

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. IPR2024-00098  
U.S. Patent No. 11,541,708

---

**PATENT OWNER'S PRELIMINARY RESPONSE**  
**(under 37 C.F.R. §42.107)**

## TABLE OF CONTENTS

|                                                                                                                                  | <u>Page</u> |
|----------------------------------------------------------------------------------------------------------------------------------|-------------|
| I. INTRODUCTION .....                                                                                                            | 1           |
| II. BACKGROUND ON MANURE LAGOONS AND STATE OF THE ART .....                                                                      | 6           |
| III. THE CHALLENGED PATENT.....                                                                                                  | 12          |
| IV. BAZOOKA’S INCREMENTAL PATENT OFFICE PROCEEDINGS .....                                                                        | 14          |
| V. DISCRETIONARY DENIAL UNDER §325(D) IS APPROPRIATE IN VIEW OF<br>BAZOOKA’S INCREMENTAL FILINGS.....                            | 15          |
| A. Discretionary Denial is Appropriate in View of Bazooka’s Incremental<br>Filings .....                                         | 16          |
| B. Discretionary Denial is Appropriate Because Substantially the Same Art<br>and Arguments Have Previously Been Considered ..... | 17          |
| VI. DISCRETIONARY DENIAL UNDER <i>FINTIV</i> IS APPROPRIATE SINCE THE<br>UNDERLYING LITIGATION IS WELL UNDERWAY .....            | 19          |
| 1. Whether The Court Granted a Stay or Evidence Exists That One May be<br>Granted if a Proceeding is Instituted.....             | 20          |
| 2. Proximity of the Court's Trial Date to the Board's Projected Statutory<br>Deadline for a Final Written Decision .....         | 20          |
| 3. Investment in the Parallel Proceeding by the Court and the Parties .....                                                      | 21          |
| 4. Overlap Between Issues Raised in the Petition and in the Parallel<br>Proceeding.....                                          | 21          |
| 5. Whether the Petitioner and the Defendant in the Parallel Proceeding are<br>the Same Party .....                               | 22          |
| 6. Other Circumstances That Impact the Board’s Exercise of Discretion,<br>Including the Merits.....                              | 22          |
| VII. LEVEL OF ORDINARY SKILL .....                                                                                               | 22          |
| VIII. CLAIM INTERPRETATION.....                                                                                                  | 23          |
| IX. GROUND 1: CLAIM 23 IS NOT ANTICIPATED BY BENNETT-II .....                                                                    | 26          |
| X. GROUND 2: CLAIMS 1, 8–18, 21–28 and 35–38 ARE NOT OBVIOUS BASED<br>ON TRUXOR IN VIEW OF YOON OR CARRIER.....                  | 31          |
| A. The Truxor Combination Fails to Disclose or Suggest a Liquid Manure<br>Pump .....                                             | 31          |

|      |                                                                                                                                                                                                                 |    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| B.   | The Truxor Combination Fails to Disclose or Suggest Buoyant Elements Positioned Between the Front Wheel and Rear Wheel on Each Side of the Vehicle .....                                                        | 35 |
| C.   | The Truxor Combination Fails to Disclose or Suggest the Claimed Combination of Elements, Which When Considered Collectively, Define an Amphibious Manure Lagoon Agitation Vehicle.....                          | 39 |
| D.   | Petitioner Has Failed to Carry Its Burden of Demonstrating That a POSITA Would Have Had a Reasonable Expectation of Success in Combining Truxor With Yoon or Carrier .....                                      | 40 |
| E.   | Petitioner’s Combination of Truxor with Carrier or Yoon to Arrive at the Required Claim Limitations is Based on Impermissible Hindsight.....                                                                    | 45 |
| XI.  | GROUND 3: CLAIMS 1, 8–18, 21–28, AND 35–38 ARE NOT OBVIOUS BASED ON SENWATEC IN VIEW OF YOON OR CARRIER.....                                                                                                    | 47 |
| A.   | Numerous Evidentiary Deficiencies Preclude The Board From Considering the Lonnemann Declaration [EX1013] and its Exhibits [EX1030] and [EX1031].....                                                            | 47 |
| B.   | The SenwaTec Combination Fails to Disclose or Suggest a Liquid Manure Pump .....                                                                                                                                | 53 |
| C.   | The SenwaTec Combination Fails to Disclose or Suggest Buoyant Elements Positioned Between the Front and Rear Wheels on Each Side of the Vehicle.....                                                            | 56 |
| D.   | The SenwaTec Combination Fails to Disclose or Suggest The Claimed Combination of Elements, Which When Considered Collectively, Define an Amphibious Manure Lagoon Agitation Vehicle.....                        | 57 |
| E.   | Petitioner Has Failed to Carry Its Burden of Demonstrating That a POSITA Would Have Had a Reasonable Expectation of Success in Combining SenwaTec With Yoon or Carrier .....                                    | 58 |
| F.   | Petitioner’s Combination of Truxor with Carrier or Yoon to Arrive at the Required Claim Limitations is Based on Impermissible Hindsight.....                                                                    | 61 |
| XII. | GROUND 4: CLAIMS 1, 8-18, 23-28 AND 35-38 ARE NOT OBVIOUS BASED ON PUCK IN VIEW OF BRYHAM.....                                                                                                                  | 63 |
| A.   | The Puck-Bryham Combination Does Not Disclose or Suggest the Liquid Manure Pump Recited in Claim 1.....                                                                                                         | 63 |
| B.   | The Puck-Bryham Combination Fails to Disclose Buoyant Elements Situated Between Front and Rear Wheels on Each Side of the Vehicle.....                                                                          | 66 |
| C.   | The Puck-Bryham Combination Fails to Disclose or Suggest a “Power Source Configured to Provide Power to Move the Vehicle Both When the Vehicle is Ground Engaging and Floating in a Liquid Manure Lagoon” ..... | 70 |

|       |                                                                                                                                                                                                    |    |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| D.    | The Puck-Bryham Combination Fails to Disclose “Wireless Remote Control Configured to ... Control At Least One of the Speed and Direction of the Vehicle When the Vehicle is Ground Engaging” ..... | 70 |
| E.    | The Puck-Bryham Combination Fails to Disclose “Four Variable Speed Hydraulic Motors, One Variable Speed Hydraulic Motor Per Wheel, For Independently Driving the Wheels at Variable Speeds” .....  | 71 |
| F.    | Petitioner Has Failed to Carry Its Burden of Demonstrating That a POSITA Would Have Been Motivated to Combine Puck and Bryham .....                                                                | 73 |
| G.    | Petitioner Has Failed to Carry Its Burden of Demonstrating That a POSITA Would Have Had a Reasonable Expectation of Success in Adding Bryham’s Wheels to Puck .....                                | 75 |
| H.    | Petitioner’s Combination of Puck with Bryham to Arrive at the Required Claim Limitations is Based on Impermissible Hindsight .....                                                                 | 77 |
| XIII. | GROUND 5: CLAIMS 1, 8-18, 23-28, AND 35-38 ARE NOT OBVIOUS BASED ON PUCK IN VIEW OF BRYHAM AND BENNETT-II.....                                                                                     | 79 |
| XIV.  | GROUND 6: CLAIMS 1–38 ARE NOT OBVIOUS BASED ON TRUXOR AND YOON OR CARRIER IN VIEW OF MANURE-MANAGER .....                                                                                          | 80 |
| A.    | The Truxor-Manure-Manager Combination Fails to Disclose or Suggest All of the Limitations of the Challenged Claims .....                                                                           | 81 |
| B.    | Petitioner Has Not Presented Sufficient Evidence That A POSITA Would Have Had a Motivation to Combine Truxor, Carrier or Yoon, and Manure-Manager.....                                             | 81 |
| C.    | Petitioner Has Not Presented Sufficient Evidence That A POSITA Would Have Had a Reasonable Expectation of Success in Making the Truxor, Carrier or Yoon, and Manure-Manager Combination .....      | 82 |
| D.    | Petitioner’s Combination of Truxor with Carrier or Yoon and Manure-Manager to Arrive at the Required Claim Limitations is Based on Impermissible Hindsight.....                                    | 84 |
| XV.   | GROUND 7: CLAIMS 1–38 ARE NOT OBVIOUS BASED ON SENWATEC AND YOON OR CARRIER IN VIEW OF MANURE-MANAGER.....                                                                                         | 86 |
| A.    | The SenwaTec-Manure-Manager Combination Fails to Disclose or Suggest Each and Every Element of the Challenged Claims .....                                                                         | 86 |
| B.    | Petitioner Has Not Presented Sufficient Evidence That A POSITA Would Have Had a Motivation to Combine SenwaTec, Carrier or Yoon, and Manure-Manager.....                                           | 86 |
| C.    | Petitioner Has Not Presented Sufficient Evidence That A POSITA Would Have Had a Reasonable Expectation of Success in Making the SenwaTec, Carrier or Yoon, and Manure-Manager Combination .....    | 87 |

|       |                                                                                                                                                                                                                                                |    |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| D.    | Petitioner’s Combination of SenwaTec with Carrier or Yoon and Manure-Manager to Arrive at the Required Claim Limitations is Based on Impermissible Hindsight .....                                                                             | 89 |
| XVI.  | GROUND 8: CLAIMS 1–38 ARE NOT OBVIOUS BASED ON PUCK AND BRYHAM (ALONE OR IN VIEW OF BENNETT-II) IN VIEW OF MANURE-MANAGER .....                                                                                                                | 91 |
| A.    | The Puck-Bryham (Alone or in View of Bennett-II)-Manure-Manager Combination Lacks All Elements of the Challenged Claims .....                                                                                                                  | 91 |
| B.    | Petitioner Has Failed to Carry Its Burden of Demonstrating That a POSITA Would Have Been Motivated to Make the Combination of Puck, Bryham (Alone or in View of Bennett-II), and Manure-Manager with a Reasonable Expectation of Success ..... | 91 |
| C.    | Petitioner’s Combination of Puck with Bryham to Arrive at the Required Claim Limitations is Based on Impermissible Hindsight .....                                                                                                             | 92 |
| XVII. | CONCLUSION.....                                                                                                                                                                                                                                | 94 |

**TABLE OF AUTHORITIES**

|                                                                                                                                   | <b>Page(s)</b> |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Cases</b>                                                                                                                      |                |
| <i>Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH,</i><br>IPR2019-01469, Paper 6, 8-9 (PTAB Feb. 13, 2020) ..... | 17             |
| <i>Apple Inc. v. Fintiv, Inc.,</i><br>IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) .....                                          | 1, 19, 20, 25  |
| <i>Salpeter v. ARP Manufacturing, LLC,</i><br>IPR2019-01382, Paper 13, 2019 .....                                                 | 51             |
| <i>In re Vivint, Inc.,</i><br>14 F.4th 1342 (Fed. Cir. 2021) .....                                                                | 16             |
| <b>Statutes</b>                                                                                                                   |                |
| 35 U.S.C. § 311(b) .....                                                                                                          | 47             |
| 35 U.S.C. § 325(d) .....                                                                                                          | <i>passim</i>  |
| <b>Other Authorities</b>                                                                                                          |                |
| 37 C.F.R. § 42.6(a)(2)(ii) .....                                                                                                  | 95             |
| 37 C.F.R. § 42.6(a)(2)(iii) .....                                                                                                 | 95             |
| 37 C.F.R. § 42.24(b)(1) .....                                                                                                     | 95             |
| 37 C.F.R. §42.63 .....                                                                                                            | 52             |
| 37 C.F.R. §42.63(b) .....                                                                                                         | 52             |

**LIST OF PATENT OWNER’S EXHIBITS**

| <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 <a href="https://www.youtube.com/watch?v=fEgvvq9HZkk">https://www.youtube.com/watch?v=fEgvvq9HZkk</a> (“Nuhn Lagoon Crawler YouTube Video Screenshots”)                                                                                 |
| 2007             | Screenshots from Petitioner’s YouTube Channel of Accused Product, retrieved on 10-2-23 from <a href="https://www.youtube.com/watch?v=3y3bSJJUOps">https://www.youtube.com/watch?v=3y3bSJJUOps</a> (“Bazooka Wolverine YouTube Video Screenshots”)                                                                                      |
| 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 <a href="https://www.youtube.com/watch?v=FXRS-9Ip1pE">https://www.youtube.com/watch?v=FXRS-9Ip1pE</a> (“Progressive Dairyman YouTube Video Screenshots”) |
| 2009             | ’708 Patent from Google Patents (with Patent Classification List, retrieved on January 23 2024 from <a href="https://patents.google.com/patent/US11541708B2/en?q=11%2c541%2c708+">https://patents.google.com/patent/US11541708B2/en?q=11%2c541%2c708+</a> (“’708 Patent on Google Patents”)                                            |
| 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”)                                                                                                                                                                                                                                                                                         |
| 2015             | DE2364962 to Kronseder (“Kronseder”)                                                                                                                                                                                                                                                                                                   |
| 2016             | DE3431345 to Lüllmann (“Lüllmann”)                                                                                                                                                                                                                                                                                                     |
| 2017             | CA2002619 to Depeault (“Depeault-II”)                                                                                                                                                                                                                                                                                                  |
| 2018             | U.S. Patent No. 10,118,138 to Tews (“Tews”)                                                                                                                                                                                                                                                                                            |
| 2019             | DANIEL L. PFOST ET AL., UNIV. OF MO. EXTENSION, ANAEROBIC LAGOONS FOR STORAGE/TREATMENT OF LIVESTOCK MANURE (Oct. 2000) (“MU Guide for Anaerobic Manure Lagoons”)                                                                                                                                                                      |
| 2020             | Screenshots from 2023 North American Manure Expo Website, retrieved on 10-2-23 from <a href="https://www.manureexpo.ca/">https://www.manureexpo.ca/</a>                                                                                                                                                                                |

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2021 | Dictionary Definitions of “Dredging” and “Agitation”, retrieved on 9-30-23 from <a href="https://en.wikipedia.org/wiki/Dredging">https://en.wikipedia.org/wiki/Dredging</a> , <a href="https://www.merriam-webster.com/dictionary/dredging#dictionary-entry-1">https://www.merriam-webster.com/dictionary/dredging#dictionary-entry-1</a> , <a href="https://www.merriam-webster.com/dictionary/agitation">https://www.merriam-webster.com/dictionary/agitation</a> , and <a href="https://www.lagoonpumping.com/articles-resources/agriculture-articles/manure-articles/">https://www.lagoonpumping.com/articles-resources/agriculture-articles/manure-articles/</a> (“‘Dredging’ and ‘Agitation’ Dictionary Definition”) |
| 2022 | ENVTL. PROT. AGENCY, PRIMER FOR MUNICIPAL WASTEWATER TREATMENT SYSTEMS (Sept. 2004) (“EPA Municipal Lagoon Primer”)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2023 | U.S. DEP’T AGRIC., <i>Agricultural Waste Management Systems</i> , in AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK ch. 9 (Dec. 2011)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2024 | Screenshot of 2023 Commercial Manure Applicator Certification, retrieved on 10-3-23 from <a href="https://elearning-dnr.iowa.gov/course/index.php?categoryid=2">https://elearning-dnr.iowa.gov/course/index.php?categoryid=2</a> (“Commercial Manure Applicator Certification”)                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2025 | JOSEPH AKYEAMPONG ET AL., <i>Evaluation of hydraulic excavator Human-Machine Interface concepts using NASA TLX</i> , 44 INT’L J. OF INDUS. ERGONOMICS 374, 374–82 (2014) (“Excavator Human-Machine Interface Concepts”)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 2026 | Screenshots of 2023 Truxor Website, retrieved on 10-1-23 from <a href="https://truxor.com/en/catalog/node/products">https://truxor.com/en/catalog/node/products</a> and <a href="https://truxor.com/en/catalog/node/products-truxor-machines">https://truxor.com/en/catalog/node/products-truxor-machines</a>                                                                                                                                                                                                                                                                                                                                                                                                              |
| 2027 | Screenshots of 2023 Berky (formerly SenwaTec) Website, retrieved on 10-4-23 from <a href="https://www.berky.de/en/berky-nereus-240-amphi/">https://www.berky.de/en/berky-nereus-240-amphi/</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 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) (“Practical Evaluation of a Control Concept”)                                                                                                                                                                                                                                                                                                                                                                                        |
| 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 <a href="https://www.youtube.com/watch?v=ecnlfMf7CH4&amp;t=1s">https://www.youtube.com/watch?v=ecnlfMf7CH4&amp;t=1s</a> (“SenwaTec YouTube Video Screenshots”)                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 2033 | Reexamination History of U.S. Patent No. 10,974,557                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2034 | McCaslin, Drive Sprockets and Track Drives, TexasFinalDrive.com, <a href="https://info.texasfinaldrive.com/shop-talk-blog/drive-sprockets-and-track-drives">https://info.texasfinaldrive.com/shop-talk-blog/drive-sprockets-and-track-drives</a> (last accessed Feb. 25, 2024) (“Drive Sprockets and Track Drives”)                                                                                                                                                                                                                                                                                                                                                                                                        |

## I. INTRODUCTION

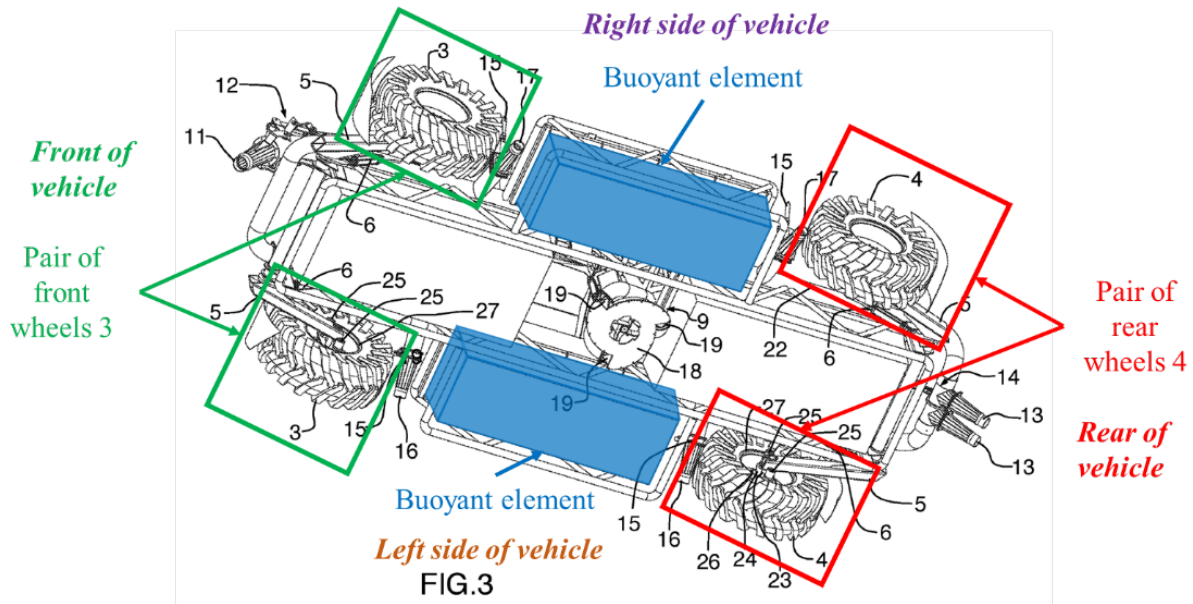
Claims 1-38 (“the Challenged Claims”) of U.S. Patent 11,541,708 (“the ‘708 Patent”) are directed to a new and non-obvious amphibious vehicle for recirculating liquid manure in a manure lagoon and disrupting the surface crust. Unlike the prior art, the claimed amphibious manure lagoon agitation vehicle can be deployed, operated, and retrieved by wireless remote-control.

Institution should be denied under 35 U.S.C. § 325(d) in view of Petitioner’s incremental patent office challenges, which are based on substantially the same art and arguments.

Institution should also be denied under *Fintiv* because the U.S. district court litigation is well underway with a claim construction hearing scheduled for April 16, 2024.

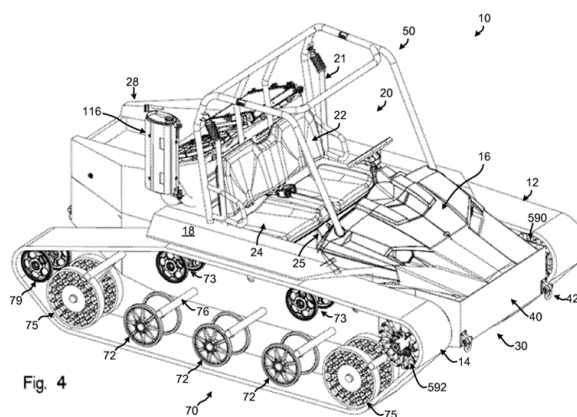
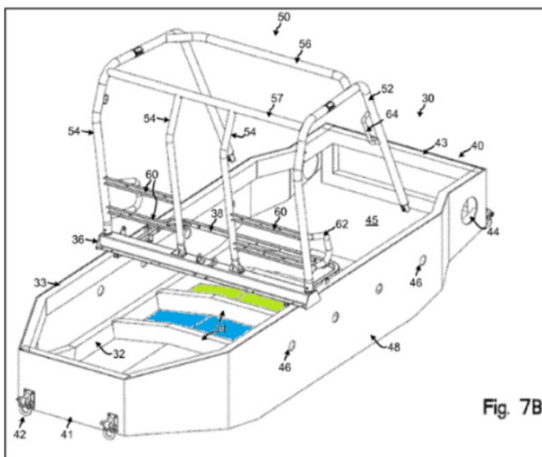
Finally, institution should be denied because Petitioner has not demonstrated that it is reasonably likely to prevail on the merits.

In Ground 1, Petitioner argues that claim 23 is anticipated by Bennett-II [EX1017]. The very first limitation of claim 23 requires a buoyant element positioned *between* the front and rear wheels on each of the right and left sides of the vehicle:



EX1001, 5 (annotated). Bennett-II does not disclose this claimed arrangement.

