Federal Court  Cour fédérale

Date: 20240913

Docket: T-1449-20

Citation: 2024 FC 1439

Toronto, Ontario, September 13, 2024

PRESENT: The Honourable Mr. Justice Manson

BETWEEN:

PROSLIDE TECHNOLOGY, INC.

Plaintiff

and

WHITEWATER WEST INDUSTRIES, LTD.

Defendant

AND BETWEEN:

WHITEWATER WEST INDUSTRIES, LTD.

Plaintiff by Counterclaim

and

PROSLIDE TECHNOLOGY, INC.

Defendant by Counterclaim

PUBLIC JUDGMENT AND REASONS
(Confidential Judgment and Reasons issued September 13, 2024)

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I. Introduction

[1] ProSlide Technology, Inc. ("ProSlide" or the "Plaintiff") brings an action against WhiteWater West Industries, Ltd. ("WhiteWater" or the "Defendant") alleging infringement of Canadian Patent No. 2,778,601 (the "601 Patent"), Canadian Patent No. 2,951,552 (the "552 Patent"), Canadian Patent No. 3,063,073 (the "073 Patent"), and Canadian Patent No. 3,085,150 (the "150 Patent") – collectively, the "ProSlide Patents". WhiteWater defends the action and brings a counterclaim alleging that the asserted claims of the ProSlide Patents are invalid.

II. Background

A. *The Parties*

[2] The parties are both Canadian corporations. ProSlide operates principally out of Ottawa, Ontario. WhiteWater's head office is in Richmond, British Columbia. ProSlide focuses on water slides exclusively, while WhiteWater offers a broader range of products. However, they are the two largest water slide companies globally, with customers around the world.

[3] Among ProSlide's commercial products is a water slide feature called the "FlyingSAUCER". The FlyingSAUCER falls within the subject matter claimed by the 552 Patent, the 073 Patent, and the 150 Patent. WhiteWater's commercial water slide products include features referred to as the "AquaSphere", the "Orbiter", and the "Tailspin". Images of each of WhiteWater's products at issue are included in Schedule B of these reasons. ProSlide alleges that the AquaSphere infringes certain claims of the 601 Patent; that the Orbiter infringes certain claims

of the 552 Patent, the 073 Patent, and the 150 Patent; and that the Tailspin infringes certain claims of the 150 Patent. WhiteWater denies infringement of any of the ProSlide Patents and challenges the validity of all the asserted claims.

B. *The Technical Background*

[4] Water slides are a subset of amusement rides. Their defining feature is their use of water to lubricate the sliding surface upon which one or more riders or ride vehicles travel. Water slides comprise an entry pool positioned higher than an exit pool, and a ride path from the entry pool to the exit pool.

[5] The entry and exit of a water slide are connected by "flumes" of varying sizes. A "flume" is an artificial walled channel that directs the rider through a specific path. Flumes are usually circular in shape, and can be fully enclosed or open along the top. They will often direct riders into a "feature" through an entry chute and out of the feature through an exit chute. A "feature" is a broad term that refers to a structure containing a sliding surface that offers a unique experience to the rider along the ride path.

C. *The 601 Patent*

[6] The 601 Patent is entitled "Water Slide" and generally relates to a slide feature design for a water slide. It was filed in Canada on November 12, 2010, but claims priority to a US patent filed on November 13, 2009. The 601 Patent was published on May 19, 2011, and issued on January 8, 2019.

[7] The patent's specification teaches that, although water slides are popular and entertaining attractions, there is a constant demand for new designs. Park owners seek water slides that will draw more consumers. Consumers in turn want unique designs that are more exciting and stimulating. The specification goes on to briefly describe various embodiments of a water slide feature comprising a sliding surface concave about three axes. It then discloses 11 figures and describes their various elements with greater detail. A representative figure can be found in Schedule A of these reasons.

[8] The 601 Patent has 44 claims. At issue are claims 1, 4, 5, 9, 11, 12, 18, 19, 20, 30, 35, and 38 (the "601 Asserted Claims"). Claims 1, 18, 19, 20, and 30 are independent claims. Claims 4, 5, 9, 11, and 12 depend solely on claim 1, while claims 35 and 38 depend solely on claim 30.

[9] The elements of each claim will be discussed in greater detail below. For the purposes of this background, and by way of example, claim 1 claims:

> A water slide feature comprising a sliding surface concave about three axes sized and adapted to carry one or more riders and/or ride vehicles sliding thereon on a non-predetermined path from an entry to an exit, the entry sized and positioned to direct the one or more riders and/or ride vehicles along the sliding surface on a path which is at least partially upward; wherein the sliding surface is a shape approximating one-half of a sphere.

D. *The 552 Patent Family*

[10] The 552 Patent is entitled "Water Ride" and relates generally to an amusement ride feature. It was filed in Canada on March 3, 2015, and published on December 17, 2015. It claims priority to a US patent filed on June 13, 2014.

[11] The 073 Patent and the 150 Patent are divisional patents of the 552 Patent (collectively for the purposes of these reasons, the "552 Patent Family"). They all share the same title, filing date, and publication date. The 552 Patent was issued on July 21, 2020. The 073 Patent was issued on September 8, 2020. The 150 Patent was issued on November 24, 2020.

[12] The 552 Patent Family disclose similar, but not identical, specifications. The specifications all teach that park owners seek new and innovative rides that provide exciting and thrilling experiences to consumers. The specifications also cite a number of known water ride designs, including one containing a closed loop section and another containing a "bowl" with an exit at the bottom center. The patents go on to state that there is a need for water rides that resolve the disadvantages of the prior art and provide more exciting experiences. Each specification goes on to summarize various embodiments of the claimed inventions, followed by detailed drawings and descriptions. Representative drawings from the specifications are included in Schedule A of these reasons.

[13] Despite the specifications' initial focus on "water rides", the overwhelming majority of the embodiments disclosed therein pertain to "a slide feature for an amusement ride" (emphasis added). The same is true of almost all of the 552 Patent Family's claims. In fact, in the 552 Patent, only two of the embodiments disclosed and two of the claims pertain explicitly to water slides. As for the 073 Patent and the 150 Patent, only two of the embodiments disclosed in each patent and none of their claims pertain to water slides.

[14] The 552 Patent has 34 claims. At issue are claims 1, 2, 3, 4, 12, 16, 18, 19, 21, 22, 25, 27, 28, 29, 30, 31, and 32 (the "552 Asserted Claims"). Claims 1, 27, and 30 are independent claims. Their essential elements are similar but not identical in scope or language. Claims 2, 3, 4, 12, 16, 18, 19, 21, 22, 25, 28, 29, 31, and 32 are dependent claims. By way of example, claims 1 and 25 claim as follows:

> 1. A slide feature for an amusement ride adapted to carry a rider or ride vehicle sliding thereon, the slide feature comprising:
>
> > an inrun permitting ingress of the rider or ride vehicle at a first elevation,
> >
> > an outrun permitting egress of the rider or ride vehicle at a second elevation, wherein the first elevation is higher than the second elevation,
> >
> > a sliding surface in communication with the inrun and the outrun, wherein the sliding surface comprises a two-dimensional, planar surface portion substantially in the geometric shape of a sector of a closed curve,
> >
> > wherein the slide feature provides that the rider or ride vehicle, at least partially urged by gravity, slides along the sliding surface from the inrun to the outrun in an arcuate path,
> >
> > wherein the sliding surface is oriented at a pitch angle around a pitch axis, the pitch angle being measured relative to a horizontal plane,
> >
> > wherein the sliding surface is oriented at a roll angle around a roll axis, the roll angle being measured relative to the horizontal plane,
> >
> > wherein the pitch axis and the roll axis are mutually perpendicular, and
> >
> > wherein at least one of the pitch angle and the roll angle is nonzero.
>
> […]
>
> 25. A water slide comprising a slide feature according to claim 1.

[15] The 073 Patent has 8 claims. At issue are claims 1, 3, 4, 5, 6, and 8 (the "073 Asserted Claims"). Claim 1 is the only independent claim. All other claims depend solely on claim 1. Claim 1 claims:

> A slide feature for an amusement ride adapted to carry a rider or ride vehicle sliding thereon, the slide feature comprising:
>
> > an inrun permitting ingress of the rider or ride vehicle at a first elevation;
> >
> > an outrun permitting egress of the rider or ride vehicle at a second elevation, wherein the first and second elevations are different;
> >
> > a sliding surface in communication with the inrun and the outrun, an apex of the sliding surface being at a higher elevation than the first and second elevations; and
> >
> > a curved outer lip bounding the sliding surface from the inrun to the outrun in an arc of at least 60 degrees, wherein a radius of the outer lip decreases along at least a first portion of the outer lip beginning proximate to the inrun, and wherein the rider or ride vehicle slide along the sliding surface from the inrun to the outrun in an arcuate path at least partially guided by the outer lip.

[16] The 150 Patent has 16 claims. At issue are claims 1, 2, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, and 16 (the "150 Asserted Claims"). Claims 1, 6, and 11 are independent claims. As with the 552 Patent, the 150 Patent's independent claims are similar but not identical in scope or language. Claims 2 and 5 depend solely on claim 1. Claims 7, 8, 9, and 10 depend solely on claim 6. Claims 13, 14, 15, and 16 depend solely on claim 11. As an example, claim 1 claims:

> A slide feature for an amusement ride adapted to carry a rider or ride vehicle sliding thereon, the slide feature comprising:
>
> > an inrun permitting ingress of the rider or ride vehicle at a first elevation;

> an outrun permitting egress of the rider or ride vehicle at a second elevation, wherein the first and second elevations are different;
>
> a sliding surface in communication with the inrun and the outrun;
>
> a curved outer lip extending from the inrun to the outrun, the outer lip defining an outer boundary of the sliding surface, wherein the outer lip has a height with respect to the sliding surface; and
>
> an inner core portion defining an inner boundary of the sliding surface from the inrun to the outrun, the inner core portion having a top surface, wherein at least a portion of the top surface has a height with respect to the sliding surface that is less than the height of the outer lip, wherein a radius of the outer lip decreases along at least a first portion of the outer lip beginning proximate to the inrun.

III. Issues

[17] With respect to the 601 Patent:

1. Does the Defendant's AquaSphere product infringe one or more of the 601 Asserted Claims?

2. Are one or more of the 601 Asserted Claims invalid for one or more of the following reasons?

    a. Anticipation – only with respect to claims 1, 4, 5, 9, 12, 19, and 20;

    b. Obviousness;

c. Lack of utility;

d. Overbreadth; or

e. Ambiguity – only with respect to claims 1, 4, 5, 9, 11, 12, 18, 19, and 38, on the basis that they include one or more of the terms “non-predetermined path from an entry to an exit”, “adjacent”, and “substantially”.

[18] With respect to the 552 Patent:

1. Does the Defendant’s Orbiter product infringe one or more of the 552 Asserted Claims?

2. Are one or more of the 552 Asserted Claims invalid for one or more of the following reasons?

a. Obviousness;

b. Lack of utility;

c. Overbreadth; or

d. Ambiguity, on the basis that they include one or more of the terms “pitch axis”, “pitch angle”, “roll axis”, “roll angle”, “sliding surface”, “radius”, “substantially planar”, and “planar surface”.

[19] With respect to the 073 Patent:

1. Does the Defendant's Orbiter product infringe one or more of the 073 Asserted Claims?

2. Are one or more of the 073 Asserted Claims invalid for one or more of the following reasons?

    a. Obviousness;

    b. Lack of utility;

    c. Overbreadth; or

    d. Ambiguity, on the basis that they include one or more of the terms "sliding surface" and "radius".

[20] With respect to the 150 Patent:

1. Does the Defendant's Orbiter product infringe one or more of claims 1, 2, 5 to 7, 10, 11, 13, and 16 of the 150 Asserted Claims?

2. Does the Defendant's Tailspin product infringe one or more of claims 6, 8 to 11, and 14 to 16 of the 150 Asserted Claims?

3. Are one or more of the 150 Asserted Claims invalid for one or more of the following reasons?

    a. Obviousness;

    b. Lack of utility;

    c. Overbreadth; or

    d. Ambiguity, on the basis that they include one or more of the terms “sliding surface”, “inner boundary”, “outer boundary”, and “radius”.

IV. Preliminary Issue on Ambiguity

[21] Early in the trial, WhiteWater stated that it will not make arguments or adduce any evidence with respect to ambiguity. It nevertheless continues to advance this ground as a matter of claim construction. In other words, WhiteWater relies on its ambiguity challenge insofar as I find that the skilled person would not be able to understand certain terms within each of the asserted claims.

[22] In making this submission, WhiteWater faces a high threshold. Justice Hughes described a finding of ambiguity as a “last resort”, one to be avoided “if at all possible” (*Pfizer Canada Inc v Canada (Minister of Health)*, 2005 FC 1725 at paras 49, 53; *Teva Canada Innovation v Apotex Inc*, 2014 FC 1070 at para 31, citing *Hughes & Woodley, Patents,* 2nd ed, looseleaf (Canada: LexisNexis Canada Inc, 2005-2014) at 310-11).

[23] Notably, while the parties' experts disagree on some aspects of claim construction, neither of them have opined that the claims at issue contain terms that the skilled person would not be able to understand, particularly in light of the patents' specifications and the common general knowledge. I find no reason in my analysis below to conclude differently. Therefore, in my view, none of the asserted claims are ambiguous.

V. The Parties' Evidence

A. *ProSlide's Witnesses*

(1) Jason Young

[24] ProSlide relies on the expert evidence of Jason Young.

[25] Mr. Young is a mechanical engineer. He earned a bachelor's degree in mechanical engineering from the University of Western Ontario and a master's degree in biomedical engineering from the University of Toronto. He is certified as a professional engineer, first licensed in Ontario in 2002, and then in Alberta in 2021.

[26] Mr. Young is involved with the ASTM International (the "ASTM"), an organization that publishes technical standards in several industries. He sits on various committees within the ASTM, some of which develop standards in relation to measurements and testing of amusement rides and water slides. He is also a technical contributor to the ASTM's standard for measuring dynamic characteristics of water slide systems using instrumented humans.

[27] Mr. Young is currently the president of Advantage Forensics, Inc., a forensic engineering firm. He has conducted over 100 assessments of water slides and water park rides. This involved assessing the geometry, speed, acceleration, and tube performance of water slides. He has been qualified as an expert in water slide design and mechanical engineering in multiple superior courts in Canada, as well as the Florida District Court.

[28] I accepted Mr. Young's expert qualification as follows:

> Mr. Jason Young is an expert in the field of mechanical engineering and waterslide design, operation, testing and evaluation.

[29] Mr. Young provided his opinion on both validity and infringement in three reports. His first report focuses on claim construction and infringement. His second report responds to WhiteWater's expert evidence on claim construction and validity. His final report expands on the first report with the benefit of WhiteWater's expert's commentary.

