US009586659C1

(12) **EX PARTE REEXAMINATION CERTIFICATE** (12663rd)

United States Patent
Langelaan

(10) **Number: US 9,586,659 C1**
(45) **Certificate Issued: Aug. 6, 2024**

(54) **POWERED HYDROFOIL BOARD**

(71) Applicant: **Jacob Willem Langelaan**, State College, PA (US)

(72) Inventor: **Jacob Willem Langelaan**, State College, PA (US)

(73) Assignee: **MHL CUSTOM, INC.**, Isabela, PR (US)

Reexamination Request:
No. 90/015,269, Aug. 9, 2023

Reexamination Certificate for:

Patent No.:	**9,586,659**
Issued:	**Mar. 7, 2017**
Appl. No.:	**15/064,521**
Filed:	**Mar. 8, 2016**

Certificate of Correction issued May 1, 2018

Related U.S. Application Data

(63) Continuation of application No. 14/509,289, filed on Oct. 8, 2014, now Pat. No. 9,359,044.

(60) Provisional application No. 61/889,071, filed on Oct. 10, 2013.

(51) **Int. Cl.**

B63H 11/04	(2006.01)
B63H 1/16	(2006.01)
B63H 5/14	(2006.01)
B63H 21/17	(2006.01)
B63H 21/21	(2006.01)

(52) **U.S. Cl.**
CPC ***B63H 11/04*** (2013.01); ***B63H 1/16*** (2013.01); ***B63H 5/14*** (2013.01); ***B63H 21/17*** (2013.01); ***B63H 21/21*** (2013.01)

(58) **Field of Classification Search**
None
See application file for complete search history.

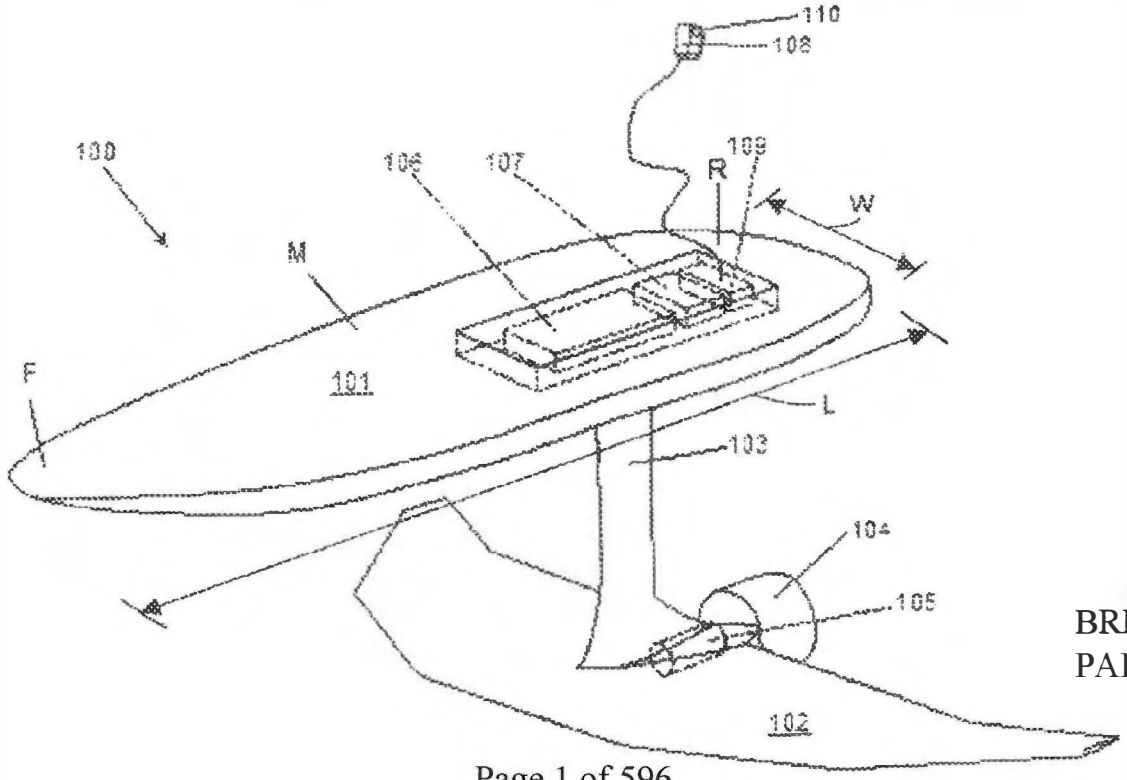
(56) **References Cited**

To view the complete listing of prior art documents cited during the proceeding for Reexamination Control Number 90/015,269, please refer to the USPTO's Patent Electronic System.

Primary Examiner Sarah B McPartlin

(57) **ABSTRACT**

A passively stable personal hydrofoil watercraft that has a flotation device, wherein a user can ride in a prone, kneeling, or standing position. The watercraft includes a strut having an upper end interconnected with the flotation device and lower end connected with a hydrofoil. The hydrofoil greatly reduces the power required to travel at higher speed. The watercraft also includes a propulsion system connected to the hydrofoil. Both longitudinal and directional control of the watercraft is via weight shift, eliminating the need of any movable surfaces. The flotation device, strut, and hydrofoil may be permanently interconnected or may be detachable.



BRP 1024
PART 1 OF 4

EX PARTE REEXAMINATION CERTIFICATE

THE PATENT IS HEREBY AMENDED AS INDICATED BELOW.

Matter enclosed in heavy brackets [ ] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

The patentability of claims **1-15** is confirmed.

Claim **16** is determined to be patentable as amended.

Claims **17-20**, dependent on an amended claim, are determined to be patentable.

New claims **21-28** are added and determined to be patentable.

16. A *passively stable, weight-shift controlled* personal hydrofoil watercraft, comprising:

a surfboard-shaped flotation device that has a fore-aft length greater than a lateral width, the flotation device having a top surface and a bottom surface, wherein the top surface has a substantially horizontal supporting surface configured to support a user in a prone, kneeling, or standing position, the flotation device having a forward section, a middle section, and a rear section;

a hydrofoil interconnected with the surfboard-shaped flotation device, the hydrofoil having a strut and a first hydrofoil wing, an upper end of the strut being fixedly interconnected with the surfboard-shaped flotation device, *the hydrofoil having no movable surface;*

a propulsion system attached to the surfboard-shaped flotation device for propelling the watercraft in a body of water, the propulsion system comprising a battery, an electric motor, a motor speed controller, and a propulsor, wherein the propulsor is selected from a propeller, a ducted propeller, or a pump-jet, and the battery and motor speed controller are contained in a watertight compartment integrated into the flotation device;

the watercraft having no movable steering system;

a handheld controller having a throttle; and

a throttle interface, wherein the throttle is adapted to send electronic signals to the throttle interface that cause an output of the propulsion system to change.

19. A watercraft in accordance with claim **16**, wherein the strut has an internal passage and electrical wires extend from the electric motor to the watertight compartment inside the strut through the internal passage for controlling *the* electric motor.

21. A watercraft in accordance with claim 1, wherein the upper end of the strut is fixedly interconnected with the flotation device via a detachable fitting.

22. A watercraft in accordance with claim 21, wherein the detachable fitting is configured to fit into a complementary opening in the flotation device.

23. A watercraft in accordance with claim 22, wherein the fitting is configured to be secured within the complementary opening by at least one of a bolt, a pin, and a latch.

24. A watercraft in accordance with claim 1, wherein the propulsion system includes a battery positioned in the strut.

25. A watercraft in accordance with claim 24, further comprising a wired connection between the battery and a motor of the propulsion system.

26. A watercraft in accordance with claim 1, further comprising a safety device for monitoring the presence of a user on the flotation board.

27. A watercraft in accordance with claim 1, wherein the strut is the only strut connected with the flotation device.

28. A watercraft in accordance with claim 1, wherein the propulsion system includes a motor speed controller contained in a watertight compartment integrated into the flotation device.

* * * * *

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/015,269	08/09/2023	9586659	GBWHCC001-EPR	5917

530 7590 06/24/2024

Lerner David LLP
20 COMMERCE DRIVE
CRANFORD, NJ 07016

EXAMINER	
MCPARTLIN, SARAH BURNHAM	

ART UNIT	PAPER NUMBER
3993	

MAIL DATE	DELIVERY MODE
06/24/2024	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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1540 West Warm Springs Road
Suite 100
Henderson, NV 89014

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/015,269* .

PATENT UNDER REEXAMINATION *9586659* .

ART UNIT *3993* .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Notice of Intent to Issue Ex Parte Reexamination Certificate	**Control No.** 90/015,269	**Patent Under Reexamination** 9586659	
	Examiner SARAH B MCPARTLIN	**Art Unit** 3993	**AIA Status** Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☑ Prosecution on the merits is (or remains) closed in this *ex parte* reexamination proceeding. This proceeding is subject to reopening at the initiative of the Office or upon petition. *Cf.* 37 CFR 1.313(a). A Certificate will be issued in view of
   (a) ☑ Patent owner's communication(s) filed: 3/4/2024.
   (b) ☐ Patent owner's failure to file an appropriate timely response to the Office action mailed: _____.
   (c) ☐ Patent owner's failure to timely file an Appeal Brief (37 CFR 41.31).
   (d) ☐ The decision on appeal by the ☐ Board of Patent Appeals and Interferences ☐ Court dated _____
   (e) ☐ Other: _____.
2. The Reexamination Certificate will indicate the following:
   (a) Change in the Specification: ☐ Yes ☑ No
   (b) Change in the Drawing(s): ☐ Yes ☑ No
   (c) Status of the Claim(s):
      (1) Patent claim(s) confirmed: 1-15.
      (2) Patent claim(s) amended (including dependent on amended claim(s)): 16-20
      (3) Patent claim(s) canceled: _____.
      (4) Newly presented claim(s) patentable: 21-28.
      (5) Newly presented canceled claims: _____.
      (6) Patent claim(s) ☐ previously ☐ currently disclaimed: _____
      (7) Patent claim(s) not subject to reexamination: _____.
3. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
4. ☐ Note the attached statement of reasons for patentability and/or confirmation. Any comments considered necessary by patent owner regarding reasons for patentability and/or confirmation must be submitted promptly to avoid processing delays. Such submission(s) should be labeled: "Comments On Statement of Reasons for Patentability and/or Confirmation."
5. ☐ Note attached NOTICE OF REFERENCES CITED (PTO-892).
6. ☑ Note attached LIST OF REFERENCES CITED (PTO/SB/08 or PTO/SB/08 substitute).
7. ☐ The drawing correction request filed on _____ is: ☐approved ☐disapproved.
8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐None of the certified copies have
   ☐been received.
   ☐not been received.
   ☐been filed in Application No. _____.
   ☐been filed in reexamination Control No. _____.
   ☐been received by the International Bureau in PCT Application No. _____.

   * Certified copies not received: _____.
9. ☐ Note attached Examiner's Amendment.
10. ☐ Note attached Interview Summary (PTO-474).
11. ☐ Other: _____.

All correspondence relating to this reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this Office action.

/SARAH B MCPARTLIN/ Primary Examiner, Art Unit 3993	

cc: Requester (if third party requester)

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Reexamination

2. The following is an examiner's statement of reasons for patentability and/or confirmation of the claims found patentable in this reexamination proceeding:

Claims 1-20 were rejected in the non-final office action mailed on 12/5/2023 over Braden (2011/0111650A1) in view of Rorabuagh et al. (5,544,607). The rejection relied upon Rorabaugh for his teaching of hydrofoil interconnected with a strut. Applicant's representative explained how the hydrofoil taught by Rorabaugh has "adjustable surfaces" that are steered by a movable steering gear. The teaching of adjustable surfaces directly contradicts the claim limitation of claims 1 and 16 requiring "the hydrofoil having no movable surface." For at least this reason, the Examiner confirms claims 1-20 as patentable over Braden in view of Rorabaugh et al.

Claims 1-2, 4-6, 8-11, 13-16 and 18-20 were further rejected in the non-final office action mailed on 12/5/2023 over Braden (2011/0111650A1) in view of Woolley (US 2005/0255764A1). The rejection relied upon Woolley for his teaching of a hydrofoil attached to a strut. The Examiner reasoned that adding a hydrofoil as taught by Woolley to the strut disclosed by Braden would increase stability of the watercraft. Applicant's representative persuasively argued that the addition of a hydrofoil as taught by Woolley to the strut disclosed by Braden as proposed by the Examiner would not create increase stability but would instead result in tremendous instability thereby making the watercraft unfit for its intended purpose. A hydrofoil provides a lifting force. In order for the Braden motor to continue to provide thrust to the board through the water concurrently with a lifting force created by the added hydrofoil, the strut would need to be lengthened to ensure that the motor remains in water. Lengthening of the strut would move the propulsion force provided by the motor further from the center of gravity of the watercraft imparting a destabilizing torque that would make the watercraft pitch upward at a nose thereof. Applicant's representative further reasons that there is nothing provided by the proposed combination that

would counteract the destabilizing torque. Woolley teaches a propulsion force for a watercraft provided by a tow rope. The tow rope effectively directs the propulsion force through the center of gravity of the watercraft which helps the watercraft maintain stability while being lifted by the hydrofoil. Moving the thrust away from the center of gravity, as would be the case in the Examiner's proposed combination, essentially equates to towing a roller skater via a tow rope tied around the skaters ankles. The Examiner is persuaded by the reasoning of Applicant's representative that the proposed combination would not increase stability and is therefore not obvious. At least for these reasons, the Examiner confirms claims 1-20 as patentable over Braden in view of Woolley et al.

Conclusion

3. Claims 1-28 are allowed.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARAH B. MCPARTLIN whose telephone number is (571)272-6854. The examiner can normally be reached M-F 7 am - 4 pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Gay Spahn** can be reached on 571-272-7731. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance

from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

All correspondence relating to this ex parte reexamination proceeding should be directed:

At Patent Center:	https://patentcenter.uspto.gov/
By Mail to:	Mail Stop *Ex Parte* Reexam Central Reexamination Unit Commissioner for Patents United States Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450
By FAX to:	(571) 273-9900 Central Reexamination Unit
By hand:	Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22314

/SARAH B MCPARTLIN/

Primary Examiner, Art Unit 3993

Conferees:

/Patricia L Engle/
Reexamination Specialist, Art Unit 3993

/Beverly Flanagan/
Acting SPRS, Art Unit 3993

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	90/015,269	9586659
	Examiner	Art Unit
	SARAH B MCPARTLIN	3636

CPC								
Symbol							Type	Version
B63H	/	11	/	04			F	2013-01-01
B63H	/	21	/	21			I	2013-01-01
B63H	/	5	/	14			I	2013-01-01
B63H	/	1	/	16			I	2013-01-01
B63H	/	21	/	17			I	2013-01-01

CPC Combination Sets									
Symbol							Type	Set	Ranking	Version
	/		/							

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	28	
/SARAH B MCPARTLIN/ Primary Examiner, Art Unit 3993	16 April 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	90/015,269	9586659
	Examiner	Art Unit
	SARAH B MCPARTLIN	3636

INTERNATIONAL CLASSIFICATION				
CLAIMED				
B63H11/04	/	11	/	04
B63H21/21	/	21	/	21
B63H5/14	/	5	/	14
B63H1/16	/	1	/	16
B63H21/17	/	21	/	17

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	28	
/SARAH B MCPARTLIN/ Primary Examiner, Art Unit 3993	16 April 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	90/015,269	9586659
	Examiner	Art Unit
	SARAH B MCPARTLIN	3636

☑ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		10		19		28								
	2		11		20										
	3		12		21										
	4		13		22										
	5		14		23										
	6		15		24										
	7		16		25										
	8		17		26										
	9		18		27										

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	28	
/SARAH B MCPARTLIN/ Primary Examiner, Art Unit 3993	16 April 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	90/015,269	9586659
	Examiner	Art Unit
	SARAH B MCPARTLIN	3636

CPC - Searched*		
Symbol	Date	Examiner

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Reviewed patent file	11/20/2023	SBM
Reviewed PTACTS for post grant proceedings (none found)	11/20/2023	SBM
Updated PTACTS search (IPR filed on 10/26/2023)	04/10/2024	SBM
Reviewed PDP and continuity data	04/10/2024	SBM
See attached search history	04/12/2024	SBM

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/S.B.M/ Primary Examiner, Art Unit 3636	

Reexamination	Application/Control No.	Applicant(s)/Patent Under Reexamination
	90/015,269	9586659
	Certificate Date	Certificate Number
		C1

Requester Correspondence Address: ☐ Patent Owner ☑ Third Party
Bayramoglu Law Offices, LLC 1540 West Warm Springs Road Suite 100 Henderson, NV 89014

LITIGATION REVIEW ☑	SBM (examiner initials)	10 April 2024 (date)
Case Name		Director Initials
MHL Custom Inc. v. Waydoo USA, Inc. et al., Case 1:21-cv-91, US District Court Delaware (open).		
MHL Custom, Inc. v. Waydoo USA, Inc. Civil Action No. 21-91-RGA, US District Court Delaware (open)		

COPENDING OFFICE PROCEEDINGS	
TYPE OF PROCEEDING	**NUMBER**
Inter Partes Review (IPR)	IPR2-24-00085

/S.B.M/ Primary Examiner, Art Unit 3636	

Bibliographic Data

Application No: 90/015,269

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☐ No ☐ Met After Allowance

Verified and Acknowledged: None /SARAH B MCPARTLIN/ (Examiner's Signature) | (Initials)

Title: POWERED HYDROFOIL BOARD

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
08/09/2023	440	3993	GBWHCC001-EPR
RULE			

APPLICANTS

INVENTORS

9586659,

CONTINUING DATA

This application is a REX of 15064521 03/08/2016 PAT 9586659

15064521 is a CON of 14509289 10/08/2014 PAT 9359044

14509289 has PRO of 61889071 10/10/2013

FOREIGN APPLICATIONS

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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	1	("5544607").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/11/20 11:51 AM
L2	1	("20050255764").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/11/20 11:54 AM
L3	1	("20110111650").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/11/20 11:55 AM
L4	1	("9586659").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/11/21 09:25 AM
L5	3	((US-5544607-A).did. AND USPT.dbnm.) OR ((US-20050255764-A1 OR US-20110111650-A1).did. AND PGPB.dbnm.)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/11/21 08:35 PM
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PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-22)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)		
	Application Number	90015269
	Filing Date	2023-08-09
	First Named Inventor	Nicholas Leason
	Art Unit	N/A
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	MHLCUS 3.5-002 CON

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.B.M/

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4020782		1977-05-03	Gleason, John	
	2	6443786		2002-09-03	Woolley, Robert C.	
	3	8290636		2012-10-16	Manning, Doug	
	4	9359044		2016-06-07	Langelaan, Jacob Willem	
	5	9586659		2017-03-07	Langelaan, Jacob Willem	
	6	4972792		1990-11-27	Yokoyama et al.	
	7	5469801		1995-11-28	Payne	
	8	9969463		2018-05-15	Pivec	

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	Filing Date	2023-08-09
	First Named Inventor	Nicholas Leason
	Art Unit	N/A
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	MHLCUS 3.5-002 CON

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.B.M/

	9	7232355		2007-06-19	Woolley	
	10	6311631		2001-11-06	Beecher, Ronald L.	

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	1	20110201238	A1	2011-08-18	Rott et al	
	2	20030167991	A1	2003-09-11	Namanny, Stan	

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Document 1. COMPLAINT FOR PATENT INFRINGEMENT against FOIL BOARDING COMPANY, INC. (Filing fee $ 402 receipt number AFLNDC-7525988.), filed by MHL CUSTOM, INC.. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Exhibit C) (ZOESCH, JOHN) (Entered: 10/21/2022)	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2023-08-09
	First Named Inventor	Nicholas Leason
	Art Unit	N/A
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	MHLCUS 3.5-002 CON

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.B.M/

	2	Document 14. ANSWER to 1 Complaint , COUNTERCLAIM against MHL CUSTOM INC by FOIL BOARDING COMPANY INC. (COUCH, MATTHEW) (Entered: ANSWER to 1 Complaint , COUNTERCLAIM against MHL CUSTOM INC by FOIL BOARDING COMPANY INC. (COUCH, MATTHEW) (Entered: 12/21/2022)	☐
	3	Document 18. ANSWER to 14 Answer to Complaint, Counterclaim by MHL CUSTOM INC. (ZOESCH, JOHN) (Entered: 01/11/2023)	☐
	4	Document 1. COMPLAINT FOR PATENT INFRINGEMENT filed with Jury Demand against Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc (Entered: 01/27/2021)	☐
	5	Document 13. ANSWER to 1 Complaint, with Jury Demand and COUNTERCLAIMS against MHL Custom, Inc., by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Farnan, Kelly) Modified on 5/21/2021 (nms). (Entered: 05/20/2021)	☐
	6	Document 17. ANSWER to 13 Answer to Complaint, Counterclaim by MHL Custom, Inc..(Bennett, Blake) (Entered: 06/10/2021)	☐
	7	Document 31. Joint Claim Construction Chart, by MHL Custom, Inc.. (Attachments: # 1 Exhibit A)(Bennett, Blake) Modified on 11/23/2021 (nms). (Entered: 11/22/2021)	☐
	8	Document 39. JOINT Appendix re 46 Joint Claim Construction Brief, by MHL Custom, Inc.. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Exhibit C, # 4 Exhibit D, # 5 Exhibit E, # 6 Exhibit F, # 7 Exhibit G, # 8 Exhibit H, # 9 Exhibit I, # 10 Exhibit J, # 11 Exhibit K)(Bennett, Blake) Modified on 2/28/2022 (nms). Modified on 3/1/2022 (nms). (Entered: 02/25/2022). [Parts 1-5]	☐
	9	Document 40. Joint Motion for Claim Construction - filed by MHL Custom, Inc.. Motions referred to Mary Pat Thynge. (Bennett, Blake) Modified on 2/28/2022 (nms). (Entered: 02/25/2022)	☐
	10	Document 46. JOINT Claim Construction Brief, filed by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/1/2022 (nms). (Entered: 03/01/2022)	☐
	11	Document 59. Letter to The Honorable Richard G. Andrews, from Blake A. Bennett, regarding submission of supplementation regarding claim construction. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Exhibit C)(Bennett, Blake) Modified on 5/16/2022 (nms). (Entered: 05/13/2022)	☐
	12	Document 60. Letter to Honorable Richard G. Andrews, from Kelly E. Farnan, regarding submission of supplementation regarding claim construction. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Exhibit C, # 4 Exhibit D, # 5 Exhibit E)(Farnan, Kelly) Modified on 5/16/2022 (nms). (Entered: 05/13/2022)	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	90015269 90015269 - GAU: 3636
	Filing Date	2023-08-09
	First Named Inventor	Nicholas Leason
	Art Unit	N/A
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	MHLCUS 3.5-002 CON

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.B.M/

	13	Document 61. Letter to The Honorable Richard G. Andrews, from Blake A. Bennett, regarding Plaintiff's objection to Defendants' May 13, 2022 submission (D.I. 60). (Bennett, Blake) Modified on 5/19/2022 (nms). (Entered: 05/18/2022)	☐
	14	Document 62. Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding Defendants limited response to Plaintiffs May 13, 2022 Submission (D.I. 59). (Farnan, Kelly) Modified on 5/18/2022 (nms). (Entered: 05/18/2022)	☐
	15	Document 66. MEMORANDUM OPINION: Providing claim construction for multiple terms in U.S. Patent Nos. 9,359,044 and 9,586,659. Signed by Judge Richard G. Andrews on 6/24/2022. (nms) (Entered: 06/24/2022)	☐
	16	Document 68. CLAIM CONSTRUCTION ORDER. Signed by Judge Richard G. Andrews on 6/30/2022. (nms) (Entered: 06/30/2022)	☐
	17	Document 87. REDACTED VERSION of 80 Opening Brief in Support, by MHL Custom, Inc.. (Bennett, Blake) Modified on 11/1/2022 (nms). (Entered: 11/01/2022)	☐
	18	Document 88. REDACTED VERSION of 83 Opening Brief in Support, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 11/01/2022)"	☐
	19	Document 102. REDACTED VERSION of 93 Answering Brief in Opposition,,, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Bordley, Dorronda) (Entered: 11/14/2022)	☐
	20	Document 104. REDACTED VERSION of 91 Answering Brief in Opposition, by MHL Custom, Inc.. (Bennett, Blake) Modified on 11/15/2022 (nms). (Entered: 11/14/2022)	☐
	21	Document 112. REDACTED VERSION of 106 Reply Brief by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 11/18/2022)	☐
	22	Document 118. REDACTED VERSION of 101 Reply Brief, by MHL Custom, Inc.. (Bennett, Blake) Modified on 11/21/2022 (nms). (Entered: 11/21/2022)	☐
	23	Document 142. ORDER: Regarding construction of "passively stable" (see Order for further details). Signed by Judge Richard G. Andrews on 1/3/2023. (nms) (Entered: 01/03/2023)	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	90015269 90015269 - GAU: 3636
	Filing Date	2023-08-09
	First Named Inventor	Nicholas Leason
	Art Unit	N/A
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	MHLCUS 3.5-002 CON

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.B.M/

	24	Document 153. MEMORANDUM OPINION. Signed by Judge Richard G. Andrews on 2/3/2023. (nms) (Entered: 02/03/2023)	☐
	25	Document 154. ORDER: Summary judgment of infringement of the '044 Patent (D.I. 78) is DENIED; Signed by Judge Richard G. Andrews on 2/3/2023. (nms) (Entered: 02/03/2023)	☐
	26	Document 160. ORAL ORDER: Ordered by Judge Richard G. Andrews on 2/22/2023. (nms) (Entered: 02/22/2023)	☐
	27	Document 174. Proposed Final Jury Instructions, by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/7/2023 (nms). (Entered: 03/07/2023)	☐
	28	Document 210. Amended Final Proposed Pretrial Order, by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/23/2023 (nms). Modified on 3/24/2023 (nms). (Entered: 03/23/2023)	☐
	29	Document 211. EXHIBITS 1-8 to 210 Amened Proposed Final Pretrial Order, by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/23/2023 (nms). (Entered: 03/23/2023)	☐
	30	Document 217. Final Jury Instructions (to be read into open court). (nms) (Entered: 03/31/2023)	☐
	31	Document 218. FINAL JURY VERDICT Form. (nms) (Entered: 03/31/2023)	☐
	32	Docket #220, REDACTED VERSION of 219 Jury Verdict. (lah) (Entered: 03/31/2023)	☐
	33	Document 222. TRIAL VERDICT (see verdict for further details). Signed by Judge Richard G. Andrews on 4/4/2023. (nms) (Entered: 04/04/2023)	☐
	34	Document 226. SO ORDERED Granting 225 JUDGMENT on the Jury Verdict. Signed by Judge Richard G. Andrews on 4/12/2023. (nms) (Entered: 04/12/2023)	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Art Unit	N/A
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	MHLCUS 3.5-002 CON

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.B.M/

	35	Document 257. MEMORANDUM OPINION. Signed by Judge Richard G. Andrews on 9/6/2023. (nms) (Entered: 09/06/2023)	☐
	36	Document 259. MEMORANDUM OPINION. Signed by Judge Richard G. Andrews on 9/7/2023. (nms) (Entered: 09/07/2023)	☐
	37	Document 260. ORDER: Plaintiffs Motion for Entry of a Permanent Injunction (D.I. 230) is DENIED; Signed by Judge Richard G. Andrews on 9/7/2023. (nms) (Entered: 09/07/2023)	☐
	38	Petition for Inter Partes Review of U.S. Patent No. 9,586,659 filed 10/26/23, Case IPR2024-00085. 92 pgs.	☐
	39	Petition for Inter Partes Review of U.S. Patent No. 9,359,044 filed 10/26/23, Case IPR2024-00086. 100 pgs.	☐
	40	DECLARATION OF STEFANO BRIZZOLARA, PH.D U.S. PATENT NO. 9,586,659 dated 10/26/23, Case IPR2024-00085. 85 pgs.	☐
	41	DECLARATION OF STEFANO BRIZZOLARA, PH.D U.S. PATENT NO. 9,359,044 dated 10/26/23, Case IPR2024-00086. 93 pgs.	☐
	42	DECLARATION OF JAKOB KUTTENKEULER dated 12/4/21, Case IPR2024-00085. 14 pgs.	☐
	43	DECLARATION OF JAKOB KUTTENKEULER dated 12/4/21, Case IPR2024-00086. 14 pgs.	☐
	44	Prosecution History of U.S. Application No. 14/509,289 filed 10/8/14, now Patent No. 9,359,044, [Downloaded 12/11/23/]. 675 pgs. [Parts 1-4]	☐
	45	Prosecution History of U.S. Application No. 15/064,521 filed 3/8/16, now Patent No. 9,586,659, [Downloaded 12/11/23/]. 154 pgs.	☐

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	First Named Inventor	Nicholas Leason
	Art Unit	N/A
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	MHLCUS 3.5-002 CON

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.B.M/

	46	Docket Report - 1-21-cv-00091-RGA, MHL Custom, Inc. v. Waydoo USA, Inc. et al (as of 12-08-23). 26 pgs.	☐
	47	Docket Report - 3-22-cv-21258-MCR-ZCB MHL Custom Inc. v. Foil Boarding Company, Inc. (as of 12-08-23). 6 pgs.	☐

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/SARAH B MCPARTLIN/	Date Considered	04/10/2024

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	90015269 90015269 - GAU: 3636
	Filing Date	2023-08-09
	First Named Inventor	Nicholas Leason
	Art Unit	N/A
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	MHLCUS 3.5-002 CON

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Michael C. Bossner/	Date (YYYY-MM-DD)	2023-12-15
Name/Print	Michael C. Bossner	Registration Number	79,441

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

US009586659B2

(12) **United States Patent**
Langelaan

(10) **Patent No.: US 9,586,659 B2**
(45) **Date of Patent: *Mar. 7, 2017**

(54) **POWERED HYDROFOIL BOARD**

(71) Applicant: **Jacob Willem Langelaan**, State College, PA (US)

(72) Inventor: **Jacob Willem Langelaan**, State College, PA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **15/064,521**

(22) Filed: **Mar. 8, 2016**

(65) **Prior Publication Data**

US 2016/0185430 A1 Jun. 30, 2016

Related U.S. Application Data

(63) Continuation of application No. 14/509,289, filed on Oct. 8, 2014, now Pat. No. 9,359,044.
(Continued)

(51) **Int. Cl.**

B63B 35/79	(2006.01)
B63B 1/24	(2006.01)
B63H 11/04	(2006.01)
B63H 1/16	(2006.01)
B63H 21/17	(2006.01)

(Continued)

(52) **U.S. Cl.**
CPC ***B63B 35/79*** (2013.01); ***B63B 1/248*** (2013.01); ***B63B 35/7926*** (2013.01); ***B63B 35/7943*** (2013.01); ***B63H 1/16*** (2013.01); ***B63H 5/14*** (2013.01); ***B63H 11/04*** (2013.01); ***B63H 21/17*** (2013.01); ***B63H 21/21*** (2013.01)

(58) **Field of Classification Search**
CPC B63B 1/248
USPC 114/74
See application file for complete search history.

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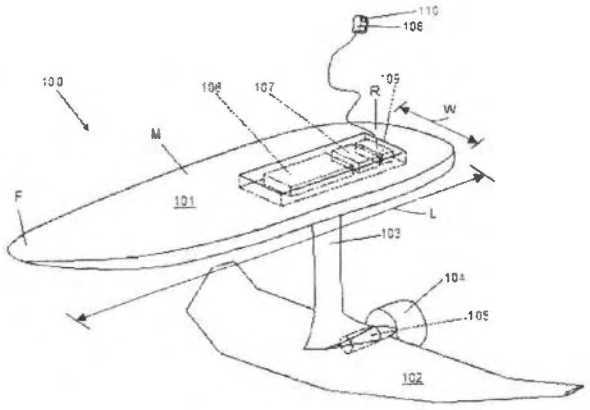
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Primary Examiner Lars A Olson
Assistant Examiner Jovon Hayes
(74) *Attorney, Agent, or Firm* Schwegman Lundberg & Woessner, P.A.

(57) **ABSTRACT**

A passively stable personal hydrofoil watercraft that has a flotation device, wherein a user can ride in a prone, kneeling, or standing position. The watercraft includes a strut having an upper end interconnected with the flotation device and lower end connected with a hydrofoil. The hydrofoil greatly reduces the power required to travel at higher speed. The watercraft also includes a propulsion system connected to the hydrofoil. Both longitudinal and directional control of the watercraft is via weight shift, eliminating the need of any movable surfaces. The flotation device, strut, and hydrofoil may be permanently interconnected or may be detachable.

20 Claims, 4 Drawing Sheets



Related U.S. Application Data

(60) Provisional application No. 61/889,071, filed on Oct. 10, 2013.

(51) **Int. Cl.**
B63H 21/21 (2006.01)
B63H 5/14 (2006.01)

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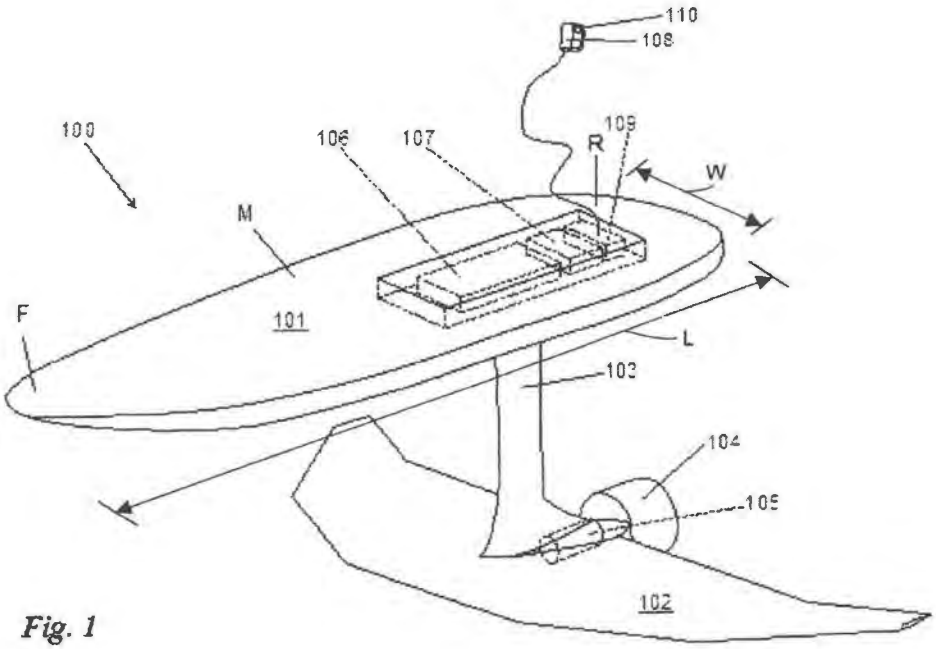

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Fig. 1

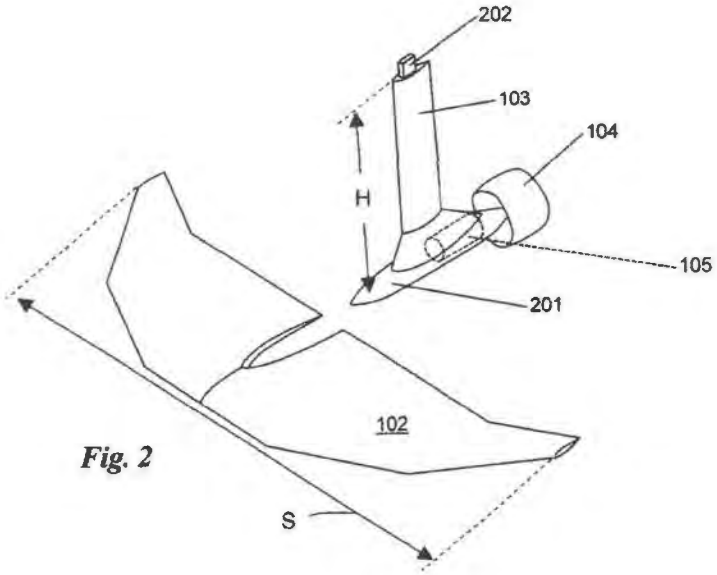

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Fig. 2

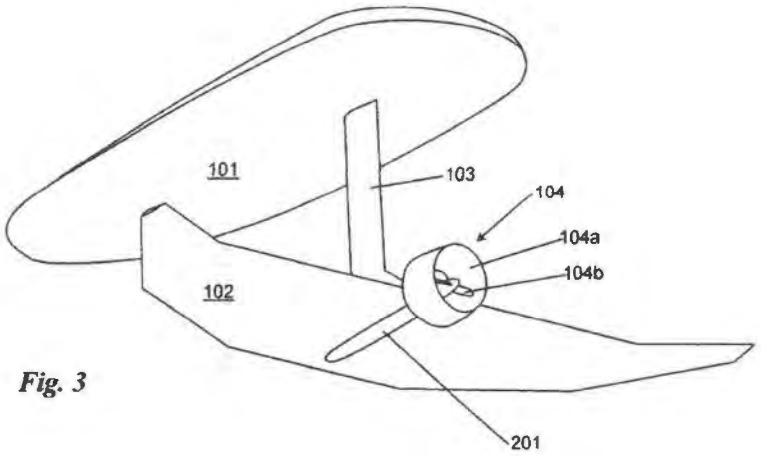


Fig. 3

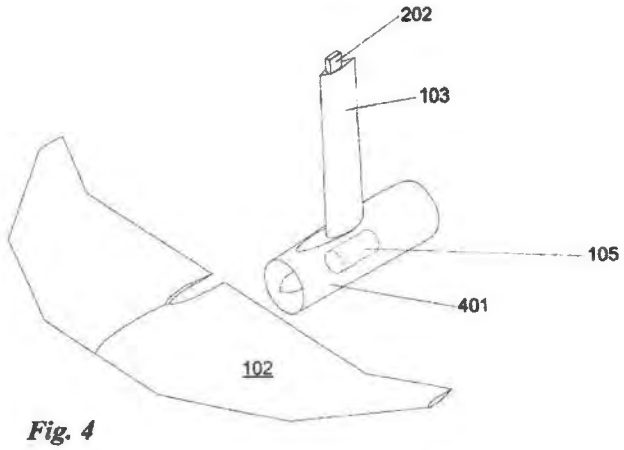


Fig. 4

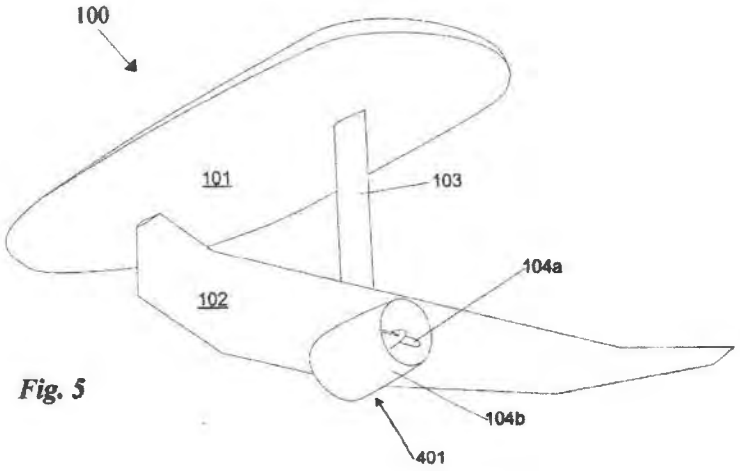


Fig. 5

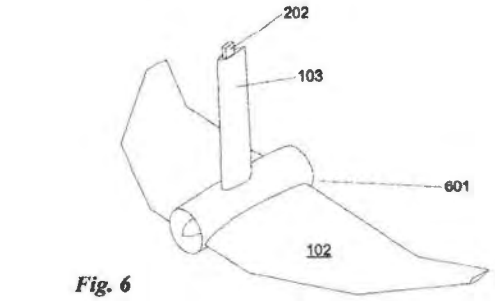


Fig. 6

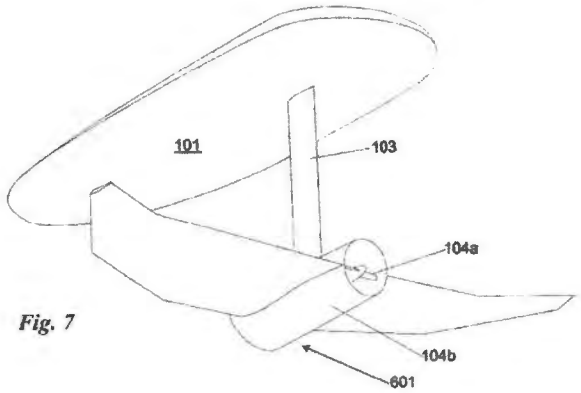


Fig. 7

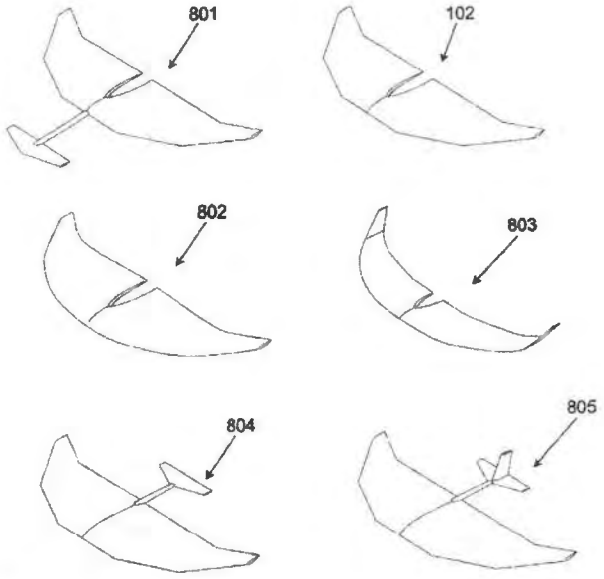


Fig. 8

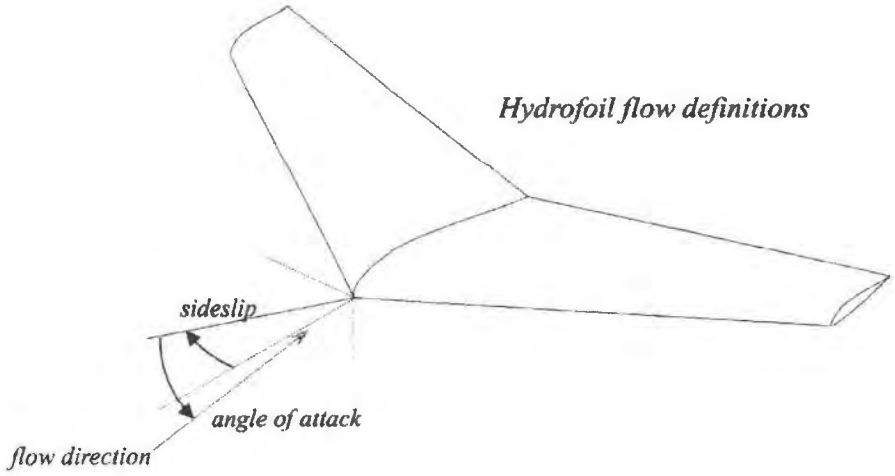

Hydrofoil flow definitions
sideslip
angle of attack
flow direction

Fig. 9

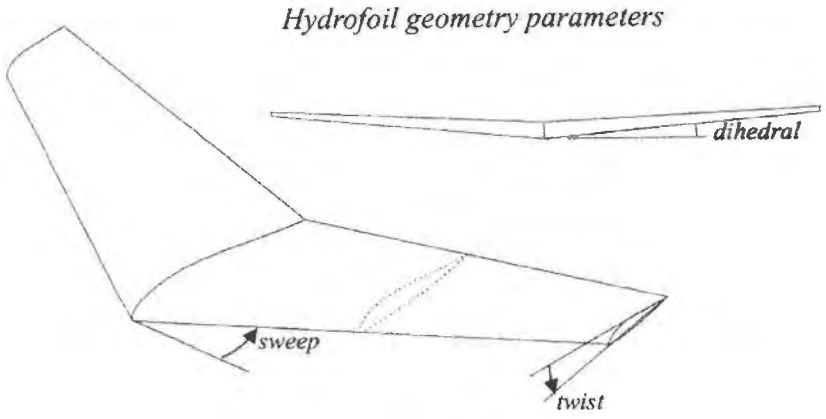

Hydrofoil geometry parameters
dihedral
sweep
twist

Fig. 10

POWERED HYDROFOIL BOARD

CROSS-REFERENCE TO RELATED APPLICATION

This application is a continuation of U.S. Ser. No. 14/509,289, filed Oct. 8, 2014, which claims priority to U.S. Provisional Patent Application Ser. No. 61/889,071, filed Oct. 10, 2013, the contents of which are incorporated herein in their entireties.

FIELD OF THE INVENTION

The present invention relates to personal watercraft; specifically, an electrically powered hydrofoil surfboard that is controlled by weight shift.

BACKGROUND OF THE INVENTION

Hydrofoils have been used on surfboards (U.S. Pat. No. 5,062,378 A, Bateman; U.S. Pat. No. 3,747,138, Morgan; U.S. Pat. No. 7,144,285 B1, Tareah), sailboards (U.S. Pat. No. 4,508,046 Shannon), water skis (U.S. Pat. No. 7,232,355, Woolley), and devices for swimmers (U.S. Pat. No. 2,931,332, Hebrank) as well as ships and boats (e.g. U.S. Pat. No. 3,227,123 A Voigt). The purpose of hydrofoils on surfboards is typically to enable higher speeds and to lift the surfboard above the choppy, turbulent surface of the water, thus enabling surfing on larger waves. On sailboards and kiteboards, hydrofoils enable higher speeds; and on water skis hydrofoils enable new forms of trick skiing.

Powered surfboards have been developed for reducing the effort required in paddling (U.S. Pat. No. 7,731,555 B2 Railey) and as personal watercraft (U.S. Pat. No. 6,702,634 B2 Jung, U.S. Pat. No. 3,262,413 A Bloomingdale et al., U.S. Pat. No. 6,192,817 B1 Dec, U.S. Pat. No. 4,971,586 A Walsh, U.S. Pat. No. 4,274,357 A Dawson). A particularly well-designed example of this type is the Jet-Surf (http://www.jet-surf.es). However, significant power is required to achieve speeds typical of surfing (up to ten horsepower to achieve thirty miles per hour), precluding the use of battery-powered motors for operationally useful periods.

A major factor that distinguishes surfboards from other watercraft is that control (both speed and directional) is affected via weight shift rather than by moveable surfaces (such as rudders) or thrust vectoring. Indeed, other methods of transport (skateboards and snowboards) also rely heavily on weight shift, and this method of control is central to the experience of surfing, snowboarding, and skateboarding.

An electrically powered hydrofoil device is described in Chen (U.S. Pat. No. 7,047,901 B2). The watercraft in that disclosure has two main disadvantages. First, the device in Chen requires a stabilizing component that controls the depth of the hydrofoil. Second, a steering mechanism is used for directional control. Therefore it does not (and cannot) accurately mimic the experience of surfing or snowboarding.

A need therefore exists for a personal watercraft that provides improved control and performance while providing a "surfing feel." In addition, this personal watercraft should be mechanically simple, easy to transport, and easy to maintain.

SUMMARY OF THE INVENTION

Embodiments of the present invention improve upon the powered surfboard by incorporating a hydrofoil. The hydrofoil greatly reduces the power required to travel at "fun" speeds (ranging from twenty to thirty miles per hour, but can be higher or lower depending on the user), so that a battery-powered electric motor (rather than an internal combustion engine) can be used to power the propulsion system. This results in reduced noise and vibration as well as reduced environmental impact.

Embodiments of the present invention also improve upon the powered hydrofoil surfboard. The hydrofoil of the present invention has been designed to provide passive stability in the longitudinal direction, making traditional altitude control systems based on moveable surfaces unnecessary. Further, both longitudinal and directional control of the board is via weight shift, so that riding the board is similar in feel to surfing or snowboarding, and the lack of a mechanical steering system makes the craft lighter, reduces parts count, and reduces the likelihood of a mechanical failure. Speed control is provided through a combination of throttle and weight shift.

The prior art in powered hydrofoil surfboards have all relied on moveable surfaces for control, and have ignored the possibility of designing the hydrofoil for passive static stability. The watercraft of the present invention is specifically designed to achieve desired levels of stability and controllability without the need for moveable surfaces. This is done through a combination of airfoil design, planform design, and tailoring the span-wise twist distribution to achieve desired outcomes.

