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Paper 9
Entered: December 1, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SYNGENTA CROP PROTECTION AG,
Petitioner,

v.

INFLEXION POINT TECHNOLOGIES, LLC,
Patent Owner.

PGR2025-00045
Patent 12,102,027 B2

Before CHRISTOPHER G. PAULRAJ, ARTHUR M. PESLAK, and DEBRA L. DENNETT, *Administrative Patent Judges.*

DENNETT, *Administrative Patent Judge*.

DECISION
Denying Institution of Post-Grant Review
35 U.S.C. § 324

I. INTRODUCTION

Syngenta Crop Protection AG ("Petitioner") filed a Petition (Paper 2, "Pet.") requesting post-grant review of claims 1–19 (the "challenged claims") of U.S. Patent No. 12,102,027 B2 (Ex. 1001, "the '027 patent"). Inflexion Point Technologies, LLC ("Patent Owner") filed a Preliminary Response. Paper 7 ("Prelim. Resp."). This case was referred to the Board for a decision on whether or not to institute post grant review. Paper 6.

We have authority to determine whether to institute a post-grant review under 35 U.S.C. § 324. Institution of a post-grant review is authorized by statute only when "the information presented in the petition . . . would demonstrate that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable." 35 U.S.C. § 324(a). The burden is on Petitioner to show that the challenged patent is eligible for post-grant review. *Mylan Pharms. Inc. v. Yeda Research & Dev. Co.*, PGR2016-00010, Paper 9 at 10 (PTAB Aug. 15, 2016) (holding that the ultimate burden of persuasion remains with a petitioner to demonstrate that the challenged patent is eligible for post-grant review). Upon consideration of the Petition, Preliminary Response, and the cited evidence, we determine that Petitioner has not shown that it is more likely than not that any of the challenged claims are unpatentable. We thus determine to not institute a post-grant review of the '027 patent based on the Petition.

II. BACKGROUND

A. Real Parties-in-Interest

Petitioner identifies Syngenta Crop Protection AG as the real party-in-interest. Pet. 2. Patent Owner identifies Inflexion Point Technologies, LLC

as the real party-in-interest. Paper 4, 1. At this stage, neither party has raised a dispute regarding the requirement to identify an RPI.

B. Related Proceedings

Petitioner identifies US App. Ser. No. 18/598,879, which claims priority to the US patent application from which the ’027 patent issued, as a related matter. Pet. 3. Petitioner also identifies PCT/US2015/037230 to which the ’027 patent claimed priority. *Id.* Patent Owner does not identify any related proceedings. *See generally* Prelim. Resp.

C. The ’027 Patent

The ’027 patent is titled “System and Method for Prescriptive Seed Treatment,” and issued on October 1, 2024. Ex. 1001, codes (54), (45). The ’027 patent is the U.S. National Stage Application of PCT/US2015/037230 filed on June 23, 2015. *Id.* at code (86).

The ’027 patent relates to farming methods for planting seed treated with a prescriptive type, amount, and/or mixture of one or more substances based at least in part on past, current, and/or predicted field and/or market conditions (“prescriptive seed treatment”). Ex. 1001, 1:6–12. The substances may be chemicals, biologicals, biostimulants, micronutrients, or other compositions. *Id.*, 7:48–63. The conditions are circumstances that can impact what seed is to be planted at a particular location and/or the type or amount of substance that is applied to the seed. *Id.*, 8:27–30. The conditions can include, *inter alia*, pest types and amounts, soil types and conditions, moisture levels, field terrain, Global Positioning System (GPS) coordinates, seed availability, and planting practices. *Id.*, 8:27–57. According to the ’027 patent, a need existed in the art for a prescriptive seed treatment in which the

seed treatment substance is intentionally applied by direct contact to the seed prior to the seed being planted into the field. *Id.*, 4:20–26.

D. Illustrative Claim

Claim 1 illustrates the challenged claims in the ’027 patent, and is reproduced below.

> 1. A prescriptive seed treatment method comprising the steps of:
>
> providing a planter, a seed drop tube, a substance receptacle, a substance applicator, a seed, and a seed-applied substance;
>
> calculating a location within a field where the seed will be delivered to the soil by the planter;
>
> selecting, based at least in part on a condition, a combination of the seed and the seed-applied substance by selecting a type of seed-applied substance and calculating a desired application amount of the selected type of the seed-applied substance to be applied to and carried by the seed to the soil;
>
> generating the combination of the seed and the selected type of the seed-applied substance at least in part by individually applying the desired application amount of the selected type of the seed-applied substance to each seed as it is being delivered to the soil
>
> and
>
> delivering the combination of the seed and the selected type of the seed-applied substance to the soil at the calculated location within the field for planting;
>
> wherein the type of the seed-applied substance and the desired application amount of the selected type of the seed-applied substance can vary as the planter changes locations within the field.

