

Filed on Behalf of: Bazooka-Farmstar, LLC

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BAZOOKA-FARMSTAR, LLC

Petitioner,

- vs. -

NUHN INDUSTRIES LTD.,

Patent Owner

REPLY TO PATENT OWNER RESPONSE IN
INTER PARTES REVIEW OF U.S. PATENT NO. 11,358,425

Case No.: IPR2023-01161

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I. INTRODUCTION

Nuhn concedes its “invention” is a simplistic combination of known elements performing their known functions of pumping liquid manure. Nuhn misunderstands the law of anticipation in Ground 1, abandons its motivation to combine arguments in Grounds 2-3, overlooks the references’ teachings in Grounds 4-5, and ignores Ground 6 entirely.

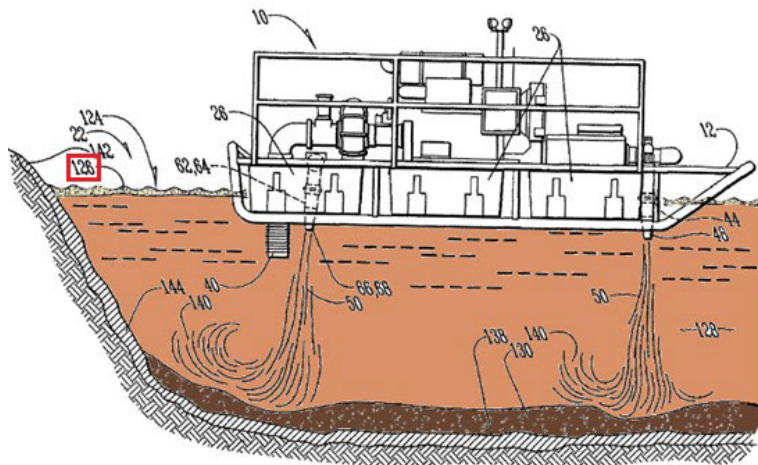
Nuhn *repeatedly* misquotes Bazooka’s marketing materials (Paper 27 at 6, 16-17, 20, 22), which actually state that most pumps cannot operate in the “thickest sludge,” to mislead the Board. EX2031, 9. The “thickest sludge” is not “liquid manure.” Inherent anticipation does not require pumping the thickest sludge or six feet of crust. Rather, the prior art need only pump one embodiment of *liquid manure*. See *Reactive Surfaces Ltd. LLP v. LG Chem Ltd.*, IPR2018-01520, Paper 44 at 50 (PTAB Feb. 24, 2020). Nuhn does not dispute that “liquid manure” includes crustless lagoons with less than 5% solids, which are pumpable with standard water pumps. Nuhn’s expert had no opinion on what structure of pump is capable of pumping liquids with suspended solids. Bazooka’s expert does. That testimony is supported by the testimony of multiple long-time manure agitation equipment veterans.

Nuhn’s weak, irrelevant secondary considerations evidence cannot overcome Bazooka’s strong case of obviousness. *Wyers v. Master Lock Co.*, 616 F.3d 1231,

1246 (Fed. Cir. 2010). Nuhn’s secondary considerations hinge on the speculative, self-serving declaration of the owner/inventor Ian Nuhn, which, as demonstrated in his deposition, is unreliable at best.

II. BACKGROUND

The ’425 Patent describes that “[m]anure ... is transferred by washing [with water] to a pit or lagoon for storage” (EX1001, 1:33-35), after which the diluted “[l]iquid manure . . . [is] *irrigate[d]* onto farm land[.]” EX1029, 1:14-17 (emphasis added). When in a lagoon, liquid manure stratifies into a bottom sludge layer 130 with settled solids (brown, below), a watery liquid supernatant layer 128 above the sludge (light brown), and occasionally, a crust 126 (yellow). EX1014, ¶¶[0003]-[0004]; EX1115, ¶6. Before irrigating onto farmland for fertilizer, lagoons are agitated by pumping the watery supernatant and shooting it against the nutrient-rich sludge and crust to suspend nutrients within the supernatant. EX1014, ¶¶[0003]-[0004]; EX1115, ¶6. Conventional irrigation equipment is used to pump the liquid manure mixture onto farmland “at a much faster rate than hauling,” making land application more efficient. EX1112, ¶22; EX1064, 15.



EX1014, FIG. 4 (annotated).

