

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BAZOOKA-FARMSTAR, LLC,

Petitioner,

v.

NUHN INDUSTRIES LTD.,

Patent Owner.

Case No. IPR2024-00004
U.S. Patent No. 11,491,835

**PATENT OWNER'S REPLY TO PETITIONER'S OPPOSITION TO THE
REVISED MOTION TO AMEND U.S. PATENT NO. 11,491,835**

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Other Authorities

37 C.F.R. § 42.121 12

PATENT OWNER'S EXHIBIT LIST

<i>Exhibit #</i>	<i>Description</i>
2001	Petitioner's <i>Ex Parte</i> Reexamination Requests for U.S. Patent No. 11,358,425 and U.S. Patent No. 10,974,557
2002	Decision Granting Patent Owner's Petition for an Unintentionally Delayed Priority Claim in U.S. Patent. No. 10,124,638
2003	U.S. Patent No. 4,594,006 to Depeault ("Depeault")
2004	Expert Declaration of Douglas S. Prairie
2005	Curriculum Vitae of Douglas S. Prairie and Case List
2006	Screenshots from Patent Owner's YouTube Channel of Patented Product, retrieved on 10-2-23 from https://www.youtube.com/watch?v=fEgvvq9HZkk
2007	Screenshots from Petitioner's YouTube Channel of Accused Product, retrieved on 10-2-23 from https://www.youtube.com/watch?v=3y3bSJJUOps
2008	Screenshots from Progressive Dairyman YouTube Channel of 2014 Manure Lagoon Agitation Boat Demonstration, published on 7-9-14 by Progressive Dairy, retrieved on 10-2-23 from https://www.youtube.com/watch?v=FXRS-9Ip1pE
2009	Patent Classification List for U.S. Patent No. 11,358,425, retrieved on 10-4-23 from https://patents.google.com/patent/US11358425B1/en?q=US11358425
2010	U.S. Patent No. 4,406,413 to Houle ("Houle")
2011	U.S. Patent No. 7,833,071 to Gaither ("Gaither")
2012	U.S. Patent No. 5,176,098 to Royle ("Royle")
2013	U.S. Patent No. 9,462,741 to Puck ("Puck-II")
2014	U.S. Patent No. 9,572,297 to Puck ("Puck-III")
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2026	Screenshots of 2023 Truxor Website, retrieved on 10-1-23 from https://truxor.com/en/catalog/node/products and https://truxor.com/en/catalog/node/products-truxor-machines
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2028	Christian Haas et al., <i>Practical Evaluation of a Control Concept for a Remote Controlled 1.8T Excavator Using a 3D Input Device</i> , BATH/ASME 2022 Symposium on Fluid Power and Motion Control, ISBN: 978-0-7918-8633-5, FPMC2022-88959, V001T01A012-1 thru V001T01A012-7 (2022)
2029	Timeline Showing Bazooka’s Post-Grant Challenges
2030	January 18, 2023 District Court Order Granting Motion to Lift Stay
2031	Reexamination History of U.S. Patent No. 11,358,425

2032	Screenshots from YouTube of SenwaTec video, retrieved on January 15, 2024 from https://www.youtube.com/watch?v=ecnlfMf7CH4&t=1s
2033	Printout of Bazooka's webpage for its Wolverine Agitation Boat, retrieved on March 30, 2024 from: https://www.bazookafarmstar.com/equipment/wolverine-agitation-boat/
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2048	U.S. Provisional Patent Application No. 63/040,562 filed June 18, 2020
2049	U.S. Provisional Patent Application No. 63/104,887 filed October 23, 2020
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2051	Notice of Allowance in U.S. Application No. 17,590,125, Mailed April 22, 2022.
2052	Notice of Intent to Issue Ex Parte Reexamination Certificate, Control No. 90/019,107, Mailed November 2, 2022.