[30] On cross-examination, Mr. Young was consistent. He made some concessions where appropriate and was forthcoming in acknowledging one clear inconsistency in his analysis, once it was pointed out to him. That said, he also conceded that (1) he did not have the same level of experience in the water slide design process as what he would expect of the skilled person, and (2) his understanding of the water slide design industry as it was between 2009 and 2011 and between 2014 and 2015 is based in part on webinars attended in 2023. While this impacts the weight of Mr. Young's testimony on the skilled persons and their common general knowledge, I nonetheless found Mr. Young to be knowledgeable and credible overall. I discuss his evidence as may be relevant below.

(2) Andreas Tanzer

[31] ProSlide also called Andreas Tanzer as an expert witness. Mr. Tanzer was (as of the date of his testimony) the Director of Research, Design & Standards at ProSlide. He worked closely with Richard Hunter, the named inventor in the asserted patents and the owner and founder of ProSlide. The two are co-inventors on a number of other patents, none of which are at issue here.

[32] Mr. Tanzer's father co-founded ProSlide with Mr. Hunter. Mr. Tanzer has worked with ProSlide ever since. He retired from ProSlide on July 5, 2024, a few weeks after his oral testimony.

[33] Mr. Tanzer has over 35 years of experience in water ride design and development at ProSlide. In addition, Mr. Tanzer was certified as a Professional Ride Inspector with the AIMS International, an organization that promotes safety in the amusement industry. He is also involved separately with the ASTM. He served as a member of the ASTM's F24 committee, and has since become its vice-chair. The F24 committee is devoted to developing standards relating to amusement rides and devices. Through his involvement with the ASTM, Mr. Tanzer chaired a number of task groups that went on to develop various standards relating to water slides and aquatic play equipment.

[34] Mr. Tanzer's evidence is focused on the design process for a new water slide feature and whether the utility of the ProSlide Patents was demonstrated or soundly predicted. In addition, his report offers fact evidence at paragraphs 22, 26, 29, 43, [redacted], 52, 74, 75, 77, 79, [redacted], 89, and 118. Among other things, Mr. Tanzer's fact evidence states that (1) he was the leader of the product

development team that developed new water slide features; (2) ProSlide had done modelling and testing of the feature claimed by the 601 Patent; and (3) ProSlide created 3D models and video simulations of the feature claimed in the 552 Patent Family and compared it with previous slides. It would therefore be incorrect to describe Mr. Tanzer merely as a proposed expert witness. He is also a fact witness, and a distinction must be made between his opinion evidence and his fact evidence.

[35] With respect to his opinion evidence, ProSlide proposes that Mr. Tanzer be qualified as follows:

> Mr. Andreas Tanzer is an expert in the field of water slide design, including the development of water slide features.

[36] WhiteWater objects to Mr. Tanzer's proposed qualification and submits that his opinion evidence is inadmissible. WhiteWater argues that he is unable to discharge the duty expected of an expert to the Court, namely to provide independent and impartial evidence. Although it is evident that Mr. Tanzer has specialized knowledge and experience in water slide design, I nevertheless agree that Mr. Tanzer's opinion evidence is compromised by his long and intimate association with ProSlide and Mr. Hunter. The issue is whether the nature and extent of the association prevents him from discharging his duty to the Court as a proposed expert.

[37] To be admissible, expert evidence must be relevant, necessary, and not subject to an exclusionary rule. The Court must also be satisfied that the proposed expert is qualified. In addition to these requirements, the Court retains its gatekeeping function, measuring the benefits of admitting a proposed expert's evidence against the costs (*White Burgess Langille Inman v Abbott*

and Haliburton Co, 2015 SCC 23 [*White Burgess*] at paras 23-24). An expert's lack of independence can render their evidence inadmissible if they are "clearly unwilling and/or unable to carry out" their duty to the Court. The expert's inability to discharge that duty engages (1) the expert's qualification and/or (2) the Court's gatekeeping role (*White Burgess* at paras 49-54).

[38] In assessing an expert's independence and impartiality, what matters is the nature and extent of their interest or connection with one of the parties, not the existence of an interest or connection. Therefore, a mere employment relationship with the party calling the evidence will be insufficient to render the evidence inadmissible, but advocacy on behalf of, close familial relationships with, or a financial stake in one party would likely suffice, depending on the circumstances, to infer that the expert lacks independence and impartiality (*White Burgess* at para 49).

[39] In *Roher v Canada*, 2019 FCA 313 [*Roher*], the Federal Court of Appeal upheld a decision by the trial Judge to exclude expert evidence for lack of independence. The appellant participated in an art donation program to reduce his taxes. At issue before the trial Judge was the fair market value of the art. The appellant relied on an expert report from an art appraiser. However, the appraiser was previously retained by the art donation program. In affirming the trial Judge's decision, the Court noted that the expert's "proposed report gave an opinion on the validity of her own appraisals" and that "she essentially proposed to give an expert opinion on her own professional opinions" (*Roher* at para 15).

[40] Mr. Tanzer's expert report is analogous to the report that was before the Court in *Roher*. On cross examination, Mr. Tanzer acknowledged that he was involved at key points in the product design process that led to the 552 Patent Family. Though he characterized his involvement as "mak[ing] sure that [the design team] crossed their Ts, dotted their Is, and [making] sure that they covered everything", it was evident from the documentary record that his involvement was far more substantive. He is identified in one document as a "mandatory reviewer" of the design concept. In a design meeting's minutes, he is noted for suggesting that ProSlide file a PCT patent and then a US patent in relation to the subject matter of the 552 Patent Family. Separately, in an email exchange referencing allegedly infringing products sold by WhiteWater, Mr. Tanzer expressed his hope that ProSlide would take legal action. When asked directly on cross examination whether he is loyal to ProSlide, Mr. Tanzer confirmed unequivocally that he is indeed loyal.

[41] In my view, given the nature and extent of his involvement in ProSlide's design process, combined with his comments on cross examination, Mr. Tanzer is unable to independently and impartially provide opinion evidence, particularly as to whether ProSlide demonstrated or soundly predicted utility. Mr. Tanzer is therefore not qualified to provide expert evidence and his opinion evidence must be excluded. Even if Mr. Tanzer's opinion evidence were admissible, I would still give it little to no weight, in light of his long and intimate association with ProSlide and the product development of at least some of the water slide features that are the subject of the patents at issue.

[42] This conclusion has no bearing on Mr. Tanzer's fact evidence, which remains admissible. I find no issues with Mr. Tanzer's credibility in that respect.

(3) Richard Hunter

[43] Richard Hunter is the President and Chief Executive Officer at ProSlide. He is the named inventor of the ProSlide Patents. Mr. Hunter's evidence discussed ProSlide's founding and its current business model. He also testified regarding the invention story of both the 601 Patent and the 552 Patent Family, and discussed the commercialization of the 552 Patent Family into the FlyingSAUCER commercial product.

[44] With respect to the 601 Patent, Mr. Hunter testified that he conceived of the invention's concept and then developed it through a method known as [redacted] According to Mr. Hunter, this testing method, combined with his prior experience in the method and water slides more generally, allowed him to understand the path a rider would take through various embodiments of the feature claimed in the 601 Patent. [redacted]

[45] [redacted]

[redacted]

[46] [redacted]

[47] As for the 552 Patent Family, Mr. Hunter testified that he conceived of the underlying concepts by melding his background as a professional skier performing high speed turns with what he saw as disadvantages in existing water slide designs that involve a looping feature. [redacted]

[48] On cross examination, Mr. Hunter was consistent in saying that compound curves were not essential to the inventions claimed by the 552 Patent Family, since certain embodiments may not have compound curves. He nonetheless conceded that having a roll or pitch angle is a fundamental design element. [redacted]

[49] Overall, Mr. Hunter was consistent in his evidence, though he tended to embellish some of his testimony. Nevertheless, I find he is a credible witness and I discuss his evidence as may be relevant below.

(4) Ray Smegal

[50] Ray Smegal is the Chief Commercial Officer at ProSlide. His current position is focused on sales, but he previously held various roles in ProSlide's product development team, including as head of that team.

[51] Mr. Smegal discussed ProSlide's position in the water slide industry. His evidence also focused on the development of the FlyingSAUCER product and its impact on the industry. He also testified regarding the negative effects that WhiteWater's Orbiter and Tailspin products had on ProSlide's sales of the FlyingSAUCER.

[52] Mr. Smegal was consistent in his evidence. He answered questions directly and clearly. I find him to be a credible witness. I discuss his evidence as may be relevant below.

B. *WhiteWater's Witnesses*

(1) James Diamond

[53] Mr. James Diamond is WhiteWater's sole expert witness in this proceeding.

[54] Mr. Diamond is a professional engineer with over 40 years of experience. He earned a bachelor's degree of applied science in civil engineering from the University of Ottawa in 1983, after which he worked with various firms as a structural engineer between 1984 and 1998. His

responsibilities in that period included creating preliminary designs, conducting engineering analysis and computer modelling, and reviewing buildings.

[55] In 1998 and until 2006, Mr. Diamond worked at ProSlide, first as a senior structural engineer and then as Manager of Design and Engineering. His responsibilities included supervision of in-house design and engineering staff, assistance in the development of conceptual designs and proposals of water slides, the standardization of water slide towers and support structures, the automation of water slide design and estimation processes, and the supervision and management of external engineering resources. He was involved in the development of several of ProSlide's water feature products, but not the features that form the subject matter of the ProSlide Patents at issue.

[56] Since leaving ProSlide, Mr. Diamond has worked with Leibe Engineering Associates. He continues to work there on matters such as the structural design of industrial projects, residential and commercial buildings, and water parks.

[57] I accepted Mr. Diamond's expert qualification as follows:

> James Diamond is a professional engineer and civil engineering consultant with expertise in structural engineering, including the design, development, manufacture and installation of water slides, water slide features and related infrastructure.

[58] As with Mr. Young, Mr. Diamond provided his opinion on both validity and infringement in three reports. His first report focuses on claim construction and validity. His second report

responds to WhiteWater's expert evidence on claim construction and infringement. His final report expands on the first report with the benefit of Mr. Young's commentary.

[59] I found Mr. Diamond to be knowledgeable, and considered his evidence to be helpful and generally credible. That said, his evidence was inconsistent in respect of several aspects, and, on cross examination, he made a number of material concessions that undermined his analysis. This undermined the weight of his evidence. I discuss his testimony, concessions, and inconsistencies as may be relevant below.

(2) Claudio Barrera

[60] Claudio Barrera has worked with WhiteWater for 23 years. He currently holds the position of Director of Innovation and has been in that role since late 2019.

[61] Between early 2010 and late 2019, Mr. Barrera held the role of Water Slide Product Manager and then Director of Product Development. In the latter of these two roles, he was responsible for the development of new products and the improvement of existing products, among other things. He oversaw the development of WhiteWater's Orbiter and Tailspin products. Though he was not involved directly with the development of WhiteWater's AquaSphere product, which coincided with his time as Water Slide Product Manager, he was aware of that work and took part in the testing and validation of the product.

[62] [redacted]

[redacted]

[63] Mr. Barrera provided evidence on the product development history of WhiteWater's AquaSphere. He stated that WhiteWater sought to create a water slide feature with a visual appeal to the external observer and a unique but brief ride experience that includes a 90 degree turn. After an early full-size model was built, an injury caused the product development team to adjust the design. According to Mr. Barrera, the team determined that it was "critical, for safety reasons," to ensure all ride vehicles enter straight down the middle of the flume leading into the AquaSphere, down a narrow corridor, up the portion of the sliding surface opposite the entry, and then back down towards the exit. This was done by, among other things, (1) creating entry and exit "channels" within the feature that direct the rider in a particular direction, and (2) adding and removing water in key areas to control the speed and trajectory of the rider.

[64] Mr. Barrera also discussed the product development history of the Orbiter. His evidence in chief acknowledged that the Orbiter's development was a response to ProSlide's FlyingSAUCER. The intent behind the Orbiter was to offer an alternative to the FlyingSAUCER. It was nonetheless allegedly designed to be distinct from ProSlide's product. According to Mr. Barrera, distinguishing

features of the Orbiter's design are its curved sliding surface, its partially upward trajectory, and its use of a "weightlessness" moment.

[65] Mr. Barrera's evidence showed that WhiteWater's product development team made an effort to remain aware of ProSlide's intellectual property. Though he and his team felt that there may be a risk of litigation, they also considered the Orbiter's design to be non-infringing.

[66] With respect to the development history of the Tailspin, Mr. Barrera testified that the concept evolved from WhiteWater's existing Open Constrictor product. The Open Constrictor is a feature that involves tight spiral curves with a constant radius using an open flume. An image of the Open Constrictor is included in Schedule A of these reasons. The evolution to the Tailspin was, per Mr. Barrera, motivated by aesthetic considerations. However, on cross examination, Mr. Barrera acknowledged that WhiteWater's development team also considered ProSlide's FlyingSAUCER product and how to best compete with it.

[67] Mr. Barrera also provided evidence of WhiteWater's manufacturing and sales process. The manufacturing of WhiteWater's parts is handled by third party subcontractors, who also handle shipping to customers. Mr. Barrera testified that the parts of eight AquaSpheres were manufactured by a third party in Canada. They were subsequently shipped for assembly and use abroad. All other products at issue were and are manufactured, assembled, and used outside of Canada. They do not pass through Canada at any point.

[68] I found Mr. Barrera's evidence to be consistent and credible. I discuss his evidence as may be relevant below.

VI. Analysis

A. *Claim Construction, the Skilled Person, and the Common General Knowledge*

[69] A patent's claims are interpreted by the Court in an informed and purposive manner. They are read from the perspective of a person of ordinary skill in the art (the "skilled person") as of the date of publication. To ensure predictability and fairness to both the patentee and the public, the Court's interpretation must remain anchored in the words and language of the claims. The Court will therefore distinguish between a claim's essential and non-essential elements, granting protection only to the invention's essential features. Reference cannot be made to the "spirit of the invention" to extend the scope of a claim. Instead, the Court will endeavour, through the eyes of the skilled person, to glean the nature of the claimed invention as described, being neither too generous nor too harsh (*Whirlpool Corp v Camco Inc*, 2000 SCC 67 [*Whirlpool*] at paras 42-55; *Free World Trust v Électro Santé Inc*, 2000 SCC 66 [*Free World Trust*] at paras 31, 44-54; *Consolboard Inc v MacMillan Bloedel (Saskatchewan) Ltd*, [1981] 1 SCR 504 [*Consolboard*] at para 27; *Tearlab Corporation v I-MED Pharma Inc*, 2019 FCA 179 [*Tearlab*] at paras 31-34).

[70] Where ambiguity persists in the words of a claim, the Court may also refer to the patent's specification for clarity (*Tearlab* at para 33).