Specific hydrofoils can be designed for different purposes: a larger foil results in lower speeds, more suitable for training; smaller foils operate at higher speeds for more advanced user; and tuning of the specific profile, twist, and dihedral can also be used to tailor the board to the user. A fixed canard or horizontal tail surface can also be added to further improve passive longitudinal stability as a training aid while still requiring the use of weight shift for control. A fixed vertical tail can be added to improve lateral stability as a training aid while still requiring the use of weight shift for control.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of a personal hydrofoil watercraft in accordance with the present invention;

FIG. **2** is an exploded perspective view showing one embodiment of the hydrofoil and propulsion system assembly;

FIG. **3** is a perspective view from underneath a personal hydrofoil watercraft in accordance with the present invention;

FIG. **4** is an exploded perspective view showing an alternate embodiment of the hydrofoil and propulsion system assembly;

FIG. **5** is a perspective view from underneath a personal hydrofoil watercraft with the hydrofoil and propulsion system of FIG. **4**;

FIG. **6** is a perspective view of an embodiment of the hydrofoil and propulsion system as an integrated body;

FIG. **7** is a perspective view from underneath a personal hydrofoil watercraft with the hydrofoil and propulsion system of FIG. **6**;

FIG. **8** shows perspective views of alternate examples of hydrofoil planform designs;

FIG. **9** is a schematic illustrating hydrofoil flow definitions; and

FIG. **10** is a schematic showing hydrofoil geometry parameters

DETAILED DESCRIPTION OF THE INVENTION

Referring to FIG. **1**, a perspective view of a hydrofoil watercraft **100** in accordance with an embodiment of the present invention is shown. Watercraft **100** may include a flotation board **101**, a hydrofoil **102** spaced below the flotation board, a strut **103** connecting the hydrofoil to the board, a propulsion system **104**, an electric motor **105**, a battery **106**, a motor speed controller **107**, a throttle system **108**, a throttle interface **109**, and a spring-loaded trigger **110**.

The flotation board **101** of FIG. **1** is similar to those used in surfing or sailboarding. In the illustrated embodiment, the flotation board has a fore-aft length L that is greater than its lateral width W. Generally, the ratio of lateral width W to length L may be between 0.2 and 0.5. The length L will generally be in the range of 5 to 8 feet and the width W will generally be in the range of 1.5 to feet. The primary function of the flotation board is to provide flotation at low speeds, and it is preferentially configured with a flat upper surface to allow an adult human to lie prone, sit, kneel or stand on it and an opposed bottom surface facing the water. The lower surface may be almost flat to permit good hydroplaning.

The flotation board **101** can be made of foam, fiber-reinforced epoxy (using glass, carbon, or Kevlar fibers), or other suitable materials known to those of skill in the art. It may have a watertight compartment defined therein to contain the battery **106**, motor speed controller **107** and throttle interface **109**. The flotation board **101** provides an attachment structure for attaching the strut **103**. The attachment structure may be a releasable mechanism to permit easy assembly and dis-assembly for transport. The flotation board **101** may be said to have a forward section F at the front end, a rear section R at the rear end and a middle section M intermediate the front and rear ends. Element M may also represent a midpoint that is halfway between the front and rear ends. As shown, the strut **103** is connected to the flotation board between the middle section M and the rear section R. The connection is behind the midpoint M and centered side to side. A throttle cable may connect the throttle module **108** to the throttle interface **109** or wireless communication may be provided between the throttle module **108** and throttle interface **109**. In an alternate arrangement, the batteries **106** may be contained in the strut **103** or embedded in the hydrofoil **102**. Each configuration has advantages and disadvantages ranging from ease of access for charging (in the case of a compartment in the flotation board) to reduction in the length of wires needed to connect the battery to the motor (in the case of containment in the strut or hydrofoil).

The strut **103** can be made of extruded aluminum, fiber-reinforced epoxy (using glass, carbon, or Kevlar fibers), or other suitable materials known to those of skill in the art. As shown, the strut is streamlined in cross-section to minimize drag. The strut may be constructed so as to allow passage of electrical wires from the motor speed controller **107** to the electric motor **105**, such as inside or attached to the strut. The primary function of the strut is to rigidly connect the hydrofoil **102** at a fixed distance H from the board **101**. The distance H will generally be in the range of 1 to 4 feet. In an alternative embodiment, more than one strut may be used or the strut may be shaped differently than shown.

The hydrofoil **102** of FIG. **1** is specifically designed to be statically stable in the longitudinal degrees of freedom via a combination of airfoil design, planform design and span-wise twist distribution. The hydrofoil **102** has a wingspan S (see FIG. **2**). The wingspan will generally be in the range of 1 to 4 feet. It is also designed to be stable in sideslip ("weathercock stability") either via planform design or via the addition of small vertical foils (winglets or fins). In some cases it may be advantageous to add a fixed canard or horizontal tail to further enhance static longitudinal stability (for example, for training purposes). The fixed distance H (see FIG. **2**) of the strut **103** may be greater than the wingspan S of the hydrofoil **102** so that the hydrofoil remains fully submerged even when the user is leaning to turn.

The propulsion system **104** (discussed in more detail below) may comprise a ducted propeller or pump-jet, or may be of another type. The propulsion system is driven by the electric motor **105**.

The electric motor **105** is connected to the motor speed controller **107** using wires sized to carry the required voltage and current. The motor speed controller **107** may include other functionality such as a low-voltage alarm or other protective circuitry for the battery **106**; alternately, such circuitry may be included in the throttle interface **109**. The main function of the throttle interface is to connect the motor speed controller **107** to the throttle module **108**.

The throttle module **108** may be a hand-held device with a spring-loaded trigger **110** (so the throttle disengages automatically when it is released). Pulling or depressing the trigger causes the motor to turn a propeller or impeller in the propulsion system **104**, with motor speed being proportional to the degree the trigger is pulled or depressed. The throttle module communicates the degree of trigger pull/depression to the throttle interface **109** via a cable or wirelessly. The throttle module may take other forms, such as being operated by other body parts.

The throttle interface **109** may in addition include circuitry and connections to permit charging of the battery **106**. This would include battery protection circuits. The throttle interface may also include a means to display battery information to the user (for example, via LEDs to indicate charge state). Alternately, such information may be displayed on the throttle module **108**.

To operate the watercraft **100**, a user initially lies prone on the flotation board **101**. The throttle is engaged, causing the craft to accelerate. As the craft gains speed the user may move to a kneeling or standing position. As the craft further gains speed the hydrofoil generates sufficient lift to raise the board above the water. The user controls altitude of the board by leaning back (to go up) and forward (to go down). The user can steer left or right by leaning in the appropriate direction. Releasing the throttle causes the motor to stop, reducing speed. The watercraft **100** may have other safety devices and features which causes the electric motor **105** to stop when the rider falls off the flotation board **101**. These devices may monitor the presence of a user on the flotation board **101**.

FIG. **2** shows an exploded perspective view of one embodiment of the hydrofoil **102**, strut **103**, propulsion system **104**, and electric motor **105**. The electric motor **105** and propulsion system **104** are integrated into a waterproof, streamlined pod **201** that is designed to be embedded in the hydrofoil **102**. The pod **201** also defines the lower end of the strut **103**. The streamlined pod performs two main structural functions: it transmits propulsion forces to the strut **103** and it transmits lift forces from the hydrofoil **102** to the strut **103**. It may also contain provisions for cooling the electric motor **105**. The pod **201** is connected to the hydrofoil **102** either by

a fitting (so that the hydrofoil can be easily removed) or it is integrally manufactured with the hydrofoil **102**.

In its preferential form the electric motor **105** is a high efficiency brushless motor. A gearbox may be provided to ensure that the propeller or impeller of the propulsion system **104** operates over an appropriate range of speeds.

The strut **103** contains at its upper end a fitting **202** to attach the strut to the flotation board **101** of FIG. **1**. This fitting fits into a complementary slot in flotation board **101** and may use one of several methods to attach the strut **103** to the flotation board **101**: examples include bolts, pins, or latches. Any other attachment approach may be used, or the strut and/or foil and/or flotation board may be integrally formed or permanently interconnected.

FIG. **3** shows a perspective view of the watercraft **100** from below. In its preferred form the propulsion system **104** comprises a propeller **104***a* and a duct **104***b*. The duct has two purposes: it acts as a propeller guard and it is designed to increase propeller thrust. In an alternate form the propulsion system may comprise a pump-jet.

FIG. **4** shows an exploded perspective view of an alternative embodiment of the hydrofoil **102**, strut **103**, electric motor **105** and propulsion system **401**. In this embodiment the propulsion system comprises a long duct and may contain a stator assembly. The duct functions both as a guard for the propeller (shown in FIG. **3**) and to improve hydrodynamic efficiency. A stator (not shown) aft of the propeller can also be included to improve propulsive efficiency. In this embodiment the electric motor **105** is enclosed in a streamlined pod embedded in the propulsion system. In the embodiment of FIG. **4**, the propulsion system is mounted below the hydrofoil **102**. FIG. **5** shows a perspective view of the watercraft **100** from below with the propulsion system **401** mounted below the hydrofoil **102**.

FIG. **6** shows a perspective view of an alternative embodiment of the hydrofoil **102**, strut **103**, and propulsion system **601**. In this embodiment the propulsion system is integrated in the hydrofoil so that the inlet is at or near the forward (leading) edge of the hydrofoil and the outlet is at or near the rear (trailing) edge of the hydrofoil. As in the embodiments of FIG. **2**, FIG. **3**, FIG. **4** and FIG. **5**, the propulsion system comprises a duct, a propeller, electric motor, and may include a stator.

FIG. **7** shows a perspective view of the watercraft **100** from below with the propulsion system of FIG. **6** integrated in the hydrofoil.

FIG. **8** shows perspective views of alternative embodiments of the hydrofoil planform. Hydrofoil **801** includes a fixed canard that increases stability (suitable for training). Note that this canard is fixed, not movable: control still occurs through weight shift. Hydrofoil **102** is shown in earlier drawings, and can be considered a baseline "all around" hydrofoil (suitable for a wide range of abilities). Foils **802** and **803** are progressively higher performance, permitting higher speeds and/or greater maneuverability. Foil **803** includes winglets, which increase directional stability and decrease drag. Foil **804** includes a horizontal tail, which improves longitudinal stability (similar to **801**, it is suitable for training). Foil **805** includes both a horizontal tail and a vertical tail, improving longitudinal stability and directional stability (suitable for training). These tails may be considered a secondary hydrofoil. Note that other versions of the hydrofoil are possible: the key is designing the hydrofoil for passive static stability via planform design, airfoil design, and span-wise twist distribution.

Preferred embodiments of the present invention provide a hydrofoil watercraft with a fixed hydrofoil connected to a flotation board by one or more struts, with the fixed hydrofoil having no movable or adjustable surfaces. No movable hydrofoil is provided, but secondary hydrofoils on one or more struts (as shown in **801**, **804**, and **805**) may be included. Additionally, no movable steering system is provided, as the watercraft is maneuvered by weight shifts.

This invention exploits passive stability to obviate the necessity for mechanisms or active control systems to provide stability. This passive stability allows the watercraft to be controlled by weight shift rather than by mechanical systems. FIG. **9** and FIG. **10** show the hydrofoil flow definitions and hydrofoil geometry parameters respectively. For the hydrofoil, longitudinally trimmed motion occurs when the total pitching moment is zero. This trim condition is stable if a disturbance results in a restoring moment that returns the hydrofoil to its original condition. The pitching moment coefficient can be written as $C_m = C_{m0}+C_{m_\alpha}\alpha+C_{m_Q}Q$ where C_{m0} is the pitching moment coefficient at zero angle of attack and zero pitch rate, C_{m_α} is the derivative of pitching moment coefficient with respect to angle of attack (called pitch stiffness), α is the angle of attack (the angle between the flow direction and the chord of the hydrofoil), C_{m_Q} is the derivative of pitching moment coefficient with respect to pitch rate (called pitch damping), and Q is the pitch rate. To ensure a trimmable, stable hydrofoil, the following conditions must be true: $C_{m0}>0$, $C_{m_\alpha}<0$, $C_{m_Q}<0$. This is achieved with a combination of airfoil selection, hydrofoil sweep and span-wise twist. The exact ratios of wing sweep and twist are dependent on the degree of stability desired and are also affected by the pitching moment characteristics of the airfoil. The derivative C_{m_Q} determines the "quickness" of the longitudinal response. Typically it will lie between −2 and −20, with more negative values leading to a "sluggish" feel. In the steady state (when Q=0) the angle of attack (and thus speed) at which trim occurs is a function of C_{m0} and C_{m_α}:

$$\alpha_{trim} = -\frac{C_{m0}}{C_{m_\alpha}}$$

C_{m0} is defined entirely by hydrofoil design parameters; C_{m_α} is defined by a combination of hydrofoil design parameters and the location of the center of gravity: this is the means by which weight shift enables longitudinal control of the hydrofoil watercraft.

Similarly for lateral motion, trim occurs when the yawing moment and rolling moment are zero. It is further desirable that this occurs at zero sideslip angle, so the hydrofoil "tracks straight" through the water. When the yaw rate is zero, rolling moment coefficient and yawing moment coefficient can be written as

$$C_l = C_{l0}+C_{l_\beta}\beta+C_{l_p}P$$

$$C_n = C_{n0}+C_{n_\beta}\beta+C_{n_p}P$$

where C_{l0} and C_{n0} are the roll rate and yaw rate at zero slideslip, respectively, C_{l_β} and C_{n_β} are the derivatives of roll rate and yaw rate with respect to sideslip angle, respectively, C_{l_p} and C_{n_p} are the derivatives of roll rate and yaw rate with respect to roll rate, respectively. Note that C_{n_β} is sometimes called weathercock stiffness and C_{l_p} is sometimes called roll damping. Trimmable, stable motion at zero sideslip is achieved by ensuring that the following conditions are true:

$$C_{l0}=0$$

$$C_{n0}=0$$

$C_{l_\beta}<0$

$C_{n_\beta}>0$

$C_{l_p}<0$

This is achieved through a combination of sweep and dihedral and can also be influenced with the addition of winglets or a fin. The practical upper limit of C_{n_β} and practical lower limits of C_{l_β} and C_{l_p} are determined by the practicality of hydrofoil design. For example, sweep angles greater that 60 degrees are unlikely to lead to useable designs and twist of greater than 15 degrees is unlikely to lead to useable designs. Given these geometric limits and the subjective judgment of "ride quality" on the part of a user, bounds on the roll and yaw derivatives exist but are not quantifiable to a useful degree of precision.

Directional control is achieved by the weight shift and the weathercock stability stiffness. Shifting weight to one side causes the watercraft to roll to that side; this causes sideslip in the direction of the weight shift, and the C_{n_β} term causes the vehicle to turn in the direction of the lean. It should be noted that there is a trade-off between stability and maneuverability. More experienced users generally want a watercraft that is somewhat less stable to provide greater maneuverability. In contrast, less experienced users may want a watercraft that has more stability, and this may be done through appropriate design of the hydrofoil to give the desired stability and maneuverability characteristics.

As will be clear to those of skill in the art, the herein described embodiments of the present invention may be altered in various ways without departing from the scope or teaching of the present invention. It is the following claims, including all equivalents, which define the scope of the invention.

I claim:

1. A passively stable, weight-shift controlled personal hydrofoil watercraft, comprising:

a flotation device that has a fore-aft length greater than a lateral width, the flotation device having a top surface and a bottom surface, wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position, the flotation device having a forward section, a middle section, and a rear section;

a strut having a upper end and a lower end, the upper end fixedly interconnected with the flotation device between the middle section and the rear section of the flotation device;

a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no movable surface;

a propulsion system for propelling the watercraft in a body of water, wherein the propulsion system is connected to the hydrofoil; and

the watercraft having no movable steering system.

2. A watercraft in accordance with claim **1**, wherein the propulsion system comprises a battery, an electric motor, a motor speed controller, and a propulsor, the propulsor selected from a propeller, a ducted propeller, or a pump-jet.

3. A watercraft in accordance with claim **2**, wherein the propulsor is disposed below the hydrofoil.

4. A watercraft in accordance with claim **1**, wherein the hydrofoil is indirectly connected to the strut.

5. A watercraft in accordance with claim **4**, wherein the strut is directly connected to the propulsion system.

6. A watercraft in accordance with claim **5**, wherein a first hydrofoil wing of the hydrofoil is indirectly connected to the strut through the propulsion system.

7. A watercraft in accordance with claim **4**, wherein the hydrofoil comprises a plurality of wings that are interconnected by way of a strut.

8. A watercraft in accordance with claim **2**, wherein the battery and motor speed controller are contained in a watertight compartment integrated into the flotation device.

9. A watercraft in accordance with claim **2**, wherein the electric motor is integrated into a waterproof, streamlined pod and the watercraft comprises a cooling system for cooling the electric motor.

10. A watercraft in accordance with claim **9**, wherein the waterproof, streamlined pod is removably interconnected with the hydrofoil through a fitting.

11. A watercraft in accordance with claim **8**, further comprising a wireless handheld controller having a transmitter, and a throttle interface having a receiver, wherein the transmitter is adapted to send wireless signals to the receiver that cause an output of the propulsion system to change.

12. A watercraft in accordance with claim **1**, wherein a first hydrofoil wing of the hydrofoil is directly connected to the strut.

13. A watercraft in accordance with claim **8**, wherein the strut has an internal passage and electrical wires extend from the electric motor to the watertight compartment inside the strut through the internal passage for controlling the electric motor.

14. A watercraft in accordance with claim **13**, wherein the flotation device has a detector adapted to detect a user's presence on the flotation device and cease operation of the electric motor if the detector detects that the user is not on the flotation device.

15. A watercraft in accordance with claim **1**, wherein the propulsion system is directly or indirectly connected to the hydrofoil.

16. A personal hydrofoil watercraft, comprising:

a surfboard-shaped flotation device that has a fore-aft length greater than a lateral width, the flotation device having a top surface and a bottom surface, wherein the top surface has a substantially horizontal supporting surface configured to support a user in a prone, kneeling, or standing position, the flotation device having a forward section, a middle section, and a rear section;

a hydrofoil interconnected with the surfboard-shaped flotation device, the hydrofoil having a strut and a first hydrofoil wing, an upper end of the strut being fixedly interconnected with the surfboard-shaped flotation device;

a propulsion system attached to the surfboard-shaped flotation device for propelling the watercraft in a body of water, the propulsion system comprising a battery, an electric motor, a motor speed controller, and a propulsor, wherein the propulsor is selected from a propeller, a ducted propeller, or a pump-jet, and the battery and motor speed controller are contained in a watertight compartment integrated into the flotation device;

the watercraft having no movable steering system;

a handheld controller having a throttle; and

a throttle interface, wherein the throttle is adapted to send electronic signals to the throttle interface that cause an output of the propulsion system to change.

17. A watercraft in accordance with claim **16**, wherein the hydrofoil comprises a plurality of hydrofoil wings including the first hydrofoil wing and a second hydrofoil wing, the first and second hydrofoil wings being connected by way of a strut.

18. A watercraft in accordance with claim 16, wherein the watercraft comprises a cooling system for cooling the electric motor.

19. A watercraft in accordance with claim 16, wherein the strut has an internal passage and electrical wires extend from the electric motor to the watertight compartment inside the strut through the internal passage for controlling electric motor.

20. A watercraft in accordance with claim 16, wherein the handheld controller comprises a wireless transmitter operatively coupled to the throttle and the throttle interface includes a receiver, the transmitter being adapted to send wireless signals to the receiver in response to actuation of the throttle that cause an output of the propulsion system to change.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO.	: 9,586,659 B2
APPLICATION NO.	: 15/064521
DATED	: March 7, 2017
INVENTOR(S)	: Jacob Willem Langelaan

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims

In Column 9, Line 4, in Claim 19, after "controlling", insert --the--

Signed and Sealed this
First Day of May, 2018

Andrei Iancu
Director of the United States Patent and Trademark Office

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04/25/2024	PAPER

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The time period for reply, if any, is set in the attached communication.

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Bayramoglu Law Offices, LLC
1540 West Warm Springs Road
Suite 100
Henderson, NV 89014

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/015,269* .

PATENT UNDER REEXAMINATION *9586659* .

ART UNIT *3993* .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

/SARAH B MCPARTLIN/

Ex Parte Reexamination Interview Summary	Control No.	Patent Under Reexamination	
	90/015,269	9586659	
	Examiner	Art Unit	AIA (FITF) Status
	SARAH B MCPARTLIN	3993	Yes

All participants (USPTO personnel, patent owner, patent owner's representative):

(1) SARAH MCPARTLIN	(3) Patricia Engle
(2) Eileen Lillis	(4) Gregory Reilly

Date of Interview: 30 January 2024

Type: a) ☐ Telephonic b) ☑ Video Conference
c) ☐ Personal (copy given to: 1) ☐ patent owner 2) ☐ patent owners representative)

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☑ No.
If Yes, brief description: _____

Agreement with respect to the claims f) ☐ was reached. g) ☑ was not reached. h) ☐ N/A.
Any other agreement(s) are set forth below under "Description of the general nature of what was agreed to..."

Claim(s) discussed: 1 and 16 .

Identification of prior art discussed: Braden (US 2011/0111650); Woolley (US 2005/0255764) and Rorabaugh et al. (5,544,607) .

Description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet .

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims patentable, if available, must be attached. Also, where no copy of the amendments that would render the claims patentable is available, a summary thereof must be attached.)

A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION MUST INCLUDE PATENT OWNER'S STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. (See MPEP § 2281). IF A RESPONSE TO THE LAST OFFICE ACTION HAS ALREADY BEEN FILED, THEN PATENT OWNER IS GIVEN **ONE MONTH** FROM THIS INTERVIEW DATE TO PROVIDE THE MANDATORY STATEMENT OF THE SUBSTANCE OF THE INTERVIEW
(37 CFR 1.560(b)). THE REQUIREMENT FOR PATENT OWNERS STATEMENT CAN NOT BE WAIVED.
EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).

/SARAH B MCPARTLIN/ Primary Examiner, Art Unit 3993	/Patricia L Engle/ Reexamination Specialist, Art Unit 399	/EILEEN D LILLIS/ SPRS, Art Unit 3993

cc: Requester (if third party requester)

Additional Participants:
Brian Tomkins (attorney)
Michael Bossner (attorney)
Jack Langelaan (inventor)
Nick Leason (Founder and CEO of MHL Custom)

Continuation of Description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Mr. Reilly provided an interview agenda (see attached).

Mr. Reilly described why Rorabaugh fails to teach a hydrofoil as required by patent claims 1 and 16. Specifically, patent claim 1 requires a hydrofoil "having no movable surface" and patent claims 1 and 16 both require a watercraft having "no movable steering system." Rorabaugh teaches hydrofoil surfaces that " are adjustable" (column 9, line 17) and the "high areal percentage of each hydrofoil that is angularly adjustable by the steering great" (column 9, lines 23-24).

Mr. Reilly further argued that the rationale for combining the hydrofoils taught by Woolley with the powered surfboard disclosed by Braden is unfounded since the stability provided by the Woolley hydrofoils is not directly transferable from the application in the "flying" water ski in Woolley to a support surface intended to ride along the water surface as disclosed by Braden. Mr. Reilly inferred that such a combination would require hindsight reasoning.

Mr. Reilly was reminded that Re-Exam practice does not include Requests for Continued Examination. Declarations from the inventor and manufacturer explaining how the addition of a hydrofoil, as taught by Woolley, to the powered surfboard disclosed by Braden would create a device that is not passively stable, as required by the patent claim, may be provided to support why such a combination is not obvious and would require hindsight reasoning.

Furthermore Applicant's representative is encouraged to explain the intended scope of the term "hydrofoil" as set forth in the claim. The Examiner recognizes how the hydrofoil is described in the specification but gives the broadest reasonable interpretation to one of ordinary skill in the art to the claim language when applying prior art.

From: Reilly, Gregory M.
To: McPartlin, Sarah
Subject: Interview Agenda for January 30, 2024 – U.S. Pat. App. No. 90/015,269 (Our Ref. MHLCUS 3.5-002 CON)
Date: Thursday, January 25, 2024 5:28:01 PM

CAUTION: This email has originated from a source outside of USPTO. **PLEASE CONSIDER THE SOURCE** before responding, clicking on links, or opening attachments.

Dear Examiner McPartlin,

Thank you for your courtesy in scheduling a video conference interview in the above-identified application on Tuesday, January 30, 2024, at 1:00 pm ET. I will be joining the Microsoft Teams invite you sent, along with my colleagues, Brian Tomkins (58,550) and Michael Bossner (79,441), and an expert in the field of aeronautics and astronautics, Jack Langelaan PhD, who is the sole inventor of this patented subject matter.

During the call, we were hoping to discuss **1)** the outstanding rejection of claim 1 under 35 U.S.C. § 103 as being obvious over U.S. Pat. Pub. No. 2011/0111650 ("Braden") in view of U.S. Pat. No. 5,544,607 ("Rorabaugh"), and **2)** the outstanding rejection of claim 1 under 35 U.S.C. § 103 as being obvious over Braden in view of U.S. Pat. Pub. No. 2005/0255764 ("Woolley").

Regarding the first rejection, we would like to discuss the fact that the disclosure of Rorabaugh is primarily directed to movable sponsons (*e.g.*, sponsons 26, 27 in FIG. 4) for a hydrofoil watercraft to increase stability. Further, when the hydrofoils are discussed in Rorabaugh, they are explicitly noted to have adjustable control surfaces (*see*, *e.g.*, col.8 ll.41-44, col.9 ll.23-26, col.13 ll.10-13, col.15 ll.36-37, col.16 ll.5-6), which are steered by Rorabaugh's movable steering gear 25. Thus, any such combination of Rorabaugh and Braden would not result in a passively stable, weight-shift controlled personal hydrofoil watercraft having no movable steering system and no movable surface on the hydrofoil, as recited in independent claim 1. As such, Applicant respectfully submits that this prior art combination does not establish a *prima facie* case of obviousness.

Regarding the second rejection, we would like to discuss that the combination of Braden and Woolley also does not establish a *prima facie* case of obviousness. In that regard, the Examiner has not provided any justification for why the hydrofoil of Woolley would be connected to the propulsion system of Braden. The Examiner alleged that such a combination would increase stability, but the purpose of the foils of Woolley is not to increase stability, but rather to provide a flying experience by elevating the rider and board above the surface of the water (*see* paragraphs [0005]-[0006]). If such a combination were to occur, the motor mount 13 of Braden would have to be significantly lengthened, so that it could continue to provide thrust while Braden's surfboard body 10 is elevated above the water. However, shifting the location of the thrust away from the center of gravity in that manner would destabilize the watercraft of Braden by imparting a large nose-up pitching moment on the watercraft. There is no suggestion in any of the applied art as to how to counteract that destabilizing torque. Indeed, Woolley does not address that problem, as the propulsion in Woolley is via a rope connected to a separate powerboat, and thus the rope itself provides an additional source of stabilization that would not exist if the propulsion were instead

connected to a hydrofoil below the board. At best, a person having ordinary skill in the art would consider providing movable steering systems and/or movable control surfaces to impart stability to the watercraft. Thus, any such combination would not result in a passively stable, weight-shift controlled personal hydrofoil watercraft having no movable steering system and no movable surface on the hydrofoil, as recited in independent claim 1.

Recognizing that internet communications are not secure, I hereby authorize the USPTO to communicate with me concerning any subject matter of this application by electronic mail.

Sincerely,
Greg Reilly
(Reg. No.64,006)

NOTE – It is to be understood that the present communication was prepared at the request of the Examiner. It is meant only for discussion purposes, and thus, should not be interpreted to limit the '269 Application in any way.

Gregory M. Reilly
greilly@lernerdavid.com
908.518.8359 Direct

Lerner David LLP
20 Commerce Drive | Suite 400 | Cranford, NJ 07016
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Litigation Search Report CRU 3999
Reexam No. 90/015,269

To: Eileen Lillis	**From: Patricia Martin, Paralegal**
Location: CRU	**Location: OCRU**
Art Unit: 3993	**Phone: (571) 272-5004**
Date: April 11, 2024	

Search Notes

U.S. Patent No. 9,586,659

Litigation: Found

1. Performed a KeyCite Search in Westlaw, which retrieves all history on the patent including any litigation.
2. Performed a search on the patent in Lexis CourtLink for any open dockets or closed cases.
3. Performed a search in Lexis in the Federal Courts and Administrative Materials databases for any cases found.
4. Performed a search in Lexis in the IP Journal and Periodicals database for any articles on the patent.
5. Performed a search in Lexis in the news databases for any articles about the patent or any articles about litigation on this patent.

Paper No. Date: 04/11/2024

Negative Treatment

Negative Direct History

The KeyCited document has been negatively impacted in the following ways by events or decisions in the same litigation or proceedings:

1. POWERED HYDROFOIL BOARD [redacted]

US PAT 9586659 , U.S. PTO Utility , Mar. 07, 2017

Ruled Invalid by

2. MHL Custom Inc v. Waydoo USA, Inc. [redacted]

654 F.Supp.3d 329 , D.Del. , Feb. 03, 2023

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LexisNexis

User Name: Patricia Martin
Date and Time: Thursday, April 11, 2024 6:34:00AM EDT
Job Number: 221685091

Results List (includes up to 250)

1. Results list for:9586659 or 9,586,659
   Client/Matter: -None-
   Terms: 9586659 or 9,586,659
   Search Type: Terms and Connectors
   Narrowed by:

Content Type	Narrowed by
US Dockets	Case Status: Open,Unknown,Closed; Case Type: Civil

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Results for: **9586659 or 9,586,659**

Dockets

1. Foil Boarding Company, Inc. Vs. MHL Custom, Inc.

... Case Type IPR: Inter partes review Technical Center Number 3600 **Patent** Application Number 15064521 **Patent** Number **9586659** Foil Boarding Company, Inc. P Petitioner FOIL BOARDING COMPANY INC...
... accorded 28 2023-11-16 Notice : Power of Attorney 53931856 Filed By: **PATENT** OWNER Document Type: PAPER Paper/Exhibit No: 4 Public? No Notice : ...
... PAPER Paper/Exhibit No: 1 Public? Yes Notice : Power of Attorney **9,586,659** Foil Boarding Company, Inc. Vs. MHL Custom, Inc. - -...
... US **Patent** Trial and Appeals Board - Alexandria US_PTO_ALE ALE Alexandria United States **Patent** Trial and Appeal Board Docket US.PTAB.ALL_IPR2024-00085_ALE IPR2024-00085_ALE 2024-02-29T10:34:24.337 Unknown NOS Unknown ...

Court: United States Patent Trial and Appeal Board | **Date Filed:** Oct 26, 2023 | **Docket Number:** IPR2024-00085 | **Nature of Suit:** Unknown | **Status:** Open

2. Mhl Custom, Inc. V. Waydoo Usa, Inc. Et Al

... 02/03/2023) 154 2023-02-03 ORDER: Summary judgment of infringement of the '044 **Patent** (D.I. 78) is DENIED; Summary judgment for the '044 **Patent** and '659 **Patent** not being invalid as anticipated by the Evolo Report (D.I. 77) is DENIED; Summary judgment for the '044 **Patent** and '659 **Patent** not being invalid as anticipated by MHLCustom's own products (D.I. 77 ...
... is resolved as follows: Summary judgment for non-infringement of the '044 **Patent** and '659 **Patent** (D.I. 81) is DENIED; Summary judgment for claims 16-20 of the '659 **Patent** being invalid for lack of written description (D.I. 81) is ...
... 02/03/2023) 7523997603 2024-04-07 ORDER: Summary judgment of infringement of the '044 **Patent** (D.I. 78) is DENIED; Summary judgment for the '044 **Patent** and '659 **Patent** not being invalid as anticipated by the Evolo Report (D.I. 77) is DENIED; Summary judgment for the '044 **Patent** and '659 **Patent** not being invalid as anticipated by MHLCustom's own products (D.I. 77 ...
... is resolved as follows: Summary judgment for non-infringement of the '044 **Patent** and '659 **Patent** (D.I. 81) is DENIED; Summary judgment for claims 16-20 of the '659 **Patent** being invalid for lack of written description (D.I. 81) is ...

Court: United States District Court, Delaware | **Date Filed:** Jan 27, 2021 | **Docket Number:** 1:21cv91 | **Nature of Suit:** Patent | **Cause:** Patent Infringement | **Status:** Open

3. Mhl Custom, Inc. V. Avante Innovations, Llc

... Custom, Inc. (Lytle, Douglas) (mme). (Entered: 12/11/2020) 14 2020-12-11 REPORT of **Patent** and Trademark Closing, regarding **patent** and/or trademark number(s) 9,359,044, **9,586,659**, re 13 Notice of Voluntary Dismissal. cc:USPTO (rmc) (Entered: 01/06/2021) 7527504369 2024-04-11 REPORT of **Patent** and Trademark Closing, regarding **patent** and/or trademark number(s) 9,359,044, **9,586,659** , re 13 Notice of Voluntary Dismissal. cc:USPTO (rmc) (Entered: 01/06/2021) ...
... 2020-08-24 REPORT on the filing or determination of an action regarding **patent** and/or trademark number(s) *9,359,044*, ***9,586,659*** cc:USPTO (jmr) (jms). (Entered: 08/24/2020) 7527504357 2024-04-11

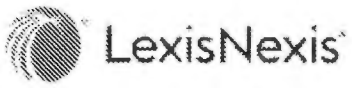
REPORT on the filing or determination of an action regarding **patent** and/or trademark number(s) *9,359,044*, ***9,586,659*** cc:USPTO (jmr) (jms). (Entered: 08/24/2020)...
... Closed 12/11/2020 CV Civil 830 **Patent** 11 San Diego 2020-08-24T00:00:00 2024-04-11T00:00:00 2020-08-24 0 CLOSED,**PATENT** Plaintiff 0 None Federal Question **Patent** Infringement 28:1338pt 0 2020-12-11T00:00:00 0 None...
... California Southern US District Court Docket US.DIS.CAS_320cv1648_CASD 3:20cv1648_CASD 2024-04-11T06:19:35.313 Intellectual Property **Patent** Civil Closed 60NN-N9M1-DXDT-G1V8-00000-00 16 20240411T062036 3:20cv1648 20cv1648 3:20 cv1648 No. 3:20cv1648 ...

Court: United States District Court, California Southern | **Date Filed:** Aug 24, 2020 | **Docket Number:** 3:20cv1648 | **Nature of Suit:** Patent | **Cause:** Patent Infringement | **Status:** Closed

4. Mhl Custom Inc V. Foil Boarding Company, Inc.

... FOIL BOARDING COMPANY INC. (mb) (Entered: 10/24/2022) 5 2022-10-24 AO 120 **Patent** and Trademark New Case Notification. Copy sent electronically to the Director of the U.S. **Patent** and Trademark Office. (mb) (Entered: 10/24/2022) 7520401851 2024-04-07 AO 120 **Patent** and Trademark New Case Notification. Copy sent electronically to the Director of the U.S. **Patent** and Trademark Office. (mb) (Entered: 10/24/2022)...
... Pending Inter Partes Review and Ex Parte Reexamination of Plaintiff's Asserted **Patent** Claims. Signed by JUDGE M CASEY RODGERS on 3/21/2024. (mb) (Entered: ...
... Pending Inter Partes Review and Ex Parte Reexamination of Plaintiff's Asserted **Patent** Claims. Signed by JUDGE M CASEY RODGERS on 3/21/2024. (mb) (Entered: ...
Patent 17 Pensacola 2022-10-21T00:00:00 2024-04-10T00:00:00 2022-10-21 0 STAYED Both 0 None Federal Question **Patent** Infringement 15:1126 0 2024-03-21T00:00:00 0 None 1 2022-10-21 COMPLAINT FOR **PATENT** INFRINGEMENT against FOIL BOARDING COMPANY, INC. (Filing fee $ 402 ...
... Pending Inter Partes Review and Ex Parte Reexamination of Plaintiff's Asserted **Patent** Claims by FOIL BOARDING COMPANY INC. (COUCH, MATTHEW) (Entered: 03/05/2024) 7520401897 ...
... Pending Inter Partes Review and Ex Parte Reexamination of Plaintiff's Asserted **Patent** Claims by FOIL BOARDING COMPANY INC. (COUCH, MATTHEW) (Entered: 03/05/2024)...

Court: United States District Court, Florida Northern | **Date Filed:** Oct 21, 2022 | **Docket Number:** 3:22cv21258 | **Nature of Suit:** Patent | **Cause:** Patent Infringement | **Status:** Open



User Name: Patricia Martin
Date and Time: Thursday, April 11, 2024 6:33:00AM EDT
Job Number: 221685066

Document (1)

1. IPR2024-00065, Foil Boarding Company, Inc. Vs. MHL Custom, Inc.

Client/Matter: -None-
Search Terms: 9586659 or 9,586,659
Search Type: Terms and Connectors
Narrowed by:

Content Type	Narrowed by
Dockets	Case Status: Open,Unknown,Closed; Case Type: Civil

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IPR2024-00085, Foil Boarding Company, Inc. Vs. MHL Custom, Inc.

US Patent Trial and Appeals Board - Alexandria

Alexandria

This case was retrieved on 04/11/2024

Header

Case Number: IPR2024-00085
Date Filed: 10/26/2023
Date Full Case Retrieved: 04/11/2024
Status: Open
Misc: (0) Unknown; Civil

Summary

Court Case Status: Patent Owner Preliminary Respo
Case Type: IPR: Inter partes review
Technical Center Number: 3600
Patent Application Number: 15064521
Patent Number: 9586659

Participants

Litigants
Foil Boarding Company, Inc.
Petitioner
MHL Custom, Inc.
PatentOwner

Attorneys

Proceedings

Date	#	Proceeding Text	Details
02/29/2024	1	EX2028	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2028 Public? Yes
02/29/2024	2	EX2027	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2027 Public? Yes
02/29/2024	3	EX2026	Filed By: PATENT OWNER Document Type: EXHIBIT

Date	#	Proceeding Text	Details
			Paper/Exhibit No: 2026 Public? Yes
02/29/2024	4	EX2025	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2025 Public? Yes
02/29/2024	5	EX2024	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2024 Public? Yes
02/29/2024	6	EX2023	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2023 Public? Yes
02/29/2024	7	EX2022	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2022 Public? Yes
02/29/2024	8	EX2021	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2021 Public? Yes
02/29/2024	9	EX2020	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2020 Public? Yes
02/29/2024	10	EX2019	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2019 Public? Yes

Date	#	Proceeding Text	Details
02/29/2024	11	EX2018	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2018 Public? Yes
02/29/2024	12	EX2017	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2017 Public? Yes
02/29/2024	13	EX2016	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2016 Public? Yes
02/29/2024	14	EX2015	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2015 Public? Yes
02/29/2024	15	EX2014	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2014 Public? Yes
02/29/2024	16	EX2013	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2013 Public? Yes
02/29/2024	17	EX2012	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2012 Public? Yes
02/29/2024	18	EX2011	Filed By: PATENT OWNER Document Type: EXHIBIT

Date	#	Proceeding Text	Details
			Paper/Exhibit No: 2011 Public? Yes
02/29/2024	19	EX2010	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2010 Public? Yes
02/29/2024	20	EX2009	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2009 Public? Yes
02/29/2024	21	EX2008	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2008 Public? No
02/29/2024	22	EX2007	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2007 Public? Yes
02/29/2024	23	EX2006	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2006 Public? Yes
02/29/2024	24	EX2005	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2005 Public? Yes
02/29/2024	25	EX2004	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2004 Public? Yes

Date	#	Proceeding Text	Details
02/29/2024	26	EX2003	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2003 Public? Yes
02/29/2024	27	EX2002	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2002 Public? Yes
02/29/2024	28	EX2001	Filed By: PATENT OWNER Document Type: EXHIBIT Paper/Exhibit No: 2001 Public? Yes
04/08/2024	29	STIPULATION AND ORDER STAYING PROCEEDINGS	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1024 Public? Yes
10/26/2023	30	Claim Construction Order	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1023 Public? Yes
10/26/2023	31	EvoloTorqeedoVideo-YTPage	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1022 Public? Yes
10/26/2023	32	DeclarationInternetArchives	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1021 Public? Yes
10/26/2023	33	BattnytViewership	Filed By: PETITIONER Document Type: EXHIBIT

Date	#	Proceeding Text	Details
			Paper/Exhibit No: 1020 Public? Yes
10/26/2023	34	BattnytArticle	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1019 Public? Yes
10/26/2023	35	KuttenkeulerDeclaration	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1018 Public? Yes
10/26/2023	36	PatentHistory-659	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1017 Public? Yes
10/26/2023	37	PatentHistory-044	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1016 Public? Yes
10/26/2023	38	US9359044	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1015 Public? Yes
10/26/2023	39	TorqeedoManual	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1014 Public? Yes
10/26/2023	40	Manning	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1013 Public? Yes

Date	#	Proceeding Text	Details
10/26/2023	41	Gleason	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1012 Public? Yes
10/26/2023	42	Woolley	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1011 Public? Yes
10/26/2023	43	EvoloTorqeedo	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1010 Public? Yes
10/26/2023	44	EvoloMovie-YouTubePage	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1009 Public? Yes
10/26/2023	45	EvoloMovie	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1008 Public? Yes
10/26/2023	46	EvoloPrototypeRun-YouTubePagePrint	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1007 Public? Yes
10/26/2023	47	EvoloPrototypeRun	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1006 Public? Yes
10/26/2023	48	EvoloReportSwedishLanguage	Filed By: PETITIONER Document Type: EXHIBIT

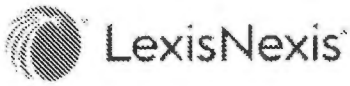
Date	#	Proceeding Text	Details
			Paper/Exhibit No: 1005 Public? Yes
10/26/2023	49	EvoloTranslationAffidavit	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1004 Public? Yes
10/26/2023	50	EvoloReportEnglishTranslation-Part 1	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1003 Public? Yes
10/26/2023	51	EvoloReportEnglishTranslation-Part 2	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1003 Public? Yes
10/26/2023	52	EvoloReportEnglishTranslation-Part 3	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1003 Public? Yes
10/26/2023	53	EvoloReportEnglishTranslation-Part 4	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1003 Public? Yes
10/26/2023	54	Declaration of Brizzolara 659	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1002 Public? Yes
10/26/2023	55	US9586659	Filed By: PETITIONER Document Type: EXHIBIT Paper/Exhibit No: 1001 Public? Yes

Date	#	Proceeding Text	Details
04/08/2024	56	PETITIONER???S REPLY TO PRELIMINARY RESPONSE REGARDING FINTIV FACTORS	Filed By: PETITIONER Document Type: PAPER Paper/Exhibit No: 10 Public? Yes
04/04/2024	57	PO Updated Mandatory Notices	Filed By: PATENT OWNER Document Type: PAPER Paper/Exhibit No: 9 Public? Yes
04/03/2024	58	Order: Sua Sponte Authorizing Additional Briefing	Filed By: BOARD Document Type: PAPER Paper/Exhibit No: 8 Public? Yes
02/29/2024	59	Motion to Seal	Filed By: PATENT OWNER Document Type: PAPER Paper/Exhibit No: 7 Public? Yes
02/29/2024	60	Patent Owner's Preliminary Response	Filed By: PATENT OWNER Document Type: PAPER Paper/Exhibit No: 6 Public? No
11/29/2023	61	Notice: Notice filing date accorded	Filed By: BOARD Document Type: PAPER Paper/Exhibit No: 5 Public? Yes
11/16/2023	62	Notice : Power of Attorney	Filed By: PATENT OWNER Document Type: PAPER Paper/Exhibit No: 4 Public? No
11/16/2023	63	Notice : Mandatory Notice	Filed By: PATENT OWNER Document Type: PAPER

Date	#	Proceeding Text	Details
			Paper/Exhibit No: 3 Public? No
10/26/2023	64	Petition : as filed	Filed By: PETITIONER Document Type: PAPER Paper/Exhibit No: 2 Public? Yes
10/26/2023	65	Notice : Power of Attorney	Filed By: PETITIONER Document Type: PAPER Paper/Exhibit No: 1 Public? Yes

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End of Document



User Name: Patricia Martin
Date and Time: Thursday, April 11, 2024 6:18:00AM EDT
Job Number: 221684634

Document (1)

1. 1:21-cv-01 Mhi Custom, Inc. V. Waydoo Usa, Inc. Et Al

Client/Matter: -None-
Search Terms: 9586659 or 9,586,659
Search Type: Terms and Connectors
Narrowed by:

Content Type	Narrowed by
Dockets	Case Status: Open,Unknown,Closed; Case Type: Civil

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1:21cv91, Mhl Custom, Inc. V. Waydoo Usa, Inc. Et Al

US District Court Docket

United States District Court, Delaware

(Wilmington)

This case was retrieved on 04/10/2024

Header

Case Number: 1:21cv91
Date Filed: 01/27/2021
Assigned To: Judge Richard G. Andrews
Nature of Suit: ***Patent*** (830)
Cause: ***Patent Infringement***
Lead Docket: None
Other Docket: the Federal Circuit, 24-01036
Jurisdiction: Federal Question

Class Code: Open
Statute: 28:1338
Jury Demand: Plaintiff
Demand Amount: $0
NOS Description: ***Patent***

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Litigants

Attorneys

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Proceedings

#	Date	Proceeding Text	Source
1	01/27/2021	COMPLAINT FOR ***PATENT INFRINGEMENT*** filed with Jury Demand against Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc. - Magistrate Consent Notice to Pltf. (Filing fee $ 402, receipt number ADEDC-3492281.) - filed by MHL Custom, Inc.. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Civil Cover Sheet)(myr) (Additional attachment(s) added on 1/27/2021: # 4 Exhibit C) (cna,). (Entered: 01/27/2021)	
2	01/27/2021	Notice, Consent and Referral forms re: U.S. Magistrate Judge jurisdiction. (myr) (Entered: 01/27/2021)	
3	01/27/2021	Report to the Commissioner of ***Patents*** and Trademarks for ***Patent***/Trademark Number(s) 9,359,044 ;***9,586,659***. (myr) (Entered: 01/27/2021)	
4	01/27/2021	Summonses Issued (please complete the top portion of the form and print out for use/service). (myr) (Entered: 01/27/2021)	
5	02/01/2021	SUMMONS Returned Executed by MHL Custom, Inc.. Waydoo USA, Inc. served on 1/29/2021, answer due 2/19/2021. (Bennett, Blake) (Entered: 02/01/2021)	
6	02/01/2021	SUMMONS Returned Executed by MHL Custom, Inc.. Shenzhen Waydoo Intelligence Technology Co., Ltd. served on 1/29/2021, answer due 2/19/2021. (Bennett, Blake) (Entered: 02/01/2021)	
	02/03/2021	Case Assigned to Judge Richard G. Andrews. Please include the initials of the Judge (RGA) after the case number on all documents filed. (rjb) (Entered: 02/03/2021)	
7	02/05/2021	MOTION for Pro Hac Vice Appearance of Attorney Robert J. Theuerkauf - filed by MHL Custom, Inc.. (Bennett, Blake) (Entered: 02/05/2021)	
8	02/05/2021	MOTION for Pro Hac Vice Appearance of Attorney Daniel W. Redding - filed by MHL Custom, Inc.. (Bennett, Blake) (Entered: 02/05/2021)	
9	02/05/2021	MOTION for Pro Hac Vice Appearance of Attorney Dennis D. Murrell - filed by MHL Custom, Inc.. (Bennett, Blake) (Entered: 02/05/2021)	
	02/05/2021	SO ORDERED, re 8 MOTION for Pro Hac Vice Appearance of Attorney Daniel W. Redding, 9 MOTION for Pro Hac Vice Appearance of Attorney Dennis D. Murrell, and 7 MOTION for Pro Hac Vice Appearance of Attorney Robert J. Theuerkauf, filed by MHL Custom, Inc.. Signed by Judge Richard G. Andrews on 2/5/2021. (nms) (Entered: 02/05/2021)	
10	02/24/2021	ORAL ORDER: Answers were due to be filed on 2/19/2021 (see D.I. 5 ; D.I. 6), and to date none have been filed. Now the Plaintiff shall file a status letter within 3 days from the entry of this Order. Ordered by Judge Richard G. Andrews on 2/24/2021. (nms) (Entered: 02/24/2021)	
	02/24/2021	Pro Hac Vice Attorneys Robert J. Theuerkauf, Daniel W. Redding, Dennis D. Murrell for MHL Custom, Inc. added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (kmd) (Entered: 02/24/2021)	