Ex. 1001, 39:42–67.

E. Asserted Challenges to Patentability and Evidence of Record

Petitioner challenges the patentability of claims 1–19 of the '027 patent on the following bases:

Ground	Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1	1–4, 6, 7, 11, 13–16	102	Wagers[1]
2	1–7, 11–16	103	Wagers, Mitchell[2]
3	8	103	Wagers, Wilkerson[3]
4	9, 10	103	Wagers, Batcheller[4]
5	17	103	Wagers, Memory[5]
6	18, 19	103	Wagers, Garner[6]
7	1–19	112	Enablement

Petitioner also relies on the Declaration of Durham K. Giles, Ph.D. *See* Ex. 1003. Patent Owner relies on the Declaration of Douglas S. Prairie, P.E. *See* Ex. 2001.

III. PRELIMINARY MATTERS

A. Post-Grant Review Eligibility

As a threshold issue, we determine whether the '027 patent is eligible for post-grant review. There are two requirements that must be met for post-grant review to be available. First, post-grant review is only available if the petition is filed within nine months of the issuance of the challenged patent. 35 U.S.C. § 321(c). Petitioner certifies that the Petition was filed within nine months of the '027 patent's issue date. Pet. 1. Second, post-grant review is

[1] Wagers et al., US 2014/0277959 A1, published Sept. 18, 2014 (Ex. 1004).
[2] Mitchell, US 1,409,564, issued Mar. 14, 1922 (Ex. 1005).
[3] Wilkerson et al., US 2004/0231575 A1, published Nov. 25, 2004 (Ex. 1006).
[4] Batcheller et al., US 2014/0379228 A1, published Dec. 25, 2014 (Ex. 1007).
[5] Memory et al., US 6,155,185, issued Dec. 5, 2000 (Ex. 1008).
[6] Garner et al., US 8,850,995 B2, issued Oct. 7, 2014 (Ex. 1009).

available only for patents that issue from applications that at one point contained at least one claim with an effective filing date of March 16, 2013, or later. *See* Pub. L. No. 112-29, §§ 3(n)(1), 6(f)(2)(A). Here, the priority date recited for the '027 patent does not include filings prior to March 16, 2013. Ex. 1001, code (22).

Petitioner filed the request for post-grant review on July 1, 2025, which is on or before nine months of the grant of the '027 patent on Oct. 1, 2024. *See* Pet. 1; 35 U.S.C. § 321(c).

Patent Owner does not challenge the eligibility of the '027 patent for post-grant review.

The '027 patent is eligible for post-grant review as the effective filing date is no earlier than June 23, 2015, the filing date of PCT application. Ex. 1001, code (22).

B. Level of Ordinary Skill in the Art

We consider the grounds of unpatentability in view of the understanding of a person of ordinary skill in the art (sometimes referred to herein as "POSA") as of the effective filing date of the challenged claims. Petitioner contends that one of ordinary skill in the art would have had

> at least a Bachelor of Science degree in Agricultural or Mechanical Engineering with 5–10 years of practical, applied experience in the field of agricultural machinery, including systems integration and fluid handling and sprayer control systems. . . . Further, one skilled in the art would have a good understanding of sensors and actuators used in foundational technologies of precision agriculture.

Pet. 16 (citing Ex. 1003, ¶ 63-65).

Patent Owner contends that one of ordinary skill in the art would have had

> a Bachelor of Science degree in Agricultural or Mechanical Engineering with 2–4 years of practical, applied experience in the field of agricultural machinery, including systems integration and fluid handling and sprayer control systems, or equivalent experience.

Prelim. Resp. 12 (citing Ex. 2001, ¶ 59). Patent Owner states that the differences in the asserted levels of ordinary skill should not change the outcome of the Petition. *Id.*

For the purposes of this decision, we adopt Petitioner's definition, which appears consistent with the level of skill shown in the prior art references of record and the '027 patent. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (explaining that specific findings regarding ordinary skill level are not required "where the prior art itself reflects an appropriate level and a need for testimony is not shown" (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985))). Our analysis, however, would not change were we to adopt Patent Owner's definition.