POSAs would have understood that agitated liquid manure lagoons have total solids contents of less than about 5% because “[m]anure that has a TS concentration of less than 5 percent ... can be irrigated[.]” EX1063, 81; EX1112, ¶23. POSAs would have understood that pre-agitation, the liquid manure supernatant has even lower solids contents than the post-agitation mixture, because the sludge and crust portions are not mixed within the supernatant. EX1112, ¶23. POSAs would have understood that conventional irrigation pumps could therefore also pump pre-agitation liquid manure supernatant to agitate the lagoon into a mixture. *Id.*

III. LEVEL OF ORDINARY SKILL IN THE ART

Recognizing its expert is not a POSA, Nuhn advances its rejected and overbroad POSA definition. Paper 27 at 12-13. While farmers may *service* farming equipment, farmers are not ordinarily *equipped to design* multi-functional amphibious vehicles. EX1112, ¶¶[0028]-[0029]. Performing buoyancy calculations,

designing transmission systems, and implementing remote-control systems are activities performed by engineers—not farmers. *Id.*

Nuhn faults Bazooka for not requiring knowledge of “storage places for manure[.]” Paper 27 at 13-14. But knowledge of livestock manure (included in Bazooka’s definition) includes knowledge of how it is stored. EX1112, ¶32. Nuhn’s POSA definition would fail for the same reason, as Nuhn’s alternative engineer definition lacks the same specificity. Paper 27 at 13-14.

The parties’ different definitions matter because Nuhn’s expert is not a POSA.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

IV. CLAIM CONSTRUCTION

Nuhn identifies “a fluid pump for pumping liquid manure” and “fluid mover” as requiring construction. Nuhn’s claim constructions are wrong.

A. Fluid Pump for Pumping Liquid Manure

“For pumping liquid manure” is a statement of intended use. Such statements do not limit the claims unless they are tied to specific structures for achieving that function. *See Textron Innovations Inc. v. Am. Eurocopter Corp.*, 498 F. App’x 23, 28 (Fed. Cir. 2012) The PTAB’s construction of “fluid pump for pumping liquid manure” properly covers a “pump with a structure that is capable of pumping liquid with suspended solids.” Paper 12 at 12. Nuhn fails to identify any structure required by this function. POSAs would have understood that this structure includes high-volume water pumps for pumping water from lakes and streams. EX1112, ¶¶60-62.

i. Nuhn Identifies No Structure for a Pump for Pumping Liquid Manure.

The Institution Decision noted that Nuhn did “not provide argument ... as to what specific structure is required to pump a liquid which includes suspended solids.” Paper 12 at 12. The PTAB “encourage[d] the parties to develop this argument[.]” *Id.* Nuhn refuses. Instead, Nuhn advances already rejected means-plus-function arguments and improperly imports method steps into its system claims.

Nuhn argues that “a fluid pump for pumping liquid manure” is limited to the structure disclosed in the “four corners of the ’425 Patent” and its equivalents. Paper

27 at 14. But this is the test for interpreting means-plus-function claims, which was already rejected. Paper 12 at 9-11. Nuhn and its expert refuse to identify *any* specific structural features for pumping liquid manure. Paper 12 at 12; EX1111, 15:22-30:3. Nor has Nuhn described why “a fluid pump for pumping liquid manure” is limited to its specification—which only describes submersible impeller centrifugal multi-outlet pumps—when POSAs would have understood that many other pumps were used for and capable of pumping liquid manure. *See, e.g.*, EX1040 at 52 (identifying ten different “[l]iquid manure handling pumps”); EX1112, ¶38.

Nuhn further argues this term should include the method step of a “pump that pumps liquid manure” as opposed the structural element of “a pump *capable of* pumping liquid manure[.]” Paper 27 at 16-17 (emphasis added). But “[w]here all *structural elements* of a claim exist in a prior art product, *and that prior art product is capable of satisfying all functional or intended use limitations*, the claimed invention is nothing more than an unpatentable new use for an old product.” *Bettcher Indus., Inc. v. Bunzl USA, Inc.*, 661 F.3d 629, 654 (Fed. Cir. 2011) (emphasis added). “A fluid pump for pumping liquid manure” covers fluid pumps *capable of* pumping liquid manure—regardless of how the pumps are actually used.

ii. [REDACTED] **“Liquid Manure” Includes Low Solid Content Manures.**

Nuhn focuses on manure storage pits containing heavy crust. While such pits may be one extreme use for Nuhn’s product, they are the exception. The ’425 Patent is directed to “*hog* and cattle manure[.]” EX1001, 1:34-36 (emphasis added). Nuhn’s evidence [REDACTED] acknowledge that “crusts do not occur on pig slurry stores[.]” EX2030 at 6; [REDACTED]. “Liquid manure” includes lagoons without crust. EX1112, ¶39. Long-time industry veterans agree. *See, e.g.*, EX1115, ¶6 (noting that about half of the thousands of manure lagoons Mr. Sundstrom agitated did not have crusts).