Petitioner's Ground 1 argument points to foam allegedly located in the *center* of Bennett-II's hull:



Pet., 35-36; EX1017. Bennett-II discloses tracks, not wheels, and the areas Petitioner identifies in green and blue (above) are located *inside* Bennett's vehicle body. Bennett-II does *not* teach a buoyant element situated between the front and rear wheels on each of the right and left sides of the vehicle body.

This limitation, which also appears in claims 17 and 21, is not met by  
Grounds 2-8 either.

In Grounds 2-3 and 6-7, Petitioner argues that Truxor or SenwaTec teach or suggest the claimed arrangement of buoyant elements and wheels, but they do not. SenwaTec discloses placing buoyant elements (pontoons) *outboard* of the wheels – not *between* the wheels:



**6-Wheel driven unit with stabilizer pontoons**

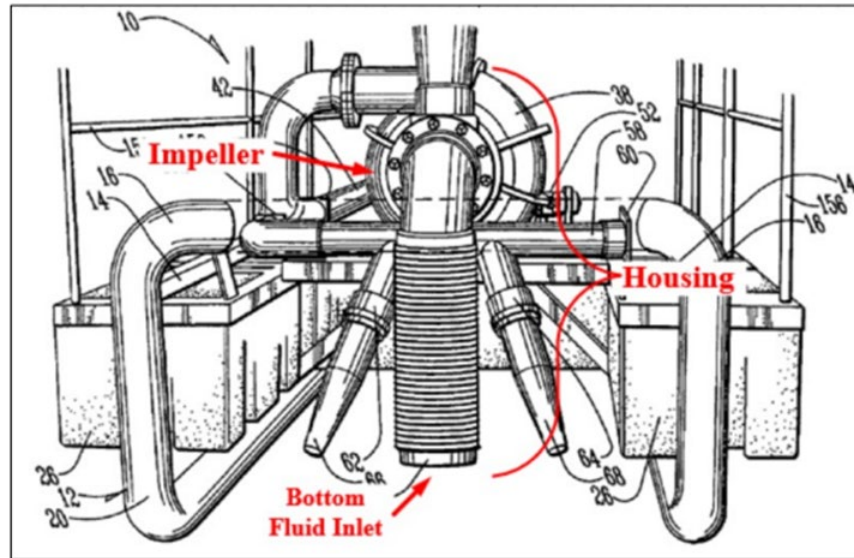
EX1012, 1 (annotated). If a POSITA were inclined to convert Truxor from tracks to wheels, they would follow this teaching since SenwaTec offered both track and wheel equipped variants of its vehicle.

In Grounds 4-5 and 8, Petitioner relies on impermissible hindsight to reach the claimed arrangement of buoyant elements and wheels. Petitioner argues a POSITA would add Bryham's wheels to Puck. But Bryham discloses a 3-wheeled

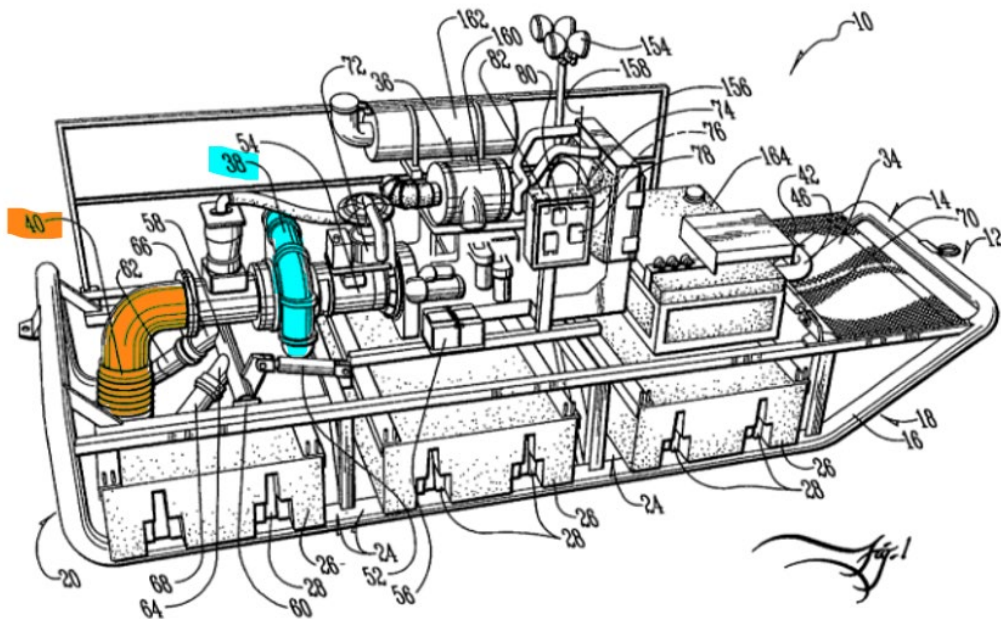
vehicle. So Petitioner goes on to argue that a POSITA would discard Bryham's single, steerable front wheel and place a duplicate set of Bryham's rear wheels at the front of Puck's manure boat. But that still does not satisfy the claimed arrangement, so Petitioner further argues that a POSITA would locate the wheels such that one of Puck's buoyant elements is located between the wheels. This is the opposite of plug-and-play substitution. A POSITA would not combine these elements in the manner Petitioner argues, with all of the attendant modifications necessary to read on the Challenged Claims, without using the '708 Patent as a blueprint.

Petitioner's Ground 2-8 challenges to independent claims 1 and 21 suffer the same deficiency – they are concocted using impermissible hindsight. Claims 1 and 21 require an amphibious vehicle with wireless remote-control and “a liquid manure pump” that is immersed in the liquid manure when the vehicle is floating.

Puck [EX1014] is the only reference that actually discloses a manure lagoon agitation vehicle, but the pump 38 in Puck is positioned high inside the vehicle and therefore is not configured to be immersed in the manure lagoon. Petitioner attempts to escape this fact by arguing that the intake pipe 40 in Puck is part of the pump 38:



Pet., 79. This argument quickly falls apart upon careful examination of the last limitation of claim 1, which recites “the liquid manure pump comprising a housing with *the bottom fluid inlet in the housing.*” The intake pipe 40 in Puck is separate from the pump 38, so the bottom opening in the intake pipe 40 is not an “inlet *in the housing*”:



EX1014, 2 (annotated). For this reason, in Grounds 6-8, Petitioner adds Manure-Manager [EX1019], which contains an advertisement for Nuhn's own tractor-mounted manure lagoon pumps. But again, Petitioner relies on impermissible hindsight. The Truxor and SenwaTec vehicles were designed for dredging. Nuhn's manure lagoon pumps are *not* designed for dredging, so replacing Truxor and SenwaTec's dredge pumps with one of Nuhn's manure lagoon pumps would likely destroy the dredging capabilities of Truxor and SenwaTec. Petitioner has not carried its burden of showing that a POSITA would make the combinations alleged in Grounds 6 and 7 in view of these conflicting uses. Similarly, in Grounds 4-5 and 8, Petitioner has not carried its burden of showing that a POSITA would convert Bryham's 3-wheel arrangement to a 4-wheel arrangement before adding Bryham's wheels to Puck.

## **II. BACKGROUND ON MANURE LAGOONS AND STATE OF THE ART**

Animal manure is typically washed into a farm lagoon for storage and later pump-out for land application as fertilizer:

## BACKGROUND

Manure produced during animal husbandry, particularly 35  
hog and cattle manure, is transferred by washing to a pit or  
lagoon for storage prior to removal for land application or  
further processing. During storage, a crust can develop on  
the surface of the pit or lagoon that must be disrupted prior  
to or during removal of the manure. Pumps are employed for 40  
this purpose with jets that return a percentage of the manure  
back to the pit or lagoon in the form of a high volume spray  
to disrupt the crust and recirculate the manure. Pumps for  
use in recirculating manure from smaller pits are known;  
however, these pumps are typically suitable for accessing 45  
the pit or lagoon from its edge and are connected to a tractor  
or similar land vehicle for operational power. They are  
therefore limited in their ability to recirculate manure to the  
middle of large lagoons, which are becoming increasing  
common as the size of animal husbandry operations 50  
increases.

Accordingly, there is a need for improved pumps and  
vehicles equipped for pumping, particularly pumps and  
vehicles suitable for use with large manure lagoons.

55

EX2004, ¶38. A unique problem that occurs with manure lagoons is that over time  
a floating “crust” develops on the surface that must be broken-up before pump-out.  
U.S. Pat. 4,594,006 to Depeault [EX2003] explains that this crust can becomes  
hard, can reach six feet thick, and has the consistency of peat moss:

## 2. Description of the Prior Art

Farm animal manure is a slurry containing liquids and solids in suspension. Such manure must be held in holding reservoirs near a barn such as in-the-ground tanks or lagoons. A by product of keeping animal manure is that it can, when required, be spread by suitable spreaders on fields as a fertilizer. The apparatus for spreading the manure normally comprises a closed tank mounted on a vehicle and communicating with a spreader. When required, the manure in the holding reservoir must be transferred into the spreading tanks by suitable pumps.

However, the manure in the holding reservoir tends to separate and the solids may settle to form a thick layer at the bottom of the reservoir and may also form a thick solid crust on the surface of the liquids. Such crust has a consistency of dry peat moss and must therefore be broken up before it can be mixed with the liquid into a slurry and be transferred from the reservoir into the spreading apparatus. It is necessary, therefore, to provide an apparatus for both mixing the solids and forming a slurry with the liquids in the reservoir as well as to have a pumping apparatus for pumping the so-formed slurry into the tank for the spreading apparatus.

Canadian Pat. No. 1,126,257 issued June 22, 1982, describes a proposed solution to the problem by providing a combined slurry mixing device and pump for the purpose of transferring the slurry to some other holding means such as a tank on a spreading apparatus.

There are other patents which describe generally devices for mixing manure in reservoirs for forming a slurry and then pumping the slurry. One of the problems which still exist even in the light of the solutions mentioned above, is the breaking up and mixing of the top crust. The top crust in the reservoir is mostly cow manure. This upper or floating crust can become relatively hard and can reach six feet in thickness. It causes a problem from a mixing point of view since as shown in Canadian Pat. No. 1,126,257, the mixing devices are normally provided at the bottom of the apparatus and near the bottom of the reservoir. In the case of the above mentioned Canadian patent, a nozzle is provided for diverting recirculated slurry as a jet towards the upper crust to try and break the crust. However, it has been found with conventional mixing devices including the above mentioned Canadian patent, that the breaking up of the upper crust and the mixing thereof is very time consuming and therefore, can be costly.

EX2003, 1:12-58.

The Patent Owner's commercial embodiment of the '708 Patent and the Petitioner's product (accused of infringement) are shown below breaking up the surface crust formed on a manure lagoon:



EX2006, 2.<sup>1</sup>

---

<sup>1</sup> <https://www.youtube.com/watch?v=fEgvvq9HZkk>



EX2007, 3.<sup>2</sup>

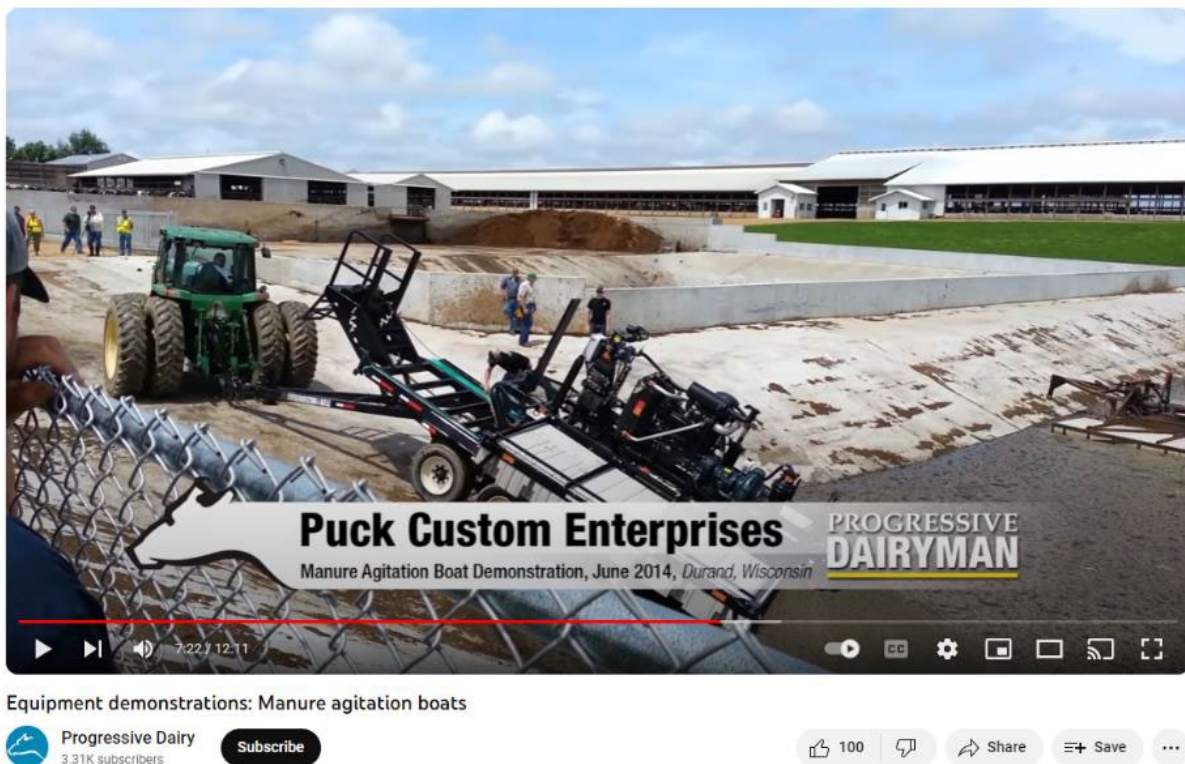
Manure lagoons are also unique in that their contents need to be stirred into a near-homogenous mixture across the entire lagoon so that the consistency, nutrients, and chemical properties (e.g., pH) is as uniform as possible. EX2004, ¶22. This is necessary for a consistent application of fertilizer after the manure is pumped from the lagoon and distributed over crops. *Id.*

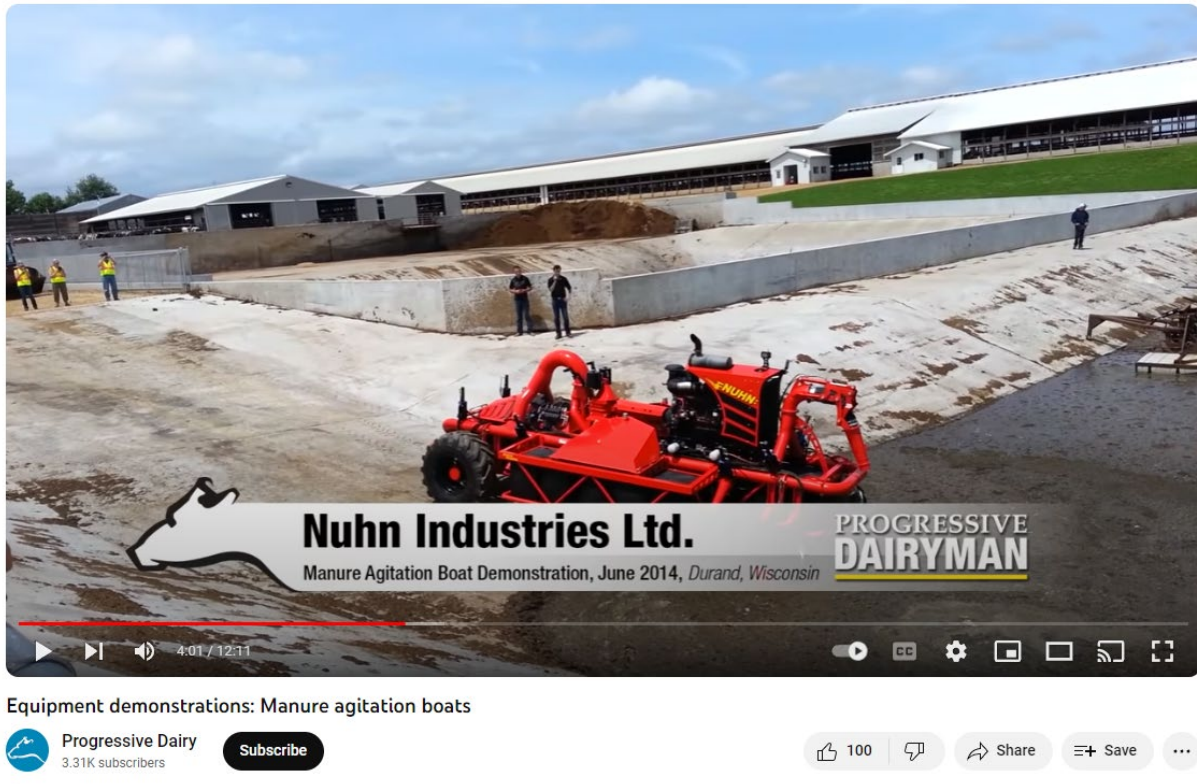
When the Patent Owner filed its provisional application in 2013, farmers stirred manure lagoons with either pumps situated at the edge of the manure

---

<sup>2</sup> <https://www.youtube.com/watch?v=3y3bSJJUOps>

lagoon, which were typically driven by the power-take-off (“PTO”) of an agricultural tractor (e.g., the manure pump described in Depeault [EX2003] or Manure Manager [EX1019]), or manure agitation “boats” (e.g., the boat described in Puck [EX1014]). These manure agitation “boats” were floating barge-like structures that had to be launched and retrieved using a trailer and/or tractor. This is depicted in the video below of a manure agitation boat demonstration held in 2014, which featured traditional manure agitation boats, including the commercial embodiment of the Puck reference [EX1014], alongside the Patent Owner’s newly-released amphibious manure agitation boat:





EX2008, 4-5.<sup>3</sup> As this video illustrates, the Patent Owner's commercial embodiment of the '708 Patent was the first of its kind and was the only manure agitation vehicle that could drive into, operate within, and drive out of the manure lagoon by wireless remote control – meaning that it did not require a trailer and/or tractor for launching and retrieval.

### III. THE CHALLENGED PATENT

The '708 Patent is one of several continuations filed off international patent application PCT/CA2014/050789 (filed August 18, 2014) and U.S. Provisional Application 61/867,598 (filed August 19, 2013). These continuations include U.S.

---

<sup>3</sup> <https://www.youtube.com/watch?v=FXRS-9Ip1pE>

Patent 10,974,557 (“the ‘557 Patent”), U.S. Patent 11,358,425 (“the ‘425 Patent”), and U.S. Patent 11,491,835 (“the ‘835 Patent”), among others (collectively, “the ‘708 Patent Family”). The ‘708 Patent issued January 3, 2023 with 38 claims, all of which have been challenged. Claims 1, 17, 21, and 23 are independent.<sup>4</sup>

Figures 2-3 of the ‘708 Patent depict the floatable vehicle body (1) and buoyant elements (2), ground engaging propulsion structure comprising a plurality of ground engaging elements in the form of powered wheels (3) and (4), liquid manure pump (9), power source (7), and the antenna of the wireless remote-control structure (40):

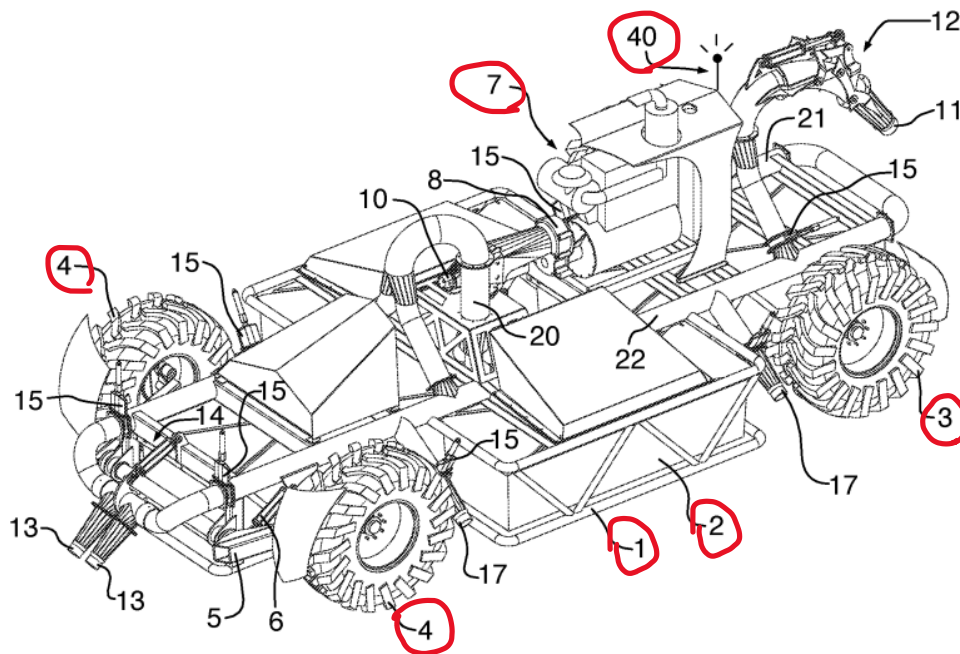
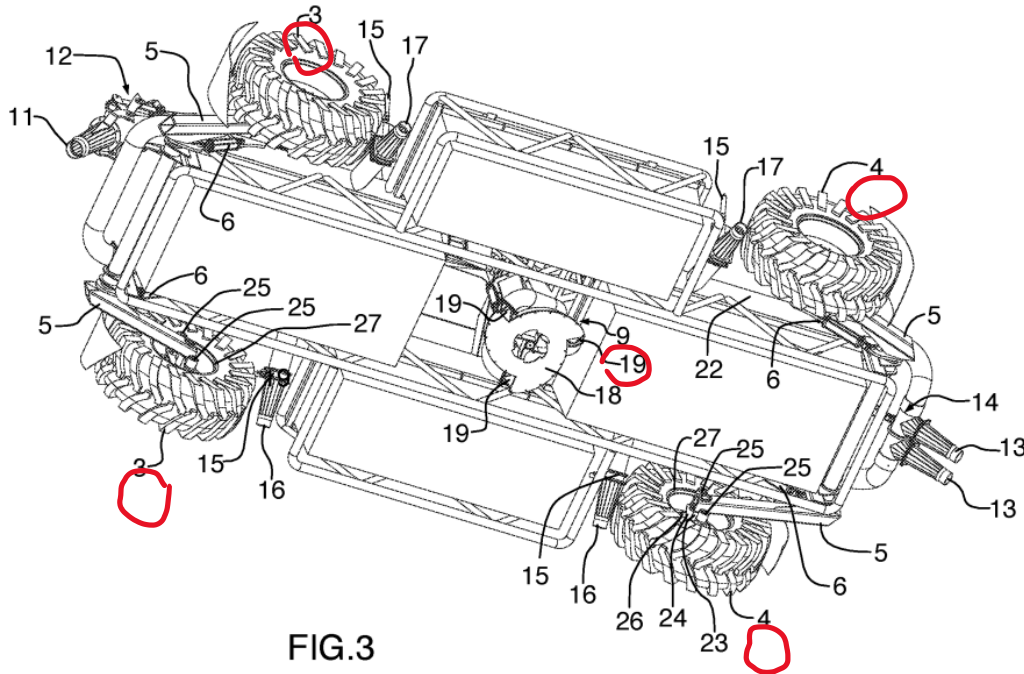


FIG. 2

<sup>4</sup> The dependent claims are patentable for additional reasons, but the Patent Owner has focused on Claims 1, 17, 21, and 23 for the limited purpose of arguing against institution.