#	Date	Proceeding Text	Source
11	02/24/2021	Letter to The Honorable Richard G. Andrews, from Blake A. Bennett, regarding status. (Bennett, Blake) Modified on 2/25/2021 (nms). (Entered: 02/24/2021)	
12	02/26/2021	STIPULATION of Waiver and to Extend Time by MHL Custom, Inc.. (Bennett, Blake) (Entered: 02/26/2021)	
	03/01/2021	SO ORDERED, re 12 Stipulation of Waiver and to Extend Time (*Reset Answer Deadlines: Shenzhen Waydoo Intelligence Technology Co., Ltd. answer due 5/20/2021; Waydoo USA, Inc. answer due 5/20/2021). Signed by Judge Richard G. Andrews on 3/1/2021. (nms) (Entered: 03/01/2021)	
13	05/20/2021	ANSWER to 1 Complaint, with Jury Demand and COUNTERCLAIMS against MHL Custom, Inc., by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Farnan, Kelly) Modified on 5/21/2021 (nms). (Entered: 05/20/2021)	
14	05/20/2021	MOTION for Pro Hac Vice Appearance of Attorney Edgar H. Haug, Robert E. Colletti and Roman Khasidov - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 05/20/2021)	
	05/20/2021	SO ORDERED, re 14 MOTION for Pro Hac Vice Appearance of Attorney Edgar H. Haug, Robert E. Colletti and Roman Khasidov, filed by Waydoo USA, Inc., Shenzhen Waydoo Intelligence Technology Co., Ltd.. Signed by Judge Richard G. Andrews on 5/20/2021. (nms) (Entered: 05/20/2021)	
15	05/26/2021	Order Setting Rule 16(b) Telephone Conference: A Scheduling Conference is set for 6/15/2021, at 4:00 PM before Judge Richard G. Andrews (see Order for further details). Signed by Judge Richard G. Andrews on 5/26/2021. (nms) (Entered: 05/26/2021)	
	05/27/2021	Pro Hac Vice Attorney Edgar H. Haug,Robert E. Colletti for Shenzhen Waydoo Intelligence Technology Co., Ltd., for Waydoo USA, Inc. added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (myr) (Entered: 05/27/2021)	
16	05/27/2021	Disclosure Statement pursuant to Rule 7.1: identifying Other Affiliate SZ DJI Technology Co., Ltd., Other Affiliate Waydoo USA, Inc., Other Affiliate Joy Surf Limited for Shenzhen Waydoo Intelligence Technology Co., Ltd. filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 05/27/2021)	
	06/04/2021	Pro Hac Vice Attorney Roman Khasidov for Shenzhen Waydoo Intelligence Technology Co., Ltd.and Waydoo USA, Inc. added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (mal) (Entered: 06/04/2021)	
17	06/10/2021	ANSWER to 13 Answer to Complaint, Counterclaim by MHL Custom, Inc..(Bennett, Blake) (Entered: 06/10/2021)	
18	06/11/2021	PROPOSED Scheduling Order, by MHL Custom, Inc.. (Bennett, Blake) Modified on 6/11/2021 (nms). (Entered: 06/11/2021)	
19	06/14/2021	SCHEDULING ORDER: Case referred to the Magistrate Judge for the purpose of exploring ADR. This matter will also be referred to a magistrate judge to handle all discovery disputed. Joinder of Parties due by 12/17/2021. Amended Pleadings due by 12/17/2021. Fact Discovery completed by 5/13/2022. Dispositive Motions due by 10/20/2022. Joint Claim Construction Brief due by 2/25/2022. A Markman Hearing is set for 3/22/2022, at 9:00 AM in Courtroom 6A. A Pretrial Conference is set for 3/10/2023, at 9:00 AM in Courtroom 6A. A 5 day Jury Trial is set for 3/27/2023, at 9:30 AM in Courtroom 6A (see Order for further details). Signed	

#	Date	Proceeding Text	Source
		by Judge Richard G. Andrews on 6/14/2021. (nms) (Entered: 06/14/2021)	
20	06/14/2021	ORAL ORDER: The Rule 16(b) Conference set for 6/15/2021, is CANCELED. Ordered by Judge Richard G. Andrews on 6/14/2021. (nms) (Entered: 06/14/2021)	
	06/14/2021	CASE REFERRED to Magistrate Judge Jennifer L. Hall for Mediation. Please see Standing Order dated January 20, 2016, regarding disclosure of confidential ADR communications. A link to the standing order is provided here for your convenience at https://www.ded.uscourts.gov/sites/ded/files/forms/StandingOrderforADR-Mediation.pdf (Taylor, Daniel) (Entered: 06/14/2021)	
21	06/14/2021	CASE REFERRED to Magistrate Judge Mary Pat Thynge to handle all discovery disputes including any that arise in connection with expert reports. (nms) (Entered: 06/14/2021)	
22	06/14/2021	ORAL ORDER: If, during the pendency of this case, Plaintiff(s) and Defendant(s) jointly wish to schedule a form of alternative dispute resolution ("ADR"), such as mediation, with Judge Hall, they should contact chambers by e-mail at Cailah_Garfinkel@ded.uscourts.gov or by phone. Additionally, if either side wishes to speak ex parte with Judge Hall regarding ADR matters, they may contact chambers via e-mail or by phone to arrange a time for a call. In addition, Judge Hall may in the future enter a sua sponte order setting an ADR teleconference. ORDERED by Judge Jennifer L. Hall on 6/14/2021. (ceg) (Entered: 06/14/2021)	
23	06/18/2021	NOTICE OF SERVICE of Defendants Initial Disclosures Under Fed. R. Civ. P. 26(a)(1) filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Farnan, Kelly) (Entered: 06/18/2021)	
24	06/21/2021	NOTICE of Appearance by Dorronda R. Bordley on behalf of Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc. (Bordley, Dorronda) (Entered: 06/21/2021)	
25	06/22/2021	ORAL ORDER Setting Teleconference: Plaintiff to initiate the call. A Telephone Conference to discuss discovery in the context of the Scheduling Order and the referral to Judge Thynge is set for 7/27/2021 at 02:00 PM Eastern Time before Judge Mary Pat Thynge. Signed by Judge Mary Pat Thynge on 6/22/2021. (Taylor, Daniel) (Entered: 06/22/2021)	
26	07/08/2021	PROPOSED Discovery Confidentiality Order, by MHL Custom, Inc.. (Bennett, Blake) Modified on 7/8/2021 (nms). (Entered: 07/08/2021)	
27	07/08/2021	SO ORDERED Granting 26 Proposed Discovery Confidentiality Order. Signed by Judge Richard G. Andrews on 7/8/2021. (nms) (Entered: 07/08/2021)	
	07/27/2021	Minute Entry for proceedings held before Judge Mary Pat Thynge - Discovery Conference held on 7/27/2021, Terminated Hearings. (Court Reporter Jennifer Guy.) (Taylor, Daniel) (Entered: 07/30/2021)	
28	08/05/2021	ORDER re 19 Scheduling Order, 21 Order Referring Case to Magistrate Judge: paragraph 3.f. of the Scheduling Order at D.I. 19 is replaced and modified consistent with the attached ORDER. Signed by Judge Mary Pat Thynge on 8/5/2021. (Taylor, Daniel) (Main Document 28 replaced on 8/5/2021) (Taylor, Daniel). (Entered: 08/05/2021)	
	08/05/2021	CORRECTING ENTRY: Updated discovery ORDER at D.I. 28 with corrected document (Taylor, Daniel) (Entered: 08/05/2021)	
29	08/17/2021	NOTICE OF SERVICE of Defendants Waydoo USA, Inc. and Shenzhen Waydoo Intelligence Technology Co., Ltd.s (1) First Set of Interrogatories to Plaintiff (Nos. 1-11), (2) First Set of Requests	

#	Date	Proceeding Text	Source
		for Production of Documents and Things to Plaintiff (Nos. 1-55), and (3) this notice filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Bordley, Dorronda) (Entered: 08/17/2021)	
30	08/27/2021	NOTICE OF SERVICE of (1) Waydoos Responses to MHLs First Set of Interrogatories (Nos. 1-20) and (2) Waydoos Responses To MHLs First Set of Production Requests (Nos. 1-45) filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Farnan, Kelly) (Entered: 08/27/2021)	
31	11/22/2021	Joint Claim Construction Chart, by MHL Custom, Inc.. (Attachments: # 1 Exhibit A)(Bennett, Blake) Modified on 11/23/2021 (nms). (Entered: 11/22/2021)	
32	12/06/2021	NOTICE of Subpoena to Testify at a Deposition in a Civil Action to Google LLC by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc. (Attachments: # 1 Exhibit 1)(Farnan, Kelly) (Entered: 12/06/2021)	
33	12/07/2021	MOTION for Pro Hac Vice Appearance of Attorney Mark Basanta - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 12/07/2021)	
	12/07/2021	SO ORDERED, re 33 MOTION for Pro Hac Vice Appearance of Attorney Mark Basanta, filed by Waydoo USA, Inc., Shenzhen Waydoo Intelligence Technology Co., Ltd.. Signed by Judge Richard G. Andrews on 12/7/2021. (nms) (Entered: 12/07/2021)	
34	12/28/2021	NOTICE to Take Deposition of Christopher Barry on January 13, 2022 filed by Waydoo USA, Inc..(Bordley, Dorronda) (Entered: 12/28/2021)	
35	01/21/2022	NOTICE OF SERVICE of (1) Defendants' Opening Claim Construction Brief and (2) Exhibits 1-9 of Defendants' Opening Claim Construction Brief filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Farnan, Kelly) (Entered: 01/21/2022)	
36	02/18/2022	NOTICE OF SERVICE of Defendant Waydoo USA, Inc. and Shenzen Waydoo Intelligence Technology Co., Ltd.'s Sur-Reply Claim Construction Brief filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Bordley, Dorronda) (Entered: 02/18/2022)	
37	02/25/2022	MOTION for Pro Hac Vice Appearance of Attorney Brian P. McGraw - filed by MHL Custom, Inc.. (Bennett, Blake) (Entered: 02/25/2022)	
	02/25/2022	SO ORDERED, re 37 MOTION for Pro Hac Vice Appearance of Attorney Brian P. McGraw, filed by MHL Custom, Inc.. Signed by Judge Richard G. Andrews on 2/25/2022. (nms) (Entered: 02/25/2022)	
39	02/25/2022	JOINT Appendix re 46 Joint Claim Construction Brief, by MHL Custom, Inc.. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Exhibit C, # 4 Exhibit D, # 5 Exhibit E, # 6 Exhibit F, # 7 Exhibit G, # 8 Exhibit H, # 9 Exhibit I, # 10 Exhibit J, # 11 Exhibit K)(Bennett, Blake) Modified on 2/28/2022 (nms). Modified on 3/1/2022 (nms). (Entered: 02/25/2022)	
40	02/25/2022	Joint Motion for Claim Construction - filed by MHL Custom, Inc.. Motions referred to Mary Pat Thynge.(Bennett, Blake) Modified on 2/28/2022 (nms). (Entered: 02/25/2022)	
	02/28/2022	CORRECTING ENTRY: The Joint Claim Construction Brief filed at D.I. 38 has been removed from the docket as the filing was incompletely formatted. The parties are requested to resubmit the brief which should also include a table of contents and a table of authorities. (nms) (Entered: 02/28/2022)	
41	02/28/2022	ORAL ORDER: The Joint Motion for Claim Construction (D.I. 40)	

#	Date	Proceeding Text	Source
		is GRANTED. Each side is limited to 45 minutes for argument. Ordered by Judge Richard G. Andrews on 2/28/2022. (nms) (Entered: 02/28/2022)	
42	02/28/2022	NOTICE to Take Deposition of Nick Leason on date to be determined filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Farnan, Kelly) (Entered: 02/28/2022)	
43	02/28/2022	NOTICE to Take Deposition of Michael Leason on date to be determined filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Farnan, Kelly) (Entered: 02/28/2022)	
44	02/28/2022	NOTICE to Take Deposition of Stewart Wagner on date to be determined filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Farnan, Kelly) (Entered: 02/28/2022)	
45	02/28/2022	NOTICE to Take Deposition of Brent Farese on date to be determined filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Farnan, Kelly) (Entered: 02/28/2022)	
46	03/01/2022	JOINT Claim Construction Brief, filed by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/1/2022 (nms). (Entered: 03/01/2022)	
47	03/01/2022	NOTICE of Subpoena to Jacob Willem Langelaan, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibit 1)(Farnan, Kelly) Modified on 3/2/2022 (nms). (Entered: 03/01/2022)	
48	03/02/2022	NOTICE to Take Deposition of MHL Custom, Inc. on a date and location to be agreed upon by the parties filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Farnan, Kelly) (Entered: 03/02/2022)	
49	03/02/2022	MOTION for Daniel W. Redding to Withdraw as Attorney - filed by MHL Custom, Inc.. (Bennett, Blake) (Entered: 03/02/2022)	
	03/03/2022	Remark: The filing at D.I. 49 is being treated as a Notice to Withdraw. A motion was not required as the party being represented by the attorney withdrawing is still represented by its local counsel. (nms) (Entered: 03/03/2022)	
50	03/03/2022	MOTION for Pro Hac Vice Appearance of Attorney Megan E. Gibson - filed by MHL Custom, Inc.. (Bennett, Blake) (Entered: 03/03/2022)	
	03/04/2022	SO ORDERED, re 50 MOTION for Pro Hac Vice Appearance of Attorney Megan E. Gibson, filed by MHL Custom, Inc.. Signed by Judge Richard G. Andrews on 3/4/2022. (nms) (Entered: 03/04/2022)	
	03/04/2022	Pro Hac Vice Attorney Mark Basanta for Shenzhen Waydoo Intelligence Technology Co., Ltd. and Waydoo USA, Inc. added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (smg) (Entered: 03/04/2022)	
	03/04/2022	Pro Hac Vice Attorney Brian P. McGraw for MHL Custom, Inc. added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (apk) (Entered: 03/04/2022)	
51	03/07/2022	NOTICE of Subpoena to Avante Innovations, LLC by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibit 1)(Farnan, Kelly) Modified on 3/8/2022 (nms). (Entered: 03/07/2022)	
52	03/07/2022	NOTICE of Subpoena to Fliteboard USA, Inc. by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibit 1)(Farnan, Kelly) Modified on 3/8/2022 (nms). (Entered: 03/07/2022)	
	03/07/2022	Pro Hac Vice Attorney Megan E. Gibson for MHL Custom, Inc. added for electronic noticing. Pursuant to Local Rule 83.5 (d).,	

#	Date	Proceeding Text	Source
		Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (srs) (Entered: 03/07/2022)	
53	03/18/2022	ORAL ORDER: Due to a scheduling conflict the Markman Hearing scheduled for 3/22/2022, is CANCELED. The hearing will be rescheduled for a date to be determined. Ordered by Judge Richard G. Andrews on 3/18/2022. (nms) (Entered: 03/18/2022)	
54	03/21/2022	ORAL ORDER: The Markman Hearing is now rescheduled for 5/3/2022, at 9:00 AM in Courtroom 6A. Ordered by Judge Richard G. Andrews on 3/21/2022. (nms) (Entered: 03/21/2022)	
	04/11/2022	CASE NO LONGER REFERRED to Magistrate Judge Hall for the purpose of exploring ADR. Please see the Court's Standing Order No. 2022-2 dated March 14, 2022. (ceg) (Entered: 04/11/2022)	
	05/03/2022	Minute Entry for proceedings held before Judge Richard G. Andrews - Markman Hearing held on 5/3/2022. Counsel for Plaintiff: B. Bennett. Counsel for Defendants: K. Farnan, D. Bordley. Plaintiff's letter due by COB on 4/13/2022. Defendant's response due by COB on 4/18/2022. (Court Reporter Heather Triozzi.) (lak) (Entered: 05/05/2022)	
55	05/04/2022	ORDER re 28 Order: The following procedures for discovery disputes with Judge Thynge in this matter shall replace the procedures defined in the Order at D.I. 28. Signed by Judge Mary Pat Thynge on 5/4/2022. (Taylor, Daniel) (Entered: 05/04/2022)	
56	05/05/2022	Stipulation and Proposed Order to Extend Discovery and Expert Disclosure Deadlines - filed by MHL Custom, Inc.. (Bennett, Blake) Modified on 5/5/2022 (nms). (Entered: 05/05/2022)	
	05/05/2022	SO ORDERED, re 56 Stipulation and Proposed Order to Extend Discovery and Expert Disclosure Deadlines. Signed by Judge Richard G. Andrews on 5/5/2022. (nms) (Entered: 05/05/2022)	
57	05/11/2022	NOTICE OF SERVICE of Subpoena to Testify at a Deposition in a Civil Action filed by MHL Custom, Inc.. (Attachments: # 1 Exhibit)(Bennett, Blake) (Entered: 05/11/2022)	
58	05/11/2022	NOTICE OF SERVICE of Subpoena to Testify at a Deposition in a Civil Action filed by MHL Custom, Inc.. (Attachments: # 1 Exhibit)(Bennett, Blake) (Entered: 05/11/2022)	
59	05/13/2022	Letter to The Honorable Richard G. Andrews, from Blake A. Bennett, regarding submission of supplementation regarding claim construction. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Exhibit C)(Bennett, Blake) Modified on 5/16/2022 (nms). (Entered: 05/13/2022)	
60	05/13/2022	Letter to Honorable Richard G. Andrews, from Kelly E. Farnan, regarding submission of supplementation regarding claim construction. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Exhibit C, # 4 Exhibit D, # 5 Exhibit E)(Farnan, Kelly) Modified on 5/16/2022 (nms). (Entered: 05/13/2022)	
61	05/18/2022	Letter to The Honorable Richard G. Andrews, from Blake A. Bennett, regarding Plaintiff's objection to Defendants' May 13, 2022 submission (D.I. 60). (Bennett, Blake) Modified on 5/19/2022 (nms). (Entered: 05/18/2022)	
62	05/18/2022	Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding Defendants limited response to Plaintiffs May 13, 2022 Submission (D.I. 59). (Farnan, Kelly) Modified on 5/18/2022 (nms). (Entered: 05/18/2022)	
63	05/24/2022	NOTICE OF SERVICE of Defendants Second Set of Interrogatories to Plaintiff (Nos. 12-13) filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Farnan, Kelly) (Entered: 05/24/2022)	
64	06/23/2022	NOTICE OF SERVICE of Plaintiff's Responses to Defendants' Second Set of Interrogatories Nos. 12-13 filed by MHL Custom,	

#	Date	Proceeding Text	Source
		Inc..(Bennett, Blake) (Entered: 06/23/2022)	
65	06/24/2022	STIPULATION to Extend Discovery and Expert Disclosure Deadlines, by MHL Custom, Inc.. (Bennett, Blake) Modified on 6/24/2022 (nms). (Entered: 06/24/2022)	
66	06/24/2022	MEMORANDUM OPINION: Providing claim construction for multiple terms in U.S. ***Patent*** Nos. 9,359,044 and ***9,586,659***. Within five days the parties shall submit a proposed order consistent with this Memorandum Opinion suitable for submission to the jury. Signed by Judge Richard G. Andrews on 6/24/2022. (nms) (Entered: 06/24/2022)	
	06/24/2022	SO ORDERED, re 65 Stipulation and Proposed Order to Extend Discovery and Expert Disclosure Deadlines. Signed by Judge Richard G. Andrews on 6/24/2022. (nms) (Entered: 06/24/2022)	
67	06/29/2022	PROPOSED Claim Construction Order, by MHL Custom, Inc.. (Bennett, Blake) Modified on 6/30/2022 (nms). (Entered: 06/29/2022)	
68	06/30/2022	CLAIM CONSTRUCTION ORDER. Signed by Judge Richard G. Andrews on 6/30/2022. (nms) (Entered: 06/30/2022)	
69	07/13/2022	NOTICE OF SERVICE of (1) Defendants Supplement to Initial Disclosures under Fed. R. Civ. P. 26(a)(1) and (2) Defendants' Disclosure of Updated Invalidity Contentions filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Farnan, Kelly) (Entered: 07/13/2022)	
70	10/18/2022	Unopposed Motion to Clarify and Amend the Dispositive Motion Deadline - filed by MHL Custom, Inc.. (Attachments: # 1 Proposed Order)(Bennett, Blake) Modified on 10/18/2022 (nms). (Entered: 10/18/2022)	
71	10/19/2022	SO ORDERED Granting 70 Unopposed Motion to Clarify and Amend the Dispositive Motion Deadline (*Resetting Deadline: Dispositive Motions due by 10/24/2022). Signed by Judge Richard G. Andrews on 10/19/2022. (nms) (Entered: 10/19/2022)	
72	10/24/2022	STIPULATION of Amendment to Protective Order, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) Modified on 10/24/2022 (nms). (Entered: 10/24/2022)	
73	10/24/2022	SO ORDERED Granting 72 Stipulation of Amendment to Protective Order. Signed by Judge Richard G. Andrews on 10/24/2022. (nms) (Entered: 10/24/2022)	
74	10/24/2022	MOTION to Exclude, In Part, the Testimony of Defendants' Expert, Mark Lanterman, under Daubert - filed by MHL Custom, Inc.. (Attachments: # 1 Proposed Order).(Bennett, Blake) Modified on 10/25/2022 (nms). (Entered: 10/24/2022)	
75	10/24/2022	MOTION to Exclude the Testimony of Defendants' Expert, Philip Kline, Under Daubert - filed by MHL Custom, Inc.. (Attachments: # 1 Proposed Order).(Bennett, Blake) Modified on 10/25/2022 (nms). (Entered: 10/24/2022)	
76	10/24/2022	MOTION to Exclude, In Part, the Testimony of Defendants' Expert, Dr. Michael Triantfyllou, under Daubert - filed by MHL Custom, Inc.. (Attachments: # 1 Proposed Order).(Bennett, Blake) Modified on 10/25/2022 (nms). (Entered: 10/24/2022)	
77	10/24/2022	MOTION for Partial Summary Judgment of No Invalidity - filed by MHL Custom, Inc.. (Attachments: # 1 Proposed Order)(Bennett, Blake) Modified on 10/25/2022 (nms). (Entered: 10/24/2022)	
78	10/24/2022	MOTION for Partial Summary Judgment of ***Infringement*** of the '044 ***Patent*** - filed by MHL Custom, Inc.. (Attachments: # 1 Proposed Order)(Bennett, Blake) Modified on 10/25/2022 (nms). (Entered: 10/24/2022)	
79	10/24/2022	MOTION for Partial Summary Judgment on Defendants' Lack of	

#	Date	Proceeding Text	Source
		Standing Defense - filed by MHL Custom, Inc.. (Attachments: # 1 Proposed Order)(Bennett, Blake) Modified on 10/25/2022 (nms). (Entered: 10/24/2022)	
80	10/24/2022	[SEALED] OPENING BRIEF in Support re 79 MOTION for Partial Summary Judgment on Defendants' Lack of Standing Defense, 76 MOTION to Exclude, In Part, the Testimony of Defendants' Expert, Dr. Michael Triantfyllou, under Daubert, 75 MOTION to Exclude the Testimony of Defendants' Expert, Philip Kline, Under Daubert, 78 MOTION for Partial Summary Judgment of ***Infringement*** of the '044 ***Patent***, 74 MOTION to Exclude, In Part, the Testimony of Defendants' Expert, Mark Lanterman, under Daubert, 77 MOTION for Partial Summary Judgment of No Invalidity, filed by MHL Custom, Inc..Answering Brief/Response due date per Local Rules is 11/7/2022. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit 3, # 4 Exhibit 4, # 5 Exhibit 5, # 6 Exhibit 6, # 7 Exhibit 7, # 8 Exhibit 8, # 9 Exhibit 9, # 10 Exhibit 10, # 11 Exhibit 11, # 12 Exhibit 12, # 13 Exhibit 13, # 14 Exhibit 14, # 15 Exhibit 15, # 16 Exhibit 16, # 17 Exhibit 17, # 18 Exhibit 18, # 19 Exhibit 19, # 20 Exhibit 20, # 21 Exhibit 21, # 22 Exhibit 22, # 23 Exhibit 23, # 24 Exhibit 24, # 25 Exhibit 25, # 26 Exhibit 26, # 27 Exhibit 27, # 28 Exhibit 28, # 29 Exhibit 29, # 30 Exhibit 30, # 31 Exhibit 31, # 32 Exhibit 32, # 33 Exhibit 33, # 34 Exhibit 34, # 35 Exhibit 35)(Bennett, Blake) Modified on 10/25/2022 (nms). (Entered: 10/24/2022)	
81	10/24/2022	DAUBERT Motions and Motion for Summary Judgment - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Proposed Order).(Farnan, Kelly) Modified on 10/25/2022 (nms). (Entered: 10/24/2022)	
82	10/24/2022	CERTIFICATE OF SERVICE for Plaintiff's Opening Brief (D.I. 80), by MHL Custom, Inc.. (Bennett, Blake) Modified on 10/25/2022 (nms). (Entered: 10/24/2022)	
83	10/24/2022	[SEALED] OPENING BRIEF in Support re 81 DAUBERT Motions and Motions for Summary Judgment, filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. Answering Brief/Response due date per Local Rules is 11/7/2022. (Farnan, Kelly) Modified on 10/25/2022 (nms). (Entered: 10/24/2022)	
84	10/24/2022	DECLARATION of Robert E. Colletti re 83 Opening Brief in Support, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibits 1-2, # 2 Exhibits 16-20)(Farnan, Kelly) Modified on 10/25/2022 (nms). (Entered: 10/24/2022)	
85	10/24/2022	[SEALED] EXHIBITS re 84 Declaration of Robert E. Colletti, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibits 3-15, # 2 Exhibits 21-26)(Farnan, Kelly) Modified on 10/25/2022 (nms). (Entered: 10/24/2022)	
	10/25/2022	The Motions filed at D.I. 74 , 75 , 76 , 77 , 78 , 79 , and 81 incorrectly referred to Magistrate Judge Mary Pat Thynge by CM/ECF are no longer referred. (nms) (Entered: 10/25/2022)	
86	10/31/2022	STIPULATION TO EXTEND TIME to File Redacted Public Versions to November 1, 2022 - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 10/31/2022)	
	11/01/2022	SO ORDERED, re 86 Stipulation to Extend time to File Redacted Public Versions to November 1, 2022. (Notice of Compliance deadline set for 11/1/2022). Signed by Judge Richard G. Andrews on 11/1/2022. (lah) (Entered: 11/01/2022)	
87	11/01/2022	REDACTED VERSION of 80 Opening Brief in Support, by MHL Custom, Inc.. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit	

#	Date	Proceeding Text	Source
		3, # 4 Exhibit 4, # 5 Exhibit 5, # 6 Exhibit 6, # 7 Exhibit 7, # 8 Exhibit 8, # 9 Exhibit 9, # 10 Exhibit 10, # 11 Exhibit 11, # 12 Exhibit 12, # 13 Exhibit 13, # 14 Exhibit 14, # 15 Exhibit 15, # 16 Exhibit 16, # 17 Exhibit 17, # 18 Exhibit 18, # 19 Exhibit 19, # 20 Exhibit 20, # 21 Exhibit 21, # 22 Exhibit 22, # 23 Exhibit 23, # 24 Exhibit 24, # 25 Exhibit 25, # 26 Exhibit 26, # 27 Exhibit 27, # 28 Exhibit 28, # 29 Exhibit 29, # 30 Exhibit 30, # 31 Exhibit 31, # 32 Exhibit 32, # 33 Exhibit 33, # 34 Exhibit 34, # 35 Exhibit 35)(Bennett, Blake) Modified on 11/1/2022 (nms). (Entered: 11/01/2022)	
88	11/01/2022	REDACTED VERSION of 83 Opening Brief in Support, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 11/01/2022)	
89	11/01/2022	REDACTED VERSION of 85 Sealed Exhibits, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibits 3-12, # 2 Exhibits 13-15, # 3 Exhibit 21-26)(Farnan, Kelly) Modified on 11/1/2022 (nms). (Entered: 11/01/2022)	
90	11/07/2022	MOTION for Discovery Teleconference - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. Motions referred to Mary Pat Thynge.(Farnan, Kelly) (Entered: 11/07/2022)	
	11/07/2022	NOTICE OF SCHEDULING: A Telephonic Discovery Conference is set for 11/15/2022 at 10:00 AM Eastern before Judge Mary Pat Thynge. Counsel for Defendants shall arrange a teleconference and share details with chambers (daniel_taylor@ded.uscourts.gov) and the court reporter (Heather Triozzi). Ordered by Judge Mary Pat Thynge on 11/7/2022. (DAT) (Entered: 11/07/2022)	
	11/07/2022	ORAL ORDER: In view of the forthcoming federal holiday on Friday, November 11, 2022, the parties are reminded that letter briefs in the discovery dispute raised at D.I. 90 shall be due as follows: (1) Defendants' letter brief shall be due on 11/9/2022 by no later than 10:00 am; (2) Plaintiff's letter brief shall be due on 11/10/2022 by no later than 10:00 am. Courtesy copies shall be due in the Clerk's Office at the same time. All courtesy copies shall be single sided. Ordered by Judge Mary Pat Thynge on 11/7/2022. (DAT) (Entered: 11/07/2022)	
91	11/07/2022	[SEALED] ANSWERING BRIEF in Opposition re 81 Daubert Motions and Motion for Summary Judgment, filed by MHL Custom, Inc..Reply Brief due date per Local Rules is 11/14/2022. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit 3, # 4 Exhibit 4, # 5 Exhibit 5, # 6 Exhibit 6, # 7 Exhibit 7, # 8 Exhibit 8, # 9 Exhibit 9, # 10 Exhibit 10, # 11 Exhibit 11, # 12 Exhibit 12, # 13 Exhibit 13, # 14 Exhibit 14, # 15 Exhibit 15, # 16 Exhibit 16, # 17 Exhibit 17, # 18 Exhibit 18, # 19 Exhibit 19, # 20 Exhibit 20)(Bennett, Blake) Modified on 11/7/2022 (nms). (Entered: 11/07/2022)	
92	11/07/2022	CERTIFICATE OF SERVICE for Answering Brief in Opposition (D.I. 91), by MHL Custom, Inc.. (Bennett, Blake) Modified on 11/7/2022 (nms). (Entered: 11/07/2022)	
93	11/07/2022	[SEALED] ANSWERING BRIEF in Opposition re 75 MOTION to Exclude the Testimony of Defendants' Expert, Philip Kline, Under Daubert, 79 MOTION for Partial Summary Judgment on Defendants' Lack of Standing Defense, 76 MOTION to to Exclude, In Part, the Testimony of Defendants' Expert, Dr. Michael Triantfyllou, under Daubert, 78 MOTION for Partial Summary Judgment of ***Infringement*** of the '044 ***Patent***, 74 MOTION to Exclude, In Part, the Testimony of Defendants' Expert, Mark	

#	Date	Proceeding Text	Source
		Lanterman, under Daubert, 77 MOTION for Partial Summary Judgment of No Invalidity, filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..Reply Brief due date per Local Rules is 11/14/2022. (Farnan, Kelly) Modified on 11/7/2022 (nms). (Entered: 11/07/2022)	
94	11/07/2022	DECLARATION of Robert E. Colletti re 93 Answering Brief in Opposition, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibits 28, 29, 31, 34)(Farnan, Kelly) Modified on 11/7/2022 (nms). (Entered: 11/07/2022)	
95	11/07/2022	[SEALED] EXHIBITS to 94 Declaration of Robert E. Colletti, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibits 27, 30, 32, 33)(Farnan, Kelly) Modified on 11/7/2022 (nms). (Entered: 11/07/2022)	
96	11/09/2022	[SEALED] Letter to The Honorable Mary Pat Thynge, from Kelly E. Farnan, regarding discovery dispute (D.I. 90). (Attachments: # 1 Exhibits 1-4)(Farnan, Kelly) Modified on 11/9/2022 (nms). (Entered: 11/09/2022)	
97	11/10/2022	[SEALED] Letter to The Honorable Mary Pat Thynge, from Blake A. Bennett, regarding Defendants' discovery request (D.I. 96). (Attachments: # 1 Exhibit 1)(Bennett, Blake) Modified on 11/10/2022 (nms). (Entered: 11/10/2022)	
98	11/10/2022	CERTIFICATE of Service for Sealed Letter dated November 10 2022 (D.I. 97), by MHL Custom, Inc.. (Bennett, Blake) Modified on 11/10/2022 (nms). (Entered: 11/10/2022)	
99	11/10/2022	NOTICE of Appearance by Andrew Ralli on behalf of MHL Custom, Inc. (Ralli, Andrew) (Entered: 11/10/2022)	
100	11/14/2022	MOTION to Accept Filing in Excess of the Prescribed Page Limitations - filed by MHL Custom, Inc.. (Attachments: # 1 Proposed Order).(Bennett, Blake) Modified on 11/14/2022 (nms). Modified on 11/14/2022 (nms). (Entered: 11/14/2022)	
	11/14/2022	Motions No Longer Referred: The referral of D.I. 100 MOTION to Accept Filing in Excess of the Prescribed Page Limitations to Judge Thynge has been removed. This referral was set in error by CM/ECF. (nms) (Entered: 11/14/2022)	
101	11/14/2022	[SEALED] REPLY BRIEF re 79 MOTION for Partial Summary Judgment on Defendants' Lack of Standing Defense, 76 MOTION to to Exclude, In Part, the Testimony of Defendants' Expert, Dr. Michael Triantfyllou, under Daubert, 75 MOTION to Exclude the Testimony of Defendants' Expert, Philip Kline, Under Daubert, 78 MOTION for Partial Summary Judgment of ***Infringement*** of the '044 ***Patent***, 74 MOTION to Exclude, In Part, the Testimony of Defendants' Expert, Mark Lanterman, under Daubert, and 77 MOTION for Partial Summary Judgment of No Invalidity, filed by MHL Custom, Inc.. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit 3, # 4 Exhibit 4, # 5 Exhibit 5)(Bennett, Blake) Modified on 11/15/2022 (nms). (Entered: 11/14/2022)	
102	11/14/2022	REDACTED VERSION of 93 Answering Brief in Opposition,,, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Bordley, Dorronda) (Entered: 11/14/2022)	
103	11/14/2022	REDACTED VERSION of 95 Exhibit to a Document by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibit 27, 30, 32, 33)(Bordley, Dorronda) (Entered: 11/14/2022)	
104	11/14/2022	REDACTED VERSION of 91 Answering Brief in Opposition, by MHL Custom, Inc.. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit 3, # 4 Exhibit 4, # 5 Exhibit 5, # 6 Exhibit 6, # 7 Exhibit 7, # 8 Exhibit 8, # 9 Exhibit 9, # 10 Exhibit 10, # 11 Exhibit 11, # 12 Exhibit 12, # 13 Exhibit 13, # 14 Exhibit 14, # 15 Exhibit 15, # 16	

#	Date	Proceeding Text	Source
		Exhibit 16, # 17 Exhibit 17, # 18 Exhibit 18, # 19 Exhibit 19)(Bennett, Blake) Modified on 11/15/2022 (nms). (Entered: 11/14/2022)	
105	11/14/2022	STIPULATION TO EXTEND TIME to File Public Versions to November 15, 2022 - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 11/14/2022)	
106	11/14/2022	[SEALED] REPLY BRIEF re 81 MOTION for Summary Judgment DAUBERT Motions filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 11/14/2022)	
107	11/14/2022	DECLARATION of Robert E. Colletti re 106 Reply Brief, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) Modified on 11/14/2022 (nms). (Entered: 11/14/2022)	
	11/14/2022	SO ORDERED, re 105 STIPULATION and Proposed Order to Extend Time to file public version to November 15, 2022. Signed by Judge Richard G. Andrews on 11/14/2022. (nms) (Entered: 11/14/2022)	
108	11/14/2022	[SEALED] EXHIBITS to 107 Declaration of Robert E. Colletti, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibits 35-37)(Farnan, Kelly) Modified on 11/14/2022 (nms). (Entered: 11/14/2022)	
	11/14/2022	Set Answering Brief Deadline re 100 MOTION to Accept Filing in Excess of the Prescribed Page Limitations. Answering Brief/Response due date per Local Rules is 11/28/2022. (nms) (Entered: 11/15/2022)	
	11/15/2022	Minute Entry for proceedings held before Judge Mary Pat Thynge - Telephonic Discovery Conference held on 11/15/2022. (Court Reporter Heidi Schoentube.) (DAT) (Entered: 11/15/2022)	
109	11/15/2022	REDACTED VERSION of 96 Letter by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibit 1-4)(Bordley, Dorronda) (Entered: 11/15/2022)	
110	11/15/2022	REDACTED VERSION of 97 Letter by MHL Custom, Inc.. (Bennett, Blake) (Entered: 11/15/2022)	
111	11/17/2022	ORAL ORDER: The parties are in an unfortunate dispute over page lengths. Plaintiff filed an answering brief of 45 pages on November 7th. (D.I. 91). That was five pages too long. The parties tried to resolve the issue amicably, but that apparently has not worked out since Plaintiff has now filed a motion to extend the page limits. (D.I. 100). Defendant has filed a reply brief to the 45 page answering brief. (D.I. 106). It is going to oppose the extension of page limits. I would like to get this resolved sooner rather than later. Thus, I offer Defendant two options. One, Plaintiff can file a 40 page answering brief saying whatever it wants to say in the 40 pages, and Defendant can modify its reply brief as it sees fit. Two, I will accept the 45 page brief, and Defendant can either stand on the reply brief it has filed, or, if Defendant wants, it can file a 25 page reply brief in its place. If Defendant rejects both options, it should report that by tomorrow, and the deadline for filing its answering brief to the motion to extend page limits is also tomorrow. I will decide the motion without waiting for any reply brief from Plaintiff. Ordered by Judge Richard G. Andrews on 11/17/2022. (nms) (Entered: 11/17/2022)	
112	11/18/2022	REDACTED VERSION of 106 Reply Brief by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 11/18/2022)	
113	11/18/2022	REDACTED VERSION of 108 Sealed Exhibits, by Shenzhen	

#	Date	Proceeding Text	Source
		Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibits 35-37)(Farnan, Kelly) Modified on 11/18/2022 (nms). (Entered: 11/18/2022)	
114	11/18/2022	Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding response to the Court's Oral Order (D.I. 111). (Farnan, Kelly) Modified on 11/18/2022 (nms). (Entered: 11/18/2022)	
115	11/18/2022	ORAL ORDER: A hearing on the pending motions (D.I. 74 , 75 , 76 , 77 , 78 , 79 , 81) is now set for 1/4/2023, at 9:00 AM in Courtroom 6A. One week before the argument date the parties are to identify no more than three issues each that they want to argue. Ordered by Judge Richard G. Andrews on 11/18/2022. (nms) Modified on 11/18/2022 (nms). (Entered: 11/18/2022)	
	11/18/2022	CORRECTING ENTRY: The text for D.I. 115 has been corrected to reflect the correct year the hearing will be held in. (nms) (Entered: 11/18/2022)	
116	11/18/2022	ORAL ORDER: The light of Defendants' response (D.I. 114) to the Court's Oral Order (D.I. 111) the Motion to Accept Filing in Excess of the Prescribed Page Limitations (D.I. 100) is GRANTED. Ordered by Judge Richard G. Andrews on 11/18/2022. (nms) (Entered: 11/18/2022)	
117	11/18/2022	Official Transcript of Discovery Teleconference held on 11/15/2022 before Judge Hon. Mary Pat Thynge. Court Reporter/Transcriber Heidi Schoentube, Phone: 302-571-0510. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter/Transcriber before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER Redaction Request due 12/9/2022. Redacted Transcript Deadline set for 12/19/2022. Release of Transcript Restriction set for 2/16/2023. (DAT) Modified on 12/2/2022 (DAT). (Entered: 11/18/2022)	
	11/21/2022	CORRECTING ENTRY: Entry previously filed as D.I. 118 was duplicative to D.I. 117 and has been removed. (nmg) (Entered: 11/21/2022)	
118	11/21/2022	REDACTED VERSION of 101 Reply Brief, by MHL Custom, Inc.. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit 3, # 4 Exhibit 4, # 5 Exhibit 5)(Bennett, Blake) Modified on 11/21/2022 (nms). (Entered: 11/21/2022)	
119	11/22/2022	MOTION for Pro Hac Vice Appearance of Attorney Patrick Lavery - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Bordley, Dorronda) (Entered: 11/22/2022)	
	11/22/2022	SO ORDERED, re 119 MOTION for Pro Hac Vice Appearance of Attorney Patrick Lavery, filed by Waydoo USA, Inc., Shenzhen Waydoo Intelligence Technology Co., Ltd.. Signed by Judge Richard G. Andrews on 11/22/2022. (nms) (Entered: 11/22/2022)	
	11/22/2022	Pro Hac Vice Attorney Patrick Lavery for Shenzhen Waydoo Intelligence Technology Co., Ltd. and Waydoo USA, Inc. added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (mpb) (Entered: 11/22/2022)	
120	12/01/2022	ORDER granting D.I. 90 MOTION for Discovery Teleconference; D.I. 96 MOTION to Compel. Signed by Judge Mary Pat Thynge on 12/1/2022. (DAT) Modified on 12/15/2022 (nms). (Entered: 12/01/2022)	
121	12/06/2022	Emergency Motion to Stay the Court's December 1 Order - filed by MHL Custom, Inc.. (Attachments: # 1 Proposed Order)(Bennett, Blake) Modified on 12/6/2022 (nms). (Entered: 12/06/2022)	
122	12/07/2022	RESPONSE to 121 Emergency Motion to Stay the Court's December 1 Order, filed by Shenzhen Waydoo Intelligence	

#	Date	Proceeding Text	Source
		Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) Modified on 12/7/2022 (nms). (Entered: 12/07/2022)	
123	12/07/2022	MOTION to Intervene - filed by Intellectual Property Insurance Services Corp. (Attachments: (12) Proposed Order)(Naylor, Joseph) Modified on 12/8/2022 (nms). Modified on 12/8/2022 (nms). Modified on 12/8/2022 (nms). (Entered: 12/07/2022)	
124	12/07/2022	Letter to the Honorable Richard G. Andrews, dated 12/7/2022, from Joseph S. Naylor, regarding request for a stay of the Court's December 1, 2022, Order. (Attachments: # 1 Proposed Order)(Naylor, Joseph) Modified on 12/8/2022 (nms). (Entered: 12/07/2022)	
	12/08/2022	CORRECTING ENTRY: The brief and declarations with exhibits filed as attachments to the motion at D.I. 123 . Motions, briefs and declarations are to be filed independent of each other. Counsel is to refile the brief and declarations accordingly. (nms) (Entered: 12/08/2022)	
	12/08/2022	CORRECTING ENTRY: The motion filed at D.I. 123 has been unsealed. There is nothing in the caption of the filing directing that the motion is confidential or is intended to be under seal. The NEF for the filing has been regenerated. (nms) (Entered: 12/08/2022)	
	12/08/2022	CORRECTING ENTRY: D.I. 124 has been recoded and the docket text corrected to reflect the filing is a letter requesting a stay and not a motion. (nms) (Entered: 12/08/2022)	
	12/08/2022	CORRECTING ENTRY: The proposed objections filed as an attachment to the motion at D.I. 123 has been removed per the filer's request. The proposed objections will be refiled under seal. (nms) (Entered: 12/08/2022)	
125	12/08/2022	[SEALED] MEMORANDUM in Support re 123 MOTION to Intervene filed by Intellectual Property Insurance Services Corp.Answering Brief/Response due date per Local Rules is 12/22/2022. (Attachments: # 1 Exhibit 1, # 2 Exhibit 1.1, # 3 Exhibit 1.2, # 4 Exhibit 1.3, # 5 Exhibit 2, # 6 Exhibit 3, # 7 Exhibit 3.1, # 8 Exhibit 3.2, # 9 Exhibit 3.3, # 10 Exhibit 3.4, # 11 Exhibit 3.5)(Naylor, Joseph) (Entered: 12/08/2022)	
126	12/08/2022	Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding Shenzhen Waydoo Intelligence Technology Co., Ltd.'s opposition to stay (D.I. 124). (Farnan, Kelly) Modified on 12/8/2022 (nms). (Entered: 12/08/2022)	
127	12/08/2022	OBJECTIONS to 120 Order, by MHL Custom, Inc.. (Bennett, Blake) Modified on 12/9/2022 (nms). (Entered: 12/08/2022)	
128	12/08/2022	DECLARATION re 127 Objections, by MHL Custom, Inc.. (Attachments: # 1 Exhibit A , # 2 Exhibit B, # 3 Exhibit C, # 4 Exhibit D, # 5 Exhibit E, # 6 Exhibit F)(Bennett, Blake) Modified on 12/9/2022 (nms). Modified on 12/9/2022 (nms). (Entered: 12/08/2022)	
129	12/08/2022	ORDER denying D.I. 121 Emergency Motion to Stay. Signed by Judge Mary Pat Thynge on 12/8/2022. (DAT) (Entered: 12/08/2022)	
130	12/14/2022	REDACTED VERSION of 125 MEMORANDUM in Support, by Intellectual Property Insurance Services Corp. (Attachments: # 1 Certificate of Service, # 2 Exhibit 1, # 3 Exhibit 1.1, # 4 Exhibit 1.2, # 5 Exhibit 1.3, # 6 Exhibit 2, # 7 Exhibit 3, # 8 Exhibit 3.1, # 9 Exhibit 3.2, # 10 Exhibit 3.3, # 11 Exhibit 3.4, # 12 Exhibit 3.5)(Naylor, Joseph) (Entered: 12/14/2022)	
131	12/14/2022	[SEALED] Response to 127 Objections, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibits 1-3)(Farnan, Kelly) Modified on 12/14/2022 (nms). (Entered: 12/14/2022)	

#	Date	Proceeding Text	Source
132	12/14/2022	NOTICE of Appearance by Kara R. Fussner on behalf of Intellectual Property Insurance Services Corp.. (Naylor, Joseph) Modified on 12/15/2022 (nms). (Entered: 12/14/2022)	
133	12/14/2022	MOTION for Pro Hac Vice Appearance of Attorney Rudolph A. Telscher, Jr., Esq. - filed by Intellectual Property Insurance Services Corp. (Attachments: # 1 Certificate of Admission)(Naylor, Joseph) (Entered: 12/14/2022)	
134	12/15/2022	ORAL ORDER: The redacted filing (D.I. 130) is REJECTED because parts of it are redacted in its entirety. Absent a compelling reason, supported by a statement under oath by a party, redactions in their entirety are impermissible; redactions must be done so as to redact the least possible amount of the materials submitted. Failure to make a good faith attempt at such redactions may result in sanctions, the most common of which would be simply unsealing the entire filing. Redacting in its entirety a document or even parts of it that contains publicly available materials is prima facie evidence of bad faith. A revised redacted filing is DUE within five business days. Ordered by Judge Richard G. Andrews on 12/15/2022. (nms) (Entered: 12/15/2022)	
	12/15/2022	SO ORDERED, re 133 MOTION for Pro Hac Vice Appearance of Attorney Rudolph A. Telscher, Jr., Esq., filed by Intellectual Property Insurance Services Corp. Signed by Judge Richard G. Andrews on 12/15/2022. (nms) (Entered: 12/15/2022)	
135	12/19/2022	REDACTED VERSION of 131 Response to Objections by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibit 1-3)(Bordley, Dorronda) (Entered: 12/19/2022)	
136	12/21/2022	REDACTED VERSION of 125 MEMORANDUM in Support, by Intellectual Property Insurance Services Corp. (Attachments: # 1 Certificate of Service, # 2 Exhibit 1, # 3 Exhibit 1.1, # 4 Exhibit 1.2, # 5 Exhibit 1.3, # 6 Exhibit 2, # 7 Exhibit 3, # 8 Exhibit 3.1, # 9 Exhibit 3.2, # 10 Exhibit 3.3, # 11 Exhibit 3.4, # 12 Exhibit 3.5)(Naylor, Joseph) (Entered: 12/21/2022)	
137	12/22/2022	[SEALED] RESPONSE to 123 MOTION to Intervene, filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) Modified on 12/22/2022 (nms). (Entered: 12/22/2022)	
138	12/22/2022	DECLARATION of Robert E. Colletti re 137 Response to Motion, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibit 1)(Farnan, Kelly) Modified on 12/22/2022 (nms). (Entered: 12/22/2022)	
139	12/28/2022	Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding Daubert and summary judgment arguments. (Farnan, Kelly) Modified on 12/28/2022 (nms). (Entered: 12/28/2022)	
140	12/29/2022	REPLY BRIEF re 123 MOTION to Intervene filed by Intellectual Property Insurance Services Corp. (Naylor, Joseph) (Entered: 12/29/2022)	
141	12/29/2022	REDACTED VERSION of 137 Response to Motion to Intervene, by Shenzhen Waydoo Intelligence Technology Co., Ltd.. (Bordley, Dorronda) Modified on 12/29/2022 (nms). (Entered: 12/29/2022)	
142	01/03/2023	ORDER: Regarding construction of "passively stable" (see Order for further details). Signed by Judge Richard G. Andrews on 1/3/2023. (nms) (Entered: 01/03/2023)	
143	01/03/2023	NOTICE of Change of Address by Blake A. Bennett (Bennett, Blake) (Entered: 01/03/2023)	
	01/04/2023	Minute Entry for proceedings held before Judge Richard G. Andrews - Hearing on pending motions held on 1/4/2023. Counsel for Plaintiff: A. Ralli. Counsel for Defendants: K. Farnan, D.	