C. Claim Construction

In a *post-grant* review, we interpret a claim "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. § 42.200(b). Under this standard, we construe the claim "in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent." *Id.*

Petitioner contends that the claims should be afforded their plain and ordinary meaning. Pet. 17.

Patent Owner contends that claim construction is necessary for the

"seed-applied substance" term because Petitioner allegedly ignores the teaching of the specification in evaluating the term. Prelim. Resp. 12. Patent Owner points to the specification, which defines a "seed-applied substance" as "includ[ing] any composition applied to seeds prior to the seeds being planted (e.g., when the seed comes in contact with the soil in a field)." *Id.* at 13 (quoting Ex. 1001, 7:45-48). Patent Owner contends that the term means "a substance that is applied directly to the seed before the seed comes into contact with the soil in a field." *Id.* (citing Ex. 2001, ¶ 55). According to Patent Owner, Petitioner erroneously uses a definition that "allows the 'seed-applied substance' to be applied to the seed (and soil) as the seed lay planted in the soil.'" *Id.*

For the purpose of addressing Petitioner's grounds, we use the definition of "seed-applied substance" provided in the '027 patent, i.e., "any composition applied to seeds prior to the seeds being planted (e.g., when the seed comes in contact with the soil in a field)." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) ("[A] patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history.").

IV. ANALYSIS

In a post grant 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). The petitioner ultimately bears the burden of persuasion to prove unpatentability of each challenged claim by a preponderance of the evidence. 35 U.S.C. § 326(e). This burden never shifts to the patent owner.

See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc., 800 F.3d 1375, 1378 (Fed. Cir. 2015). The Board may authorize a post grant review if we determine that the information presented in the record shows that it is more likely than not that the petitioner will prevail with respect to at least one of the claims challenged in the petition. 35 U.S.C. § 324(a). We now turn to analyzing each of Petitioner's seven asserted grounds of unpatentability.

A. Ground 1: Alleged Anticipation by Wagers

1. Principles of Law

Anticipation requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citation omitted). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.'" *Id.* (citation omitted). Moreover, to anticipate, a prior art reference must "disclose[] within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim." *Net MoneyIN, Inc. v. Verisign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008). The reference must also be enabling, which requires that the reference "teach a skilled artisan—at the time of filing—to make or carry out what it discloses in relation to the claimed invention without undue experimentation." *In re Morsa*, 803 F.3d 1374, 1377 (Fed. Cir. 2015) (citing *In re Antor Media Corp.*, 689 F.3d 1282, 1289–90 (Fed. Cir. 2012)). The reference, however, "need not enable the claim in its entirety, but instead the reference need only enable a single embodiment of the claim." *Id.*

2. Overview of Wagers

Wagers, titled "Multi-seed Planter Control System and Method for the Same," is a U.S. patent application filed in 2014. Ex. 1004, codes (54), (43). At this stage of the proceeding, Patent Owner does not dispute that Wagers qualifies as prior art.

Wagers discloses methods for automatically planting two or more seed types with an agricultural planter that includes monitoring the planter location on a prescription map of an agricultural field. Ex. 1004, ¶ 8. The planter includes one or more remotely adjustable planting characteristics of the planter including, but not limited to, vacuum level, population rate, coulter down pressure, agricultural product selection, and application rate of an agricultural product selected according to one or more of the selected seed type or the monitored planter location on the prescription map. *Id.* The planting characteristics may be dynamically adjusted. *Id.*

3. Analysis

Our analysis of whether Wagers discloses the limitation "individually applying the desired application amount of the selected type of the seed-applied substance to each seed as it is being delivered to the soil" is dispositive of Petitioner's challenge to claim 1 as anticipated.

Petitioner contends that paragraphs of Wagers "necessarily disclose the application of the substance to the individual seed just prior to placement on the ground" to one of ordinary skill in the art. Pet. 31 (citing Ex. 1003, ¶¶ 92, 303). Paragraph 92 of the Giles Declaration, in turn, states that Wagers' disclosure of "metering of individual seeds and applying an agricultural product or substance contemporaneously with the dispensing [and planting] of the seed" provides the basis for the skilled artisan's

understanding. Ex. 1003, ¶ 92 (referring to excerpts of Ex. 1004, ¶¶ 28, 40, 51, 60, and 61 in the claim charts in relation to the limitation at issue). Paragraph 303 is Dr. Giles's conclusion, which contains his opinion that claim 1 is anticipated without reference to specific portions of Wagers. *See id.*, ¶ 303.