The literature describes “liquid manure” as a mixture of water and manure with solid contents of less than about 5%. EX1112, ¶40 (collecting citations). [REDACTED] [REDACTED] t “liquid manure” includes lagoons with solid contents of less than 5%. [REDACTED] “Liquid manures with less than approximately 4% total solids can be pumped from ... lagoons using pumps designed for conventional water irrigation.” *Id.* (quoting EX1040, 64) (collecting citations); *see also* EX1029, 1:14-17; EX1114, ¶7; EX1115, ¶15. POSAs would have understood a “fluid pump for pumping liquid manure” to cover such water pumps. EX1112, ¶40.

B. Fluid Mover

Nuhn advances a §112(f) construction of “fluid mover.” If so, the construction should be a “*pump, conduit, and nozzle*.”

Many components move fluid. But claims 7 and 19 require the fluid mover to control “at least one of speed and direction of the vehicle when the vehicle is floating[.]” EX1001, 8:63-64, 10:10-12. The ’425 Patent says “[t]he fluid pump 9 is ... fluidically connected to all fluid nozzles of the vehicle via the fluid conduits 20-22.” *Id.*, 5:42-48. “The flow rate of the fluid pump 9 may also be adjusted to enhance directional and speed control via the plurality of nozzles while floating.” *Id.*, 6:16-18.

Nuhn alleges that a “fluid mover” means “valves and nozzles.” However, under this construction, the “fluid mover” lacks structure (a pump) that could move fluid through the valves and nozzles. *See Default Proof Credit Sys. v. Home Depot USA, Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005) (“[C]orresponding structure ... must include all structure that actually performs the recited function.”). Nuhn’s construction should be rejected. EX1112, ¶¶48-57.

V. GROUND 1: CLAIMS 1-21 ARE ANTICIPATED BY CARRIER

Carrier anticipates the ’425 Patent claims—it discloses pumps capable of pumping forms of liquid manure having less than 5% solids. Nuhn provides no counter evidence, but attempts to mislead by repeatedly misquoting Bazooka’s

marketing literature misleadingly replacing “thickest sludge” with “liquid manure”. Nuhn also wrongly equates solid crust with liquid manure. Finally, Nuhn’s remote control arguments fail—Carrier’s more detailed disclosure anticipates. Paper 1 at 42-43; EX1112, 72-77.

A. Claim 1: Carrier Discloses a Fluid Pump Capable of Pumping Liquid Manure.

The claimed structure is a “fluid pump.” EX1001, 8:36. “[F]or pumping liquid manure” is a non-limiting statement of intended use. *Supra* Section IV.A. Carrier discloses a fluid pump and therefore anticipates. EX1112, ¶60. Nuhn’s attempt to add an intent element to avoid the prior art fails. [REDACTED]

Regardless, Carrier describes an amphibious firefighting vehicle including a “draft capable” “[h]igh [v]olume” pump for pumping combinations of foam, dry chemicals, decon solutions, and fluid “from a lake or stream.” EX1005, ¶¶[0007], [0051], [0061]. [REDACTED]

[REDACTED] Mr. Puck, the inventor of EX1014, has experience developing firefighting and manure pumps and confirmed that high-volume firefighting pumps can pump liquid manure. EX1114, ¶6. Another manure industry veteran, Mr. Sundstrom, agrees that water pumps can pump liquid manure. EX1115, ¶15. POSAs would have understood that Carrier discloses a pump capable

of pumping liquid manure. EX1112, ¶¶61-65. Nuhn provides no credible counter evidence.

Furthermore, POSAs would have understood Carrier’s disclosure of high-volume firefighting pumps refer to centrifugal or positive displacement pumps. *Id.*, ¶¶63-65. POSAs understood that such pumps were used to pump liquid manure. *Id.*; EX1040, 51-52; EX1054, 76-77.

“Inherency does not require the prior art’s disclosure be coextensive with and mirror [the claim’s] full scope[.]” *Reactive Surfaces*, IPR2018-01520, Paper 44 at 50 (citing *Toro Co. v. Deere & Co.*, 355 F.3d 1313, 1321 (Fed. Cir. 2004)). Instead, “the [prior art] must have sufficiently described and enabled at least one embodiment that necessarily featured or resulted in the subject matter embraced by the claim[.]” *Id.* (internal citation omitted); *see also ParkerVision, Inc. v. Qualcomm Inc.*, 903 F.3d 1354, 1361 (Fed. Cir. 2018).

██
██
████████████████████ “Liquid manures with less than approximately 4% total solids can be pumped from ... lagoons using pumps designed for conventional water irrigation.” EX1040, 64; *see also* EX1112, ¶¶66-68. POSAs would have understood that Carrier’s “[h]igh [v]olume” firefighting pumps, capable of pumping liquid from

“lakes and streams” were capable of pumping at least such dilute forms of liquid manure. EX1112, ¶¶66-68.

