

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INARI AGRICULTURE, INC.,
Petitioner,

v.

PIONEER HI-BRED INTERNATIONAL, INC.
Patent Owner.

Case No. PGR2024-00023
Patent No. 11,696,545

PETITIONER'S REQUEST FOR DIRECTOR REVIEW

The Board's denial of institution raises important questions of law and patent policy echoing those in the Board's denials of institution in PGR2024-00019 (concerning the '803 Patent) and PGR2024-00020 (concerning the '020 Patent). The '545 Patent's specification and claim set are indeed virtually identical to those in the '803 and '020 Patents. See EX1103 & EX1104 (redlines). All three patents were filed on the same day and were allowed without meaningful analysis. The Board's refusal to institute review of the '545 Patent wrongly suggests a series of rigid brightline rules wrongly insulating plant utility patent claims from scrutiny.

For one, the Board improperly pronounced a loophole under which plant breeders can obtain plant utility patents as a matter of right merely by breeding new varieties in which one of the two parents is "proprietary" and the breeder declines to provide information during the patent prosecution process. The decision permits breeders in essence to *register* for utility patent protection merely by combining trade secrets (withheld from the PTO) with indisputable prior art—regardless of whether such work was inventive. Tellingly, the "proprietary" parent at issue here ("inbred line PH1VNA") is the *exact same* "proprietary" parent at issue in the '020 Patent subject to Petitioner's Request for Director Review in PGR2024-00020. The only difference is that PO bred the proprietary plant with one publicly available species in the '020 Patent and a second publicly available species herein. In both cases, the publicly available parents had already spawned

older offspring that themselves had been the subject of other patents which had already taught the publicly available parents' viability for breeding purposes.

In wrongly rewarding PO for having held back information—namely, the existence of the “proprietary” parent PH1VNA—as a trade secret, the Board wrongly disincentivized such disclosure while neglecting black-letter law that (1) patents and trade secrets are mutually incompatible forms of protection and (2) even “proprietary” activities can be highly relevant—even dispositive—to patentability, including obviousness under §103. Under the Board’s misguided analysis, PO could have obtained an unlimited number of patents merely by breeding “proprietary” PH1VNA with numerous different publicly available parents—even if it was already publicly known that such publicly available parents had a track record of success in generating new inbred lines.

Aside from blessing such assembly line applications and prosecution, the Board’s decision directly contradicts recent USDA recommendations to the PTO in connection with Executive Order 14036’s mandate that the PTO and USDA collaborate to ensure that the patent system does not “unnecessarily reduce competition in seed... markets beyond that reasonably contemplated by the Patent Act.” 86 Fed. Reg. 36987, 36993 (July 14, 2021). The USDA advised the PTO to consider requiring disclosure of “breeding histories or pedigrees back to known and *publicly available parents*” as part of the original disclosure “for utility patents

pertaining to plant varieties and traits.”¹ The USDA’s proposed approach would prevent blind spots of the sort that occurred during examination of the ’545 Patent here. By contrast, allowing the Board’s denial of institution to stand would risk perpetuating such blind spots and undermining Office training that ostensibly “proprietary” information can be material to patentability and thus can—and should—be requested during examination. *See* MPEP §724.04.

Separately, the Board improperly pronounced a heightened new standard of assessing the unpatentability of plant utility claims post-grant that the agency does not apply pre-grant. This new standard effectively creates an impermissible *presumption of patentability* in IPRs and PGRs for plant utility claims. To overcome this new presumption potential challengers must access seed deposits and perform seed analysis nowhere required when assessing patentability in the first instance. Such seed access and analysis would wrongly subject potential challengers to the risk of patent infringement merely in seeking to overcome the Board’s heightened new standard. The agency has no power to create a brightline rule altering patentability standards, let alone one unique to a specific technology.

¹ Oct. 8, 2024 USDA Recommendations, at

https://www.ams.usda.gov/sites/default/files/media/Recommendations_to_PTO_for_Increasing_Research_Access_to_Germplasm.pdf.

