

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 REPLY TO PATENT OWNER'S PRELIMINARY
RESPONSE**

PO's POPR urges special rules for plant utility obviousness determinations that would wrongly handcuff the PTO and perpetuate an endless stream of patents at the expense of the public interest in general and U.S. farmers in particular. PO seeks to immunize patents on inbred corn lines from § 103 challenges by excusing application of the *Graham* factors—including the scope and content of the prior art, the differences between the prior art and the claims at issue, and the level of ordinary skill in the art—whenever the closest art is a “proprietary” line. PO's proposed approach would wrongly collapse the distinction between utility patents and PVP rights despite the Supreme Court's emphasis in *J.E.M.* that § 103 makes it “much more difficult to obtain a utility patent for a plant than to obtain a PVP certificate.” 534 U.S. 124, 142 (2001).

PO neglects that the “expansive and flexible approach for assessing obviousness” applies to *all* technologies—as recently reiterated by the *en banc* CAFC in *LKQ*. 102 F.4th 1280, 1294 (Fed. Cir. 2024) (quoting *KSR*). That flexible approach permits utility patents on new plant varieties that are genuinely inventive and improve upon the closest prior art—such as the patents in *J.E.M.*, which discussed the closest prior art in the specifications. But § 103 does not and cannot be read to authorize patents for new plant varieties resulting only from ordinary skill—particularly when (as here) the applicant deliberately *withholds* information about the closest prior art. That would be a recipe for limitless patent thickets

unfairly burdening U.S. farmers while rewarding a lack of public disclosure, turning the basic patent bargain on its head.

I. Plant Utility Patents Are Not Entitled to Special Patentability Standards

PO seeks a plant utility carveout the likes of which patent law has never seen. PO insists that it was *impossible* for Petitioner—and the PTO—to establish obviousness given that “one-half of the parentage of PH4CYJ is nowhere in the prior art.” POPR at 29-30. But neither the agency nor the public has a way to confirm that bald assertion. Under PO’s theory, therefore, the fact that PO withheld the closest art (“proprietary” PH1VNA, POPR at 48) from the PTO and Petitioner means the *Graham* factors cannot be applied and PO should win every time.

Such a rule eviscerates the public policies underlying the patent laws and contradicts not only the “expansive and flexible approach” *KSR* mandated when assessing obviousness (550 U.S. at 415), but also 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.

Crediting PO’s position would create 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.

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 PH1KTF/Smalley) and repeatedly breeding it with female Labradors kept behind closed doors (analogous to 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.” POPR at 47. In short, breeders could patent puppies—even the most ordinary—as a matter of right. And critically, the public gains no advancement in the art by such backward patenting practices.

Section 103 does not countenance such an absurd result, which would authorize limitless patents on work that at best constitutes “ordinary innovation” and does not justify “exclusive rights under the patent laws.” *KSR*, 550 U.S. at 427.

PO nevertheless proposes its special rule and asks the Board to bless its recipe for patent thickets in a climate already crippling U.S. farmers. As Petitioner stressed (Petition at 4) and PO never denies, PO’s approach would allow breeders to obtain utility patents on *any* stable new plant variety. While PVP certificates are available for such offspring, utility patents are the *exception* rather than the rule.

Instituting review would facilitate a return to proper balance and crack down

on a “special standard to patents on inbred corn lines that exists nowhere else.” POPR at 6. Thanks to that overly lax standard—exemplified by the Examiner’s allowance of the ’545 Patent without any obviousness analysis and without even requesting any information regarding the “proprietary” PH1VNA line (Petition at 16-21) —PO runs an assembly line recycling PVP paperwork into a cookie-cutter specification yielding hundreds of patents with nearly identical claim sets—each directed to a particular inbred corn variety. The ’545 Patent is a case in point. It was filed on 7/2/21 along with 91 other inbred corn applications—*every single one* of which has since issued as a utility patent.

Such patent thickets unfairly tax U.S. farmers and “deter competition due to the prohibitive cost of challenging each patent separately.” 89 Fed. Reg. 40439 (May 10, 2024) (Notice of Proposed Rulemaking re Terminal Disclaimer Practice).

II. Growing Plants is Not Required to Challenge Plant Utility Patents, But Patentees May Conduct Such Studies to Overcome Challenges

Adding insult to injury, PO wrongly faults *Petitioner* for not generating data of its own to prove a negative and conclusively establish that there is no patentable difference between the claimed variety and the prior art.