B. Claims 7 and 19: Carrier Discloses a Fluid Mover.

Carrier discloses a pump, conduit, and nozzles, which POSAs would have understood to be capable of controlling the vehicle’s speed and direction while floating. EX1112, ¶¶78-85. Nuhn’s counterarguments are irrelevant and ignore the vehicle’s propulsion pump that could offset any reactionary propulsion effects to keep it stationary when firefighting. *Id.*, ¶86; EX1005, ¶[0049].

Carrier also discloses valves for controlling the pump’s flow, thereby controlling the vehicle’s speed and direction when floating. EX1005, ¶[0051]; EX1112, ¶87.

C. Claims 12-21: Carrier Discloses a Mechanical Drive.

POSAs would have understood the hydrostatic PTO used to power the fluid pump from the engine comprises a mechanical drive shaft. A POSA would have understood this shaft to be a “mechanical drive.” EX1112, ¶¶93-97.

VI. GROUNDS 2-5: CLAIMS 1-21 ARE OBVIOUS

A. Nuhn’s Secondary Considerations Lack Nexus and Do Not Overcome the Strong Obviousness Case.

Nuhn bears the burden of production concerning evidence of secondary considerations. *ZUP, LLC v. Nash Mfg.*, 896 F.3d 1365, 1373 (Fed. Cir. 2018). Nuhn’s evidence is Ian Nuhn’s self-serving and unreliable declaration. Such “weak

evidence of secondary considerations ... cannot overcome the strong showing[s] of obviousness” presented here. *Id.* at 1375.

Nuhn fails to meet its nexus burden. *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019). This nexus may be presumed only if a product is “coextensive” with the claims. *Id.* A “patent claim is not coextensive with a product that includes a ‘critical’ unclaimed feature ... that materially impacts the product’s functionality[.]” *Id.* at 1375.

In the ’835 Patent IPR, Nuhn identified six other features, unclaimed in the ’425 Patent, that it describes as “material” and “directly contribut[ing] to the new and unexpected results and commercial success” described in this IPR. IPR2024-00004, Paper 21 at 15-20. Nuhn’s Lagoon Crawlers include each of these features. EX1112, ¶¶264-324. “In light of [Nuhn’s] own assertions about the significance of the[se] unclaimed features, no reasonable fact finder could conclude that these features are insignificant.” *Fox Factory*, 944 F.3d at 1375. Nuhn fails to show its secondary considerations are tied to its claims; they are irrelevant.

**i. Nuhn’s Market Share “Research” Is Unreliable; Its
“Commercial Success” and “Industry Praise” Is Tied to
Unpatented Features.**

Nuhn’s arguments are based on Ian Nuhn’s guesses at the number of products sold by Puck. But commercial success evidence must include *data* establishing the market share of the patent owner’s products *to competing products*. *In re Applied*

Materials, Inc., 692 F.3d 1289, 1300 (Fed. Cir. 2012). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] While he provides some revenue information, he does not even say if Nuhn profited from its sales. *See Cisco Sys., Inc v. Centripetal Networks, Inc.*, IPR2018-01444, Paper 32 at 42 (PTAB Feb. 11, 2020). Such “generalized and vague testimony of a single employee” is insufficient for establishing commercial success. *Les Ateliers Beau-Roc Inc. v. Air Power Sys. Co., LLC*, IPR2020-01702, Paper 32 at 30 (PTAB. Apr. 18, 2022).

Nuhn relies solely on the presumption of a nexus to its alleged “commercial success.” Paper 27 at 34, 44-45. However, there is ample evidence rebutting any such presumption. “[T]he commercial success of an ‘invention’ might be due not to the invention itself but to skillful marketing of the product embodying the invention.” *Ritchie v. Vast Res., Inc.*, 563 F.3d 1334, 1336 (Fed. Cir. 2009). Where “unclaimed features ... contribute, at least in part, to the commercial success ... [this] weakens the nexus and discounts the overall weight given to ... [such] evidence.” *Intex Recreation Corp. v. Team Worldwide Corp.*, IPR2018-00870, Paper 159 at 80 (PTAB Sept. 12, 2019).

Ian Nuhn's own statements indicate that any success is due to its products' appearance, having "massive wheels [and] the brilliant red paint job" rather than the claimed features. EX2067, 2. He describes how "[a] lot of people think [Nuhn's product is] a jacked-up Ferrari[.]" EX2064; *see also* EX2072. He admits that "if we would have just slapped metal together and made a simple barge, I don't think we would have received the same response. ***I think because we made it look the way it does people are proud to fork over that kind of change and they are proud to own it.***" EX2068, 30 (emphasis added).

Comparing the Lagoon Crawler to prior art "simple barge[s]" shows that the Lagoon Crawler's "massive wheels" and "brilliant red paint job" stand out in the manure/amphibious vehicle industries. EX2067, 2. However, paint jobs and monster tires do not confer patentability.