In particular, the Board wrongly faulted Petitioner’s unpatentability analysis *under §103* for not having sequenced PO’s seed deposit. But a seed deposit is required to satisfy *§112* mandates and is not sequenced pre-grant as part of any initial patentability determination. The Challenged Claims do not require *any* sequence—much less that associated with the deposited seed. Instead, as PO admits, the deposit is merely “an *exemplary* embodiment.” POPR at 42. The Board’s decision wrongly turns on this non-limiting specification embodiment and allows PO to skirt Petitioner’s patentability challenge based on information PO concedes is omitted from the ’545 Patent specification.

The ’545 Patent and the Board’s decision also implicate an increasingly critical aspect of patent policy as U.S. farmers struggle with unnecessary restrictions on such seed deposits and face improper patent infringement charges. Indeed, PO has sued Petitioner for doing *exactly* what the Board concluded is required here. *See Corteva Agriscience LLC v. Inari Agric., Inc.*, C.A. No. 23-1059-JFM (D. Del.), Second Am. Complaint (Oct. 15, 2024, Dkt. No. 158). PO even contends that Petitioner induced infringement merely by ordering seed from the relevant depository. And the district court has allowed the case to proceed on the theory that despite the “availability” of deposits after patent issuance, the public is not entitled “to exploit them in any way.” *Corteva Agriscience LLC v. Inari Agric., Inc.*, No. CV 23-1059, 2024 WL 3653040, at *11 (D. Del. Aug. 2,

2024). This is despite agency guidance to the contrary that “all restrictions” on the “availability to the public of the deposited material” must be “irrevocably removed” once a patent grants. §1.808.

Sequencing deposited seed—which under PO’s own litigation theory would exploit the deposit—cannot be required post-grant when the agency assesses no such data in its pre-grant patentability determination. The agency lacks the power to legislate in this area and replace the flexibility mandated by Congress under §103 with a rigid rule—much less one that would chill challenges to plant utility claims by exposing potential requesters to the same expensive lawsuits such as that which Petitioner already faces. AIA trial proceedings are intended as a cost-effective alternative to litigation—not to cause it. The decision should be reversed by the Director and remanded for a proper patentability analysis.

Requiring the public to analyze seed deposits as a threshold prerequisite for a viable §103 challenge “unnecessarily reduce[s] competition in seed...markets beyond that reasonably contemplated by the Patent Act”—notwithstanding Executive Order 14036’s mandate that the PTO and USDA collaborate to ensure that the patent system does *not* unnecessarily reduce such competition. The Board’s erroneous denial of institution contradicts the Executive Order and the objectives the PTO and USDA together announced in response—namely, to “enhance the quality of the patent examination process for innovations related to

agricultural products.” EX1024. It likewise contradicts the USDA’s related recommendation that the PTO clarify the information required for inventors to disclose while also ensuring that deposits are “available for public access *without restrictions* imposed by the depositor.” *See supra* note 1.

I. BACKGROUND

The ’545 Patent claims an inbred corn plant that is the child of an earlier inbred corn plant that PO had previously patented (EX1005, “Smalley”) and which PO had likewise already used as the parent to breed many other plants—including those disclosed in fourteen indisputable prior art patents (Petition at 20, 35, citing EX1003, ¶¶94). Benson (EX1006) is one such patent. It discloses an inbred sibling of the claimed inbred line and has a specification essentially identical to that of the later-filed ’545 Patent itself. *See* EX1101; *see also* EX1003, ¶¶191-197.

The ’545 Patent’s other parent—inbred line “PH1VNA”—was purportedly proprietary. It is the same plant used as one of the two parents in PO’s ’020 Patent, which was filed the same day as the application for the ’545 Patent.

During prosecution, PO failed to disclose Benson or any of the other thirteen indisputable §102(a)(1) prior art references disclosing additional older “siblings” of the claimed variety (i.e., all sharing Smalley as a parent). PO likewise failed to disclose that it had filed a different application the same day as that for the ’545 Patent seeking a patent (later issued as the ’020 Patent, at issue in PGR2024-

00020) on a different child of the purportedly proprietary PH1VNA line.

The PTO issued the '545 Patent without any meaningful examination or any statement of the reasons for allowance. The Examiner—not involved with the '020 Patent—did not even issue a Request for Information Under Rule 105.

