C. § 102(b) as anticipated by Sensibaugh, claims 2 and 3 would have been obvious under 35 U.S.C. §103(a) over the combination of Sensibaugh and Neyman, claims 6, 11 and 12 would have been obvious over the combination of Sensibaugh and Welshimer, and claim 13 would have been obvious over the combination of Sensibaugh, Welshimer, and Ferguson. Pet. 55–59. The Petition provides a brief summary of the Sensibaugh reference, and general assertions that the applied references disclose the claimed subject matter. *Id.* The Petition then refers to multiple paragraphs in the Declaration of Phillip E. Sensibaugh (“Sensibaugh Declaration”). *See id.* at 56 (“[a]n accounting of the ’756 Patent claims using the *Sensibaugh* patent disclosure is detailed” in ¶ 37 of the Sensibaugh Declaration), 57 (“It is further submitted that the subject claims are obvious for the reasons provided in the *Sensibaugh Declaration*”), 58 (same). The referred-to paragraphs of the Sensibaugh Declaration present approximately 12 pages of claim charts and other

arguments in further support of the unpatentability challenges based on Sensibaugh. Ex. 1017 ¶¶ 37–40. This practice of citing the Sensibaugh Declaration to support conclusory statements that are not otherwise supported in the Petition amounts to incorporation by reference.

It is improper to incorporate by reference arguments from one document into another document. 37 C.F.R. § 42.6(a)(3); *see also* Rules of Practice for Trials Before The Patent Trial and Appeal Board and Judicial Review of Patent Trial and Appeal Board Decisions; Final Rule, 77 Fed. Reg. 48,612, 48,617 (Aug. 14, 2012) (prohibition against incorporation by reference is to eliminate abuses that arise from incorporation). By incorporating by reference the arguments from the Sensibaugh Declaration into the Petition, Petitioners circumvent the page limits imposed on petitions for *inter partes* review. Accordingly, we decline to consider information that is not provided in the Petition, but is instead incorporated by reference to the cited paragraphs in the Sensibaugh Declaration.

A petition for *inter partes* review must identify how the challenged claims are unpatentable under the statutory grounds asserted by the petitioners, and must specify where each element of the claims is found in the relied-upon prior art. 37 C.F.R. § 42.104(b)(4). A petition must include “a detailed explanation of the significance of the evidence including material facts, and the governing law, rules, and precedent.” *Id.* at § 42.22(a)(2). With respect to the unpatentability grounds based on Sensibaugh, the Petition (1) does not specify sufficiently where each element of the claims is found in the applied references, and (2) does not include a detailed explanation of the significant of the evidence. *See* 37 C.F.R. §§ 42.104(b)(4), 42.22(a)(2). Accordingly, on the record before us, the

IPR2014-00939
Patent 6,884,756 B2

information presented in the Petition does not demonstrate a reasonable likelihood that Petitioners would prevail with respect to its assertions of unpatentability based on Sensibaugh.

III. CONCLUSION

For the foregoing reasons, we conclude that Petitioners have not demonstrated a reasonable likelihood that at least one of the challenged claims of the '756 patent is unpatentable based on the asserted grounds.

IV. ORDER

In consideration of the foregoing, it is hereby:
ORDERED that the Petition is denied.

IPR2014-00939
Patent 6,884,756 B2

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