Nuhn's Lagoon Crawler



Truxor



EX1006, 5.

SenwaTec



EX1012, 2.

Puck



EX1119, 1.

Sundstrom



EX1115, ¶7.

ii. Nuhn’s “Long Felt Need” Was Already Solved.

Nuhn’s mischaracterization of the alleged “long felt need” is belied by the ’425 Patent, which only identifies the problem with shore-based, tractor-mounted agitators that cannot “recirculate manure to the middle of large lagoons.” EX1001, 1:40-49. The Background does not mention floating agitation vehicles, such as Puck or Sundstrom, or amphibious agitation vehicles, such as SenwaTec, that were already used to agitate the middle of large lagoons. EX1112, ¶325.

Nuhn argues it solved the problem of breaking a crust, mixing solids, and forming a slurry in large lagoons. Paper 27 at 35. But Puck’s and Sundstrom’s prior art products were already available before Nuhn filed its provisional application. EX2083, ¶¶27, 12; EX1115, ¶8. Puck, like Sundstrom, could “break[] up the crust (126)” and “cause the sludge (130) at the bottom (138) of the lagoon (22) to mix with the supernatant (128) and form [a] slurry (50).” EX1014, ¶[0036]; EX1112, ¶327. Nuhn’s alleged “long-felt need” was already solved. *Geo M. Martin Co. v. All. Mach. Sys. Int’l LLC*, 618 F.3d 1294, 1304 (Fed. Cir. 2010) (“Where the differences between the prior art and the claimed invention are [] minimal ... it cannot be said that any long-felt need was unsolved.”).

**iii. Nuhn Ignores the Knowledge of POSAs and the Prior Art
When Arguing Skepticism and Unexpected Results.**

Nuhn’s alleged skepticism about using hydraulically-driven wheels in corrosive manure lagoons is unsupported. Others, including UD-Umweltdienste and Sealegs (Bryham’s commercial embodiment), already used and marketed amphibious vehicles with hydraulically-driven wheels in manure and corrosive environments before Nuhn’s Lagoon Crawler. *See* EX1084; EX1081; EX1020; EX1012; EX1112, ¶333.

Nuhn’s alleged skepticism about the position of the vehicle’s nozzles/pump being uncontrollable or prone to clogging is unsupported. Puck already used this arrangement of nozzles with a bottom fluid inlet pump in its product before 2013. *See, e.g.*, EX1014; EX1119. Nuhn concedes that Puck was the market leader in lagoon agitation at that time. Paper 27 at 33. These features were well-understood and accepted before Nuhn’s alleged invention. EX1112, ¶334.

Nuhn’s only evidence of skepticism is from owner, Ian Nuhn. Paper 27 at 43-44; EX2083; [REDACTED]. [REDACTED]

[REDACTED] This does not support that “a number of industry experts expressed skepticism.” Paper 27 at 44.

Nuhn’s “unexpected results” arguments are unsupported. Nuhn argues extensively about how the “pocket” created by the vehicle “start[s] a working zone for the pump[.]” Paper 27 at 39-40. But that was already disclosed in Truxor, or SenwaTec, and that arrangement is wholly absent from the claims (or specification). EX1112, ¶329; *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1385 (Fed. Cir. 2015) (affirming obviousness where the “unexpected results” lacked a nexus to the claims). The only difference from Truxor or SenwaTec *in the claims* of the ’425 Patent is remote control of the vehicle. Providing remote control of the vehicle is not an unexpected result of adding a remote control. EX1112, ¶329.

Finally, while Nuhn argues about the unexpected result of a vehicle crawling through a lagoon crust, POSAs would have understood that amphibious vehicles are heavy enough to break through crust. EX1112, 330; *Bristol-Myers Squibb Co. v. Teva Pharms. USA, Inc.*, 752 F.3d 967, 977 (Fed. Cir. 2014) (holding that unexpected results are evaluated from a POSA’s perspective). This is the same result achieved when using the SenwaTec product in manure. EX1112, 330; *see also* EX1081, 3:54-4:04.

**iv. Any Industry Praise Was Not Due to Patentable Differences
Between the Lagoon Crawler and the Prior Art.**

Praise is insufficient if it is not attributable to the material differences between the patented product and the prior art. *Asyst Techs., Inc. v. Emtrak, Inc.*, 544 F.3d

1310, 1316 (Fed. Cir. 2008). The only claimed difference between the Lagoon Crawler and the SenwaTec/Truxor vehicles is remote control. Nuhn’s “praise” of the Lagoon Crawler relates to the bright red paint job, knobby tires, and jacked-up-Ferrari look. *Supra* Section VI.A.i. **Not** the addition of remote control. Nuhn’s praise cannot overcome the strong case of obviousness, especially where others already described adding remote control to amphibious vehicles, such as Truxor and SenwaTec. *See* EX1025, 4.

v. [REDACTED] **Is Irrelevant.**

Nuhn relies on [REDACTED], arguing that others sought rights to its patent. Paper 27 at 43. “[E]vidence of a single license agreement[,]” [REDACTED] [REDACTED] is “insufficient to demonstrate ‘commercial acquiescence’ supporting non-obviousness.” *Cisco Sys. Inc., v. SSL Servs. LLC*, IPR2015-01754, Paper 58 at 36 (PTAB Feb. 22, 2017).