Petitioner requested PGR on the ground that the Challenged Claims are unpatentable under §103 in view of Smalley and PO's corresponding Plant Variety Protection Act Certificate (each disclosing the same parental variety), and separately under Benson (disclosing the older inbred sibling). Petition at 41-59. Petitioner presented evidence that the disclosed properties of the claimed variety closely track those disclosed in the Smalley parent and Benson sibling, and further that nothing in the '545 Patent suggests any variation a POSA would have viewed as surprising or unexpected. Petition at 41-42 (citing EX1003, ¶¶107-114).

In response, PO reasoned that the claimed variety's lineage made it *impossible* to establish obviousness given that “one-half of the parentage of PH4CYJ is nowhere in the prior art,” but instead had been kept behind lock and key (notwithstanding that PO had separately used the allegedly secret PH1VNA variety to breed the sibling line covered in the '020 Patent). POPR at 29-30.

In reply, Petitioner stressed that (1) neither the PTO nor the public had any way to confirm PO's bald assertion and (2) under PO's theory, the fact that PO had withheld the “proprietary” art dictated that PO should win every time because the

Graham factors cannot be applied. Reply at 1-2. For example, taking the analogy proposed by PO’s own expert (EX2004, ¶56), a Labrador Retriever dog breeder could create a limitless patent thicket on inbred Labradors by taking a publicly disclosed champion stud (analogous to Smalley) and repeatedly breeding it with female Labradors kept behind closed doors (analogous to the purportedly “proprietary” PH1VNA). Under PO’s erroneous bright-line logic, claims on the offspring Labradors would be immune from § 103 attacks because the female parent dog was “not known in the art,” yet “[a] POSA could not arrive at [the offspring dogs] without it.” Reply at 2-3 (quoting POPR at 47).

In sur-reply, PO never denied that its theory would permit utility patent claims on new plant varieties any time a breeder kept one of the parent plants proprietary. PO instead merely reasoned that plant breeding involves a “massive” funnel and is not directly comparable to dog breeding—notwithstanding that PO’s own expert had originated the analogy. Sur-reply at 4. But utility patents incentivize the disclosure of inventive concepts that go beyond mere “ordinary innovation.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 427 (2007). They are not merely a reward for hard work, as the latter approach would “stifle, rather than promote, the progress of useful arts.” *Id.*

In rejecting Petitioner’s obviousness challenge, the Board nevertheless stressed that Petitioner had “only identified one parent” of the claimed variety and

had not demonstrated a reasonable expectation of success “when [the] other parent was not known in the art at the relevant time.” Paper 15 at 15-17 (“Petitioner, however, fails to demonstrate sufficiently how or why a person of ordinary skill in the art would have had a reasonable expectation of success in developing PH4CYJ specifically, when its other parent was not known in the art at the relevant time.”). Nowhere did the Board address the necessary implications of such logic—that is, allowing plant breeders to obtain utility patent protection as a matter of right merely by combining prior art patents with trade secrets. Nor did the Board otherwise identify any authority for treating genotype as relevant to §103 when the Challenged Claims do not require *any* sequence and PO likewise failed to disclose sequence information as part of the specification, but instead describes the deposited sample as a mere “exemplary embodiment” (POPR at 42).

The Board likewise echoed PO’s arguments when emphasizing PO’s seed deposit of the claimed plant and faulting Petitioner for not having analyzed the plant’s “genotype.” Paper 15 at 14 (stressing “Petitioner’s lack of evidence in the prior art regarding PH4CYJ’s genotype”). The Board reasoned that “[b]y depositing the seeds” PO had made such “genetic sequence...available.” *Id.* at 13. The Board later reiterated the claimed seed’s purported “unique genotype” and faulted PO for not addressing how a POSA would have produced such genotype when PH1VNA (i.e., the “proprietary” parent) was purportedly secret. *Id.* at 15-16.