#	Date	Proceeding Text	Source
		Bordley. Defendants are directed to submit their letter by the end of next week. (Court Reporter Heather Triozzi.) (lah) (Entered: 01/04/2023)	
144	01/04/2023	REQUEST for Oral Argument by Intellectual Property Insurance Services Corp re 123 MOTION to Intervene. (Naylor, Joseph) (Entered: 01/04/2023)	
145	01/13/2023	Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding response to January 4, 2023 Motions Hearing. (Farnan, Kelly) Modified on 1/13/2023 (nms). (Entered: 01/13/2023)	
146	01/17/2023	Letter to The Honorable Richard G. Andrews, from Blake A. Bennett, regarding response to Defendants January 13, 2023 letter (D.I. 145). (Bennett, Blake) Modified on 1/17/2023 (nms). (Entered: 01/17/2023)	
147	01/19/2023	Official Transcript of Oral Argument held on 01/04/23 before Judge Richard G. Andrews. Court Reporter Heather M. Triozzi,Email: Heather_Triozzi@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 2/9/2023. Redacted Transcript Deadline set for 2/21/2023. Release of Transcript Restriction set for 4/19/2023. (Triozzi, Heather) (Entered: 01/19/2023)	
148	01/26/2023	ORAL ORDER: A hearing on the motion to intervene (D.I. 123) and the objections (D.I. 127) to the Magistrate's Order (D.I. 120) is now set for 2/17/2023, at 9:00 AM in Courtroom 6A. Ordered by Judge Richard G. Andrews on 1/26/2023. (nms) (Entered: 01/26/2023)	
149	01/26/2023	NOTICE OF SERVICE of Defendants Requests for Admission Propounded to Plaintiff filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Bordley, Dorronda) (Entered: 01/26/2023)	
150	01/26/2023	NOTICE OF SERVICE of MHL Custom Inc.'s Request for Admissions Propounded to Defendants filed by MHL Custom, Inc..(Bennett, Blake) (Entered: 01/26/2023)	
	02/01/2023	DEFICIENCY NOTICE issued by the Court to Plaintiff and Defendant Intellectual Property Insurance Services Corp.: Pursuant to Fed. R. Civ. P. 7.1 (b)(1), A party must: (1) file the disclosure statement with its first appearance, pleading, petition, motion, response, or other request addressed to the court. Counsel is requested to supplement the docket with an appropriate Rule 7.1 Disclosure Statement. (nms) (Entered: 02/01/2023)	
151	02/02/2023	Disclosure Statement pursuant to Rule 7.1: No Parents or Affiliates Listed filed by MHL Custom, Inc.. (Bennett, Blake) (Entered: 02/02/2023)	
152	02/02/2023	Disclosure Statement pursuant to Rule 7.1: identifying Corporate Parent Intellectual Property Control Corporation for Intellectual Property Insurance Services Corp filed by Intellectual Property Insurance Services Corp. (Naylor, Joseph) (Entered: 02/02/2023)	
153	02/03/2023	MEMORANDUM OPINION. Signed by Judge Richard G. Andrews on 2/3/2023. (nms) (Entered: 02/03/2023)	
154	02/03/2023	ORDER: Summary judgment of ***infringement*** of the '044 ***Patent*** (D.I. 78) is DENIED; Summary judgment for the '044 ***Patent*** and '659 ***Patent*** not being invalid as anticipated by the Evolo Report (D.I. 77) is DENIED; Summary judgment for the '044 ***Patent*** and '659 ***Patent*** not being invalid as anticipated by MHLCustom's own products (D.I. 77) is DISMISSED as moot; Summary judgment for Defendants' lack of standing argument (D.I. 79) is DISMISSED as	

#	Date	Proceeding Text	Source
		moot. Motion for Partial Summary Judgment is resolved as follows: Summary judgment for non-***infringement*** of the '044 ***Patent*** and '659 ***Patent*** (D.I. 81) is DENIED; Summary judgment for claims 16-20 of the '659 ***Patent*** being invalid for lack of written description (D.I. 81) is GRANTED (see Order for further details). Signed by Judge Richard G. Andrews on 2/3/2023. (nms) (Entered: 02/03/2023)	
155	02/03/2023	MEMORANDUM ORDER: The motion as to Defendants' computer/internet expert, Mark Lanterman (D.I. 74) is DENIED. The motion as to Defendants' damages expert, Philip Kline (D.I. 75) is DENIED. The motion as to Defendants' technical expert, Dr. Michael Triantafyllou (D.I. 76) is DENIED. Defendants' motions (D.I. 81) are GRANTED in part and DENIED in part (see Memorandum Order for further details). Signed by Judge Richard G. Andrews on 2/3/2023. (nms) (Entered: 02/03/2023)	
156	02/03/2023	Corrected Disclosure Statement pursuant to Rule 7.1: identifying Corporate Parent Intellectual Property Control Corporation for Intellectual Property Insurance Services Corp filed by Intellectual Property Insurance Services Corp. (Naylor, Joseph) Modified on 2/6/2023 (nms). (Entered: 02/03/2023)	
157	02/09/2023	MOTION for Pro Hac Vice Appearance of Attorney Jason Kanter - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Bordley, Dorronda) (Entered: 02/09/2023)	
	02/10/2023	SO ORDERED, re 157 MOTION for Pro Hac Vice Appearance of Attorney Jason Kanter, filed by Waydoo USA, Inc., Shenzhen Waydoo Intelligence Technology Co., Ltd.. Signed by Judge Richard G. Andrews on 2/10/2023. (nms) (Entered: 02/10/2023)	
	02/15/2023	Pro Hac Vice Attorney Jason A. Kanter for Shenzhen Waydoo Intelligence Technology Co., Ltd. and Waydoo USA, Inc. added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (mpb) (Entered: 02/15/2023)	
158	02/17/2023	ORDER Granting Motion to Intervene (D.I. 123): Upon consideration of non- party Intellectual Property Insurance Services Corporation's Motion to Intervene, said motion is GRANTED and movant is hereby granted leave to intervene, in this case for the limited purposes of objecting to Magistrate Judge Thynge's December 1,2022 Order, granting Defendants' motion to compel (D.I. 120) and asserting claims of privilegeover any documents at issue in said Order. Signed by Judge Richard G. Andrews on 2/17/2023. (nms) (Entered: 02/17/2023)	
	02/17/2023	Minute Entry for proceedings held before Judge Richard G. Andrews - Hearing on the motion to intervene and the objections to the Magistrate's Order held on 2/17/2023. Counsel for Plaintiff: A. Ralli, J. Naylor. Counsel for Defendants: D. Bordley. Defendants letter is due on 2/24/2023. (Court Reporter Heather Triozzi.) (lah) (Entered: 02/17/2023)	
159	02/21/2023	Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding expert testimony dispute (D.I. 155). (Farnan, Kelly) Modified on 2/21/2023 (nms). (Entered: 02/21/2023)	
160	02/22/2023	ORAL ORDER: The parties submitted a letter about their dispute over Mr. Barrys testimony. (D.I. 159). Defendants request for exclusion is DENIED. Mr. Barry cannot testify that dynamic stability has any different definition than the one I have given it. Plaintiff says Mr. Barry will comply with that requirement. The parties disagree about the role of certain motion types oscillation, aperiodic motion, perhaps others in relation to dynamic stability. That is not a definitional dispute. The experts can debate that dispute and be cross-examined about it at trial. Ordered by Judge	

#	Date	Proceeding Text	Source
		Richard G. Andrews on 2/22/2023. (nms) (Entered: 02/22/2023)	
161	02/23/2023	STIPULATION and Proposed Order to Extend Time to submit letter responding to Motion to Intervene to February 27, 2023 - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) Modified on 2/24/2023 (nms). (Entered: 02/23/2023)	
	02/24/2023	SO ORDERED, re 161 STIPULATION and Proposed Order to Extend Time to submit letter responding to Motion to Intervene to February 27, 2023. Signed by Judge Richard G. Andrews on 2/24/2023. (nms) (Entered: 02/24/2023)	
162	02/24/2023	NOTICE OF SERVICE of Defendants' Notice Pursuant to 35 U.S.C. 282 regarding U.S. ***Patent*** Nos. 9,359,044 and ***9,586,659*** filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..(Bordley, Dorronda) (Entered: 02/24/2023)	
163	02/27/2023	Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding response to the Court's questions at the motion to intervene hearing. (Farnan, Kelly) Modified on 2/27/2023 (nms). (Entered: 02/27/2023)	
164	03/02/2023	ORDER: Waydoo may maintain a copy of MHL_0103530, but is instructed either todestroy or to return all electronic and hard copies of the other documents (see Order for further details). Signed by Judge Richard G. Andrews on 3/2/2023. (nms) (Entered: 03/02/2023)	
	03/02/2023	Remark: The documents submitted for in camera review under the cover of the letter at D.I. 163 have been destroyed per the filer's authority. (nms) (Entered: 03/02/2023)	
165	03/06/2023	[SEALED] MOTION in Limine No. 1 - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) Modified on 3/6/2023 (nms). (Entered: 03/06/2023)	
166	03/06/2023	[SEALED] MOTION in Limine No. 2 - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) Modified on 3/6/2023 (nms). (Entered: 03/06/2023)	
167	03/06/2023	[SEALED] MOTION in Limine No. 3 - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) Modified on 3/6/2023 (nms). (Entered: 03/06/2023)	
168	03/06/2023	EXHIBITS 1-5 to 166 MOTION in Limine No. 2, 165 MOTION in Limine No. 1, and 167 MOTION in Limine No. 3, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) Modified on 3/6/2023 (nms). (Entered: 03/06/2023)	
169	03/06/2023	[SEALED] EXHIBITS 2-3 to 166 MOTION in Limine No. 2, 165 MOTION in Limine No. 1, and 167 MOTION in Limine No. 3, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) Modified on 3/6/2023 (nms). (Entered: 03/06/2023)	
	03/06/2023	CORRECTING ENTRY: Plaintiff's Motions in Limine filed as a Reply Brief at D.I. 170 has been removed from the docket. The filing was made using an incorrect code. Plaintiff is to refile its motion in limine using a motion code. (nms) (Entered: 03/06/2023)	
172	03/06/2023	[SEALED] Joint Pretrial Order, by MHL Custom, Inc.. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit 3, # 4 Exhibit 4, # 5 Exhibit 5, # 6 Exhibit 6, # 7 Exhibit 7, # 8 Exhibit 8, # 9 Exhibit 9, # 10 Exhibit 10)(Bennett, Blake) Modified on 3/7/2023 (nms). (Entered: 03/06/2023)	
	03/07/2023	CORRECTING ENTRY: The motions in limine filed at D.I. 170 have been removed from the docket. Motions in limine are to be filed separately and any supporting documents (i.e. exhibits, declarations) are to be filed separate from the motion (see Scheduling Order at D.I. 19 , paragraph 14). (nms) (Entered:	

#	Date	Proceeding Text	Source
		03/07/2023)	
	03/07/2023	CORRECTING ENTRY: The letter and its attachments filed at D.I. 171 has been removed from the docket. The parties are to refile the Proposed Preliminary Jury Instructions, Proposed Final Jury Instructions, Proposed Voir Dire, Plaintiff's Proposed Verdict form, and Defendants' Proposed Verdict form. Each of those filings should be filed independent of the other. (nms) (Entered: 03/07/2023)	
173	03/07/2023	Proposed Preliminary Jury Instructions, by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/7/2023 (nms). (Entered: 03/07/2023)	
174	03/07/2023	Proposed Final Jury Instructions, by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/7/2023 (nms). (Entered: 03/07/2023)	
175	03/07/2023	Proposed Jury Verdict Form, by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/7/2023 (nms). (Entered: 03/07/2023)	
176	03/07/2023	Defendants' Proposed Jury Verdict Form, by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/7/2023 (nms). (Entered: 03/07/2023)	
177	03/07/2023	Proposed Voir Dire by MHL Custom, Inc.. (Bennett, Blake) (Entered: 03/07/2023)	
178	03/07/2023	[SEALED] MOTION in Limine No. 1 - filed by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/7/2023 (nms). Modified on 3/7/2023 (nms). (Entered: 03/07/2023)	
179	03/07/2023	[SEALED] MOTION in Limine No. 2 - filed by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/7/2023 (nms). (Entered: 03/07/2023)	
180	03/07/2023	[SEALED] MOTION in Limine No. 3 - filed by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/7/2023 (nms). (Entered: 03/07/2023)	
181	03/07/2023	[SEALED] Exhibits to 178 MOTION in Limine No. 1, 179 MOTION in Limine No. 2, and 180 MOTION in Limine No. 3, by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/7/2023 (nms). (Entered: 03/07/2023)	
182	03/07/2023	Official Transcript of Oral Argument held on 2/17/23 before Judge Richard G. Andrews. Court Reporter Heather M. Triozzi,Email: Heather_Triozzi@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 3/28/2023. Redacted Transcript Deadline set for 4/10/2023. Release of Transcript Restriction set for 6/5/2023. (Triozzi, Heather) (Entered: 03/07/2023)	
	03/10/2023	Minute Entry for proceedings held before Judge Richard G. Andrews - Pretrial Conference held on 3/10/2023. Counsel for Plaintiff: A. Ralli. Counsel for Defendants: K. Farnan, D. Bordley. The parties are directed to resubmit the pretrial order incorporating the Courts rulings made at the hearing. (Court Reporter Heather Triozzi.) (lah) (Entered: 03/10/2023)	
183	03/10/2023	Letter to the Honorable Richard G. Andrews, from Kelly E. Farnan, regarding Batnytt article. (Farnan, Kelly) Modified on 3/11/2023 (nms). (Entered: 03/10/2023)	
184	03/13/2023	ORDER AFTER PRETRIAL CONFERENCE: The Proposed Pretrial Order (D.I. 172) was extensively discussed and will be ADOPTED as modified. A jury trial will begin on Friday, March 24, 2023, at 10:00 a.m. Each side is allowed 11.5 hours (see Order for further details and rulings). Signed by Judge Richard G. Andrews on 3/13/2023. (nms) (Entered: 03/13/2023)	
185	03/13/2023	REDACTED VERSION of 165 MOTION in Limine No. 1 by	

#	Date	Proceeding Text	Source
		Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Bordley, Dorronda) (Entered: 03/13/2023)	
186	03/13/2023	REDACTED VERSION of 166 MOTION in Limine No. 2 by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Bordley, Dorronda) (Entered: 03/13/2023)	
187	03/13/2023	REDACTED VERSION of 167 MOTION in Limine No. 3 by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Bordley, Dorronda) (Entered: 03/13/2023)	
188	03/13/2023	REDACTED VERSION of 169 Sealed Exhibits, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Bordley, Dorronda) Modified on 3/14/2023 (nms). (Entered: 03/13/2023)	
189	03/13/2023	REDACTED VERSION of 178 MOTION in Limine No. 1 by MHL Custom, Inc.. (Bennett, Blake) (Entered: 03/13/2023)	
190	03/13/2023	REDACTED VERSION of 179 MOTION in Limine No. 2 by MHL Custom, Inc.. (Bennett, Blake) (Entered: 03/13/2023)	
191	03/13/2023	REDACTED VERSION of 180 MOTION in Limine No. 3 by MHL Custom, Inc.. (Bennett, Blake) (Entered: 03/13/2023)	
192	03/13/2023	REDACTED VERSION of 181 Sealed Exhibits, by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/14/2023 (nms). (Entered: 03/13/2023)	
193	03/13/2023	STIPULATION and [Proposed] Order Regarding Pretrial Conference Follow-up Submissions by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 03/13/2023)	
194	03/14/2023	SO ORDERED Granting 193 Stipulation and Order establishing schedule for pretrial order submissions (see Order for further details). Signed by Judge Richard G. Andrews on 3/14/2023. (nms) (Entered: 03/14/2023)	
195	03/14/2023	Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding response to obviousness and indefiniteness arguments. (Attachments: # 1 Exhibit A)(Farnan, Kelly) Modified on 3/15/2023 (nms). (Entered: 03/14/2023)	
196	03/15/2023	[SEALED] Letter to The Honorable Richard G. Andrews, from Andrew A. Ralli, regarding identifying items discussed at pretrial conference. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Exhibit C, # 4 Exhibit D)(Ralli, Andrew) Modified on 3/16/2023 (nms). (Entered: 03/15/2023)	
197	03/16/2023	Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding response to March 10th pretrial conference instructions. (Farnan, Kelly) Modified on 3/16/2023 (nms). (Entered: 03/16/2023)	
	03/17/2023	REDACTION NOTICE: In accordance with section G of the Administrative Procedures Governing Filing and Service by Electronic Means, redacted versions of sealed documents shall be filed electronically within 7 days of the filing of the sealed document. The records of this case do not reflect the filing of a redacted version of DI # 172 . (nms) (Entered: 03/17/2023)	
198	03/17/2023	ORAL ORDER: The Court has considered the issues raised in the proposed pretrial order (D.I. 172 at 36-37 & 40-42) about whether Defendants have disclosed the Evolo Report alone as the basis for obviousness and the inverse relationship between stability and controllability as a basis for an indefiniteness finding. The Court has reviewed Defendants' letter (D.I. 195) and concludes that Defendants' expert's report discloses both invalidity defenses. Therefore, they remain among the defenses Defendants may assert at trial. Ordered by Judge Richard G. Andrews on 3/17/2023. (lah) (Entered: 03/17/2023)	

#	Date	Proceeding Text	Source
199	03/17/2023	Letter to The Honorable Richard G. Andrews, from Andrew A. Ralli, regarding claims reduction. (Ralli, Andrew) Modified on 3/20/2023 (nms). (Entered: 03/17/2023)	
200	03/20/2023	Letter to The Honorable Richard G. Andrews, from Andrew A. Ralli, regarding Plaintiff claims reduction. (Ralli, Andrew) Modified on 3/20/2023 (nms). (Entered: 03/20/2023)	
201	03/20/2023	MEMORANDUM ORDER: Plaintiff's motion in limine (D.I. 180) is granted in part and denied in part. Likewise, Defendant's motion in limine (D.I. 167) is granted in part and denied in part (see Memorandum Order for further details). Signed by Judge Richard G. Andrews on 3/20/2023. (nms) (Entered: 03/20/2023)	
202	03/21/2023	NOTICE of Change of Address by Joseph S. Naylor (Naylor, Joseph) (Entered: 03/21/2023)	
203	03/21/2023	Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding Defendants asserted defenses. (Farnan, Kelly) Modified on 3/21/2023 (nms). (Entered: 03/21/2023)	
204	03/21/2023	Preliminary Jury Instructions (to be read in open court). (nms) (Entered: 03/21/2023)	
205	03/21/2023	Voir Dire (to be read in open court). (nms) (Entered: 03/21/2023)	
206	03/21/2023	REDACTED VERSION of 172 Joint Pretrial Order, by MHL Custom, Inc.. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit 3, # 4 Exhibit 4, # 5 Exhibit 5, # 6 Exhibit 6, # 7 Exhibit 7, # 8 Exhibit 8, # 9 Exhibit 9, # 10 Exhibit 10)(Bennett, Blake) Modified on 3/21/2023 (nms). (Entered: 03/21/2023)	
207	03/21/2023	Letter to Judge Andrews, from Andrew A. Ralli, regarding Plaintiffs response to Defendants March 21, 2023 letter on reduction of defenses (D.I. 203). (Ralli, Andrew) Modified on 3/22/2023 (nms). (Entered: 03/21/2023)	
208	03/22/2023	Official Transcript of Pretrial Conference held on 3/10/23 before Judge Richard G. Andrews. Court Reporter Heather M. Triozzi,Email: Heather_Triozzi@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 4/12/2023. Redacted Transcript Deadline set for 4/24/2023. Release of Transcript Restriction set for 6/20/2023. (Triozzi, Heather) (Entered: 03/22/2023)	
209	03/23/2023	ORAL ORDER: At the pretrial conference, the Court ordered the parties to resubmit the pretrial order. (D.I. 208 at 4:5-10). The Court referred to the expected revised pretrial order separately in its own order after the pretrial conference. (D.I. 184). Trial starts tomorrow, but the Court is unaware of any revised pretrial order having been submitted. By the end of the day, the parties should either submit the revised pretrial order or submit a joint letter explaining why they have not done so. Ordered by Judge Richard G. Andrews on 3/23/2023. (nms) (Entered: 03/23/2023)	
210	03/23/2023	Amended Final Proposed Pretrial Order, by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/23/2023 (nms). Modified on 3/24/2023 (nms). (Entered: 03/23/2023)	
211	03/23/2023	EXHIBITS 1-8 to 210 Amened Proposed Final Pretrial Order, by MHL Custom, Inc.. (Bennett, Blake) Modified on 3/23/2023 (nms). (Entered: 03/23/2023)	
212	03/24/2023	SO ORDERED as modified re 210 Amended Final Joint Pretrial Order. Signed by Judge Richard G. Andrews on 3/24/2023. (nms) (Entered: 03/24/2023)	
	03/24/2023	CORRECTING ENTRY: D.I. 210 has been unsealed per the filing at D.I. 212 . (nms) (Entered: 03/24/2023)	
213	03/24/2023	Letter to The Honorable Richard G. Andrews, from Andrew A.	

#	Date	Proceeding Text	Source
		Ralli, regarding parties meet and confer status. (Ralli, Andrew) Modified on 3/27/2023 (nms). (Entered: 03/24/2023)	
	03/24/2023	Minute Entry for proceedings held before Judge Richard G. Andrews - Jury Trial day 1 held on 3/24/2023. Local Counsel for Plaintiff: A. Ralli. Local Counsel for Defendant: K. Farnan. Jury selection held; preliminary jury instructions read. (Court Reporter Deanna Warner.) (lah) (Entered: 03/27/2023)	
214	03/25/2023	Letter to Judge Andrews, from Kelly Farnan, regarding Waydoo's defenses (D.I. 213). (Farnan, Kelly) Modified on 3/27/2023 (nms). (Entered: 03/25/2023)	
	03/27/2023	REDACTION NOTICE: In accordance with section G of the Administrative Procedures Governing Filing and Service by Electronic Means, redacted versions of sealed documents shall be filed electronically within 7 days of the filing of the sealed document. The records of this case do not reflect the filing of a redacted version of DI # 196 . (nms) (Entered: 03/27/2023)	
	03/27/2023	Minute Entry for proceedings held before Judge Richard G. Andrews - Jury Trial day 2 held on 3/27/2023. Local Counsel for Plaintiff: A. Ralli. Local Counsel for Defendant: K. Farnan. Opening statements made. Witnesses: Nicholas Leason, Zhao Tao by deposition, Jacob Langelaan, Steward Wagner. (Court Reporter Heather Triozzi.) (lah) (Entered: 03/28/2023)	
215	03/28/2023	Proposed Final Jury Instructions, by MHL Custom, Inc. . (Bennett, Blake) Modified on 3/29/2023 (nms). (Entered: 03/28/2023)	
	03/28/2023	Minute Entry for proceedings held before Judge Richard G. Andrews - Jury Trial day 3 held on 3/28/2023. Local Counsel for Plaintiff: A. Ralli. Local Counsel for Defendant: K. Farnan. Witnesses: Christopher Barry, Wang Ping by deposition, Jeffrey Stec. (Court Reporter Heather Triozzi.) (lah) (Entered: 03/29/2023)	
	03/29/2023	Minute Entry for proceedings held before Judge Richard G. Andrews - Jury Trial day 4 held on 3/29/2023. Local Counsel for Plaintiff: A. Ralli. Local Counsel for Defendant: K. Farnan. Witnesses: Wang Ping, Kevin Wade, Mark Lanterman, Michael Triantafyllou, Phillip Kline. (Court Reporter Heather Triozzi.) (lah) (Entered: 03/30/2023)	
	03/30/2023	SECOND REDACTION NOTICE: In accordance with section G of the Administrative Procedures Governing Filing and Service by Electronic Means, redacted versions of sealed documents shall be filed electronically within 7 days of the filing of the sealed document. The records of this case do not reflect the filing of a redacted version of DI # 196 . (nms) (Entered: 03/30/2023)	
216	03/30/2023	REDACTED VERSION of 196 Letter, by MHL Custom, Inc.. (Attachments: # 1 Exhibit, # 2 Exhibit, # 3 Exhibit, # 4 Exhibit)(Ralli, Andrew) (Entered: 03/30/2023)	
	03/30/2023	Minute Entry for proceedings held before Judge Richard G. Andrews - Jury Trial day 5 held on 3/30/2023. Local Counsel for Plaintiff: A. Ralli. Local Counsel for Defendant: K. Farnan. Witnesses: Phillip Kline, Christopher Barry. (Court Reporter Heather Triozzi.) (lah) (Entered: 03/31/2023)	
217	03/31/2023	Final Jury Instructions (to be read into open court). (nms) (Entered: 03/31/2023)	
218	03/31/2023	FINAL JURY VERDICT Form. (nms) (Entered: 03/31/2023)	
219	03/31/2023	[SEALED] JURY VERDICT. (lah) (Entered: 03/31/2023)	
220	03/31/2023	REDACTED VERSION of 219 Jury Verdict. (lah) (Entered: 03/31/2023)	
	03/31/2023	Minute Entry for proceedings held before Judge Richard G. Andrews - Jury Trial day 6 completed on 3/31/2023. Final jury	

#	Date	Proceeding Text	Source
		instructions read; closing arguments made; deliberations; verdict. (Court Reporter Heather Triozzi.) (lah) (Entered: 03/31/2023)	
221	03/31/2023	Exhibit List for Jury Trial held 3/24/2023 - 3/31/2023. (lah) (Entered: 03/31/2023)	
	04/03/2023	Case no longer referred to Chief Magistrate Judge Mary Pat Thynge. (nms) (Entered: 04/03/2023)	
222	04/04/2023	TRIAL VERDICT (see verdict for further details). Signed by Judge Richard G. Andrews on 4/4/2023. (nms) (Entered: 04/04/2023)	
223	04/07/2023	Joint Letter to The Honorable Richard G. Andrews, from Andrew A. Ralli, regarding post trial motions. (Ralli, Andrew) Modified on 4/7/2023 (nms). (Entered: 04/07/2023)	
224	04/11/2023	ORAL ORDER: The proposed schedule as set forth in D.I. 223 is APPROVED. The page limits for the briefing on the post-trial motions is limited to 20-20-10, not 40-40-20. Ordered by Judge Richard G. Andrews on 4/11/2023. (nms) (Entered: 04/11/2023)	
225	04/12/2023	PROPOSED Judgment on the Jury Verdict, by MHL Custom, Inc.. (Ralli, Andrew) Modified on 4/12/2023 (nms). (Entered: 04/12/2023)	
226	04/12/2023	SO ORDERED Granting 225 JUDGMENT on the Jury Verdict. Signed by Judge Richard G. Andrews on 4/12/2023. (nms) (Entered: 04/12/2023)	
	04/17/2023	CORRECTING ENTRY: The motion to redact filed at D.I. 227 on 4/14/2023, has been removed from the docket per discussion between counsel and chambers. Counsel will refile an amended motion. (nms) (Entered: 04/17/2023)	
227	04/17/2023	MOTION to Redact Trial Transcripts - filed by MHL Custom, Inc.. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit 3, # 4 Exhibit 4, # 5 Exhibit 5, # 6 Exhibit 6, # 7 Exhibit 7, # 8 Exhibit 8, # 9 Proposed Order)(Ralli, Andrew) Modified on 4/17/2023 (nms). Modified on 4/28/2023 (nms). (Entered: 04/17/2023)	
	04/18/2023	DEFICIENCY NOTICE by the Court issued to MHL Custom, Inc. re 227 Sealed Motion to Redact Transcript. Upon review of the filing, it was determined it does not comply with Local Rule 5.2(b)(1). Plaintiff is requested to supplement the docket with a certificate of service for this motion. (nms) (Entered: 04/18/2023)	
228	04/18/2023	CERTIFICATE OF SERVICE for Motion to Redact Trial Transcripts (D.I. 227), by MHL Custom, Inc.. (Ralli, Andrew) Modified on 4/18/2023 (nms). (Entered: 04/18/2023)	
229	04/18/2023	ORAL ORDER: The motion to redact trial transcripts (D.I. 227) is DENIED. Ordered by Judge Richard G. Andrews on 4/18/2023. (nms) (Entered: 04/18/2023)	
	04/28/2023	Remark: The motion to seal (D.I. 227) has been unsealed per entry of the Order at D.I. 229 . (nms) (Entered: 04/28/2023)	
230	05/02/2023	MOTION for Permanent Injunction - filed by MHL Custom, Inc.. (Attachments: # 1 Exhibit)(Ralli, Andrew) Modified on 5/3/2023 (nms). (Entered: 05/02/2023)	
231	05/02/2023	MOTION for Attorneys' Fees and Expenses - filed by MHL Custom, Inc.. (Ralli, Andrew) Modified on 5/2/2023 (nms). Modified on 5/3/2023 (nms). (Entered: 05/02/2023)	
232	05/02/2023	MOTION for Enhanced Damages - filed by MHL Custom, Inc.. (Ralli, Andrew) Modified on 5/2/2023 (nms). Modified on 5/3/2023 (nms). (Entered: 05/02/2023)	
233	05/02/2023	MOTION for Supplemental and/or Ongoing Damages, and For Pre-Judgment and Post-Judgment Interest - filed by MHL Custom, Inc.. (Ralli, Andrew) Modified on 5/2/2023 (nms). Modified on 5/3/2023 (nms). (Entered: 05/02/2023)	
234	05/02/2023	RENEWED Motion for Judgment as a Matter of Law and Motion for a New Trial - filed by Shenzhen Waydoo Intelligence	

#	Date	Proceeding Text	Source
		Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Proposed Order)(Farnan, Kelly) Modified on 5/2/2023 (nms). (Entered: 05/02/2023)	
235	05/02/2023	[SEALED] OPENING BRIEF in Support re 232 MOTION for Enhanced Damages, 233 MOTION for Supplemental and/or Ongoing Damages, and For Pre-Judgment and Post-Judgment Interest, 231 MOTION for Attorneys' Fees and Expenses, and 230 MOTION for Permanent Injunction, filed by MHL Custom, Inc..Answering Brief/Response due date per Local Rules is 5/16/2023. (Attachments: # 1 Exhibit, # 2 Exhibit, # 3 Exhibit, # 4 Exhibit, # 5 Exhibit, # 6 Exhibit, # 7 Exhibit)(Ralli, Andrew) Modified on 5/2/2023 (nms). (Entered: 05/02/2023)	
236	05/02/2023	OPENING BRIEF in Support re 234 RENEWED Motion for Judgment as a Matter of Law and Motion for a New Trial, filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..Answering Brief/Response due date per Local Rules is 5/16/2023. (Farnan, Kelly) Modified on 5/2/2023 (nms). (Entered: 05/02/2023)	
237	05/02/2023	CERTIFICATE OF SERVICE Motion for Entry of a Permanent Injunction (D.I. 230); Motion for Attorneys' Fees and Expenses (D.I. 231); Motion for Enhance Damages (D.I. 232); Motion for Supplemental and/or Ongoing Damages, and For Pre-Judgment and Post-Judgment Interest (D.I. 233), by MHL Custom, Inc. (Ralli, Andrew) Modified on 5/3/2023 (nms). (Entered: 05/02/2023)	
	05/03/2023	CORRECTING ENTRY: The motions filed at D.I. 230 , 231 , 232 , and 233 have been unsealed. The NEFs for the filings have been regenerated. (nms) (Entered: 05/03/2023)	
	05/15/2023	REDACTION NOTICE: In accordance with section G of the Administrative Procedures Governing Filing and Service by Electronic Means, redacted versions of sealed documents shall be filed electronically within 7 days of the filing of the sealed document. The records of this case do not reflect the filing of a redacted version of DI # 235 . (nms) (Entered: 05/15/2023)	
238	05/15/2023	REDACTED VERSION of 235 Opening Brief in Support, by MHL Custom, Inc.. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit 3, # 4 Exhibit 4, # 5 Exhibit 5, # 6 Exhibit 6, # 7 Exhibit 7)(Ralli, Andrew) Modified on 5/15/2023 (nms). (Entered: 05/15/2023)	
239	05/18/2023	Official Transcript of Jury Trial - Jury Selection held on 3/24/23 before Judge Richard G. Andrews. Court Reporter Deanna Warner,Email: Deanna_Warner@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 6/8/2023. Redacted Transcript Deadline set for 6/20/2023. Release of Transcript Restriction set for 8/16/2023. (Triozzi, Heather) (Entered: 05/18/2023)	
240	05/18/2023	Official Transcript of Jury Trial held on 3/27/23 before Judge Richard G. Andrews. Court Reporter Heather M. Triozzi,Email: Heather_Triozzi@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 6/8/2023. Redacted Transcript Deadline set for 6/20/2023. Release of Transcript Restriction set for 8/16/2023. (Triozzi, Heather) (Entered: 05/18/2023)	
241	05/18/2023	Official Transcript of Jury Trial held on 3/28/23 before Judge Richard G. Andrews. Court Reporter Heather M. Triozzi,Email: Heather_Triozzi@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court	

#	Date	Proceeding Text	Source
		Reporter before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 6/8/2023. Redacted Transcript Deadline set for 6/20/2023. Release of Transcript Restriction set for 8/16/2023. (Triozzi, Heather) (Entered: 05/18/2023)	
242	05/18/2023	Official Transcript of Jury Trial held on 3/29/23 before Judge Richard G. Andrews. Court Reporter Heather M. Triozzi,Email: Heather_Triozzi@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 6/8/2023. Redacted Transcript Deadline set for 6/20/2023. Release of Transcript Restriction set for 8/16/2023. (Triozzi, Heather) (Entered: 05/18/2023)	
243	05/18/2023	Official Transcript of Jury Trial held on 3/30/23 before Judge Richard G. Andrews. Court Reporter Heather M. Triozzi,Email: Heather_Triozzi@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 6/8/2023. Redacted Transcript Deadline set for 6/20/2023. Release of Transcript Restriction set for 8/16/2023. (Triozzi, Heather) (Entered: 05/18/2023)	
244	05/18/2023	Official Transcript of Jury Trial held on 3/31/23 before Judge Richard G. Andrews. Court Reporter Heather M. Triozzi,Email: Heather_Triozzi@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 6/8/2023. Redacted Transcript Deadline set for 6/20/2023. Release of Transcript Restriction set for 8/16/2023. (Triozzi, Heather) (Entered: 05/18/2023)	
245	06/07/2023	ANSWERING BRIEF in Opposition re 234 Renewed Motion for Judgment as a Matter of Law andMotion for a New Trial filed by MHL Custom, Inc..Reply Brief due date per Local Rules is 6/14/2023. (Ralli, Andrew) (Entered: 06/07/2023)	
246	06/07/2023	[SEALED] ANSWERING BRIEF in Opposition re 232 Motion for Enhanced Damages, 233 Motion for Supplemental and/or Ongoing Damages, and For Pre-Judgment and Post-Judgment Interest, 231 Motion for Attorneys' Fees and Expenses, and 230 Motion for Permanent Injunction, filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..Reply Brief due date per Local Rules is 6/14/2023. (Attachments: # 1 Exhibit 2, # 2 Exhibit 4)(Farnan, Kelly) Modified on 6/7/2023 (nms). (Entered: 06/07/2023)	
247	06/07/2023	EXHIBITS 1, 3, and 5 to 246 Answering Brief in Opposition, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibit 1, # 2 Exhibit 3, # 3 Exhibit 5)(Farnan, Kelly) Modified on 6/7/2023 (nms). (Entered: 06/07/2023)	
248	06/07/2023	EXHIBITS 6-7 to 246 Answering Brief in Opposition, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibit 6, # 2 Exhibit 7)(Farnan, Kelly) Modified on 6/7/2023 (nms). (Entered: 06/07/2023)	
249	06/14/2023	NOTICE of Constitutional Question by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc. (Attachments: # 1 Certificate of Service)(Bordley, Dorronda) (Entered: 06/14/2023)	
250	06/21/2023	[SEALED] REPLY BRIEF re 232 MOTION for Enhanced	

#	Date	Proceeding Text	Source
		Damages, 233 MOTION for Supplemental and/or Ongoing Damages, and For Pre-Judgment and Post-Judgment Interest, 231 MOTION for Attorneys' Fees and Expenses, and 230 MOTION for Permanent Injunction, filed by MHL Custom, Inc.. (Ralli, Andrew) Modified on 6/22/2023 (nms). (Entered: 06/21/2023)	
251	06/21/2023	CERTIFICATE OF SERVICE of Plaintiffs Reply Brief in Support of its Post-Trial Motions for Permanent Injunction, Supplemental Damages, Ongoing Damages, Pre and Post Judgment Interest, Enhanced Damages and Attorneys Fees by MHL Custom, Inc. re 250 Reply Brief, (Ralli, Andrew) (Entered: 06/21/2023)	
252	06/21/2023	REPLY BRIEF re 234 Renewed Motion for Judgment as a Matter of Law andMotion for a New Trial filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 06/21/2023)	
253	06/23/2023	REDACTED VERSION of 246 Answering Brief in Opposition, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Attachments: # 1 Exhibit 2, # 2 Exhibit 4)(Farnan, Kelly) (Entered: 06/23/2023)	
254	06/26/2023	REQUEST for Oral Argument by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc. re 232 MOTION for Enhanced Damages, 233 MOTION for Supplemental and/or Ongoing Damages, and For Pre-Judgment and Post-Judgment Interest, 231 MOTION for Attorneys' Fees and Expenses, 230 MOTION for Permanent Injunction, 234 Renewed Motion for Judgment as a Matter of Law andMotion for a New Trial. (Farnan, Kelly) (Entered: 06/26/2023)	
	07/06/2023	REDACTION NOTICE: In accordance with section G of the Administrative Procedures Governing Filing and Service by Electronic Means, redacted versions of sealed documents shall be filed electronically within 7 days of the filing of the sealed document. The records of this case do not reflect the filing of a redacted version of DI # 250 . (nms) (Entered: 07/06/2023)	
255	07/06/2023	REDACTED VERSION of 250 Reply Brief, by MHL Custom, Inc.. (Ralli, Andrew) Modified on 7/6/2023 (nms). (Entered: 07/06/2023)	
256	07/31/2023	NOTICE requesting Clerk to remove Dorronda R. Bordley as co-counsel. Reason for request: no longer with firm. (Bordley, Dorronda) (Entered: 07/31/2023)	
257	09/06/2023	MEMORANDUM OPINION. Signed by Judge Richard G. Andrews on 9/6/2023. (nms) (Entered: 09/06/2023)	
258	09/06/2023	ORDER: Defendants' Motion for Renewed Judgment as a Matter of Law and Motion for a New Trial (D.I. 234) is DENIED. Signed by Judge Richard G. Andrews on 9/6/2023. (nms) (Entered: 09/06/2023)	
259	09/07/2023	MEMORANDUM OPINION. Signed by Judge Richard G. Andrews on 9/7/2023. (nms) (Entered: 09/07/2023)	
260	09/07/2023	ORDER: Plaintiffs Motion for Entry of a Permanent Injunction (D.I. 230) is DENIED; Plaintiffs Motion for Attorneys' Fees and Expenses (D.I. 231) is DENIED; Plaintiffs Motion for Enhanced Damages (D.I. 232) is DENIED. Plaintiffs Motion for Supplemental and/or Ongoing Damages, and for Pre-Judgment and Post-Judgment Interest (D.I. 233) is GRANTED-IN-PART and DENIED-IN PART. Plaintiffs motion for supplemental damages (D.I. 233) is GRANTED-IN-PART and DENIED-IN-PART. Plaintiff is entitled to supplemental damages from January 1, 2023 to April 12, 2023, the date of judgment. Plaintiff's motion for pre-judgment and post-judgment interest (D.I. 233) is GRANTED. Plaintiff's motion for ongoing damages (D.I. 233) is DISMISSED without prejudice. The Parties are instructed to see if	

#	Date	Proceeding Text	Source
		they can reach an agreement on an ongoing royalty. Signed by Judge Richard G. Andrews on 9/7/2023. (nms) (Entered: 09/07/2023)	
262	10/05/2023	NOTICE OF APPEAL to the Federal Circuit of 226 Judgment . Appeal filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) (Entered: 10/05/2023)	
	10/05/2023	APPEAL - Credit Card Payment received re 262 Notice of Appeal (Federal Circuit) filed by Waydoo USA, Inc., Shenzhen Waydoo Intelligence Technology Co., Ltd.. (Filing fee $505, receipt number ADEDC-4241860.) (Farnan, Kelly) (Entered: 10/05/2023)	
	10/06/2023	CORRECTING ENTRY: The Notice of Appeal filed at D.I. 261 has been removed from the docket as it was filed using an incorrect code. The Notice of Appeal as been correctly refiled at D.I. 262 . (nms) (Entered: 10/06/2023)	
	10/06/2023	Notification regarding 262 Notice of Appeal (Federal Circuit) sent to Reporter Triozzi (smg) (Entered: 10/06/2023)	
	10/06/2023	Notification regarding 262 Notice of Appeal (Federal Circuit) sent to Reporter Warner (smg) (Entered: 10/06/2023)	
	10/06/2023	Notice of Appeal and Docket Sheet to US Court of Appeals for the Federal Circuit re 262 Notice of Appeal (Federal Circuit). (smg) (Entered: 10/06/2023)	
263	10/06/2023	BILL OF COSTS by MHL Custom, Inc.. (Bennett, Blake) (Entered: 10/06/2023)	
264	10/06/2023	NOTICE requesting Clerk to remove Andrew A. Ralli as co-counsel. Reason for request: No longer with Cooch and Taylor, P.A.. (Bennett, Blake) (Entered: 10/06/2023)	
265	10/12/2023	NOTICE of Docketing Record on Appeal from USCA for the Federal Circuit re 262 Notice of Appeal (Federal Circuit), filed by Waydoo USA, Inc., Shenzhen Waydoo Intelligence Technology Co., Ltd.. USCA Case Number 2024-1036. (nms) (Entered: 10/12/2023)	
266	10/19/2023	OBJECTIONS to 263 Bill of Costs, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Farnan, Kelly) Modified on 10/19/2023 (nms). (Entered: 10/19/2023)	
267	10/19/2023	TRANSCRIPT REQUEST by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc. for proceedings held on May 3, 2022 and March 10, 2023 before Judge Richard G. Andrews, (Farnan, Kelly) (Entered: 10/19/2023)	
268	11/20/2023	Official Transcript of Markman Hearing held on 05/03/22 before Judge Richard G. Andrews. Court Reporter Heather M. Triozzi,Email: Heather_Triozzi@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 12/11/2023. Redacted Transcript Deadline set for 12/21/2023. Release of Transcript Restriction set for 2/20/2024. (Triozzi, Heather) (Entered: 11/20/2023)	
269	11/20/2023	Official Transcript of Pretrial Conference held on 03/10/23 before Judge Richard G. Andrews. Court Reporter Heather M. Triozzi,Email: Heather_Triozzi@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 12/11/2023. Redacted Transcript Deadline set for 12/21/2023. Release of Transcript Restriction set for 2/20/2024. (Triozzi, Heather) (Entered: 11/20/2023)	
270	01/03/2024	Unopposed Motion for Permission to Withdraw as Counsel - filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo	

#	Date	Proceeding Text	Source
		USA, Inc.. (Attachments: # 1 Certificate of Compliance, # 2 Proposed Order, # 3 Certificate of Service)(Farnan, Kelly) Modified on 1/4/2024 (nms). (Entered: 01/03/2024)	
271	01/04/2024	ORDER: A hearing on the motion for permission to withdraw as counsel is now set for February 6, 2024, at 11:00 a.m. in Courtroom 6A of the J. Caleb Boggs Federal Building, 844 N. King Street, Wilmington, DE 19801. Richards, Layton & Finger, P.A. shall provide notice of the hearing to Defendants Waydoo USA, Inc. and Shenzhen Waydoo Intelligence Technology Co., Ltd.. Signed by Judge Richard G. Andrews on 1/4/2024. (nms) (Entered: 01/04/2024)	
272	01/19/2024	MOTION for Entry of a Permanent Injunction or Alternative Motion to Alter or Amend the Prior Order Denying Plaintiff's Motion for a Permanent Injunction - filed by MHL Custom, Inc.. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Exhibit 3, # 4 Exhibit 4, # 5 Exhibit 5, # 6 Exhibit 6, # 7 Exhibit 7, # 8 Exhibit 8, # 9 Exhibit 9, # 10 Exhibit 10, # 11 Exhibit 11, # 12 Exhibit 12)(Bennett, Blake) Modified on 1/22/2024 (nms). (Entered: 01/19/2024)	
	01/19/2024	Set Answering Brief Deadline re 272 MOTION for Entry of a Permanent Injunction or Alternative Motion to Alter or Amend the Prior Order Denying Plaintiff's Motion for a Permanent Injunction. Answering Brief/Response due date per Local Rules is 2/2/2024. (nms) (Entered: 01/22/2024)	
273	01/25/2024	Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding compliance with the Court's Jan. 4, 2024 Order (D.I. 271). (Attachments: # 1 Exhibit)(Farnan, Kelly) Modified on 1/25/2024 (nms). (Entered: 01/25/2024)	
274	01/25/2024	Letter to The Honorable Richard G. Andrews, from Kelly E. Farnan, regarding request to extend deadline to respond to Motion for Permanent Injunction. (Farnan, Kelly) Modified on 1/25/2024 (nms). (Entered: 01/25/2024)	
275	01/26/2024	Letter to Judge Andrews, from Blake A. Bennett, regarding response to Ms. Farnan's January 25, 2024 letter (D.I. 274). (Bennett, Blake) Modified on 1/26/2024 (nms). (Entered: 01/26/2024)	
276	01/26/2024	ORAL ORDER: The deadline for Waydoos brief in opposition to the Motion for Permanent Injunction is extended to five minutes after I resolve the pending motion to withdraw (assuming I permit withdrawal) or until a date to be set (assuming I deny permission to withdraw). I note that the record to date appears to support the conclusion that Waydoo is a recalcitrant litigant in default of all its obligations related to this case. Ordered by Judge Richard G. Andrews on 1/26/2024. (nms) (Entered: 01/26/2024)	
277	02/02/2024	ANSWERING BRIEF in Opposition re 272 MOTION for Entry of a Permanent Injunction or Alternative Motion to Alter or Amend the Prior Order Denying Plaintiff's Motion for a Permanent Injunction filed by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc..Reply Brief due date per Local Rules is 2/9/2024. (Gorman, John) (Entered: 02/02/2024)	
278	02/02/2024	NOTICE of Appearance by John V. Gorman on behalf of Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc. (Gorman, John) (Entered: 02/02/2024)	
279	02/02/2024	NOTICE of Appearance by Amy Michele Dudash on behalf of Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc. (Dudash, Amy) (Entered: 02/02/2024)	
280	02/02/2024	NOTICE requesting Clerk to remove Edgar H. Haug, Robert E. Colletti, Jason Kanter, Mark Basanta, Roman Khasidov, Patrick Lavery and the law firm of Haug Partners LLP as co-counsel. Reason for request: no longer represents party. (Farnan, Kelly)	

#	Date	Proceeding Text	Source
		(Entered: 02/02/2024)	
281	02/02/2024	NOTICE OF SUBSTITUTION OF COUNSEL re Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.: Entry of appearance of attorney Amy Michele Dudash. Attorney Kelly E. Farnan, Esq. terminated. (Dudash, Amy) (Entered: 02/02/2024)	
282	02/05/2024	Letter to Honorable Richard G. Andrews, from John V. Gorman, respectfully requesting cancellation of hearing regarding Unopposed Motion for Permission to Withdraw as Counsel. (Gorman, John) Modified on 2/5/2024 (nms). (Entered: 02/05/2024)	
283	02/05/2024	Letter to The Honorable Richard G. Andrews, from Blake A. Bennett, regarding response to Defendants' February 5, 2024 letter (D.I. 282). (Bennett, Blake) Modified on 2/5/2024 (nms). (Entered: 02/05/2024)	
284	02/05/2024	ORAL ORDER: The Unopposed Motion for Permission to Withdraw as Counsel (D.I. 270) is DISMISSED as moot (see D.I. 278 , D.I. 279 , D.I. 281). The hearing scheduled for 2/6/2024, is CANCELED. The parties are to submit a joint status report by 2/20/2024. Ordered by Judge Richard G. Andrews on 2/5/2024. (nms) (Entered: 02/05/2024)	
285	02/20/2024	JOINT Status Report, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Dudash, Amy) Modified on 2/20/2024 (nms). (Entered: 02/20/2024)	
286	03/20/2024	ORAL ORDER: A joint status report is due no later than three (3) days from the date of this Order. Ordered by Judge Richard G. Andrews on 3/20/2024. (nms) (Entered: 03/20/2024)	
287	03/25/2024	Joint Status Report, by Shenzhen Waydoo Intelligence Technology Co., Ltd., Waydoo USA, Inc.. (Dudash, Amy) Modified on 3/25/2024 (nms). (Entered: 03/25/2024)	

Judgments

Date	In Favor Of	Against	Amount	Interest	Court Cost	Status	Status Date
04/12/2023	MHL Custom, Inc.	Shenzhen Waydoo Intelligence Technology Co., Ltd.	$ 0.00	0.00%	$ 0.00	Not Yet Satisfied - SEE DOCKET	04/12/2023
04/12/2023	MHL Custom, Inc.	Waydoo USA, Inc.	$ 0.00	0.00%	$ 0.00	Not Yet Satisfied - SEE DOCKET	04/12/2023

Patents

Number	Title	Issued	Class	Subclass
9,359,044	Weight-shift controlled personal hydrofoil watercraft	06/07/2016	1	1
9,586,659	Powered hydrofoil board	03/07/2017	1	1

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End of Document

Document (1)

1. 3:20cv1643, Mini Custom, Inc. V. Avante Innovations, Llc

Client/Matter: -None-
Search Terms: 9586659 or 9,586,659
Search Type: Terms and Connectors
Narrowed by:

Content Type	Narrowed by
Dockets	Case Status: Open,Unknown,Closed; Case Type: Civil

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3:20cv1648, Mhl Custom, Inc. V. Avante Innovations, Llc

US District Court Docket

United States District Court, California Southern

(San Diego)

This case was retrieved on 04/11/2024

Header

Case Number: 3:20cv1648
Date Filed: 08/24/2020
Assigned To: Judge Roger T. Benitez
Referred To: Magistrate Judge William V. Gallo
Nature of Suit: Patent (830)
Cause: Patent Infringement
Lead Docket: None
Other Docket: None
Jurisdiction: Federal Question

Class Code: Closed
Closed: 12/11/2020
Statute: 28:1338pt
Jury Demand: Plaintiff
Demand Amount: $0
NOS Description: Patent

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Proceedings

#	Date	Proceeding Text	Source
1	08/24/2020	COMPLAINT with Jury Demand against Avante Innovations, LLC (Filing fee $ 400 receipt number ACASDC-14383404.), filed by MHL Custom, Inc.. (Attachments: # 1 Civil Cover Sheet, # 2 Exhibits)The new case number is 3:20-cv-1648-LAB-WVG. Judge Larry Alan Burns and Magistrate Judge William V. Gallo are assigned to the case. (Lytle, Douglas)(jmr) (jms). (Entered: 08/24/2020)	
2	08/24/2020	REPORT on the filing or determination of an action regarding patent and/or trademark number(s) *9,359,044*, *9,586,659* cc:USPTO (jmr) (jms). (Entered: 08/24/2020)	
3	08/24/2020	Summons Issued. Counsel receiving this notice electronically should print this summons and serve it in accordance with Rule 4, Fed.R.Civ.P and LR 4.1. (jmr) (jms). (Entered: 08/24/2020)	
4	08/25/2020	NOTICE of Party With Financial Interest by MHL Custom, Inc. . No Parties With Financial Interest. (Lytle, Douglas) (jdt). (Entered: 08/25/2020)	
5	08/25/2020	Request to Appear Pro Hac Vice (Filing fee received: $ 206 receipt number ACASDC-14389425.) (Application to be reviewed by Clerk.) (Redding, Daniel) (rmc). (Entered: 08/25/2020)	
6	08/25/2020	Request to Appear Pro Hac Vice (Filing fee received: $ 206 receipt number ACASDC-14389460.) (Application to be reviewed by Clerk.) (Theuerkauf, Robert) (rmc). (Entered: 08/25/2020)	
7	08/25/2020	PRO HAC APPROVED: Robert J. Theuerkauf appearing for Plaintiff MHL Custom, Inc. (no document attached) (rmc) (Entered: 08/25/2020)	
8	08/25/2020	PRO HAC APPROVED: Daniel W. Redding appearing for Plaintiff MHL Custom, Inc. (no document attached) (rmc) (Entered: 08/25/2020)	
9	08/27/2020	MINUTE ORDER. Chief Judge Larry Alan Burns has declined assignment pursuant to General Order 598. Case reassigned to Judge Roger T. Benitez for all further proceedings. The new case number is 20cv1648 BEN (WVG).(no document attached) (jcj) (Entered: 08/27/2020)	
10	08/27/2020	Request to Appear Pro Hac Vice (Filing fee received: $ 206 receipt number ACASDC-14403418.) (Application to be reviewed by Clerk.) (Murrell, Dennis) (rmc). (Entered: 08/27/2020)	
11	08/27/2020	PRO HAC APPROVED: Dennis D. Murrell appearing for Plaintiff MHL Custom, Inc. (no document attached) (rmc) (Entered: 08/27/2020)	
12	12/04/2020	SUMMONS Returned Executed by MHL Custom, Inc. Avante Innovations, LLC served. (Lytle, Douglas) (tcf). (Entered: 12/04/2020)	

#	Date	Proceeding Text	Source
13	12/11/2020	NOTICE of Voluntary Dismissal by MHL Custom, Inc. (Lytle, Douglas) (mme). (Entered: 12/11/2020)	
14	12/11/2020	REPORT of Patent and Trademark Closing, regarding patent and/or trademark number(s) 9,359,044, 9,586,659, re 13 Notice of Voluntary Dismissal. cc:USPTO (rmc) (Entered: 01/06/2021)	

Patents

Number	Title	Issued	Class	Subclass
9,359,044	Weight-shift controlled personal hydrofoil watercraft	06/07/2016	1	1
9,586,659	Powered hydrofoil board	03/07/2017	1	1

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User Name: Patricia Martin
Date and Time: Thursday, April 11, 2024 6:23:00AM EDT
Job Number: 221684788

Document (1)

1. 3:22cv21258, Mini Custom Inc V. Foil Boarding Company, Inc.