Nuhn fails to provide any evidence that [REDACTED] sought a license to the ‘425 *Patent*, as opposed to Nuhn’s other patents. Indeed, [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] *Les Ateliers Beau-Roc Inc.*, IPR2020-01702, Paper 32 at 36.

Moreover, [REDACTED] may have just been a reaction to Nuhn's multiple patent lawsuits (Paper 1 at 1-2), which undercuts Nuhn's licensing evidence. *See Bosch Auto. Serv. Sols., LLC v. Matal*, 878 F.3d 1027, 1038 (Fed. Cir. 2017).

vi. Nuhn's Copying Allegations Are Unreliable.

Nuhn fails to provide credible evidence of copying. Nuhn's only copying evidence comes from Ian Nuhn's recollection of a discussion with a mechanic in 2021. EX2083, ¶¶70-71. Nuhn hasn't provided the name—let alone a declaration—of this mechanic. This self-serving anecdote is inadmissible hearsay.

Importantly, the Wolverine is *not* a copy of the Lagoon Crawler. EX1112, ¶¶335-336. The Wolverine utilizes propellers—not nozzles—for propulsion and agitation. EX2032, 1; *see* EX1001, 3:57-58 ([T]he vehicle does not comprise a propeller."). And its wheels do not raise and lower. "Copying by the accused infringer ... has limited probative value in the absence of evidence of failed development efforts by the infringer[.]" *Samsung Elecs. Am. Inc. v. Kannuu Pty Ltd.*, IPR2020-00738, Paper 107 at 84 (PTAB. Jan. 30, 2024). Nuhn provides no such evidence.

B. Ground 2: Claims 1-7 and 12-19 Are Obvious Over Truxor in View of Yoon or Carrier

Truxor in view of Yoon or Carrier render obvious claims 1-7 and 12-19 because Truxor teaches every feature of the claims aside from remote control, and POSAs know it was obvious to implement remote control into Truxor.

i. Claim 1

a. Truxor and Yoon or Carrier Disclose the Claimed Remote-Control Functionality.

Nuhn does not challenge the motivation to combine Truxor with Yoon or Carrier. Nuhn acknowledges, “at the time of invention ... generally remote control was known.” Paper 27 at 47. Failure to employ remote control of the steering, land/water propulsion, and pump functionality would make the vehicle unusable. POSAs would have understood that each of these remote-control teachings described in Yoon or Carrier could be implemented into the vehicle of Truxor. EX1112, ¶¶130-131.

b. Truxor Discloses “a Fluid Pump for Pumping Liquid Manure.”

Nuhn’s argument that the Doro Pump cannot pump liquid manure because the Doro Pump includes a suction intake, wheel feed, or screw feed, to cut or crush solids actually proves it *can* pump liquid manure. Paper 27 at 47-48. Nuhn ignores that any manure solids are crushed by the wheel feed or screw feed and fed into the pump with the liquid manure. EX1112, ¶¶113-129. If anything, the pump feeds ensure it

pumps the liquid manure. Regardless, dredge pumps, such as the Doro Pump, were capable of pumping higher solid content forms of fluid manure in addition to lower solid content liquid manure. EX1112, 118.

ii. Claims 7 and 19

Truxor discloses a pump, conduit, and nozzle which could produce a reaction force and control the vehicle's speed and direction while floating. EX1112, ¶¶138-146. Nuhn argues that Truxor would not obviate claims 7 and 19 if the Doro Pump were detached. But “a prior art reference ... render[s] obvious an apparatus claim ... even if it does not meet the claim limitations in all modes of operation.” *ParkerVision*, 903 F.3d at 1361.



EX1006, 10.