[71] While the claim language is read through the eyes of the skilled person, having regard to that person's common general knowledge, the Court is entitled to differ from the construction argued by either party, as it is the role of the Court alone as a matter of law to construe the claims (*Biogen Canada Inc v Pharmascience Inc*, 2022 FCA 143 at paras 71-72; *Whirlpool* at para 61).

[72] The skilled person referred to above is a hypothetical figure who, being equipped with the common general knowledge, is sufficiently informed in the art to be able to appreciate the patent at a technical level. In doing so, the skilled person is presumed to have a mind willing to understand. Though a paragon of deduction and dexterity, the skilled person is nevertheless devoid of intuition, imagination, or inventiveness (*Free World Trust* at para 44; *Whirlpool* at para 53; *Hospira Healthcare Corporation v Kennedy Trust for Rheumatology Research*, 2020 FCA 30 [*Hospira*] at para 79).

[73] The skilled person's common general knowledge is the set of skills, knowledge, and technical acumen ordinarily known in the field as of the date of publication (*Apotex Inc v Sanofi-Synthelabo Canada Inc*, 2008 SCC 61 [*Sanofi*] at para 37). This is distinct from the prior art, which may include all relevant information that is publicly available. Therefore, the mere existence of some information in a prior publication or document does not in itself render it part of the common general knowledge. That information must also be ordinarily known to the skilled person in their field or industry (*Gemak Trust v Jempak Corporation*, 2022 FCA 141 at paras 95-96).

(1) The Skilled Person(s) to whom the Patents are Addressed

[74] Mr. Young states that the skilled person is the same for both the 601 Patent and the 552 Patent Family. He says that the skilled person would have either (a) a bachelor's degree in mechanical engineering and at least four years of experience in designing, evaluating, analyzing, and/or testing water slide rides, or (b) at least ten years of apprenticeship and training as a water slide designer, manufacturer, and/or tester under the supervision of a qualified individual.

[75] Mr. Diamond disagrees. First, he states that the 601 Patent and the 552 Patent Family are not addressed to the same skilled person. He notes that the subject matter of the 601 Patent is a *water slide* feature, whereas the 552 Patent Family pertains mainly to an *amusement ride* feature, with only some embodiments explicitly including a water slide. Since amusement rides encompass a set of products that is larger in scope than mere water slides, Mr. Diamond says that the 552 Patent Family is addressed to a skilled person with a wider range of experience that includes dry rides, snow rides, and ice rides.

[76] Second, Mr. Diamond argues that Mr. Young's educational requirements are too narrow. He submits that the skilled person could have "any educational training that would provide a person with the underlying skills to design and/or build a water slide or water slide feature." This includes any discipline of engineering or industrial design.

[77] Third, Mr. Diamond says that the extent of experience suggested by Mr. Young is arbitrary. In his (Mr. Diamond's) view, the skilled person can have less than four years of experience in the

field if that experience is combined with educational training. Otherwise, in the case of the skilled person without educational training, the minimum experience can be less than ten years. Mr. Diamond would not specify a length of time, other than to say that it is less than what Mr. Young suggested.

[78] I find that the skilled person to whom the 601 Patent is addressed (the "601 skilled person") is somewhat different from the skilled person to whom the 552 Patent Family is addressed (the "552 skilled person", and together with the 601 skilled person, the "skilled persons"). Both of the skilled persons would have either (a) a bachelor's degree in mechanical or civil/structural engineering and at least four years of experience in their field, or (b) at least six to eight years of apprenticeship and training in their field. The 601 skilled person's field would be focused on designing, evaluating, analyzing, and/or testing water slide rides. The 552 skilled person's experience would be focused on the same competencies in relation to both water slide rides and dry amusement rides more generally, but not necessarily to snow or ice rides, as nothing in the 552 Patent Family suggests snow or ice are possible features of the disclosed and claimed subject matter.

(2) The Common General Knowledge

[79] Mr. Young and Mr. Diamond agree that the skilled persons would share the same common general knowledge and that there is no material difference in the common general knowledge between the 601 Patent's publication date and the 552 Patent Family's publication date. They also both agree that the common general knowledge includes the following:

1. The components of a water slide, including a water slide tower, entry pool, exit pool, closed and open flumes, sliding surface, water slide features, and (in some cases) ride vehicles;

2. The components of water slide features, including an entry chute, exit chute, and sliding surface;

3. Geometric concepts like radius, diameter, geometric center or centroid, radius of curvature;

4. Geometric shapes, including a circle, ellipse, closed curve, sector of a closed curve, spiral, helix;

5. Concavity versus convexity;

6. Compound curves; and

7. The importance of both entertainment and safety as design considerations, the latter being the paramount consideration.

[80] I agree that the above matters are part of the skilled persons' common general knowledge at the relevant dates. Of the areas suggested by only one expert but not readily proposed by the other, I also find that the following forms part of the skilled persons' common general knowledge:

1. Methods of describing an object's orientation in 3D space relative to the horizontal plane, specifically the pitch angle, roll angle, and yaw angle;

2. The importance of tapering the edges connecting an entry/exit chute and a sliding surface, so as to ensure safety;

3. The general uses of water in a water slide, including lubrication, braking, guidance, and propulsion;

4. The role of gravity in the ride path;

5. Different types of friction and their effect on the ride path;

6. The *possible* (but ultimately uncertain) effects that water may have on a rider or ride vehicle's path, including simulated paths; and

7. Only in the case of the 552 skilled person, the differences between dry rides and water slides, particularly in relation to design considerations and ride path.

[81] Finally, I find that [redacted] is not part of the common general knowledge.

(3) [redacted] and the Common General Knowledge

[82] [redacted]

[83] The evidence clearly indicates that [redacted] would not be part of the skilled persons' common general knowledge. In other words, the skilled persons would not have known to use [redacted] at any relevant date in this proceeding. Nor could they presume from the disclosure of example ride paths in a patent's specification that [redacted] was used by a patentee to simulate such paths. [redacted]

[84] [redacted] In my view, if [redacted] was disclosed, the skilled persons would be able to supplement the outcome of such testing with their

common general knowledge to make some inferences as to the possible ride paths that will emerge once water is introduced. This is not to say that such inferences would suffice on their own to finalize a water slide feature's design. [redacted]

(4) Construing the Claims

[85] Mr. Young and Mr. Diamond are both of the view that all elements of each claim are essential. I agree.

[86] The experts also generally agree on the proper construction of the claims, except with respect to a handful of terms and phrases. Within the 601 Patent, the experts disagree on the meaning of (a) "non-predetermined path", (b) "the ride path crosses under the entry", (c) "looping path around the sliding surface", and (d) "exit adjacent to entry". Within the 552 Patent Family, they do not agree on the meaning of (e) "amusement ride", (f) "planar surface portion", (g) "sliding surface oriented at a pitch angle around a pitch axis… relative to a horizontal plane", "sliding surface oriented at a roll angle around a roll axis… relative to a horizontal plane", (h) "radius of the outer lip", and (i) "decreases stepwise". WhiteWater says many of these terms are ambiguous – that is, their meaning cannot be discerned by the skilled person having a mind willing to understand. I disagree and provide the construction to be applied to each of the terms below:

(a) *"non-predetermined path"*

[87] Mr. Young interprets the term “non-predetermined path” to mean that the rider’s path on the claimed feature’s sliding surface is not determined by the ride geometry, including for example flumes and walls. He states that a non-predetermined path would be impacted by other variables such as the rider’s mass, speed, and angle upon entry.

[88] Mr. Diamond construes the phrase to mean that the rider’s path is not known in advance. Mr. Diamond does not disagree with Mr. Young’s description that the ride path of the sliding surface in question is not determined by the geometry itself. However, Mr. Diamond stresses that even a predetermined path would have some variations. For example, the rider’s weight and speed could create minor variations or oscillations as the rider’s path runs through a flume, a decidedly predetermined trajectory. Therefore, he considers a slide path to be a “non-predetermined path” only where there is more than one possible distinct path on which to slide through a water slide feature.

[89] Embedded in the experts’ analyses are two ways of understanding the difference between predetermined and non-predetermined paths. One way is centered around *variation in movement*: a predetermined path has little variation, while a non-predetermined path has high variation. Another way is focused on *control of external factors*: if the geometry and design of the sliding surface uses walls and flumes, as well as other methods such as water flow, to render external factors such as the rider’s weight immaterial to the path, then that path is predetermined; otherwise the path is non-predetermined.

[90] In my view, the phrase "non-predetermined path" means a path not *controlled* by walls, channels, flumes, or other tools like water flow, such that the path is materially influenced by the rider's weight, speed, and angle of entry. This accords with the 601 Patent's specification. There, at page 8, the patent discusses one embodiment of the claimed invention, describing the path as "not predetermined by walls or channels" (emphasis added).

(b) *"the ride path crosses under the entry"*

[91] Mr. Diamond suggests that the meaning of the phrase "the ride path crosses under the entry" is that the ride path passes through a point that is below the entry. It does not intersect itself. Mr. Young argues that the phrase means that the ride path goes through a point on the sliding surface twice, the point being immediately below the entry. The ride path therefore intersects itself.

[92] The disagreement between the two experts is illustrated by reference to the 601 Patent's specification. Mr. Young's interpretation is best represented by Figure 1 therein, while Mr. Diamond's construction is represented by Figure 4. In discussing Figure 1, the specification describes the ride path in five segments and goes on at page 10 to use the term "crosses" to mean "intersected":

> In the fifth segment 40, the sliding path 28 crosses over the first segment 30 of the sliding path 28 completing a 360° loop, and the rider may travel upward and out through the exit 16.
>
> [Emphasis added.]

[93] In contrast, when describing Figure 4, the specification states on page 14 that the ride path does not cross itself, despite the fact that it passes under the entry:

> In this embodiment, the entry 314 extends over the exit 316 such that the sliding path 328 does not cross itself on the sliding surface 312. Instead, the exit 316 is below the entry 314.
>
> [Emphasis added.]

[94] I find that the phrase "the ride path crosses under the entry" means that the ride path intersects with itself at a point on the sliding surface that is immediately below the entry, similar to what is depicted in Figure 1.

(c) *"looping path around the sliding surface"*

[95] Mr. Young argues that a looping path is one that intersects with itself. Mr. Diamond includes within the meaning of the term any path that has the shape of a loop, even if the path does not cross itself.

[96] I agree with Mr. Diamond. At various points in the 601 Patent's specification, the term "loop" is used to describe the shape of a path that does not cross itself. For example, on page 14, the specification states in relation to Figure 4 that:

> In this embodiment, the entry 314 extends over the exit 316 such that the sliding path 328 does not cross itself on the sliding surface 312. Instead, the exit 316 is below the entry 314. The sliding path 328 still traces a looping path around center point 320 of the sliding surface 312.
>
> [Emphasis added.]

[97] And in relation to Figure 5, the specification provides on page 14 that:

> It can be seen that in this embodiment, the water slide 410 may not be a complete half-sphere. The water slide 410 may be formed from a portion of a half-sphere but not a complete half-sphere. […] This results in the sliding path 428 tracing a looping path only about one half of the looping path traced in the previously described embodiments.
>
> [Emphasis added.]

[98] The specification's use of the term "loop", along with its references to Figures 4 and 5, suggests to the skilled person that a looping path need not intersect itself. Rather, the distinguishing feature of a looping path is that the rider or ride vehicle travels in an arc around the center of the sliding surface.

(d) *"exit adjacent to entry"*

[99] Mr. Young states that an exit is adjacent to the entry if the two are on the same side of the sphere and are no greater than 90 degrees apart. In other words, the exit and the entry would be no more than a quadrant apart. Mr. Diamond says this is an arbitrary limit, but offered no alternative interpretation other than that the exit is *beside* the entry.

[100] I find that the term "adjacent" in this context means that the exit and the entry are on the same side of the sphere and are no greater than 90 degrees apart.

(e) *"amusement ride"*

[101] Mr. Young construes the term "amusement ride" to mean a water slide ride with at least one slide feature. He offers a number of reasons to explain why the term includes only water slide rides, and no other types of amusement rides:

1. The titles of each of the 552 Patent Family patents, which refer to a "Water Ride";

2. The patent's owner being ProSlide;

3. The specification stating that the patent pertains only generally to amusement rides and more specifically to water slides;

4. The background section focusing entirely on water slides and issues that existed in known designs at the time; and

5. Most (though not all) of the figures disclosed in each of the 552 Patent Family patents pertain to water slides.

[102] I do not agree. In the 552 Patent, it is not necessary to consult the specification, as the claims themselves make a distinction between a feature in an amusement ride and a feature in a water slide. This is clear from claims 1 and 25. The former is an independent claim claiming a feature for an amusement ride. The latter is a dependent claim claiming the feature of claim 1, but in a water slide. If, as Mr. Young suggests, the term "amusement ride" includes only water slides,

then there would be no need for differentiating a water slide from an amusement ride in claim 25. In the absence of evidence to the contrary, claims are presumed not to be redundant (*Ratiopharm Inc v Canada (Health)*, 2007 FCA 83 at para 33). Moreover, different words are presumed to have different meanings (*ABB Technology AG v Hyundai Heavy Industries Co, Ltd*, 2015 FCA 181 at para 45, aff'g 2013 FC 947 at para 29). This teaches that the term "amusement ride" has a broader meaning than "water slide".

[103] The disclosure of the 552 Patent serves to further support this finding. Nearly all of the embodiments disclosed in the summary section describe a feature for an amusement ride. Only two embodiments disclose "a water slide comprising a slide feature as described above [in relation to amusement rides]".

[104] As for the 073 Patent and the 150 Patent, their specifications disclose various embodiments of a feature for an amusement ride. However, a number of embodiments disclosed are described by language more narrowly focused on water slides. Again, like the 552 Patent, this suggests that the term "amusement ride" should be construed to be broader than "water slide".

[105] I find that the term "amusement ride" includes, but is not limited to, water slides. It also includes other types of amusement rides.

(f) *"planar surface portion"*

[106] Mr. Diamond states that the sentence "the sliding surface comprises a… planar surface portion substantially in the geometric shape of a sector of a closed curve" means that the sliding

surface is mostly flat. Mr. Young agrees that the term "planar" means flat. However, he argues that a sliding surface with only one small flat segment would fall within the meaning of the term. On cross examination, he agreed that by his definition, even a planar surface portion as small as a "half cookie" would suffice. I do not agree.

[107] I find that the sentence at issue would be understood by the 552 skilled person to mean that more than an insignificant portion of the sliding surface is flat.

(g) *"pitch angle around a pitch axis" and "roll angle around a roll axis"*

[108] Mr. Young states that the frame of reference for the sliding features' pitch and roll axes are identified by the specifications of the 552 Patent Family. He cites examples from the figures disclosed by the specifications. Mr. Diamond acknowledges that the figures disclose a frame of reference, but also observes that the specifications go on to state that the axes may vary in location. Nevertheless, Mr. Diamond opines that the 552 skilled person, reading the patent with a mind willing to understand, would adopt the frame of reference disclosed in the specifications' figures, notwithstanding any inconsistency thereafter.