On its face, the ’545 Patent does not suggest any unexpected results or advantageous properties as compared to earlier inbred lines. As Petitioner explained and PO does not dispute, the disclosed properties fell “well within the mainstream of [prior art] phenotypes.” Petition at 34 (citing EX1003, ¶¶74-85).

PO and its expert instead reason that the specification on which Petitioner and its expert relied only discloses a “*partial*” list” of relevant properties (POPR, at 50, 53, 59) and “*omits*” multiple purportedly “important” traits (EX2004, ¶130). PO nevertheless maintains that it was *Petitioner’s* responsibility to grow plants and conduct head-to-head studies between the claimed variety and the prior art and figure out what was deliberately omitted. POPR at 2, 40.

PO’s theory contradicts black-letter law that patentees bear a burden of production to identify purported objective indicia of non-obviousness. *Prometheus Lab ’ys v. Roxane Lab ’ys*, 805 F.3d 1092, 1102 (Fed. Cir. 2015). Petitioner had no burden to generate such evidence and go beyond PO’s template specification.

PO likewise neglects the important role of objective indicia when wrongly asserting that Petitioner treats “*any* newly developed [corn] plant” as “necessarily obvious in light of the prior art.” POPR at 43. Not so. Petitioner’s approach, like obviousness law applied to other fields, leaves room for patents on corn plants that go beyond mere “ordinary innovation” (*KSR*, 550 U.S. at 427) and offer significant and/or synergistic benefits over the prior art—the public disclosure of which should be incentivized by awarding breeders stronger rights as compared to those provided by PVP certificates, which “strike a different balance” (EX1026, 4).

PO’s own earlier patents in *J.E.M.* are cases in point. As the PTO advised the Supreme Court, they taught “readily identifiable benefits to farmers.” EX1030, 28.

One patent, for instance, explained how hybrids from the claimed inbred line had “more yield” than those from “either parental line” and outperformed even the “closest prior art.” EX1077, 7:16-21. Contrast that to PO’s current approach of sidestepping the critical safeguards to the public embodied by the *Graham* factors.

Similarly, U.S. Patent No. 5,159,133—issued to Petitioner’s expert Dr. Riley—included extensive head-to-head data comparing the claimed inbred line to an earlier inbred line. EX1092, 10:39-12:3. These studies showed how the claimed inbred line and related hybrids outperformed the prior art in agronomically material ways such as (1) higher yields (“more bushels per acre”); (2) “higher grain test weight”; (3) “better grain quality,” and (4) tolerance of “higher elevations.” *Id.*

In sum, PO’s specifications in the earlier patents evidenced how the parental lines had “worked together in an unexpected and fruitful manner” to yield a corn plant with superior properties to prior art varieties. *KSR*, 550 U.S. at 416.

Here, by contrast, the ’545 Patent does not suggest any such unexpected results and/or advantageous properties above and beyond the prior art. It is not the job of the public to ferret out and remedy the specification’s omissions, if any.

III. Deposits Concern § 112 and Do Not Permit Breeders to Bypass § 103

Similarly, PO wrongly dwells on the specification’s reference to deposited seed and asserts that Petitioner was obligated to analyze such deposit (POPR at 33-34)—notwithstanding that PO admits it was just a non-limiting “exemplary

embodiment” (*id.* at 42). PO does not and cannot cite any authority treating deposits themselves as relevant for § 103 (as opposed to § 112). Instead, PO urges yet another special rule for plant utility patents in derogation of the public interest.

PO likewise repeatedly and unpersuasively attempts to distinguish *Ex parte C* (the Board decision PO cited to the Supreme Court as evidence § 103 had teeth and justified awarding utility patents on plants in appropriate instances despite the availability of PVP certificates—see Petition at 5-6) on the theory that no deposit was “available” in *Ex parte C*. POPR at 29, 45; *see also id.* at 32. PO neglects that **the *Ex parte C* applicant expressly offered to deposit relevant seed.** 27

U.S.P.Q.2d at 1494. While such deposit was relevant for § 112, the Board maintained the obviousness finding because the *face of the specification* never suggested any material differences between the claimed invention and the prior art. 27 U.S.P.Q.2d at 1497. Without an “explanation” in the “specification” or a “declaration,” the Board declined to credit “the dissimilarities argued by appellant” over “the similarities proffered by the references.” *Id.* And the Board certainly did not remand for the examiner to grow the claimed plant next to the prior art varieties.