Client/Matter: -None-
Search Terms: 9586659 or 9,586,659
Search Type: Terms and Connectors
Narrowed by:

Content Type	Narrowed by
Dockets	Case Status: Open,Unknown,Closed; Case Type: Civil

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STAYED

3:22cv21258, Mhl Custom Inc V. Foil Boarding Company, Inc.

US District Court Docket

United States District Court, Florida Northern

(Pensacola)

This case was retrieved on 04/10/2024

Header

Case Number: 3:22cv21258
Date Filed: 10/21/2022
Assigned To: Judge M Casey Rodgers
Referred To: Magistrate Judge ZACHARY C BOLITHO
Nature of Suit: ***Patent*** (830)
Cause: ***Patent Infringement***
Lead Docket: None
Other Docket: None
Jurisdiction: Federal Question

Class Code: Open
Statute: 15:1126
Jury Demand: Both
Demand Amount: $0
NOS Description: ***Patent***

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Proceedings

#	Date	Proceeding Text	Source
1	10/21/2022	COMPLAINT FOR ***PATENT INFRINGEMENT*** against FOIL BOARDING COMPANY, INC. (Filing fee $ 402 receipt number AFLNDC-7525988.), filed by MHL CUSTOM, INC.. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Exhibit C) (ZOESCH, JOHN) (Entered: 10/21/2022)	
2	10/21/2022	CIVIL COVER SHEET. (ZOESCH, JOHN) (Entered: 10/21/2022)	

#	Date	Proceeding Text	Source
3	10/21/2022	NOTICE Summons by MHL CUSTOM, INC. (ZOESCH, JOHN) (Entered: 10/21/2022)	
4	10/24/2022	Summons Issued as to FOIL BOARDING COMPANY INC. (mb) (Entered: 10/24/2022)	
5	10/24/2022	AO 120 ***Patent*** and Trademark New Case Notification. Copy sent electronically to the Director of the U.S. ***Patent*** and Trademark Office. (mb) (Entered: 10/24/2022)	
6	11/07/2022	AFFIDAVIT of Service for Return of Service served on Foil Boarding Company Inc on 10-26-2022, filed by MHL CUSTOM INC. (ZOESCH, JOHN) (Entered: 11/07/2022)	
7	11/17/2022	NOTICE of Appearance by ROBERT JAMES POWELL on behalf of FOIL BOARDING COMPANY INC (POWELL, ROBERT) (Entered: 11/17/2022)	
8	11/17/2022	NOTICE of Appearance by MATTHEW MCDONNELL COUCH on behalf of FOIL BOARDING COMPANY INC (COUCH, MATTHEW) (Entered: 11/17/2022)	
9	11/18/2022	MOTION for Extension of Time to File Response/Reply (Unopposed) by FOIL BOARDING COMPANY INC. (COUCH, MATTHEW) (Entered: 11/18/2022)	
	11/18/2022	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 9 MOTION for Extension of Time to File Response/Reply (Unopposed) (mb) (Entered: 11/18/2022)	
10	11/21/2022	ORDER re 9 MOTION for Extension of Time to File Response/Reply (Unopposed) filed by FOIL BOARDING COMPANY INC, FOIL BOARDING COMPANY INC. The Defendant's deadline to respond to Plaintiff's Complaint is extended to December 21, 2022. (Answer due by 12/21/2022.) Signed by JUDGE M CASEY RODGERS on 11/21/2022. (blr) (Entered: 11/22/2022)	
11	12/19/2022	MOTION to Appear Pro Hac Vice by Kristopher O. Anderson.(Filing fee $ 208 receipt number AFLNDC-7606480.) by FOIL BOARDING COMPANY INC. (Attachments: # 1 Exhibit A - Certificate of Good Standing) (ANDERSON, KRISTOPHER) (Entered: 12/19/2022)	
	12/20/2022	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 11 MOTION to Appear Pro Hac Vice by Kristopher O. Anderson.(Filing fee $ 208 receipt number AFLNDC-7606480.) (mb) (Entered: 12/20/2022)	
12	12/21/2022	MOTION to Appear Pro Hac Vice by J. Hunter Adams.(Filing fee $ 208 receipt number AFLNDC-7610659.) by FOIL BOARDING COMPANY INC. (Attachments: # 1 Exhibit Cert of Good Standing) (ADAMS, JAMES) (Entered: 12/21/2022)	
	12/21/2022	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 12 MOTION to Appear Pro Hac Vice by J. Hunter Adams.(Filing fee $ 208 receipt number AFLNDC-7610659.) (mb) (Entered: 12/21/2022)	
13	12/21/2022	ORDER. The Motions for Admission Pro Hac Vice, ECF Nos. 11 and 12 , are GRANTED. Attorneys Kristopher O. Anderson and James Hunter Adams of Moorhead Law Group, are admitted pro hac vice to represent the Defendant, Foil Boarding Company, Inc., pursuant to Local Rule 11.1(C). (Appointed KRISTOPHER O ANDERSON, JAMES HUNTER ADAMS for FOIL BOARDING COMPANY INC). Signed by JUDGE M CASEY RODGERS on 12/21/2022. (mb) (Entered: 12/21/2022)	
14	12/21/2022	ANSWER to 1 Complaint , COUNTERCLAIM against MHL	

#	Date	Proceeding Text	Source
		CUSTOM INC by FOIL BOARDING COMPANY INC. (COUCH, MATTHEW) (Entered: 12/21/2022)	
15	12/21/2022	Corporate Disclosure Statement/Certificate of Interested Persons by FOIL BOARDING COMPANY INC. (COUCH, MATTHEW) (Entered: 12/21/2022)	
	12/22/2022	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 14 Answer to Complaint (please see proposed ISO). (mb) (Entered: 12/22/2022)	
16	12/23/2022	INITIAL SCHEDULING ORDER: Fed.R.Civ.P. 7.1 Corporate Disclosure Statement Deadline set for 1/6/2023. Rule 26 Meeting Report due by 2/6/2023. Discovery due by 6/19/2023. Signed by JUDGE M CASEY RODGERS on 12/23/2022. (mb) (Entered: 12/23/2022)	
17	12/28/2022	Corporate Disclosure Statement/Certificate of Interested Persons by MHL CUSTOM INC. (ZOESCH, JOHN) (Entered: 12/28/2022)	
18	01/11/2023	ANSWER to 14 Answer to Complaint, Counterclaim by MHL CUSTOM INC. (ZOESCH, JOHN) (Entered: 01/11/2023)	
19	02/02/2023	REPORT of Rule 26(f) Planning Meeting. (Attachments: # 1 Exhibit Exhibit A - Proposed ESI Protocol) (ZOESCH, JOHN) (Entered: 02/02/2023)	
	02/03/2023	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 19 Report of Rule 26(f) Planning Meeting. (mb) (Entered: 02/03/2023)	
20	02/21/2023	FINAL SCHEDULING ORDER AND MEDIATION REFERRAL re 19 Joint REPORT. (Discovery due by 12/22/2023. The deadline for filing potentially Dispositive Motions, as well as daubert motions, to be filed by 5/22/2024. Mediation to take place by 1/19/2024. Mediation Report due by 2/2/2024). Signed by JUDGE M CASEY RODGERS on 2/21/2023. (mb) (Entered: 02/21/2023)	
21	02/27/2023	MOTION to Appear Pro Hac Vice by Megan E. Gibson.(Filing fee $ 208 receipt number AFLNDC-7727898.) by MHL CUSTOM INC. (Attachments: # 1 Exhibit Exhibit A - Certificate of Good Standing) (ZOESCH, JOHN) (Entered: 02/27/2023)	
22	02/27/2023	MOTION to Appear Pro Hac Vice by Dennis David Murrell.(Filing fee $ 208 receipt number AFLNDC-7728094.) by MHL CUSTOM INC. (Attachments: # 1 Exhibit Exhibit A - Certificate of Good Standing) (ZOESCH, JOHN) (Entered: 02/27/2023)	
23	02/27/2023	MOTION to Appear Pro Hac Vice by Brian P. McGraw.(Filing fee $ 208 receipt number AFLNDC-7728095.) by MHL CUSTOM INC. (Attachments: # 1 Exhibit Exhibit A - Certificate of Good Standing) (ZOESCH, JOHN) (Entered: 02/27/2023)	
24	02/27/2023	MOTION to Appear Pro Hac Vice by Robert J. Theuerkauf.(Filing fee $ 208 receipt number AFLNDC-7728098.) by MHL CUSTOM INC. (Attachments: # 1 Exhibit Exhibit A - Certificate of Good Standing) (ZOESCH, JOHN) (Entered: 02/27/2023)	
	02/28/2023	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 22 MOTION to Appear Pro Hac Vice by Dennis David Murrell.(Filing fee $ 208 receipt number AFLNDC-7728094.), 24 MOTION to Appear Pro Hac Vice by Robert J. Theuerkauf.(Filing fee $ 208 receipt number AFLNDC-7728098.) (mb) (Entered: 02/28/2023)	
	02/28/2023	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 23 MOTION to Appear Pro Hac Vice by Brian P. McGraw.(Filing fee $ 208 receipt number AFLNDC-7728095.) (mb) (Entered: 02/28/2023)	

#	Date	Proceeding Text	Source
25	03/07/2023	ORDER. The Motions for Admission Pro Hac Vice, ECF Nos. 21 , 22 , 23 and 24 are GRANTED. Attorneys Megan E. Gibson, Dennis D. Murrell, Brian P. McGraw and Robert J. Theuerkauf, are admitted pro hac vice to represent the Plaintiff/Counter-Defendant, MHL Custom, Inc., pursuant to Local Rule 11.1(C). Signed by JUDGE M CASEY RODGERS on 3/7/2023. (mb) (Entered: 03/07/2023)	
26	05/19/2023	Joint MOTION to Stay and Notice of Potential Settlement by FOIL BOARDING COMPANY INC. (COUCH, MATTHEW) (Entered: 05/19/2023)	
	05/19/2023	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 26 Joint MOTION to Stay and Notice of Potential Settlement (mb) (Entered: 05/19/2023)	
27	05/22/2023	REFERRAL AND ORDER re 26 MOTION to STAY. The Court finds, and the parties agree, that the interests of efficiency and judicial economy are best served by staying this matter, including all discovery and proceedings, for the reasons set forth in the parties' joint motion. This case is therefore STAYED until July 16, 2023. The parties must promptly notify the Court if the case settles or is ready to proceed. (Deadline for clerk to check status of stay by 7/16/2023.) Signed by JUDGE M CASEY RODGERS on 5/22/2023. (mb) (Entered: 05/22/2023)	
28	07/13/2023	Second MOTION for Settlement , Joint MOTION to Stay by FOIL BOARDING COMPANY INC. (COUCH, MATTHEW) (Entered: 07/13/2023)	
	07/14/2023	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 28 Second MOTION for Settlement and Joint MOTION to Stay. (mb) (Entered: 07/14/2023)	
29	07/18/2023	REFERRAL AND ORDER re 18 MOTION to Stay. The motion is GRANTED. The case is STAYED an additional 30 days, or until August 18, 2023. The parties must promptly notify the Court if the case settles or is ready to proceed. (Deadline for clerk to check status of stay by 8/18/2023.) Signed by JUDGE M CASEY RODGERS on 7/18/2023. (mb) (Entered: 07/18/2023)	
30	08/18/2023	NOTICE Regarding Settlement Discussions - IMPASSE, by FOIL BOARDING COMPANY INC (COUCH, MATTHEW) (Entered: 08/18/2023)	
	08/21/2023	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 30 Notice Regarding Settlement Discussions - IMPASSE, 29 Order Staying Case. (mb) (Entered: 08/21/2023)	
31	08/25/2023	AGREED UPDATED SCHEDULING ORDER, by MHL CUSTOM INC. (MCGRAW, BRIAN) Modified on 8/28/2023 to correct docket text of pdf attached to match ECF. (mb). (Entered: 08/25/2023)	
	08/28/2023	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 31 AGREED UPDATED SCHEDULING ORDER. (mb) (Entered: 08/28/2023)	
32	08/29/2023	ORDER re 30 Parties' NOTICE Regarding Settlement Discussions. That the previously entered stay is hereby LIFTED and the case will proceed under the deadlines as outlined in the parties' Agreed Updated Scheduling Order dated August 25, 2023 (ECF No. 31). The parties' deadline to join additional parties and amend the pleadings is extended to February 1, 2024; the parties' discovery deadline is extended to September 6, 2024; the parties' dispositive motion deadline is extended to October 18, 2024; all correlating deadlines are extended accordingly. (Parties' Deadline	

#	Date	Proceeding Text	Source
		to join additional parties and file Amended Pleadings due by 2/1/2024 . Discovery due by 9/6/2024. Dispositive Motions to be filed by 10/18/2024. Mediation to take place by 10/7/2024. Mediation Report due by 10/21/2024.) Signed by JUDGE M CASEY RODGERS on 8/29/2023. (mb) (Entered: 08/29/2023)	
33	02/08/2024	Joint MOTION to Extend Time RE: THE REMAINING CLAIM CONSTRUCTION DEADLINES by MHL CUSTOM INC. (Attachments: # 1 Exhibit Second Agreed Updated Scheduling Order) (ZOESCH, JOHN) (Entered: 02/08/2024)	
	02/09/2024	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 33 Joint MOTION to Extend Time RE: THE REMAINING CLAIM CONSTRUCTION DEADLINES (mb) (Entered: 02/09/2024)	
34	02/22/2024	ORDER re 33 MOTION to Modify the Remaining Claim Construction Deadlines. The motion is GRANTED as requested. By 2/23/2024, the parties shall complete and filea Joint Claim Construction Statement in the form andsubstance required by LPR 6.3. By 3/13/2024, all claim construction discovery shallbe completed. By 3/29/2024, the parties shall serve and file anopening brief, including any supporting evidence,supporting its proposed claim construction. By 4/19/2024), the parties shall serve and file aresponse brief, including any supporting evidence. Signed by JUDGE M CASEY RODGERS on 2/22/2024. (mb) (Entered: 02/22/2024)	
35	02/23/2024	Third MOTION to Extend TimeJoint Motion to Modify the Remaiing Claim Construction Deadlines by FOIL BOARDING COMPANY INC. (Attachments: # 1 Exhibit Third Agreed Updated Scheduling Order) (COUCH, MATTHEW) (Entered: 02/23/2024)	
	02/26/2024	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 35 Third MOTION to Extend TimeJoint Motion to Modify the Remaiing Claim Construction Deadlines (mb) (Entered: 02/26/2024)	
36	02/27/2024	ORDER re 35 MOTION to Modify the Remaining Claim Construction Deadlines. The motion is GRANTED as requested. By 3/1/2024, the parties shall complete and file aJoint Claim Construction Statement in the form andsubstance required by LPR 6.3. By 3/13/2024, all claim construction discovery shallbe completed. By 3/29/2024, the parties shall serve and file anopening brief, including any supporting evidence,supporting its proposed claim construction. By 4/19/2024, the parties shall serve and file aresponse brief, including any supporting evidence. Signed by JUDGE M CASEY RODGERS on 2/27/2024. (mb) (Entered: 02/27/2024)	
37	03/01/2024	NOTICE Joint Claim Construction Statement and Chart by MHL CUSTOM INC (ZOESCH, JOHN) (Entered: 03/01/2024)	
38	03/05/2024	MOTION to Stay Pending Inter Partes Review and Ex Parte Reexamination of Plaintiff's Asserted ***Patent*** Claims by FOIL BOARDING COMPANY INC. (COUCH, MATTHEW) (Entered: 03/05/2024)	
39	03/05/2024	MEMORANDUM in Support re 38 MOTION to Stay Pending Inter Partes Review and Ex Parte Reexamination of Plaintiff's Asserted ***Patent*** Claims filed by FOIL BOARDING COMPANY INC. (COUCH, MATTHEW) (Entered: 03/05/2024)	
40	03/06/2024	AMENDED MEMORANDUM in Support re 38 MOTION to Stay Pending Inter Partes Review and Ex Parte Reexamination of Plaintiff's Asserted ***Patent*** Claims [Amended Memorandum] filed by FOIL BOARDING COMPANY INC. (Attachments: # 1 Exhibit Exhibit 1 - PTAB-IPR2024-00086-2, # 2 Exhibit Exhibit 2 - PTAB-	

#	Date	Proceeding Text	Source
		IPR2024-00085-2, # 3 Exhibit Exhibit 3 - PTAB-IPR2024-00086-1002, # 4 Exhibit Exhibit 4 - PTAB-IPR2024-00085-1002, # 5 Exhibit Exhibit 5 - PTAB-IPR2024-00086-5, # 6 Exhibit Exhibit 6 - PTAB-IPR2024-00085-5, # 7 Exhibit Exhibit 7 - 530_90015269_08-09-2023_RXOSUB.R.40, # 8 Exhibit Exhibit 8 - 530_90015269_09-06-2023_RXREXO, # 9 Exhibit Exhibit 9 - 530_90015269_12-04-2023_RXR.NF, # 10 Exhibit Exhibit 10 - 530_90015269_01-28-2024_RXEXTG, # 11 Exhibit Exhibit 11 - DDE-1-21-cv-00091-259) (COUCH, MATTHEW) (Entered: 03/06/2024)	
	03/06/2024	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 40 AMENDED Memorandum in Support of 38 MOTION to Stay Pending Inter Partes Review and Ex Parte Reexamination of Plaintiff's Asserted ***Patent*** Claims. (mb) (Entered: 03/06/2024)	
41	03/19/2024	STIPULATION re 38 MOTION to Stay Pending Inter Partes Review and Ex Parte Reexamination of Plaintiff's Asserted ***Patent*** Claims and Proposed Order Staying Proceedings by MHL CUSTOM INC. (ZOESCH, JOHN) (Entered: 03/19/2024)	
	03/20/2024	ACTION REQUIRED BY DISTRICT JUDGE: Chambers of JUDGE M CASEY RODGERS notified that action is needed Re: 41 STIPULATION re 38 MOTION to Stay. (mb) (Entered: 03/20/2024)	
42	03/21/2024	STIPULATION AND ORDER STAYING PROCEEDINGS re 38 MOTION to Stay Pending Inter Partes Review and Ex Parte Reexamination of Plaintiff's Asserted ***Patent*** Claims. Signed by JUDGE M CASEY RODGERS on 3/21/2024. (mb) (Entered: 03/22/2024)	

Patents

Number	Title	Issued	Class	Subclass
9,359,044	Weight-shift controlled personal hydrofoil watercraft	06/07/2016	1	1
9,586,659	Powered hydrofoil board	03/07/2017	1	1

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*** THIS DATA IS FOR INFORMATIONAL PURPOSES ONLY ***

End of Document

☐ US9586659B2 - Powered hydrofoil board

Original

Bibliographic information & Images

Publication number and date
US9586659B2
2017-03-07

Granted

Application number and date
US15064521 {/api/control?client=&query=AN:("US15064521")&autosearch=true}
2016-03-08

Priority number and date
US15064521 {/api/control?client=&query=PRN:("US15064521")&autosearch=true}
2016-03-08

Ultimate owner
MHL CUSTOM {/api/control?client=&query=uo:("MHL%20CUSTOM")&autosearch=true}

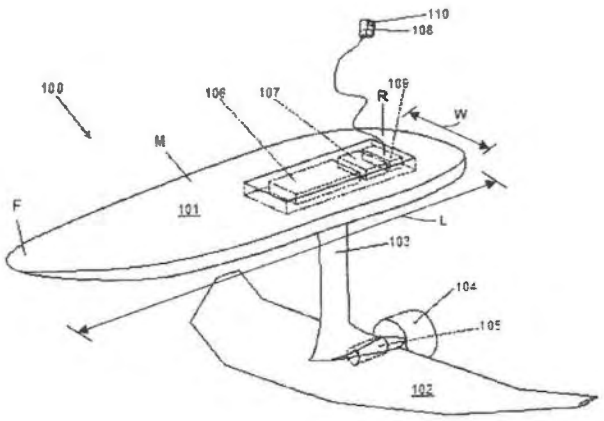
Original assignee
Jacob Willem Langelaan {/api/control?client=&query=pa:("Jacob%20Willem%20Langelaan")&autosearch=true}

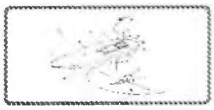
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$$\alpha_{trim} = -\frac{C_{m0}}{C_{m_\alpha}}$$

Abstract

A passively stable personal hydrofoil watercraft that has a flotation device, wherein a user can ride in a prone, kneeling, or standing position. The watercraft includes a strut having an upper end interconnected with the flotation device and lower end connected with a hydrofoil. The hydrofoil greatly reduces the power required to travel at higher speed. The watercraft also includes a propulsion system connected to the hydrofoil. Both longitudinal and directional control of the watercraft is via weight shift, eliminating the need of any movable surfaces. The flotation device, strut, and hydrofoil may be permanently interconnected or may be detachable.

Original

Claims

1. A passively stable, weight-shift controlled personal hydrofoil watercraft, comprising: a flotation device that has a fore-aft length greater than a lateral width, the flotation device having a top surface and a bottom surface, wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position, the flotation device having a forward section, a middle section, and a rear section; a strut having a upper end and a lower end, the upper end fixedly interconnected with the flotation device between the middle section and the rear section of the flotation device; a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no movable surface; a propulsion system for propelling the watercraft in a body of water, wherein the propulsion system is connected to the hydrofoil; and the watercraft having no movable steering system.

2. A watercraft in accordance with claim 1 , wherein the propulsion system comprises a battery, an electric motor, a motor speed controller, and a propulsor, the propulsor selected from a propeller, a ducted propeller, or a pump-jet.

3. A watercraft in accordance with claim 2 , wherein the propulsor is disposed below the hydrofoil.

4. A watercraft in accordance with claim 1 , wherein the hydrofoil is indirectly connected to the strut.

5. A watercraft in accordance with claim 4 , wherein the strut is directly connected to the propulsion system.

6. A watercraft in accordance with claim 5 , wherein a first hydrofoil wing of the hydrofoil is indirectly connected to the strut through the propulsion system.

7. A watercraft in accordance with claim 4 , wherein the hydrofoil comprises a plurality of wings that are interconnected by way of a strut.

8. A watercraft in accordance with claim 2 , wherein the battery and motor speed controller are contained in a watertight compartment integrated into the flotation device.

9. A watercraft in accordance with claim 2 , wherein the electric motor is integrated into a waterproof, streamlined pod and the watercraft comprises a cooling system for cooling the electric motor.

10. A watercraft in accordance with claim 9 , wherein the waterproof, streamlined pod is removably interconnected with the hydrofoil through a fitting.

11. A watercraft in accordance with claim 8 , further comprising a wireless handheld controller having a transmitter, and a throttle interface having a receiver, wherein the transmitter is adapted to send wireless signals to the receiver that cause an output of the propulsion system to change.

12. A watercraft in accordance with claim 1 , wherein a first hydrofoil wing of the hydrofoil is directly connected to the strut.

13. A watercraft in accordance with claim 8 , wherein the strut has an internal passage and electrical wires extend from the electric motor to the watertight compartment inside the strut through the internal passage for controlling the electric motor.

14. A watercraft in accordance with claim 13 , wherein the flotation device has a detector adapted to detect a user's presence on the flotation device and cease operation of the electric motor if the detector detects that the user is not on the flotation device.

15. A watercraft in accordance with claim 1 , wherein the propulsion system is directly or indirectly connected to the hydrofoil.

16. A personal hydrofoil watercraft, comprising: a surfboard-shaped flotation device that has a fore-aft length greater than a lateral width, the flotation device having a top surface and a bottom surface, wherein the top surface has a substantially horizontal supporting surface configured to support a user in a prone, kneeling, or standing position, the flotation device having a forward section, a middle section, and a rear section; a hydrofoil interconnected with the surfboard-shaped flotation device, the hydrofoil having a strut and a first hydrofoil wing, an upper end of the strut being fixedly interconnected with the surfboard-shaped flotation device; a propulsion system attached to the surfboard-shaped flotation device for propelling the watercraft in a body of water, the propulsion system comprising a battery, an electric motor, a motor speed controller, and a propulsor, wherein the propulsor is selected from a propeller, a ducted propeller, or a pump-jet, and the battery and motor speed controller are contained in a watertight compartment integrated into the flotation device; the watercraft having no movable steering system; a handheld controller having a throttle; and a throttle interface, wherein the throttle is adapted to send electronic signals to the throttle interface that cause an output of the propulsion system to change.

17. A watercraft in accordance with claim 16 , wherein the hydrofoil comprises a plurality of hydrofoil wings including the first hydrofoil wing and a second hydrofoil wing, the first and second hydrofoil wings being connected by way of a strut.

18. A watercraft in accordance with claim 16 , wherein the watercraft comprises a cooling system for cooling the electric motor.

19. A watercraft in accordance with claim 16 , wherein the strut has an internal passage and electrical wires extend from the electric motor to the watertight compartment inside the strut through the internal passage for controlling electric motor.

20. A watercraft in accordance with claim 16 , wherein the handheld controller comprises a wireless transmitter operatively coupled to the throttle and the throttle interface includes a receiver, the transmitter being adapted to send wireless signals to the receiver in response to actuation of the throttle that cause an output of the propulsion system to change.

Original

Families

Display in a list (/api/control?client=&familiesSearch=_) INPADOC

This section contains all family relations of this particular document. For more information about the different families, refer to the User Manual (Glossary/Families).

Extended (6) Priority date/claims	Complete (2) Priority date/claims	Main (2) Priority date/claims	Domestic (2) Priority date/claims	Publication number	Application number	Title	Status

2014-10-08 US14509289 US15064521 US15429535 US61889071	2017-02-10 US14509289 US15064521 US15429535 US61889071	2017-02-10 US14509289 US15064521 US15429535 US61889071	2017-02-10	☐	US20170283015A1	US15429535	POWERED HYDROFOIL BOARD	Filed
	2016-03-08 US14509289 US15064521 US61889071	2016-03-08 US14509289 US15064521 US61889071	2016-03-08	☐	US9586659B2	US15064521	Powered hydrofoil board	Granted
				☐	US20160185430A1	US15064521	Powered Hydrofoil Board	Granted
	2014-10-08 US14509289 US61889071	2014-10-08 US14509289 US61889071	2014-10-08	☐	US9359044B2	US14509289	Weight-shift controlled personal hydrofoil watercraft	Granted
				☐	US9278729B2	US14509289	Weight-shift controlled personal hydrofoil watercraft	Granted
				☐	US20150104985A1	US14509289	WEIGHT-SHIFT CONTROLLED PERSONAL HYDROFOIL WATERCRAFT	Granted

Description

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application is a continuation of U.S. Ser. No. 14/509,289, filed Oct. 8, 2014, which claims priority to U.S. Provisional Patent Application Ser. No. 61/889,071, filed Oct. 10, 2013, the contents of which are incorporated herein in their entireties.

FIELD OF THE INVENTION

[0002] The present invention relates to personal watercraft; specifically, an electrically powered hydrofoil surfboard that is controlled by weight shift.

BACKGROUND OF THE INVENTION

[0003] Hydrofoils have been used on surfboards (U.S. Pat. No. 5,062,378 A, Bateman; U.S. Pat. No. 3,747,138, Morgan; U.S. Pat. No. 7,144,285 B1, Tareah), sailboards (U.S. Pat. No. 4,508,046 Shannon), water skis (U.S. Pat. No. 7,232,355, Woolley), and devices for swimmers (U.S. Pat. No. 2,931,332, Hebrank) as well as ships and boats (e.g. U.S. Pat. No. 3,227,123 A Voigt). The purpose of hydrofoils on surfboards is typically to enable higher speeds and to lift the surfboard above the choppy, turbulent surface of the water, thus enabling surfing on larger waves. On sailboards and kiteboards, hydrofoils enable higher speeds; and on water skis hydrofoils enable new forms of trick skiing.

[0004] Powered surfboards have been developed for reducing the effort required in paddling (U.S. Pat. No. 7,731,555 B2 Railey) and as personal watercraft (U.S. Pat. No. 6,702,634 B2 Jung, U.S. Pat. No. 3,262,413 A Bloomingdale et al., U.S. Pat. No. 6,192,817 B1 Dec, U.S. Pat. No. 4,971,586 A Walsh, U.S. Pat. No. 4,274,357 A Dawson). A particularly well-designed example of this type is the Jet-Surf (http://www.jet-surf.es). However, significant power is required to achieve speeds typical of surfing (up to ten horsepower to achieve thirty miles per hour), precluding the use of battery-powered motors for operationally useful periods.

[0005] A major factor that distinguishes surfboards from other watercraft is that control (both speed and directional) is affected via weight shift rather than by moveable surfaces (such as rudders) or thrust vectoring. Indeed, other methods of transport (skateboards and snowboards) also rely heavily on weight shift, and this method of control is central to the experience of surfing, snowboarding, and skateboarding.

[0006] An electrically powered hydrofoil device is described in Chen (U.S. Pat. No. 7,047,901 B2). The watercraft in that disclosure has two main disadvantages. First, the device in Chen requires a stabilizing component that controls the depth of the hydrofoil. Second, a steering mechanism is used for directional control. Therefore it does not (and cannot) accurately mimic the experience of surfing or snowboarding.

[0007] A need therefore exists for a personal watercraft that provides improved control and performance while providing a "surfing feel." In addition, this personal watercraft should be mechanically simple, easy to transport, and easy to maintain.

SUMMARY OF THE INVENTION

[0008] Embodiments of the present invention improve upon the powered surfboard by incorporating a hydrofoil. The hydrofoil greatly reduces the power required to travel at "fun" speeds (ranging from twenty to thirty miles per hour, but can be higher or lower depending on the user), so that a battery-powered electric motor (rather than an internal combustion engine) can be used to power the propulsion system. This results in reduced noise and vibration as well as reduced environmental impact.

[0009] Embodiments of the present invention also improve upon the powered hydrofoil surfboard. The hydrofoil of the present invention has been designed to provide passive stability in the longitudinal direction, making traditional altitude control systems based on moveable surfaces unnecessary. Further, both longitudinal and directional control of the board is via weight shift, so that riding the board is similar in feel to surfing or snowboarding, and the lack of a mechanical steering system makes the craft lighter, reduces parts count, and reduces the likelihood of a mechanical failure. Speed control is provided through a combination of throttle and weight shift.

[0010] The prior art in powered hydrofoil surfboards have all relied on moveable surfaces for control, and have ignored the possibility of designing the hydrofoil for passive static stability. The watercraft of the present invention is specifically designed to achieve desired levels of stability and controllability without the need for moveable surfaces. This is done through a combination of airfoil design, planform design, and tailoring the span-wise twist distribution to achieve desired outcomes.

[0011] Specific hydrofoils can be designed for different purposes: a larger foil results in lower speeds, more suitable for training; smaller foils operate at higher speeds for more advanced user; and tuning of the specific profile, twist, and dihedral can also be used to tailor the board to the user. A fixed canard or horizontal tail surface can also be added to further improve passive longitudinal stability as a training aid while still requiring the use of weight shift for control. A fixed vertical tail can be added to improve lateral stability as a training aid while still requiring the use of weight shift for control.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] FIG. 1 is a perspective view of a personal hydrofoil watercraft in accordance with the present invention;

[0013] FIG. 2 is an exploded perspective view showing one embodiment of the hydrofoil and propulsion system assembly;

[0014] FIG. 3 is a perspective view from underneath a personal hydrofoil watercraft in accordance with the present invention;

[0015] FIG. 4 is an exploded perspective view showing an alternate embodiment of the hydrofoil and propulsion system assembly;

[0016] FIG. 5 is a perspective view from underneath a personal hydrofoil watercraft with the hydrofoil and propulsion system of FIG. 4;

[0017] FIG. 6 is a perspective view of an embodiment of the hydrofoil and propulsion system as an integrated body;

[0018] FIG. 7 is a perspective view from underneath a personal hydrofoil watercraft with the hydrofoil and propulsion system of FIG. 6;

[0019] FIG. 8 shows perspective views of alternate examples of hydrofoil planform designs;

[0020] FIG. 9 is a schematic illustrating hydrofoil flow definitions; and

[0021] FIG. 10 is a schematic showing hydrofoil geometry parameters

DETAILED DESCRIPTION OF THE INVENTION

[0022] Referring to FIG. 1, a perspective view of a hydrofoil watercraft **100** in accordance with an embodiment of the present invention is shown. Watercraft **100** may include a flotation board **101**, a hydrofoil **102** spaced below the flotation board, a strut **103** connecting the hydrofoil to the board, a propulsion system **104**, an electric motor **105**, a battery **106**, a motor speed controller **107**, a throttle system **108**, a throttle interface **109**, and a spring-loaded trigger **110**.

[0023] The flotation board **101** of FIG. 1 is similar to those used in surfing or sailboarding. In the illustrated embodiment, the flotation board has a fore-aft length L that is greater than its lateral width W. Generally, the ratio of lateral width W to length L may be between 0.2 and 0.5. The length L will generally be in the range of 5 to 8 feet and the width W will generally be in the range of 1.5 to feet. The primary function of the flotation board is to provide flotation at low speeds, and it is preferentially configured with a flat upper surface to allow an adult human to lie prone, sit, kneel or stand on it and an opposed bottom surface facing the water. The lower surface may be almost flat to permit good hydroplaning.

[0024] The flotation board **101** can be made of foam, fiber-reinforced epoxy (using glass, carbon, or Kevlar fibers), or other suitable materials known to those of skill in the art. It may have a watertight compartment defined therein to contain the battery **106**, motor speed controller **107** and throttle interface **109**. The flotation board **101** provides an attachment structure for attaching the strut **103**. The attachment structure may be a releasable mechanism to permit easy assembly and dis-assembly for transport. The flotation board **101** may be said to have a forward section F at the front end, a rear section R at the rear end and a middle section M intermediate the front and rear ends. Element M may also represent a midpoint that is halfway between the front and rear ends. As shown, the strut **103** is connected to the flotation board between the middle section M and the rear section R. The connection is behind the midpoint M and centered side to side. A throttle cable may connect the throttle module **108** to the throttle interface **109** or wireless communication may be provided between the throttle module **108** and throttle interface **109**. In an alternate arrangement, the batteries **106** may be contained in the strut **103** or embedded in the hydrofoil **102**. Each configuration has advantages and disadvantages ranging from ease of access for charging (in the case of a compartment in the flotation board) to reduction in the length of wires needed to connect the battery to the motor (in the case of containment in the strut or hydrofoil).

[0025] The strut **103** can be made of extruded aluminum, fiber-reinforced epoxy (using glass, carbon, or Kevlar fibers), or other suitable materials known to those of skill in the art. As shown, the strut is streamlined in cross-section to minimize drag. The strut may be constructed so as to allow passage of electrical wires from the motor speed controller **107** to the electric motor **105**, such as inside or attached to the strut. The primary function of the strut is to rigidly connect the hydrofoil **102** at a fixed distance H from the board **101**. The distance H will generally be in the range of 1 to 4 feet. In an alternative embodiment, more than one strut may be used or the strut may be shaped differently than shown.

[0026] The hydrofoil **102** of FIG. 1 is specifically designed to be statically stable in the longitudinal degrees of freedom via a combination of airfoil design, planform design and span-wise twist distribution. The hydrofoil **102** has a wingspan S (see FIG. 2). The wingspan will generally be in the range of 1 to 4 feet. It is also designed to be stable in sideslip ("weathercock stability") either via planform design or via the addition of small vertical foils (winglets or fins). In some cases it may be advantageous to add a fixed canard or horizontal tail to further enhance static longitudinal stability (for example, for training purposes). The fixed distance H (see FIG. 2) of the strut **103** may be greater than the wingspan S of the hydrofoil **102** so that the hydrofoil remains fully submerged even when the user is leaning to turn.

[0027] The propulsion system **104** (discussed in more detail below) may comprise a ducted propeller or pump-jet, or may be of another type. The propulsion system is driven by the electric motor **105**.

[0028] The electric motor **105** is connected to the motor speed controller **107** using wires sized to carry the required voltage and current. The motor speed controller **107** may include other functionality such as a low-voltage alarm or other protective circuitry for the battery **106**; alternately, such circuitry may be included in the throttle interface **109**. The main function of the throttle interface is to connect the motor speed controller **107** to the throttle module **108**.

[0029] The throttle module **108** may be a hand-held device with a spring-loaded trigger **110** (so the throttle disengages automatically when it is released). Pulling or depressing the trigger causes the motor to turn a propeller or impeller in the propulsion system **104**, with motor speed being proportional to the degree the trigger is pulled or depressed. The throttle module communicates the degree of trigger pull/depression to the throttle interface **109** via a cable or wirelessly. The throttle module may take other forms, such as being operated by other body parts.

[0030] The throttle interface **109** may in addition include circuitry and connections to permit charging of the battery **106**. This would include battery protection circuits. The throttle interface may also include a means to display battery information to the user (for example, via LEDs to indicate charge state). Alternately, such information may be displayed on the throttle module **108**.

[0031] To operate the watercraft **100**, a user initially lies prone on the flotation board **101**. The throttle is engaged, causing the craft to accelerate. As the craft gains speed the user may move to a kneeling or standing position. As the craft further gains speed the hydrofoil generates sufficient lift to raise the board above the water. The user controls altitude of the board by leaning back (to go up) and forward (to go down). The user can steer left

or right by leaning in the appropriate direction. Releasing the throttle causes the motor to stop, reducing speed. The watercraft **100** may have other safety devices and features which causes the electric motor **105** to stop when the rider falls off the flotation board **101**. These devices may monitor the presence of a user on the flotation board **101**.

[0032] FIG. 2 shows an exploded perspective view of one embodiment of the hydrofoil **102**, strut **103**, propulsion system **104**, and electric motor **105**. The electric motor **105** and propulsion system **104** are integrated into a waterproof, streamlined pod **201** that is designed to be embedded in the hydrofoil **102**. The pod **201** also defines the lower end of the strut **103**. The streamlined pod performs two main structural functions: it transmits propulsion forces to the strut **103** and it transmits lift forces from the hydrofoil **102** to the strut **103**. It may also contain provisions for cooling the electric motor **105**. The pod **201** is connected to the hydrofoil **102** either by a fitting (so that the hydrofoil can be easily removed) or it is integrally manufactured with the hydrofoil **102**.

[0033] In its preferential form the electric motor **105** is a high efficiency brushless motor. A gearbox may be provided to ensure that the propeller or impeller of the propulsion system **104** operates over an appropriate range of speeds.

[0034] The strut **103** contains at its upper end a fitting **202** to attach the strut to the flotation board **101** of FIG. 1. This fitting fits into a complementary slot in flotation board **101** and may use one of several methods to attach the strut **103** to the flotation board **101**: examples include bolts, pins, or latches. Any other attachment approach may be used, or the strut and/or foil and/or flotation board may be integrally formed or permanently interconnected.

[0035] FIG. 3 shows a perspective view of the watercraft **100** from below. In its preferred form the propulsion system **104** comprises a propeller **104***a* and a duct **104***b*. The duct has two purposes: it acts as a propeller guard and it is designed to increase propeller thrust. In an alternate form the propulsion system may comprise a pump-jet.

[0036] FIG. 4 shows an exploded perspective view of an alternative embodiment of the hydrofoil **102**, strut **103**, electric motor **105** and propulsion system **401**. In this embodiment the propulsion system comprises a long duct and may contain a stator assembly. The duct functions both as a guard for the propeller (shown in FIG. 3) and to improve hydrodynamic efficiency. A stator (not shown) aft of the propeller can also be included to improve propulsive efficiency. In this embodiment the electric motor **105** is enclosed in a streamlined pod embedded in the propulsion system. In the embodiment of FIG. 4, the propulsion system is mounted below the hydrofoil **102**. FIG. 5 shows a perspective view of the watercraft **100** from below with the propulsion system **401** mounted below the hydrofoil **102**.

[0037] FIG. 6 shows a perspective view of an alternative embodiment of the hydrofoil **102**, strut **103**, and propulsion system **601**. In this embodiment the propulsion system is integrated in the hydrofoil so that the inlet is at or near the forward (leading) edge of the hydrofoil and the outlet is at or near the rear (trailing) edge of the hydrofoil. As in the embodiments of FIG. 2, FIG. 3, FIG. 4 and FIG. 5, the propulsion system comprises a duct, a propeller, electric motor, and may include a stator.

[0038] FIG. 7 shows a perspective view of the watercraft **100** from below with the propulsion system of FIG. 6 integrated in the hydrofoil.

[0039] FIG. 8 shows perspective views of alternative embodiments of the hydrofoil planform. Hydrofoil **801** includes a fixed canard that increases stability (suitable for training). Note that this canard is fixed, not movable: control still occurs through weight shift. Hydrofoil **102** is shown in earlier drawings, and can be considered a baseline "all around" hydrofoil (suitable for a wide range of abilities). Foils **802** and **803** are progressively higher performance, permitting higher speeds and/or greater maneuverability. Foil **803** includes winglets, which increase directional stability and decrease drag. Foil **804** includes a horizontal tail, which improves longitudinal stability (similar to **801**, it is suitable for training). Foil **805** includes both a horizontal tail and a vertical tail, improving longitudinal stability and directional stability (suitable for training). These tails may be considered a secondary hydrofoil. Note that other versions of the hydrofoil are possible: the key is designing the hydrofoil for passive static stability via planform design, airfoil design, and span-wise twist distribution.

[0040] Preferred embodiments of the present invention provide a hydrofoil watercraft with a fixed hydrofoil connected to a flotation board by one or more struts, with the fixed hydrofoil having no movable or adjustable surfaces. No movable hydrofoil is provided, but secondary hydrofoils on one or more struts (as shown in **801**, **804**, and **805**) may be included. Additionally, no movable steering system is provided, as the watercraft is maneuvered by weight shifts.

[0041] This invention exploits passive stability to obviate the necessity for mechanisms or active control systems to provide stability. This passive stability allows the watercraft to be controlled by weight shift rather than by mechanical systems. FIG. 9 and FIG. 10 show the hydrofoil flow definitions and hydrofoil geometry parameters respectively. For the hydrofoil, longitudinally trimmed motion occurs when the total pitching moment is zero. This trim condition is stable if a disturbance results in a restoring moment that returns the hydrofoil to its original condition. The pitching moment coefficient can be written as $C_m=C_{m0}+C_{m\alpha}\alpha+C_{mQ}Q$ where C_{m0} is the pitching moment coefficient at zero angle of attack and zero pitch rate, $C_{m\alpha}$ is the derivative of pitching moment coefficient with respect to angle of attack (called pitch stiffness), α is the angle of attack (the angle between the flow direction and the chord of the hydrofoil), C_{mQ} is the derivative of pitching moment coefficient with respect to pitch rate (called pitch damping), and Q is the pitch rate. To ensure a trimmable, stable hydrofoil, the following conditions must be true: $C_{m0}>0$, $C_{m\alpha}<0$, $C_{mQ}<0$. This is achieved with a combination of airfoil selection, hydrofoil sweep and span-wise twist. The exact ratios of wing sweep and twist are dependent on the degree of stability desired and are also affected by the pitching moment characteristics of the airfoil. The derivative C_{mQ} determines the "quickness" of the longitudinal response. Typically it will lie between −2 and −20, with more negative values leading to a "sluggish" feel. In the steady state (when Q=0) the angle of attack (and thus speed) at which trim occurs is a function of C_{m0} and $C_{m\alpha}$.

[0042] $$\alpha_{trim} = -\frac{C_{m0}}{C_{m_\alpha}}$$

C_{m0} is defined entirely by hydrofoil design parameters; $C_{m\alpha}$ is defined by a combination of hydrofoil design parameters and the location of the center of gravity: this is the means by which weight shift enables longitudinal control of the hydrofoil watercraft.