#### IV. BAZOOKA'S INCREMENTAL PATENT OFFICE PROCEEDINGS

Bazooka incrementally filed eight patent office challenges against the '708 Patent Family:

1. Reexamination No. 90/019,076 ("the First Reexamination") of the '557 Patent – filed May 6, 2022, concluded with claims confirmed, reexamination certificate issued December 28, 2022
2. Reexamination No. 90/019,258 ("the Second Reexamination") of the '557 Patent – filed September 26, 2023, pending, reexamination granted October 18, 2023
3. Reexamination No. 90/019,290 ("the Third Reexamination") of the '557 Patent – filed October 23, 2023, pending, reexamination granted January 22, 2024
4. Reexamination No. 90/019,302 ("the Fourth Reexamination") of the '557 Patent – filed November 13, 2023, pending, reexamination granted February 12, 2024

5. Reexamination No. 90/019,107 of the ‘425 Patent – filed August 30, 2022, concluded with claims confirmed, reexamination certificate issued November 16, 2022
6. *Bazooka-Farmstar, LLC v. Nuhn Industries LTD.*, Case No. IPR2023-01161, challenging the ‘425 Patent – filed June 30, 2023, pending, instituted January 9, 2024
7. *Bazooka-Farmstar, LLC v. Nuhn Industries LTD.*, Case No. IPR2024-00004, challenging the ‘835 Patent – filed October 13, 2023, no institution decision has been made
8. *Bazooka-Farmstar, LLC v. Nuhn Industries LTD.*, Case No. IPR2024-00098, challenging the ‘708 Patent – filed November 3, 2023, no institution decision has been made

A timeline illustrating Bazooka’s patent office challenges is attached as EX2029 and demonstrates a clear pattern of incremental filings where Bazooka strategically waited for Patent Office decisions and/or Patent Owner responses before pursuing its next challenge.

**V. DISCRETIONARY DENIAL UNDER §325(D) IS APPROPRIATE IN VIEW OF BAZOOKA’S INCREMENTAL FILINGS**

The rationale behind § 325(d) is simple – challengers are not afforded a second or subsequent bite at the apple simply because they are unhappy with the result of previous challenges. That is precisely the situation here. Bazooka’s initial reexaminations of the ‘557 and ‘425 Patents failed and as a result Bazooka has now filed three new reexamination requests against the ‘557 Patent and IPRs against the ‘425, ‘835, and ‘708 Patents. Bazooka’s second and third wave of challenges

attempt to cure the deficiencies found by the Office during the first wave of reexaminations against the ‘557 and ‘425 Patents.

**A. Discretionary Denial is Appropriate in View of Bazooka’s Incremental Filings**

The Federal Circuit has expressly admonished the incremental filing of patent office challenges as “abusive filing practices” that “risks harassment of patent owners and frustration of Congress’ intent in enacting the [AIA]” and has ordered the dismissal of such filings under 35 U.S.C. § 325(d). *In re Vivint, Inc.*, 14 F.4th 1342, 1353 (Fed. Cir. 2021) (explaining that incremental filings using prior patent office decisions as a roadmap to correct past deficiencies should be rejected under § 325(d)). Bazooka’s incremental filings meet this criteria.

Bazooka waited until after the Patent Owner filed its Preliminary Response in the ‘425 IPR before filing its IPR Petitions challenging the ‘835 and ‘708 Patents. This was strategic since it allowed Bazooka to review the Patent Owner’s arguments and correct deficiencies in its later Petitions, including:

(1) Bazooka’s inclusion of a copy of the video depicted in EX1031 (*see* Pet., xi) in response to the Patent Owner’s arguments in the ‘425 IPR correctly pointing out that the Board could not consider EX1031 because the Petitioner did not provide a copy of the video;

(2) Bazooka’s revisions to its motivation to combine analysis in Grounds 2-8 in an apparent response to criticisms that the ‘425 IPR Petition failed to

demonstrate a reasonable expectation of success. For example, instead of arguing that a POSITA would add Bryham's wheels to Puck as it did in the '425 IPR, Bazooka now argues that a POSITA would convert Bryham's 3-wheel configuration to a 4-wheel configuration before adding it to Puck; and

(3) Bazooka's addition of Grounds 6-8, which cite a "new" reference (Manure-Manager [EX1019, EX1020]) in response to Patent Owner's arguments that the references in the '425 IPR fail to disclose a liquid manure pump.

**B. Discretionary Denial is Appropriate Because Substantially the Same Art and Arguments Have Previously Been Considered**

The Board has discretion to deny institution under 35 U.S.C. § 325(d) of petitions asserting the "same or substantially the same prior art or arguments" as those previously presented to the Office. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6, 8-9 (PTAB Feb. 13, 2020). Each Ground of this Petition presents the same or substantially the same prior art that has been considered by the Office multiple times. Bennett-II (Grounds 1 and 4-5), Carrier (Grounds 2-3 and 6-7), and Puck (Grounds 4-5 and 8) were all considered during both prosecution and reexamination. Manure-Manager (Grounds 6-8) is cumulative of the teachings of at least Houle [EX2010], Depeault [EX2003], and Depault [EX2017], all of which were before the Examiner. The wireless remote-control teachings of Yoon (Grounds 2-3 and 6) are cumulative of Carrier as demonstrated by the fact that Carrier and Yoon are used interchangeably

in the Petition. Truxor (Ground 2) and SenwaTec (Grounds 3 and 7), which disclose manned amphibious vehicles equipped with optional fluid pumps, are cumulative of Carrier, as none of these references disclose an amphibious vehicle with a liquid manure pump. Truxor and SenwaTec disclose manned amphibious vehicles with pump attachments that are advertised for other uses.

Petitioner also fails to carry its burden of demonstrating that the Office made a material error in granting the ‘708 Patent.

In Ground 1, Petitioner argues that Bennett-II anticipates claim 23, when in fact, Bennett-II is missing the claimed configuration of buoyant elements and wheels.

In Grounds 2-3, Petitioner argues that Truxor and SenwaTec disclose pumps for pumping liquid manure. But the printed publications themselves only describe using the Truxor and SenwaTec vehicles in ponds and lakes for weed removal and dredging and make no reference to manure or manure lagoons.

In Grounds 4-5, Petitioner fails to show that the Examiner erred in allowing the ‘708 Patent over combinations of Puck (a manure agitation boat) with wheeled amphibious vehicles like those disclosed in Bryham and Bennett-II. Examiner Avila previously applied the combination of Puck with Royle and Remley during prosecution of the ‘425 Patent and the CRU confirmed the claims of the ‘425 Patent over Bazooka’s combination of Carrier II in view of Puck.

Bryham and Bennett-II simply teach other wheeled amphibious vehicles that are cumulative of Carrier II, Royle, and Remley.

In Grounds 6-8, Petitioner attempts to add the liquid manure pump Nuhn advertised in the Manure-Manager publication to the combinations Petitioner proposed in Grounds 2-5. But the Examiner considered Houle [EX2010], Depeault [EX2003], and Depault-II [EX2017], which disclose tractor-mounted manure agitation pumps like those advertised in Manure-Manager [EX1019, 1020].

Consideration of all the above flaws in the aggregate ultimately informs the Board's discretionary authority under § 325(d) and weighs heavily *against* institution.

**VI. DISCRETIONARY DENIAL UNDER *FINTIV* IS APPROPRIATE SINCE THE UNDERLYING LITIGATION IS WELL UNDERWAY**

Bazooka could have sought a post-grant administrative review of the '708 Patent when it filed its Petition against the '425 Patent in June 2023. Instead, Bazooka waited until after the Patent Owner's Preliminary Response was due in the '425 Patent before filing this IPR Petition. The result of Bazooka's purposeful delay is that the underlying litigation is now much further along than it was when Bazooka filed its '425 IPR Petition and when Nuhn filed its Preliminary Response in the '425 IPR. Because the underlying litigation is now well underway, discretionary denial under *Fintiv* is appropriate.

The PTAB's decision in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) lays out 6 factors the Board must consider in determining whether to institute an AIA post-grant proceeding where there is parallel district court litigation, and each factor weighs against the institution of this IPR.

**1. Whether The Court Granted a Stay or Evidence Exists That One May be Granted if a Proceeding is Instituted**

In October 2023, Bazooka filed an expedited motion to extend various claim construction deadlines and its third motion to stay the underlying litigation. The Court has not ruled on Bazooka's motion for a stay, but the Court has rejected Bazooka's request to extend deadlines. The parties filed opening claim construction briefs on February 16, 2024, the response brief deadline is March 10, 2024, and a claim construction hearing is scheduled for April 16, 2024. The Court's unwillingness to extend these dates suggests that Bazooka's motion for yet another stay will be denied.

**2. Proximity of the Court's Trial Date to the Board's Projected Statutory Deadline for a Final Written Decision**

It is reasonable to expect that the Court will schedule a trial around the time the Board's final written decision is due. While no trial date has been set, the Court's scheduling order provides a fact discovery cut-off deadline of June 27, 2024 and the explanation that "[a]ll other dates, including trial, will be set after the order on claim construction is entered." With fact discovery closing on June 27, 2024, it is

reasonable to expect trial dates in Q1 or Q2 of 2025. This lines up with the Board's projected statutory deadline for a Final Written Decision by May 2025.

### **3. Investment in the Parallel Proceeding by the Court and the Parties**

The underlying litigation has been pending now for over two years. The original litigation was transferred from the Eastern District of Wisconsin to the Southern District of Iowa, where it was consolidated with several other litigations. Both the parties and the Court have already invested substantial resources in this litigation. There have been multiple motions, hearings, and over 150 docket filings/entries. The parties have exchanged discovery, infringement and invalidity contentions, expert reports on claim construction, and opening claim construction briefs have been filed. Petitioner's representations to the Board that the underlying litigation is still in "early stages" are false.

### **4. Overlap Between Issues Raised in the Petition and in the Parallel Proceeding**

All of the invalidity grounds set forth in the Petition were included in the invalidity contentions Bazooka served in August 2023. There is a complete overlap between the issues raised in the petition and the parallel proceeding. While Petitioner's Sotera Stipulation [EX1036] covers any grounds Petitioner raised or could have raised in this IPR, it does not appear to expressly preclude Petitioner from raising invalidity defenses based on the Truxor, SenwaTec, Puck, Bryham, and

Manure-Manager products themselves in the underlying litigation, since defenses based on the sale or public use of these products are ineligible from IPR proceedings.

### **5. Whether the Petitioner and the Defendant in the Parallel Proceeding are the Same Party**

The Petitioner and the defendant in the underlying district court litigation are the same party – Bazooka-Farmstar, LLC.

### **6. Other Circumstances That Impact the Board’s Exercise of Discretion, Including the Merits**

As explained herein, Petitioner plays games when it comes to Truxor and SenwaTec, attempting to rely on evidence that is outside the four corners of the publications themselves [EX1006] and [EX1012], is fraught with evidentiary problems, and treads on evidence of prior public uses, which is not an issue the Board has jurisdiction to consider. The district court is the proper forum to vet these defenses. Granting institution will result in duplicated efforts and a waste of resources – those of the parties, the Board, and the district court.

## **VII. LEVEL OF ORDINARY SKILL**

Petitioner’s definition of the “level of ordinary skill in the art” inexplicably excludes those most familiar with manure agitation equipment – livestock farmers and the manure application business. EX2004, ¶59. The ‘708 Patent repeatedly mentions farming, manure, and the problems encountered when storing animal manure in farm lagoons or pits. EX1001, 1:27-31, 1:35-54, 3:16-23, 8:5-28.

Based on the totality of the ‘708 Patent disclosure, a POSITA is “a livestock farmer or commercial manure applicator familiar with manure agitation equipment or an engineer with at least 2 years of experience designing agricultural equipment and knowledge of manure agitation equipment.” EX2004, ¶64.

## VIII. CLAIM INTERPRETATION

Independent claims 17, 21, and 23 of the ‘708 Patent all require a first buoyant element positioned between a first front wheel and a first rear wheel and a second buoyant element positioned between a second front wheel and a second rear wheel. Claim 17 recites “a first buoyant element situated between the first front wheel and the first rear wheel and a second buoyant element between the second front wheel and the second rear wheel.” Claim 21 similarly recites that “the first buoyant element is between the first front wheel and the first rear wheel and the second buoyant element is between the second front wheel and the second rear wheel.” And claim 23 recites a “a first buoyant element situated between [the]a first front wheel and [the]a first rear wheel and a second buoyant element between [the]a second front wheel and [the]a second rear wheel.”<sup>5</sup>

Claim 17 further recites that “the first front wheel and the first rear wheel are on a first *side* of the vehicle and the second front wheel and the second rear wheel

---

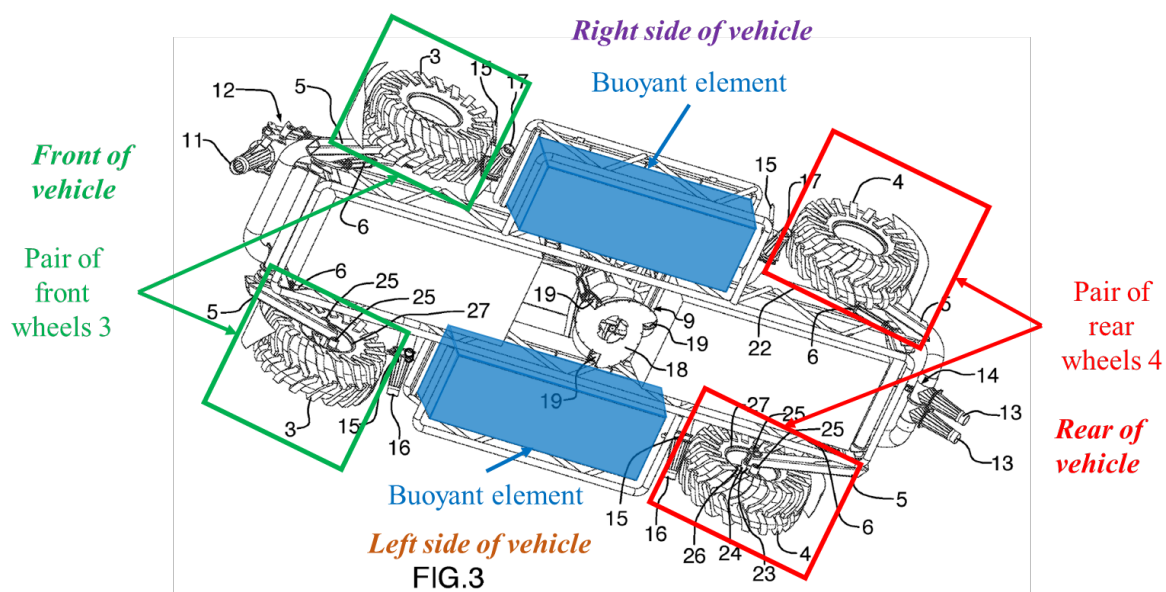
<sup>5</sup> The bracketed claim language is that which was removed with the Office’s June 27, 2023 Certificate of Correction. EX1002, 1.

are on a second *side* of the vehicle” (emphasis added). And claim 21 recites “a first buoyant element on a first *side* of the vehicle body and a second buoyant element on a second *side* of the vehicle body” (emphasis added).

*A POSITA would understand that these positional limitations for the first and second buoyant elements to mean that “a buoyant element is positioned in the space between the front and rear wheels on each of the right and left sides of the vehicle body.”* EX2004, ¶77.

A POSITA would *not* understand that these positional limitations merely describe buoyant elements centrally located in the middle of the vehicle body or buoyant elements located outboard of the wheels. *Id.*, ¶78.

The ‘708 Patent describes and illustrates a front set of wheels 3 on the right and left sides of the vehicle body 1 and a rear set of wheels 4 on the right and left sides of the vehicle body 1.



*Id.*, ¶81 (showing annotation of FIG. 3). The specification explains that these wheels “[m]ay be provided in pairs with one wheel of each pair disposed on opposite sides of the vehicle.” EX1001, 2:13-14. The specification also explains that there is a “front of the vehicle,” [EX1001, 4:8], a “rear of the vehicle,” [EX1001, 4:8-9], a “right side of the vehicle” [EX1001, 3:51], and a “left side of the vehicle,” [EX1001, 3:52]. Therefore, the “opposite sides of the vehicle” refers not to the front or rear of the vehicle, but rather the right and left sides of the vehicle. EX2004, ¶¶79-80. This is further supported by the specification’s explanation of how the vehicle steers on land, where “increasing the rotational speed of the hydraulic motors 25 on the *right side* relative to the motors 25 on the left side, the vehicle is caused to turn to the left.” EX1001, 6:32-34. The specification also describes the detailed support structure and drivetrain for “the *right side wheel* of the set of wheels 3” (emphasis added). *Id.*, 2:13-14.

A POSITA would thus understand that the “first front wheel” and the “second front wheel” recited in the claims are the right front wheel and the left front wheel and that the “first rear wheel” and the “second rear wheel” recited in the claims are the right rear wheel and the left rear wheel, or vice versa. EX2004, ¶¶81-83. As shown in the annotated copy of FIG. 3 above, one buoyant element 2 is situated in the space between a first front wheel 3 and a first rear wheel 4 on the right side of the vehicle and another buoyant element 2 is situated in the space

between a second front wheel 3 and a second rear wheel 4 on the left side of the vehicle. This intrinsic evidence requires the construction set forth above.

**IX. GROUND 1: CLAIM 23 IS NOT ANTICIPATED BY BENNETT-II**

Bennett-II fails to disclose “a first buoyant element situated between a first front wheel and a first rear wheel and a second buoyant element between a second front wheel and a second rear wheel” as required by claim 23.

Bennett-II discloses a vehicle with tracks. EX1004, ¶173.

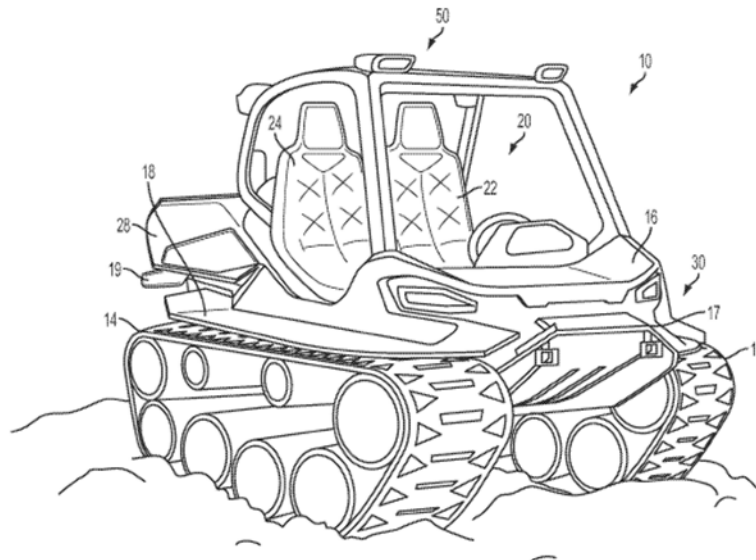


FIG. 1

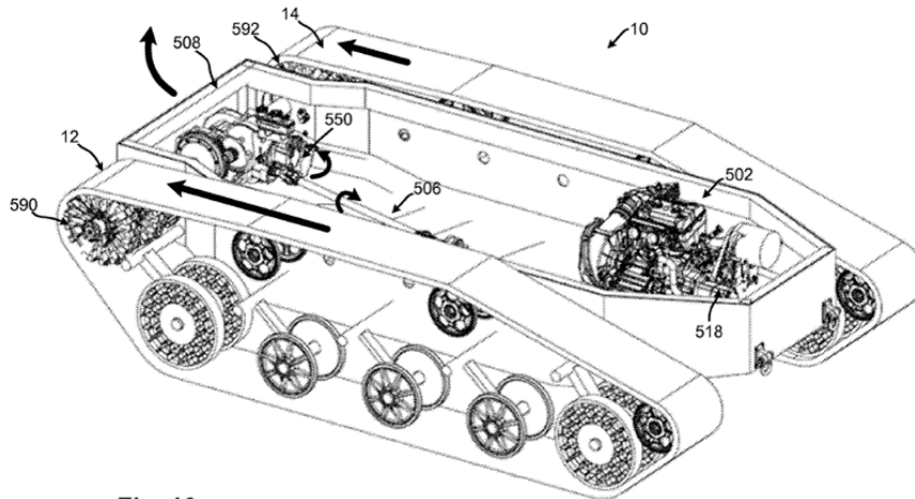


Fig. 16

EX1017, FIGS. 1 & 16.