[109] In my view, whatever difference exists between Mr. Young and Mr. Diamond in this respect is immaterial. I agree with Mr. Young that the 552 skilled person, reading each of the 552 Patent Family as a whole and having a mind willing to understand, would appreciate that "the roll axis is defined as running horizontally from the middle of the feature to the midway point along the outer lip" of the feature, and that "[t]he pitch axis is then defined as running horizontally at a 90° angle (i.e., perpendicular) to the roll axis".

(h) *"radius of the outer lip"*

[110] Mr. Diamond points to an inconsistency in the use of the term "radius". He specifically observes the distinct use of the term in the context of the "radius of the sliding surface" and the "radius of the outer lip". Mr. Young simply states that, in the latter case, the term "radius" means radius of curvature. Mr. Diamond "do[es] not disagree" with Mr. Young's conclusion, despite the inconsistency he highlighted.

[111] There is no material difference between the positions of Mr. Diamond and Mr. Young. The 552 skilled person would appreciate that the term "radius" can have different meanings. The skilled person would understand that the phrase "radius of the outer lip" means the radius of curvature of the outer lip.

(i) *"decreases stepwise"*

[112] Mr. Young states that the outer lip's radius of curvature decreases "stepwise" if each successive component of the outer lip has a radius of curvature that is lower than what was before it. He says this would occur in discrete stages, not gradually. Mr. Diamond, by contrast, states that decreasing "stepwise" means decreasing progressively, which Mr. Young understands to include a constantly/gradually decreasing radius.

[113] I agree with Mr. Young. The 073 Patent's claims 2 and 3 each claim a feature where the radius of the outer lip decreases along its first portion. Claim 2 states that the decrease is continuous, whereas claim 3 states that the decrease is "stepwise". This indicates that the term

"stepwise" does not include a gradual change, but a change in discrete stages. The 552 skilled person would understand the term accordingly.

B. *Infringement*

[114] A patentee enjoys an exclusive right to make, construct, use, and sell the invention claimed by their patent (*Patent Act*, RSC 1985, c P-4, s 42). With some exceptions, none of which are at issue here, this exclusive right is infringed when anyone other than the patentee makes, constructs, uses, or sells an article that embodies all the essential elements of the invention as claimed (*Monsanto Canada Inc v Schmeiser*, 2004 SCC 34 at para 30). The making, constructing, using, or selling must occur within Canada for liability to arise under Canadian law (*Hospira* at para 36, *Domco Industries Ltd v Mannington Mills Inc*, (1990) 29 CPR (3d) 481 at 494-95 (FCA)).

[115] The allegation that WhiteWater's AquaSphere, Orbiter, and Tailspin products infringe the ProSlide Patents therefore raises two questions: (1) do the AquaSphere, Orbiter, and Tailspin contain all the essential elements of the ProSlide Patents' claims, as asserted?; and (2) if so, did WhiteWater make, construct, use, or sell any of the infringing articles in Canada? Both questions must be answered in the affirmative for ProSlide's action to succeed.

[116] With respect to the first question, WhiteWater concedes that the Tailspin contains the essential elements of several of the 150 Asserted Claims. However, WhiteWater denies that the AquaSphere and the Orbiter embody all of the essential elements of any of the asserted claims in the 601 Patent and the 552 Patent Family, respectively. As for the second question, WhiteWater

acknowledges that the "components" for eight AquaSpheres were made in Canada, but denies that any other product was made or used in Canada.

[117] The evidence indicates that WhiteWater manufactures its products' "components" through subcontractors. According to Mr. Barrera, these "components" are "the parts… that need to be assembled on site to create a complete water slide" (emphasis added). In other words, the subcontractor creates a "kit of parts" containing the complete set needed to build a water slide or water slide feature. The subcontractor then delivers the components to WhiteWater's customer for final assembly and use at the customer's location. There is no dispute that none of the products at issue were physically manufactured, assembled, or used in Canada, the only exception being the eight AquaSpheres noted above. However, even those eight AquaSphere components were then shipped for assembly and use abroad.

[118] With respect to those articles not manufactured or assembled in Canada, ProSlide says that WhiteWater's conduct is still infringing because "WhiteWater is essentially doing, in Canada, everything to make […] the slides, apart from those final steps of the physical making". ProSlide specifically alleges that WhiteWater (1) creates pre-contract conceptual designs to promote its products, (2) generates detailed computer-aided designs and mechanical specification drawings in Canada for each product it sells, (3) provides these designs and drawings to subcontractors, who then manufacture the impugned articles' components outside of Canada, (4) inspects and audits the moulds and parts created by the subcontractors, (5) sends instructions for the assembly, and (6) supervises installation, among other things.

[119] ProSlide alleges that such activities create a “real and substantial connection to Canada” and that liability may arise on this connection alone, notwithstanding the fact that the physical making and using occurs outside of Canada. In effect, ProSlide invites the Court to re-examine and expand the scope of what constitutes making and using in Canada.

[120] The law on what constitutes “use” was recently confirmed by the Federal Court of Appeal in *Steelhead LNG (ASLNG) Ltd v Arc Resources Ltd*, 2024 FCA 67 [*Steelhead*]. The legal principles expounded by the Court of Appeal in *Steelhead* provide a complete answer to ProSlide’s argument as to what constitutes “use”. Where a patent claims a physical object, the patentee’s exclusive rights under section 42 of the *Patent Act* to “use” the invention extend only to that object. They do not also include the use of conceptual designs or drawings of that object (*Steelhead* at paras 70-72). ProSlide has not satisfied me that there is anything in this proceeding that would justify departing from, re-examining, or expanding on the legal principles as espoused in *Steelhead*.

[121] Because the Court of Appeal’s conclusion pertained to the scope of protection applicable around a claim for a physical object, its finding that conceptual designs are not included in that protection extends equally to what constitutes “making” under the *Patent Act*. As with “use”, there is no basis in law to find that generating detailed computer-aided designs and mechanical drawings in Canada is “making” the claimed invention, where the invention as claimed is for a physical object.

[122] Thus, none of the impugned articles were in fact “made” or “used” in Canada and no liability can attach against WhiteWater under Canadian law in connection to those articles. The only exception is the eight AquaSpheres whose components were manufactured in Canada. For those, the outstanding question is whether they embody the essential elements of any of the 601 Asserted Claims.

[123] WhiteWater submits that (1) the AquaSphere’s ride path is not “non-predetermined”, (2) the AquaSphere’s sliding surface is not concave about three axes nor in the shape of half a sphere, and (3) the ride path is oscillating, not looping. At least one of these three elements is essential in all of the 601 Asserted Claims. Accordingly, WhiteWater argues that the AquaSphere infringes none of the 601 Asserted Claims.

[124] I agree with WhiteWater that the AquaSphere’s ride path is predetermined. Mr. Barrera testified that WhiteWater sought to ensure, out of a concern for riders’ safety, that all ride vehicles entering the AquaSphere move in a specific and controlled manner. To do this, WhiteWater introduced entry and exit trowel-shaped “channels”, used a particular water flow pattern to slow vehicles upon entry, and used other geometric features of the AquaSphere. Together, these features control the path of the ride vehicle as it moves through the feature.

[125] Mr. Barrera’s evidence is consistent with Mr. Diamond’s observations. Much like Mr. Barrera, Mr. Diamond stated that the ride path in the AquaSphere is supported by both the sliding surface’s geometry and the water flow therein. Mr. Diamond also noted that videos of ride vehicles moving through the AquaSphere showed a consistent ride path. Once a ride vehicle enters through

the entry chute, the entry channel directs the vehicle along the center of the sphere and into a small pooling of water. The water then slows the vehicle as it makes its way up the side of the sphere opposite the entry. The ride vehicle subsequently travels back towards the exit channel, mounts a convex portion of the sliding sphere called the "duck bill", and oscillates back through the channel as it moves towards the exit chute.

[126] Mr. Young performed eleven tests to examine how a ride vehicle would move through the AquaSphere. The tests produced eleven sets of GPS data that track Mr. Young's ride path for each ride. Mr. Young observed that each ride path was different. He cites this result to support his conclusion that the AquaSphere's ride paths are non-predetermined. Though I found Mr. Young's GPS data to be reliable, I do not agree with his interpretation of that data.

[127] There is no question that there is at least some variation in each ride path examined by both Mr. Diamond and Mr. Young. However, whether a path is "predetermined" or "non-predetermined" is not a question of *variation*. As I observed in my construction of the term, the question is one of *control*: does the sliding feature use walls, channels, and other methods such as water flow or propulsion to control the rider or ride vehicle? The evidence in this case shows that such methods of control are used in the AquaSphere – namely, the entry and exit channels, and the water flow that slows down a ride vehicle upon entry.

[128] Since the ride path is predetermined, the AquaSphere does not infringe any of claims 1, 4, 5, 9, 11, 12, 18, and 19 of the 601 Patent.

[129] I also agree with WhiteWater that the AquaSphere does not include a looping path. Again, this turns on claim construction. The skilled person would understand a looping path to entail movement in an arc around the center of the sliding feature. A ride path does not need to intersect with itself nor complete a full turn to be a looping path.

[130] As noted above, the evidence shows that the ride path in the AquaSphere moves across the centerline of the feature before it oscillates in the direction of the exit. The rider does not move in an arc around the center. Therefore, the ride path in the AquaSphere is not a looping path, and the AquaSphere does not infringe any of claims 9, 11, 12, 18, 19, 30, 35, and 38 of the 601 Patent.

[131] This leaves claim 20 of the 601 Patent as the only remaining claim asserted against the AquaSphere. The claim reads as follows:

> A water slide feature comprising a spherical sliding surface adapted to carry one or more riders and/or ride vehicles sliding thereon from an entry to an exit, the entry sized and positioned to direct the one or more riders and/or ride vehicles along the sliding surface to the exit; wherein the sliding surface is a shape approximating one-half of a sphere.

[132] The AquaSphere is a water slide feature comprising a sliding surface adapted to carry one or more riders and/or ride vehicle from an entry to an exit. The question is whether the sliding surface is spherical and whether it has a shape approximating half a sphere. WhiteWater's position is that the AquaSphere satisfies neither one of those two elements. More specifically, WhiteWater alleges that the AquaSphere's sliding surface is a quarter sphere rather than a half sphere, since the ride vehicle slides on one side of the bottom surface of the AquaSphere but not the other. WhiteWater also alleges that the trowel-shaped channels, along with a convex portion of the

feature between the entry and exit, show that the sliding surface is not concave about three axes. I do not agree.

[133] Mr. Young testified that the skilled person's common general knowledge includes understanding that creating a safe transition from a flume into a water slide feature requires the absence of sharp edges. Hence, those edges would need to be smoothed out, gradually transitioning a ride vehicle from the flume, through the entry chute, and into the feature. They would also have to gradually transition a vehicle out of the feature, through an exit chute, and into a flume. In the context of a sliding feature that is concave about three axes, such gradual transitions are necessarily convex. Mr. Young also testified that minor channels may be used to allow for a "smooth and safe" entry into the feature. Thus, the presence of channels or convex edges around the entry and exit chutes do not mean that the sliding surface as a whole is not concave about three axes. In my view, the skilled person would indeed consider the AquaSphere's sliding surface to be concave about three axes.

[134] Mr. Young also observed that in some of the videos of ride vehicles moving through the AquaSphere, and in his own experience testing the feature, portions of the ride vehicle would occasionally move on the side opposite the exit. He also noted that water is used to lubricate the entire bottom half of the AquaSphere, not only the side where the ride vehicle oscillates towards the exit. Hence, it cannot be said that the AquaSphere's sliding surface is a quarter sphere. The skilled person would consider the sliding surface to have a shape approximating a half sphere.

[135] Therefore, all elements of claim 20 of the 601 Patent are embodied in the AquaSphere. Since eight AquaSpheres were manufactured in Canada, those eight articles infringe claim 20 of the 601 Patent. This conclusion is subject to my findings on invalidity.

[136] Accordingly, only claim 20 of the 601 Patent may be infringed, if valid. None of the asserted claims in any of the 552 Patents or the remaining claims asserted in the 601 Patent are infringed.

C. *Invalidity*

(1) Applicable Principles

(a) *Anticipation*

[137] A claimed invention is anticipated if the citable prior art (1) discloses the essential elements of the claim, and (2) enables the skilled person to perform the invention (*Sanofi* at paras 28, 31-37). The relevant cut-off date for citable prior art is (a) one year prior to the filing date, if the prior art was disclosed by the patentee or by a person who acquired the information from the patentee, or (b) the claim date, if the prior art was disclosed by any other person (*Patent Act*, s 28.2(1)).

[138] Anticipation requires that the essential elements of the claimed invention be disclosed in a single citable publication. It cannot be established by assembling together components from various publications (*Western Oilfield Equipment Rentals Ltd v M-I LLC*, 2021 FCA 24 [*Western Oilfield*] at para 85, citing *Free World Trust* at para 26). If the Court is satisfied that the disclosure

is established under the first step of the analysis, its assessment of enablement under the second step will presume that the skilled person is willing to engage in some trial and error in performing the invention, but without undue burden. What constitutes undue burden will differ from one case to the next (*Sanofi* at para 37).

(b) *Obviousness*

[139] In assessing obviousness, the Court must (1) identify the skilled person and their common general knowledge; (2) identify the inventive concept of the claim in question or, if that cannot readily be done, construe it; and (3) identify what, if any, differences exist between the matter cited as forming part of the "state of the art" and the inventive concept of the claim or the claim as construed. If there are no differences between the state of the art and the inventive concept, the subject matter of the claim is obvious. Otherwise, the Court will (4) consider whether, without any knowledge of the invention as claimed, the skilled person could bridge the difference between the state of the art and the inventive concept without any degree of inventiveness. If so, the invention is obvious. Otherwise, the invention is not obvious (*Sanofi* at para 67).

[140] The "inventive concept" is the end point towards which the claim advances the art (*Bristol-Myers Squibb Canada Co v Teva Canada Ltd*, 2017 FCA 76 at para 65). It is informed by the claim's construction but remains distinct from it (*Apotex Inc v Shire LLC*, 2021 FCA 52 [*Shire*] at para 75). Claim construction identifies the scope of the patent's protection, whereas the inventive concept represents the solution taught by the patent (*Shire* at paras 75-76). Therefore, different claims may have somewhat different inventive concepts (*Shire* at paras 77, 86-88).

[141] The inventive concept may be difficult to ascertain for some claims. In such circumstances, the case law provides several options for the Court to address the difficulty. The Court may examine the specification for guidance, without departing from the language of the claim itself (*Shire* at para 67). If the exercise becomes "too involved", the Court may also rely on the claim's construction without further elaboration (*Ciba Specialty Chemicals Water Treatments Limited v SNF Inc*, 2017 FCA 225 [*Ciba*] at paras 76-77; *Tearlab* at paras 76-78).