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2054	Lagoon Crawler Prototype Brochure, Aggressive Agitation
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2060	Print No. 2 of Nuhn YouTube Video - "Nuhn Lagoon Crawler Unrivaled Lagoon Agitation!", accessed at https://www.youtube.com/watch?v=fEgvvq9HZk
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2063	B. Shypula, <i>Transforming farming</i> , The London Free Press (Sept. 9, 2013))
2064	B. Shypula, <i>Crawler makes manure almost sexy</i> , The Beacon Herald (Sept. 6, 2013)
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2067	M. Beitz, <i>Crawler is turning heads</i> , The Beacon Herald at A2 (Jan. 30, 2014)
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2069	D. Rankin, <i>Nuhn Industries celebrates employees at expansion grand opening</i> , 100th lagoon crawler unveiling, St. Marys Independent (Aug. 7, 2015)
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2075 (Under Seal)	March 21, 2022 Email to Nuhn re: Licensing Lagoon Crawler Technology
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2101	US 8,944,758 to Nuhn
2102	Intentionally Omitted
2103	Intentionally Omitted
2104	Intentionally Omitted
2105	Intentionally Omitted
2106	January 13, 2025 Declaration of Douglas S. Prairie
2107	U.S. Patent Application Publication 2013/0145980 to Puck (“Puck II”)
2108	Chart Showing Support For Substitute Claims
2109	Redline Comparison between U.S. Provisional Patent Application No. 61/867,598 and International Patent Application No. PCT/CA2014/050789
2110	Redline Comparison between U.S. Provisional Patent Application No. 61/867,598 and U.S. Patent Application No. 15/044,905 (now U.S. Patent No. 9,694,636)
2111	Redline Comparison between U.S. Provisional Patent Application No. 61/867,598 and U.S. Patent Application No. 15/586,493 (now U.S. Patent No. 10,124,638)
2112	Redline Comparison between U.S. Provisional Patent Application No. 61/867,598 and U.S. Patent Application No. 16/157,950 (now U.S. Patent No. 10,710,422)

2113	Redline Comparison between U.S. Provisional Patent Application No. 61/867,598 and U.S. Patent Application No. 16/891,627 (now U.S. Patent No. 10,974,557)
2114	Redline Comparison between U.S. Provisional Patent Application No. 61/867,598 and U.S. Patent Application No. 17/201,100 (now U.S. Patent No. 11,491,835)
2115	Nuhn Header Series Vertical Pit Pump Brochure

I. INTRODUCTION

Petitioner's Opposition to Nuhn's Revised Motion to Amend is based on a single prior art combination of four separate references: Puck (a published patent application), the Puck Boat (a commercial product), Bryham (a patent), and Nuhn's G'Force Vertical Pit Pump ("Nuhn's Pit Pump") advertised in Manure-Manager (non-patent literature) ("the Puck Combination"). Petitioner fails to establish that a POSITA would have been motivated to modify Puck to include Bryham's wheels because Puck had already solved the problem of exposing a trailer and operator to corrosive manure when launching and retrieving the Puck boat. This precludes Petitioner's Puck Combination.

Further, when viewed without hindsight, the teachings of these four prior art references plainly point to a different configuration, where the pump is positioned at the far end of a pivoting boom-arm. EX2106, ¶¶141-151. The Puck Combination fails to teach the claimed configuration where the liquid manure pump: (i) has a substantially vertical drive shaft and a constant angular orientation, (ii) has a pumping housing and impeller that are positioned along / mounted to the underside of the floatable vehicle body, and (iii) submerged components/portions of the vehicle positioned to the right, left, front, and rear of the pump housing, as required by Claims 41, 57, 79, and 80.

To compensate for these facial deficiencies, Petitioner proposes the following modifications, in what is clearly a hindsight-based reconstruction of Nuhn's invention:

- Eliminating the pivot structure and pivot functionality of Nuhn's Pit Pump and mounting it in a fixed vertical orientation (Paper 47, 5);
- Eliminating or shortening the boom arm of Nuhn's Pit Pump to bring the pump up towards the underside of Puck's boat (Paper 47, 8);
- Discarding Bryham's unpowered front swiveling wheel and adding two sets of Bryham's powered rear wheels at the four corners of Puck's boat (Paper 47, 20); and
- Modifying Bryham's hydraulic system that powers the wheels to also power Nuhn's Pit Pump (Paper 47, 11).

None of these modifications are taught or suggested by the prior art and they are contrary to the record. The Board need not speculate as to how a POSITA would have combined Nuhn's Pit Pump with Puck because the record shows that Puck and Sundstrom added boom-mounted pumps to manure agitation boats in the relevant time period. EX1156; EX1159. Notably, neither Puck nor Sundstrom eliminated the boom arm and pivot structure as Petitioner advocates.