As quoted in the claim charts, Wagers' excerpted paragraphs state:

> [0028] The agricultural product reservoirs 118 are *configured to provide the agricultural product contemporaneously with dispensing and planting of seeds*.
>
> [0040] In one example a seed selector 410 is operated to accordingly *feed the selected seed to the seed metering system 120* (e.g., including the seed disk driven by a motor such as a hydraulic motor, the vacuum fan). The seed disk 412 accordingly adjusts its vacuum level according to the seed type selected based on instructions from the controller 402. The vacuum level is adjusted in one example *to reliably hold each of the seeds along the seed disk* (e.g., based on the respective size, shape, and weight of the seed) for planting . . . . In still another example, the controller 402 controls a down-pressure of the coulter 414 according to the seed type being planted. The coulter pressure is in one example adjusted upwardly or downwardly *to provide a desired depth for planting of the selected seed*. In a similar manner *one or more of the sprayer or pneumatic dispenser 418 for liquid and granular agricultural products 418 are adjusted to provide a desired type and amount of the respective agricultural product* based on the seed selected and optionally one or more of the terrain characteristics for instance provided by the terrain characteristic module.
>
> [0051] [I]n one example the control valve 544 is used *to apply a particular rate of an agricultural product with the respective row unit 114*.
>
> [0060] In another example dynamically changing one or more remotely adjustable planting characteristics . . . In one example specified vacuum levels are associated with each of one or more hybrids or each of a differing seed types and the controller 402

changes the vacuum level for instance of one or more of the seed disks 412 is based on the selected seed type.

See also [0061].

Ex. 1003, App. C, ¶¶ 28, 31, 40, 51, 60 (emphasis added).

Patent Owner argues that "Petitioner reads out that the '027 patent discloses a *seed*-applied substance, i.e., a substance *applied to the seed*." Prelim. Resp. 25. Patent Owner reproduces Fig. 8C of the '027 patent to support its argument.

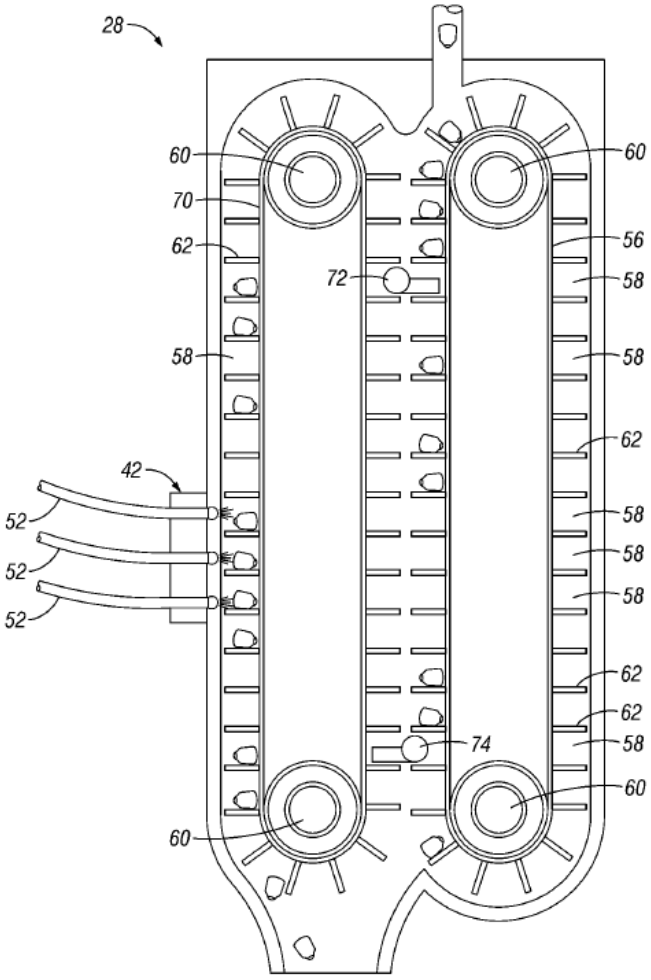

Fig. 8C is a schematic view of a seed drop tube configuration and substance applicators in accordance with an embodiment of the '027 patent. Ex. 1001, 6:16–18. Seed drop tube 28 comprises accelerator belt 56,