[0043] Similarly for lateral motion, trim occurs when the yawing moment and rolling moment are zero. It is further desirable that this occurs at zero sideslip angle, so the hydrofoil "tracks straight" through the water. When the yaw rate is zero, rolling moment coefficient and yawing moment coefficient can be written as $Cl=Cl0+Cl\beta\beta+ClpP$ $Cn=Cn0+Cn\beta\beta+CnpP$ where C_{l0} and C_{n0} are the roll rate and yaw rate at zero slideslip, respectively, $C_{l\beta}$ and $C_{n\beta}$ are the derivatives of roll rate and yaw rate with respect to sideslip angle, respectively, C_{lp} and C_{np} are the derivatives of roll rate and yaw rate with respect to roll rate, respectively. Note that $C_{n\beta}$ is sometimes called weathercock stiffness and C_{lp} is sometimes called roll damping. Trimmable, stable motion at zero sideslip is achieved by ensuring that the following conditions are true: $Cl0=0$ $Cn0=0$ $Cl\beta<0$ $Cn\beta>0$ $Clp<0$ This is achieved through a combination of sweep and dihedral and can also be influenced with the addition of winglets or a fin. The practical upper limit of $C_{n\beta}$ and practical lower limits of $C_{l\beta}$ and C_{lp} are determined by the practicality of hydrofoil design. For example, sweep angles greater that 60 degrees are unlikely to lead to useable designs and twist of greater than 15 degrees is unlikely to lead to useable designs. Given these geometric limits and the subjective judgment of "ride quality" on the part of a user, bounds on the roll and yaw derivatives exist but are not quantifiable to a useful degree of precision.

[0044] Directional control is achieved by the weight shift and the weathercock stability stiffness. Shifting weight to one side causes the watercraft to roll to that side; this causes sideslip in the direction of the weight shift, and the $C_{n\beta}$ term causes the vehicle to turn in the direction of the lean. It should be noted that there is a trade-off between stability and maneuverability. More experienced users generally want a watercraft that is somewhat less stable to provide greater maneuverability. In contrast, less experienced users may want a watercraft that has more stability, and this may be done through appropriate design of the hydrofoil to give the desired stability and maneuverability characteristics.

[0045] As will be clear to those of skill in the art, the herein described embodiments of the present invention may be altered in various ways without departing from the scope or teaching of the present invention. It is the following claims, including all equivalents, which define the scope of the invention.

Original

Classifications

IPC	CPC
B63B1/24	B63H21/17
B63B35/79	B63H21/21
B63H1/16	B63H5/14
B63H5/14	B63H11/04
B63H11/04	B63H1/16
B63H21/17	B63B32/10
B63H21/21	B63B32/50
	B63B32/66
	B63B32/40
	B63B32/64

Persons

Ultimate Owner

Original
MHL CUSTOM (/api/control?client=&query=uo:("MHL%20CUSTOM")&autosearch=true)

Original Assignees

Original	Standardized	Normalized
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Current Assignees

Original	Standardized	Normalized
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Original
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Legal representative(s)

Original	Standardized	Normalized
Schwegman Lundberg & Woessner, P.A. (/api/control?client=&query=ag:("Schwegman%20Lundberg%20%26%20Woessner%2C%20P.A.")&autosearch=true)		

Legal information

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Legal status

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Filed	2016-03-08	FILED

Designated states

Date	Event code	Description

Ownership



Payment status

Date	Status	Event code	Description
2020-03-17	Fee paid	M2551	PAYMENT OF MAINTENANCE FEE, 4TH YR, SMALL ENTITY.

Litigation/Opposition

Docket number	Docket description	Court	Date Filed
IPR2024-00085	Foil Boarding Company, Inc. Vs. MHL Custom, Inc.		2023-10-25
3:20cv1648	Mhl Custom, Inc. V. Avante Innovations, Llc		2020-08-23
3:22cv21258	Mhl Custom Inc V. Foil Boarding Company, Inc.		2022-10-20
24-1036	MHL Custom, Inc. v. Waydoo USA, Inc.		2023-10-11
1:21cv91	Mhl Custom, Inc. V. Waydoo Usa, Inc. Et Al		2021-01-26

Page: 1

Pharmaceuticals

Product	Type	Active Ingredient	Applicant	Application No.	Application Type	Approval Date	Patent Expiry Date	Patent usage code	Exclusivity Code	Exclusivity Date	Dosage	Strength	Product Number	Route	RLD	Pa Re

No pharmaceuticals data

Citations

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☐ POWERED HYDROFOIL BOARD

Publication number US20170283015A1
Publication date 2017-10-05
Application date 2017-02-10

A passively stable personal hydrofoil watercraft that has a flotation device, wherein a user can ride in a prone, kneeling, or standing position. The watercraft includes a strut having an upper end interconnected with the flotation device and lower end connected with a hydrofoil. The hydrofoil greatly reduces the power required to travel at higher speed. The watercraft also includes a propulsion system connected to the hydrofoil. Both longitudinal and directional control of the watercraft is via weight shift, eliminating the need of any movable surfaces. The flotation device, strut, and hydrofoil may be permanently interconnected or may be detachable.

☐ Weight-shift controlled personal hydrofoil watercraft

Publication number US9278729B2
Publication date 2016-03-08
Application date 2014-10-08

A passively stable personal hydrofoil watercraft that has a flotation device, wherein a user can ride in a prone, kneeling, or standing position. The watercraft includes a strut having an upper end interconnected with the flotation device and lower end connected with a hydrofoil. The hydrofoil greatly reduces the power required to travel at higher speed. The watercraft also includes a propulsion system connected to the hydrofoil. Both longitudinal and directional control of the watercraft is via weight shift, eliminating the need of any movable surfaces. The flotation device, strut, and hydrofoil may be permanently interconnected or may be detachable.

☐ Weight-shift controlled personal hydrofoil watercraft

Publication number US9359044B2
Publication date 2016-06-07
Application date 2014-10-08

A passively stable personal hydrofoil watercraft that has a flotation device, wherein a user can ride in a prone, kneeling, or standing position. The watercraft includes a strut having an upper end interconnected with the flotation device and lower end connected with a hydrofoil. The hydrofoil greatly reduces the power required to travel at higher speed. The watercraft also includes a propulsion system connected to the hydrofoil. Both longitudinal and directional control of the watercraft is via weight shift, eliminating the need of any movable surfaces. The flotation device, strut, and hydrofoil may be permanently interconnected or may be detachable.

☐ WEIGHT-SHIFT CONTROLLED PERSONAL HYDROFOIL WATERCRAFT

Publication number US20150104985A1
Publication date 2015-04-16
Application date 2014-10-08

A passively stable personal hydrofoil watercraft that has a floation device, wherein a user can ride in a prone, kneeling, or standing position. The watercraft includes a strut having an upper end interconnected with the flotation device and lower end connected with a hydrofoil. The hydrofoil greatly reduces the power required to travel at higher speed. The watercraft also includes a propulsion system connected to the hydrofoil. Both longitudinal and directional control of the watercraft is via weight shift, eliminating the need of any movable surfaces. The floation device, strut, and hydrofoil may be permanently interconnected or may be detachable.

☐ STEERABLE HYDROFOIL WATERCRAFT

Publication number WO2023283274A1
Publication date 2023-01-12
Application date 2022-07-06

A steering system for a hydrofoil watercraft, wherein a user may ride in a seated, prone, kneeling, or standing position while steering the watercraft without the use of his or her body weight. Vertical elevation, left and right roll, and longitudinal direction control of the watercraft is accomplished via steering, resulting in movement of the control surfaces (fins) on the hydrofoil, thus eliminating the need for weight shifting on the flotation device. An electronic remote and/or mounted joystick steering system can be operated either electronically or through direct mechanical linkage to control the direction of the watercraft. The steering system can include an unmanned remote controlled drone hydrofoil watercraft that can be operated remotely.

☐ STEERABLE HYDROFOIL WATERCRAFT

Publication number AU2022306579A1
Publication date 2024-02-15
Application date 2022-07-06

A steering system for a hydrofoil watercraft, wherein a user may ride in a seated, prone, kneeling, or standing position while steering the watercraft without the use of his or her body weight. Vertical elevation, left and right roll, and longitudinal direction control of the watercraft is accomplished via steering, resulting in movement of the control surfaces (fins) on the hydrofoil, thus eliminating the need for weight shifting on the flotation device. An electronic remote and/or mounted joystick steering

system can be operated either electronically or through direct mechanical linkage to control the direction of the watercraft. The steering system can include an unmanned remote controlled drone hydrofoil watercraft that can be operated remotely.

☐ Steerable hydrofoil watercraft

Publication number US11731741B2
Publication date 2023-08-22
Application date 2022-07-06

A steering system for a hydrofoil watercraft, wherein a user may ride in a seated, prone, kneeling, or standing position while steering the watercraft without the use of his or her bodyweight. Vertical elevation, left and right roll, and longitudinal direction control of the watercraft is accomplished via steering, resulting in movement of the control surfaces (fins) on the hydrofoil, thus eliminating the need for weight shifting on the flotation device. An electronic remote and/or mounted joystick steering system can be operated either electronically or through direct mechanical linkage to control the direction of the watercraft. The steering system can include an unmanned remote controlled drone hydrofoil watercraft that can be operated remotely.

☐ STEERABLE HYDROFOIL WATERCRAFT

Publication number US20230009310A1
Publication date 2023-01-12
Application date 2022-07-06

A steering system for a hydrofoil watercraft, wherein a user may ride in a seated, prone, kneeling, or standing position while steering the watercraft without the use of his or her bodyweight. Vertical elevation, left and right roll, and longitudinal direction control of the watercraft is accomplished via steering, resulting in movement of the control surfaces (fins) on the hydrofoil, thus eliminating the need for weight shifting on the flotation device. An electronic remote and/or mounted joystick steering system can be operated either electronically or through direct mechanical linkage to control the direction of the watercraft. The steering system can include an unmanned remote controlled drone hydrofoil watercraft that can be operated remotely.

☐ Personal hydrofoil water craft

Publication number US20020124783A1
Publication date 2002-09-12
Application date 2002-01-29

A hull-less personal water craft is provided which reduces air, water, noise, and wake pollution over personal water craft presently on the market. The craft includes a strut assembly having forward and rearward ends, with an operator platform attached at the rearward end, and having at least one hydrofoil positioned below the operator platform. A propulsion system is provided, as is a control column which provides the operator interface when the craft operator is kneeling, standing or sitting on the operator platform. The hydrofoil provides substantially all of the lift for the craft when in operation, and the elimination of a hull greatly reduces the power requirements and wake generated by the craft in operation.

☐ Personal hydrofoil water craft

Publication number US6178905B1
Publication date 2001-01-30
Application date 1998-10-23

A hull-less personal water craft is provided which reduces air, water, noise, and wake pollution over personal water craft presently on the market. The craft includes a strut assembly having forward and rearward ends, with an operator platform attached at the rearward end, and having at least one hydrofoil positioned substantially underneath the operator platform at a predetermined distance. A propulsion system is provided at the forward end of the strut, and is operatively coupled to a control column which provides the operator interface when the craft operator is kneeling or standing on the operator platform. The hydrofoil provides substantially all of the lift for the craft when in operation, and the elimination of a hull greatly reduces the power requirements and wake generated by the craft in operation.

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Documents (4)

1. *MHL Custom, Inc. v. Waydoo USA, Inc.*
Client/Matter: -None-
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Client/Matter: -None-
Search Terms: 9586659 or 9,586,659
Search Type: Terms and Connectors
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4. *MHL Custom, Inc. v. Waydoo USA, Inc.*
Client/Matter: -None-
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MHL Custom, Inc. v. Waydoo USA, Inc.

United States District Court for the District of Delaware

September 6, 2023, Decided; September 6, 2023, Filed

Civil Action No. 21-0091-RGA

Reporter
2023 U.S. Dist. LEXIS 157220 *; 2023 WL 5748755

MHL CUSTOM, INC., Plaintiff, v. WAYDOO USA, INC. and SHENZHEN WAYDOO INTELLIGENCE TECHNOLOGY CO., LTD., Defendants.

Prior History: *MHL Custom, Inc. v. Waydoo USA, Inc., 2022 U.S. Dist. LEXIS 111958, 2022 WL 2290860 (D. Del., June 24, 2022)*

Core Terms

Patents, enabled, infringement, contends, stability, argues, specification, eFoils, publicly, royalty, hydrofoil, prior art, letters, stable, videos, watercraft, reasonable jury, new trial, experimentation, motion for a new trial, willful, matter of law, profit margin, public access, invention, prototype, locate, Boat, flat, weight of the evidence

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Judges: RICHARD G. ANDREWS, UNITED STATES DISTRICT JUDGE.

Opinion by: Richard G. Andrews

Opinion

MEMORANDUM OPINION

September 6, 2023

/s/ Richard G. Andrews

ANDREWS, UNITED STATES DISTRICT JUDGE:

Before me are Defendants Waydoo USA's and Shenzhen Waydoo Intelligence Technology's (collectively, "Waydoo") post-trial motions.

Waydoo moves for renewed judgment as a matter of law on a variety of issues. (D.I. 234). In the alternative, Waydoo moves for a new trial.[1] (*Id.*). The motions have been fully briefed. (D.I. 236, 245, 252).

I. BACKGROUND

Plaintiff MHL Custom ("MHL") filed suit against Waydoo alleging infringement of U.S. ***Patent*** Nos. 9,359,044 (the "'044 ***patent***") and ***9,586,659*** (the "'659 ***patent***") (collectively, the "Asserted ***Patents***"). (D.I. 1). The Asserted ***Patents*** relate to a weight-shift controlled personal hydrofoil watercraft (often referred to as an eFoil). The Asserted ***Patents*** share a common **[*2]** specification.

I held a jury trial from March 24-31, 2023, on claims 1-2, 5, and 6 of the '044 ***patent*** and claims 1-2 of the '659 ***patent***. The jury found the asserted claims to be valid and infringed, the infringement was willful, and MHL was entitled to a reasonable royalty of $500 per board sold by Waydoo (totaling $1,334,000 in damages). (D.I. 219). The parties have now filed post-trial motions.[2]

Waydoo seeks renewed judgment as a matter of law, or

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[1] Waydoo does not make any arguments in favor of its new trial motion. Instead, it simply has a perfunctory sentence that it includes at the end of the JMOL arguments. In my view, it has forfeited its new trial arguments.

[2] MHL's post-trial motions (D.I. 230-233) are addressed in a separate opinion.

in the alternative, a new trial, on (1) whether the Evolo Report (a potential prior art reference) was publicly accessible; (2) whether the Evolo Report is enabled; (3) whether the Asserted ***Patents*** are enabled; (4) whether Waydoo infringed the '659 ***patent***; (5) whether Waydoo's infringement of the Asserted ***Patents*** was willful; and (6) whether the jury's award of damages is supported by the evidence. (D.I. 236 at 1-2). I address each issue in turn. I note that Waydoo does not challenge the correctness of any of the jury instructions.

II. LEGAL STANDARD

A. Judgment as a Matter of Law

Judgment as a matter of law is appropriate if "the court finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for [a] party" on an issue. *Fed. R. Civ. P. 50(a)(1)*. "Entry of judgment **[*3]** as a matter of law is a 'sparingly' invoked remedy, 'granted only if, viewing the evidence in the light most favorable to the nonmovant and giving it the advantage of every fair and reasonable inference, there is insufficient evidence from which a jury reasonably could find liability.'" *Marra v. Phila. Hous. Auth., 497 F.3d 286, 300 (3d Cir. 2007)* (citation omitted).

"To prevail on a renewed motion for JMOL following a jury trial, a party must show that the jury's findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied by the jury's verdict cannot in law be supported by those findings." *Pannu v. Iolab Corp., 155 F.3d 1344, 1348 (Fed. Cir. 1998)* (cleaned up). "'Substantial' evidence is such relevant evidence from the record taken as a whole as might be accepted by a reasonable mind as adequate to support the finding under review." *Perkin-Elmer Corp. v. Computervision Corp., 732 F.2d 888, 893 (Fed. Cir. 1984)*.

In assessing the sufficiency of the evidence, the Court must give the non-moving party, "as [the] verdict winner, the benefit of all logical inferences that could be drawn from the evidence presented, resolve all conflicts in the evidence in his favor and, in general, view the record in the light most favorable to him." *Williamson v. Consol. Rail Corp., 926 F.2d 1344, 1348 (3d Cir. 1991)*. The Court "must not determine credibility of witnesses, and must not substitute its **[*4]** choice for that of the jury between conflicting elements in the evidence." *Perkin-Elmer, 732 F.2d at 893*. Rather, the Court must determine whether the evidence supports the jury's verdict. *See Dawn Equip. Co. v. Ky. Farms Inc., 140 F.3d 1009, 1014 (Fed. Cir. 1998)*; 9B CHARLES ALAN WRIGHT & ARTHUR R. MILLER, FEDERAL PRACTICE AND PROCEDURE § 2524 (3rd ed. 2008) ("The question is not whether there is literally no evidence supporting the party against whom the motion is directed but whether there is evidence upon which the jury might reasonably find a verdict for that party.")

Where the moving party bears the burden of proof, the Third Circuit applies a different standard. This standard "'requires the judge to test the body of evidence not for its insufficiency to support a finding, but rather for its overwhelming effect.'" *Fireman's Fund Ins. Co. v. Videfreeze Corp., 540 F.2d 1171, 1177, 13 V.I. 382 (3d Cir. 1976)* (quoting *Mihalchak v. Am. Dredging Co., 266 F.2d 875, 877 (3d Cir. 1959)*). The Court "must be able to say not only that there is sufficient evidence to support the finding, even though other evidence could support as well a contrary finding, but additionally that there is sufficient evidence for permitting any different finding.'" *Id. at 1171* (quoting *Mihalchak, 266 F.2d at 877*).

B. Motion for a New Trial

Federal Rule of Civil Procedure 59(a)(1)(A) provides, in pertinent part: "The court may, on motion, grant a new trial on all or some of the issues—and to any party—... after a jury trial, for any reason **[*5]** for which a new trial has heretofore been granted in an action at law in federal court...." Among the most common reasons for granting a new trial are: (1) the jury's verdict is against the clear weight of the evidence, and a new trial must be granted to prevent a miscarriage of justice; (2) newly discovered evidence exists that would likely alter the outcome of the trial; (3) improper conduct by an attorney or the court unfairly influenced the verdict; or (4) the jury's verdict was facially inconsistent. *See Zarow-Smith v. New Jersey Transit Rail Operations, Inc., 953 F. Supp. 581, 584-85 (D.N.J.1997)*.

The decision to grant or deny a new trial is committed to the sound discretion of the district court. *See Allied Chem. Corp. v. Daiflon, Inc., 449 U.S. 33, 36, 101 S. Ct. 188, 66 L. Ed. 2d 193 (1980)*; *Olefins Trading, Inc. v. Han Yang Chem. Corp., 9 F.3d 282, 289 (3d Cir.1993)* (reviewing district court's grant or denial of new trial motion under the "abuse of discretion" standard). Although the standard for granting a new trial is less rigorous than the standard for granting judgment as a

matter of law—in that the Court need not view the evidence in the light most favorable to the verdict winner—a new trial should only be granted where "a miscarriage of justice would result if the verdict were to stand," the verdict "cries out to be overturned," or where the verdict "shocks [the] conscience." *Williamson, 926 F.2d at 1352-53*.

III. DISCUSSION

One of the significant issues at **[*6]** trial and now at JMOL was whether the "Evolo Report" anticipated the asserted ***patent*** claims. The jury did not reach the merits of the anticipation issue because it found that the Evolo Report was not publicly accessible and that it was not enabled. (D.I. 219 at 2). Each finding alone is sufficient to support the verdict. Waydoo challenges both of these findings. In order to obtain any relief, Waydoo must be successful on both challenges. I address the two findings separately.

A. Public Accessibility of The Evolo Report

1. Legal Standard

"Whether a reference qualifies as a 'printed publication' under *§ 102(b)* is a legal conclusion based on underlying factual findings." *Jazz Pharm., Inc. v. Amneal Pharms., LLC, 895 F.3d 1347, 1356 (Fed. Cir. 2018)*. "A reference is considered publicly accessible if it was disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it." *Acceleration Bay, LLC v. Activision Blizzard Inc., 908 F.3d 765, 772 (Fed. Cir. 2018)* (citation and internal quotation marks omitted). "The test for public accessibility is not 'has the reference been indexed,'" *Id. at 774*, and 'public accessibility' requires more than technical accessibility," *id. at 773*. The ***patent*** challenger bears the burden of establishing that a particular document is a printed **[*7]** publication by clear and convincing evidence. *See Medtronic, Inc. v. Barry, 891 F.3d 1368, 1380 (Fed. Cir. 2018)*; *Pfizer, Inc. v. Apotex, Inc., 480 F.3d 1348, 1359 (Fed. Cir. 2007)* ("Since we must presume a ***patent*** valid, the ***patent*** challenger bears the burden of proving the factual elements of invalidity by clear and convincing evidence.").

2. Analysis

The Evolo Report is a document detailing the capstone project of a group of engineering students in Sweden. (D.I. 242 at 783:13-19 (Triantafyllou); *see also* D.I. 243 at 968:21-24 (Barry)). The students' capstone project was essentially "to create a vehicle which looks like an eFoil." (D.I. 242 at 783:15-16 (Triantafyllou)).

At trial, Waydoo argued the Evolo Report was a printed publication that anticipated the Asserted ***Patents***. The priority date of the Asserted ***Patents*** is October 10, 2013. (D.I. 212 at 8). The jury found the Evolo Report was not publicly accessible. (D.I. 219 at 2).

Waydoo argues that it is entitled to judgment as a matter of law, or a new trial, because it presented unchallenged evidence that the Evolo Report was publicly accessible. (D.I. 236 at 4). Waydoo cites Mr. Lanterman's testimony that the Evolo Report was posted on the Evolo project webpage of Prof. Kuttenkeuler's course website in June 2009. (*Id.* (citing D.I. 242 at 724:23-725:4 (Lanterman))). **[*8]** Waydoo contends that the record shows there was "successful activity" on the course website almost every day from November 2011 to October 2013 (*id.* (citing DTX068A; D.I. 242 at 734:8-16 (Lanterman))), the Evolo project webpage had 120 unique visitors, and 17 unique visitors downloaded the Evolo Report from the webpage (*id.* (citing (DTX068A; D.I. 242 at 734:22-735:9 (Lanterman)). Mr. Lanterman further testified that Google crawled and indexed the Evolo Report in January 2010. (*Id.* (citing D.I. 242 at 725:4-726:6 (Lanterman))).

In addition to accessing the Evolo Report through Google, Waydoo argues the Evolo Report was publicly accessible through the August 2009 issue of the Swedish magazine "Båtnytt" ("Boat News"). An article in that issue featured a link to the Evolo project webpage. (*Id.* at 4).

In short, Waydoo argues the Evolo Report was publicly accessible through two avenues: Google Search and the Boat News article.

MHL concedes the evidence shows the "Evolo Report existed online and may have been downloaded by 17 different people prior to the critical date." (D.I. 245 at 5). MHL, however, contends that "online availability, standing alone, is not enough to demonstrate public accessibility." **[*9]** (*Id.*). MHL argues it was reasonable for the jury to conclude that Waydoo failed to meet its burden to show the Evolo Report was not publicly

accessible because Waydoo did not (1) present evidence that anyone accessed the Evolo Report through the Boat News article or (2) show how an interested person could find the Evolo Report through a Google Search. (*Id.* at 7).

I agree with MHL that a reasonable jury could conclude that Waydoo did not meet its heavy evidentiary burden to show the Evolo Report was publicly accessible. Waydoo's evidence establishes that the Evolo Report was technically accessible. MHL concedes that. But "'public accessibility' requires more than technical accessibility." *Acceleration Bay, 908 F.3d at 773*. I find there is sufficient evidence for a reasonable jury to conclude that the Evolo Report was not publicly accessible, despite being technically accessible, and that Waydoo has not shown that there is "insufficient evidence for permitting any" finding other than public accessibility.

First, the Boat News article may have provided an adequate roadmap for an interested party to arrive at the Evolo Report by linking to the Evolo project page. *See Blue Calypso, LLC v. Groupon, Inc., 815 F.3d 1331, 1350 (Fed. Cir. 2016)* ("An adequate roadmap need not give turn-by-turn directions, **[*10]** but should at least provide enough details from which we can determine that an interested party is reasonably certain to arrive at the destination: the potentially invalidating reference."). What is lacking in Waydoo's argument is evidence to establish that an interested party would be able to find or locate the Boat News magazine. Waydoo has not pointed to any evidence regarding whether Boat News, a Swedish boating magazine, is a publication that the "interested public" would have access to, have been aware of, or have been able to locate. *Cf. Voter Verified, Inc. v. Premier Election Sols., Inc., 698 F.3d 1374, 1380 (Fed. Cir. 2012)* (finding article was publicly accessible when it was posted on a website that was "was well known to the community" interested in that subject matter); *Cornell Univ. v. Hewlett-Packard Co., 2008 U.S. Dist. LEXIS 39343, 2008 WL 11274580 at *6 (N.D.N.Y. May 14, 2008)* (finding an article in a "seminal publication" to be a "research aid" for locating a prior art reference). Therefore, I think a reasonable jury could conclude that Waydoo did not meet its burden in showing that the Evolo Report was publicly accessible through the Boat News article. Likewise, I do not think there is such "overwhelming effect" to disturb the jury's decision. *Fireman's Fund, 540 F.2d at 1177*.

Second, I think a reasonable jury could conclude that Waydoo did not meet its burden to prove that the Evolo Report was **[*11]** publicly accessible through Google Search. The Federal Circuit has cautioned that indexing, by itself, is not sufficient to prove public accessibility. *Acceleration Bay, LLC, 908 F.3d at 774* ("We have explained that where indexing is concerned, whether online or in tangible media, the ultimate question is whether the reference was available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it." (citation and internal quotation marks omitted)). Mr. Lanterman testified that the Evolo Report was accessible, but his testimony pertained to technical accessibility (i.e., Google confirmed the link was active, crawled, and indexed). (D.I. 242 at 746:12-24 (Lanterman)). While Mr. Lanterman testified that an interested person could have found the Evolo Report through Google (*id.* at 745:7-11), he also testified that he did not perform a Google search to locate the Evolo Report (*id.* at 743:9-13) and that he did not know what a sufficient Google search would have been to locate the Evolo Report (*id.* at 727:18-23, 743:6-8, 743:14-745:11). I think a reasonable jury could conclude from Mr. Lanterman's testimony that the report was only technically accessible, **[*12]** and not publicly accessible such that "persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence," could locate the Evolo Report through Google.

Third, Waydoo contends that it should prevail because the evidence it provided "is uncontradicted and unimpeached," and "MHL did not present any evidence that would permit a different finding." (D.I. 236 at 6-7). I disagree. As the ***patent*** challenger, it was Waydoo's burden to prove by clear and convincing evidence that the Evolo Report was publicly accessible. *See Medtronic, 891 F.3d at 1380; Pfizer, 480 F.3d at 1359*. As already discussed, I think a reasonable jury could determine that Waydoo failed to meet its burden.

Therefore, I will deny Waydoo's JMOL motion as it pertains to the public accessibility of the Evolo Report. For the same reasons, I find that the jury's finding that the Evolo Report was not publicly accessible is not against the clear weight of the evidence. Therefore, Waydoo's motion for a new trial on this issue is denied.

B. Enablement

1. Legal Standard

A ***patent***'s "specification must enable the full scope of

the invention as defined by its claims." Amgen Inc. v. Sanofi, 598 U.S. 594, 143 S. Ct. 1243, 1254, 215 L. Ed. 2d 537 (2023). For a ***patent*** claim to be enabled, the ***patent*** specification must "contain a written **[*13]** description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same[.]" 35 U.S.C. § 112(a). "The enablement requirement is met where one skilled in the art, having read the specification, could practice the invention without 'undue experimentation.'" Streck, Inc. v. Rsch. & Diagnostic Sys., Inc., 665 F.3d 1269, 1288 (Fed. Cir. 2012) (citation omitted); *see also* Amgen, 143 S. Ct. at 1255 ("[A] specification may call for a reasonable amount of experimentation to make and use a ***patented*** invention. What is reasonable in any case will depend on the nature of the invention and the underlying art."). Factors for assessing whether a disclosure would require undue experimentation include:

> (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.

In re Wands, 858 F.2d 731, 737 (Fed. Cir. 1988).

"Enablement is a question of law based on underlying facts." Wyeth & Cordis Corp. v. Abbott Lab'ys, 720 F.3d 1380, 1384 (Fed. Cir. 2013). The party challenging validity must **[*14]** prove lack of enablement by clear and convincing evidence. Cephalon, Inc. v. Watson Pharms., Inc., 707 F.3d 1330, 1336 (Fed. Cir. 2013).

2. Analysis

i. Enablement of Evolo Report

At trial, the jury found that the Evolo Report is not enabled. (D.I. 219). "I presume a prior art printed publication is enabling." Lambda Optical Sols., LLC v. Alcatel Lucent USA Inc., 2015 U.S. Dist. LEXIS 132380, 2015 WL 5734427, at *1 (D. Del. Sept. 30, 2015) (citing Robocast, Inc. v. Apple, Inc., 39 F. Supp. 3d 552, 565 (D. Del. 2014)). It is therefore the patentee's initial burden to show that a prior art reference is not enabled, but, if the patentee presents some evidence of enablement, "the burden still rests on the party asserting invalidity to ultimately demonstrate by clear and convincing evidence that the prior art is enabled." Robocast, 39 F. Supp. 3d 552, 566 (D. Del. 2014) (quoting Forest Labs., Inc. v. Ivax Pharms., Inc., 438 F. Supp. 2d 479, 487 n. 3 (D. Del. 2006), ***aff'd***, 501 F.3d 1263 (Fed. Cir. 2007) (internal citations omitted)).

Waydoo argues that it is MHL's burden to prove that the Evolo Report is not enabled. (D.I. 236 at 7 (citing Apple Inc. v. Corephotonics, Ltd., 861 F. App'x 443, 449 (Fed. Cir. 2021)). I do not think shifting the evidentiary burden back to Waydoo after MHL presents some evidence of non-enablement is contrary to *Corephotonics*. *See* Corephotonics, 861 F. App'x at 450 (finding [the PTAB] erred when it refused to consider evidence Apple introduced in support of enablement of a printed publication after Corephotonics raised the issue of non-enablement); *see also* id. at 449 ("[T]he [PTAB] shifted the burden to Apple to provide evidence before institution (i.e., in its petition) that [a ***patent*** publication] was enabling **[*15]** as part of its burden to prove anticipation. This was error.").[3]

Waydoo contends that Mr. Barry's opinions about enablement were about the Evolo prototypes, not the final Evolo Report. (D.I. 236 at 8). Waydoo explains that none of the Evolo prototypes reflect the "final" product of the Evolo Report because the last prototype built used a motor that did not have the requisite power. (*Id.* at 9). Waydoo contends the final prototype is not representative of the Evolo Report's full disclosure because the final prototype used a 2 kW motor, but the Evolo Report indicated that a more powerful 4 kW motor was required. (*See* D.I. 243 at 1011:12-1012:21). The Evolo Report discussed using a larger motor to meet the requirements for power and speed. (*Id.* at 1012:16-23 (Barry)). Waydoo argues the Evolo Report's instruction to use a 4 kW motor would render the Report enabled as the larger motor is necessary to achieve stability.

Waydoo further argues that the Evolo Report must be enabled because textbooks from the 1960's teach the same information about stability that is disclosed in the ***patent*** specification. (*Id.* at 11). Waydoo contends that "if the [Asserted] ***Patent***'s disclosure enables a POSA to make **[*16]** a stable eFoil, the same prior art disclosures enable the Evolo Report too." (D.I. 252 at 4).

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[3] Even if the evidentiary burden to prove a prior art reference is non-enabled ultimately lies with MHL, it would not alter my analysis because I find there is substantial evidence to support the jury's finding that the Evolo Report is not enabled.

Waydoo argues that Mr. Barry put forth an invalid "inherency" argument based on the Evolo hydrofoils being flat plates. (D.I. 236 at 10-11). Mr. Barry testified that the Evolo hydrofoils could not achieve stability because they were flat plates. (*See* D.I. 243 at 1041:21-1042:2). Waydoo contends this argument must fail because Mr. Barry contradicted himself and stated that flat plates can achieve stability. (D.I. 236 at 10-11). I take Waydoo to be framing Mr. Barry's testimony as saying the Evolo hydrofoils are inherently unstable because they are flat plates, but, because Mr. Barry contradicted himself, that argument does not support his opinion.

MHL argues there was sufficient evidence for the jury to find the Evolo Report is not enabled. Mr. Barry concluded the Evolo Report is not enabled because the Evolo team "didn't ever do the calculations required to produce stability . . . they never considered stability in the physical design of the object." (D.I. 245 at 9 (quoting D.I. 243 at 973:3-9)). Mr. Barry concluded that a POSA would read the Evolo Report and understand that an automatic control **[*17]** system was required rather than understand that the watercraft had a passively stable system. (*Id.* (quoting D.I. 243 at 956:18-957:3)). Mr. Barry testified that using a higher-powered motor would not change his opinion that the Evolo Report was not enabled. (*Id.* (quoting D.I. 243 at 1055:9-15)). Mr. Barry also testified that the "delta wing" in the Evolo Report was a flat plat, which would prevent it from achieving stability. (*Id.* at 11).

I think there is substantial evidence to support the jury's finding that the Evolo Report is not enabled.

First, Mr. Barry testified that the Evolo Report was not enabled, independent of the watching the YouTube videos of the different Evolo prototypes. (D.I. 243 at 973:1-13). Therefore, MHL's evidence was about the Evolo Report itself, not just about the Evolo prototypes.

Second, Mr. Barry testified that the Evolo Report's instruction to use a 4 kW motor in the watercraft, as opposed to the 2 kW motor actually used in the final prototype, would not change his opinion that the Evolo Report was not enabled. Waydoo argues the Evolo Report instructed that a 4 kW motor was required and, as a result, would make the Evolo Report enabled. **(D.I.** 236 at 8). Mr. **[*18]** Barry explained that a more powerful motor would not make the watercraft stable because the watercraft would not reach the requisite speed to achieve stability without crashing first. (D.I. 243 at 1054:25-1055:15).

Third, Mr. Barry expressed that using a flat plate could achieve stability, but it was unlikely to do so. (*Id.* at 973:10-11 ("And, further, the use of the hydrofoil they selected is unlikely to produce stability."), 1041:18-24). I agree with Waydoo that this does not support an argument that the Evolo Report discloses a watercraft that is inherently unstable because the hydrofoils are flat plates. I think, however, the fact that the Evolo Report discloses using flat plates, which may not be conducive to stability (per Mr. Barry's testimony), makes it a relevant aspect for Mr. Barry, and therefore the jury, to consider in the context of the full Evolo Report.

For each of these three points, the jury was entitled to assess the credibility of Mr. Barry and believe him over Waydoo's expert. It is not for me to weigh the credibility of the witnesses.

Fourth, I reject Waydoo's argument that the Evolo Report must be enabled because the Asserted ***Patents*** disclose information about stability **[*19]** that existed in textbooks. Mr. Barry testified that the Asserted ***Patents*** teach stability at the same level of detail as textbooks from the 1960's. (D.I. 243 at 1037:23-1038:11). Mr. Barry testified that the Evolo Report referred to and cited those textbooks and that the Report's authors therefore "would have had all the information." (*Id.* at 1041:3-9). Waydoo's argument seems to be that the Evolo Report must be enabled because a POSA would, or could, use the information that is disclosed in other prior art references with the Evolo Report. (*See* D.I. 236 at 11).

But the Report's authors having access to other prior art references does not mean the Evolo Report teaches how to apply that information such that the disclosure of the Evolo Report is enabled. Waydoo cites *SRI Int'l, Inc. v. Internet Sec. Sys., Inc., 511 F.3d 1186, 1194 (Fed. Cir. 2008)* for support, but that case is distinguishable. In *SRI*, the anticipating prior art reference was found to be enabling because it provided a "similar, or even a partially identical" disclosure to the specification of the ***patent*** in that case. *Id.* ("Thus, the 1997 publication with its similarities in technical scope and description to the specification of the '212 ***patent*** meets the enabling hurdle for a prior art reference.").

I do not think **[*20]** the fact that the Asserted ***Patents***' disclosures about stability existed in textbooks (i.e., other prior art references) means the Evolo Report must be enabled. Even though the ***patent***s information about stability may have been well-known in the art (D.I. 243 at 1038:12-22 (Barry)), and accessible to a POSA, I

think the proper focus for determining enablement is how the Evolo Report teaches a POSA to apply those principles. Mr. Barry testified that the Evolo Report does not enable a passively stable eFoil. (*See* D.I. 243 at 998:5-14). Another way of phrasing this is that the Evolo Report applies those well-known principles to achieve an unstable watercraft. I do not think a prior art reference that applies the knowledge of a POSA to achieve a non-enabled embodiment necessarily enables a different, enabled embodiment just because it is possible to apply that same knowledge in a different manner. As such, I think it is reasonable for a jury to determine that the Evolo Report is not enabled because, if they chose to credit Mr. Barry's testimony, there was sufficient evidence to determine that the Evolo Report only teaches one to apply the principles from the textbooks to achieve an unstable **[*21]** watercraft. As such, the jury could conclude that undue experimentation would be required to practice a stable watercraft. Therefore, I do not think the Evolo Report is automatically enabled just because the information disclosed in the Asserted ***Patents*** existed in textbooks.

I find a reasonable jury could have considered Mr. Barry's testimony and determined that the Evolo Report is not enabled. Therefore, Waydoo's JMOL motion is denied.

For the same reasons, I find the jury's finding that the Evolo Report is not enabled is not against the clear weight of the evidence. Therefore, Waydoo's motion for a new trial is denied.

ii. Enablement of the Asserted *Patents*

Waydoo advances two arguments for why the Asserted ***Patents*** are not enabled. First, Waydoo argues that if the Evolo Report is not enabled, then the Asserted ***Patents*** must not be enabled. (D.I. 236 at 11-13). More specifically, Waydoo contends that the Asserted ***Patents*** are not enabled because they fail to disclose key information regarding stability and hydrofoil design that the Evolo Report teaches. (*Id.* at 12 (listing concepts in the Evolo Report such as longitudinal dihedral wing arrangement, location of the center of gravity, and **[*22]** the importance of speed with respect to stability, that are not in the ***patent*** specification); *see also* D.I. 242 at 805:2-25 (Dr. Triantafyllou); D.I. 244 at 1149:1-18 (arguing such concepts are disclosed in the Evolo Report) (Waydoo closing)). If the Evolo Report, which discloses more than the Asserted ***Patents***, is not enabled, then, Waydoo argues, it must logically follow that the Asserted ***Patents*** are not enabled.

Waydoo appears to contend that the Asserted ***Patents*** needed to describe the missing information rather than rely on a POSA to supply it. Waydoo cites *Auto. Techs. Int'l, Inc. v. BMW of N. Am., Inc.*, 501 F.3d 1274, 1284 (Fed. Cir. 2007), for the proposition that "'it is insufficient to merely state that known technologies can be used to 'achieve passive stability." (D.I. 236 at 14 (citing *Auto. Techs.*, 501 F.3d at 1283)).

In *Auto. Techs.*, the Federal Circuit found an electronic side impact sensor was not enabled in part because "side impact sensing was a new field and . . . there were no electronic sensors in existence that would detect side impact crashes." *Auto. Techs.*, 501 F.3d at 1284.

The case here is distinguishable. The Evolo Report may teach additional content not found in the ***patent*** specification, but I do not think that is sufficient to find the Asserted ***Patents*** not to be enabled. Waydoo does not argue and fails to cite **[*23]** evidence (e.g., expert testimony) that would indicate that the absence of this information in the Asserted ***Patents*** would mean undue experimentation is required to practice the invention. (*See* D.I. 236 at 12). In *Auto. Techs.*, the record was far more developed to show that the ***patent*** was not enabled because it was missing key information. *See* 501 F.3d at 1284 (noting expert testimony identified two problems in practicing the invention and that a "'great deal of experimentation' would have been necessary to make an electronic side impact sensor after reading the specification"). Such evidence is lacking here.

Second, Waydoo argues that the Asserted ***Patents*** do not enable dual-wing crafts and, therefore, do not enable the full scope of the claims.[4] Waydoo reiterates its points that the Asserted ***Patents*** do not enable a passively stable watercraft, generally. (D.I. 236 at 12).

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[4] This is the first time that Waydoo is raising the argument that the claims are not enabled for practicing dual-wing crafts, specifically. At trial, Waydoo moved for judgment as a matter of law for lack of enablement because the ***patents*** "teach you nothing new." (D.I. 243 at 1067:14-16). Thus, Waydoo may have forfeited this argument. *See* *United States v. Dowdell*, 70 F.4th 134, 140 (3d Cir. 2023) ("[A]n example of [forfeiture] is an inadvertent failure to raise an argument." (alteration in original) (quoting *Barna v. Bd. of Sch. Dirs. of Panther Valley Sch. Dist.*, 877 F.3d 136, 147 (3d Cir. 2017))). MHL, however, does not object to Waydoo raising this argument now. Because MHL fails to argue the issue is forfeited, MHL has forfeited any forfeiture argument, and I address the issue.

As already discussed, I reject that argument. Waydoo further argues that the specification does not describe how to arrange or design two hydrofoil wings to achieve stability. (*Id.* at 13). Waydoo contends the specification disparages dual-wing hydrofoils as only being suitable for training purposes. (*Id.* at 13).

I think a reasonable jury could **[*24]** conclude that Waydoo failed to meet its burden to show that the Asserted ***Patents*** are not enabled. Waydoo contends the specification lacks guidance in designing or arranging two hydrofoil wings but offers no support that undue experimentation would be required to practice a dual-wing craft. (*See* D.I. 236 at 13). Waydoo contends that the ***patents*** are not enabled because they do not contain any experimental data or working examples. (*Id.*). Actual working examples, however, are not required to satisfy the enablement requirement. *Allergan, Inc. v. Sandoz Inc., 796 F.3d 1293, 1310 (Fed. Cir. 2015)*.

I also disagree that the ***patent*** disparages dual-wing hydrofoils or that the statements in the specification would prevent a POSA from practicing a dual-wing hydrofoil without undue experimentation. The ***patent*** indicates that hydrofoils can be designed to have certain tradeoffs (i.e., lower speed, but greater stability). (*See* '044 ***patent*** at col. 2:26-35). The specification indicates that designs with greater stability may be better used for training. (*Id.*). The specification indicates that a hydrofoil design that includes a "fixed canard" (i.e., a second wing) increases stability and is "suitable for training." (*Id.* at col. 5:36-37; *see also id.* at col. 5:45-50). The specification **[*25]** does not state that these designs are only suitable for training, or that even being suitable for training is undesirable. The specification is just explaining an advantage of a particular embodiment.

I think a reasonable jury could conclude that Waydoo failed to carry its burden in showing the Asserted ***Patents*** are not enabled. Therefore, Waydoo's JMOL motion is denied.

For the same reasons, I find the jury's finding that the Asserted ***Patents*** are enabled is not against the clear weight of the evidence. Therefore, Waydoo's motion for a new trial is denied.

C. Infringement of the '659 *Patent*

Waydoo contends there is insufficient evidence to show that the Waydoo eFoils are stable. As such, Waydoo argues there is insufficient evidence to show that Waydoo infringed the '659 ***Patent***.[5] Waydoo contends that the only evidence regarding whether Waydoo's eFoils are dynamically stable[6] are Mr. Barry's testimony from watching videos of individuals riding Waydoo's boards and Mr. Barry's eigenvalue analysis. (D.I. 236 at 14-15). Waydoo contends that stability cannot be assessed from watching videos of the eFoils being ridden. Waydoo argues Mr. Barry's determination about stability from the video clips was unscientific for the **[*26]** additional reason that the clips viewed were shorter than 20 seconds, which was the shortest time frame he indicated was necessary to make a determination about stability. (*Id.* at 15).

Waydoo argues the results from the eigenvalue analysis show Waydoo's eFoils are dynamically unstable as each board has at least one positive sigma value.[7] (D.I. 236 at 15). Waydoo contends that Mr. Barry's "damping" theory to explain why the eFoils are stable, despite the positive sigma values, is unsupported.

MHL contends that Mr. Barry did not rely solely on videos to determine if the Waydoo eFoils were stable. (D.I. 245 at 13). MHL argues that Mr. Barry explained that the eigenvalue analysis was a conservative estimate and that in the real world there would be damping effects that would stabilize the eFoil. (*Id.* at 14 (citing D.I. 241 at 472:20-473:2)).

I find a reasonable jury could have determined the '659 ***patent*** was infringed. Mr. Barry testified that the Waydoo eFoils were stable based on watching videos. The jury saw at least some of the same videos. (*See e.g.*, D.I. 241 at 487:11-24 (playing a video Mr. Barry used to "make a positive determination of stability of the Waydoo products")). Waydoo contends that **[*27]** whether a watercraft is stable cannot be evaluated just from watching videos. (D.I. 236 at 14-15). The record shows that watching a video of a watercraft can, at

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[5] I construed the preamble of claim 1 of the '659 ***patent*** to be limiting and to require static and dynamic stability. (D.I. 212 at 7). Claim 2 of the '659 ***patent*** depends from claim 1.

[6] Waydoo does not argue that its eFoils are not statically stable.

[7] As I noted when addressing Waydoo's motion for summary judgment on non-infringement of the '659 ***patent***, "The parties agree that this type of analysis can be used to assess whether a watercraft is dynamically stable." (D.I. 153 at 8 (citing D.I. 83 at 31; and then citing D.I. 91 at 43)). "If an eigenvalue analysis reports a positive 'sigma value,' it indicates that [a watercraft] is unstable." (D.I. 153 at 8 (quoting D.I. 83 at 3)).

least, give some indication about stability. (D.I. 242 at 840:24-841:11 (Triantafyllou); D.I. 241 at 482:2-5 (Barry)). Therefore, it was reasonable for the jury to consider Mr. Barry's testimony about stability based on the videos of the Waydoo eFoils.

The jury did not just have the video evidence and Mr. Barry's testimony about the stability of Waydoo's eFoils. The jury also had Mr. Barry's testimony about the eigenvalue analysis he performed, from which he concluded that the eFoils were stable. (D.I. 241 at 423:10-424:15).

The eigenvalue analysis produced at least one marginally positive sigma value for the Waydoo eFoil, indicating that the eFoils are dynamically unstable. (*Id.* at 471:22-25). Mr. Barry, however, testified that there are real-world damping effects that the analysis program did not consider. (*Id.* at 474:1-5, 474:11-16). The damping effects, if considered, would result in lesser sigma values than the program would indicate. (*Id.* at 471:6-10). Mr. Barry did not quantify the damping effects, but provided testimony **[*28]** that the damping effects would be "very large." (*Id.* at 476:6-17). Mr. Barry concluded the eigenvalue analysis supported his dynamic stability conclusion notwithstanding the one marginally positive sigma value.

Thus, the jury was free to consider Mr. Barry's testimony about the videos and his eigenvalue analysis and weigh it against the testimony of Waydoo's expert. It is not my place to determine the credibility of the witnesses. *Perkin-Elmer, 732 F.2d at 893.*

I think there is substantial evidence to support the jury's determination. Therefore, Waydoo's JMOL motion is denied.

Likewise, I find that the jury's determination that Waydoo infringed the '659 ***patent*** is not against the clear weight of the evidence. Therefore, Waydoo's motion for a new trial is denied.

D. Damages

Waydoo contends that the jury's damages award of a reasonable royalty of $500 per board is not supported by the evidence. Waydoo contends that damages should be limited to a 2.5% royalty rate. (D.I. 236 at 20). Waydoo raises four arguments as to why the royalty rate of $500 per board is not a *reasonable* royalty. I address each one in turn.

First, Waydoo challenges the comparability of the Fliteboard Agreement, which Dr. Stec used as a comparable license agreement, **[*29]** because it was made under the threat of litigation and Dr. Stec did not account for such threats in his analysis. (D.I. 236 at 18). MHL counters that the Fliteboard Agreement was not the product of threats of litigation nor was it used to settle active litigation.

I addressed a similar "threat of litigation" argument in Waydoo's *Daubert* motions. (D.I. 155 at 3). When I denied Waydoo's *Daubert* motion to exclude Dr. Stec's testimony, I noted that the Fliteboard Agreement was not used to settle litigation and that Dr. Stec had a "plausible case for economic comparability." (*Id.*). The jury was free to consider Dr. Stec's testimony regarding the Fliteboard Agreement.

Second, Waydoo contends that the Fliteboard Agreement is not comparable because it included two other ***patents***, in addition to the Asserted ***Patents***, and Dr. Stec failed to apportion any value to those two ***patents*** in the Fliteboard Agreement. (D.I. 236 at 19). MHL contends that Dr. Stec did an apportionment analysis of the Fliteboard Agreement and concluded that the two non-asserted ***patents*** here had no value. I agree with MHL that Dr. Stec did an apportionment analysis. He testified that he apportioned no value to the two non-asserted **[*30]** ***patents*** as they were "thrown in" as Mr. Wagner, President of MHL Custom, informed him that those ***patents*** "didn't guide the license in any way, shape or form." (D.I. 241 at 617:16-25). Waydoo contends that Dr. Stec relied on Mr. Wagner's representation about the value of the other ***patents*** and Mr. Wagner never valued a ***patent*** before. Dr. Stec, however, clarified he relied on Mr. Wagner for his perspective of the negotiations. (*Id.* at 618:1-7). The jury was free to consider Dr. Stec's testimony.