Even if Petitioner's hindsight-based modifications are accepted, the resulting combination still lacks submerged structure directly rearward of the pump housing (as required by Claims 41, 79, and 80) along the longitudinal centerline (as required by Claims 41 and 57) to keep floating solid material away from the bottom fluid opening in the pump housing. The structure

Petitioner points to for this limitation – the rear nozzle yoke on the Puck Boat – is not a submerged component of the vehicle and would not be directly rearward of the pump housing if Nuhn’s Pit Pump were added to Puck.

II. CLAIM CONSTRUCTION

A. Along The Longitudinal Centerline

Petitioner’s construction that “along the longitudinal centerline” means “on or next to the longitudinal centerline” eviscerates the geometric position claimed because the words “or next to” covers structure that is positioned to the right or left of the longitudinal centerline. EX2106, ¶41. Structures spaced to the right and left of the longitudinal centerline are plainly not positioned along the longitudinal centerline. *Id.* Petitioner’s construction is also inconsistent with EX1175, which defines “along” as “at a point or points on.” EX1175, 1. The words “or next to” are not part of the definitions found in EX1175. The proper construction of “along the longitudinal centerline” is “on the longitudinal centerline.” EX2106, ¶45.

B. Liquid Manure Pump

Petitioner’s construction of “liquid manure pump” as “a pump with structure capable of pumping liquid with suspended solids” impermissibly broadens the scope of the “liquid manure pump” limitation to no longer require a pump that is capable of pumping liquid manure. Liquid manure is not simply a fluid with suspended solids. Both experts recognize that in addition to containing suspended solids, liquid

manure is highly corrosive and acts as a non-Newtonian fluid when pumped. EX2106, ¶¶60-65, EX1004, ¶120; EX1049, 5; EX1050; 8. Therefore, the materials and components of a liquid manure pump must be capable of withstanding the highly corrosive environment of liquid manure lagoons and the shear behavior / forces associated with pumping a non-Newtonian fluid. EX2106, ¶¶49, 60-65.

III. CLAIMS 41-80 ARE PATENTABLE OVER PUCK IN VIEW OF THE PUCK BOAT, BRYHAM, AND MANURE-MANAGER

A. The Record Shows That A POSITA Would Not Have Been Motivated to Combine Puck, The Puck Boat, Bryham, And Manure-Manager In The Manner Petitioner Suggests

Petitioner's combination of Puck, the Puck Boat, Bryham, and Manure-Manager fails because it does not reasonably consider what a POSITA would have done without having the benefit of using Nuhn's patent as a blueprint. Petitioner flips the analysis on its face, where Petitioner first devises modifications to the prior art in an attempt to arrive at the claimed configuration and then has its expert formulate *ex post facto* reasons to justify the modifications. The question before the Board is not whether there is some *possible* justification or rationale for Petitioner's modifications, but rather whether the record demonstrates that a POSITA would have made such modifications when facing known problems in the art.

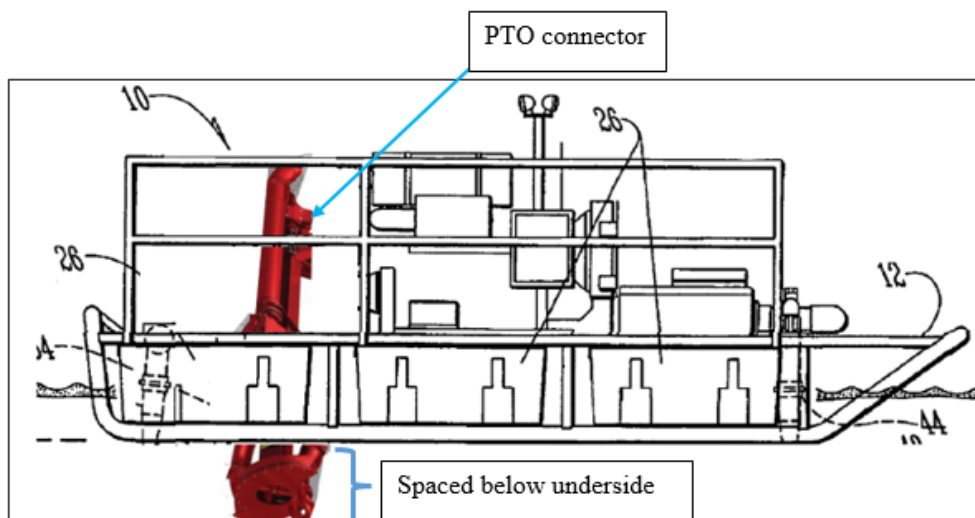
Petitioner argues that a POSITA would have added Bryham's wheel to Puck to avoid placing Puck's trailer or one's feet in a manure lagoon when launching and retrieving Puck's boat. This problem did not actually exist because Puck's trailer is

designed so the boat can be launched and retrieved without backing the trailer into the manure lagoon. Paper 23, 67-72. A POSITA concerned with exposing a trailer to highly corrosive manure would not have added Bryham's wheels to Puck's boat due to corrosion, instability, traction, and steering problems. EX2106, ¶¶118-125.