Truxor also discloses “[a]djustable flow for all functions of the hydraulic system[.]” EX1006, 3. POSAs would have understood this adjustable flow would be

provided by valves in the hydraulics which could vary fluid flow from the nozzles to control the speed and direction of the vehicle. EX1112, ¶¶145-146.

iii. Claims 12-19

The Doro Pump is powered by a hydraulic motor, which is connected to the power source through the hydraulic system. A POSA would have understood that the hydraulic motor includes a drive shaft that connects to and drives the Doro Pump. EX1112, ¶¶147-149. This drive shaft is a “mechanical drive” which comprises part of the connection between the Doro Pump and the power source. *Id.*

C. Ground 3: Claims 1-7 and 12-19 Are Obvious Over SenwaTec In View of Yoon or Carrier.

SenwaTec in view of Yoon or Carrier render obvious claims 1-7 and 12-19 because SenwaTec teaches every feature of the claims aside from remote control, and POSAs knew it was obvious to implement remote control into SenwaTec.

i. Claim 1

a. SenwaTec and Yoon or Carrier Disclose the Claimed Remote Control Functionality.

A POSA would have understood that the remote-control teachings of Yoon or Carrier could be implemented into SenwaTec, as described above. *Supra* Section VI.B.i.a; EX1112, ¶172.

b. Centrifugal Pumps Pump Liquid Manure.

Citing Houle, Nuhn argues that the “powerful centrifugal pump” with “8 [inch] suction[] and 6 [inch] discharge ports” of SenwaTec is not suitable for pumping liquid manure. Paper 27 at 53; EX1012, 1; EX2029, ¶244. While Houle describes difficulties pumping high solid content manure with centrifugal pumps, Houle describes its own centrifugal pump for “pumping slurry.” EX2010, 1:8; EX1112, ¶161. And [REDACTED] *the ’425 Patent also discloses a centrifugal pump used for pumping liquid manure.* [REDACTED] [REDACTED];¹ EX1001, 7:42-46; EX1029. Nuhn and its expert’s allegations that “a centrifugal pump ... is not suitable for pumping liquid manure” contradict the ’425 Patent, Houle, and those in the industry using such pumps. Paper 27, 53; EX1112, ¶162; EX1054, 76-77.

c. The SenwaTec Pump Was Capable of Pumping Liquid Manure.

For the same reasons outlined above, a POSA would have understood the centrifugal dredging pump of SenwaTec to be capable of pumping liquid manure.

¹ The ’224 Patent [REDACTED] is a continuation of the incorporated-by-reference ’758 Patent.

Supra Sections V.A, VI.B.i.b. Additionally, ample evidence demonstrates SenwaTec’s manure pumping capabilities.

EX1081-EX1082 were publicly available before the ’425 Patent priority date. EX1094, ¶¶10-13; EX1096, ¶¶7-10. As shown therein, the Amphi-King pumped solid-laden waste that was applied to agricultural fields. EX1081 at 8:54-10:18. POSAs would have understood that manure is applied to agricultural fields as fertilizer and would have therefore understood the material pumped in EX1081 demonstrates that the pump was capable of pumping liquid manure. EX1112, ¶163.

EX1083-EX1084 also show the Amphi-King pumping manure. While Nuhn attempts to distinguish between human manure and other animal manures based on their treatment methods, industry veterans confirm that this is a distinction without a difference. EX1094, ¶32; EX1115, ¶14; EX1112, ¶¶164-167. Nevertheless, “for pumping liquid manure” covers “pumping liquid human manure” the same as “pumping liquid cattle manure.” SenwaTec includes a fluid pump for pumping liquid manure.

ii. Claims 7 and 19

SenwaTec discloses a pump, conduit, and nozzle. As described above, POSAs would have understood that this structure could control the speed and direction of the vehicle. *Supra*, Section VI.B.ii; EX1112, ¶¶182-187.

Alternatively, POSAs would have understood that the “variable” hydraulic functions of SenwaTec are accomplished with valves that control the centrifugal pump which changes the speed and direction of the vehicle. EX1112, ¶188.

iii. Claims 12-19

POSAs would have understood that the centrifugal pump is connected to the power source by a mechanical drive. *Supra* Section VI.B.iii; EX1112, ¶¶189-190.

D. Grounds 4-5: Claims 1-21 Are Obvious Over Puck In View of Bryham or in Further View of Bennett-II.

POSAs would have been motivated to add the wheels of Bryham to the vehicle of Puck for easily transporting the vehicle into and out of the lagoon. Paper 1 at 73-76. Nuhn ignores Bryham’s extensive teachings and motivations to combine. And POSAs would have had reasonable expectations of success in doing so.

i. The Puck Vehicle Is Ready for Modification with Bryham’s Wheels.

POSAs would have understood that the logical location for the Bryham wheels on Puck would be to place one wheel at each corner of the steel frame 16 of Puck, which is typical for wheels on four-sided vehicles and more stable. EX1112, ¶¶218-219, 222. These wheels would not have interfered with the hull because the wheels would extend below the frame and dock sections. *Id.*, ¶221-222. POSAs would have understood that any interference when retracting the wheels could be addressed by shaping the dock sections to accommodate the wheels. *Id.* Furthermore,

Bryham describes *retractable* wheels as “optional[.]” EX1015, 5: 30-31, 4:65-67; EX1112, ¶223.