[142] To ascertain the "state of the art" against which the inventive concept is measured, the Court may consider any prior art within the public domain relied upon by the parties (*Ciba* at paras 56-60). In addition to the skilled person's common general knowledge, the citable prior art includes references published (a) one-year prior to the filing date, if the prior art was disclosed by the patentee or someone who obtained knowledge from the patentee, or (b) before the claim date, if the prior art was disclosed by any other person (*Patent Act*, s 28.3; *Eli Lilly Canada Inc v Mylan Pharmaceuticals ULC*, 2016 FCA 119 at paras 23-25). The Court may also consider a "mosaic" composed of several references within the prior art before it to determine the state of the art (*Ciba* at para 60).

[143] Notwithstanding the fact that a mosaic of several references may be relied upon to argue obviousness, the Court must nevertheless exercise vigilance. Therefore, constructing a mosaic out of an excessively large set of references may lead to an inference that the inventive concept is in fact not part of, nor as proximate to, the state of the art as alleged. Doing so is consistent with the Federal Court of Appeal's general and well-known caution against hindsight analysis in *Beloit Canada Ltd v Valmet Oy*, (1986) 8 CPR (3d) 289 at 295 (FCA):

> Every invention is obvious after it has been made, and to no one more so than an expert in the field. Where the expert has been hired for the purpose of testifying, his infallible hindsight is even more suspect. It is so easy, once the teaching of a patent is known, to say, "I could have done that"; before the assertion can be given any weight, one must have a satisfactory answer to the question, "Why didn't you?"

[144] As for the fourth step of the analysis, the issue of whether the skilled person would be able to fill the gap between the state of the art and the inventive concept, if any such gap exists, is predicated on the skilled person's lack of imagination and inventiveness (*Tearlab* at para 81; *Hospira* at para 79). The skilled person is therefore able to rely on their common general knowledge and a reasonably diligent search of the prior art, but nothing further (*Ciba* at para 62).

(a) *Overbreadth*

[145] If a claim is broader than (a) what was disclosed or (b) what was actually invented, then that claim is invalid for overbreadth (*Western Oilfield* at para 128; *Pfizer Canada Inc v Pharmascience Inc*, 2013 FC 120 at para 84, citing *Leithiiser v Pengo Hydra-Pull of Canada Ltd*, [1974] 2 FC 954 at 965 (FCA)).

(b) *Lack of Utility*

[146] To have utility, an invention must provide a solution to a practical problem that pertains to the nature of the patent's subject matter. The patentee need not realize every promised use of the claimed invention – any scintilla of utility pertaining to the invention's subject matter will do

(*AstraZeneca Canada Inc v Apotex Inc*, 2017 SCC 36 [*AstraZeneca*] at paras 52-55; *Apotex Inc v Wellcome Foundation Ltd*, 2002 SCC 77 [*Wellcome*] at para 56).

[147] The utility requirement in section 2 of the *Patent Act* is to be interpreted in line with its purpose: to prevent the patenting of fanciful, speculative or inoperable inventions (*AstraZeneca* at para 57). Accordingly, a scintilla of utility must be established as of the filing date by either demonstration or sound prediction (*AstraZeneca* at para 55).

[148] To soundly predict utility, the case law requires that (1) there is a factual basis for the prediction, (2) there is an articulable and sound line of reasoning from the factual basis to permit an inference supporting the alleged utility, and (3) there is proper disclosure (*Wellcome* at para 70). It is the inventor, not the skilled person, whose perspective is invoked by the first two steps of the sound prediction test. In that respect, the Court determines whether the *inventor* had a factual basis and a sound line of reasoning supporting the utility prior to the filing date. It is only in the third step of the test that the Court concerns itself with the perspective of the skilled person. Here, the Court asks whether the factual basis and line of reasoning would be self-evident to the *skilled person* (*Wellcome* at para 70; *Pharmascience Inc v Teva Canada Innovation*, 2022 FCA 2 [*Pharmascience*] at para 5).

[149] The skilled person is presumed to have the benefit of their common general knowledge when reading the patent. Thus, where factual basis is based on the common general knowledge and the line of reasoning would be apparent to the skilled person, the disclosure requirements may be met by describing the invention in sufficient detail such that it can be practiced (*Bell Helicopter*

Textron Canada Limitée v Eurocopter, société par actions simplifiée, 2013 FCA 219 [*Eurocopter*] at para 155). At other times, the factual basis and line of reasoning are not immediately clear without explicit disclosure. In such cases, failure to explicitly disclose the factual basis and the line of reasoning is cause for invalidity due to lack of utility (*Wellcome* at paras 70-71; *Pharmascience* at para 5).

[150] The parties disagree as to the correct standard to establish demonstration. ProSlide suggests that it is sufficient that test results are strongly suggestive of utility, such that no other logical explanation is likely. It cites *Seedlings Life Science Ventures, LLC v Pfizer Canada ULC*, 2020 FC 1 [*Seedlings FC*] at paragraph 149, where the Court explained that "it is not necessary to show that the invention will be a commercial success" or "that the device has received or would receive regulatory approval." While that may be true, a more thorough review of the Court's reasons in *Seedlings FC* does not support ProSlide's position. In the paragraph immediately preceding the one cited by ProSlide, the Court explained that:

> [148] Utility can be proved either by demonstration or by "sound prediction," in both cases as of the date of the application. Demonstration is where the device was actually made or built and shown to work. Sound prediction is where, in the absence of actual demonstration, utility is shown by a "sound line of reasoning" based on what was known about the invention as of the date of filing.
>
> [Emphasis added; citations omitted.]

[151] WhiteWater says that the standard is higher. It argues that demonstration can only happen when the actual subject matter of the invention exists and is tested in a way that would then give one knowledge about the subject matter of the invention; anything short of knowing is nothing but a prediction. In support of this proposition, WhiteWater cites *Wellcome* at paragraphs 11-19, where

Justice Binnie appears to reject the view that strongly suggestive evidence suffices to demonstrate utility.

[152] WhiteWater also cites *Eurocopter* at paragraph 148 and *Seedlings FC* at paragraphs 152 to 159, where the Court found that, respectively, (1) mathematical modeling is generally predictive, not demonstrative, and (2) prototypes can be demonstrative, but computer-aided designs are generally predictive.

[153] It is evident from the case law above that the line separating demonstration from prediction is not always a bright one. It will often depend on the nature of the invention at issue. Given the nature of the inventions claimed in the patents in this case relate to a water slide feature or a slide feature for an amusement ride, in order for the utility of a claimed feature of the inventions to be demonstrated, I find that the said features or a prototype in respect of these features, as claimed, that accurately approximates their essential elements must be built and then tested by humans or weighted dummies. Otherwise, the utility of the claims at issue must be soundly predicted.

(2) The 601 Patent

(a) *Anticipation*

[154] WhiteWater alleges that claims 1, 4, 5, 9, 12, 19, and 20 of the 601 Patent are anticipated by United Kingdom Patent No. 2,224,948 (the “948 Patent”), which was published well before the applicable cut-off date. The 948 Patent discloses a bowl-shaped feature with an entry near the top edge of the feature and an exit at the bottom centre. The rider enters the feature and slides in a

descending spiral path before reaching the exit. A representative figure from the 948 Patent is included in Schedule C of these reasons.

[155] Mr. Young argues that none of the following elements are disclosed by the 948 Patent: (1) a ride path that is at least partially upward, (2) a sliding surface that is spherical, and (3) a sliding surface in a shape approximating one-half of a sphere. At least one of these elements is present in each of the claims that are alleged to lack novelty.

[156] Regarding the ride path, Mr. Diamond states that the skilled person would understand, using their common general knowledge, that the ride paths described by the 948 Patent would be elliptical and would therefore have an upward component. He cites a video of a water slide feature that appears to embody the invention disclosed by the 948 Patent in support of his position. However, I am not satisfied that the skilled person would know that the ride path would have an upward component when the 948 Patent explicitly instructs otherwise. Nor would it be correct to cite a second piece of prior art to supplement the skilled person's understanding of the 948 Patent. The 948 Patent must itself disclose all of the essential elements of the claims at issue.

[157] I agree with Mr. Young that nothing in the 948 Patent discloses a ride path that is at least partially upward. All of the ride paths disclosed in the 948 Patent have a downward vertical component. A partially upward ride path is an essential element to claims 1, 4, 5, 9, 12, and 19 of the 601 Patent. Therefore, none of those claims are anticipated by the 948 Patent.

[158] This leaves claim 20, whose elements I have already summarized above. There is no dispute that the 948 Patent discloses a water slide feature comprising a sliding surface adapted to carry a rider or group of riders sliding thereon from an entry to an exit. There is also no dispute that the entry described by the 948 Patent is sized and positioned to direct the rider from the entry to the exit along the sliding surface. The only question is whether the sliding surface is spherical, and whether it has a shape approximating one-half of a sphere.

[159] A distinction must be made here between the terms "spherical" and "a shape approximating one-half of a sphere". Those are two separate elements. The first term indicates that the sliding feature can be visualized as a segment of a sphere, but that segment does not necessarily amount to one-half. Thus, every "shape approximating one-half of a sphere" is "spherical", but the inverse is not true. This view is supported by the 601 Patent's specification, which discusses various figures as follows:

> The embodiments depicted in Figures 1 to 6B depict a sliding surface which has a curvature based on that of a portion of a sphere. However, embodiments are not limited to spherical sliding surfaces. Other embodiments encompass portions of ovoid, ellipsoid, paraboloid and other bowl-shaped sliding surfaces as well as irregular surfaces designed to achieve the same looping effect as described above.
>
> [Emphasis added.]

[160] Mr. Young points to Figure 2 of the 948 Patent. He observes that a portion of the sliding surface is convex near the exit and that the radius of curvature decreases near the top edge of the bowl-shaped sliding surface. I do not agree with Mr. Young's conclusion that these elements mean that the sliding surface is not spherical. As noted above, the 601 skilled person would understand

that edges must be tapered in some way to remove sharp edges. Mr. Young himself emphasized this fact when he was cross-examined on infringement.

[161] Mr. Young also observes that the 948 Patent discusses a potential embodiment whereby the bowl-shaped surface is "shelved" – that is, that segments of the sliding surface are at a constant angle relative to the horizontal. However, the 948 Patent's disclosure is not limited to this embodiment, and it would be incorrect to limit the anticipation analysis accordingly.

[162] Overall, I agree with the evidence of Mr. Diamond that that the 948 Patent discloses a sliding feature that is "spherical". The sliding surface in the 948 Patent is repeatedly described as a "bowl". This term encapsulates a number of potential shapes, many of which are spherical.

[163] I am also satisfied for the same reason that, of the sliding surfaces disclosed in the 948 Patent, some are in the shape of a half sphere. The term "bowl" includes a half-sphere among its potential shapes. The 948 Patent's specification also explicitly describes an embodiment whereby the sliding surface is curved such that the angle of the surface at entry is around 90 degrees relative to the horizontal and as low as 20 degrees near the exit:

> We have in general found that a steep wall angle at the point of entry, e.g. of around 90°, starts revolution off satisfactorily, and as gravity takes over from centrifugal force, the angle of the sides is made more shallow so as to compensate for the reducing centrifugal element. At this point, an angle of around 30 ± 10° is suitable.

[164] The skilled person would understand the above description to be of a bowl approximating the shape of a half-sphere.

[165] Accordingly, all elements of the 601 Patent's claim 20 are disclosed in the 948 Patent. Given that the disclosure is accompanied by various figures and descriptions, I find that the 601 skilled person would find the invention of claim 20 is disclosed in the 948 Patent and would be able to preform that invention based on that disclosure. Claim 20 is anticipated.

(b) *Obviousness*

[166] WhiteWater argues that all of the 601 Asserted Claims are obvious. In addition to the 948 Patent, WhiteWater cites several pieces of prior art, namely United States Patent No. 6,354,955 (the "955 Patent"), United States Patent No. 6,743,107 (the "107 Patent"), United States Patent No. 7,056,220 (the "220 Patent"), United States Patent No. 5,137,497 (the "497 Patent"), and United States Design Patent No. D548,810 (the "D810 Patent"). A representative figure from each of these is included in Schedule C of these reasons. I discuss the patents as may be relevant below.

[167] I have already identified the 601 skilled person and their common general knowledge. I have also found that claim 20 is anticipated by the 948 Patent. I find that the inventive concept of claim 20 is part of the state of the art as disclosed in the 948 Patent and is obvious.

(i) Independent Claim 1 and its Dependent Claims

[168] Mr. Young states that the inventive concept of claim 1 is "a waterslide feature whereby the rider enters a partial sphere-shaped feature with a non-predetermined path (e.g., no guide walls), and follows a trajectory that climbs the wall of the sphere before exiting". Mr. Diamond submits that the inventive concept of claim 1 is "a water slide feature that has a concave, hemispherical sliding surface where one or more riders and/or ride vehicles slide on the inside surface from the

entry to the exit on a path that is not known in advance of the rider or ride vehicle sliding on the surface, but which is at least partially upwards". The experts' proposed inventive concepts are similar, but neither one of them fully captures the inventive concept of claim 1.

[169] I find that the inventive concept of claim 1 is a water slide feature with a concave sliding surface in the shape of a half-sphere, whereon the rider slides along a path that is not predetermined by the use of walls, channels, or other methods like water flow, but that also involves climbing the wall at some point prior to the exit.

[170] Mr. Diamond submits that there is no difference between the state of the art and the inventive concept. He argues that, since the 948 Patent allegedly discloses the elements of claim 1, it must also disclose its inventive concept. I have already rejected that argument in my analysis of WhiteWater's anticipation challenge. However, Mr. Diamond also cites the water slide features of the 497 Patent, the 220 Patent, and the 107 Patent, which he claims disclose various elements of claim 1 that form part of the inventive concept, namely a non-predetermined, partially upward path.

[171] None of the 497 Patent, the 220 Patent, and the 107 Patent disclose all of the elements of claim 1. While the 497 Patent does appear to disclose a non-predetermined ride path with upward components, its sliding surface has a parabolic, upwardly open cross section. Similarly, the 220 Patent discloses a funnel-shaped conical sliding surface tilted in a downward slope, along which the rider moves in an oscillating path. The 107 Patent discloses a slide apparatus having a series

of slides with a somewhat parabolic, upwardly open configuration and “switchback” channels that direct riders in a predetermined path, typically from one slide to the next.

[172] Mr. Diamond seems to imply, without much elaboration or actual meaningful support, that the 601 skilled person would be able to compose a mosaic containing the elements of claim 1 from the above noted prior art, whereby the 948 Patent provides the bowl-shaped sliding surface, the 497 Patent and the 220 Patent provide the non-predetermined, partially upward ride path, and the 107 Patent also provides the partially upward ride path. I am not satisfied that this is the case, nor that the skilled person with their common general knowledge would directly and without difficulty ascertain the 601 invention as claimed in claim 1 or its dependent claims.