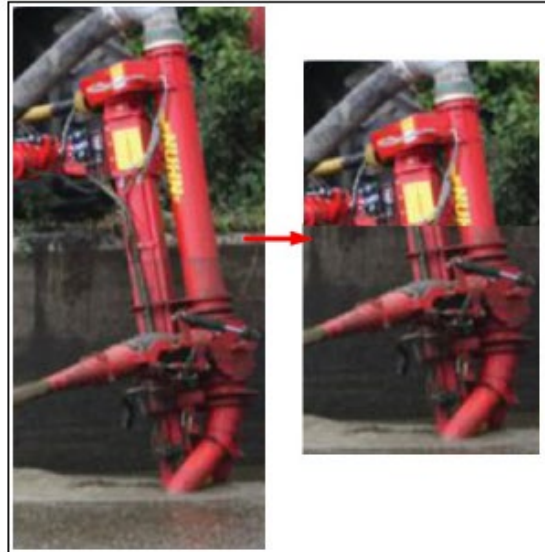
B. A Combination of Puck, The Puck Boat, Bryham, and Manure-Manager Does Not Satisfy The Elements of Claims 41-80

1. Claims 41 and 57 require the pump housing and impeller of the liquid manure pump to be “positioned along the underside of the floatable vehicle body”

The boom arm of Nuhn's Pit Pump is about 10 feet long. EX2106, ¶92. A manure pump is mounted to the lower end of the boom arm, while the upper end of the boom arm includes a PTO driven input shaft. EX2106, ¶141. Adding Nuhn's Pit Pump to Puck would result in the manure pump being spaced below the underside of the floatable vehicle body by a considerable distance – rather than along the underside of the floatable vehicle body, as required by Claims 41 and 57.



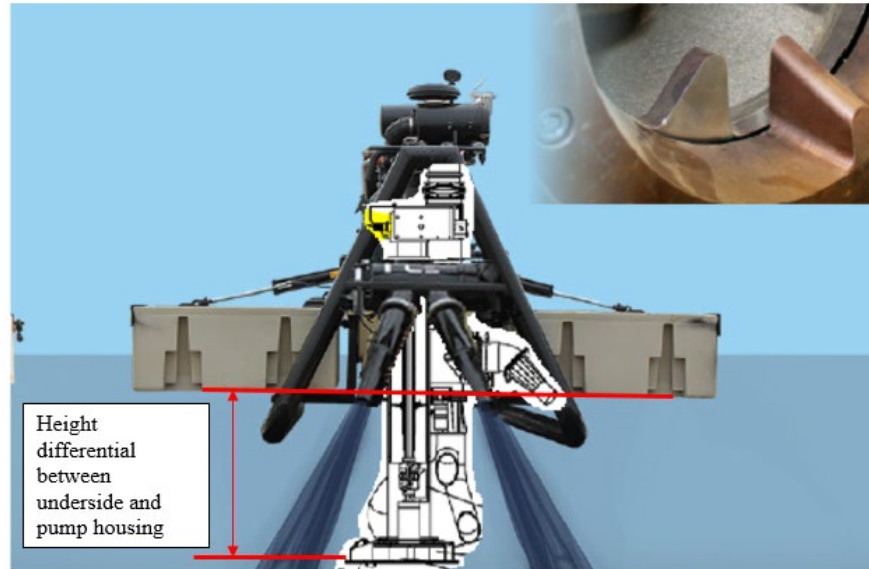
EX2106, ¶¶162, 224. Acknowledging this deficiency, Petitioner argues that Nuhn's Pit Pump could be shortened.



EX1174, ¶58. But this modification is contrary to record evidence showing that when Puck actually fitted boom-mounted pumps to his prototype boat, the pump housing was spaced well below the underside of the boat.



EX1159, 5. EX2106, ¶146. And even if Nuhn's Pit Pump were shortened, the pump housing and impeller would still be spaced below the underside of Puck's boat rather than "along the underside" as Claims 41 and 57 require.