Moreover, Nuhn’s distinction between barge-shaped hulls and vee-hulls is irrelevant. Nuhn ignores that Bryham discloses compatibility with barge-shaped hulls (*see* EX1112, ¶¶218-219), and Puck discloses that “[t]he vessel (12) may alternatively be constructed ... with a more standard hull[.]” EX1014, ¶[0022]; EX1112, ¶225.

ii. Remote-Control Wheels Use the Same Remote-Control Principles Taught by Puck.

The well-known nature of remote control in 2013 is evident from the ’425 Patent, which provides no specifics on how the remote control is configured, constructed, or programmed. EX1112, ¶211.

Puck teaches a “wireless receiver (80) and a wireless transmitter (82), that allow the control panel (74) to operate as a wireless remote control, actuated by a remote[-]control system (84).” EX1014, ¶[0031]. Puck describes using these components to remotely control valves for directing fluid flow. EX1112, ¶¶212-213; EX1014, ¶¶[0031], [0033]. POSAs would have understood that remote control of Bryham’s wheels (as taught by Bennett-II (EX1017)) could be achieved by remote control of the valves directing hydraulic fluid to Bryham’s wheel motors. EX1112, ¶¶208-215, 214-246; EX1015, 16:1-12.

iii. POSAs Understood the Benefits of a Central Power Source.

Nuhn argues against powering the wheels and fluid pump from one engine, versus providing multiple separate engines on the vehicle. However, POSAs understood that adding extra engines created “extra cost and complications” and was therefore undesirable. EX1112, ¶¶204-207, EX1116, 5. POSAs would have been motivated to power the Bryam wheels with the Puck engine.

VII. GROUND 6: CLAIMS 1-21 ARE ANTICIPATED BY LYSENG

Nuhn argues Lyseng is not prior art due to its certificate of correction. However, despite telling the USPTO that its request for correction related to the ’425 Patent (EX1118), Nuhn never even sought permission from the PTAB to file its request. 37 C.F.R. §1.323. Nuhn provides no substantive argument for the patentability of claims 1-21 over Lyseng, which anticipates claims 1-21. Paper 1 at 91-95.

Nuhn fails to recognize that its Certificate of Correction is only effective “*in causes of action thereafter arising[.]*” *Emerson Elec. Co. v. SIPCO, LLC*, IPR2016-00984, Paper 52 at 17 (PTAB Jan. 24, 2020) (quoting 35 U.S.C. §255) (“Patent [o]wner did not even seek correction until after [p]etitioner had filed its [p]etition Thus ... the [c]ertificate would not impact this trial.”); *see also Election Sys. & Software, LLC v. Hart Intercivic, Inc.* PGR2020-00031, Paper 18 at 6-10 (PTAB Feb. 5, 2021).

The '638 Patent fails to properly claim priority in the ADS. Paper 1 at 28-30. Such “transcription errors’ doom[] the [] patent’s priority claim, as the Application Data Sheet controls domestic benefit.” *Bausch & Lomb Inc. v. Zeavision, LLC*, IPR2022-00089, Paper 34 at 24 (PTAB Apr. 10, 2023). Here, where the '425 Patent family inconsistently lists the filing dates, the public could conclude that the '789 PCT was filed after the '598 Provisional expired. *See, e.g.*, EX1127, 1:10-13. A reading of the '638 Patent ADS confirms this conclusion.

The only way to determine the correct filing dates is to dig through the prosecution history, locating each filing receipt. Congress decided against this approach and put the burden on the patent owner. *Medtronic CoreValve, LLC v. Edwards Lifesciences Corp.*, 741 F.3d 1359, 1366 (Fed. Cir. 2014). Therefore, before the Certificate of Correction, claims 1-21 are invalid over Lyseng.

VIII. CONCLUSION

For the reasons above, Petitioner asks that the PTAB issue a final written decision, finding Claims 1-21 unpatentable, and the Director cancel these claims.

Respectfully submitted,

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. §42.24, the undersigned attorney for the Petitioner, Bazooka-Farmstar, LLC, declares that the argument section of this Petition has 5520 words, according to the word count tool in Microsoft Word™.

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CERTIFICATE OF SERVICE

The undersigned certifies, in accordance with 37 C.F.R. §§42.105 and 42.6, that service was made on the Patent Owner as detailed below.

<i>Date of service</i>	August 6, 2024
<i>Manner of service</i>	Electronic mail addressed to: bluchsinger@harnessip.com syackey@harnessip.com mcutler@harnessip.com
<i>Documents served</i>	Reply To Patent Owner Response in <i>Inter Partes</i> Review of U.S. Patent No. 11,358,425, including Exhibit List; Exhibits EX1111 through EX1132
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