[173] While all four prior art patents pertain to water slides, their elements do not interlink easily in the unintuitive mind of the skilled person. In my view, it is not obvious to the skilled person that the ride paths of (1) the upwardly open sliding surface of the 497 Patent, (2) the funnel-shaped conical surface of the 220 Patent, or (3) the somewhat parabolic surface of the 107 Patent would have an application in the context of a bowl-shaped surface like the one disclosed in the 948 Patent. Therefore, such a mosaic would not be obvious with respect to disclosing the invention of claim 1 to the skilled person.

[174] The 601 skilled person would also not be able to bridge that difference using their common general knowledge or a reasonably diligent search. Nothing in the common general knowledge of the skilled person would lead them to replace the downward spiral path described in the 948 Patent with a non-predetermined path having a partial upward component. Nor is there reason to believe

that the common general knowledge would lead the skilled person to use the ride paths of the 497 Patent, the 220 Patent, or the 107 Patent on a sliding surface approximating the shape of a half-sphere. To create such combinations would necessarily require a degree of inventiveness.

[175] Claim 1 is not obvious. Since claims 4, 5, 9, 11, and 12 depend on claim 1, they too are not obvious.

(ii) Independent Claim 18

[176] Claim 18 claims:

> A water slide feature comprising a **concave** sliding surface sized and adapted to carry one or more riders and/or ride vehicles sliding thereon on an **non-predetermined** path from an entry to an exit, the entry sized and positioned to direct the one or more riders and/or ride vehicles along the sliding surface in a **looping** path around the sliding surface and out an exit **adjacent** to the entry; wherein the sliding surface is a shape approximating **one-half of a sphere**.

[177] I find that the inventive concept of claim 18 is a water slide feature with a concave sliding surface in the shape of a half-sphere, whereon the rider slides along a looping path that is not predetermined by the use of walls, channels, or other methods like water flow, and where the feature's entry and the exit are adjacent.

[178] There is at least one essential difference between the state of the art and the inventive concept of claim 18 – namely, placing the exit adjacent to the entry. Mr. Diamond concedes this difference. However, he argues that the 601 skilled person would be able to bridge that difference

without any inventiveness because they would understand that having the exit adjacent to the entry is a necessary corollary of the ride path being a looping path.

[179] Mr. Diamond's analysis is inconsistent with the proper construction of the word "looping". As noted above, it is not necessary for the ride path to intersect itself or otherwise complete a full (or near-full) rotation around the slide feature to be looping. This is evident from Figure 5 in the specification, which is described as having a looping path, even though that path only completes a 180 degree rotation.

[180] If anything, combining a non-predetermined looping path with an exit that is adjacent to entry implies that, after entering the feature, the rider would (1) complete a full or near full rotation around that sliding surface, (2) return to an area near the entry, and then (3) go into the exit, missing the entry despite its proximity without the assistance of walls, channels, or other methods of directing the ride path. This is not an obvious combination of elements. It requires a degree of inventiveness.

[181] Claim 18 is not obvious.

(iii) Independent Claim 19

[182] Claim 19 claims

> A water slide feature comprising a **concave** sliding surface sized and adapted to carry one or more riders and/or ride vehicles sliding thereon on a **non-predetermined path** from an entry to an exit, the entry sized and positioned to direct the one or more riders and/or ride vehicles along the sliding surface on a path having a first path

> **segment** with a first horizontal component of movement in a first direction across the sliding surface and a second path segment with an upward vertical component of movement and a second horizontal component of movement in a second direction across the sliding surface opposite to the first horizontal direction; wherein the sliding surface is a shape approximating **one-half of a sphere**.

[183] I find that the inventive concept of claim 19 is a water slide feature with a concave sliding surface in the shape of a half-sphere, whereon the rider slides along a path that is not predetermined by the use of walls, channels, or other methods like water flow, but that also has two segments going in opposite horizontal directions, with the second segment having an upward component prior to exiting the feature.

[184] The scope of claim 19 is narrower than the scope of claim 1. This is evident from a comparison of the elements of both claims. Claim 19 includes all the elements of the claim 1, but with a more defined ride path. I find that claim 19 is also not obvious.

(iv) Independent Claim 30 and its Dependent Claims

[185] Claim 30 claims:

> A water slide feature comprising a **spherical** sliding surface adapted to carry one or more riders and/or ride vehicles sliding thereon from an entry to an exit, the entry sized and positioned to direct the one or more riders and/or ride vehicles along the sliding surface on a path which is **at least partially upward** and having a first path **segment** with a first horizontal component of movement in a first direction across the sliding surface and a second path segment with an upward vertical component of movement and a second horizontal component of movement in a second direction across the sliding surface opposite the first horizontal direction, wherein the entry is at a substantially **right angle** to the exit; and wherein the entry is

> substantially **perpendicular** to the sliding surface where the entry meets the sliding surface.

[186] I find that the inventive concept of claim 30 is a water slide feature with a spherical sliding surface, whereon the rider slides along a path with two segments going in opposite horizontal directions, with at least the second segment having an upward component prior to exiting the feature at a substantially right angle to the entry, which entry is perpendicular to the sliding surface.

[187] There is at least one essential difference between the state of the art and the inventive concept of claim 30 – namely, that the entry is substantially perpendicular to the sliding surface. Mr. Diamond concedes this difference. He argues, however, that that difference may be bridged by the skilled person by combining known bowl-shaped water slide features (presumably exemplified by the 948 Patent) with the elements disclosed by other patents. Mr. Diamond specifically cites the 497 Patent, which he says shows an entry that is substantially perpendicular to the sliding surface. Mr. Diamond also cites the 955 Patent, specifically the fact that its specification explains that the entrance "can be configured in various ways".

[188] I do not agree with Mr. Diamond. The 955 Patent's disclosure that the entrance "can be configured in various ways" does not in any way indicate that the entry could be perpendicular to the sliding surface. In fact, because the intended ride paths in many of the figures disclosed in the 955 Patent have a downward spiral trajectory, the 601 skilled person would likely understand that the entrance *cannot* be perpendicular to the sliding surface.

[189] Similarly, the 497 Patent does not show an entry that is substantially perpendicular to the sliding surface. Mr. Diamond alleges that the convex portion connecting the horizontal entry point and the sliding surface is not part of the sliding surface. This, however, runs contrary to the very wording of the 497 Patent, which describes the sliding surface as having a cross section in the shape of an upward-facing parabola. This would suggest to the skilled person that the convex portion that follows the entry, including the flat, horizontal portion that is immediately connected to the entry, is part of the sliding surface. The 497 Patent does not show a perpendicular entry.

[190] I am not satisfied that the skilled person would bridge the difference between the state of the art and the inventive concept of claim 30.

[191] Claim 30 is not obvious. Since claims 35 and 38 depend on claim 30, they too are not obvious.

(c) *Overbreadth*

[192] WhiteWater argues that all of the 601 Asserted Claims are overbroad. Its sole submission is that the claims are broader than what was actually made. WhiteWater has not pleaded nor does it allege that the asserted claims are broader than what was disclosed, and neither expert argues that this is the case.

[193] WhiteWater relies on Mr. Diamond's argument that, because nothing was physically built, the claims at issue must be overbroad. I do not agree with Mr. Diamond, for several reasons. First, aside from disclosure, the test for overbreadth is concerned with what was made *or contemplated*,

not simply what was physically built, as Mr. Diamond's position suggests. Although the latter serves as a good indicator of the former, it is not an exclusive measure of the actual invention. The inventor may contemplate an invention with a narrower or broader set of elements than what they physically built. It would be incorrect to disregard such work and restrict the actual invention to what was physically built.

[194] To suggest otherwise is to import a requirement of demonstration into the overbreadth analysis. This muddles the line between overbreadth and utility, as is evident from Mr. Diamond's focus in his overbreadth analysis on whether development work was done and whether a full-size model was built. Although the *content* of developmental work and the elements of a full-size model would be relevant to assess what the inventor considered essential in the invention, the existence or absence of such work or models is a concern reserved for utility and sound prediction.

[195] Second, even if Mr. Diamond was correct to limit the overbreadth analysis to what was physically built, his resulting argument is inconsistent. On the one hand, he argues that the claims are broader than what was actually made. Yet, on the other hand, he submits that nothing was actually made to begin with. This is not a coherent position. If nothing was actually made, then there was nothing against which Mr. Diamond can assess the breadth of the claims (aside from the disclosure).

[196] [redacted]

[redacted]

[197] The onus is on WhiteWater to satisfy the Court, on a balance of probabilities, that the 601 Asserted Claims are overbroad. The evidence does not support such a finding. The 601 Asserted Claims are not overbroad.

(d) *Utility*

[198] WhiteWater argues that all of the 601 Asserted Claims lack utility.

[199] Both experts agree that, in order for any water slide feature to have a scintilla of utility, it must be demonstrated or soundly predicted that a rider would enter the feature, traverse the feature's sliding surface, and then exit the feature. The experts do not agree whether the rider must also be able to do each of those steps safely. Mr. Diamond argues that a minimum level of safety must also be demonstrated or soundly predicted. Mr. Young says that safety is not part of the requisite scintilla of utility.

[200] I find that a water slide feature has a scintilla of utility if it is demonstrated or soundly predicted that a rider would enter, traverse, and exit the feature.

[201] It is well-established that utility must be examined on a claim-by-claim basis (*Astrazeneca Canada Inc v Apotex Inc*, 2015 FCA 158 at para 4; *Pfizer Canada Inc v Teva Canada Limited*, 2017 FC 777 at para 325). Although WhiteWater bears the onus of satisfying the Court that each of the asserted claims lacks utility, WhiteWater has elected to advance a collective attack against them all, namely that:

1. there was no demonstration at all of any of the embodiments claimed in the 601 Asserted Claims; *and*

2. there was no factual basis at all from which to soundly predict the utility of any of the 601 Asserted Claims; or in the alternative, any such factual basis was not sufficient to make a sound line of reasoning with respect to any of the asserted claims; or in the further alternative, there was no disclosure of any such factual basis or sound line of reasoning with respect to any of the asserted claims.

[202] It is evident that utility was not demonstrated in relation to the features claimed by the 601 Asserted Claims. None of the claimed features were actually built, and no model was accurately representative of the claimed features' elements to allow for "strongly suggestive" results for which "no other logical explanation is likely". [redacted] Although there was some evidence that prior to the relevant date, ProSlide also constructed computer-aided designs

which showed representations of the spherical slide feature, Mr. Hunter could not recall who made them or for what reason, and there is nothing to indicate how they were used to model a rider's path across the sliding surface.

[203] I therefore find that the scintilla of utility was not demonstrated with respect to any of the 601 Asserted Claims. The remaining question is whether that utility was soundly predicted. Again, this requires a factual basis, a sound line of reasoning, and proper disclosure.

[204] [redacted]

[205] Mr. Diamond's position confuses the first and second steps of the sound prediction test. In essence, the first step examines whether there is a starting point from which the inventor can make inferences. This could include, among other things, objects, models, or data that relate in some way to the subject matter of the invention. The second step is where the inventor's inferences are assessed. Part of that entails examining whether the inventor's assumptions are sound.

[206] I find there was a factual basis to serve as a starting point. [redacted] I also accept that the inventor's factual basis included the common

general knowledge known to the skilled person at the relevant date. This basis provides a starting point from which inferences may be drawn.

[207] Mr. Diamond argues that the line of reasoning from the factual basis to the predicted scintilla of utility is not sound. He again says that no information can be drawn from the factual basis as to how water will affect or behave in the claimed features. [redacted]

[208] Mr. Young states that the common general knowledge is part of the inventor's factual basis in this case, and that knowledge includes an understanding of the principles of physics, specifically gravity, friction, acceleration, momentum, energy, and fluid dynamics. [redacted]

[209] [redacted]

[redacted]

[210] That said, as sound as Mr. Hunter's prediction may have been with respect to the likely ride path as claimed in the 601 Patent, it was nevertheless deficient in other essential elements of the invention as claimed. [redacted]

[redacted] While the computer-aided designs that can be relied upon did include an entry chute and an exit chute, they did not model how a rider would pass through them. There was simply nothing with which Mr. Hunter could infer that a rider would be able to enter and exit the features of the 601 Asserted Claims. His line of reasoning that a rider would be able to do so was at best speculative.

[211] The ability of a rider to enter and exit a feature is not a minor consideration. It is part of the scintilla of utility of all of the 601 Asserted Claims. The failure to make a sound, non-speculative prediction in that respect means that the utility of each of the asserted claims was also not soundly predicted.

[212] Equally important in establishing the sound prediction, even if the line of reasoning could be argued to be sound, is the requirement of proper disclosure. In this case, neither the factual basis nor the sound line of reasoning was disclosed. [redacted]

As I have already found, the skilled person would be able to draw some information from [redacted], *if that testing was disclosed*, but the skilled person would not be able to conclude from the mere disclosure of a ride path that that path is workable or that it was developed based on a sound prediction using [redacted], as that method was not disclosed and certainly not known to the skilled person.

[213] As a result, the 601 Asserted Claims lack utility.

(3) The 552 Patent

(a) *Obviousness*

[214] WhiteWater argues that all of the 552 Asserted Claims are obvious. I have already identified the 552 skilled person and their common general knowledge.

[215] WhiteWater cites several pieces of prior art for its obviousness challenge, namely United States Patent No. 6,729,963 (the "963 Patent") and United States Patent No. 8,226,492 (the "492 Patent"). The subject matter of these two patents is embodied by WhiteWater's Boomerango product and ProSlide's Tornado Wave product. WhiteWater also cites United States Patent No. 8,360,895 (the "895 Patent"). I discuss each of these patents and commercial products as may be relevant below.

(i) Independent Claim 1 and its Dependent Claims

[216] I have described the elements of claim 1 above.

[217] Mr. Diamond argues that the inventive concept of claim 1 is "a slide feature that has a sliding surface that includes a two-dimensional, planar portion that is shaped like the sector of a closed curve. The feature has an inrun (i.e., an entry) and an outrun (i.e., an exit), where the entry is elevated above the exit. The sliding surface is configured such that riders travel on an arcuate path across the sliding surface. The sliding surface is oriented, relative to the horizontal, at pitch

and roll angles about pitch and roll axes, which are perpendicular to each other. At least one of the pitch and roll angles is not zero."

[218] Mr. Young claims that the inventive concept of claim 1 is "a water slide feature with a sliding surface that comprises a planar surface portion substantially in the shape of a sector of a closed curve and that is oriented at roll and pitch angles about roll and pitch axes (where at least one of the pitch and roll angles is not zero). The rider enters the feature via the inrun, travels across the sliding surface in an arcuate path and then exits at the outrun; the inrun is at a higher elevation than the outrun such that the rider is urged through the feature at least partially by the force of gravity." As with claim 1 of the 601 Patent, the experts' proposed inventive concepts are similar, but neither one of them accurately describes the inventive concept of the 552 Patent's claim 1.