substance application belt 70, and one or more deflectors 72, with accelerator belt 56 configured to receive a seed of a particular seed type from one or more seed meters 26. *Id.*, 20:12–16. Upon the detection and/or presence of a condition triggering a seed to receive one or more seed-applied substances, one or more deflectors 72 can be actuated by one or more controllers 54 and/or other mechanisms to transfer the seed from accelerator belt 56 to substance application belt 70. *Id.*, 20:20–24. The seed is transferred from accelerator belt 56 to substance application belt 70 and travels past substance applicator 42, during which one or more seed-applied substances are applied to at least a portion of the seed. *Id.*, 20:34–38. The combination of a seed and seed-applied substance can be dispensed from seed drop tube 28 and/or transferred to accelerator belt 56 via a second deflector 74. The combination of seed and seed-applied substance can be dispensed from seed drop tube 28. *Id.*, 20:38–39.

Patent Owner contends that Figs. 8A, 8B, 8C, and 8D of the '027 patent depict example embodiments that include "individually applying the desired application amount of the selected type of the seed-applied substance to each seed as it is being delivered to the soil." *See* Prelim. Resp. 26. According to Patent Owner, the seed-applied substance obviates the need to apply a treatment to the soil. *Id.* at 27.

In the Prairie Declaration, Mr. Prairie states that he is a named inventor on the Wagers reference (Ex. 1004) which discloses bulk-application of fertilizer, insecticide, or herbicide to the soil itself, but not applying a substance directly to individual seeds before planting. Ex. 2001, ¶¶ 62, 78. Mr. Prairie states that Wagers does not disclose applying the seed-applied substance to the seed prior to the seed contacting the soil, but rather

that "the seed-applied substance is carried to the soil *by the seed*. *Id.*, ¶ 102 (quoting Ex. 1001, claim. 1 ("calculating a desired application amount of the selected type of the *seed-applied substance to be applied to and carried by the seed to the soil*.")); *see also id.*, ¶ 105. According to Mr. Prairie, Wagers discloses "how the row units 114 may spray liquid fertilizer or herbicide on the rows (e.g., onto the dirt) while seeds are being dispersed." *Id.*, ¶ 79 (quoting Ex. 1004, ¶ 28 ("The agricultural product reservoirs 118 are configured to provide the agricultural product contemporaneously with dispensing and planting of seeds.")). "[P]aragraph [28] only demonstrates that Wagers applies the agricultural product while the seed is planted: the 'agricultural product reservoirs 118 are configured to provide the agricultural product contemporaneously with dispensing and planting of seeds.'" *Id.*, ¶ 103 (citing Ex. 1004, ¶ 28).

Mr. Prairie states that paragraph 50 of Wagers confirms his position in discussing "an agricultural product dispenser 418 such as one or more of a sprayer or pneumatic system for respective liquid ***or granular*** fertilizer, herbicide, insecticide or the like." *Id.*, ¶ 80 (quoting Ex. 1004, ¶ 50). According to Mr. Prairie, "[g]ranular fertilizer, herbicide, or insecticide logically and physically cannot be applied to seeds themselves and are instead applied to soil." *Id.*, ¶ 81. Per Mr. Prairie, "[t]he agricultural product—discussed throughout Wagers as 'liquid or granular fertilizer, herbicide, or insecticide,' *see* Ex. 1004, [0050], is applied at a continuous rate throughout a prescription zone." *Id.*, ¶ 104 (citing Ex. 1004, ¶ 50 ("In one example the agricultural product input 540 includes but is not limited to a type of agricultural product as well as *a rate of dispensing* of the agricultural product provided by the controller 402 and *based upon the*

location of the planter (or the respective row unit 114) within a zone of the prescription map (e.g., within the prescription map module 404).") (emphasis added)). Mr. Prairie states that, rather than disclosing application of the substance to the individual seed just prior to placement in the ground, as alleged by Petitioner, "Wagers instead discloses agricultural product dispersed simultaneously with planting—not to the seed itself, but with the seed in its planted location." *Id.*, ¶ 106.

The Wagers reference and Mr. Prairie's declaration convince us that Wagers does not teach "individually applying the desired application amount of the selected type of the seed-applied substance to each seed as it is being delivered to the soil." Thus, Petitioner does not show that it is more likely than not that Wagers anticipates independent claim 1. As the reference does not anticipate claim 1, it cannot anticipate any of the claims depending from claim 1 challenged in Ground 1, i.e., claims 2–4, 6, 7, 11, or 13–16.