***Tracks are not wheels.*** EX2004, ¶103.

Petitioner nevertheless asks the Board to equate the track-driving load wheels 75 in Bennett-II's track system with the '708 Patent's ground engaging wheels recited in claim 23. Pet., 35-36. A POSITA would not equate Bennett-II's track-driving load wheels 75, which are more commonly known in the art as "track driving sprockets," to the claimed wheels. EX2004, ¶104. Petitioner's argument is also contrary to the intrinsic evidence. The '708 Patent describes a ground engaging propulsion structure that comprises either tracks *or* wheels. EX1001, 2: 7-11. A POSITA would therefore interpret claim 23 to cover the *wheeled* embodiment—and not the tracked embodiment—due to claim 23's recitation of "a first front wheel and a first rear wheel" and "a second front wheel and a second

But even if the Board accepts the Petitioner's reading of Bennett-II's track-driving load wheels 75, Petitioner has failed to show anticipation because Bennett-II does not teach a buoyant element positioned between the load wheels 75 on each side of the vehicle body. *Id.*, ¶105.

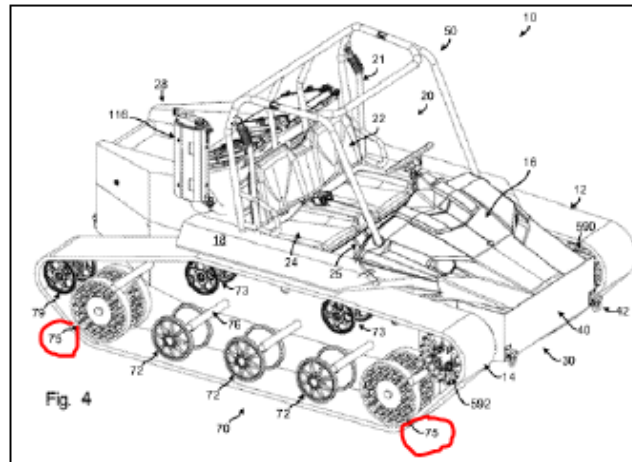
*Element [23.1]:* The vehicle includes a tub “configured to float.” EX1017, ¶[0051]; EX1018, ¶[0050]. Bennett-II describes that the tub 40 includes cross members 34 which separate the interior of the tub 40 into various chambers (shown below in green and blue). EX1017, ¶[0050]; EX1018, ¶[0049].



• • • •

Bennett-II describes using “foam material ... in order to fill volume voids and resist water ingestion during amphibious operation.” EX1017, ¶[0051]; EX1018, ¶[0050].

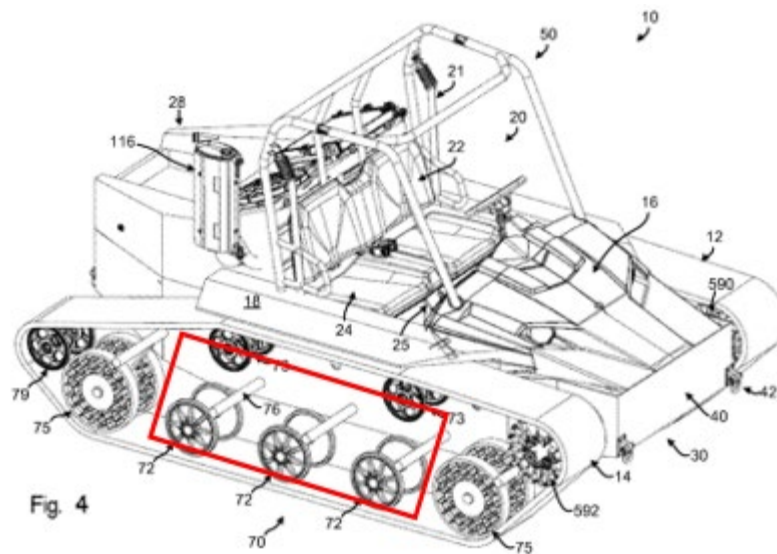
As shown when comparing FIG. 4 (shown below) to FIG. 7B, the buoyant chambers are arranged within the tub 40 in between the load wheels 75.



EX1017-EX1018, FIG. 4; *see also id.*, FIG. 5 (depicting load wheels on the other side of the vehicle).

Pet., 35-36 (red annotations added). It is unclear that Bennett-II even discloses foam filled buoyant chambers at the specific locations Petitioner and Dr. Winkel have identified in blue and green. EX2004, ¶109. But critically, Petitioner provides no explanation whatsoever as to how a first chamber (e.g., annotated above in blue)) ***is positioned between*** a first front load wheel 75 and a first rear load wheel 75 on the right side of the vehicle body and a second chamber (e.g., annotated above in green) ***is positioned between*** the second front load wheel 75 and the second rear load wheel 75 on the left side of the vehicle body. Petitioner's

expert only states that “[a] POSA would have understood that the load wheels are located toward the front end and rear end of the vehicle and the buoyant elements are located between them in the longitudinal direction.” EX1004, ¶189. But this fails to explain how the chambers (annotated in green and blue above) are located *between* Bennett-II’s load wheels 75, when the green and blue chambers are *inside* the vehicle body and therefore are not positioned in the space *between* the load wheels, which are on the *outside* of the vehicle body.



The claims do not merely require the buoyant elements to be aft of the front wheels and forward of the rear wheels as Petitioner seems to suggest. Nor would a POSITA interpret the first front wheel and the first rear wheel to be on opposite sides of the vehicle such that the space between them would extend diagonally across the vehicle. EX2004, ¶77. ***For the avoidance of doubt, the Patent Owner is not taking the position that the entire buoyant element must fit within the space between the front and rear wheels on each side of the vehicle body, but***

*surely some part of the buoyant element must be positioned in this space to*

*satisfy the claim language.* The record plainly shows that *no part* of the

“chambers” Petitioner has identified in Bennett-II occupy this space.

For at least this reason, Bennett-II fails to teach each and every element of claim 23 of the ‘708 Patent and thus fails to anticipate claim 23.

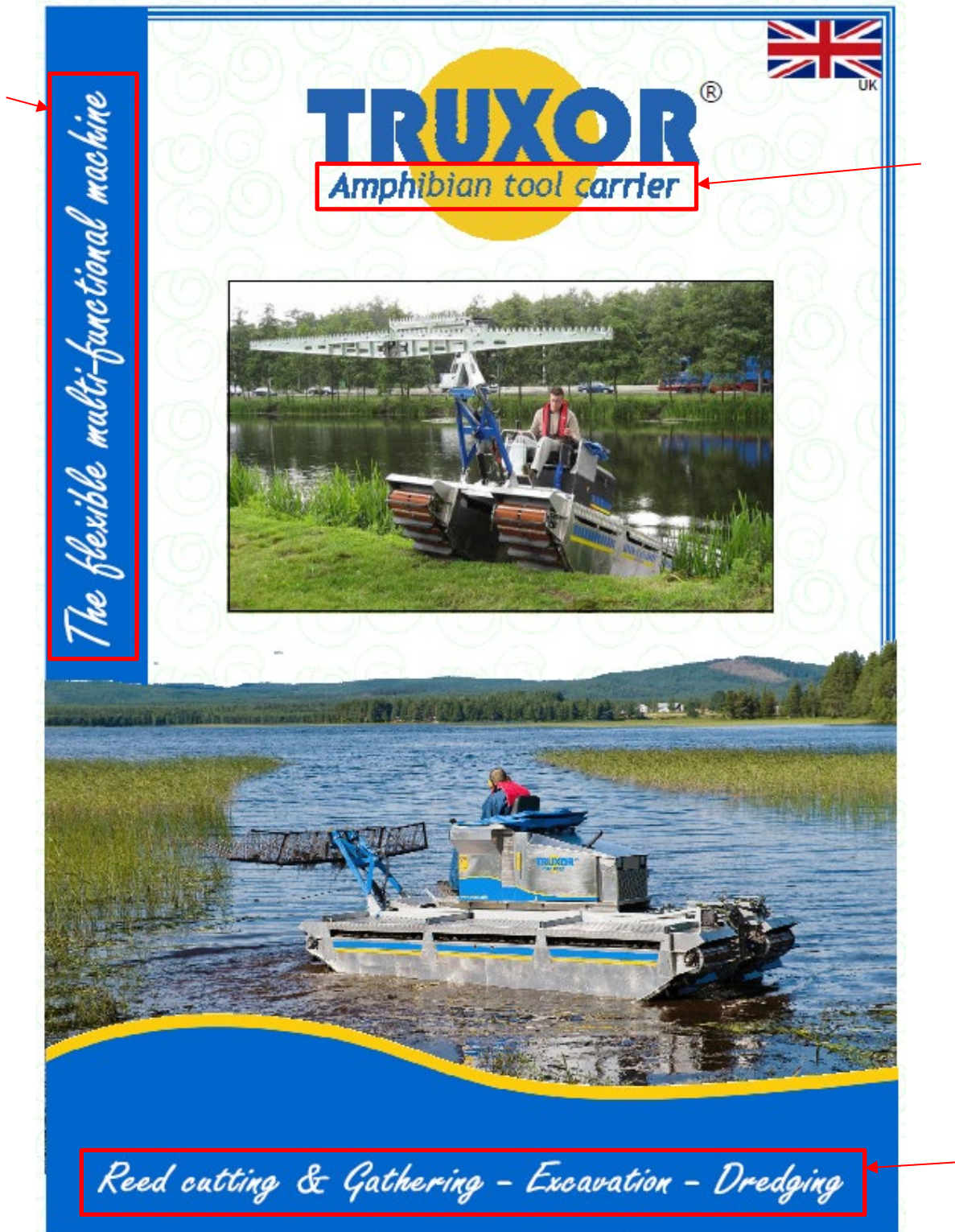
**X. GROUND 2: CLAIMS 1, 8–18, 21–28 and 35–38 ARE NOT OBVIOUS  
BASED ON TRUXOR IN VIEW OF YOON OR CARRIER**

**A. The Truxor Combination Fails to Disclose or Suggest a Liquid  
Manure Pump**

Challenged Claims 1 and 21 explicitly require “a liquid manure pump.”

Petitioner relies on Truxor to disclose these claim elements. Pet., 43-45, 52. But the Truxor publication does not teach or suggest either of them.

The Truxor vehicle is not a manure agitation vehicle and its marketing brochure does not teach or suggest that it is. The very cover of Truxor’s marketing brochure touts its vehicle as an “Amphibian tool carrier” and “The flexible multi-functional machine.” These multiple functions are listed along the bottom of the cover as “Reed cutting & Gathering – Excavation – Dredging”:



EX1006, 1 (annotations added). There are absolutely no references to manure, farm lagoons, or livestock farming in Truxor's marketing brochure. Nor does

Truxor's marketing brochure disclose that its dredge pump attachments pump  
manure:

Tools and accessories

## Dredge pumps



*The Doro Pump* is operated by a hydraulic motor and has a capacity of 10-40 m<sup>3</sup>/h. The Doro Pump is available with two types of feeds to the pump inlet: wheel feeding or screw feeding. The wheel feeder has a rotating wheel with horizontal cutters and vertical teeth which aerate the sediment and cut off roots to facilitate the feeding into the inlet of the pump. The rotating wheel gives a greater flow of sediment to the pump inlet when the sediment is soft.

When dredging harder sediments, screw feeding can give a more stable flow to the pump inlet. For sediment containing solid objects, e.g. stones, bits of wood, etc., screw feeding is recommended. The in-feed is important to give the pump an even flow of sediment, which can also be facilitated by knives mounted on the suction intake of the pump.

Suction dredging in pure sand is performed with a nozzle mounted on the intake of the pump. The Doro Pump is delivered with a mechanical bracket.

The Doro Pump can be delivered with a hydraulically run telescopic arm as an accessory which will increase the dredging depth and facilitate the manoeuvring.

Wheel feed



Screw feed



Suction mouthpiece



EX1006, 10. Instead, Truxor's documentation clearly states that the Doro  
pump is designed for pumping light sediments:

### The Doro Pump

Page 18

The Doro pump is designed for pumping light sediments and volatile sand. The Doro pump is supplied with a screw feed. The intake can be equipped with a suction nozzle when pumping sand or light floating sediments.

EX2004, ¶118 (providing highlighted excerpt of EX1007, p. 123).

Petitioner improperly attempts to have its expert **add** to the teachings of Truxor by explaining that the Doro Pump attachment provides an increased ability to pump manure and could readily pump liquid manure:

207. While liquid manure can be pumped by irrigation or water pumps, the Doro Pump provides an increased ability to pump manure of different forms and consistencies, including liquid manure, slurry, and semisolid manure, which have higher solids contents than liquid manure. *See supra* Section V.B.ii. Dredge systems were known in the art for pumping higher solid concentration manure, and the Doro Pump dredger could readily pump liquid manure. EX1037, 3; EX1052, 2; EX1060, 64; *see also supra* Section V.C.

EX1004, ¶207 (highlighting added). However, these conclusory statements are unsupported and are therefore insufficient to carry Petitioner’s burden. Dr. Winkel’s assertion that the Doro Pump “could readily pump liquid manure” has zero support in the Truxor literature, which does not teach or suggest using the Doro Pump to pump liquid manure. EX2004, ¶¶116-121. And Dr. Winkel fails to provide any discussion or analysis comparing the capabilities of the Doro Pump to liquid manure pumps. *Id.*

As a result, it cannot reasonably be said that the Truxor publication [EX1006] discloses a vehicle with “a liquid manure pump.”

**B. The Truxor Combination Fails to Disclose or Suggest Buoyant Elements Positioned Between the Front Wheel and Rear Wheel on Each Side of the Vehicle**

Independent claims 17, 21, and 23 require a first buoyant element positioned between a first front wheel and a first rear wheel and a second buoyant element positioned between a second front wheel and a second rear wheel.

The Truxor Combination fails to disclose these limitations. It is undisputed that Truxor discloses a vehicle with tracks as shown below. Pet., 41 (“Truxor describes tracks for maneuvering . . . .”); EX1004, ¶135 (noting that Truxor has a “tracked drive”).



EX1006, p. 3. Because Truxor discloses tracks rather than wheels, Truxor does not teach “a first front wheel and a first rear wheel” or “a second front wheel and a second rear wheel” as required by claims 17, 21, and 23. EX2004, ¶¶122-126.

Petitioner therefore asserts that a POSITA would substitute the tracks of

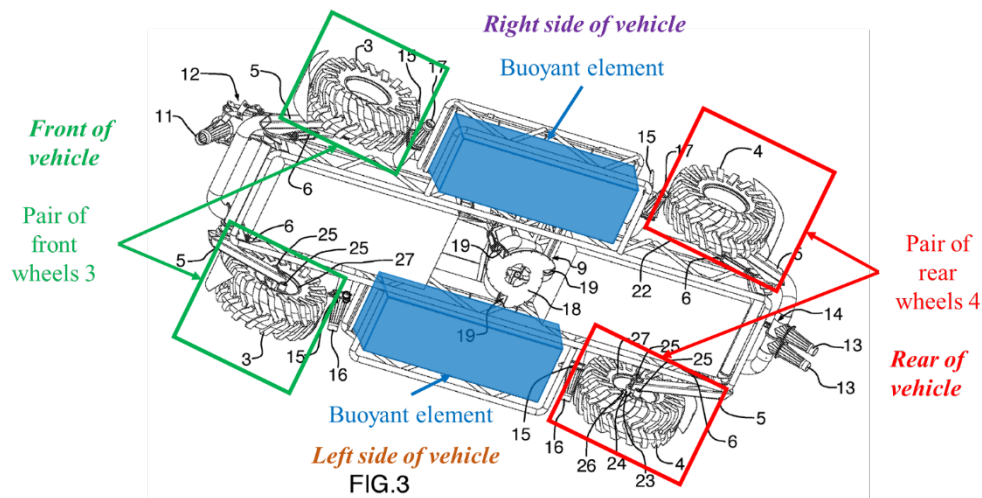
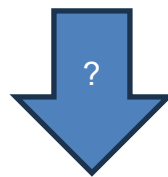
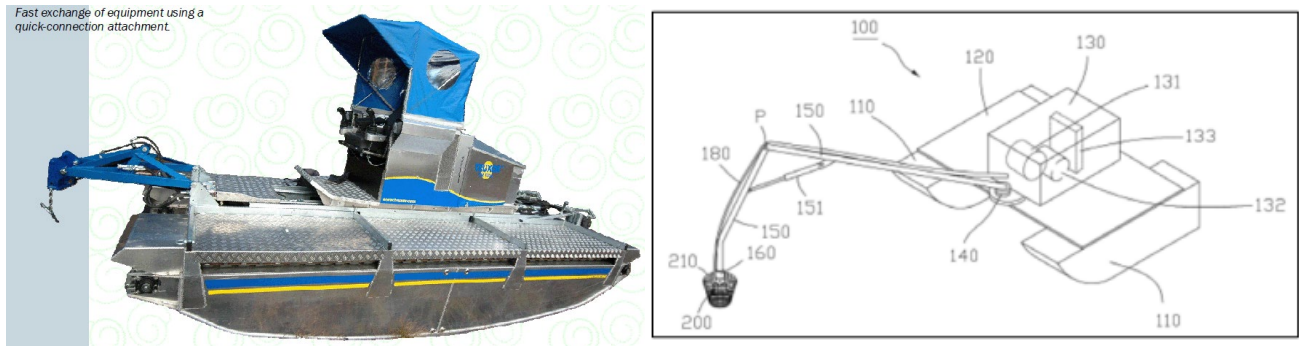
Truxor for wheels. Pet., 48. But even if Petitioner’s argument that a POSITA would be motivated to swap out Truxor’s tracks for wheels is accepted, the combination still fails to provide first and second buoyant elements that are positioned in the space between the front and rear wheels on each side of the vehicle, as required by claims 17, 21, and 23.

Citing the aluminum pontoons of Truxor’s vehicle body and the pontoons 110 disclosed in Yoon, Petitioner asserts that it would have been “natural” to arrange these pontoons between the front and rear wheels:

215. It would have been obvious to substitute the tracks of Truxor with the wheels of Yoon or Carrier. *Supra* Section VIII.C. A POSA would have understood that the natural location in which to arrange the wheels on the vehicle of Truxor would have been to position a pair of wheels toward the front and a pair of wheels toward the rear of the vehicle with each pair of wheels symmetrically arranged with one wheel on either side of the vehicle to promote vehicle stability. This arrangement would result in one pontoon being located between the right pair of wheels and another pontoon being located between the left pair of wheels.

EX1004, ¶215 (highlighting added); *see also* Pet., 48.

Contrary to Petitioner’s conclusory assertions, there is nothing to suggest that a POSITA would have considered the positional arrangement claimed for the buoyancy elements and wheels to be obvious, or that a POSITA would otherwise arrive at the claimed inventions (*e.g.*, as shown for FIG. 3 of the ‘708 Patent) from the generic discourse of SenwaTec and Yoon. EX2004, ¶¶127-133.



*Id.*, ¶129 (blue arrow annotation added).

The pontoons disclosed in Truxor and Yoon run the *entire length* of the vehicle body. *Id.*, ¶131. So wheels could not be added in front of and behind these pontoons without shortening the pontoons or extending the frame of the vehicle body out beyond the front and rear ends of the pontoons. *Id.* In either case, the

fore and aft stability of the vehicle would be negatively affected, which is why the pontoons in Truxor and Yoon extend entire length of the vehicle body. *Id.* This would discourage a POSITA from selecting the arrangement the Petitioner proposes and in fact would have reasons for selecting other arrangements. *Id.*

The record demonstrates that if Truxor were converted from tracks to wheels as Petitioner suggests, then the “natural location” for the pontoons would be outboard of the wheels rather than between them, because that is precisely what SenwaTec *discloses*. *Id.*, ¶132. SenwaTec offered its vehicle in both a track-equipped version and a wheeled version. *Id.* Notably, the wheeled version of the vehicle disclosed in SenwaTec included pontoons installed *outboard* of the wheels. *Id.*



A compact muscular vehicle with tracks



6-Wheel driven unit with stabilizer pontoons

EX1012, 1 (red annotations added). The record thus establishes that positioning Truxor’s or Yoon’s pontoons *outboard* of the wheels would be the “natural location” a POSITA would select based on the teachings of the prior art. EX2004, ¶132. The Truxor Combination is a clear case of Petitioner impermissibly using

the ‘708 Patent as a blueprint to arrive at the claimed subject matter.

**C. The Truxor Combination Fails to Disclose or Suggest the Claimed Combination of Elements, Which When Considered Collectively, Define an Amphibious Manure Lagoon Agitation Vehicle**

The Patent Owner has not claimed a general-purpose amphibious vehicle with various tool attachments like in Truxor. The Challenged Claims, when considered as a whole, define an amphibious vehicle that is specially adapted for the particular purpose of disrupting the crust and recirculating liquid manure in a manure lagoon, where the vehicle can drive into, out of, and navigate the manure lagoon by wireless remote control. EX2004, ¶134.

As the CRU explained at the conclusion of reexaminations of the ‘557 and ‘425 Patents, “the prior art does not reasonably show an amphibious vehicle that can be mobile on both land and liquid that pumps manure.” EX2033, 8, EX2031, 6 (emphasis added). The Truxor Combination is no different because the Truxor marketing brochure does not reasonably convey to a POSITA a vehicle that floats in, moves in, and/or pumps manure. EX2004, ¶135. On its face, the Truxor marketing brochure [EX1006] describes a manned amphibious vehicle for weed removal and dredging. *Id.* Absent impermissible hindsight, a strict combination of Truxor with Yoon or Carrier would result in a remote-controlled amphibious weed clearing and dredging vehicle – not a remote-controlled amphibious manure lagoon pumping/agitation vehicle. *Id.*, ¶136. This is not just a difference in the intended

application, but a different collection and arrangement of components and systems.