II. REASONS FOR GRANTING REVIEW

A. Reasons Related to the Purportedly Secret Parent Variety

1. The Board's Reliance on the Parent Variety PO Kept Hidden Raises an Important Question of Law: It Constitutes an Impermissible §103 Standard Discouraging Disclosure

In rejecting Petitioner's §103 analysis and emphasizing the “proprietary” parent plant that PO had bred with Smalley, the Board pronounced an impermissible new obviousness standard contradicting the fundamental principle that patents and trade secrets are incompatible rights. *Atl. Rsch. Mktg. Sys., Inc. v. Troy*, 659 F.3d 1345, 1357 (Fed. Cir. 2011). That incompatibility is why the PTO not only refuses to permit applicants to withhold information on the ground that it is “proprietary,” but further requires such information to be **publicly disclosed** before patent issuance when it is material to obviousness. MPEP §724.04. The PTO's rule also tracks binding precedent that even proprietary information can be highly relevant—even dispositive—to obviousness. *Nat'l Steel Car, Ltd. v. Canadian Pacific Ry., Ltd.*, 357 F.3d 1319, 1337 (Fed. Cir. 2004) (reversing district court, which had wrongly discounted unpublished internal drawings because they did not constitute prior art: “[T]he prior-art status of the Prichard disclosure and the Lund drawing is not dispositive.”).

Simply put, the Board's analysis wrongly rewards PO for having (allegedly) kept the second parent plant behind closed doors. As Petitioner stressed and neither

PO nor the Board denies, such logic opens a massive loophole allowing artisans to obtain patents as a matter of right by combining trade secrets (withheld from the PTO) with indisputable prior art—regardless of whether such work was inventive. This loophole is of particular concern in the seed industry. By PO’s own admission, plant breeders are naturally inclined to restrict access to the inbred seed lines used as parents for new varieties. *See Corteva Agriscience LLC v. Inari Agric., Inc.*, C.A. No. 23-1059-JFM (D. Del.), Second Am. Complaint (Oct. 15, 2024, Dkt. No. 158), ¶33 (noting that inbred seed lines are normally “not sold commercially, and their use is carefully restricted”). Plant breeders may therefore keep inbred lines secret even while commercializing subsequent “hybrid” lines created using the inbreds. As such, as compared to other industries, it is all the more important that the patent system incentivize breeders to disclose inbred lines rather than keeping them under lock and key. Yet the Board’s decision does the opposite—wrongly rewarding PO for its failure to disclose PHIVNA.

2. The Board’s Reliance on the Parent Variety PO Kept Hidden Raises an Important Policy Question: It Creates an Enormous Blind Spot for Examiners and Contradicts the USDA’s Recommendations Per the President’s Executive Order

The Board’s decision is likewise illogical as a policy matter given the above-noted perverse incentives discouraging disclosure.

For one, the Board’s analysis created an enormous blind spot that prevented proper examination—notwithstanding the numerous ways in which even

“proprietary” information can be relevant and indeed dispositive to the non-obviousness analysis as well as other patentability requirements.

Separately but relatedly, the Board’s decision contradicts the USDA’s recent recommendation that the PTO consider requiring disclosure of “breeding histories or pedigrees back to known and *publicly available parents*” as part of the original disclosure “for utility patents pertaining to plant varieties and traits.” *See supra* note 1. Here, by contrast, the ’545 Patent’s specification only discloses information regarding one publicly available parent. PO thereby obtained the ’545 Patent without having provided “breeding histories or pedigrees back to known and *publicly available parents*.” The end result was an enormous blind spot during prosecution—one that would have been avoided had the PTO instead taken the approach subsequently recommended by the USDA.

B. Reasons Related to the Board’s Demand For Seed Deposit Testing

1. The Board’s Insisted Seed Deposit Analysis Raises an Important Legal: It Constitutes an Impermissible §103 Standard Unique to Plant Utility Patents By Wrongly Presuming Patentability

In rejecting Petitioner’s §103 analysis and faulting Petitioner for not comparing the seed PO deposited to the prior art patents (e.g., Smalley) PO had previously obtained, the Board pronounced an impermissible new obviousness standard that imposes new hurdles following patent issuance effectively creating a presumption of patentability for plant utility patents in IPRs and PGRs. Under the

Board’s decision, potential challengers must analyze deposited seed to raise §103 challenges even though examiners need not analyze such deposits when making §103 rejections. Such a disconnect contradicts plain Congressional intent and presents an important question of law subject to the Director’s de novo review. IPRs and PGRs require the Board to “**reconsider** whether existing patents satisfy the novelty and nonobviousness requirements for inventions.” *United States v. Arthrex, Inc.*, 594 U.S. 1, 8 (2021) (emphasis added).