B. Ground 2: Alleged Obviousness Over Wagers

1. Principles of Law

Under 35 U.S.C. § 103, a claim is unpatentable as obvious if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. 35 U.S.C. § 103; *see also KSR Int'l Co.*, 550 U.S. at 406. The question of obviousness is resolved based on 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) any objective indicia of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18

(1966). An obviousness determination requires finding a reason to combine accompanied by a reasonable expectation of achieving what is claimed in the challenged patent. *See Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016). "[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *KSR*, 550 U.S. at 419–20.

2. Overview of Mitchell

Mitchell, titled "Antismut Grain and Soil Treating Process and Apparatus," is a U.S. Patent No. 1,409,564, issued Mar. 14, 1922. Ex. 1005, 1. Mitchell concerns "a process and means for treating grain and the soil in which it is sown or planted, to prevent the crop from containing smut."[7] *Id.*, 1:16–19. According to the inventor, the novel feature of the process "consists in the simultaneous spraying of the grain and the soil during the planting or seeding operation, whereby not only the seed is subject to the action of the anti-smut liquid, but the soil in which the seed is planted is also subjected thereto." *Id.*, 1:36–43. The seed and the soil are sprayed at the same time. *Id.*, 1:65–67.

Figures 4 and 5 of Mitchell are reproduced below.

[7] Smut is a type of fungal disease that occurs in cereal grains.

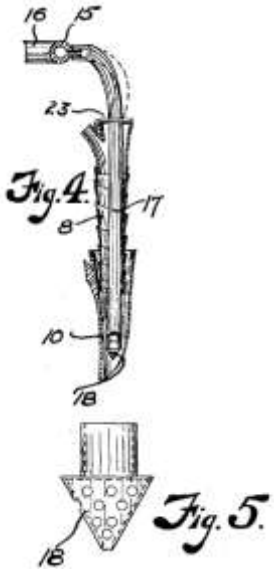

Fig. 4.
Fig. 5.

Mitchell Figure 4 is a sectional view taken through one of the hollow grain-guiding telling of an ordinary drill, and Figure 5 is a detail view of a nozzle located at the lower extremity of each of the liquid-delivering spouts. Ex. 1005, 1:98–104. The seed passes into hollow teeth 8 connected to a grain box and then into the earth, the points 10 of teeth 8 coming into contact with the soil. *Id.*, 2:11–17. From conduit 15, spout 17 passes through hollow tooth 8, spout 17 being relatively small such that it does not interfere with passage of the grain through tooth 8. *Id.*, 2:35–41. The lower extremity of each spout 17 is equipped with spray nozzle 18, which is located just above point 10 of tooth 8, so that the liquid as it issues from the nozzle is deposited upon the grain and the soil or earth in which it is planted simultaneously. *Id.*, 2:42–47.

3. Analysis

Petitioner argues that Mitchell discloses a seed treatment method utilizing an ordinary planter to apply a desired application amount of a selected type of the seed-applied substance to each seed as it is being delivered to the soil: "as the seed is about to enter the earth at the lower

extremities 10 of the hollow teeth, the liquid is applied to the grain" and "spraying the seed as it falls." Pet. 43 (quoting Ex. 1005, 2:54-64, 2:101-105). Petitioner contends that, accordingly, Mitchell disclosed planters including seed drop tubes that provide for the release of seed at or near the ground, and allow precision in seed placement and may be used in conjunction with a spraying system in order to provide treated seeds as the seed drops into the ground. *Id.*

Petitioner contends that "[o]ne would have been motivated to incorporate the spray nozzle configuration of Mitchell because of the precision it affords," and "[i]ncorporating such a configuration in the multi-row planter disclosed in Wagers would have been straightforward." Pet. 49 (quoting Ex. 1003, ¶ 145).

Patent Owner challenges, *inter alia*, Petitioner's motivation to combine Wagers and Mitchell, noting that Petitioner merely contends that Mitchell's spray nozzle affords precision, and incorporating Mitchell would have been straightforward. Prelim. Resp. 47–48.