*Id.*

**D. Petitioner Has Failed to Carry Its Burden of Demonstrating That a POSITA Would Have Had a Reasonable Expectation of Success in Combining Truxor With Yoon or Carrier**

Petitioner argues a POSITA would have had a reasonable expectation of success in adding Yoon or Carrier’s remote control functionality to Truxor because a fourth reference, Melnikov [EX1027, EX1028], “describes adding remote control to Truxor-like amphibious sludge-pumping vehicles.” Pet., 40. The problem with this argument however is that Petitioner grossly misrepresents what Melnikov teaches. It does not teach adding remote control to Truxor or a similar vehicle – in fact Melnikov teaches the exact opposite.

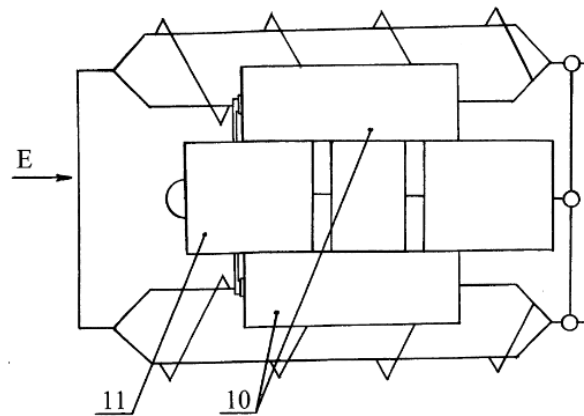
Melnikov only discusses Truxor in its “Background” section as prior art and notes the drawback that it requires an onboard operator:

**Truxor** — a multifunctional amphibian machine manufactured by the Swedish company *Dorotea Mekaniska AB* is known (www.doroteamekaniska.se). The amphibian is a pontoon machine on caterpillar tracks operated by one operator. On the machine, an oil skimmer, cultivator, excavator, rakes may be quickly mounted as hydraulic attachments. The machine is easily placed on a trailer, which makes it mobile and reduces transport costs. However, **the disadvantages of the machine may include the presence of an operator located on the machine itself**, which limits the use thereof in conditions dangerous for humans.

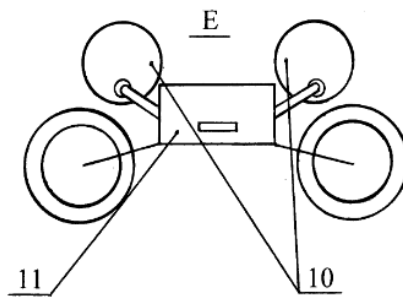
EX1028, 4. But Melnikov does not suggest adding remote control to Truxor.

EX2004, ¶¶151-154. Instead of doing that, Melnikov designed a radically different remote-controlled vehicle with a dual-screw propulsion system that looks nothing

like Truxor:



Фиг. 11



Фиг. 12

EX1027, 7. Melnikov clearly knew of the Truxor vehicle and clearly knew that its requirement for an onboard operator was a drawback. EX2004, ¶154. If it were both obvious and reasonably feasible to add remote control functionality to Truxor, that is precisely what Melnikov would have done. *Id.* But Melnikov didn't do that and instead created a device that would be far simpler to operate as a remote-control vehicle – and one that does not include a submersible pump on the end of a boom arm. *Id.*

Petitioner fails to address this glaring problem. Truxor's design places a priority on visual observation of its pump attachments, given the elevated operator's seat:



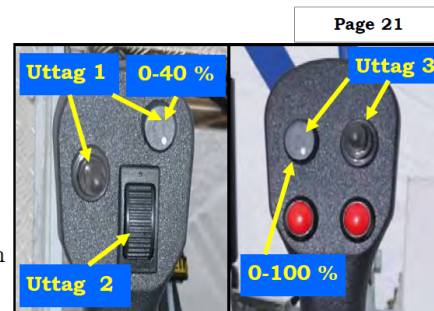
EX2004, ¶145 (annotating EX1007, 60). It would be difficult or impossible to position and control the dredge pump mounted to the end of Truxor's boom-arm from a distance. *Id.*, ¶¶144-149

Nor has Petitioner's expert shown that Truxor's manual controls lend themselves to remote control. Truxor's operator's manual discloses two multi-

function joysticks that are used to control the positioning and operation of the submersed pump:

### The Doro Pump

The Doro pump is regulated with the help of crossbar switches. The left joystick adjusts the screw feed = socket 1. The rotation can be max. 40 %. The upward and downward movement of the telescope extension is controlled using socket 2 (accessory). The right joystick with socket 3 regulates the rotation speed of the pump, which can be 100 % in most cases.

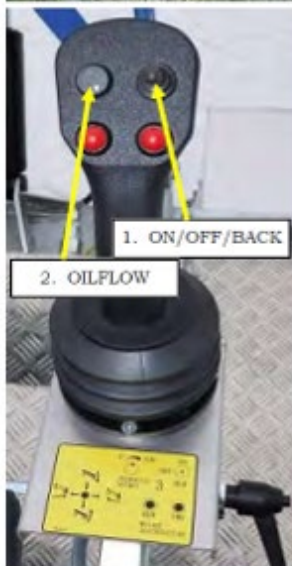


EX1007, 126.



The digging arm may only be moved laterally when the outriggers touch the bottom. The lateral scope of the digging arm with a mounted Doro pump is 4 metres but for safety reasons only a 2-metre range can be used. This means that the permissible working width from the centre is 2 metres in each direction.

**Warning!** There is a tilting risk if the maximum range is used.



Hydraulic-driven tools mounted on Doro Digger require different oil flows.

Socket 3 that determines the oil flow/pressure to the tools is regulated using the right joystick. The switch (1) controls on/off/back.

The knob (2) adjusts the oil flow. Turn the control clockwise to end position for maximum oil flow (100%).

The rotation speed of the diesel motor also affects the maximum flow of the hydraulic pump. Higher rotation speed is required when many hydraulic functions are running at the same time.

Recommended oil flows for the different tools (2):

Doro Pump V380-100 %

Slaghack Orsi 80-100 %

Doro Cutter ESM 1900 40-60 %

Doro Mill 50-70 %



EX2004, ¶139 (providing annotation of EX1007, 128-129). Hydraulic controls of this type provide tactile feedback to the onboard operator and the difficulties with converting these types of hydraulic controls to wireless remote control is well documented and would have been known to a POSITA. EX2004, ¶140.

Petitioner's expert has not shown or even attempted to explain how remote control over the various functions could be implemented, how a POSITA could overcome these difficulties when making this combination, or that the resulting combination would actually work in the manure lagoon environment. *Id.*, ¶141. Real-world evidence points away from this combination. Even today, some ten years later, there is no evidence that a remote-control option has been added to the Truxor vehicle. *Id.*, ¶¶142-146.

Also, as highlighted above, Truxor’s operator’s manual warns of a known “tilting risk.” EX1007, 128. Petitioner’s expert acknowledged Truxor’s tilting (*i.e.*, rollover) risk in the proceedings for the ‘425 and ‘835 Patents.

|                                                                                           |                                                                                    |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <b>Potential Rollover Risk</b><br>EX1006, 5; <i>see also</i> EX1020-EX1021, 1; EX1022, 8. | <b>Cold Weather/Hypothermia</b><br>EX1006, 5.                                      |
|          |  |

EX2004, ¶147 (citing IPR2024-00004, EX1004, ¶249; IPR2023-01161, EX1004, ¶257). This tilting risk would dissuade a POSITA from adding remote-control functionality to Truxor because manure lagoons typically have steep embankments and remote-control is less precise and it is more difficult for the operator to perceive tipping and counter-steer. *Id.*, ¶148. Petitioner’s expert completely overlooks these issues from a reasonable expectation of success standpoint. *Id.*

**E. Petitioner’s Combination of Truxor with Carrier or Yoon to Arrive at the Required Claim Limitations is Based on Impermissible Hindsight**

Combining Truxor with Carrier or Yoon to arrive at the limitations of the Challenged Claims would require a POSITA to find multiple motivations to make a completely non-sensical series of modifications to Truxor – when the failure to do so for any specific one would destroy the combination. EX2004, ¶156.

- First, a POSITA would need to find motivation to re-design or replace Truxor's Doro *dredge* pump so that it could be effectively used as a liquid *manure* pump – even though there is no teaching or suggestion of manure pumping applications in Truxor's literature.
- Second, a POSITA would need to find motivation to replace Truxor's tracks with front and rear wheels on each side of the vehicle – even though the tracks work just fine for Truxor's purpose.
- Third, a POSITA would need to find motivation either (a) chop off length from Truxor's pontoons, which run the entire length of the vehicle, to shorten them, or (b) extend the length of the vehicle – all in order to position a pontoon between the new and unnecessary front and rear wheels on each side of the vehicle. And a POSITA would need to do all of this even though the prior art teaches positioning the pontoons outboard of the wheels, which is this most logical solution.
- Fourth, a POSITA would need to find motivation to add wireless remote control to Truxor, even though it would be extremely difficult to convert Truxor's complex joysticks and hydraulic controls to wireless remote control – only to end up with a pumping vehicle that is difficult if not impossible to control / operate from a remote

location due to the inability to observe the positioning of Truxor's boom arm and therefore the pump.

*Id.*

A POSITA would only arrive at Petitioner's Truxor Combination by using the Challenged Claims as blueprint. *Id.*, ¶157.

**XI. GROUND 3: CLAIMS 1, 8–18, 21–28, AND 35–38 ARE NOT OBVIOUS BASED ON SENWATEC IN VIEW OF YOON OR CARRIER**

**A. Numerous Evidentiary Deficiencies Preclude The Board From Considering the Lonnemann Declaration [EX1013] and its Exhibits [EX1030] and [EX1031]**

Petitioner unsuccessfully attempts to add to the teachings of the SenwaTec's reference [EX1012] through the Lonnemann Declaration [EX1013] and its constituent Exhibits [EX1030] and [1031]. The Board cannot consider these materials due to a number of evidentiary problems.

Lonnemann claims that one of SenwaTec's customers in Germany, UD Umweltdienste, *used* the SenwaTec vehicle "for pumping manure and agitating manure lagoons":

5. **One of SenwaTec's customers of the Amphi-King was a company called UD Umweltdienste GmbH ("UD Umweltdienste"). UD Umweltdienste used the Amphi-King for pumping manure and agitating manure lagoons.**

EX1013, ¶5 (annotations added). Invalidity challenges based on evidence of prior public use are ineligible for consideration in IPR proceedings under 35 U.S.C. §

311(b). But even more problematic is the fact that Lonnemann's statements are wholly unsupported and unsubstantiated.

Lonnemann claims that a news article published prior to the Patent Owner's filing date described the manure pumping capabilities of SenwaTec's vehicle:

6. SenwaTec's amphibious vehicle products and their associated manure pumping capabilities were the subject of news publications prior to August 19, 2013. See e.g., Exhibit A (accessible at <https://www.hna.de/lokales/rotenburg-bebra/frosch-vorbild-1376974.html>). SenwaTec appreciated its products being published in news publications because they helped to raise awareness for SenwaTec's products.

EX1013, ¶6 (annotations added). But the news article attached as Exhibit A to Lonnemann's Declaration does not support his affidavit. The article [English translation at EX1030] contains no references to manure or livestock farming and instead suggests that the "sewage pond" the SenwaTec vehicle was being used to *dredge* was a decommissioned municipal wastewater treatment pond for "toilet waste":

This idea is not that far off: "After all, it's not fecal matter that's in the sewage sludge," explains the vehicle operator of the frog-like machine, "it's just dead bacteria that previously ate the fecal matter." Thus, what floats in the pond is anything but toilet waste.

EX1030, 3 (annotations added). So Exhibit A [EX1029-30] does not actually teach the SenwaTec vehicle being operated in “manure” as Lonnemann incorrectly claims.

Exhibit B [EX1031] to the Lonnemann Declaration, which is a collection of screen shots from a video, does not fare any better. The YouTube page for this video (*see* link in footnote<sup>6</sup>) lists an upload date of ***November 29, 2016*** – that’s more than ***three years after the Patent Owner’s priority date:***

---

<sup>6</sup> <https://www.youtube.com/watch?v=ecnlfMf7CH4&t=1s> [EX2032].



EX2004, ¶186 (providing annotated excerpt of EX2032, 1). As a result, this video cannot be considered as a printed publication or evidence of the general knowledge in the art in 2013.

Petitioner attempts to use Lonnemann’s declaration to demonstrate that the video was “publicly accessible” in 2012:

18. The video of Exhibit B was publicly accessible on the internet in 2012.

19. The video of Exhibit B was distributed by UD Umweltdienste to the public prior to August 19, 2013, including in 2012. For example, the video of Exhibit B was distributed by UD Umweltdienste to SenwaTec at least as early as May 3, 2012.

EX1013, ¶¶18-19 (annotations added). But the Lonnemann Declaration does not lay sufficient foundation to establish that Lonnemann has personal knowledge that the video was publicly accessible on the internet in 2012. Lonnemann and his company SenwaTec admittedly did not create the video – UD Umweltdienste did. *Id.*, ¶15. No URL, screenshot, or other corroborating evidence is provided showing that this video was actually published on the internet before the video was published on YouTube in November of 2016 – well after the Patent Owner’s priority date. Indeed, Lonnemann does not state that he personally accessed this video on the internet in 2012. Lonnemann does not state that he personally posted this video on the internet in 2012 or that his company SenwaTec posted this video on the internet in 2012. Petitioner bears the burden of proving public accessibility and the unsubstantiated statements found in the Lonnemann Declaration are not sufficient. *See, e.g., Salpeter v. ARP Manufacturing, LLC*, IPR2019-01382, Paper 13, 2019 Pat. App. LEXIS 13146, \*16-17 (PTAB Dec. 27, 2019) (rejecting a

petitioner's reliance on a video to supplement a product manual in attempted §102 and §103 rejections where no link or verifiable publication date was provided).

Also, the mere fact that a customer (UD Umweltdienste) made a video using a manufacturer's product and sent that video to the manufacturer (SenwaTec) does **not** demonstrate public accessibility. Lonnemann has not testified to any disclosure of the video by UD Umweltdienste to anyone other than SenwaTec (*i.e.*, anyone outside the customer-manufacturer relationship). There is simply no evidence here demonstrating that UD Umweltdienste's act of providing the video to SenwaTec was made outside of a private exchange (*i.e.*, that the video demonstrates **common** knowledge in the art).

Finally, the Board must also disregard this video because it includes on-screen text in a foreign language and the Petitioner has not provided an English-language translation in violation of 37 C.F.R. §42.63:

**§ 42.63 Form of evidence.**

**(a) Exhibits required.** Evidence consists of affidavits, transcripts of depositions, documents, and things. All evidence must be filed in the form of an exhibit.

**(b) Translation required.** When a party relies on a document or is required to produce a document in a language other than English, a translation of the document into English and an affidavit attesting to the accuracy of the translation must be filed with the document.

37 C.F.R. §42.63(b) (annotations added).

**B. The SenwaTec Combination Fails to Disclose or Suggest a Liquid Manure Pump**

Challenged Claims 1 and 21 explicitly require “a liquid manure pump.”

Petitioner relies on SenwaTec to disclose these claim elements. Pet., 59-62, 71; EX1004, ¶¶246, 267. But the SenwaTec vehicle is not advertised as a manure agitation vehicle. EX2004, ¶¶161-162. SenwaTec’s marketing brochure prominently advertises at the top of the first page its expertise in the following areas “Ditch Cleaner And Slope Mowers,” “Moving and Clearing Boats,” “Weed Harvesters,” “Amphibious Vehicles,” and “Cutter Suction And Excavating Dredges”:



**40 YEARS OF EXPERIENCE IN THE DEVELOPMENT OF:**

- DITCH CLEANER AND SLOPE MOWERS
- MOWING AND CLEARING BOATS
- WEED HARVESTERS
- AMPHIBIOUS VEHICLES
- CUTTER SUCTION AND EXCAVATING DREDGES

**SCHRÖER ENVIRONMENT AND WATER TECHNOLOGY**  
**Light Amphibious Boat/Vehicle**  
***"Amphi-King®" SWT-AB380***

- ❖ Light and strong aluminum construction, approximately 2480 kg (5,500 lbs.), without attachments
- ❖ 6-wheel drive or track drive system (track drives are patented system)
- ❖ Forward crane ready for many attachments with available power for up to 50 KW (67 HP)
- ❖ Heavy duty Diesel engine certified to the latest standards of Tier IV emission and fuel consumption
- ❖ Optimal configuration of power requirements and hydraulic unit (less operating costs)
- ❖ Low ground pressure and good clearance on terrain, marches and swamps during on-land drives
- ❖ Shallow vessel draft with, low center of gravity for safe on-water maneuvering
- ❖ High working range and wide swing radius of the hydraulic crane arm, ready for many attachments
- ❖ Operating controls conveniently placed and adjustable to suite operator's seat position
- ❖ Vehicle construction & safety configuration according to European & International standards



**A compact muscular vehicle with tracks**  
With a powerful centrifugal pump and 8" suction- and 6" discharge ports, hydraulically driven, delivering 40 kW of pumping power



**6-Wheel driven unit with stabilizer pontoons**  
With a powerful centrifugal pump and 8" suction- and 6" discharge ports, hydraulically driven, delivering 40 kW of pumping power



**- Ergonomic arrangement of the operating and monitoring elements**



**- A compact transport package on the tilt deck trailer**

EX1012, 1 (annotations added); *see also* EX2004, ¶161. There is absolutely no reference to manure, farm lagoons, or livestock farming in SenwaTec's marketing

brochure. EX2004, ¶162. Nor does SenwaTec's marketing brochure disclose that its dredge pump attachments may be used to pump manure. *Id.*

Petitioner improperly attempts to use Exhibit A [EX1029-30 – the Berky news article] and Exhibit B [EX1031 – screenshots from the UD Umweltdienste video] to **add** to the teachings of SenwaTec's marketing brochure [EX1012]:

SenwaTec teaches an amphibious vehicle with multiple attachments, including a dredging pump. EX1012, 1-2. SenwaTec is used in ponds, lakes, and streams. *Id.* A POSA would have understood that Amphi-King (the product described in SenwaTec) is analogous art, as it was used for pumping liquid manure in manure lagoons, as described in pre-2013 publications. EX1029-EX1031; *see also*

Pet., 55 (annotations added). But as explained above – the video [EX1031] is a 2016 publication and neither the video [EX1031] nor the Berky newspaper article [EX1030] show or describe the SenwaTec vehicle pumping *liquid manure*.

Even if EX1030 and EX1031 are considered, sewage ponds (i.e., municipal wastewater ponds) and manure lagoons are very different. EX2004, ¶35. A large amount of the solids and debris found in manure lagoons is bedding material, such as straw and sand, that sticks to the manure and gets washed into the manure lagoon. *Id.* Human waste is also treated at a sewage treatment plant before going into a storage pond and therefore has much less debris than a manure lagoon. *Id.*

Municipal wastewater treatment ponds are typically much smaller than manure lagoons. A POSITA would appreciate that the problems associated with maintaining a manure lagoon are different than those that arise in municipal wastewater treatment facilities. *Id.*

The conclusory statements found in the cited paragraphs of the Winkel Declaration [EX1004, ¶237] rely on this same flawed evidence and is at odds with the claim language itself, which expressly requires a liquid manure pump as opposed to a generic or general-purpose pump. EX2004, ¶74. As a result, Petitioner has not carried its burden of demonstrating that the SenwaTec Combination discloses liquid manure pump.

**C. The SenwaTec Combination Fails to Disclose or Suggest Buoyant Elements Positioned Between the Front and Rear Wheels on Each Side of the Vehicle**

Independent claims 17, 21, and 23 of the ‘708 Patent all require a first buoyant element positioned between a first front wheel and a first rear wheel and a second buoyant element positioned between a second front wheel and a second rear wheel.

Petitioner tries to rely on SenwaTec’s “stabilizer pontoons” to disclose the first and second buoyant elements required by Claims 17, 21, and 23. Pet., 64-65. 67, 69, 71. But Petitioner is *wrong* that “SenwaTec discloses that the metal stabilizer pontoons are situated between the front and rear wheels on each side of the vehicle.”

*Id.* The SenwaTec reference clearly depicts pontoons that are installed ***outboard of the wheels.***



EX1012, 1 (annotations added. There is simply **no** disclosure in SenwaTec of the stabilizer pontoons being **situated between** the front and reel wheels on each side of the vehicle. EX2004, ¶¶167-170.

**D. The SenwaTec Combination Fails to Disclose or Suggest The Claimed Combination of Elements, Which When Considered Collectively, Define an Amphibious Manure Lagoon Agitation Vehicle**

The claims are not directed to a general-purpose amphibious vehicle with various tool attachments like SenwaTec's vehicle, but rather define an amphibious vehicle that is specially adapted for the particular purpose of disrupting the crust and recirculating liquid manure in a manure lagoon, where the vehicle can drive into, out of, and navigate the manure lagoon by wireless remote control. EX1001, 8:5-28. SenwaTec's marketing brochure [EX1012] describes a manned amphibious vehicle for weed removal and dredging, so absent impermissible hindsight, a strict combination of SenwaTec with Yoon or Carrier would result in a

remote-controlled amphibious weed clearing and dredging vehicle – not a remote-controlled amphibious manure lagoon agitation vehicle. EX2004, ¶¶171-173. This is not just a difference in the intended application, but a different collection and arrangement of components and systems. *Id.*, ¶173.