Similarly, Petitioner rightly analyzed “*the words of the specification*” and prior art rather than growing plants from the deposits. POPR at 46. PO’s position would wrongly render plant utility patents immune from § 103 challenge. Even had

Petitioner done as PO suggests, PO would still have dismissed Petitioner’s analysis because it did not include the “proprietary” PH1VNA PO withheld from the public.

IV. Plant Genetics Do Not Justify Special Rules Contradicting *KSR*

PO yet again seeks special rules for plant utility patents when stressing the claimed variety’s “*unique* genome” (POPR at 43) and asserting that Petitioner’s purported silence as to this “*unique* genetic composition... *necessarily*” dooms Petitioner’s “obviousness analysis” (POPR at 41). PO theorizes that Petitioner had to “compar[e] PH4CYJ’s genome to those of the asserted prior art” to assess “the differences between them” and “*whether it was even possible*” for the prior art varieties to start a § 103 analysis. POPR at 44. Under PO’s false logic, there is an (undefined) difference beyond which prior art is *per se* impermissible to consider.

In *LKQ*, the en banc Federal Circuit recently rejected analogous false logic when overturning a Board decision applying an overly rigid test for obviousness in the context of design patent applications. Under the old test, obviousness theories as to claimed designs necessarily failed unless (1) the primary reference was “*basically the same*” as the challenged claim and (2) any secondary reference was “*so related*” to the primary reference such that “features in one would suggest application of those features to the other.” 102 F.4th at 1293-94. As *LKQ*

recognized, however, such “rigid requirement[s]” were impermissible “limitations absent from § 103’s broad and flexible standard.” 102 F.4th at 1294.

Despite this warning, PO neglects the flexibility mandated by *KSR* and wrongly argues that one must analyze the genomes of prior art varieties to assess whether they are even potential “*starting point[s]*” for § 103 analysis. POPR at 45. Under PO’s proposed “rigid” rule, the analysis would “abruptly end[.]” absent a green light—just like the design patent test *LKQ* struck down. 102 F.4th at 1294.

Nor is it material whether inbred corn breeding is an “unpredictable” art (POPR at 3, 35) even though pedigree breeding was a “dependable method for producing improved inbred lines” (EX2008, 113-114) and the “doubled haploid” technique PO used did *not* employ the “many generations” PO elsewhere touts (POPR at 10, 15). “[A] rule of law equating unpredictability to patentability... would mean that *any* new [inbred line] would be separately patentable.” *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1364 (Fed. Cir. 2007) (holding that claims to new salt were obvious despite factual finding that “it was generally unpredictable as to whether a particular salt would form and what its exact properties would be”).

Similarly, PO’s emphasis on the purported “realities of modern inbred maize development” (POPR at 45) is a thinly disguised attempt to “cling to formalistic rules for obviousness” and “deem entire classes of prior art teachings irrelevant.” *In re Kubin*, 561 F.3d 1351, 1360 (Fed. Cir. 2009). The patentability question here

is not a matter of corn breeding, but “a problem of patent law.” *Id.* at 1361. And patent law recognizes that while claims may be “distinguishable from the prior art,” often the “differences...are simply not sufficient to warrant a patent grant.” *Freedman Seating Co. v. Am. Seating Co.*, 420 F.3d 1350, 1363 (Fed. Cir. 2005) (“[A] claim that is obvious is, ***by definition, distinguishable*** from the prior art”).

The Challenged Claims here are one such case. Absent objective indicia of non-obviousness (*see supra* § II), it was not patentable to take PH1KTF—disclosed in Smalley, and previously used to spawn 7 older inbred children (Petition at 35)—and crossing it with a “proprietary” mate to create yet another inbred line.

Date: July 31, 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 July 31, 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:

Michael Kane, Reg. No. 39,722
Katie E. Hyma, Reg. No. 75,037
Dexter Whitley, *Pro Hac Vice*
Yong (Lucien) Wang, *Pro Hac Vice*
Jonathan Singer, *Pro Hac Vice*
Email: PGR58032-0005PS1@fr.com

Date: July 31, 2024

/MacAulay Rush/
MacAulay Rush
Paralegal
WOLF, GREENFIELD & SACKS, P.C.