Third, Waydoo maintains that the $500 per board royalty is not reasonable because it exceeds Waydoo's 15% profit margin (i.e., $450 per board) and, thus, would not have been the agreed upon royalty in a hypothetical negotiation. (D.I. 236 at 19). MHL argues that the $500 per board royalty is reasonable because Mr. Ping testified, at least at one point, that Waydoo's profit margin was 35%. Even though Mr. Ping also testified that Waydoo's profit margin was 15%, MHL argues it was up to the jury to consider the inconsistent testimony to ascertain Waydoo's profit margin.

I think there is substantial evidence to support the jury's determination that $500 per board is a reasonable

royalty. Mr. Ping's **[*31]** testimony about Waydoo's profit margin is inconsistent. At one time he indicated it was 35%. (D.I. 241 at 535:17-536:9). At another time he indicated it was 15% and the 35% value was just a goal. (D.I. 241 at 616:3-5). When a party's witness gives conflicting testimony about something that is solely within the party's knowledge, a jury will usually have a substantial basis to credit either version. Thus, I think the jury to determine that Waydoo's profit margin is 35%.

Even if the 35% profit margin was just Waydoo's goal, however, I think a jury could still consider it when determining a reasonable royalty from a hypothetical negotiation. A hypothetical negotiation takes place on the eve of infringement. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 76 (Fed. Cir. 2012) ("Indeed, the basic question posed in a hypothetical negotiation is: if, on the eve of infringement, a willing licensor and licensee had entered into an agreement instead of allowing infringement of the ***patent*** to take place, what would that agreement be?"). It seems reasonable to me that in a hypothetical negotiation the parties would take into account the parties' expectations, such as Waydoo's expected (or even hoped-for) 35% profit margin.

Fourth, Waydoo contends that "the percent **[*32]** royalty of the Fliteboard Agreement is not economically comparable to MHL's per-unit hypothetical negotiation." (D.I. 236 at 19-20). Waydoo contends that for the Fliteboard Agreement to be comparable the royalty should be assessed at $157.50 per board, which is a 5.25% royalty, as used in the Fliteboard Agreement. I addressed a similar issue in Waydoo's *Daubert* motion. (D.I. 155 at 3 ("It is about whether the license should be evaluated on a royalty rate based on percentage of sales price or a royalty rate based on a dollar amount per sales unit."). I determined, "It is for the jury to decide how convincing Dr. Stec's analysis is." (*Id.*). The jury considered Dr. Stec's testimony and chose, at least to some extent, to credit it. Therefore, I do not see this as a reason to grant Waydoo's motion for judgment as a matter of law or a new trial.

I think there was sufficient evidence for the jury to determine a reasonable royalty to be $500 per board. Therefore, Waydoo's JMOL motion is denied.

For the same reasons, I find the jury's award of damages is not against the clear weight of the evidence. Therefore, Waydoo's motion for a new trial is denied.

E. Willfulness

Waydoo contends there is not **[*33]** substantial evidence that Waydoo's infringement was willful. Waydoo argues that MHL did not present any evidence that Waydoo had the specific intent to infringe MHL's ***patents***. (D.I. 236 at 17). Waydoo argues that the only evidence produced at trial were the cease-and-desist letters MHL sent Waydoo on January 31, 2019, April 9, 2019, and April 12, 2019. (*Id.*). Waydoo disputes that it received these letters. (*Id.* at 17 n.13). Waydoo further argues those letters are not sufficient to support a finding of willfulness because the letters, even if received, did not provide specificity regarding the infringement (e.g., no claim charts). (*Id.*). Waydoo argues that none of the cease-and-desist letters refer to Waydoo's Flyer ONE product, which is the product Waydoo is currently selling.

MI-IL contends there is substantial evidence that infringement was willful. MHL argues that the short amount of time between Waydoo's formation as a company and Waydoo's development of an eFoil ready for market implies that Waydoo copied MHL. (D.I. 245 at 15). MHL contends that the cease-and-desist letters informed Waydoo in 2019 that Waydoo was infringing the Asserted ***Patents***. (*Id.* at 16). MHL sent the first **[*34]** two letters to the email address on Waydoo's website and the third letter via mail to Waydoo's physical address. (D.I. 240 at 344:12-19 (Wagner)).

"Under *Halo*, the concept of 'willfulness' requires a jury to find no more than deliberate or intentional infringement." *Eko Brands, LLC v. Adrian Rivera Maynez Enterprises, Inc.*, 946 F.3d 1367, 1378 (Fed. Cir. 2020) (citing *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 579 U.S. 93, 105, 136 S. Ct. 1923, 195 L. Ed. 2d 278 (2016)). Taking all reasonable inferences in MHL's favor, I think it is reasonable for the jury to infer that Waydoo received the letters given that they were sent to the email address listed on Waydoo's website.

With respect to the content of the cease-and-desist letters, I think they are specific enough for the jury to conclude Waydoo's infringement was willful. The letters referenced the Asserted ***Patents***. (D.I. 240 at 342:24-343:1 (Wagner)). Mr. Wagner testified that the letters referenced the Waydoo Flyer (*id.* at 343:2-5, 343:20-21), which was the eFoil Waydoo was marketing at the time (D.I. 236 at 17).

Waydoo contends that the letters were not specific because they did not include a claim chart. (D.I. 236 at

17). I do not think a claim chart is required to establish that Waydoo had knowledge that it was infringing the Asserted ***Patents***. I think the reference to the ***patents*** and the product Waydoo was marketing is sufficient **[*35]** for the jury to infer that Waydoo knew of the infringement.[8] *See Purewick Corp. v. Sage Prods., LLC, 2023 U.S. Dist. LEXIS 56199, 2023 WL 2734418, at *9 (D. Del. Mar. 31, 2023)* ("Plaintiff must show that the accused infringer knew of the ***patent***-in-suit, and knowingly or intentionally infringed the ***patent*** after acquiring that knowledge." (citation and internal quotation marks omitted)), *appeal dismissed, 2023 U.S. App. LEXIS 16294, 2023 WL 4230367 (Fed. Cir. June 28, 2023)*.

I also do not think that Waydoo started marketing the Flyer One, the second-generation product, in June 2020, necessarily means Waydoo's infringement with respect to the Flyer One is not willful. Waydoo merely points to the fact that the product was not accused in the 2019 letters, which were sent before Waydoo began marketing the Flyer One. Waydoo does not point to any differences between the models that would lead one to think the Flyer One was different from the Flyer with respect to infringing the Asserted ***Patents***. Taking all reasonable inferences in MI-IL's favor, I think a jury could infer that Waydoo knew the Flyer One was infringing the Asserted ***Patents*** because of its knowledge that the Flyer was infringing.

I think there is substantial evidence that Waydoo knew of the Asserted ***Patents*** and that its products infringed the Asserted ***Patents***. Therefore, Waydoo's JMOL motion is denied.

For the **[*36]** same reasons, I find the jury's finding of willful infringement is not against the clear weight of the evidence. Therefore, Waydoo's motion for a new trial is denied.

IV. CONCLUSION

For the reasons discussed above, Waydoo's renewed JMOL motions and motions for a new trial are denied.

An appropriate order will issue.

ORDER

For the reasons stated in the accompanying opinion, IT IS HEREBY ORDERED that Defendants' Motions for Renewed Judgment as a Matter of Law and Motion for a New Trial (D.I. 234) is DENIED.

IT IS SO ORDERED this 6 day of September 2023.

/s/ Richard G. Andrews

United States District Judge

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[8] Waydoo appears to argue that the letters only "'assert[]' that a Waydoo eFoil infringes" the Asserted ***Patents***." (D.I. 236 at 17 (citing D.I. 240 at 342:14-343:5 (Wagner)). Even if the letters only referenced a Waydoo eFoil, rather than the Flyer by name, I think that is sufficient to put Waydoo on notice as it was only marketing one eFoil at the time. (D.I. 236 at 17 (noting the Flyer ONE was not introduced until June 2020)).

Caution
As of: April 11, 2024 10:29 AM Z

MHL Custom, Inc. v. Waydoo USA, Inc.

United States District Court for the District of Delaware

September 7, 2023, Decided; September 7, 2023, Filed

Civil Action No. 21-0091-RGA

Reporter
2023 U.S. Dist. LEXIS 158243 *; 2023 WL 5805889

MHL CUSTOM, INC., Plaintiff, v. WAYDOO USA, INC. and SHENZHEN WAYDOO INTELLIGENCE TECHNOLOGY CO., LTD., Defendants.

Subsequent History: Appeal filed, 10/12/2023

Prior History: MHL Custom, Inc. v. Waydoo USA, Inc., 2022 U.S. Dist. LEXIS 111958, 2022 WL 2290660 (D. Del., June 24, 2022)

Core Terms

damages, infringement, ongoing, royalty, argues, ***patents***, permanent injunction, supplemental, irreparable harm, enhancing, enhanced damage, market share, contends, parties, injunction, post-judgment, competitors, patentee, license, weighs, factors, judicial estoppel, royalty rate, eFoils, pre-judgment, products, attorney's fees, lost sales, sales, direct competitor

Counsel: **[*1]** For MHL Custom, Inc., Plaintiff: Blake A. Bennett, LEAD ATTORNEY, Cooch and Taylor, Wilmington, DE; Brian P. McGraw, Dennis D. Murrell, Megan E. Gibson, Robert J. Theuerkauf.

For Waydoo USA, Inc., a Delaware corporation, Defendant: Dorronda R. Bordley, Kelly E. Farnan, LEAD ATTORNEYS, Richards, Layton & Finger, PA, Wilmington, DE; Edgar H. Haug, Mark Basanta, Robert E. Colletti, Roman Khasidov.

For Shenzhen Waydoo Intelligence Technology Co., Ltd., a limited liability company of China, Defendant: Dorronda R. Bordley, Kelly E. Farnan, LEAD ATTORNEYS, Richards, Layton & Finger, PA, Wilmington, DE; Edgar H. Haug, Mark Basanta, Robert E. Colletti, Roman Khasidov, PRO HAC VICE.

For Shenzhen Waydoo Intelligence Technology Co., Ltd., a limited liability company of China, Waydoo USA, Inc., a Delaware corporation, Counter Claimants: Dorronda R. Bordley, Kelly E. Farnan, LEAD ATTORNEYS, Richards, Layton & Finger, PA, Wilmington, DE.

For MHL Custom, Inc., Counter Defendant: Blake A. Bennett, LEAD ATTORNEY, Cooch and Taylor, Wilmington, DE; Dennis D. Murrell, Robert J. Theuerkauf.

Judges: Richard G. Andrews, United States District Judge.

Opinion by: Richard G. Andrews

Opinion

MEMORANDUM OPINION

September 7, 2023

/s/ Richard G. Andrews **[*2]**

ANDREWS, UNITED STATES DISTRICT JUDGE:

Before me are Plaintiff MHL's post-trial motions. MHL seeks a permanent injunction (D.I. 230), attorneys' fees (D.I. 231), enhanced damages (D.I. 232), supplemental damages, ongoing damages, and pre- and post-judgment interest (D.I. 233). The motions have been fully briefed. (D.I. 235, 246, 250).

I. BACKGROUND

MHL filed suit against the Waydoo Defendants asserting infringement of U.S. ***Patent*** Nos. 9,359,044 (the "'044 ***patent***") and ***9,586,659*** (the "'659 ***patent***"). (D.I. 1). The asserted ***patents*** relate to a weight-shift controlled personal hydrofoil watercraft, often referred to as an eFoil. The asserted ***patents*** share a common specification.

I held a jury trial from March 24-31, 2023, on claims 1-2,

5, and 6 of the '044 ***patent*** and claims 1-2 of the '659 ***patent***. The jury found the asserted claims to be valid and infringed, the infringement was willful, and MHL was entitled to a reasonable royalty of $500 per board (totaling $1,334,000 in damages). (D.I. 219). The parties have now filed post-trial motions.[1] MHL requests the following: (1) a permanent injunction; (2) supplemental damages and/or ongoing damages; (3) pre- and post-judgment interest; (4) enhanced damages; and (5) attorneys' fees. (D.I. 235 at 1-2).

II. PERMANENT [*3] INJUNCTION

A. Legal Standard

Courts "may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by ***patent***, on such terms as the court deems reasonable." *35 U.S.C. § 283*. "According to well-established principles of equity, a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief." *eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391, 126 S. Ct. 1837, 164 L. Ed. 2d 641 (2006)*. "A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction." *Id.*

"The essential attribute of a ***patent*** grant is that it provides a right to exclude competitors from infringing the ***patent***." *Acumed LLC v. Stryker Corp., 551 F.3d 1323, 1328 (Fed. Cir. 2008)*.

B. Analysis

1. Judicial Estoppel

As an initial matter, Waydoo argues that the doctrine of judicial estoppel should prevent MHL from obtaining a permanent injunction. Waydoo cites MHL's closing argument when MHL said, "MHL's not trying to put Waydoo out of business, but is asking for fair compensation for their **[*4]** use of these ***patents***. Just like Fliteboard is paying a fair compensation for the use of the ***patents***." (D.I. 244 at 1126:19-22). Waydoo contends this statement amounts "to telling the jury [MHL] was not seeking [an injunction]." (D.I. 246 at 2). Waydoo argues MHL should be estopped from seeking a permanent injunction now because "[a] permanent injunction would, of course, put Waydoo out of business in the U.S." (*Id.*).

MHL argues that judicial estoppel is inappropriate. MHL contends that it never told the jury it was not seeking a permanent injunction and that the statement in its closing argument is not "irreconcilably inconsistent" with its motion seeking a permanent injunction now. (D.I. 250 at 2-3).

The doctrine of judicial estoppel bars a party that has previously asserted a legal position from asserting an inconsistent or contrary legal position in a later proceeding. *Oneida Motor Freight, Inc. v. United Jersey Bank, 848 F.2d 414, 419 (3d Cir. 1988)*. The equitable remedy of judicial estoppel is applied to preserve the integrity of the system. Its focus is on the relationship between the litigant and the judicial system. *Id.* The elements of judicial estoppel are: (1) the party to be estopped is taking two irreconcilably inconsistent positions; (2) the party to **[*5]** be estopped has changed his or her position in bad faith; and (3) the use of judicial estoppel is tailored to address the harm identified and no lesser sanction would adequately remedy the damage done. *See Montrose Med. Group Participating Savings Plan v. Bulger, 243 F.3d 773, 777-78 (3d Cir. 2001)*.

I agree with MHL that judicial estoppel is inappropriate here. The statements in MHL's closing argument came in the context of discussing what a reasonable royalty would be. (*See* D.I. 244 at 1125:23-1127:13). MHL was asking for a royalty rate of $550 per board, which is approximately the same amount Fliteboard was paying per board.[2] I do not think the statement, "MHL's not trying to put Waydoo out of business," amounts to a declaration that MHL was not seeking apermanent injunction. The issue of injunctive relief was not before the jury. (D.I. 212 at 6 ("The Court held that MHL shall

[1] Waydoo's post-trial motions are addressed in a separate opinion. (D.I. 257).

[2] The Fliteboard Agreement used a royalty rate that was a percentage of the sale price, rather than a flat dollar amount per board. (D.I. 241 at 556:13-14 (Stec)). Based on Fliteboard's sales price, the dollar amount per board was approximately $550. (*See* D.I. 241 at 557:19-558:2, 559:14-560:3 (Stec)).

not present any evidence to the jury related to its claims for fees, costs, or an injunction")). Therefore, I find that neither this statement, nor the comparison with Fliteboard, is irreconcilably inconsistent with seeking a permanent injunction.

Thus, I find the judicial estoppel does not apply here.

2. Irreparable Injury

"To prove irreparable injury, a patentee must show '1) that absent an injunction, **[*6]** it will suffer irreparable harm, and 2) that a sufficiently strong causal nexus relates the alleged harm to the alleged infringement.'" *Presidio Components, Inc. v. Am. Tech. Ceramics Corp., 875 F.3d 1369, 1383 (Fed. Cir. 2017)* (cleaned up) (quoting *Apple Inc. v. Samsung Elecs. Co., 695 F.3d 1370, 1374 (Fed. Cir. 2012)*). "To determine whether the patentee will suffer irreparable harm absent an injunction, the court may consider factors such as the nature of competition between the patentee and the infringer, the willingness of a patentee to license, and any lost sales the patentee has proven." *Presidio Components, 875 F.3d at 1383*.

a. Nature of Competition

Direct competition strongly suggests the potential for irreparable harm absent an injunction. *Id.* at 1363 (vacating denial of a permanent injunction based on finding no irreparable injury because the record showed "direct and substantial competition between the parties"); *see also Douglas Dynamics, LLC v. Buyers Prods. Co., 717 F.3d 1336, 1346 (Fed. Cir. 2013)* ("Where two companies are in competition against one another, the patentee suffers the harm—often irreparable—of being forced to compete against products that incorporate and infringe its own ***patented*** inventions."). A patentee may establish irreparable harm by showing "that [the parties] were competitors and that [the patentee] lost market share while [the infringer] gained it." *See Broadcom Corp. v. Emulex Corp., 732 F.3d 1325, 1338 (Fed. Cir. 2013)* (upholding the district court's grant of a permanent injunction).

MHL argues **[*7]** that MHL and Waydoo are direct competitors and that MHL will be irreparably harmed by losing market share to Waydoo. (D.I. 235 at 3-5). MHL points out that Waydoo and MHL, at one time, had the same distributor and MHL retailers have stated they have lost sales to Waydoo. (*Id.* at 4). MHL contends that they have lost, and will continue lose, market share to Waydoo. From 2018 to 2022, MHL's market share decreased from 100%[3] to 55%, and Waydoo's market share grew from 0% to 10-15%. (*See* D.I. 240 at 340:25-341:16 (Wagner)). Waydoo contends that MHL and Waydoo are not direct competitors. Waydoo argues the two parties cannot be direct competitors as they "occupy different market segments because they sell eFoils at different price points." (D.I. 246 at 4). Waydoo argues the evidence regarding competition is lacking as only one distributor, Mr. Tamayo, is alleged to have represented that he lost MHL sales to Waydoo. (*Id.* at 5).

I find MHL and Waydoo are direct competitors. Mr. Wade, the North American distributor of Waydoo eFoils (D.I. 242 at 687:6-7), admitted there was some overlap in the market between the two companies. (*See id.* at 715:24-716:9 (Wade) (testifying both companies sell eFoils **[*8]** and there is "certainly some overlaps" between them in the market)). While Mr. Wade tried to distinguish the two companies' products by price point by analogizing Waydoo to selling Honda Civics and MHL to selling Ferraris (*id.* at 716:7-9 (Wade)), I do not think the different price points means they are not direct competitors. *See Douglas Dynamics, 717 F.3d at 1344* (finding irreparable harm when analogizing patentee's product to a Mercedes and infringer's product to a Ford). I think what matters here is that MHL and Waydoo both market similar products through similar distribution channels and sellers with similar end users in mind. Therefore, I think the parties are direct competitors, which weighs in favor of MHL suffering an irreparable harm absent an injunction.

b. Willingness of Patentee to License

MHL has licensed the asserted ***patents*** to other competitors in the market, including Fliteboard, which has a larger market share than Waydoo. (D.I. 240 at 206:19-207:4 (Leason); *id.* at 340:25-341:16 (Wagner)). Mr. Leason, MHL's CEO, testified that MHL is open and willing to license the asserted ***patents*** to competitors. (*Id.* at 207:23-25 ("But, ultimately we agreed that a rising tide can raise all boats, right, and there was **[*9]** not much of a market."); 208:5-7 ("And so, it's perfectly fine to have a competitor out there. In fact, it makes you a better brand, you know, when you have somebody to compete with."); 212:6-7 ("I've always left that door open

[3] At that time, MHL was the only manufacturer of eFoils.

for the competitors.")). Mr. Leason's statements indicate that MHL would not suffer an irreparable harm by having Waydoo compete in the market.

MHL argues that licensing the asserted ***patents*** to other competitors in the market should not weigh against a permanent injunction because MHL only licensed to parties that "did not force MHL to spend significant money to litigate over the course of many years" and the parties "respected MHL's intellectual property and did the right thing." (D.I. 250 at 4).

I do not think the fact that MHL has only licensed to companies that MHL did not sue is a relevant distinction. To the contrary, I would think MHL's willingness to license the ***patents*** without requiring litigation would be evidence that licensing the ***patents*** is not an irreparable harm. "Litigation costs are undoubtedly undesirable and may take funds away from other endeavors, but they are not an irreparable harm in the injunction calculus." *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc., 694 F.3d 1312, 1337 (Fed. Cir. 2012)*. While MHL may justifiably **[*10]** feel that Waydoo disrespected its intellectual property, that is not an irreparable harm.

Therefore, I think MHL's willingness to license its ***patents***, and the fact that it has licensed its ***patents*** to a bigger competitor in the market, weighs against finding that MHL would suffer an irreparable harm absent an injunction.

c. Lost Sales

MHL argues that it has and will lose sales to Waydoo. I do not think MHL has carried its burden in showing this. At trial, the jury awarded damages in the form of a reasonable royalty, not lost sales. (D.I. 219 at 4-5).[4] The only evidence MHL cites regarding lost sales is (1) its termination of its relationship with MacKite, a distributor, and (2) a statement Mr. Tamayo, another distributor, made to Dr. Stec. (D.I. 235 at 4).

MHL, however, chose to terminate its relationship with MacKite because MacKite started carrying Waydoo eFoils. (D.I. 241 at 569:5-11 (Stec)). I do not think MHL's decision to terminate its relationship with MacKite, as opposed to MacKite dropping MHL, is enough to show that it lost sales due to Waydoo infringing the asserted ***patents***. There is also no evidence to quantify the number of sales MHL would have had if that relationship still **[*11]** existed. Likewise, the statement from Mr. Tamayo to Dr. Stec did not detail or quantify the number of sales MHL allegedly lost to Waydoo. (D.I. 241 at 626:22-627:24 (Stec)). Such allegations are not sufficient to demonstrate irreparable harm through lost sales.

MHL argues that it has lost, and will continue to lose, market share to Waydoo. MHL cites the growth of Waydoo's market share over the past four years and MHL's loss of market share over that same time as evidence. (D.I. 235 at 4). I am not persuaded. As MHL concedes, during that same time Fliteboard entered the market and has grown to occupy 25-30% of the market. The absence of a two-player market does not automatically negate irreparable harm, *Robert Bosch LLC v. Pylon Mfg. Corp., 659 F.3d 1142, 1151 (Fed. Cir. 2011)*, but it is still MHL's burden to show that Waydoo's infringement caused MHL's loss in market share. "As [MHL] and [Waydoo] are not the only competitors in this multi-supplier market, [Waydoo's] infringement has not necessarily affected [MHL's] market position." *Belden Techs., Inc. v. Superior Essex Commc'ns LP, 802 F. Supp. 2d 555, 577 (D. Del. 2011)*; *see also Wonderland Switzerland AG v. Evenflo Co., Inc., 2022 U.S. Dist. LEXIS 118061, 2022 WL 2438750, at *3 (D. Del. July 5, 2022)* (finding plaintiff did not show defendant's infringement caused plaintiff to lose market share when there were many additional competitors), *appeal docketed*, No. 23-1947 (Fed. Cir. July 27, 2023). Given that Waydoo markets its products at a significantly **[*12]** lower price point than MHL (D.I. 243 at 716:1-7 (noting there is about a $2000 difference between the cheapest MHL product and the most expensive Waydoo product) (Kline)), I do not think a sale made by Waydoo is automatically a sale lost by MHL.

Furthermore, even if MHL has lost some market share to Waydoo, MHL has lost a more substantial portion of the market to Fliteboard, one of its own licensees. As such, I do not think losing a smaller portion of the market to Waydoo is necessarily an irreparable harm.

Therefore, I do not think that MHL has met its burden in showing that Waydoo's infringement has caused MHL to lose market share or sales such that MHL would suffer an irreparable harm.

3. Remedies Available at Law

MHL raises two arguments for why remedies at law are

[4] MHL did not pursue a damages theory based on lost sales. (*See* D.I. 211, Ex. 3 at 10).

inadequate. First, MHL argues it will continue to lose market share to Waydoo and money alone cannot compensate it for this loss. I disagree for the same reasons that I find MHL will not suffer an irreparable harm.

Second, MHL argues that an ongoing royalty is not an adequate remedy because Waydoo's accounting records are unreliable. MHL cites inconsistencies in Waydoo's accounting of the number of eFoils it sold and Mr. **[*13]** Ping's testimony that Waydoo's accounting records were "not very good." (D.I. 235 at 5-6, 6 n.2). I am not persuaded this makes damages an inadequate remedy. Mr. Ping testified there were accounting issues from 2018-2020. (D.I. 242 at 685:23-686:1). The accounting issues appear to have ceased in 2020, three years ago. MHL does not cite anything to indicate these issues are ongoing or will emerge in the future. Therefore, I find that MHL has not shown that damages are inadequate to compensate for Waydoo's infringement.

4. Balance of Hardships and Public Interest

Given my conclusions regarding irreparable harm and the remedies available at law, I need not make any findings concerning the balance of hardships and public interest factors.

MHL's motion for a permanent injunction is denied.

C. SUPPLEMENTAL DAMAGES

The jury's award covered infringement up through December 31, 2022, the most recent date for which Waydoo had produced sales and financial records. (D.I. 235 at 9). MHL seeks supplemental damages at the $500 per board royalty determined by the jury for the period from January 1, 2023, to the entry of the permanent injunction. (*Id.*). I, however, have denied MHL's motion for a permanent **[*14]** injunction. Given that MHL has moved for ongoing royalties at the jury-determined royalty rate, I take MHL to be arguing for supplemental damages up until the date of judgment in the event I do not grant a permanent injunction or grant ongoing royalties.

Waydoo argues that MHL waived its ability to request supplemental damages by not presenting the issue to the jury. (D.I. 246 at 9). Waydoo further contends that awarding supplemental damages would violate its Seventh Amendment right to a jury trial. (*Id.*). Waydoo does not argue that MHL had any accounting by way of discovery from Waydoo of the eFoils sold after December 31, 2022. (*See id.* at 9-11).

I find that MHL is entitled to supplemental damages. First, awarding MHL supplemental damages does not violate Waydoo's Seventh Amendment right to a jury trial. "[T]he amount of supplemental damages following a jury verdict is a matter committed to the sound discretion of the district court." SynQor, Inc. v. Artesyn Techs., Inc., 709 F.3d 1365, 1384 (Fed. Cir. 2013) (rejecting defendants' argument that they had a right to a jury trial with respect to plaintiff's claim for supplemental damages); *see also* Bayer Healthcare LLC v. Baxalta Inc., 989 F.3d 964, 986-87 (Fed. Cir. 2021) (rejecting Seventh Amendment argument to find "the district court acted within its discretion in awarding supplemental damages" when it calculated pre-verdict supplemental **[*15]** damages by applying the jury's royalty rate to the actual infringing sales base).

Second, I do not think MHL waived its right to supplemental damages. In its reply brief, MHL cites its statement of legal issues for trial in the pretrial order, which recites,

> In addition, in the event that [MHL] prevails at trial, it will seek injunctive relief against further infringement and additional damages and/or an accounting for royalties accruing as a result of [Waydoo's] continuing infringement after September of 2022, the most recent date for which [Waydoo] ha[s] produced financial information in this case.

(D.I. 206-3, Ex. 3 at 11).[5] This issue was preserved in the pre-trial order. Since MHL was not seeking lump sum damages, I think MHL had no basis to ask for reasonable royalty damages for a time period for which, due to recency, it could not possibly present a royalty base. MHL has not waived its right to supplemental damages simply because the issue was not presented to the jury.

Therefore, I find that MHL is entitled to supplemental damages from January 1, 2023, to April 12, 2023, the date of the judgment (D.I. 226).

D. ONGOING DAMAGES

[5] It appears that shortly before trial Waydoo provided an update on what it had sold from August 2022 to December 2022. (D.I. 637:22-638:7 (Stec)). I assume that is why the pre-trial order differs from the trial testimony.

Waydoo argues that MHL waived its ability to request ongoing **[*16]** damages by not presenting the issue to the jury. Waydoo contends that awarding ongoing damages would violate its Seventh Amendment right to have a jury decide damages. I disagree.

As noted above, this issue was included in the pre-trial order. (D.I. 206-3, Ex. 3 at 11). Therefore, MHL did not waive its right to ongoing damages. Furthermore, the Federal Circuit and this Court have held that "there is no Seventh Amendment right to jury trial for ongoing royalties." Godo Kaisha IP Bridge 1 v. TCL Commc'n Tech. Holdings Ltd., 2019 U.S. Dist. LEXIS 70752, 2019 WL 1877189, at *4 (D. Del. Apr. 26, 2019) (citing Paice LLC v. Toyota Motor Corp., 504 F.3d 1293, 1315-16 (Fed. Cir. 2007)), *aff'd*, 967 F.3d 1380 (Fed. Cir. 2020). Therefore, I reject Waydoo's argument that it is unconstitutional to award ongoing damages.

It is within this Court's discretion to impose an ongoing royalty, but granting ongoing remedies is not automatic any time a permanent injunction is denied. Paice, 504 F.3d at 1314-15. While an ongoing royalty is not automatic, "the Federal Circuit has indicated that a prevailing patentee should receive compensation for any continuing infringement." Vectura Ltd. v. GlaxoSmithKline LLC, 2019 U.S. Dist. LEXIS 155768, 2019 WL 4346502, at *6 (D. Del. Sept. 12, 2019) (quoting Apple, Inc. v. Samsung Elecs. Co., 2014 U.S. Dist. LEXIS 165975, 2014 WL 6687122, at *9 (N.D. Cal. Nov. 25, 2014)).

To determine the ongoing royalty rate, courts have used the *Georgia-Pacific* factors. "Generally, the jury's damages award is a starting point for evaluating ongoing royalties." Apple, Inc., 2014 U.S. Dist. LEXIS 165975, 2014 WL 6687122, at *14. In assessing ongoing royalties, I must consider (1) the "change in the parties' bargaining positions, and the resulting change in economic **[*17]** circumstances, resulting from the determination of liability," Amado v. Microsoft Corp., 517 F.3d 1353, 1360 (Fed. Cir. 2008), (2) "changed economic circumstances, such as changes related to the market for the ***patented*** products," XY, LLC v. Trans Ova Genetics, 890 F.3d 1282, 1297 (Fed. Cir. 2018), and (3) any other "post-verdict factor" that would impact "what a hypothetical negotiation would look like after the prior infringement verdict." *Id.*

MHL argues I should award ongoing royalties at the jury-determined royalty rate: $500 per board. (D.I. 235 at 10). The only rationale MHL offers to support this is the fact that the jury's damages award is a starting point (*id.* (citing Apple, 2014 U.S. Dist. LEXIS 165975, 2014 WL 6687122, at *14)) and that ongoing royalty rates are often higher than rates awarded at trial (*id.* (citing Telcordia Techs., Inc. v. Cisco Sys., Inc., 2014 U.S. Dist. LEXIS 51076, 2014 WL 1457797, at *4 (D. Del. Apr. 14, 2014)). Waydoo, however, points out a series of factual issues such as potential changes in the marketplace (e.g., new competitors, new products from MHL at lower price points, etc.), which would change the royalty on which the parties would agree. (D.I. 246 at 11).

I do not think that using the jury's royalty rate of $500 per board is appropriate just because the jury's damages award is a starting point and ongoing royalties are frequently higher. Case law advises to take into consideration "additional economic factors arising out of the imposition of **[*18]** an ongoing royalty." Paice, 504 F.3d at 1315; *see also* Telcordia Techs., 2014 U.S. Dist. LEXIS 51076, 2014 WL 1457797, at *4 ("However, the court must assess an ongoing royalty in light of relevant post-verdict economic circumstances.").

Given that an ongoing royalty only becomes a ripe issue once I deny the request for a permanent injunction, and that neither party has sufficiently addressed the relevant factors in their briefing, I am not now equipped to determine what an appropriate ongoing royalty ought to be. The Federal Circuit has advised that a prudent course of action is to first let the parties attempt to negotiate an ongoing royalty rate, and then the district court can weigh in if necessary. Paice, 504 F.3d at 1315.I think the parties are best positioned to negotiate a royalty. Therefore, I will dismiss MHL's motion for ongoing royalties without prejudice. The parties are directed to attempt to negotiate an ongoing royalty rate. If the parties are unable to come to an agreement, MHL is free to file another motion for ongoing royalties.

E. PRE-AND POST-JUDGMENT INTEREST

MHL seeks pre- and post-judgment interest on its damages.

Pre-judgment interest should be awarded "absent some justification for withholding such an award." Gen. Motors Corp. v. Devex Corp., 461 U.S. 648, 657, 103 S. Ct. 2058, 76 L. Ed. 2d 211 (1983). Waydoo argues MHL should not be entitled to pre-judgment interest **[*19]** because MHL delayed filing suit by two years. (D.I. 246 at 11). Waydoo contends this two-year period is an undue delay as it caused Waydoo's damages to escalate. (*Id.* at 12 (citing Crystal Semiconductor Corp.

v. TriTech Microelectronics Int'l, Inc., 246 F.3d 1336, 1362 (Fed. Cir. 2001)). I disagree.

Crystal Semiconductor does not stand for the rule that a two-year delay is an undue delay. The Federal Circuit rejected such an interpretation in Kaufman v. Microsoft Corp., 34 F.4th 1360, 1375 (Fed. Cir. 2022). The Federal Circuit, instead, has advised that "to show that delay was undue, a defendant must, at least generally, show that it was prejudiced." *Id.* Waydoo has not presented any argument that it was prejudiced by the delay. Waydoo merely argues that its damages are higher due to the delay in filing the suit. (D.I. 246 at 12). Waydoo, however, does not contend that it would have mitigated its damages but for the delay. Kaufman, 34 F.4th 1375 (reversing the district court's decision to withhold pre-judgment interest when the only evidence of prejudice to the defendant was that it "could have," but not that it "would have," altered the infringing product to create a non-infringing alternative). Therefore, I find that MHL is entitled to pre-judgment interest.

MHL argues the interest rate and compounding period should be the prime rate, compounded quarterly. (D.I. 235 at 11). Waydoo does not **[*20]** argue for a different interest rate or compounding period.[6] Therefore, I will award pre-judgment interest at the prime rate, compounded quarterly.[7]

Post-judgment interest is governed by 28 U.S.C. § 1961. Section 1961(a) provides, "Such interest shall be calculated from the date of the entry of the judgment, at a rate equal to the weekly average 1-year constant maturity Treasury yield, as published by the Board of Governors of the Federal Reserve System, for the calendar week preceding the date of the judgment." Waydoo has not presented any argument as to why I should not assess post-judgment interest. Accordingly, I will award MHL post-judgment interest at the Treasury bill rate as defined in § 1961(a), compounded annually.

[6] Waydoo disputes the amount of damages on which the interest is assessed by contending the amount of damages awarded by the jury is against the clear weight of the evidence. (D.I. 246 at 12). Waydoo raises this issue in its motion for renewed judgment as a matter of law. (D.I. 234). I denied that motion. (D.I. 257 & 258).

[7] This is what I have done for a number of cases. *See* Bayer Healthcare LLC v. Baxalta Inc., 2019 U.S. Dist. LEXIS 144164, 2019 WL 4016235, at *7 n.9 (D. Del. Aug. 26, 2019) (collecting cases), *aff'd*, 989 F.3d 964 (Fed. Cir. 2021).

F. ENHANCED DAMAGES

1. Legal Standard

"[T]he court may increase the damages up to three times the amount found or assessed." 35 U.S.C. § 284. Enhanced damages are "designed as a 'punitive' or 'vindictive' sanction for egregious infringement behavior," which is "willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, or—indeed—characteristic of a pirate." Halo Elecs., Inc. v. Pulse Elecs., Inc., 579 U.S. 93, 103-04, 136 S. Ct. 1923, 195 L. Ed. 2d 278 (2016). Enhanced damages are "not to be meted out in a typical infringement case." Id. at 103. A jury's finding of willful infringement is a prerequisite **[*21]** to the enhancement of damages but is not by itself sufficient. Presidio Components, Inc. v. Am. Tech. Ceramics Corp., 875 F.3d 1369, 1382 (Fed. Cir. 2017).

Although not required, the court may consider the non-exclusive Read factors as part of its analysis. Id. at 1382-83 (citing Read Corp. v. Portec, Inc., 970 F.2d 816 (Fed. Cir. 1992)). The Read factors include: (1) whether the infringer deliberately copied the ideas or design of another; (2) whether the infringer, when he knew of the other's ***patent*** protection, investigated the scope of the ***patent*** and formed a good-faith belief that it was invalid or that it was not infringed; (3) the infringer's behavior as a party to the litigation; (4) defendant's size and financial condition; (5) closeness of the case; (6) duration of defendant's misconduct; (7) remedial action by defendant; (8) defendant's motivation for harm; and (9) whether defendant attempted to conceal its misconduct. Read, 970 F.2d at 827.

For Read factor one, MHL argues there is direct evidence of copying "from the fact that Waydoo's first iteration . . . was a carbon copy of the ***patented*** product's design." (D.I. 250 at 9). MHL, however, does not cite to anything to support its assertion that the products are so alike that they must have been copied. MHL contends there is circumstantial evidence of copying based on the timeline for Waydoo forming a company and bringing **[*22]** its eFoil to market. (D.I. 235 at 13). I do not think this factor weighs in favor of enhancing damages. MHL essentially argues that Waydoo must have copied because there can be no other explanation for how Waydoo developed a complete eFoil ready for the market in seven months when it took MHL and Dr. Langelaan years to

accomplish the same feat. (*Id.*). I do not think the record makes it more likely than not that Waydoo copied MHL's product.

For *Read* factor two, MHL argues that Waydoo did not have a good faith belief that the asserted ***patents*** were invalid or not infringed. MHL contends Waydoo's defenses are merely "litigation-inspired" defenses. (*Id.* at 14). MHL further cites to the jury's finding of willful infringement. Waydoo contends that it had a good faith belief that the asserted ***patents*** were invalid as anticipated by the Evolo Report. (D.I. 246 at 14 (citing D.I. 246-2, Ex. 4, at 74:24-75:23)).[8] In view of the willful infringement verdict, I find this factor weighs in favor of enhancing damages.

For *Read* factor three, MHL contends that Waydoo's litigation was not reasonable because they presented arguments that "could be considered weak at best and borderline frivolous at worst." (D.I. **[*23]** 235 at 14). I disagree.

I do not think Waydoo's arguments were unreasonable or particularly weak. I denied MHL's motions for summary judgment that Waydoo infringed the '044 ***patent*** and that the asserted ***patents*** were not invalid as anticipated. (D.I. 154). I found genuine issues of material fact for both. MHL takes issue with the fact that Waydoo relied primarily on expert testimony for many of its arguments regarding obviousness and enablement. (D.I. 235 at 15-16). I do not think that alone makes Waydoo's arguments frivolous or its actions misconduct. I note that it is the norm in ***patent*** litigation to rely primarily upon expert testimony for such arguments.

Overall, I do not think Waydoo's conduct was unreasonable. Indeed, I think many of these issues were closer than how MHL portrays them. Therefore, I find this factor weighs against enhancing damages.

For *Read* factor four, MHL argues that Waydoo will not be jeopardized by enhancing damages as Waydoo does millions of dollars in revenue each year. Waydoo contends that MHL cites Waydoo's revenues, not its profits, and that its profits over the relevant period were approximately $900,000. (D.I. 246 at 18; D.I. 85-1 at 1024-25 of 1039). Waydoo argues that **[*24]** enhancing damages would jeopardize its financial well-being as the jury award ($1,334,000) by itself exceeds its profits. (D.I. 246 at 18).

This Court has looked beyond just profits when considering the fourth factor. *See TruePosition Inc. v. Andrew Corp., 568 F. Supp. 2d 500, 528 (D. Del. 2008)* (considering a party's revenues and research expenditures). Even when it is shown that the defendant has not turned a profit, this factor is considered neutral. *Bio-Rad Lab'ys Inc. v. 10X Genomics, Inc., 2019 U.S. Dist. LEXIS 122912, 2019 WL 3322322, at *10 (D. Del. July 24, 2019), vacatedon other grounds, 967 F.3d 1353 (Fed. Cir. 2020)*. Waydoo has not cited any evidence to indicate that it would be jeopardized by an enhanced damages award. Given that Waydoo generates millions of dollars of revenue, has turned a profit, and may continue to sell products globally, I do not think Waydoo would be jeopardized by enhancing damages. Therefore, I find this factor slightly favors enhancing damages.

For *Read* factor five, MHL argues this case was not close as it prevailed on every issue presented to the jury. While MHL is correct that it prevailed at trial, I do not think that means this case was not close. As discussed in *Read* factor three, I do not think Waydoo's case was particularly weak. Therefore, I find this factor weighs against enhancing damages.

For *Read* factor six, MHL argues that Waydoo has been infringing for four years, **[*25]** including throughout this litigation. Waydoo does not address this factor. Because infringement has been ongoing for so long, I find this factor weighs in favor of enhancing damages. *See Vectura Ltd. v. GlaxoSmithKline LLC, 2019 U.S. Dist. LEXIS 155768, 2019 WL 4246502, at *4 (D. Del. Sept. 12, 2019)* (finding infringement for "nearly three years, which includes a period of post-litigation infringement," favored enhancing damages).

For *Read* factor seven, MHL argues that Waydoo has not taken any remedial action. Waydoo does not address this factor. Therefore, I find this factor favors enhancement.

For *Read* factor eight, MHL concedes there is no motivation to harm. This factor is therefore neutral.

For *Read* factor nine, MHL argues Waydoo attempted to conceal its misconduct as Waydoo only produced one engineering report during discovery, despite Waydoo's head of research and development indicating that there were other reports. (D.I. 235 at 18). Waydoo argues that MHL is raising a discovery dispute for the first time and has not shown how it was harmed by it. (D.I. 246 at 19). Waydoo contends that it has been operating in the open

[8] There was no testimony at trial about Waydoo's beliefs.

(*id.*), which MHL does not dispute. Because Waydoo has been operating in the open, I find this factor weighs against enhanced damages. *See* Ventura, 2019 U.S. Dist. LEXIS 155768, 2019 WL 4346502, at *5 (finding *Read* factor nine weighed against enhancement **[*26]** when it was not in dispute that the defendant operated in the open).

I find that MHL is not entitled to enhanced damages. The *Read* factors, on balance, do not favor enhancing damages. I do not think MHL has demonstrated that Waydoo's conduct warrants enhancing damages. Therefore, MHL's motion for enhanced damages is denied.

G. ATTORNEYS' FEES

1. Legal Standard

The ***Patent*** Act provides, "The court in exceptional cases may award reasonable attorney fees to the prevailing party." 35 U.S.C. § 285. Under the statute there are two basic requirements: (1) that the case is "exceptional" and (2) that the party seeking fees is a "prevailing party." The Supreme Court defined an "exceptional" case as "simply one that stands out from others with respect to the substantive strength of a party's litigating position (considering both the governing law and the facts of the case) or the unreasonable manner in which the case was litigated." Octane Fitness, LLC v. ICON Health & Fitness, Inc., 572 U.S. 545, 545, 134 S. Ct. 1749, 188 L. Ed. 2d 816 (2014). "District courts may determine whether a case is 'exceptional' in the case-by-case exercise of their discretion, considering the totality of the circumstances." *Id.* The Supreme Court has provided a non-exclusive list of factors for district courts to consider in deciding whether a case is exceptional, **[*27]** including frivolousness, deterrence, motivation, and objective unreasonableness in the factual and legal components of the suit. *Id.* at 554 n.6.

MHL refers to the same arguments it presented under the *Read* factors for enhanced damages. (D.I. 235 at 20 ("As discussed in connection with the enhanced damages argument, above, one could reasonably infer based on the result that this case was never close."); *id.* ("Finally, as to the last factor, which is the litigation behavior of [Waydoo], much of this analysis is presented above in connection with the enhanced damages request.")). As discussed above, I found this to be a close case. Waydoo did not engage in misconduct or unprofessional behavior. Therefore, MHL's motion for attorneys' fees is denied.

III. CONCLUSION

For the foregoing reasons, MHL's motion for pre- and post-judgment interest is GRANTED, MHL's motion for supplemental damages is GRANTED-IN-PART and DENIEDIN- PART, MHL's motion for ongoing royalties is DISMISSED without prejudice, MHL's motion for a permanent injunction is DENIED, MHL's motion for enhanced damages is DENIED, and MHL's motion for attorneys' fees is DENIED.

An appropriate order will issue.

ORDER

For the reasons stated in the accompanying **[*28]** opinion, IT IS HEREBY ORDERED that Plaintiff's Motion for Entry of a Permanent Injunction (D.I. 230) is DENIED; Plaintiff's Motion for Attorneys' Fees and Expenses (D.I. 231) is DENIED; Plaintiff's Motion for Enhanced Damages (D.I. 232) is DENIED; Plaintiff's Motion for Supplemental and/or Ongoing Damages, and for Pre-Judgment and Post-Judgment Interest (D.I. 233) is GRANTED-IN-PART and DENIED-IN PART. My order resolving Plaintiff's Motion for Supplemental and/or Ongoing Damages, and For Pre-Judgment and Post-Judgment Interest (D.I. 233) is as follows:

1. Plaintiff's motion for supplemental damages (D.I. 233) is GRANTED-IN-PART and DENIED-IN-PART. Plaintiff is entitled to supplemental damages from January 1, 2023 to April 12, 2023, the date of judgment.
2. Plaintiff's motion for pre-judgment and post-judgment interest (D.I. 233) is GRANTED.
3. Plaintiff's motion for ongoing damages (D.I. 233) is DISMISSED without prejudice. The Parties are instructed to see if they can reach an agreement on an ongoing royalty.

IT IS SO ORDERED this 7th day of September 2023.

/s/ Richard G. Andrews

United States District Judge

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Neutral
As of: April 11, 2024 10:29 AM Z

MHL Custom, Inc. v. Waydoo USA, Inc.

United States District Court for the District of Delaware

February 2, 2023, Decided; February 3, 2023, Filed

Civil Action No. 21-0091-RGA

Reporter
654 F. Supp. 3d 329 *; 2023 U.S. Dist. LEXIS 19476 **

MHL CUSTOM, INC., Plaintiff, v. WAYDOO USA, INC. and SHENZHEN WAYDOO INTELLIGENCE TECHNOLOGY CO., LTD., Defendants.

Prior History: *MHL Custom, Inc. v. Waydoo USA, Inc., 2022 U.S. Dist. LEXIS 111958, 2022 WL 2290860 (D. Del. June 24, 2022)*

Core Terms

stability, ***patent***, static, stable, watercraft, specification, preamble, hydrofoil, dynamic, invention, products, summary judgment, infringement, flotation, passive, invalid, surface, written description, argues, parties, discloses, recites, anticipated, skill, non-infringement, genuine issue of material fact, summary judgment motion, original condition, weight-shift, eigenvalue

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Judges: Richard G. Andrews, United States strict Judge.

Opinion by: Richard G. Andrews

Opinion

[*333] MEMORANDUM OPINION

/s/ Richard G. Andrews

ANDREWS, UNITED STATES DISTRICT JUDGE:

Before me are Plaintiff MHL Custom's ("MHL") and Defendants Waydoo USA's and Shenzhen Waydoo Intelligence Technology's (collectively, "Waydoo") motions for partial summary judgment. The parties have fully briefed the motions. (D.I. 80, 83, 91, 93, 101, 106). I heard oral argument on January 4, 2023.

[*334] I. BACKGROUND

Plaintiff alleges that Defendants infringe two of Plaintiff's ***patents***. Those ***patents*** are U.S. ***Patent*** Nos. 9,359,044 (the, "'044 ***Patent***") and ***9,586,659*** (the, "'659 ***Patent***") (collectively, the "Asserted ***Patents***"). The Asserted ***Patents*** relate to a personal hydrofoil watercraft. The Asserted ***Patents*** share a common specification.

Plaintiff asserts that Defendants' products infringe all claims **[**2]** of the '044 ***Patent*** (claims 1-22) and '659 ***Patent*** (claims 1-20). Defendants counterclaimed. (D.I. 13). The parties agree claim 1 of the '044 ***Patent*** and claims 1 and 16 of the '659 ***Patent*** are representative of the other claims for purposes of the pending motions.[1]

Plaintiff has moved for summary judgment of (1) direct infringement of claim 1 of the '044 ***Patent***, (2) the '044 ***Patent*** and '659 ***Patent*** are not anticipated, and (3) Plaintiff has standing. (D.I. 77, 78, 79). Defendants have moved for summary judgment of (1) claims 16-20 of the '659 ***Patent*** are invalid for lack of written description, (2) non-infringement of the '044 ***Patent***, and (3) non-

[1] These three claims are the independent claims in the two ***patents***. For purposes of the pending motions, Parties agree that the other elements of the dependent claims are met and only dispute as to whether all the claim elements as listed in the three independent claims are infringed by Defendants' products.

infringement of claims 1-15 of the '659 ***Patent***. (D.I. 81).