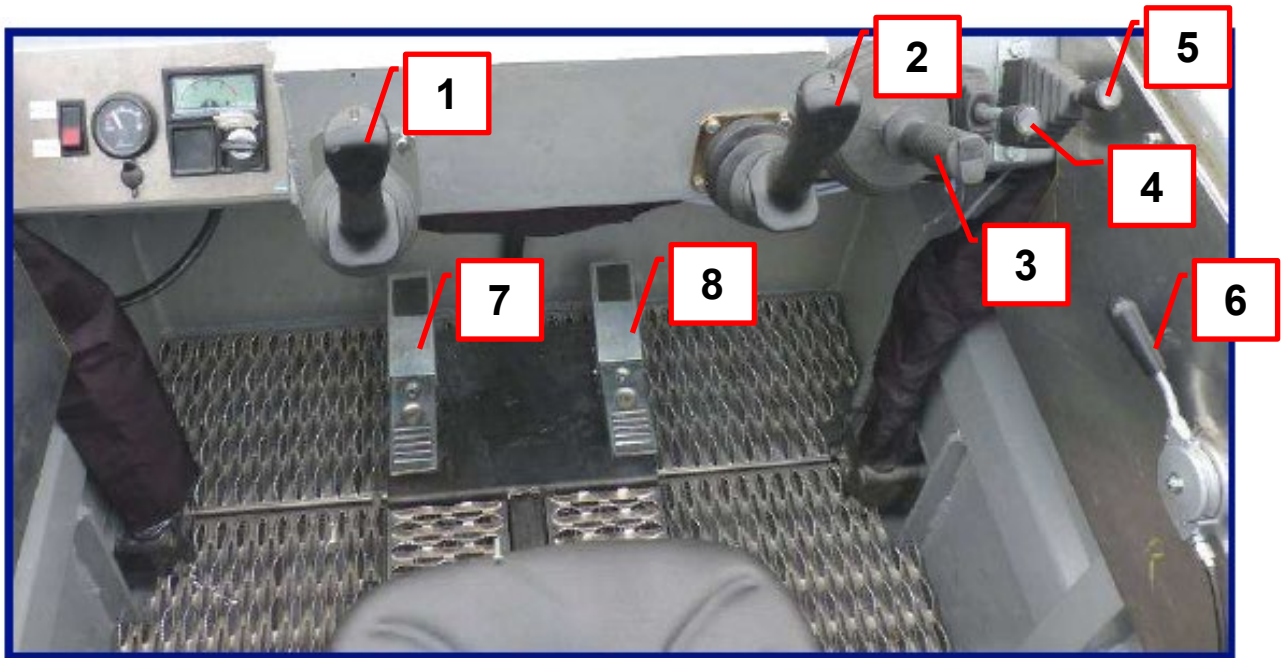
**E. Petitioner Has Failed to Carry Its Burden of Demonstrating That a POSITA Would Have Had a Reasonable Expectation of Success in Combining SenwaTec With Yoon or Carrier**

The Petition is fatally deficient by failing to demonstrate that a POSITA would have had a reasonable expectation of success in achieving the claimed invention through a combination of SenwaTec with Yoon or Carrier.

Like Truxor, the amphibious vehicle disclosed in SenwaTec and its tool attachments are designed to be operated by an on-board operator. SenwaTec therefore fails to teach the three enumerated wireless remote-control limitations of the Challenged Claims. Citing Melnikov, Petitioner asserts that a POSITA would **add** wireless remote-control functionality to the amphibious vehicle disclosed in SenwaTec in view of the remote-control teachings of Yoon or Carrier. Pet., 55-59. But Petitioner's reliance on Melnikov is misplaced. As explained above, if it was easy to add remote-control to a vehicle like that disclosed in Truxor or SenwaTec, Melnikov would have done that instead of creating a radically different vehicle to add remote-control to. EX2004, ¶¶150-155. Even today, some ten years later,

there is no evidence that a remote-control option has been added to the Truxor or SenwaTec vehicles. EX2004, ¶180.

The vehicle disclosed in SenwaTec has at least 8 different control interfaces – 5 separate joysticks, 2 foot pedals, and 1 hand-lever:



EX2004, ¶177 (adding annotations to EX1012, 1). Petitioner has not carried its burden of showing that a POSITA would have had a reasonable expectation that all these controls, which must be operated by both hands and both feet, could successfully be carried over to wireless remote-control without significant effort and adaptation. EX2004, ¶¶178-179.

Moreover, the photographs in SenwaTec’s marketing brochure suggest to a POSITA that remote-control of SenwaTec’s pumping functionality from a distance would be a **major problem** given that the operators in the photographs are

**STANDING UP** to get a better view of the submerged pump even though the operator's seat can't be more than 10 feet from the pump:



EX2004, ¶184 (providing annotated excerpts of EX1012, 2). This reinforces what a POSITA would readily appreciate – it would be difficult if not impossible to control and operate this type of vehicle and pump (i.e., those disclosed in SenwaTec or Truxor) from a remote location. EX2004, ¶185. A POSITA would not have a reasonable expectation of success in adding remote-control to SenwaTec in view of this knowledge. *Id.*, ¶¶185-188.

**F. Petitioner’s Combination of Truxor with Carrier or Yoon to Arrive at the Required Claim Limitations is Based on Impermissible Hindsight**

Combining SenwaTec with Carrier or Yoon and then further modifying the combination to arrive at the limitations of the Challenged Claims would require a POSITA to find multiple motivations to make a completely non-sensical series of modifications – when the failure to do so for any specific one would destroy the combination. EX2004, ¶189.

- First, a POSITA would need to find motivation to re-design or replace SenwaTec’s *dredge* pump so that it could be effectively used as a liquid *manure* pump – even though there is no teaching or suggestion of *manure* pumping applications in SenwaTec’s literature.
- Second, a POSITA would need to find motivation to relocate SenwaTec’s stabilizer pontoons – which are *outboard* of SenwaTec’s wheels – to be positioned between the front and rear wheels on each

side of the vehicle, which is nonsensical given that the stabilizer pontoons would have to be dramatically shortened to allow the stabilizer pontoons to be positioned between the wheels on each side of the vehicle and would provide less stability by virtue of being made smaller and being positioned closer to the centerline of the vehicle. And a POSITA would need to do all of this even though stabilizer pontoons in SenwaTec are already positioned at their most logical location.

- Third, a POSITA would need to find motivation to add wireless remote control to SenwaTec, even though it would be extremely difficult to convert SenwaTec's myriad of joysticks and foot controls to wireless remote control – only to end up with a pumping vehicle that is difficult if not impossible to control / operate from a remote location due to the inability to observe the positioning of Truxor's boom arm and therefore the pump.

*Id.*

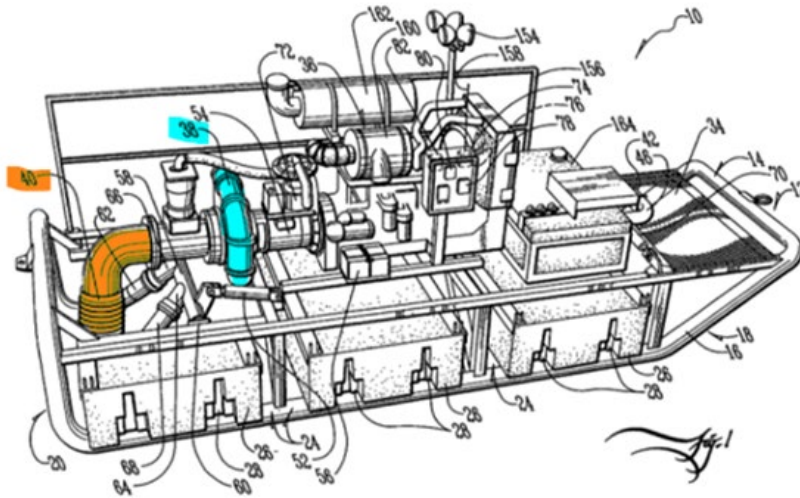
A POSITA would only arrive at Petitioner's SenwaTec Combination by using the Challenged Claims as blueprint. *Id.*, ¶190.

**XII. GROUND 4: CLAIMS 1, 8-18, 23-28 AND 35-38 ARE NOT OBVIOUS  
BASED ON PUCK IN VIEW OF BRYHAM**

**A. The Puck-Bryham Combination Does Not Disclose or Suggest the  
Liquid Manure Pump Recited in Claim 1**

Independent claim 1 recites “the liquid manure pump comprising a *bottom fluid inlet configured to be immersed in the liquid manure when the vehicle is floating ... the liquid manure pump comprising a housing with the bottom fluid inlet in the housing*” (emphasis added).

Petitioner incorrectly argues that the “housing” of the liquid manure pump 38 disclosed in Puck includes the “intake pipe 40.” Pet., 79-80. But Puck describes the intake pipe 40 as a separate component that is not part of the slurry pump 38:



EX2004, ¶196 (providing annotated FIG. 1 from Puck [EX1014]).

The written description in Puck further demonstrates that the Petitioner's position is untenable. EX2004, ¶197. For example, paragraph [0026] of Puck describes the slurry pump 38 as being "coupled to" the downwardly directed intake pipe 40 and that intake pipe 40 may be extensible:

[0025] Coupled to the power source (36) is a liquid manure pump such as a slurry pump (38). In the preferred embodiment, the slurry pump (38) is a Cornell Redi-Prime centrifugal pump capable of handling both solid and liquid material. The slurry pump (38) is preferably designed to move between one thousand and twenty-four thousand liters of material per minute, more preferably between eight thousand and twenty thousand liters of material per minute, and most preferably about sixteen thousand liters of material per minute.

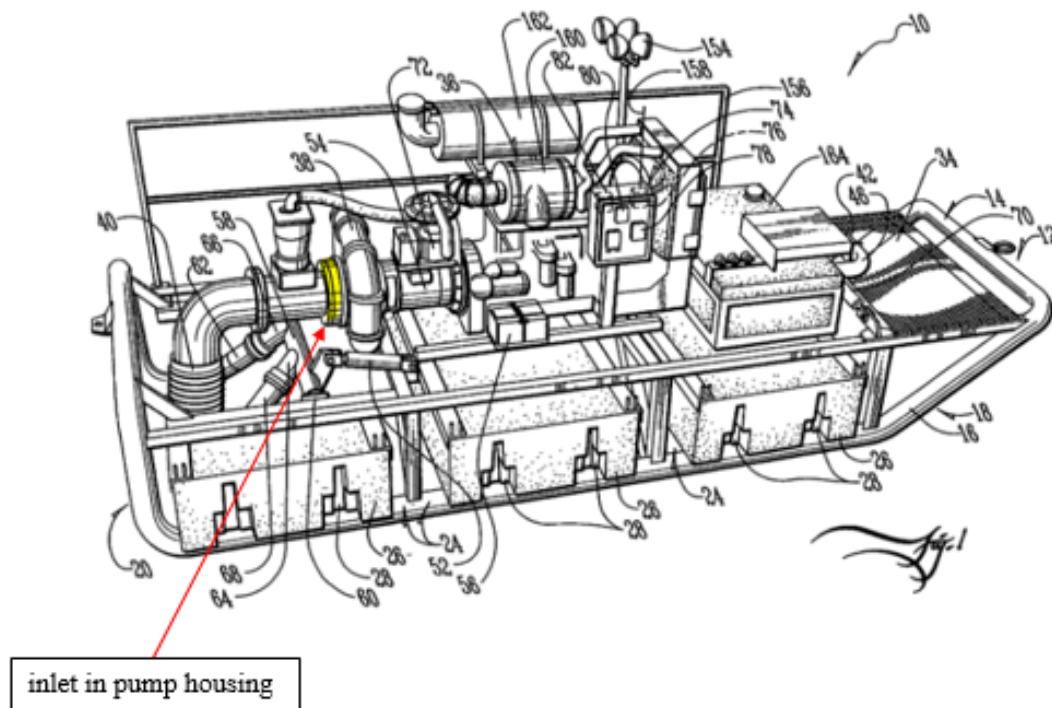
[0026] The slurry pump (38) is coupled to a liquid manure intake, such as a slurry intake, which is a downwardly directed intake pipe (40) in the preferred embodiment and is capable of handling manure crust, supernatant, sludge and the combined slurry. (FIGS. 1 and 4). If desired, the intake pipe (40) may be extensible to adjust the depth of the intake pipe (40). The intake pipe (40) is constructed to extend about twenty-four inches below the surface of the lagoon (22), but may be extended or retracted to any desired depth, including the entire depth of the lagoon (22).

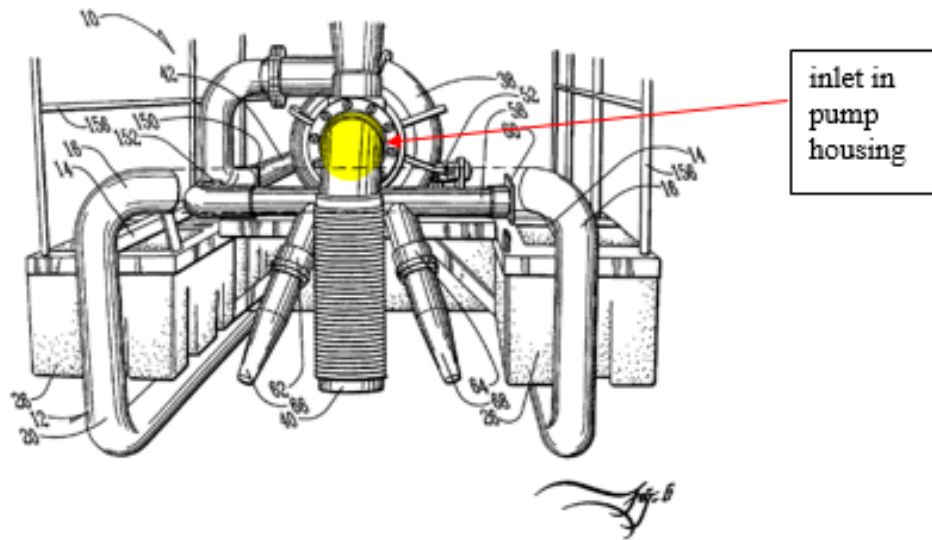
[0027] Coupled to the slurry pump (38) by a transport pipe (42) is a first slurry output (44). (FIG. 5). The first slurry output (44) is an angled pipe (46) pivotably coupled to the transport pipe (42). Releasably coupled to the angled pipe (46) is a tapered liquid manure nozzle (48) to increase the velocity of slurry (50) passing through the nozzle (48). (FIGS. 4-5). If desired, different sizes and configurations of nozzles (48) may be coupled to the angled pipe (46) to adjust the direction and velocity of slurry (50) exiting through the first slurry output (44). Coupled between the angled pipe (46) and the frame (14) is a steering control hydraulic cylinder (52). The hydraulic cylinder (52) is coupled to a hydraulic pump (54) that, in turn, is coupled to a 12-volt battery (56). (FIGS. 1 and 5).

EX2004, ¶197 (providing annotated excerpt of Puck [EX1014, ¶25]).

The “intake pipe 40” is no more a part of the slurry pump 38 than the “transport pipe 42,” which is also described as being “coupled to” the slurry pump 38. EX2004 ¶197. In view of this disclosure, the intake pipe 40 of Puck cannot be considered part of the “housing” of the liquid manure pump 38. Because the intake pipe 40 in Puck is a separate conduit it cannot define a “*bottom fluid inlet in the housing*” of the slurry pump 38 as required by the language of claim 1. *Id.*, ¶¶197-198.

Instead, Puck discloses a slurry pump 38 with an inlet that is positioned in the rear side of the pump housing:





EX2004, ¶199 (providing annotated FIGS. 1 and 6 of Puck [EX1014]).

A POSITA would not consider this rear inlet in Puck’s pump housing 38 to be “a bottom fluid inlet” as required by the language of claim 1 because it is not positioned at the bottom of the slurry pump 38 and it is not “configured to be immersed in the liquid manure when the vehicle is floating.” *Id.*

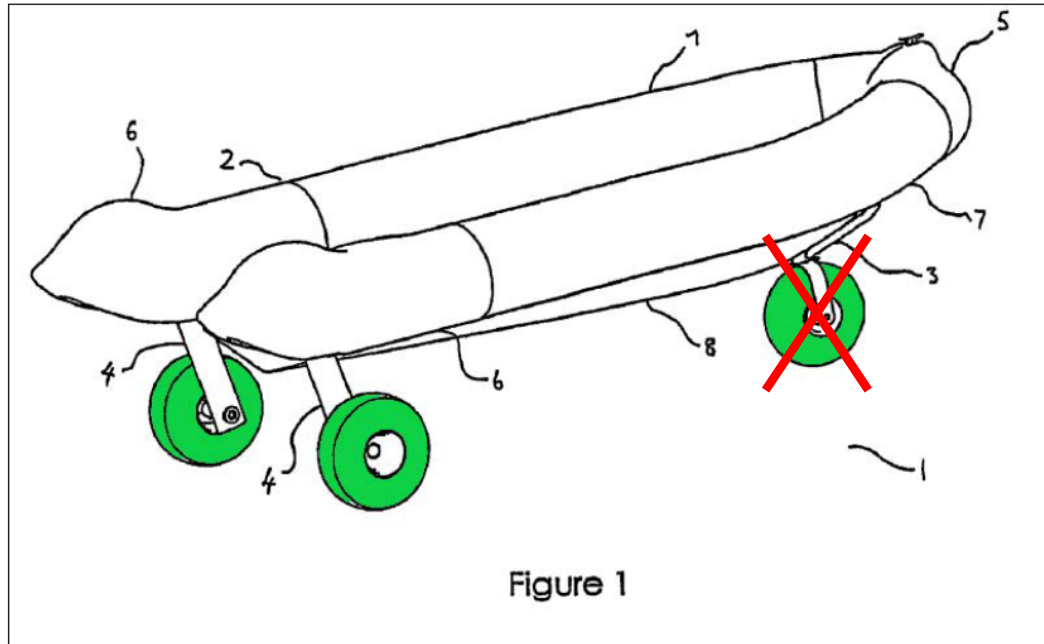
Bryham does not cure this deficiency as it does not disclose a liquid manure pump at all.

**B. The Puck-Bryham Combination Fails to Disclose Buoyant Elements Situated Between Front and Rear Wheels on Each Side of the Vehicle**

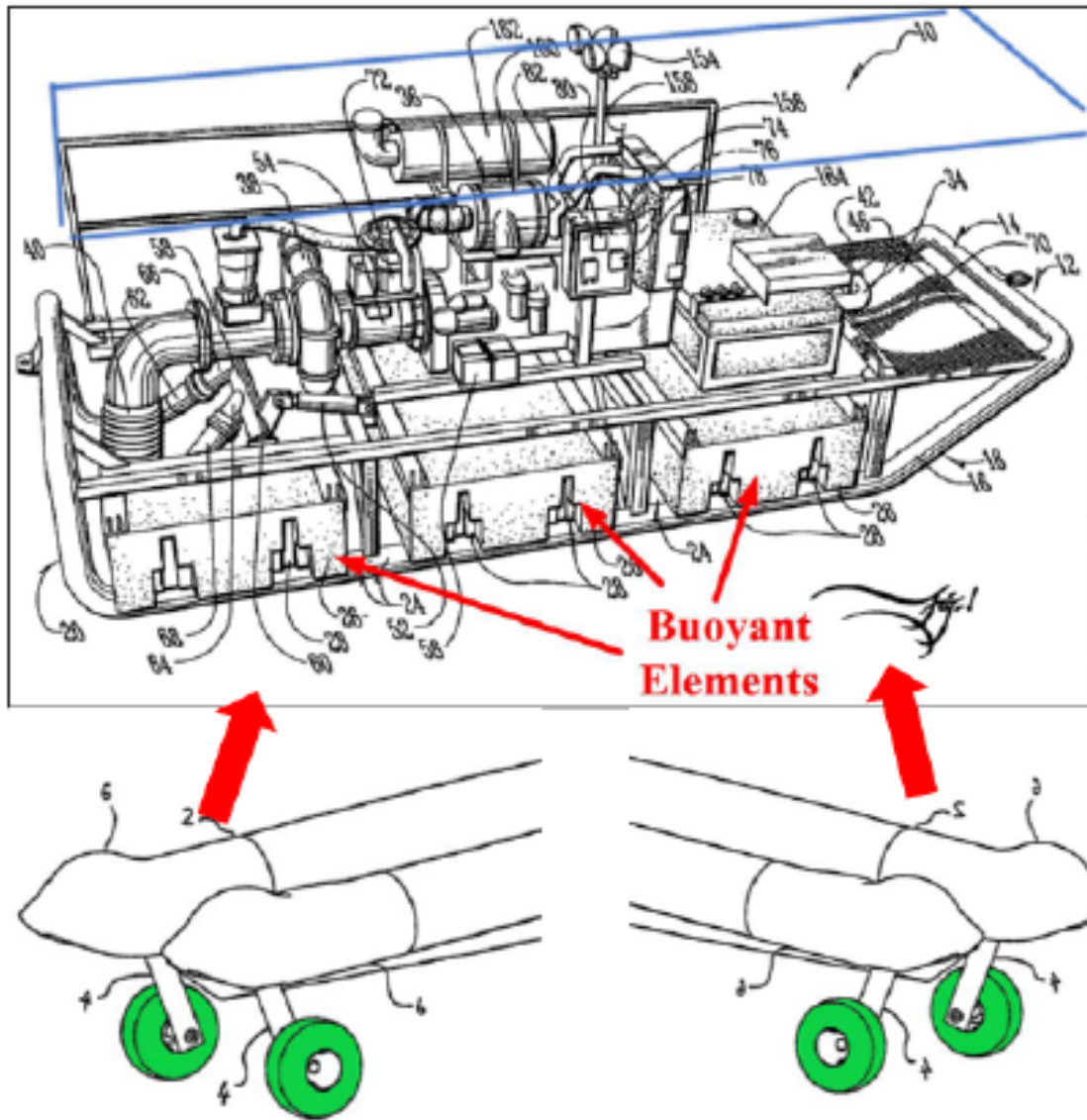
Independent claims 17 and 23 require a buoyant element situated between the front and rear wheels on each of the right and left sides of the vehicle body.

Attempting to satisfy this limitation, Petitioner argues that a POSITA would

discard the single, steerable wheel in Bryham, replace it by duplicating the two rear wheels disclosed in Bryham, and then place both sets of Bryham's rear wheels at the front and rear corner's of Puck's hull, in the fashion annotated below. Pet., 73-76, 80-81, 87-88.