[219] I find that the inventive concept of claim 1 is a slide feature with an inrun elevated above an outrun, where the inrun and outrun are connected by a sliding surface that contains a two-dimensional planar or flat portion substantially in the shape of a sector of a closed curve, that has pitch and roll angles relative to the horizontal plane, at least one of which is non-zero, and whereon the rider slides in an arcuate path at least in part due to gravity.

[220] Mr. Diamond argues that there is no difference between the inventive concept of claim 1 and the state of the art. He specifically cites the 963 Patent, WhiteWater's corresponding Boomerango commercial product, and the 492 Patent.

[221] With respect to the 492 Patent, Mr. Diamond argues that it discloses a slide feature with an entry higher than an exit, a roll angle about a roll axis relative to the horizontal, and an arcuate path. He nevertheless concedes that the sliding surface in the 492 Patent is curved, lacking any flat portion, and that it does not have a pitch angle. However, he argues those missing elements can be found in the 963 Patent and the Boomerango commercial product, which disclose a sliding surface that is oriented at a pitch angle and a flat portion, a segment of which is in the shape of a sector of a closed curve. Implied in Mr. Diamond's submission is that the 552 skilled person would be able to construct a mosaic out of the elements of the 492 Patent, the 963 Patent, and the Boomerango.

[222] Mr. Young submits that none of the above references disclose all of the elements. I agree. However, Mr. Young fails to consider that the 552 skilled person may be able to construct a mosaic from individual pieces of prior art, and that such a mosaic may disclose all of the elements.

[223] In my view, the skilled person would be able to piece together elements from the 963 Patent, the 492 Patent, and the Boomerango to create a mosaic, without the need for any inventiveness or ingenuity. All three references pertain to the water slide industry and are owned by prominent water slide companies. They also all have comparable geometry that would allow the 552 skilled person to "transpose" the elements of one reference onto the features of the other.

[224] However, I do not agree that any of the above pieces of prior art disclose a roll angle relative to the horizontal plane. In advancing this position, Mr. Diamond relies on the following line from the 492 Patent: "In some embodiments, the lowermost surface of the sliding surface is inclined from horizontal descending from the entry end to the exit end at an angle of about 5 degrees from

horizontal". Mr. Diamond infers from this that the entire sliding surface is tilted about the roll axis by 5 degrees. I am not satisfied that the 552 skilled person would make that inference. The only thing that the above quoted line indicates is that a portion between the entry and exit, near the bottom of the sliding surface has a slope. Nothing more is disclosed regarding the sliding surface as a whole. Therefore, there is a difference between the state of the art and the inventive concept of claim 1.

[225] None of the elements of the other pieces of prior art cited by Mr. Diamond in relation to the obviousness challenge are sufficient to change this finding. ProSlide's Tornado Wave product is based on the 492 Patent and also fails to disclose a roll angle as claimed. The same is true of the water slide disclosed in the 895 Patent, which appears to lie flat on the horizontal ground.

[226] I am also not satisfied that the 552 skilled person would be able to bridge the difference between the state of the art and the inventive concept of claim 1. Nothing in Mr. Diamond's evidence advances this position. He simply states that adopting a flat surface instead of a curved surface in the 492 Patent would be a routine choice for the skilled person and that this would result in a sliding surface with both a pitch and a roll angle. Mr. Diamond's comments in this respect address other elements not disclosed in the 492 Patent, namely a planar portion and a pitch angle. The view that the 492 Patent already discloses a roll angle is an assumption that I do not accept.

[227] Claim 1 is not obvious. Since claims 2, 3, 4, 12, 16, 18, 19, 21, 22, and 25 directly or indirectly depend on claim 1 and are also not obvious.

(ii) Independent Claim 27 and its Dependent Claims

[228] Claim 27 claims:

> A slide feature for an amusement ride adapted to carry a rider or ride vehicle sliding thereon, the slide feature comprising: an inrun permitting ingress of the rider or ride vehicle at a first elevation, an outrun permitting egress of the rider or ride vehicle at a second elevation, wherein the first elevation is higher than the second elevation, a sliding surface in communication with the inrun and the outrun, wherein the sliding surface is a substantially two-dimensional, planar surface, wherein the slide feature provides that the rider or ride vehicle, at least partially urged by gravity, slides along the sliding surface from the inrun to the outrun in an arcuate path, wherein the sliding surface is oriented so that an elevation of the rider or ride vehicle increases along a first portion of the arcuate path and decreases along a second portion of the arcuate path, wherein the sliding surface is oriented at a pitch angle around a pitch axis, the pitch angle being measured relative to a horizontal plane, wherein the sliding surface is oriented at a roll angle around a roll axis, the roll angle being measured relative to the horizontal plane, wherein the pitch axis and the roll axis are mutually perpendicular, and wherein at least one of the pitch angle and the roll angle is nonzero.

[229] I find that the inventive concept of claim 27 is a slide feature with an inrun elevated above an outrun, where the inrun and outrun are connected by a sliding surface that is substantially flat, that has pitch and roll angles relative to the horizontal plane, at least one of which is non-zero, and whereon the rider slides in an arcuate path at least in part due to gravity, the arcuate path's elevation initially increasing and then decreasing.

[230] Although the inventive concept of claim 27 is different from the inventive concept of claim 1, both claims include a roll angle. I have already concluded that none of the prior art cited by Mr. Diamond in relation to obviousness, nor any mosaic thereof, discloses this element. I have also concluded that the skilled person would not be able to bridge that difference. Therefore, claim 27 is also non-obvious, as are claims 28, 29, and 31, which depend on claim 27.

(iii) Independent Claim 30 and its Dependent Claims

[231] Claim 30 claims:

> A slide feature for an amusement ride adapted to carry a rider or ride vehicle sliding thereon, the slide feature comprising: an inrun permitting ingress of the rider or ride vehicle at a first elevation, an outrun permitting egress of the rider or ride vehicle at a second elevation, wherein the first elevation is higher than the second elevation, a sliding surface in communication with the inrun and the outrun, wherein the sliding surface comprises a two-dimensional, planar surface portion that is substantially circular or substantially elliptical, wherein the slide feature provides that the rider or ride vehicle, at least partially urged by gravity, slides along the sliding surface from the inrun to the outrun in an arcuate path, wherein the sliding surface is oriented at a pitch angle around a pitch axis, the pitch angle being measured relative to a horizontal plane, wherein the sliding surface is oriented at a roll angle around a roll axis, the roll angle being measured relative to the horizontal plane, wherein the pitch axis and the roll axis are mutually perpendicular, and wherein at least one of the pitch angle and the roll angle is nonzero.

[232] I find that the inventive concept of claim 30 is a slide feature with an inrun elevated above an outrun, where the inrun and outrun are connected by a sliding surface that contains a flat portion substantially in the shape of an ellipse, that has pitch and roll angles relative to the horizontal plane, at least one of which is non-zero, and whereon the rider slides in an arcuate path at least in part due to gravity.

[233] As with claims 1 and 27, I have already concluded that none of the prior art cited by Mr. Diamond in relation to obviousness, nor any mosaic thereof, discloses a roll angle as claimed. I have also concluded that the skilled person would not be able to bridge that difference. Therefore, claim 30 is also non-obvious, as is claim 32, which depends on claim 30.

(b) *Overbreadth*

[234] WhiteWater argues that all of the 552 Asserted Claims are overbroad. As with the 601 Patent, WhiteWater's pleading and submissions are based on the fact that the asserted claims are broader than the actual invention made, not the disclosure.

[235] As with utility, WhiteWater's position on the overbreadth of the 552 Asserted Claims is part of a larger submission on the 552 Patent Family as a whole. My findings on overbreadth with respect to the 552 Patent are therefore relevant and applicable to the 073 Patent and the 150 Patent.

[236] WhiteWater points specifically to the oral testimony of Mr. Hunter regarding the FlyingSAUCER, the product that Mr. Hunter contemplated as he conceived of the subject-matter of the 552 Patent Family. WhiteWater argues that, based on Mr. Hunter's testimony, the following are key aspects of the FlyingSAUCER: (1) the feature being part of a water slide, rather than other types of slides, (2) a substantially planar sliding surface, (3) an outer wall, (4) the outer wall having a compounding curve, and (5) an orientation about a pitch angle and a roll angle. WhiteWater says that the absence of any of these elements from the asserted claims is cause for invalidity due to overbreadth.

[237] As a preliminary point, it would be incorrect to say that the FlyingSAUCER is the embodiment of one invention contemplated by Mr. Hunter. Rather, it is better understood as a product with a range of possible designs, each of which embodies one of three contemplated inventions related to the 552 Patent, the 073 Patent, and the 150 Patent.

[238] ProSlide argues that WhiteWater's overbreadth challenge must fail because it is not possible to determine which key aspects of the FlyingSAUCER pertain to which contemplated invention. It cites *Seedlings Life Science Ventures, LLC v Pfizer Canada ULC*, 2021 FCA 154 [*Seedlings FCA*] at paragraph 53, where the Court observed that:

> [A] patent application often describes more than one invention. During prosecution, such applications are commonly divided, whereby the original application is limited to claims to only one invention, and a new divisional application is filed containing only claims to another. In both of the foregoing situations, it can be expected that the claims of a patent that issues from the application in question may omit some elements that might have been considered important to the invention when the application was published (publication being the relevant date for interpreting the patent). Clearly, overbreadth should not apply to invalidate claims in these circumstances.
>
> [Emphasis added; citations omitted.]

[239] ProSlide misapplies the Court's decision in *Seedlings FCA*. The Court was observing that one cannot conclude that a divisional patent is overbroad solely because its claims fail to include elements that are key to the contemplated invention of the parent patent. Instead, it must also be established that those aspects are key to the contemplated invention of the divisional patent as well. Indeed, the Court goes on to affirm in paragraph 55 that an overbroad patent is invalid. It would be wrong to conclude from the Court's comments that an exception must be made with respect to divisional patents.

[240] I acknowledge that, in some cases, because the invention disclosures of divisional patents and their parent patents will overlap completely, there may be difficulty in differentiating between the key aspects of their contemplated inventions. However, such difficulty cannot displace the Court's obligation to make findings of fact in each case.

(i) The Inventor's Perspective

[241] Mr. Hunter's testimony indicates that he always contemplated that the FlyingSAUCER would be part of a water slide. In discussing what motivated him to conceive of the FlyingSAUCER, Mr. Hunter explained that he always wanted to replicate his experience skiing "in a water ride":

> Q. Turning back to the 552 Patent, Exhibit 6. Mr. Hunter, did ProSlide have a name for the project or the technology that led to the filing of this patent?
>
> A. Yes. This is the FlyingSAUCER Patent.
>
> Q. And can you tell us about how the idea for the FlyingSAUCER technology first came up?
>
> A. Yeah. The FlyingSAUCER, it came up in 2014. The idea, there were really two entries to the thought process for me. Being a ski racer, you know, my long -- a long part of my life, I was always thinking about turns that kind of gave the same feeling as skiing down a slope or racing in a ski racing turn.
>
> […]
>
> And it was always something in my thought process that I wanted to try to create this in a water ride, because in a water ride, before the FlyingSAUCER, you were either in an open flume with a determined path, which has two walls. And so inherently when you're riding in a linear pattern, of course you can't look to the right or the left and you actually don't look to the right or the left.
>
> Also, of course, if you were in a tunnel and you had a roof with two walls, of course you're looking straight down, so you're always looking in a linear fashion. And it was always part of my thinking was I really wanted to open up the inside wall and really kind of anticipate where we were -- where you would go in a water ride.
>
> [Emphasis added.]

[242] Mr. Hunter also acknowledged in his oral testimony that "the goal was to absolutely ride the outer wall around this curvature, and that was a thought process that I had in my mind." However, when cross examined on the outer wall, he consistently denied that such a wall would have to have a compounding curve.

[243] As for the pitch and roll angles, Mr. Hunter initially denied that they are key aspects of the FlyingSAUCER, but went to concede the point after WhiteWater put to him that he had made contrary prior statements:

> THE COURT: But, Mr. Hunter, now I'm going to go converse.
>
> THE WITNESS: Okay.
>
> THE COURT: You clearly say roll and pitch are absolutely fundamental design elements, you don't say that about the compound curves but you certainly say that [roll and pitch are fundamental] -- is that not true or is it true?
>
> THE WITNESS: I think that is true actually. I think that is true the way he described it.
>
> THE COURT: Okay.

[244] Finally, Mr. Hunter was consistent in his testimony that a substantially planar surface is not a key aspect of the FlyingSAUCER. When WhiteWater suggested otherwise, arguing that a substantially planar surface is important for riders to see where they are headed, he denied that this was the case:

> Q. And so the idea being to create a sliding surface that was open and flat where riders could see around the turn while maintaining their speed, right?
>
> A. As one embodiment, yeah.

> Q. Well, that was the point of the invention, right? That wide open space, to see across as you're coming in, yes?
>
> A. Yes.
>
> Q. And flat plane while maintaining speed. Speed is important, right?
>
> A. The key -- the key is to be able to see. I mean, right? The key is to be able to see. So "flat" is a good description. The truth is that it wouldn't have to be necessarily perfectly flat, but the key is to be able to see.
>
> [Emphasis added.]

[245] In summary, Mr. Hunter's evidence suggests that he viewed the following as key aspects to the FlyingSAUCER in all its embodiments: (1) the feature being part of a water slide, (2) the outer wall, and (3) an orientation about a pitch angle and a roll angle. Mr. Hunter did not consider a compounding curve or a substantially planar surface to be key to the inventions as contemplated.

(ii) The 552 Skilled Person's Perspective

[246] It is not sufficient to examine the inventor's perspective as to what was key to the invention made or contemplated. Although such a perspective may be informative, the Court must ascertain what the skilled person considered to be a key aspect. For this, the Court looks for guidance from the parties' experts (*Steelhead LNG (ASLNG) Ltd v ARC Resources Ltd*, 2023 FC 1684 at para 303).

[247] Mr. Young argues that the 552 skilled person would not consider the five elements noted by WhiteWater to be key aspects of any of the 552 Patent Family's inventions as contemplated. He specifically notes that the disclosures of the 552 Patent Family discuss embodiments that (1)

are not limited to water slides; (2) have no outer walls, compounding or otherwise; (3) have no pitch and roll angles; and (4) have sliding surfaces that are not necessarily substantially planar.

[248] I do not find Mr. Young's evidence to be helpful. He misunderstands the branch of the overbreadth test that is at issue. WhiteWater readily concedes that the claims are not broader than the disclosure. It challenges the scope of the claims compared to the invention that was actually made or contemplated, not compared to the disclosure.