In refusing to grant such reconsideration, the Board neglected explicit Congressional commands and wrongly held Petitioner to a proof burden far beyond that required of an examiner to determine that plant utility claims are unpatentable. In particular, the Board wrongly faulted Petitioner’s §103 analysis for not having analyzed seed PO had deposited for purposes of satisfying §112. *See supra* §1.

Examiners and the Board plainly can and do reject plant utility claims as obvious without analyzing deposits. In a previous Board decision PO itself touted to the Supreme Court as proof the non-obviousness requirement has teeth in the context of plant utility claims (EX1029, *20- 21, *38, & n.25), the Board affirmed a §103 rejection as to a claimed plant that did “not appear to differ significantly from the prior art plants as measured by” various purely **phenotypic** characteristics. *Ex Parte C*, 27 U.S.P.Q.2d 1492 (B.P.A.I. 1992). The Board reached that result **even though the applicant had offered to deposit the claimed seed**. *Id.* at 1494.

Likewise, PGR and IPR petitioners challenging plant utility claims—standing in place of the examiner for purposes of “reconsider[ing] whether existing patents satisfy the novelty and nonobviousness requirements” (*Arthrex*, 594 U.S. at 8)—need not analyze deposited seed to carry their burden of establishing it is more likely than not that plant utility claims are unpatentable under §103. Any such requirement would wrongly presume patentability and hold petitioners to a different, higher burden than that required of examiners during prosecution.

Indeed, if PO believed the genetic sequence of the claimed variety was material to prosecution, they can do the relevant analysis themselves and disclose the results under well-established PTO procedures. See MPEP §2424. But there is no basis for requiring challengers to do such work when patentees themselves have not. Here, PO claimed its new plant variety solely by reference to its phenotype.

2. The Board’s Insisted Deposit Analysis Raises an Important Policy Question: It Wrongly Deters Competition By Forcing Prospective Challengers to Risk Infringement Liability

The Board’s demand for seed deposit analysis is also illogical as a policy matter because the required testing would require challengers to bear the risk of liability for infringing the very plant utility claims they believe to be unpatentable. Seed deposits only become available “upon the granting of the patent.” §1.808(a)(2). Under the Board’s logic, parties considering §103 challenges to issued plant utility patents must test such deposits while knowing patentees could sue them for

infringing the challenged claims on the theory the testing is an infringing “use” under §271(a). Unsuccessful challengers could thus face liability.

Pending litigation between PO and Petitioner concerning Petitioner’s testing of seed deposits in connection with other plant utility claims confirms that such risks are real-world concerns. *See Corteva Agriscience LLC v. Inari Agric., Inc.*, C.A. No. 23-1059-JFM (D. Del.), Second Am. Complaint (Oct. 15, 2024, Dkt. No. 158). PO maintains that Petitioner infringes plant utility patents merely by **testing** related deposited seed. *See, e.g., id.*, ¶¶195, 234, 269, 305, 341. PO even contends that Petitioner induces infringement just by **ordering** seed. *See, e.g., id.* ¶¶218-228. In successfully opposing Petitioner’s motion to dismiss, PO expressly argued that “use” under §271(a) is interpreted “broadly” and there is “no de minimis exception to infringement.” *Corteva Agriscience LLC v. Inari Agric., Inc.*, Corteva’s Answering Brief in Opposition to Defendants’ Motion (Jan. 9, 2024, Dkt. No. 26) at 10-11.

Particularly given such litigation, it is unreasonable as a policy matter for the Board to reason that “[b]y depositing the seeds,” PO made “available” the “genetic sequence” corresponding to the deposit even though PO failed to disclose it as text in the specification. Paper 15 at 13. The only way for Petitioner or other potential challengers to determine the genetic sequence of the deposit is to test it—an action PO contends to be an infringing “use.” Would-be challengers thus must either (1) run a risk of infringement or (2) forego PGR or IPR entirely.

Date: November 13, 2024

/Scott A. McKeown /
Scott A. McKeown, Reg. No. 42,866

CERTIFICATE OF SERVICE UNDER 37 C.F.R. § 42.6 (E)(4)

I certify that on November 14, 2024, I will cause a copy of the foregoing document, including any exhibits or appendices filed therewith, to be served via electronic mail, as previously consented to by Patent Owner, upon the following:

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