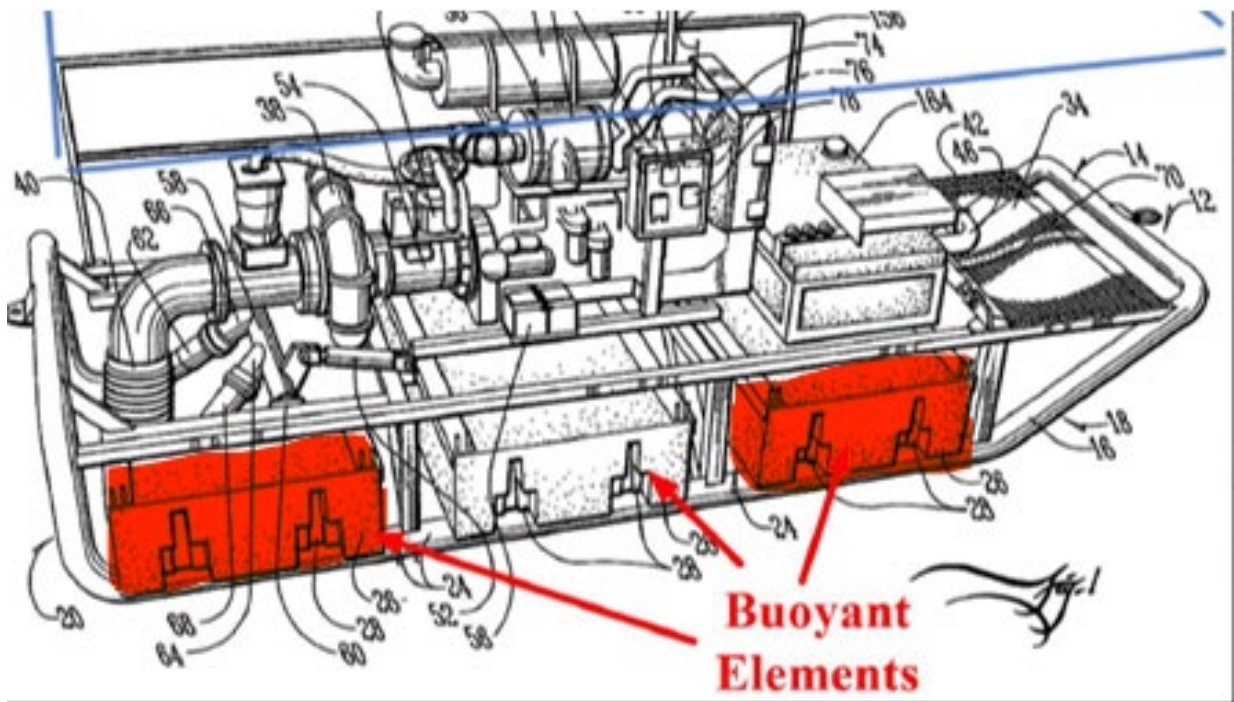
Pet., 81 (red annotations added).



EX2004, ¶206 (providing annotated Fig. 1 of Puck [EX1014] and annotated Fig. 1 of Bryham [EX1015]); *see also* EX1004, ¶¶293, 301.

Petitioner makes a further unsupported leap that in addition to converting Bryham's 3-wheel configuration to a 4-wheel configuration, a POSTA would then

position the wheels on Puck's vehicle such that at least one floating dock section 26 would be situated between the front and rear wheels on each side of the vehicle. Pet., 86. EX2004, ¶207. But adding Bryham's wheels to Puck in the manner suggested by Petitioner would require removing the floating dock sections from the corners of Puck's vehicle (annotated in red below) to create room for Bryham's retractable wheel assemblies (annotated in green above). *Id.*, ¶¶207-208



EX2004, ¶208 (providing annotated FIG. 1 of Puck [EX1014]). Doing so eliminates the floating dock sections at the rear of the vehicle altogether and would create uneven buoyancy fore-and-aft. EX2004, ¶208. This would discourage a

POSITA from positioning Bryham's wheels at the locations proposed by

Petitioner. *Id.*

**C. The Puck-Bryham Combination Fails to Disclose or Suggest a “Power Source Configured to Provide Power to Move the Vehicle Both When the Vehicle is Ground Engaging and Floating in a Liquid Manure Lagoon”**

Independent claims 1, 17, and 23 all require “a power source configured to provide power to move the vehicle both when the vehicle is ground engaging and when the vehicle is floating in [a/the] liquid manure lagoon.” Petitioner's sole basis for alleging that this element is met is its expert's conclusory statement that a POSITA would be motivated to use Puck's power source to also power the wheels being added from Bryham because “doing so would be cheaper, lighter, and more efficient than” than using separate electric motors to power Bryham's wheels. Pet., 77; EX1004, ¶286. But this is conclusory and Dr. Winkel does not show or explain how doing so would be cheaper, lighter, or more efficient. Indeed, using separate electric motors is one of the *preferred* embodiments expressly disclosed in Bryham. EX1015, 16:13-27; *see also* EX2004, ¶¶211-213.

**D. The Puck-Bryham Combination Fails to Disclose “Wireless Remote Control Configured to ... Control At Least One of the Speed and Direction of the Vehicle When the Vehicle is Ground Engaging”**

In a similarly conclusory fashion, Petitioner argues that a “POSA would have been motivated to configure the remote-control steering system of Puck to

control the speed and direction of the ground engagement means of Bryham while the vehicle is ground engaging.” Pet., 78; EX1004, ¶289. But Puck’s remote-control system is limited to turning the engine on and off, controlling engine speed, turning the nozzles on and off, and controlling nozzle direction. EX1014, ¶¶32-33. Indeed, Puck lacks any sort of ground engaging propulsion structure. EX2004, ¶214.

So the Petitioner is **not** arguing **simple plug-and-play substitution** here, but instead argues that a POSITA would modify the remote-control system in Puck to control Bryham’s steering and drive system. But doing so would require substantial modification and neither the references or even the Winkel Declaration explain how a POSITA could make those modifications to arrive at a successful combination. A POSITA would not make the alleged combination without guidance. It’s not enough for the art to teach remote controlled vehicles generally for this combination to have been obvious. *Id.*, ¶215.

**E. The Puck-Bryham Combination Fails to Disclose “Four Variable Speed Hydraulic Motors, One Variable Speed Hydraulic Motor Per Wheel, For Independently Driving the Wheels at Variable Speeds”**

Independent claim 17 requires the amphibious vehicle with four wheels and to have “four variable speed hydraulic motors, one variable speed hydraulic motor per wheel, for independently driving the wheels at variable speeds.” The manure agitation boat disclosed in Puck does not have its own set of wheels, much less

powered wheels. EX2004, ¶216. So Petitioner attempts to rely upon Bryham as teaching this limitation. But each wheel of the amphibious vehicle described in Bryham is not powered by its own variable speed hydraulic motor. Indeed, as shown below, the front wheel in Bryham (i.e., the one at the bow that swivels) is not powered at all and therefore is not powered by its own variable speed hydraulic motor:

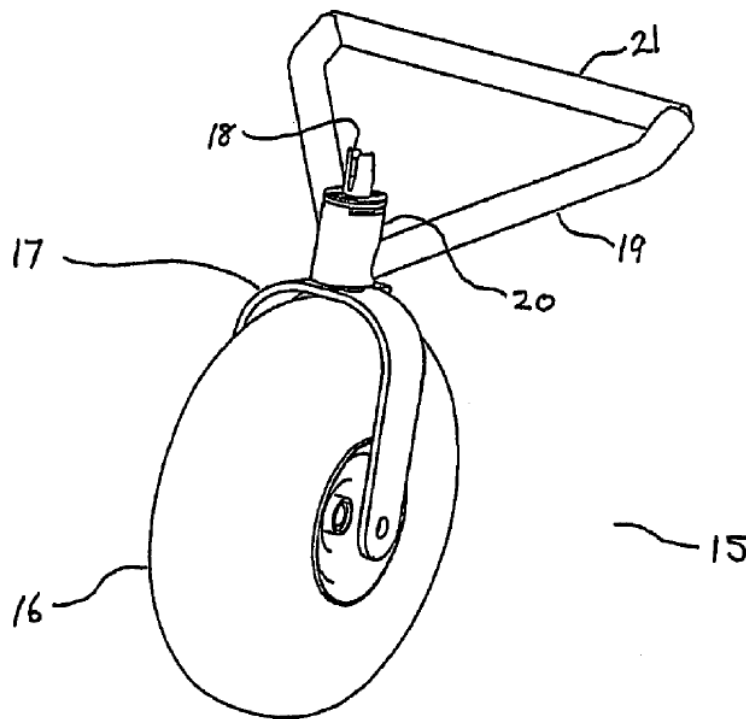


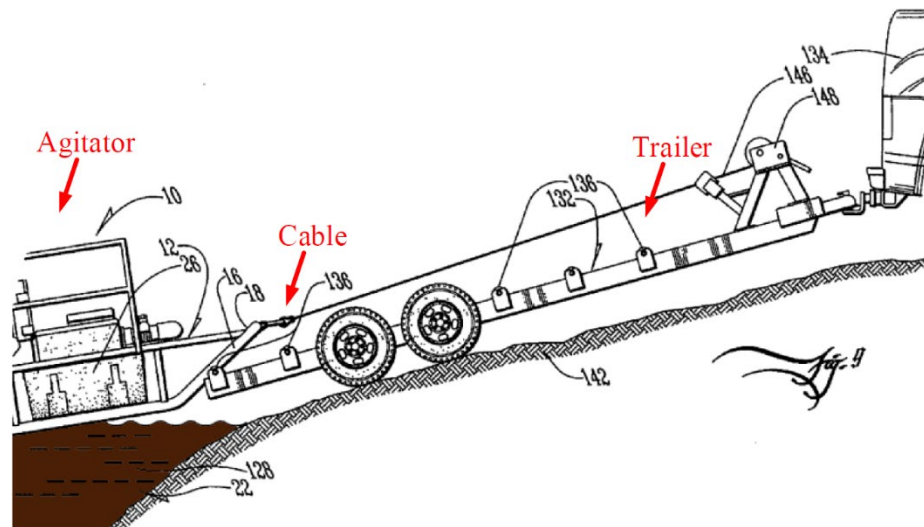
Figure 3A

EX1015, 3; EX2004, ¶216

And as discussed below, Petitioner's theory that a POSITA would delete Bryham's single front wheel and replace it with a duplicate set of Bryham's rear wheels relies on impermissible hindsight.

**F. Petitioner Has Failed to Carry Its Burden of Demonstrating That a POSITA Would Have Been Motivated to Combine Puck and Bryham**

Petitioner incorrectly asserts that a POSITA would have been motivated to combine the teachings of Puck with the teachings of Bryham “to make transporting, launching, and retrieving the Puck boat easier, safer and without having to put the trailer (let alone one’s feet) in the corrosive manure lagoon.” Petition, 73; EX1004, ¶276. Neither of these reasons/flaws in Puck’s design are supported by Puck’s disclosure. EX2004, ¶218. As shown in the annotated image below from the Petition, Puck actually discloses a system where the manure agitation boat can be launched and retrieved without backing the trailer into the manure lagoon:



(Id., FIG. 9 (annotated).)

Pet., 74; EX2004, ¶219. A POSITA would therefore recognize that the process of launching and retrieving Puck’s boat does not “require a user stepping in a lagoon”

or “exposing a trailer (or vehicle) to highly corrosive environments” in a manure lagoon as Petitioner incorrectly argues. Pet., 75; EX2004, ¶220. Indeed, neither the trailer nor the operator is shown entering the lagoon when Puck’s boat is launched in the manure boat demonstration video published by Progressive Dairyman. EX2004, ¶221. In view of the foregoing, POSITA would not have seen any problem with Puck’s design that needed fixing. EX2004, ¶¶222.

Furthermore, if a POSITA were concerned about “exposing a trailer (or vehicle) to highly corrosive environments” (Pet., 75), they certainly would not have looked to substitute Puck’s trailer, which did not need to be submersed in a manure lagoon, for a ground engaging propulsion structure that would be submersed in a manure lagoon the entire time the manure agitation vehicle was operating in the lagoon. EX2004, ¶223. If a POSITA were concerned that the “corrosive” environment of a manure lagoon might damage Puck’s trailer and trailer wheels/bearings, that concern would lead them away from adding Bryham’s wheels to Puck’s manure lagoon agitation boat because the wheels, bearings, etc. of Bryham’s ground engaging propulsion structure would be immersed and remain in the corrosive manure lagoon for hours on end during agitation sessions. *Id.* Contrary to Petitioner’s arguments, the purported Puck-Bryham Combination would not actually solve the alleged problem of equipment exposure to corrosive manure lagoon environments. *Id.*, ¶224.

**G. Petitioner Has Failed to Carry Its Burden of Demonstrating That a POSITA Would Have Had a Reasonable Expectation of Success in Adding Bryham's Wheels to Puck**

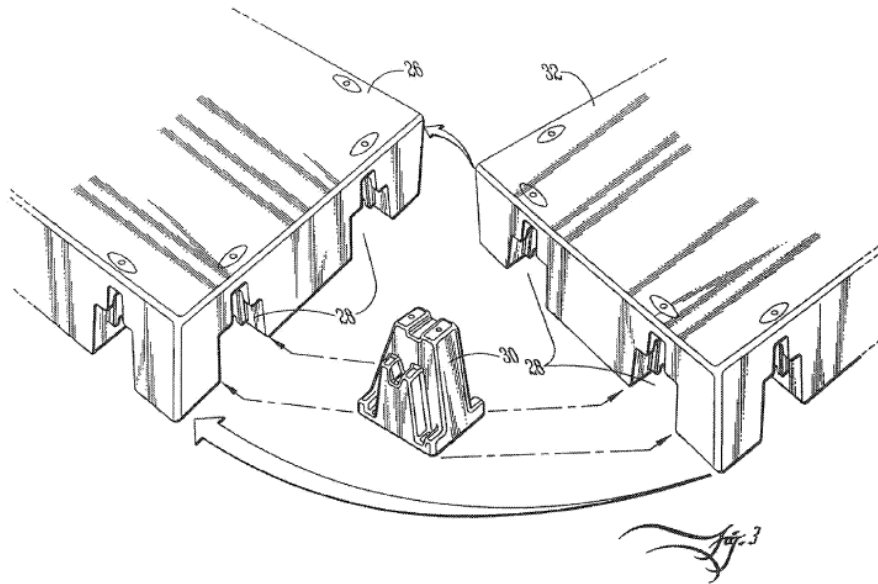
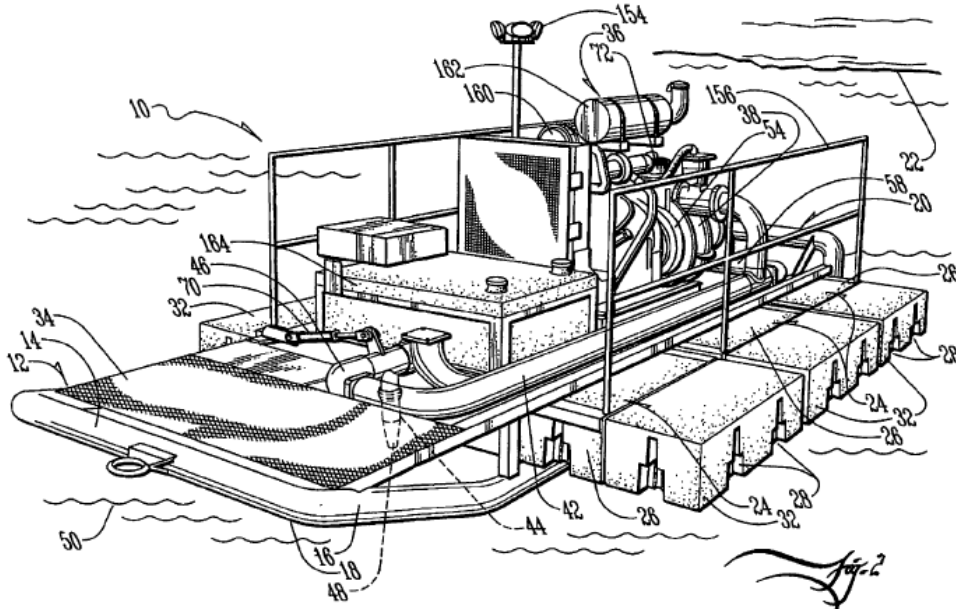
Petitioner has not carried its burden of demonstrating that a POSITA would have had a reasonable expectation of success in adding Bryham's wheels to the manure agitation boat disclosed in Puck to achieve the claimed invention.

Like Royle [EX2012], Bryham discloses a vee-hull boat with three wheels (one at the bow and two at the stern) that can retract and extend into and out of the boat hull. EX2004, ¶227. Unlike Royle and Bryham, Puck is more barge-like and is constructed from modular floating dock sections 26 that are placed in a plurality of receiver slots 24 in a ladder-like frame 14:

(10) from a manure lagoon (22). (FIGS. 1-2). The frame (14) defines a plurality of receiver slots (24) into which are provided modular dock sections (26), such as those known in the art. In the preferred embodiment, the dock sections (26) are 1000 series dock components manufactured by Connect-A-Dock, Inc. of Atlantic, Iowa.

[0023] The modular dock sections (26) are provided with connector slots (28) to fit into interlocking mating engagement with connector pins (30). The connector pins (30) allow the modular dock sections (26) to connect to additional dock sections (32) in a manner such as that known in the art. (FIGS. 1 and 3). The use of interlocking additional dock sections (32) allows for the buoyancy of the vessel (12) to be increased and allows the additional dock sections (32) to be removed to reduce the overall width of the agitator (10) for transport and storage. If desired, pontoons, inflatable components or any

EX2004, ¶228 (providing annotated excerpt of Puck [EX1014] at ¶¶22-23). The modular dock sections 26 are held together with connector pins 30:



EX1014, 3-4; EX2004, ¶229. Petitioner has failed to carry its burden of explaining why a POSITA would reasonably expect that Bryham's wheels could be successfully added to Puck's vessel, when Puck does not have a conventional boat hull structure like that disclosed in Bryham and Puck. EX2004, ¶¶234-236.

Adding Bryham's wheels would seemingly interfere with the modular dock sections required in Puck for floatation and the two cannot occupy the same space. *Id.*, ¶230. Moreover, Puck's vessel is designed so that its weight is evenly distributed when it is on shore and on the trailer. *Id.*, ¶232. Puck's vessel is not designed so that its entire weight can be carried at 3 or 4 discrete points as it would be if Bryham's wheels were added. *Id.*, ¶231.

**H. Petitioner's Combination of Puck with Bryham to Arrive at the Required Claim Limitations is Based on Impermissible Hindsight**

Combining Puck with Bryham to arrive at the limitations of the Challenged Claims would require a POSITA to find multiple motivations to make a completely non-sensical series of modifications to Puck – when the failure to do so for any specific one would destroy the combination. EX2004, ¶237.

- First, a POSITA would need to find motivation to relocate Puck's slurry pump from its location high on the vehicle to a location where it would be immerse in the liquid manure when the vehicle is floating – even though there is no teaching or suggestion of this.
- Second, a POSITA would need to find motivation to discard Bryham's single front wheel, and add two sets of Bryham's rear wheels to the front and rear corners of Puck's boat – even though there is no teaching or suggestion of this.

- Third, a POSITA would need to find motivation to remove the front and rear buoyant elements on each side of Puck's boat to accommodate Bryham's wheels, in order to have the remaining middle buoyant element on each of the right and left sides of the boat positioned between the new front and rear wheels on each side of the boat. And a POSITA would have to do all of this with the knowledge that serious stability problems would likely ensue with no buoyant elements position at the rear of the vehicle.
- Fourth, a POSITA would need to find motivation to discard the electric wheel motors disclosed in Bryham and replace them with four variable speed hydraulic motors, one for each wheel, and then modify Puck's hydraulic system, which was only designed to move linear actuators, so that it could also be used to power hydraulic motors to drive the new wheels from Bryham.
- Fifth, a POSTIA would need to find motivation to modify Puck's wireless remote control, which was only designed to control the engine and nozzles, so that it could also independently control the speed and/or direction of the new Bryham wheels – even though there is no teaching or suggestion of how Puck's remote control system could be modified to control Bryham's wheels.

*Id.*

The above modifications Petitioner advocates to arrive at the claim limitations require much more than the routine substitution of elements and would not have been combined by a POSITA in this manner without using the ‘708 Patent as a blueprint. *Id.*, ¶238.

**XIII. GROUND 5: CLAIMS 1, 8-18, 23-28, AND 35-38 ARE NOT OBVIOUS BASED ON PUCK IN VIEW OF BRYHAM AND BENNETT-II**

Ground 5 is largely the same as Ground 4. Therefore, it is not reasonably likely that Petitioner will prevail under Ground 5 for the reasons explained above in response to Ground 4. *See* Section XII; *see also* EX2004, ¶¶240-290. Petitioner cites Bennett-II for the sole purpose of disclosing additional teachings of remote-control. Pet., 89. But **this solves nothing**. EX2004, ¶263. Bennett-II teaches an amphibious vehicle 10 with a pair of tracks 12, 14 that are driven by two track driving sprockets 590, 592 through a transmission 550:

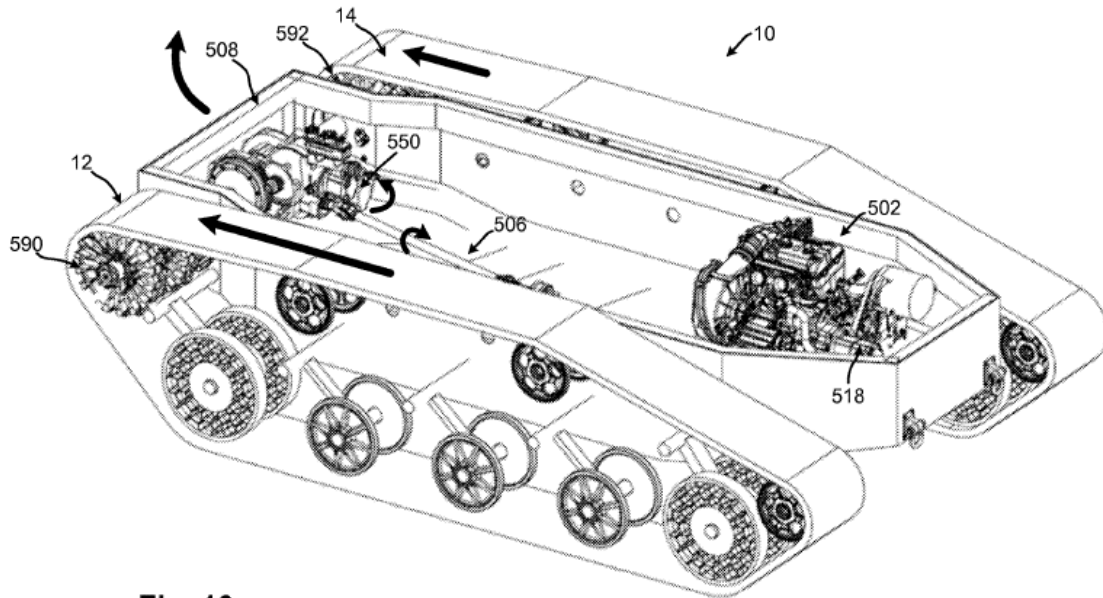


**Fig. 16**

EX1017, 22; EX2004, ¶264. The fact that Para. [0043] of Bennett-II provides the generalized statement that “vehicle 10 may be operated by remote control” tells a POSITA nothing about how one could modify Puck’s remote-control system to control Bryham’s retractable wheels, which are quite different from Bennett’s drivetrain. EX2004, ¶265.