We note that Petitioner's quotations of Mitchell stop short of including the fact that the liquid anti-smut compound is sprayed on the seed *and on the soil simultaneously*. *See* Ex. 1005, 2:44–47 ("the liquid as it issues from the nozzle is *deposited upon the grain and the soil or earth in which it is planted, simultaneously.*" (emphasis added); 2:61–64 (liquid is applied to the grain *and also to the earth*, thus *giving the seed and earth at the same time a treatment with the anti-smut liquid compound*." (emphasis added); 2:101–105 (" [t]he herein described seeding process, consisting in *dropping seed and simultaneously spraying the seed as it falls and the soil into which it falls* with an anti-smut liquid" (emphasis added). The fact that

Mitchell sprays seed *and soil at the same time* suggests that one of ordinary skill would not have looked to Mitchell to afford precision to the process of planting individual seeds. Petitioner does not identify what type of "precision" is afforded by Mitchell. Further, Mitchell appears to suffer from the same problem that Wagers does insofar as it teaches the application of chemicals to the soil itself rather than a "seed-applied substance." *See* Ex. 2001, ¶¶ 34–35.

Under such circumstances, Petitioner's purported reason to combine the references is tainted by impermissible hindsight. The issue is not whether a skilled artisan presented with Wagers and Mitchell would have understood that they *could be* combined. *See PersonalWeb Techs., LLC, v. Apple, Inc.*, 848 F.3d 987, 993 (Fed. Cir. 2017). "That is not enough: it does not imply a motivation to pick out those two references and combine them to arrive at the claimed invention." *Id.* (citing *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) ("[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.").

Petitioner has not shown that it is not more likely than not that at least of one of the claims of the '027 patent is obvious over Wagers in view of Mitchell.

C. Grounds 3–6: Alleged Obviousness over Wagers in view of additional references

Each of Grounds 3–6 concerns one or two claims that depend from claim 1 and rely on Wagers as the primary reference plus one additional reference as teaching the portion of the dependent claim that further limits

claim 1. *See* Ex. 1001, 40:33–50; 41:20–25. Therefore, each of Grounds 3–6 relies on Wagers as teaching all elements of claim 1.

For the reasons discussed above, Petitioner has not shown that it is not more likely than not Wagers teaches all elements of claim 1. Therefore, we find that Petitioner has not shown that it is more likely than not that Wagers in view of an additional reference renders the claims subject to Grounds 3–6 obvious.

D. Ground 7: Alleged Lack of Enablement

1. Principles of Law

To show that a claim is invalid for lack of enablement, a challenger must show "that a person of ordinary skill in the art would not be able to practice the claimed invention without undue experimentation." *Enzo Life Sciences, Inc. v. Roche Molecular Sys., Inc.*, 928 F.3d 1340, 1345 (Fed. Cir. 2019). "[A] patent specification complies with the statute even if a 'reasonable' amount of routine experimentation is required in order to practice a claimed invention." *Enzo Biochem, Inc. v. Calgene, Inc.*, 188 F.3d 1362, 1371 (Fed. Cir. 1999). Whether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). These factors, referred to as the *Wands* factors, include: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. *Id.*

Nothing more than objective enablement is required, and therefore it is irrelevant whether this teaching is provided through broad terminology or illustrative examples. *In re Marzocchi*, 439 F.2d 220, 223 (CCPA 1971). *See In re Howarth*, 654 F.2d 103, 105 (CCPA 1981) ("An inventor need not, however, explain every detail since he is speaking to those skilled in the art."). Enablement is a question of law. *In re Swartz*, 232 F.3d 862, 863 (Fed. Cir. 2000).

2. Analysis

Citing dozens of paragraphs of the Giles Declaration, Petitioner contends that the '027 patent lacks enablement of "seed," generating the combination of the seed and the seed-applied substance "as it is being delivered to the soil," and "individually applying the seed-applied substance to each seed as it is being delivered to the soil." Pet. 73–86.

As to enablement of "seed," Petitioner contends that seeds vary in size, shape, symmetry, as well as other characteristics, such that "[i]t is unclear how a POSA would be able to use the same prescriptive seed treatment method claimed for any seed and '[generate] the combination of the seed and the selected type of the seed-applied substance . . . as it is being delivered to the soil,' without undue experimentation" due to changes in such things as air resistance and surface area from seed-to-seed. Pet. 73–74. This statement is followed by a citation to the Giles Declaration in which Dr. Giles states his opinion that the '027 patent "provide[s] little guidance as to how to develop a planter to use the claimed method," "require[s] the use of a planter capable of performing the [claimed] method for any seed and generating the combination at each seed location," and enumerated at least ten variables that "reliably need to be considered by a POSA when

developing or designing a planter to carry out such a method." Giles Decl. ¶ 227.