EX2106, ¶¶168, 230; EX1160, 2.

2. Claims 79 and 80 require the pump housing of the liquid manure pump to be “mounted to the underside of the floatable vehicle body”

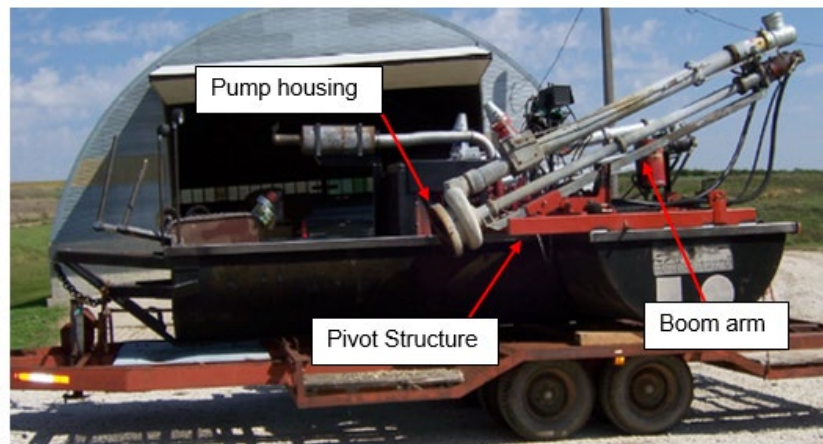
Petitioner glosses over the language in Claims 79 and 80 requiring the pump housing to be mounted to the underside of the floatable vehicle body – as opposed to simply being “positioned along the underside” like in Claims 41 and 57 – and ignores record evidence showing that both Puck and Sunstrom installed boom mounted pumps to the top deck and did not mount them to the underside of the floatable vehicle body. EX1156, 1; EX1159, 3; EX2106, ¶¶293-294, 349-350.

3. Claims 41, 57, 79, and 80 require the liquid manure pump to have “a vertical driveshaft” and “a constant angular orientation relative to the floatable vehicle body”

Instead of mounting Nuhn’s Pit Pump to the rear of Puck’s boat, in a similar manner to the way it attaches to the rear of a tractor, Petitioner makes an

unsupported and illogical leap in arguing that a POSITA would discard the pivot structure and pivot functionality of Nuhn's Pit Pump when adding it to Puck.

Puck's prototype and Sundstrom both demonstrate that if a POSITA were motivated to add Nuhn's Pit Pump to Puck's boat, they would have retained the boom and pivot structure of Nuhn's Pit Pump as opposed to mounting the manure pump to the boat with the pump housing along the underside of the vehicle and the drive shaft in a fixed vertical orientation as Petitioner now advocates in hindsight.

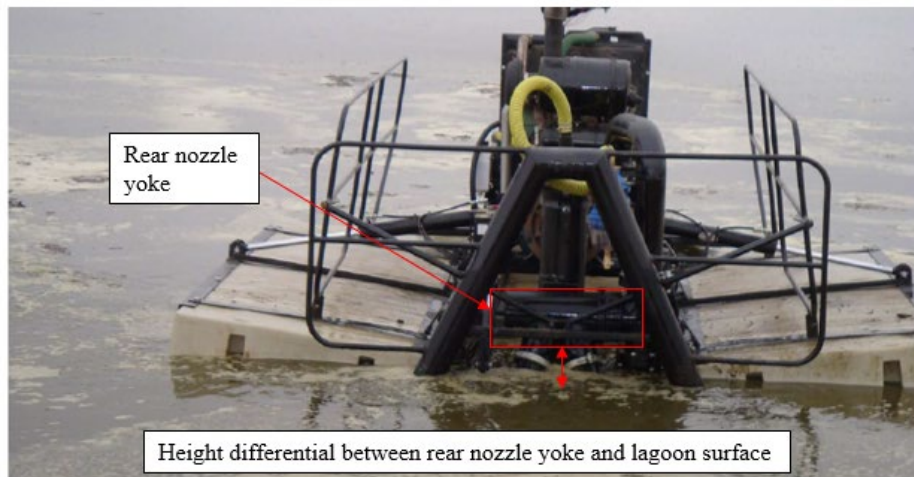


EX2106, ¶¶178, 240, 304, 360. Because Nuhn's Pit Pump swings up and down, adding it to Puck would not result in a liquid manure pump with "a constant angular orientation relative to the floatable vehicle body," as required by Claims 41, 57, 79, and 80. EX2106, ¶¶181, 243, 307, 363.