**XIV. GROUND 6: CLAIMS 1–38 ARE NOT OBVIOUS BASED ON TRUXOR AND YOON OR CARRIER IN VIEW OF MANURE-MANAGER**

Ground 6 is largely the same as Ground 2. Therefore, it is not reasonably likely that Petitioner will prevail under Ground 6 for the reasons explained above in response to Ground 2. *See* Section X; *see also* EX2004, ¶¶291-337.

**A. The Truxor-Manure-Manager Combination Fails to Disclose or Suggest All of the Limitations of the Challenged Claims**

Petitioner's reliance on Manure-Manager to disclose manure lagoon pumps, including advertisements for Nuhn's own G-Force Vertical Pit Pump, does not resolve the deficiencies of Petitioner's Truxor Combination in Ground 2.

Even if a POSITA were motivated to substitute the vehicle tracks of Truxor for the wheels of Yoon, the resulting combination does not meet the additional requirement of the Challenged Claims, where first and second buoyant elements are positioned in the space between the front and rear wheels on each side of the vehicle. EX2004, ¶¶292-304. The evidence shows that a POSITA would have positioned the pontoons disclosed in Truxor or Yoon *outboard* of the wheels if they were motivated to convert Truxor from tracks to wheels and add buoyant elements to the vehicle. *Id.*, ¶303. Manure-Manager and Carrier do not teach otherwise, so the Truxor-Manure-Manager Combination also fails.

**B. Petitioner Has Not Presented Sufficient Evidence That A POSITA Would Have Had a Motivation to Combine Truxor, Carrier or Yoon, and Manure-Manager**

Petitioner's alleged motivation to combine is that "[a] POSA looking to select an improved pump for use on the Truxor multi-functional machine would have been motivated to use Respondent's Pump design, given the teachings in the literature, often alongside Respondent's own pump advertisements, touting the efficiency and durability benefits of such dual outlet pumps." Pet., 96. But

critically, Truxor’s literature describes a manned amphibious vehicle for “Reed cutting & Gathering – Excavation – Dredging” – not manure lagoon agitation. EX1006, 1.

A POSITA would not have been motivated to replace Truxor’s dredge pumps with a manure lagoon agitation pump that was unproven in dredging applications because a POSITA would have expected such a substitution to destroy the primary purpose of Truxor’s vehicle – dredging. EX2004, ¶¶306-307.

Pumps and pumping vehicles that are used for manure lagoon agitation are designed such that the pump intake is positioned below the surface crust on a manure lagoon, but above the bottom of the lagoon, to prevent the pump from clogging and to avoid damaging the manure lagoon liner. *Id.*, ¶¶308-309. By contrast, dredge pumps, like the pumps advertised in Truxor, are designed to be moved about a lake or stream bottom to suck up the bottom sediment. *Id.*, ¶¶310-311. Because Nuhn’s G-Force Vertical Pit Pump was not designed, validated, or advertised to be used in dredging, a POSITA would *not have* attempted to replace Truxor’s dredge pumps with Nuhn’s G-Force Vertical Pit Pump.

**C. Petitioner Has Not Presented Sufficient Evidence That A POSITA Would Have Had a Reasonable Expectation of Success in Making the Truxor, Carrier or Yoon, and Manure-Manager Combination**

Petitioner’s conclusory assertion that “[a] POSA would have had a reasonable expectation of success in using Respondent’s Pump based on it being

vehicle mounted and powered” is entirely insufficient. Pet., 96. The dredge pumps disclosed in Truxor are mounted at the end of an articulating boom arm at the front of the Truxor vehicle. EX1006, 10; EX2004, ¶314. As a result of this mounting arrangement, Truxor’s dredge pumps are powered by hydraulics and driven by a flow of hydraulic fluid passing through the hydraulic lines. EX2004, ¶314.

Unlike Truxor’s dredge pumps, Nuhn’s G-Force Vertical Pit Pump is powered by a mechanical transmission and driveshaft that is mechanically coupled to the power-take-off (PTO) of a tractor. EX1019, 27. The Truxor vehicle lacks a PTO to provide power to its attachments. A POSITA would not have had a reasonable expectation of success that Nuhn’s G-Force Vertical Pit Pump could be connected to and effectively driven by Truxor’s hydraulics, without substantial modification. EX2004, ¶¶315-316.

Petitioner also fails to adequately explain why a POSITA would have had a reasonable expectation of success in making this combination and achieving the claimed invention for the same reasons set forth in Section X.D in response to Ground 2, including the difficulties with converting Truxor’s complex hydraulic controls to wireless remote control and the difficulty of controlling the positioning and operation of Truxor’s boom-mounted pump from a remote location. *Id.*, ¶¶316-344.

**D. Petitioner's Combination of Truxor with Carrier or Yoon and Manure-Manager to Arrive at the Required Claim Limitations is Based on Impermissible Hindsight**

Combining Truxor with Carrier or Yoon and Manure-Manager to arrive at the limitations of the Challenged Claims would require a POSITA to find multiple motivations to make a completely non-sensical series of modifications to Truxor – when the failure to do so for any specific one would destroy the combination.

EX2004, ¶335.

- First, a POSITA would need to find motivation to replace Truxor's Doro *dredge* pump with the *liquid manure* pump Nuhn advertised in Manure-Manager – even though (a) there is no teaching or suggestion of manure pumping applications in Truxor's literature, (b) Nuhn's pump was unproven in dredging and likely to destroy Truxor's dredging functionality, which is its primary purpose, and (c) Truxor lacks the PTO necessary to drive Nuhn's G-Force Vertical Pit Pump and there is no evidence that Nuhn's pump could be easily converted to hydraulic drive.
- Second, a POSITA would need to find motivation to replace Truxor's tracks with front and rear wheels on each side of the vehicle – even though the tracks work just fine for Truxor's purpose.

- Third, a POSITA would need to find motivation either (a) chop off length from Truxor's pontoons, which run the entire length of the vehicle, to shorten them, or (b) extend the length of the vehicle – all in order to position a pontoon between the new and unnecessary front and rear wheels on each side of the vehicle. And a POSITA would need to do all of this even though the prior art teaches positioning the pontoons outboard of the wheels, which is this most logical solution.
- Fourth, a POSITA would need to find motivation to add wireless remote control to Truxor, even though it would be extremely difficult to convert Truxor's complex joysticks and hydraulic controls to wireless remote control – only to end up with a pumping vehicle that is difficult if not impossible to control / operate from a remote location due to the inability to observe the positioning of Truxor's boom arm and therefore the pump.

*Id.*

A POSITA would only arrive at Petitioner's Truxor-Manure-Manager Combination by using the Challenged Claims as blueprint. *Id.*, ¶336.

**XV. GROUND 7: CLAIMS 1–38 ARE NOT OBVIOUS BASED ON SENWATEC AND YOON OR CARRIER IN VIEW OF MANURE-MANAGER**

Ground 7 is largely the same as Ground 3. Therefore, it is not reasonably likely that Petitioner will prevail under Ground 7 for the reasons explained above in response to Ground 3. *See* Section XI.

**A. The SenwaTec-Manure-Manager Combination Fails to Disclose or Suggest Each and Every Element of the Challenged Claims**

Petitioner’s reliance on Manure-Manager to disclose manure lagoon pumps does not resolve the deficiencies of Petitioner’s SenwaTec Combination in Ground 3. For example, Petitioner’s reliance on SenwaTec to disclose buoyant elements positioned between the front wheel and rear wheel on each side of SenwaTec’s vehicle is misplaced because there is no disclosure in SenwaTec that the stabilizer pontoons are situated between the front and rear wheels on each side of the vehicle as Petitioner contends. EX2004, ¶339-343. To the contrary, SenwaTec placed the stabilizer pontoons outboard of the wheels, rather than between the wheels as required by the Challenged Claims. *Id.*, ¶343. Petitioner does not and cannot cite any portion of Manure-Manager, Carrier or Yoon that resolves this deficiency.

**B. Petitioner Has Not Presented Sufficient Evidence That A POSITA Would Have Had a Motivation to Combine SenwaTec, Carrier or Yoon, and Manure-Manager**

Petitioner’s alleged motivation to combine for Ground 6 is that: “a POSITA would have been ... motivated to use Respondent’s Pump on the SenwaTec

vehicle because of the pump’s advertised manure pumping capabilities, which would allow the SenwaTec vehicle to more efficiently pump manure, saving fuel costs, time, and providing better agitation.” Pet., 105; EX1004, ¶343.

But SenwaTec’s literature only describes a manned amphibious weed clearing and dredging vehicle. EX1012, 1-2; EX2004, ¶346. The evidence outside of the SenwaTec reference itself should not be considered for the reasons explained above, but even if it is, it shows, at best, that one environmental services company in Germany (UD Umweltdienste) used the SenwaTec vehicle to *dredge* a decommissioned municipal wastewater treatment pond. A POSITA would not be motivated to replace SenwaTec’s dredging pump with Nuhn’s manure lagoon pump because there is zero evidence that Nuhn’s manure lagoon pump would work in dredging applications. EX2004, ¶¶347-353. A POSITA would be discouraged from making the proposed combination because it would likely destroy the primary purpose of SenwaTec’s vehicle – dredging. *Id.*, ¶347.

**C. Petitioner Has Not Presented Sufficient Evidence That A POSITA Would Have Had a Reasonable Expectation of Success in Making the SenwaTec, Carrier or Yoon, and Manure-Manager Combination**

Petitioner contends that a POSA would have had a reasonable expectation of success in using Nuhn’s liquid manure pump “being vehicle mounted and powered”. Pet., 96, 104-105. This is entirely insufficient.

The dredging pumps disclosed in SenwaTec are mounted at the end of an articulating excavator arm at the front of the SenwaTec vehicle. EX2004, ¶355.

As a result of this mounting arrangement, SenwaTec's dredging pumps are powered by hydraulics and driven by a flow of hydraulic fluid passing through the hydraulic lines. *Id.* A POSITA would not have had a reasonable expectation of success that Nuhn's G-Force Vertical Pit Pump, which includes a mechanical coupling, driveshaft, and mechanical gearbox, could be connected to and effectively driven by SenwaTec's hydraulics. *Id.*, ¶¶356-357.

Ground 7 is also based on the same flawed assumption that a POSITA would somehow add wireless remote-control functionality to the amphibious vehicle disclosed in SenwaTec in view of the remote-control teachings of Yoon or Carrier. Petitioner fails to adequately explain why a POSITA would have had a reasonable expectation of success in making this combination and achieving the claimed invention for the same reasons set forth in Section XI.E in response to Ground 3, including the difficulties with converting SenwaTec's numerous joysticks and foot pedals to wireless remote control and the difficulty of controlling Truxor's vehicle and pump from a remote location where control over the placement and operation of a pump on the end of Truxor's articulating excavator arm would be difficult, if not impossible. *Id.*, ¶358-372.

**D. Petitioner's Combination of SenwaTec with Carrier or Yoon and Manure-Manager to Arrive at the Required Claim Limitations is Based on Impermissible Hindsight**

Combining SenwaTec with Carrier or Yoon and Manure-Manager and then further modifying the combination to arrive at the limitations of the Challenged Claims would require a POSITA to find multiple motivations to make a completely non-sensical series of modifications – when the failure to do so for any specific one would destroy the combination. EX2004, ¶373.

- First, a POSITA would need to find motivation to replace SenwaTec *dredging* pumps with the *liquid manure* pump Nuhn advertised in Manure-Manager – even though (a) there is no teaching or suggestion of manure pumping applications in SenwaTec's literature, (b) Nuhn's pump was unproven in dredging and likely to destroy SenwaTec's dredging functionality, which is its primary purpose, and (c) SenwaTec lacks the PTO necessary to drive Nuhn's G-Force Vertical Pit Pump and there is no evidence that Nuhn's pump could be easily converted to hydraulic drive.
- Second, a POSITA would need to find motivation to relocate SenwaTec's stabilizer pontoons – which are *outboard* of SenwaTec's wheels – to be positioned between the front and rear wheels on each side of the vehicle, which is nonsensical given that the stabilizer

pontoons would have to be dramatically shortened to allow the stabilizer pontoons to be positioned between the wheels on each side of the vehicle and would provide less stability by virtue of being made smaller and being positioned closer to the centerline of the vehicle. And a POSITA would need to do all of this even though stabilizer pontoons in SenwaTec are already positioned at their most logical location.

- Third, a POSITA would need to find motivation to add wireless remote control to SenwaTec, even though it would be extremely difficult to convert SenwaTec's myriad of joysticks and foot controls to wireless remote control – only to end up with a pumping vehicle that is difficult if not impossible to control / operate from a remote location due to the inability to observe the positioning of Truxor's boom arm and therefore the pump.

*Id.*

A POSITA would only arrive at Petitioner's SenwaTec Combination by using the Challenged Claims as blueprint. *Id.*, ¶374.

**XVI. GROUND 8: CLAIMS 1–38 ARE NOT OBVIOUS BASED ON PUCK AND BRYHAM (ALONE OR IN VIEW OF BENNETT-II) IN VIEW OF MANURE-MANAGER**

Ground 6 is largely the same as Grounds 4 (Puck-Bryham) and Ground 5 (Puck-Bryham-Bennet-II). Therefore, it is not reasonably likely that Petitioner will prevail under Ground 4 for the reasons explained above in response to Grounds 4 and 5. *See* Sections XII, XIII.

**A. The Puck-Bryham (Alone or in View of Bennett-II)-Manure-Manager Combination Lacks All Elements of the Challenged Claims**

Petitioner’s Ground 8 combination still fails to teach or suggest the limitation of the Challenged Claims requiring a buoyant element positioned between the front and rear wheels on each side of the vehicle body. EX2004, ¶¶377-391. Manure-Manager’s additional disclosure of Nuhn’s tractor-mounted manure pump does nothing to resolve this deficiency. *Id.*, ¶387.

**B. Petitioner Has Failed to Carry Its Burden of Demonstrating That a POSITA Would Have Been Motivated to Make the Combination of Puck, Bryham (Alone or in View of Bennett-II), and Manure-Manager with a Reasonable Expectation of Success**

As explained above, a POSTIA concerned with the corrosive environment of a manure lagoon would have been discouraged from adding Bryham’s wheels to Puck. EX2004, ¶404. In addition, a POSITA would not have had a reasonable expectation of success that Bryham’s retractable wheels could be added to Puck’s barge-like structure, could be driven by Puck’s hydraulic system, and could be

controlled by Puck's remote-control system. EX2004, ¶¶406-418. The addition of Manure-Manager does not resolve this issue.

**C. Petitioner's Combination of Puck with Bryham to Arrive at the Required Claim Limitations is Based on Impermissible Hindsight**

Combining Puck with Bryham to arrive at the limitations of the Challenged Claims would require a POSITA to find multiple motivations to make a completely non-sensical series of modifications to Puck – when the failure to do so for any specific one would destroy the combination. EX2004, ¶419.

- First, a POSITA would need to find motivation to replace Puck's slurry pump, which is centrally located on the vehicle high above the surface of the manure lagoon, with the *liquid manure* pump Nuhn advertised in Manure-Manager, which is designed to be mounted to the back of a farm tractor – even though there is no teaching or suggestion in the references themselves that Puck's slurry pump suffered drawbacks or needed replacing.
- Second, a POSITA would need to find motivation to discard Bryham's single front wheel, and add two sets of Bryham's rear wheels to the front and rear corners of Puck's boat – even though there is no teaching or suggestion of this.
- Third, a POSITA would need to find motivation to remove the front and rear buoyant elements on each side of Puck's boat to

accommodate Bryham's wheels, in order to have the remaining middle buoyant element on each of the right and left sides of the boat positioned between the new front and rear wheels on each side of the boat. And a POSITA would have to do all of this with the knowledge that serious stability problems would likely ensue with no buoyant elements position at the rear of the vehicle.

- Fourth, a POSITA would need to find motivation to discard the electric wheel motors disclosed in Bryham and replace them with four variable speed hydraulic motors, one for each wheel, and then modify Puck's hydraulic system, which was only designed to move linear actuators, so that it could also be used to power hydraulic motors to drive the new wheels from Bryham.
- Fifth, a POSTIA would need to find motivation to modify Puck's wireless remote control, which was only designed to control the engine and nozzles, so that it could also independently control the speed and/or direction of the new Bryham wheels – even though there is no teaching or suggestion of how Puck's remote control system could be modified to control Bryham's wheels – and even though there is no teaching or suggestion of how Bennett-II's generically

disclosed remote control system for its tracked vehicle could be  
modified to control Bryham's retractable wheels.

*Id.*

The modifications Petitioner advocates to arrive at the claim limitations  
require much more than the routine substitution of elements and would not have  
been combined by a POSITA in this manner without using the '708 Patent as a  
blueprint. *Id.*, ¶420.

## **XVII. CONCLUSION**

Petitioner has not established a reasonable likelihood that any of the  
Challenged Claims will be found unpatentable.

Dated: February 26, 2024

Respectfully submitted,

By: /James B. Luchsinger/  
James B. Luchsinger, Reg. 73,705  
HARNESS DICKY & PIERCE, P.L.C.  
5445 Corporate Drive, Suite 200  
Troy, MI 48098  
Phone: 248-641-1600  
Fax: 248-641-0270  
[bluchsinger@harnessip.com](mailto:bluchsinger@harnessip.com)

Matthew L. Cutler, Reg. No. 43,574  
HARNESS DICKY & PIERCE, P.L.C.  
7700 Bonhomme Ave., Suite 400  
St. Louis, MO 63105  
Phone: 314-726-7500  
Fax: 314-726-7501  
[mcutler@harnessip.com](mailto:mcutler@harnessip.com)

***Attorneys for Nuhn Industries Ltd.***

**CERTIFICATE OF COMPLIANCE**

The undersigned hereby certifies that this brief complies with the type volume limitations of 37 C.F.R. § 42.24(b)(1). This brief contains 13,985 words as calculated by the “Word Count” feature of Microsoft Word for Microsoft 365 MSO, the word processing program used to create this brief.

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.

Dated: February 26, 2024

Respectfully submitted,

By: /James B. Luchsinger/  
James B. Luchsinger, Reg. 73,705  
HARNESS DICKY & PIERCE, P.L.C.  
5445 Corporate Drive, Suite 200  
Troy, MI 48098  
Phone: 248-641-1600  
Fax: 248-641-0270  
[bluchsinger@harnessip.com](mailto:bluchsinger@harnessip.com)

Matthew L. Cutler, Reg. No. 43,574  
HARNESS DICKY & PIERCE, P.L.C.  
7700 Bonhomme Ave., Suite 400  
St. Louis, MO 63105  
Phone: 314-726-7500  
Fax: 314-726-7501  
[mcutler@harnessip.com](mailto:mcutler@harnessip.com)

***Attorneys for Nuhn Industries Ltd.***

**CERTIFICATE OF SERVICE**

Pursuant to 37 C.F.R. 42.6(e), I certify that on February 26, 2024, a true and correct copy of the foregoing **Patent Owner's Preliminary Response** was served by electronic mail on Petitioner's lead and backup counsel at the following addresses:

**Lead Counsel**

Thomas J. Leach  
MERCHANT & GOULD P.C.  
150 South Fifth Street, Suite 2200  
Minneapolis, MN 55402  
Phone: 612-336-4665  
Fax: 612-332-9081  
tleach@merchantgould.com  
USPTO Reg. No. 53,188

**Back-up Counsel**

Robert A. Kalinsky  
MERCHANT & GOULD P.C.  
150 South Fifth Street, Suite 2200  
Minneapolis, MN 55402  
Phone: 612-336-4771  
Fax: 612-332-9081  
rkalinsky@merchantgould.com  
USPTO Reg. No. 50,471

Jeffrey D. Blake  
MERCHANT & GOULD P.C.  
191 Peachtree Street NE, Suite 3800  
Atlanta, GA 30303  
Phone: 404-954-5040  
Fax: 612-332-9081  
jblake@merchantgould.com  
USPTO Reg. No. 58,884

Michael A. Erbele  
(*pro hac vice* forthcoming)  
MERCHANT & GOULD P.C.  
150 South Fifth Street, Suite 2200  
Minneapolis, MN 55402  
Phone: 612-336-4670  
Fax: 612-332-9081  
merbele@merchantgould.com

Taylor R. Stemler  
MERCHANT & GOULD P.C.  
150 South Fifth Street, Suite 2200  
Minneapolis, MN 55402  
Phone: 612-371-5215  
Fax: 612-332-9081  
tstemler@merchantgould.com  
USPTO Reg. No. 79,777

/James B. Luchsinger/  
JAMES B. LUCHSINGER  
HARNES DICKY & PIERCE, P.L.C.