II. LEGAL STANDARD

"The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). Material facts are those "that could affect the outcome" of the proceeding. Lamont v. New Jersey, 637 F.3d 177, 181 (3d Cir. 2011) (quoting Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248, 106 S. Ct. 2505, 91 L. Ed. 2d 202 (1986)). "[A] dispute about a material fact is 'genuine' if the evidence is sufficient to permit a reasonable jury to return a verdict for the nonmoving party." *Id.* The burden on the moving party may be discharged by pointing out to the district court that there is an absence of evidence supporting the non-moving party's case. **[**3]** Celotex Corp. v. Catrett, 477 U.S. 317, 323, 106 S. Ct. 2548, 91 L. Ed. 2d 265 (1986).

The burden then shifts to the non-movant to demonstrate the existence of a genuine issue for trial. Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 586-87, 106 S. Ct. 1348, 89 L. Ed. 2d 538 (1986); Williams v. Borough of West Chester, 891 F.2d 458, 460-61 (3d Cir. 1989). A non-moving party asserting that a fact is genuinely disputed must support such an assertion by: "(A) citing to particular parts of materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations . . . , admissions, interrogatory answers, or other materials; or (B) showing that the materials cited [by the opposing party] do not establish the absence . . . of a genuine dispute . . . ." Fed. R. Civ. P. 56(c)(1). The non-moving party's evidence "must amount to more than a scintilla, but may amount to less (in the evaluation of the court) than a preponderance." Williams, 891 F.2d at 460-61.

When determining whether a genuine issue of material fact exists, the court must view the evidence in the light most favorable to the non-moving party and draw all reasonable inferences in that party's favor. Scott v. Harris, 550 U.S. 372, 378, 127 S. Ct. 1769, 167 L. Ed. 2d 686 (2007); Wishkin v. Potter, 476 F.3d 180, 184 (3d Cir. 2007). If the non-moving party **[*335]** fails to make a sufficient showing on an essential element of its case with respect to which it has the burden of proof, the moving party is entitled to judgment as a matter of law. *See* Celotex, 477 U.S. at 322.

III. DISCUSSION

A. INFRINGEMENT OF CLAIMS 1-15 OF THE '659 *PATENT*

Defendants **[**4]** have moved for summary judgment on non-infringement of claims 1-15 of the '659 ***Patent*** (D.I. 80 at 20-26; D.I. 83 at 29-32). The dispute focuses on whether Defendants infringe claim 1 of the '659 ***Patent***. Claims 2-15 depend on claim 1. The claim reads as follows:

> 1. A passively stable, weight-shift controlled personal hydrofoil watercraft, comprising:
> a flotation device that has a fore-aft length greater than a lateral width, the flotation device having a top surface and a bottom surface, wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position, the flotation device having a forward section, a middle section, and a rear section;
> a strut having a upper end and a lower end, the upper end fixedly interconnected with the flotation device between the middle section and the rear section of the flotation device;
> a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no movable surface;
> a propulsion system for propelling the watercraft in a body of water, wherein the propulsion system is connected to the hydrofoil; and
> the watercraft having no movable steering system.

('659 ***Patent***, cl. 1). The parties agree that the preamble of the '659 ***Patent***—A passively **[**5]** stable, weight-shift controlled personal hydrofoil watercraft—is limiting. (D.I. 83 at 30; D.I. 91 at 41). The parties dispute whether the "stable" aspect of the limitation is met. (D.I. 83 at 29-32; D.I. 91 at 43-45).

There are two issues to this dispute.

The first issue is whether "stable" includes both static stability — having an initial tendency to return to an original condition when disturbed — and dynamic stability — eventually returning to an original condition when disturbed. (D.I. 60-2, Ex. B at 602). Defendants argue both are included; Plaintiff, only static stability. I previously construed this term to have its plain and ordinary meaning but permitted the parties to readdress the issue at this stage of the case. (D.I. 66 at 9). Because there is a dispute over the scope of the claim

term, I must construe the term before addressing the question of infringement. Q2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., 521 F.3d 1351, 1361 (Fed. Cir. 2008) ("A determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate . . . when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute.").

The second issue is whether Defendants infringe the stability limitation as construed.

1. Claim Construction [6]**

"It is a bedrock principle of ***patent*** law that the claims of a ***patent*** define the invention to which the patentee is entitled the right to exclude." Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotation marks omitted). "'[T]here is no magic formula or catechism for conducting claim construction.' Instead, the court is free to attach the appropriate weight to appropriate **[*336]** sources 'in light of the statutes and policies that inform ***patent*** law.'" SoftView LLC v. Apple Inc., 2013 U.S. Dist. LEXIS 125893, 2013 WL 4759195, at *1 (D. Del. Sept. 4, 2013) (quoting Phillips, 415 F.3d at 1324) (alteration in original). When construing ***patent*** claims, a court considers the literal language of the claim, the ***patent*** specification, and the prosecution history. Markman v. Westview Instruments, Inc., 52 F.3d 967, 977-80 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370, 116 S. Ct. 1384, 134 L. Ed. 2d 577 (1996). Of these sources, "the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." Phillips, 415 F.3d at 1315 (internal quotation marks omitted).

"[T]he words of a claim are generally given their ordinary and customary meaning. . . . [Which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the ***patent*** application." Id. at 1312-13 (citations and internal quotation marks omitted). "[T]he ordinary meaning **[**7]** of a claim term is its meaning to [an] ordinary artisan after reading the entire ***patent***." Id. at 1321 (internal quotation marks omitted). "In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." Id. at 1314.

When a court relies solely upon the intrinsic evidence—the ***patent*** claims, the specification, and the prosecution history—the court's construction is a determination of law. *See* Teva Pharms. USA, Inc. v. Sandoz, Inc., 574 U.S. 318, 331, 135 S. Ct. 831, 190 L. Ed. 2d 719 (2015). The court may also make factual findings based upon consideration of extrinsic evidence, which "consists of all evidence external to the ***patent*** and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." Phillips, 415 F.3d at 1317-19 (internal quotation marks omitted). Extrinsic evidence may assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art, and how the invention works. *Id.* Extrinsic evidence, however, is less reliable and less useful in claim construction than the ***patent*** and its prosecution history. *Id.*

Defendants argue that "stable" **[**8]** should mean being statically stable and dynamically stable. Defendants cite to the ***patent*** specification and textbooks for support that a person of ordinary skill in the art ("POSA") would read "stable" to require static and dynamic stability. (D.I. 83 at 4-7).

Plaintiff argues that "stable" should be interchangeable with statically stable or having static stability, and therefore, does not require that the watercraft have dynamic stability. (D.I. 91 at 22). Plaintiff cites to their expert, Mr. Barry, for support that 'stable' and 'static stability' are 'commonly used interchangeably with respect to aircraft and hydrofoil stability.' (D.I. 91 at 18 (citing D.I. 80-31, ¶ 12)). Mr. Barry also expressed an opinion that the ***patent*** uses the terms interchangeably. (*Id.* at 19).

I agree with Defendants that "stable" should mean having both static stability and dynamic stability. I previously rejected Plaintiff's argument that "stable" and "static stability" could be used interchangeably. (D.I. 66 at 9). Plaintiff has not provided compelling intrinsic or extrinsic evidence to convince me to deviate from my initial view. Furthermore, the ***patent*** specification recites, "This trim condition is stable **[**9]** if a disturbance results in a restoring **[*337]** moment that returns the hydrofoil to its original condition." ('659 ***Patent***, col. 6:14-16). The hydrofoil returning to its original condition is a description of dynamic stability, not static stability. Therefore, the ***patent*** specification indicates that stable and statically stable (or static stability) are not interchangeable.

Therefore, I will construe "A passively stable, weight-

shift controlled personal hydrofoil watercraft" to mean "a weight-shift controlled personal watercraft having a hydrofoil that does not have any moveable components and which, when disturbed, (1) has an initial tendency to return to its original condition and (2) eventually returns to its original condition."[2]

2. Non-Infringement by the Accused Products

The remaining issue is whether the accused products have static stability and dynamic stability. Defendants argue that their products are dynamically unstable (or lack dynamic stability) and Plaintiff has provided no evidence to show the accused products are dynamically stable. Thus, Defendants argue there is no genuine issue of material fact that precludes summary judgment that the accused products do not infringe claims 1-15 of the **[**10]** '659 ***Patent***.

Defendants contend that the only evidence Plaintiff has that shows Defendants' products are dynamically stable are "eigenvalue" analyses of some of the accused products. (D.I. 83 at 31). The parties agree that this type of analysis can be used to assess whether a watercraft is dynamically stable. (D.I. 83 at 31; D.I. 91 at 43). "If an eigenvalue analysis reports a positive 'sigma value,' it indicates that [a watercraft] is unstable." (D.I. 83 at 3). Defendants assert, because "[a]ll of Mr. Barry's eigenvalue analyses for [Defendants'] products report positive sigma values," Plaintiff's own expert shows conclusively that Defendants' products do not have dynamic stability. (D.I. 83 at 32).

Plaintiff argues that Defendants are not entitled to summary judgment because there still exists a genuine issue of material fact as to whether Defendants' products are dynamically stable. Plaintiff cites to Mr. Barry's deposition where he testified that he did not believe his analyses showed the products were dynamically unstable. (D.I. 91 at 44). Plaintiff contends that: (1) while Mr. Barry's eigenvalue analysis showed the watercrafts to be dynamically unstable, the results were "close" to showing **[**11]** dynamic stability, and (2) when Mr. Barry viewed the accused products operating in the real world, he concluded that they were dynamically stable, notwithstanding the eigenvalue analysis. (*Id.; see* D.I. 85-1, Ex. 6, 402:8-403:23 (stating positive eigenvalues did not indicate dynamic instability in part because the software was "an approximation" and did not account for all effects)). Plaintiff, therefore, argues that the eigenvalue analysis is not conclusive when considering Mr. Barry's testimony and other analyses.

Plaintiff also relies on Mr. Barry's statements that the Athena Vortex Lattice (AVL) software he used to analyze the stability of the watercrafts understated the stability of the accused products.[3] Mr. Barry stated that the AVL software does not **[*338]** account for additional stabilizing factors that "exist once the effect of the water in which the hydrofoil is operating in is considered," such as "damping, free surface, added mass, and viscosity". (D.I. 91 at 44; *see, e.g.*, D.I. 80-33, Ex. 31, ¶¶ 23 (free surface), 55 (damping, added mass and viscosity effects)). Therefore, Plaintiff contends that Mr. Barry's testimony about his different analyses and his conclusions raises a genuine **[**12]** dispute as to whether the accused products are dynamically stable.

I agree with Plaintiff that there is a genuine dispute whether the accused products are dynamically stable. Defendants are correct that the eigenvalue analyses of the watercrafts show at least one positive sigma value for each product analyzed, which Plaintiff does not dispute, indicating dynamic instability. Those analyses, however, are not the only evidence in the record. The record also includes testimony by Mr. Barry, in which he concludes that the watercraft are dynamically stable based on analyzing the stability derivatives using the AVL software and observation of the watercraft in the real world. (D.I. 91 at 44; *see, e.g.*, D.I. 80-33, ¶¶ 26-28, 53-55). Taking the evidence in the light most favorable to Plaintiff, as I am required to do, I determine that a reasonable jury could conclude that the accused products have dynamic stability and therefore do infringe.

Therefore, I will deny summary judgment of infringement of claims 1-15 of the '659 ***Patent***.

B. INFRINGEMENT OF THE '044 *PATENT*

The parties have cross-moved for summary judgment on infringement of claims 1-22 of the '044 ***Patent*** (D.I. 80 at 20-26; D.I. 83 at 29-32). The parties agree **[**13]**

[2] I proposed this construction prior to oral argument. (D.I. 142).

[3] Mr. Barry used the AVL software to analyze the pitch stability derivative, directional stability derivative, and roll stability derivative to assess watercraft stability. Mr. Barry also used the AVL software to analyze the eigenvalues for his eigenvalue analysis. (*See, e.g.*, D.I. 85-1, Ex. 3, ¶¶ 95-96, 155-156)

that whether either side is entitled to summary judgment comes down to whether there is a genuine issue of material fact that Defendants infringe claim 1 of the '044 ***Patent***. The claim reads as follows:

> 1. A passively stable, weight-shift controlled personal hydrofoil watercraft, comprising:
> a flotation device that has a fore-aft length greater than a lateral width, the flotation device having a top surface and a bottom surface, wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position, the flotation device having a forward section, a middle section, and a rear section, and the flotation device being controlled via weight shift of the user;
> a strut having an upper end and a lower end, the upper end fixedly interconnected with the flotation device between the middle section and the rear section of the flotation device;
> a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no movable surface and designed to provide passive static stability controlled solely by weight shift of the user;
>
> a propulsion system for propelling the watercraft in a body of water, wherein the propulsion system is connected to the hydrofoil; **[**14]** and
> the watercraft having no movable steering system.

('044 ***Patent***, cl. 1). There are two disputes at issue here. First, the parties dispute whether the preamble of claim 1 is limiting. Plaintiff argues it is not; Defendants, that it is. Second, the parties dispute whether Defendants' products satisfy the stability limitations of claim 1. Resolving the second issue necessarily depends on the outcome of the first issue.

1. Whether the Preamble of Claim 1 is Limiting

As an initial matter, it is proper for me to determine whether the **[*339]** preamble of claim 1 is limiting or not. Plaintiff argues that this is a determination to be left for the jury. (D.I. 91 at 41). Plaintiff is mistaken. Determining the effect of preamble language is a claim-construction issue. *See* Cochlear Bone Anchored Solutions AB v. Oticon Medical AB, 958 F.3d 1348, 1354 (Fed. Cir. 2020). Claim construction and resolving the scope of asserted claims are questions of law left to the court. *See* Every Penny Counts, Inc. v. American Express Co., 563 F.3d 1378, 1383 (citing O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., 521 F.3d 1351, 1361-62 (Fed. Cir. 2008)). Therefore, I find it is necessary for me to make this determination now.[4]

"[A]s a general rule preamble language is not treated as limiting." Aspex Eyewear, Inc. v. Marchon Eyewear, Inc., 672 F.3d 1335, 1347 (Fed. Cir. 2012). "Whether to treat a preamble as a limitation is 'determined on the facts of each case in light of the overall form of the claim, and the invention as described in the specification and illuminated **[**15]** in the prosecution history.'" Deere & Co. v. Bush Hog, LLC, 703 F.3d 1349, 1357 (Fed. Cir. 2012) (quoting Applied Materials, Inc. v. Advanced Semiconductor Materials Am., Inc., 98 F.3d 1563, 1572-73 (Fed. Cir. 1996)). "In general, a preamble limits the invention if it recites essential structure or steps, or if it is necessary to give life, meaning, and vitality to the claim." Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002) (citation and quotation marks omitted). "The preamble may be limiting to the extent it is 'necessary to provide antecedent basis for the body of the claim.'" Cochlear Bone, 958 F.3d at 1355 (quoting Symantec Corp. v. Computer Assoc. Int'l, Inc., 522 F.3d 1279, 1288 (Fed. Cir. 2008)). In addition, the preamble may be limiting when the preamble "is essential to understand limitations or terms in the claim body," recites "additional structure or steps underscored as important by the specification," or there was "clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art." Catalina, 289 F.3d at 808. In other words, there are numerous exceptions to the default rule that a preamble is not limiting.

Plaintiff contends that the preamble is not limiting because there is a presumption against reading a preamble as limiting and this case does not present one of the recognized exceptions to that presumption. Specifically, Plaintiff argues that the "preamble does not: (1) recite essential structure; (2) provide antecedent basis to the claim term at issue; and (3) is not essential to **[**16]** understand limitations or terms in the claim body." (D.I. 91 at 42).

Plaintiff further argues that there was no reliance on the preamble during prosecution. (*Id.* at 43). Plaintiff cites to the fact the preamble was present in the original claim as filed, and the static stability limitation was added to overcome prior art. (D.I. 146 at 2). Plaintiff contends that this shows that neither the inventor nor Examiner relied

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[4] While I have construed identical preamble language in the context of claim 1 of the '659 ***Patent*** as limiting, both parties agreed the preamble was limiting in that ***patent***.

on the preamble during prosecution because the addition of the static stability limitation would be unnecessary if the preamble were limiting. (*Id.* at 2).

Defendants argue the preamble should be limiting because claim 1 of the '659 ***Patent***, which is part of the same ***patent*** family and has an identical specification, recites identical language and both parties agree the preamble is limiting in that context. Defendants contend that there is "no technical or legal justification for why identical preambles should be treated differently." (D.I. 83 at 30). Defendants further **[*340]** argue that the preamble "is limiting because it recites an 'essential' element not found in the body of the claim (i.e., dynamic stability)." (D.I. 106 at 15). To put it another way, Defendants argue that the ***patent*** specification **[**17]** "repeatedly defines the invention as an overall stable watercraft," and therefore the preamble should be limiting because only the preamble specifies that the invention is dynamically stable. (D.I. 145 at 3).

I agree with Plaintiff that the preamble is not limiting. As an initial matter, I am not aware of any case law that states a preamble must be limiting in one ***patent*** because the identically worded preamble is limiting in another ***patent*** belonging to the same ***patent*** family. Defendants have also not supplied any such case law, despite being given additional time to do so. (D.I. 145 at 1).

The proposed identically-worded-preamble rule is inconsistent with the case law.[5] The Federal Circuit has stated "[w]hether to treat a preamble as a limitation is determined on the facts of each case in light of the overall form of the claim[] and the invention as described in the specification and illuminated in the prosecution history." *Cochlear Bone*, 958 F.3d at 1354 (quoting *Deere & Co.*, 703 F.3d at 1357). I am thus required to analyze the form of claim 1 of the '044 ***Patent***, which has significant differences from the form of claim 1 of the '659 ***Patent***, when determining whether the preamble is limiting. Therefore, I do not believe that the presumption against reading a preamble **[**18]** as non-limiting is overcome just because the same preamble is limiting in claim 1 of the '659 ***Patent***.

I do not find that dynamic stability is an "essential" element that requires the preamble to be limiting. Nor do I think dynamic stability is "underscored as important by the specification." *Catalina*, 289 F.3d at 808. Nowhere in the '044 ***Patent*** is the term "dynamic stability" or "dynamically stable" used.

The '044 ***Patent*** specification does repeatedly describe the invention as being "stable" or having "passive stability," and dynamic stability is a component of those terms. *See* Section III.A.1 *supra.* "But not every preamble reference to additional structure is limiting, even when the structure is noted in the specification—even, indeed, when the structure is 'underscored as important by the specification.'" *Arctic Cat Inc. v. GEP Power Products, Inc.*, 919 F.3d 1320, 1329 (Fed. Cir. 2019) (quoting *Catalina*, 289 F.3d at 808 ("[W]hen reciting additional structure or steps underscored as important by the specification, the preamble may operate as a claim limitation.")). Furthermore, even though the specification references the importance of stability, it similarly does so with respect to static stability. *See* '044 ***Patent*** 2:17-20 ("The prior art in powered hydrofoil surfboards have all relied on moveable surfaces for control, **[**19]** and have ignored the possibility of designing the hydrofoil for passive static stability."); 5:50-54 ("Note that other versions of the hydrofoil are possible: the key is designing the hydrofoil for passive static stability via planform design, airfoil design, and span-wise twist distribution."). Therefore, I read the specification as underscoring the importance that the watercraft have static stability.

[*341] The body of claim 1 of the '044 ***Patent*** addresses this essential, static stability element of the invention by reciting "a hydrofoil . . . designed to provide passive static stability." ('044 ***Patent***, cl. 1). Because having static stability is already an explicit limitation in the body of the claim, I do not read the preamble as supplying an essential element for claim 1 of the '044 ***Patent***.[6]

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[5] Furthermore, I have not applied such a rule even when the claims sharing the identical preamble are part of the same ***patent***. *See Takeda Pharma. Co. v. Actavis Lab'ys FL, Inc.*, 2016 U.S. Dist. LEXIS 73121, 2016 WL 3193188, at *6 n.6, *7 n.7, *7-8 (D. Del. June 6, 2016) (independently analyzing whether identical preamble language is limiting in two separate claims of the same ***patent***), *aff'd in part, rev'd in part sub nom. Natco Pharma, Inc. v. Actavis Lab'ys FL, Inc.*, 934 F.3d 1344 (Fed. Cir. 2019).

[6] It is this explicit recitation of static stability in the body of the claim 1 of the '044 ***Patent*** that differentiates the effect of the preamble in claim 1 of the '044 ***Patent*** from the effect of the preamble in claim 1 of the '659 ***Patent***. The body of claim 1 of the '659 ***Patent*** does not contain any limitations pertaining to stability. As already discussed, the shared ***patent*** specification underscores the importance of the watercraft having static stability. Therefore, the preamble is providing an essential

Accordingly, I conclude that the preamble of claim 1 of the '044 ***Patent*** is not limiting.

2. Non-Infringement of the '044 *Patent*

Defendants' motion for summary judgment of non-infringement of the '044 ***Patent*** is premised on the preamble of claim 1 of the '044 ***Patent*** being limiting and requiring the additional limitation of dynamic stability. (D.I. 83 at 29-31). Because I have determined that the preamble to claim 1 is not limiting, there is no dynamic stability limitation in the **[**20]** claims of the '044 ***Patent***. Therefore, Defendants' motion for summary judgment of non-infringement of the '044 ***Patent*** is denied.

3. Infringement of the '044 *Patent*

Plaintiff moves for summary judgment that Defendants infringe claim 1 of the '044 ***Patent***, and, by extension, all other claims of the '044 ***Patent***, on the ground that there is no genuine issue of fact that Defendants' accused products are statically stable.[7] Plaintiff argues that the testimony of its expert witness, Mr. Barry, and the analysis he conducted of the accused products, demonstrates that the accused products are passively statically stable. (D.I. 80 at 24-26). Plaintiff contends that because Defendants have not produced any affirmative evidence to dispute that the accused products are passively statically stable, there is no disputed fact in the record that prevents finding that the accused products infringe the '044 ***Patent***. (*Id.* at 25-26).

Defendants argue, "There is a genuine dispute as to whether [Plaintiff] has evidence sufficient to meet its burden for showing even static stability." (D.I. 93 at 25). Defendants contend that their expert witness, Dr. Triantafyllou, has "explained that in trying to show static stability of the Accused Products, Mr. Barry concocted his own stability **[**21]** standard rather than assess them according to the standard set out in the Asserted ***Patents***." (*Id.* at 26). Defendants further argue, "Without undisputed evidence that the Accused Products meet the standard set out in the Asserted ***Patents***—which [Plaintiff] does not have because Mr. Barry did not so opine—summary judgment of infringement is improper." (*Id.*). Defendants also argue that summary judgment is improper because Mr. Barry did not examine all of the accused products for infringement. (*Id.*).

I agree with Defendants that there exists a genuine issue of material fact. Plaintiff has provided evidence through Mr. Barry's testimony and analysis to show that Defendants' accused products are statically stable. Defendants' expert responded by noting that Mr. Barry's analysis deviates from that included in the asserted **[*342]** ***patents***, and the reason for doing so goes unexplained. (D.I. 85-1, Ex. 8, ¶ 17). A reasonable juror could weigh the testimony by the parties' experts and reach the conclusion that Plaintiff has not carried its burden to show that Defendants' products are statically stable.

Therefore, I will deny summary judgment as to infringement of the '044 ***Patent***.

C. WRITTEN DESCRIPTION OF CLAIMS 16-20 [22] OF THE '659 *PATENT***

Defendants move for summary judgment of invalidity for lack of written description for claims 16-20 of the '659 ***Patent***. Claim 16, which is representative of the other claims,[8] reads as follows:

16. A personal hydrofoil watercraft, comprising:
a surfboard-shaped flotation device that has a fore-aft length greater than a lateral width, the flotation device having a top surface and a bottom surface, wherein the top surface has a substantially horizontal supporting surface configured to support a user in a prone, kneeling, or standing position, the flotation device having a forward section, a middle section, and a rear section;
a hydrofoil interconnected with the surfboard-shaped flotation device, the hydrofoil having a strut and a first hydrofoil wing, an upper end of the strut being fixedly interconnected with the surfboard-shaped flotation device;
a propulsion system attached to the surfboard-shaped flotation device for propelling the watercraft in a body of water, the propulsion system

element in claim 1 of the '659 ***Patent*** by stating that the watercraft needs to be "stable." Since the preamble is limiting, the full scope of "stable" becomes a limitation.

[7] The parties agree that the only claim limitation in question is whether Defendants' products meet the stability limitation of claim 1. As discussed above, claim 1 of the '044 ***Patent*** only requires static stability because the preamble is not limiting.

[8] Claims 17-20 are dependent claims that depend on claim 16.

> comprising a battery, an electric motor, a motor speed controller, and a propulsor, wherein the propulsor is selected from a propeller, a ducted propeller, or a pump-jet, and the battery and motor speed controller **[**23]** are contained in a watertight compartment integrated into the flotation device;
> the watercraft having no movable steering system;
> a handheld controller having a throttle; and
> a throttle interface, wherein the throttle is adapted to send electronic signals to the throttle interface that cause an output of the propulsion system to change.

('659 ***Patent***, cl. 16). Defendants assert the claims are invalid for lack of written description because they do not contain a stability limitation (i.e., do not require the watercraft to be statically stable, dynamically stable, or both), but the specification of the Asserted ***Patents*** "clearly discloses the alleged invention as being a stable hydrofoil watercraft, and never suggests that the alleged invention can be anything other than stable." (D.I. 83 at 26). Defendants further contend that the file history of the '044 ***Patent*** shows the ***patent*** examiner "explicitly relied on the hydrofoil providing static stability in allowing the '044 [P]atent." (*Id.*). Defendants analogize the present case to *ICU Medical, Inc. v. Alaris Medical Sys., Inc., 558 F.3d 1368, 1377-79 (Fed. Cir. 2009)*.

Plaintiff does not dispute that neither static stability nor dynamic stability (or both together) are limitations of the claims 16-20 of the '659 ***Patent***. Plaintiff asserts the written description requirement **[**24]** is met because the ***patent*** specification does not limit the invention to a "stable" watercraft. Plaintiff analogizes the present case to *ScriptPro LLC v. Innovation Assoc., Inc., 833 F.3d 1336, 1340-42 (Fed. Cir. 2016)*. Plaintiff argues that a stable watercraft is just one purpose of the invention and claims 16-20 of the '659 ***Patent*** are written to address other purposes of the invention, **[*343]** such as not having a movable steering system, providing a "surfing feel," and being easy to transport and maintain. (D.I. 91 at 39).

The written description requirement contained in *35 U.S.C. § 112* requires that the specification "clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." *Ariad Pharms., Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1351 (Fed. Cir. 2010)* (en banc) (alteration in original). "In other words, the test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." *Id.* "When determining whether a specification contains adequate written description, one must make an 'objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art.'" *Bos. Sci. Corp. v. Johnson & Johnson, 647 F.3d 1353, 1366 (Fed. Cir. 2011)* (quoting *Ariad, 598 F.3d at 1351*).

The written description inquiry is a question of fact. *Ariad, 598 F.3d at 1351*. Although **[**25]** it is a question of fact, "[c]ompliance with the written description requirement . . . is amenable to summary judgment in cases where no reasonable fact finder could return a verdict for the non-moving party." *PowerOasis, Inc. v. T-Mobile USA, Inc., 522 F.3d 1299, 1307 (Fed. Cir. 2008)*. "A party must prove invalidity for lack of written description by clear and convincing evidence." *Vasudevan Software, Inc. v. MicroStrategy, Inc., 782 F.3d 671, 682 (Fed. Cir. 2015)*.

I find that Defendants are entitled to summary judgment that claims 16-20 of the '659 ***Patent*** are invalid for lack of written description. The ***patent*** specification does not disclose that the patentee possessed a personal hydrofoil watercraft that lacks both static and dynamic stability. There is no genuine disputed fact about this.

The specification of the '659 ***Patent*** only, and repeatedly, describes the invention as being a watercraft that is either stable or at least has static stability. For example, the abstract of the ***patent*** recites, "A passively stable personal hydrofoil watercraft . . . ." ('659 ***Patent*** at Abstract). The ***patent*** specification further recites, "The hydrofoil of the present invention has been designed to provide passive stability in the longitudinal direction, making traditional altitude control systems based on moveable surfaces unnecessary." (*Id.* at col. 2:8-12).

Static stability distinguishes **[**26]** the invention from the prior art. The specification recites, "The prior art in powered hydrofoil surfboards have all relied on moveable surfaces for control, and have ignored the possibility of designing the hydrofoil for passive static stability. . . . [T]he present invention is specifically designed to achieve desired levels of stability and controllability without the need for moveable surfaces." (*Id.* at col. 2:20-26). The ***patent*** specification further emphasizes that the hydrofoil should be designed to provide static stability to the watercraft, even for undisclosed embodiments. (*Id.* at col. 5:62-65 ("Note that other versions of the hydrofoil are possible: the key is designing the hydrofoil for passive static stability via

planform design, airfoil design, and span-wise twist distribution.")). The ***patent*** specification attributes the ability to be controlled by weight shift to the stability of the watercraft. The specification states, "This invention exploits passive stability to obviate the necessity for mechanisms or active control systems to provide stability. This passive stability allows the watercraft to be controlled by weight shift rather than by mechanical systems." (*Id.* **[**27]** at col. 6:7-11). There is nothing in the ***patent*** specification to suggest that a watercraft **[*344]** that is both statically and dynamically unstable is part of the disclosure. *See* LizardTech, Inc. v. Earth Resource Mapping, Inc., 424 F.3d 1336, 1349 (Fed. Cir. 2005).

I agree with Defendants that the present case is similar to *ICU Medical*. In *ICU Medical*, the ***patent*** at issue claimed medical valves with spikes and without spikes (i.e., valves without the spike limitation). The specification of the ***patent***, however, only described "medical valves with spikes." *Id.* at 1378. The Federal Circuit upheld the district court's grant of summary judgment that the "spikeless" claims were invalid for lack of written description because a POSA would not have understood the patentee to have invented a "spikeless" medical valve. *Id.* at 1378-79.

Similarly, in the present case, the '659 ***Patent*** only discusses a watercraft that is at least statically stable. There is nothing in the specification that would signal to a POSA that the patentee invented a watercraft that is statically unstable. Furthermore, at oral argument, Plaintiff failed to point to any disclosure in the ***patent*** specification of a description or embodiment of a watercraft that was not at least statically stable. (D.I. 147 at 73:9-23). *See* *ICU Medical*, 558 F.3d at 1379.

While Plaintiff argues that this case is more analogous **[**28]** to ScriptPro, LLC v. Innovation Assocs., Inc., 833 F.3d 1336 (Fed. Cir. 2016), I disagree. In *ScriptPro*, the Federal Circuit reversed the district court's ruling that claims without a limitation of employing a "sorting and storage scheme based on patient-identifying information" were invalid for lack of written description. *Id.* at 1341. The Federal Circuit noted that while the ***patent*** specification "focuses on embodiments employing a sorting and storage scheme based on patient-identifying information," it is not a limitation of the invention because the invention is used to solve many problems, not all of which involve using a scheme based on patient-identifying information. *Id.* Specifically, the Federal Circuit cautioned that "a specification's focus on one particular embodiment or purpose cannot limit the described invention where the specification expressly contemplates other embodiments or purposes." *Id.* at 1341.

Plaintiff's arguments that watercraft stability is just one solution the invention addresses, like the scheme in *ScriptPro*, misses the mark. First, in *ScriptPro*, the Federal Circuit stated that the "***patent***'s express disclosure that sorting and storing can be done in a number of ways distinguishes this case from . . . *ICU Medical*." *Id.* Specifically, the Federal Circuit **[**29]** found that the invention was not limited to using a patient-identifying information sorting scheme because the ***patent*** specification disclosed that "any predetermined storage scheme will do." *Id.* Unlike in *ScriptPro*, there is no such express disclosure in the '659 ***Patent*** specification that the watercraft can be statically and dynamically unstable. Nor is there anything that could reasonably be interpreted as an implied disclosure.

Second, the Federal Circuit noted that the ***patent*** in *ScriptPro* was aimed at addressing multiple problems and that the different claims were directed at "covering these different aspects of the invention." *Id.* at 1342. In this case, however, the ***patent*** specification clearly describes static stability as a limitation of the invention as a whole, not an aspect of some embodiments or one purpose. *See* p.19 *supra*. The ***patent*** specification is not just describing some embodiments as stable or having static stability. (*See, e.g.*, '659 ***Patent***, col. 2:9-12; 2:23-25, 5:62-65). Nor is the specification describing stability as just one purpose of the invention. The ***patent*** specification, instead, is emphasizing that it is the stability of the watercraft — or at the least static stability provided by the **[**30]** **[*345]** hydrofoil — that permits the invention to achieve the full scope of its purposes such as not having a moveable steering system. (*See id.* at col. 6:7-11).

Therefore, I find that Defendants are entitled to summary judgment that claims 16-20 of the '659 ***Patent*** are invalid for lack of written description.

D. ANTICIPATION OF THE '044 *PATENT* AND '659 *PATENT*

Plaintiff moves for summary judgment on Defendants' counterclaims that the Asserted ***Patents*** are invalid as anticipated by Plaintiff's products. (DI. 80 at 26-37; *see also* D.I. 13 at 13-14). Defendants concede that they are not arguing that Plaintiff's own products invalidate the Asserted ***Patents***. (D.I. 93 at 27 ("Waydoo is not

asserting that the Asserted ***Patents*** are invalid over MHL's own products.")). Therefore, this issue is moot and Plaintiff's motion is dismissed.

Plaintiff also moves for summary judgment on Defendants' counterclaims that the Asserted ***Patents*** are invalid as anticipated by the Evolo Report. The Evolo Report is a 554 page report from "a graduate-level student project that was completed in 2009 by naval architecture students at the Royal Institute of Technology in Stockholm, Sweden." (D.I. 80 at 26-37). [9]

There are two issues to this dispute.

The first issue **[**31]** is whether the Evolo Report discloses the static stability limitation of the claims 1-22 of the '044 ***Patent*** and claims 1-15 of the '659 ***Patent***.[10] Plaintiff argues it does not; Defendants argue it does.

The second issue is whether the Evolo Report is a printed publication. Plaintiff argues the Evolo Report is not because it was not publicly accessible before the priority date of the Asserted ***Patents***. Defendants argue there is a genuine issue of material fact as to whether the Evolo Report was publicly accessible.

I address each issue in turn.

1. Does the Evolo Report Disclose the Static Stability Limitation?

"To show that a ***patent*** claim is invalid as anticipated, the accused infringer must show by clear and convincing evidence that a single prior art reference discloses each and every element of a claimed invention." *Silicon Graphics, Inc. v. ATI Techs., Inc., 607 F.3d 784, 796 (Fed. Cir. 2010)*. "[E]very element of the claimed invention [must be described], either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation." *Callaway Golf Co. v. Acushnet Co., 576 F.3d 1331, 1346 (Fed. Cir. 2009)*. As with infringement, the court construes the claims and compares them against the prior art. *See Enzo Biochem, Inc. v. Applera Corp., 599 F.3d 1325, 1332 (Fed. Cir. 2010)*. "While anticipation is a question of fact, it may be decided on summary judgment if **[**32]** the record reveals no genuine dispute of material fact." *Encyclopaedia Britannica, Inc. v. Alpine Elecs. of Am., Inc., 609 F.3d 1345, 1349 (Fed. Cir. 2010)*.

Plaintiff argues that the Evolo Report does not disclose a statically stable watercraft. **[*346]** Specifically, Plaintiff argues that Defendants cannot meet their burden because Dr. Triantafyllou did not mathematically assess the stability of the watercraft disclosed in the Evolo Report. (D.I. 80 at 34-35). Plaintiff also cites to Mr. Barry's expert report to show that the Evolo Report discloses a statically unstable watercraft (*Id.* at 35-36).

Defendants argue that there is a material issue of fact as to whether the Evolo Report discloses a statically stable watercraft because Dr. Triantafyllou concluded that the Evolo Report discloses a statically stable watercraft. (D.I. 93 at 32 (citing D.I. 85-1, Ex. 7, ¶¶ 220-241)). Defendants contend that Dr. Triantafyllou responded to the arguments raised by Plaintiff's expert, Mr. Barry. (D.I. 93 at 32 (citing D.I. 85-1, Ex. 9, ¶¶ 71-77)).

I find there are genuine issues of material fact as to whether the Evolo Report discloses a statically stable watercraft. Both parties rely on the testimony of their expert witnesses to establish their positions. A reasonable juror could weigh the testimony by **[**33]** the parties' experts and reach the conclusion that Defendants have shown that the Evolo Report discloses a statically stable watercraft.

2. Is the Evolo Report a Printed Publication?

"Whether a reference qualifies as a "printed publication" under *§ 102(b)* is a legal conclusion based on underlying factual findings." *Jazz Pharm., Inc. v. Amneal Pharm., LLC, 895 F.3d 1347, 1356 (Fed. Cir. 2018)*. "A reference is considered publicly accessible if it was disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it." *Acceleration Bay, LLC v. Activision Blizzard Inc., 908 F.3d 765, 772 (Fed. Cir. 2018)* (citation and internal quotation marks omitted). "The test

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[9] Plaintiff argue that Defendants improperly combine multiple Evolo-related references into one anticipation analysis. Defendants argue in their briefing that the Evolo Report itself is the single prior art reference that anticipates the Asserted ***Patents***. (D.I. 93 at 30). Therefore, for purposes of this motion, I focus only on the Evolo Report.

[10] Plaintiff also argues that claims 16-20 of the '659 ***Patent*** are not invalidated by anticipation because the Evolo Report does not disclose a motor speed controller, but this issue is moot as I have found claims 16-20 of the '659 ***Patent*** to be invalid for lack of written description. *See* Section III.C *supra*.

for public accessibility is not 'has the reference been indexed?'" *Id. at 774*. Instead, "the ultimate question is whether the reference was 'available to the extent that persons interested and ordinarily skilled in the subject matter or art[,] exercising reasonable diligence, can locate it.'" *Voter Verified, Inc. v. Premier Election Sols., Inc., 698 F.3d 1374, 1380 (Fed. Cir. 2012)* (quoting *SRI Int'l, Inc. v. Internet Sec. Sys., Inc., 511 F.3d 1186, 1194 (Fed. Cir. 2008)*).

Plaintiff argues the Evolo Report was not publicly accessible before the priority date of the Asserted ***Patents***. (D.I. 80 at 30-32). Plaintiff specifically contends that there is no evidence that the Evolo website, which contained a link to the Evolo Report, was indexed by Google, would turn up on **[**34]** a Google search in 2013, or was otherwise accessible to a POSA before the Asserted ***Patents***' priority date. (D.I. 32).

Defendants argue that Plaintiff is not entitled to summary judgment because there is evidence that the Evolo Report was publicly accessible before the Asserted ***Patents***' priority date. Therefore, there is a disputed material of fact, making summary judgment inappropriate. Defendants argue that the record contains evidence that the Evolo Report was downloaded in the United States before the priority date of the Asserted ***Patents***; that their expert Mr. Lanterman concluded that the Evolo website was likely indexed by Google and had regular activity, and that an article published in the Swedish magazine Batnytt ("Boat News") in August 2009 detailed the Evolo project and contained a link to the Evolo website. (D.I. 93 at 28-30).

I find there is a genuine issue of material fact as to whether the Evolo Report was publicly accessible to a POSA prior to October 2013. Plaintiff concedes that there was at least one user in the United States (or at least outside of Sweden and Switzerland) **[*347]** who downloaded the Evolo Report. (D.I. 80 at 16, n.7). Further, the article in Batnytt may also **[**35]** have served as a publicly accessible "research aid" that would have led a POSA to the Evolo website, which contained the Evolo Report. *See, e.g., Blue Calypso, LLC v. Groupon, Inc., 815 F.3d 1331, 1350 (Fed. Cir. 2016); Bruckelmyer v. Ground Heaters, Inc., 445 F.3d 1374, 1379 (Fed. Cir. 2006)*. For these reasons, I find a reasonable jury could determine that the Evolo Report was publicly accessible before the Asserted ***Patents***' priority date.

Therefore, I find Plaintiff is not entitled to summary judgment on Defendants' counterclaims that the Asserted ***Patents*** are anticipated by the Evolo Report.

E. PLAINTIFF'S STANDING

Plaintiff moved for summary judgment on Defendants' affirmative defense that Plaintiff lacks standing. (D.I. 79). After oral argument, Defendants stated they are not challenging standing. (D.I. 145).

Therefore, I will dismiss Plaintiff's motion for summary judgment on standing as moot.

IV. CONCLUSION

For the reasons stated above, I deny Plaintiff's motion for summary judgment for infringement of the '044 ***Patent***, deny Plaintiff's motion for summary judgment for the Asserted ***Patents*** not being invalid as anticipated by the Evolo Report, and dismiss Plaintiff's motion for summary judgment on Defendants' lack of standing argument.

I deny Defendants' motion for summary judgment for non-infringement of the '044 ***Patent*** and '659 ***Patent*** and grant Defendants' motion **[**36]** for summary judgment of invalidity for lack of written description for claims 16-20 of the '659 ***Patent***.

An appropriate order will issue.

ORDER

For the reasons stated in the accompanying memorandum opinion, IT IS HEREBY ORDERED that Plaintiff's Motion for Partial Summary Judgment is resolved as follows: summary judgment of infringement of the '044 ***Patent*** (D.I. 78) is DENIED; summary judgment for the '044 ***Patent*** and '659 ***Patent*** not being invalid as anticipated by the Evolo Report (D.I. 77) is DENIED; summary judgment for the '044 ***Patent*** and '659 ***Patent*** not being invalid as anticipated by MHL Custom's own products (D.I. 77) is DISMISSED as moot; summary judgment for Defendants' lack of standing argument (D.I. 79) is DISMISSED as moot.

Defendants' Motion for Partial Summary Judgment is resolved as follows: summary judgment for non-infringement of the '044 ***Patent*** and '659 ***Patent*** (D.I. 81) is DENIED; summary judgment for claims 16-20 of the '659 ***Patent*** being invalid for lack of written description (D.I. 81) is GRANTED.

As used in the asserted claims of the '659 ***Patent***, the term "A passively stable, weight-shift controlled personal hydrofoil watercraft" is construed to mean "a weight-shift controlled personal watercraft having a hydrofoil that does not have any moveable components and which, when disturbed, **[**37]** (1) has an initial tendency to return to its original condition and (2) eventually returns to its original condition."

As used in the preamble of the asserted claims of the '044 ***Patent***, the term "A passively stable, weight-shift controlled personal hydrofoil watercraft" is construed not to be limiting.

IT IS SO ORDERED this 2nd day of February 2023.

/s/ Richard G. Andrews

United States strict Judge

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Neutral
As of: April 11, 2024 10:29 AM Z

MHL Custom, Inc. v. Waydoo USA, Inc.

United States District Court for the District of Delaware

June 24, 2022, Decided; June 24, 2022, Filed

Civil Action No. 21-91-RGA

Reporter
2022 U.S. Dist. LEXIS 111958 *; 2022 U.S.P.Q.2D (BNA) 586; 2022 WL 2290860

MHL CUSTOM, INC., Plaintiff; v. WAYDOO USA, INC, and SHENZHEN WAYDOO INTELLIGENCE TECHNOLOGY CO., LTD, Defendants.

Subsequent History: ***Patent*** interpreted by, Summary judgment denied by, Summary judgment dismissed by, As moot, Summary judgment granted by *MHL Custom, Inc. v. Waydoo USA, Inc., 2023 U.S. Dist. LEXIS 19479 (D. Del., Feb. 2, 2023)*

Motion granted by, in part, Motion denied by, in part *MHL Custom, Inc. v. Waydoo USA, Inc., 2023 U.S. Dist. LEXIS 46138, 2023 WL 2572285 (D. Del., Mar. 20, 2023)*

Motion denied by, Motion for new trial denied by *MHL Custom, Inc. v. Waydoo USA, Inc., 2023 U.S. Dist. LEXIS 157220 (D. Del., Sept. 6, 2023)*

Injunction denied by, Judgment entered by, Motion granted by, in part, Motion denied by, in part, Motion dismissed by, Without prejudice, Costs and fees proceeding at *MHL Custom, Inc. v. Waydoo USA, Inc., 2023 U.S. Dist. LEXIS 158243 (D. Del., Sept. 7, 2023)*

Core Terms

hydrofoil, flotation, surface, stability, user, proposed construction, watercraft, ***patent***, top, kneeling, static, prone, passive, standing position, ordinary meaning, specification, propulsion, positions, interconnected, stable, strut, upper end, weight-shift, propelling, disturbed, tailoring, disposed, throttle, fixedly, movable

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Judges: Richard G. Andrews, UNITED STATES DISTRICT JUDGE.

Opinion by: Richard G. Andrews

Opinion

MEMORANDUM OPINION

June 24, 2022

/s/ Richard G. Andrews

ANDREWS, UNITED STATES DISTRICT JUDGE:

Before me is the issue of claim construction of multiple terms in U.S. ***Patent*** Nos. 9,359,044 ("the '044 ***Patent***") and ***9,586,659*** ("the '659 ***Patent***"). I held a claim construction hearing on May 3, 2022 and requested supplemental briefing on several questions. I have considered the parties' joint and supplemental briefing. (D.I. 46, 59, 60, 62).

I. LEGAL STANDARD

"It is a bedrock principle of ***patent*** law that the claims of a ***patent*** define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005)* (en banc) (cleaned up). "'[T]here is no magic formula or catechism for conducting claim construction.' Instead, the court is free to attach the appropriate weight to appropriate sources 'in light of the statutes **[*2]** and policies that inform ***patent*** law.'" *SoftView LLC v. Apple Inc., 2013 U.S. Dist. LEXIS 125893, 2013 WL 4759195, at *1 (D. Del. Sept. 4, 2013)* (quoting *Phillips, 415 F.3d at 1324*) (alteration

in original). When construing ***patent*** claims, a court considers the literal language of the claim, the ***patent*** specification, and the prosecution history. *Markman v. Westview Instruments, Inc., 52 F.3d 967, 977-80 (Fed. Cir. 1995)* (en banc), *aff'd, 517 U.S. 370, 116 S. Ct. 1384, 134 L. Ed. 2d 577 (1996)*. Of these sources, "the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Phillips, 415 F.3d at 1315* (cleaned up).

"[T]he words of a claim are generally given their ordinary and customary meaning.... [Which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the ***patent*** application." *Id. at 1312-13* (citations and internal quotation marks omitted). "[T]he ordinary meaning of a claim term is its meaning to [an] ordinary artisan after reading the entire ***patent***." *Id. at 1321* (internal quotation marks omitted). "In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood **[*3]** words." *Id. at 1314*.

When a court relies solely upon the intrinsic evidence—the ***patent*** claims, the specification, and the prosecution history—the court's construction is a determination of law. *See Teva Pharms. USA, Inc. v. Sandoz, Inc., 574 U.S. 318, 331, 135 S. Ct. 831, 190 L. Ed. 2d 719 (2015)*. The court may also make factual findings based upon consideration of extrinsic evidence, which "consists of all evidence external to the ***patent*** and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Phillips, 415 F.3d at 1317-19* (cleaned up). Extrinsic evidence may assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art, and how the invention works. *Id.* Extrinsic evidence, however, is less reliable and less useful in claim construction than the ***patent*** and its prosecution history. *Id.*

II. BACKGROUND

The ***patents*** claim a "personal hydrofoil"—a surfboard-like device that achieves a hovering effect by using a fin that glides under the surface of the water. This fin—the hydrofoil—"enable[s] higher speeds and to lift the surfboard above the choppy, turbulent surface of the water, thus enabling surfing on larger waves." '044 ***Patent***, 1:26-28.

The '044 ***patent*** application was filed October 8, 2014. The '659 ***patent*** application was filed March 8, 2016 and is a continuation of **[*4]** the '044 ***patent***. The '044 and '659 ***patents*** share a specification. The parties agree that the following claims are representative for their respective ***patents***. The disputed claim language is italicized.

'044 ***Patent***, Claim 1:

> A passively stable, weight-shift controlled personal hydrofoil watercraft, comprising:
>
> a flotation device that has a fore-aft length greater than a lateral width, the flotation device having a top surface and a bottom surface, *wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position*, the flotation device having a forward section, a middle section, and a rear section, and the flotation device being controlled via weight shift of the user;
> a strut having an upper end and a lower end, the upper end fixedly interconnected with the flotation device between the middle section and the rear section of the flotation device;
>
> a hydrofoil fixedly interconnected with the lower end of the strut, the hydrofoil having no movable surface and *designed to provide passive static stability* controlled solely by weight shift of the user;
>
> a propulsion system for propelling the watercraft in a body of water, wherein the propulsion system is connected to the hydrofoil; and **[*5]**
> the watercraft having no movable steering system.

'044 ***Patent***, Claim 5:

> A watercraft in accordance with claim 1, wherein *the design for providing the passive static stability is achieved through a combination of airfoil design, planform design and tailoring of span-wise twist distribution.*

'659 ***Patent***, Claim 1:

> *A passively stable, weight-shift controlled personal hydrofoil watercraft*, comprising:
>
> a flotation device that has a fore-aft length greater than a lateral width, the flotation device having a top surface and a bottom surface, *wherein a user can be disposed on the top surface of the flotation device in a prone, kneeling, or standing position*,