We do not agree that claims to a prescriptive seed treatment method require the inventor to disclose how to build a single planter that is capable of planting any and every seed, as Dr. Giles seems to suggest. We agree with Patent Owner that Petitioner is imposing a heightened enablement standard, requiring strict disclosure of how to plant every type of seed in a commercially successful way. Prelim. Resp. 50 (citing *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1338 (Fed. Cir. 2003) ("Enablement does not require an inventor to meet lofty standards for success in the commercial marketplace. Title 35 does not require that a patent disclosure enable one of ordinary skill in the art to make and use a perfected, commercially viable embodiment absent a claim limitation to that effect.").

Petitioner argues that applying a substance to a seed "as it is being delivered to the soil" "inherently involves substantial challenges" such as accounting for how the seed will travel within the seed's path, and detecting the seed to determine when and how to apply the substance within the seed's path, as well as designing a substance applicator to apply the substance in the seed's path. Pet. 71–72. Petitioner contends that the '027 patent contains no discussion of the basic technical parameters involved. *Id.* at 72. Petitioner argues that seed drop tubes were "well known around the time of filing of the '027 Patent to have difficulty in maintaining accurate and consistent seed spacing at planting speeds of greater than 5 mph," and that seeds traveling through seed drop tubes "contact and bounce off the walls of the seed tubes in relatively random intervals" leading to differences in the rates at which seeds travel through the tubes. *Id.* at 76 (citing Ex.

1003, ¶ 241 (citing Ex. 1014, published 2003, and Ex. Ex. 1015, published 2007)).

Patent Owner's declarant, Mr. Prairie, states that, as one of ordinary skill in the art, he "could use this method no matter the size, shape, mass, or any other characteristic of the seed." Ex. 2001, ¶ 122. He cautions, however, that not all seeds would be economically viable to plant in the claimed manner, as some may need to be planted very slowly, but "[t]hat does not mean they could not be planted in this way, just that there would be less profit on the resulting plant." *Id.*, ¶ 123. He states he would have understood "how to utilize various seeds, regardless of individual seed characteristic[s], to generat[e] the combination of the seed and seed-applied substance 'as it is being delivered to the soil,'" given the '027 patent's disclosure of "examples where the spray of the seed-applied substance is directed to a spot where each seed passes through the seed drop tube." *Id.*, ¶ 124. According to Mr. Prairie, "[t]he seeds, no matter the size, shape, mass, or any other characteristic, are guided through the seed drop tube at consistent rates—unable to 'bounce off the walls' of the seed drop tube and are in discrete compartments . . . which allow for consistent spraying within a compartment to ensure coverage and limit overspray." *Id.*

Weighing the evidence presented, the challenges of which Petitioner complains seem to fall within the bounds of routine experimentation. "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR*, 550 U.S. at 421. Especially in terms of applying a substance to a seed as it is delivered to the soil, Figures 8A–8D and related text provide substantial discussion and explanation of the claimed method and the device that could be used to implement that method. *See* Ex. 1001,

Figs. 8A–8D, 14:43–20:56. Petitioner's emphasis on differences between seeds elevates form over substance. Moreover, Petitioner states that "it is unclear what technology existed at the time of filing of the '027 patent that would allow seeds to maintain such regular intervals and orientations through seed drop tubes." Pet. 78. Petitioner, however, cannot meet its burden of proof by merely proclaiming a lack of knowledge on its part.

The claims do not necessarily fail the enablement requirement because the claimed method may be inoperable for some combinations of seed and seed-applied substance. *See Atlas Powder Co. v. E.I. du Pont De Nemours & Co*., 750 F.2d 1569, 1576–77 (Fed. Cir. 1984) ("It is not a function of the claims to specifically exclude . . . possible inoperative substances." (citing *In re Dinh-Nguyen*, 492 F.2d 856, 858–59 (CCPA 1974)). The number of inoperative embodiments within the scope of a claim is relevant if it forces one of ordinary skill in the art to experiment unduly in order to practice the claimed invention. *Atlas*, 750 F.2d at 1576–77. Petitioner, however, has not shown that to be the case here.

Accordingly, Petitioner's lack of enablement argument fails.

V. CONCLUSION

Petitioner has not established that it will more likely than not prevail in showing that at least one of the challenged claims is unpatentable.

VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 324(a) the Petitioner is denied and no trial is instituted.

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