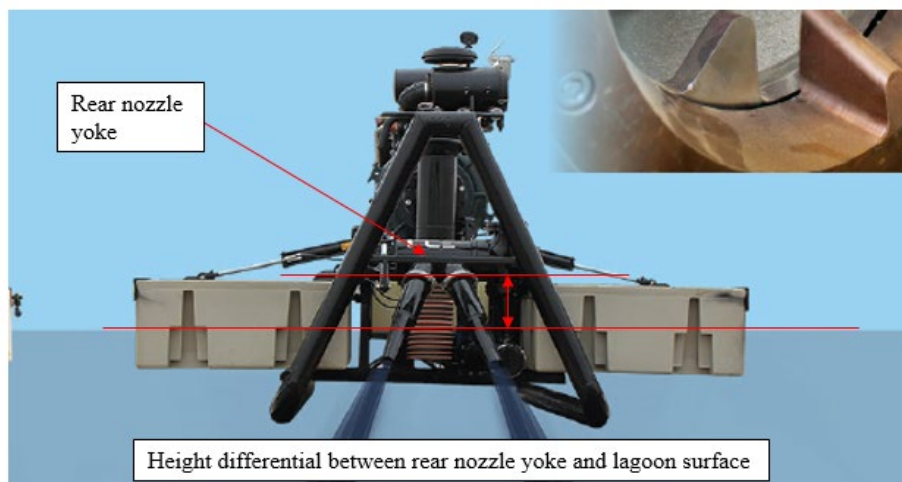
4. Claims 41 and 57 require submerged components/portions of the vehicle to be positioned forward and rearward of the pump housing along the longitudinal centerline

Puck discloses a rear nozzle yoke that is forward of the intake pipe. By contrast, on the Puck Boat, the rear nozzle yoke is rearward of the intake pipe. But

as discussed above, Nuhn's Pit Pump is designed to swing up and down, a feature that a POSITA would have retained. EX2106, ¶¶141-143. Therefore, a POSITA would have positioned the rear nozzle yoke forward of Nuhn's Pit Pump, like in the Puck reference, so that it would not interfere with the pivoting pump. EX2106, ¶156. And even if the arrangement on the Puck Boat were used, the rear nozzle yoke is clearly spaced above the top surface of the buoyant elements and is designed to be above the surface of a manure lagoon when the vehicle is floating.



EX2106, ¶189; EX1169, 2.

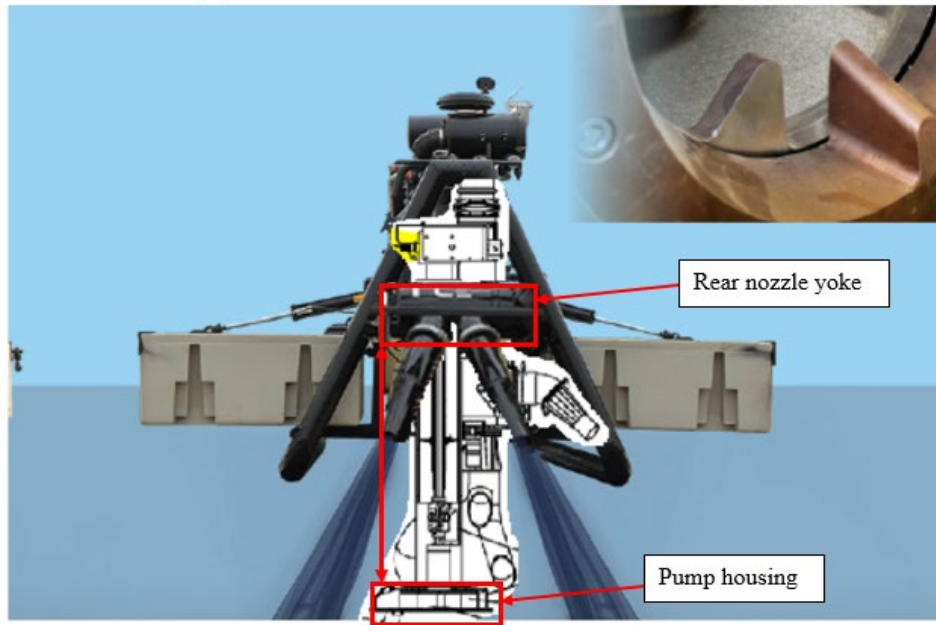


EX2106, ¶189. A POSITA would not reasonably understand the rear nozzle yoke of Puck's Boat to be a submerged component/portion of the vehicle. *Id.*

5. Claims 41, 79, and 80 require submerged components/portions of the vehicle to be positioned directly rearward of the pump housing

As compared to Claim 57, which only requires a submerged portion of the vehicle to be rearward of the pump housing along the longitudinal centerline, Claims 41, 79, and 80 recite an additional and more specific requirement where the submerged component/portion of the vehicle must be “**directly** rearward” of the pump housing. This claim language defines a three-dimensional geometric relationship where the submerged component / portion must be behind the pump housing and must be at substantially the same height (i.e., submerged depth) and substantially the same lateral position (i.e., not offset to the right or left) as the pump housing. EX2106, ¶¶192, 318, 374. The language of Claim 57 where the submerged component need only be “rearward of the pump housing along the longitudinal centerline” defines a two-dimensional geometric relationship that lacks a height/depth requirement (other than requiring submerged structure). *Id.*

If the boom arm of Nuhn's Pit Pump were shortened, as Petitioner argues, the rear nozzle yoke of the Puck Boat would still be **well above** the pump housing.



EX2106, ¶191. And there would be an unobstructed path to the pump housing from the rear (when viewed from the rear, the rear nozzle yoke would not obstruct from view any portion of the pump housing). A POSITA would not consider the rear nozzle yoke to be “directly rearward” of the pump housing in view of this height differential, nor would the rear nozzle yoke function “to keep solid material away from the bottom fluid opening in the pump housing of the immersible liquid manure pump,” as claimed. EX2106, ¶¶191-195, 317-321, 373-377.

IV. THE SUBSTITUTE CLAIMS HAVE WRITTEN DESCRIPTION SUPPORT UNDER 35 U.S.C. § 112(a)

A. There is written description support for the language in Claims 79 and 80 requiring the pump housing to be “mounted to the underside” of the floatable vehicle body

Petitioner incorrectly argues that the specification only explains the position of the liquid manure pump and not how it is mounted. As shown in at least Figure 8

and explained in the specification, the liquid manure pump may be mounted to the underside of the floatable vehicle body by a “linear actuator” (35) and/or “a lever structure of the vehicle.” EX1001, 3:5-11 and Fig. 8; EX2106, ¶¶69-72.

B. There is written description support for the language in Claims 41, 57, 79, and 80 stating that the submerged components / portions of the vehicle function “to keep floating solid material away from the bottom fluid opening in the pump housing”

Petitioner incorrectly argues that the language in Claims 41, 57, 79, and 80 explaining that the submerged components/portion of the vehicle “keep floating solid material away from the bottom fluid opening in the pump housing” is a negative limitation. This language does not describe the absence of a structural feature or the absence of a function, but rather **positively recites the function** of the claimed structure. EX2106, ¶¶73-74. Thus, the caselaw Petitioner cites is inapposite.

V. THE REVISED MOTION TO AMEND COMPLIES WITH 37 C.F.R. § 42.121

Petitioner’s argument that the subject matter of the Substitute Claims is not supported in the applications that followed the provisional application is a red herring – the provisional application and subsequent applications all share substantially the **same specification**. EX2106, ¶¶66-67; EX2109-EX2114.

VI. CONCLUSION

Petitioner has not established that Substitute Claims 41-80 are unpatentable.

Dated: January 13, 2025

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CERTIFICATE OF COMPLIANCE

The undersigned hereby certifies that this brief complies with the page limitations set forth in 37 C.F.R. § 42.24(c)(3).

The undersigned further certifies this brief complies with the typeface requirements of 37 C.F.R. § 42.6(a)(2)(ii) and typestyle requirements of 37 C.F.R. § 42.6(a)(2)(iii). This brief has been prepared in a proportionally spaced typeface using Microsoft Word for Microsoft 365 MSO in Times New Roman 14-point font.

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. 42.6(e), I certify that on this 13th day of January, 2025, a true and correct copy of the foregoing **Patent Owner's Reply to Petitioner's Opposition to the Revised Motion to Amend U.S. Patent No. 11,491,835** was served by electronic mail on Petitioner's lead and backup counsel at the following addresses:

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