[249] Mr. Diamond's evidence in this regard is more persuasive. He reviews the work done by Mr. Hunter and his colleagues in developing the FlyingSAUCER and observes that it (1) pertained entirely to a water slide feature, not a feature for an amusement ride; (2) revealed that the roll angle should be 15 degrees or 25 degrees and the pitch angle should be zero; (3) indicated that an outer wall with a compound curve whose radius first decreases and then increases ensures that the riders are "loaded" onto the wall; and (4) consistently incorporated a substantially planar sliding surface. Mr. Diamond submits that the 552 skilled person would consider these to be key aspects of the FlyingSAUCER.

[250] In support of his position, Mr. Diamond refers to (1) the minutes from a number of design review meetings in ProSlide, (2) several "design specification" documents setting out constraints in the design of the FlyingSAUCER, and (3) a series of emails among Mr. Hunter and his colleagues. Those records indicate the following:

[redacted]

[redacted]

[redacted]

[251] Based on the above, I find that the 552 skilled person would consider the following as key aspects of inventions contemplated or made in relation to the 552 Patent Family: (1) the feature being part of a water slide, (2) combining a non-zero roll angle with a pitch angle of zero, (3) a compounding outer wall, and (4) a substantially planar surface as part of the sliding surface.

[252] All of the 552 Asserted Claims lack at least one of the above elements. Claims 1, 2, 3, 4, 12, 16, 18, 19, 21, 22, 27, 28, 30, 31, and 32 are not limited to water slides. Claims 1, 2, 3, 4, 12, 16, 18, 19, 21, 22, 25, 27, 28, 29, 30, 31, and 32 do not claim an orientation with a non-zero roll angle and a pitch angle of zero. Claims 1, 2, 3, 4, 12, 16, 25, 27, 28, 29, and 30 do not claim an outer wall, compounding or otherwise. Claims 18, 19, 21, and 22 include an outer wall but do not state that it is compounding. Therefore, all of the 552 Asserted Claims are overbroad.

(c) *Utility*

[253] WhiteWater argues that all of the 552 Asserted Claims lack utility. WhiteWater's position is part of a larger submission on the 552 Patent Family as a whole. In other words, WhiteWater advances the same submissions on utility with respect to the 552 Assert Claims, the 073 Asserted Claims, and the 150 Asserted Claims. My findings on utility with respect to the 552 Patent are therefore relevant and applicable to the 073 Patent and the 150 Patent as well.

[254] As with the 601 Patent, Mr. Young argues that an amusement ride feature has a scintilla of utility if the rider can enter, traverse, and exit the feature. Mr. Diamond proposes the same scintilla of utility, but adds that the rider must be able to do this safely. He also suggests that a scintilla of utility must exist with respect to every type of amusement ride, including dry, snow, and ice rides.

[255] I do not agree with Mr. Diamond that safety is part of the scintilla of utility, and I do not agree with his view that utility must be shown with respect to every type of amusement ride. The case law is clear that "any use" will do. Therefore, all that is needed is to demonstrate or soundly predict that the rider can enter, traverse, and exit the feature *in at least one* type of amusement ride.

The only exception is with respect to the features of claims 25 and 29 of the 552 Patent, as those are limited to water slides. Their requisite scintilla of utility is that the rider can enter, traverse, and exit the feature *in a water slide*.

[256] As noted earlier, the onus is on WhiteWater to satisfy the Court that the 552 Asserted Claims lack utility. WhiteWater elected to challenge all of the asserted claims of the 552 Patent Family collectively, arguing that (1) there were no demonstrations of any of the asserted claims, and (2) although it is conceded that there was a factual basis and a sound line of reasoning, there was no proper disclosure in any of the 552 Patent Family.

[257] None of the features claimed by the 552 Patent Family were actually built prior to the relevant date, nor was any prototype that approximates the features' size and elements. There was no demonstration with which to establish utility. The only issue is whether there was proper disclosure that can support a finding of sound prediction.

[258] I summarized the evidence of the work done by Mr. Hunter and his colleagues for the 552 Patent Family above in my discussion on overbreadth. [redacted] Using these models and designs, Mr. Hunter and his colleagues arrived at certain design details to ensure the inventions of the 552 Patent Family worked. Those details include an outer wall with a compounding curve and an "all roll no pitch" orientation.

[259] The 552 Patent Family's specifications disclose both the factual basis upon which utility was predicted as well as the line of reasoning. Unlike the 601 Patent, the factual basis in the case of the 552 Patent Family is not limited to small-scale physical models or computer-aided designs thereof. It also included computer-aided designs that were used to simulate ride paths. Those designs were disclosed in the figures of each of the 552 Patent Family. In addition, the 552 Patent Family also disclosed ProSlide's line of reasoning that a compounding curve and an "all roll no pitch" orientation ensure that the features would work. For example, regarding compound curves, the three patents disclose on page 12 of their specifications that:

> In some embodiments, it may be desirable that the inrun 110 compounds (i.e., transitions) from a large radius to a smaller radius relative to point 136 in order to urge the rider or ride vehicle towards the outer lip 122 as the rider or ride vehicle enters the slide feature 102. In some embodiments, it may be desirable that the outrun 112 compounds in a similar manner in order to urge the rider or ride vehicle into the exit chute 108. In some embodiments, the inrun 110 and/or the outrun 112 may compound in the opposite manner, namely from a smaller radius to a large radius relative to point 136.

[260] And regarding the appropriate orientation, each of the three patents disclose on page 26 of their specifications that:

> Some embodiments having a roll angle only (i.e., a non-zero roll angle and a pitch angle of zero) may reduce or eliminate uphill portions of the slide feature 1402, for example reducing or eliminating portions of the sliding surface 1420 that may have a negative (uphill) gradient. Configurations of the slide feature 1402 with fewer or no uphill portions may reduce or eliminate a need to configure the slide feature 1402 with water evacuation means. Configurations of the slide feature 1402 with fewer or no uphill portions may also improve the performance of inrun 1410 by urging riders or ride vehicles entering the slide feature 1402 to maintain contact with outer lip 1422.

[261] I am satisfied based on the above that the 552 skilled person would appreciate that testing was performed, that it involved computer-aided designs, and that the embodiments disclosed are the result of those tests and designs. [redacted] The features claimed are shown not to be fanciful, inoperable, or speculative. Since these underlying policy concerns are satisfied by the disclosure of the computer-aided designs, the further disclosure of the [redacted] is not necessary.

[262] I find that the utility of the asserted claims of the 552 Patent Family was soundly predicted. This includes the 552 Asserted Claims.

(4) The 073 Patent

(a) *Obviousness*

[263] WhiteWater argues that all of the 073 Asserted Claims are obvious. As with the 552 Patent, it cites the 963 Patent and WhiteWater's Boomerango, the 492 Patent and ProSlide's Tornado Wave, and the 895 Patent.

[264] Being part of the 552 Patent Family, the 073 Patent and the 552 Patent share the same skilled person, informed by the same set of common general knowledge. I have also already outlined the elements of claim 1 of the 073 Patent, which is the patent's sole independent claim.

[265] Mr. Diamond submits that the inventive concept of claim 1 is "a slide feature with a sliding surface that has an inrun (i.e., an entry) and an outrun (i.e., an exit) at different elevations where an apex of the sliding surface is higher than the inrun and the outrun. The feature has a curved outer lip bounding the sliding surface that extends from the inrun to the outrun in an arc of at least 60 degrees. A radius of the outer lip decreases along at least a first portion of the outer lip beginning proximate to the inrun. The rider slides along the sliding surface in an arcuate path that is at least partially guided by the outer lip."

[266] Mr. Young argues that the inventive concept of claim 1 is "a waterslide feature that has an inrun and an outrun at different elevations, where an apex of the sliding surface is higher than both the inrun and the outrun. The sliding surface is bound by a curved outer lip from the inrun to the outrun in an arc of at least 60 degrees. A radius of the outer lip decreases along at least a first portion of the outer lip beginning proximate to the inrun. The outer lip serves to at least partially guide the arcuate path of the rider."

[267] I find that the inventive concept of claim 1 is a slide feature with an inrun and outrun at different elevations, the two being connected by a sliding surface that has an apex higher than both the inrun and outrun, that has a curved outer lip with an arc of at least 60 degrees and a decreasing curvature radius along at least its first portion, and whereon the rider slides in an arcuate path guided at least partially by the outer lip.

[268] Mr. Diamond argues that there is no difference between the state of the art and the inventive concept. He cites the 492 Patent, claiming that it discloses a sliding feature with an inrun and

outrun at different elevations, an apex higher than both the inrun and outrun, a curved outer lip with an arc of 60 degrees or more, and a decreasing radius of curvature. He further claims that the 552 skilled person would understand that the ride path is arcuate and at least partially guided by the outer lip.

[269] I do not agree with Mr. Diamond's position that the 492 Patent discloses the inventive concept of claim 1. Mr. Diamond's claim that the 552 skilled person would understand that the ride path is at least partially guided by the outer lip is contrary to the explicit teachings of the 492 Patent. At various points, the patent states that the outer lip is present solely for safety reasons and may be omitted altogether. The ride paths disclosed by the 492 Patent are in no way guided by the outer lip. Mr. Diamond does not claim that any other piece of prior art could be combined with the 492 Patent to create a mosaic that supplements this deficiency. Therefore, there is a difference between the state of the art and the inventive concept of claim 1.

[270] I am not satisfied that the skilled person would be able to bridge the difference. Mr. Diamond provides no examples as to how the 552 skilled person would know to utilize the outer lip disclosed in the 492 Patent as a way to guide the ride path.

[271] Claim 1 is not obvious. Claims 3, 4, 5, 6, and 8 depend on claim 1 and are also not obvious.

(b) *Overbreadth*

[272] WhiteWater argues that all of the 073 Asserted Claims are overbroad. I have already concluded that the skilled person would consider the following as key aspects of all of the

inventions contemplated or made in relation to the 552 Patent Family: (1) the feature being part of a water slide, (2) combining a non-zero roll angle with a pitch angle of zero, and (3) a compounding outer wall.

[273] All of the 073 Asserted Claims lack all of the above elements. The only exception is claim 4, which claims a compounding outer wall but is still not limited to water slides nor oriented along an "all roll no pitch" orientation. Other claims include an outer wall, but fail to state that it is compounding. Accordingly, all of the 073 Asserted Claims are overbroad.

(c) *Utility*

[274] WhiteWater argues that all of the 073 Asserted Claims lack utility. I have already concluded that the utility of the asserted claims of the 552 Patent Family was soundly predicted. This includes the 073 Asserted Claims.

(5) The 150 Patent

(a) *Obviousness*

[275] WhiteWater argues that all of the 150 Asserted Claims are obvious. As with the 552 Patent and the 073 Patent, WhiteWater cites the 963 Patent and WhiteWater's Boomerango, the 492 Patent and ProSlide's Tornado Wave, and the 895 Patent. Being part of the 552 Patent Family, the 150 Patent has the same skilled person as the 552 Patent, informed by the same set of common general knowledge.

[276] Claims 1, 6, and 11 are independent claims.

(i) Independent Claim 1

[277] I have already identified the elements of claim 1 of the 150 Patent above.

[278] Mr. Diamond suggests that the inventive concept of claim 1 is "a slide feature that has a sliding surface with an inrun (i.e., an entry) and an outrun (i.e., an exit) where the inrun and outrun are at different elevations. The slide feature has a curved outer lip that has a height with respect to the sliding surface and extends from the inrun to the outrun defining an outer boundary of the sliding surface. A radius of the outer lip decreases along at least a first portion of the outer lip beginning proximate to the inrun. The slide feature also has an inner core portion that defines an inner boundary of the sliding surface from the inrun to the outrun. The inner core portion has a top surface, wherein at least a portion of the top surface has a height with respect to the sliding surface that is less than the height of the outer lip."

[279] Mr. Young argues that the inventive concept of claim 1 is "a waterslide feature that has an inrun and an outrun at different elevations. A curved outer lip extends upward from the sliding surface defining an outer boundary of the sliding surface from the inrun to the outrun. A radius of the outer lip decreases along at least a first portion of the outer lip beginning proximate to the inrun. The inner boundary of the sliding surface is defined by an inner core portion; at least a portion of the top surface of the inner core portion is shallower relative to the sliding surface than the outer lip."

[280] I find that the inventive concept of claim 1 is a slide feature with an inrun and outrun at different elevations, the two being connected by a sliding surface that has a curved outer lip with a decreasing curvature radius along at least its first portion, that has an inner core portion with a top surface, and whose boundaries are defined by the outer lip and the inner core, where at least part of the top surface is shallower relative to the sliding surface than the outer lip.

[281] Mr. Diamond claims that there is no difference in the state of the art and the inventive concept of claim 1. He cites the 492 Patent and the 895 Patent. He also appears to suggest that the 552 skilled person may create a mosaic of the two patents' elements. I do not agree that either reference discloses an inner core with a top surface. In fact, a review of all of the prior art cited by Mr. Diamond in relation to obviousness indicates that none of them disclose this element.

[282] One may argue that the 492 Patent and the 895 Patent disclose an inner lip along the inner boundary of the sliding surface and that this inner lip can be considered an inner core. However, even if this is the case, that inner core would still lack a top surface. This essential component of the inventive concept is not disclosed in either one of the 492 Patent and the 895 Patent. Therefore, there is a difference between the state of the art and the inventive concept of claim 1.

[283] I am not satisfied that the skilled person would be able to bridge that difference. Mr. Diamond argues that adjusting the height of the top surface is considered a routine design choice by the 552 skilled person. However, Mr. Diamond fails to explain how the 552 skilled person would think to add an inner core with a top surface to begin with.

[284] Claim 1 is not obvious. Claims 2, 3, and 5 depend on claim 1 and are also not obvious.

(ii) Independent Claim 6

[285] Claim 6 claims:

> A slide feature for an amusement ride adapted to carry a rider or ride vehicle sliding thereon, the slide feature comprising: an inrun permitting ingress of the rider or ride vehicle at a first elevation; an outrun permitting egress of the rider or ride vehicle at a second elevation, wherein the first and second elevations are different; a sliding surface in communication with the inrun and the outrun; a curved outer lip extending from the inrun to the outrun, the outer lip defining an outer boundary of the sliding surface, wherein the outer lip has a height with respect to the sliding surface; and an inner core portion defining an inner boundary of the sliding surface from the inrun to the outrun, the inner core portion having a top surface, wherein at least a portion of the top surface has a height with respect to the sliding surface that is less than the height of the outer lip, wherein the sliding surface extends around the inner core portion in an arc of at least 60 degrees.

[286] I find that the inventive concept of claim 6 is a slide feature with an inrun and outrun at different elevations, the two being connected by a sliding surface that has a curved outer lip that extends from the inrun to the outrun in an arc of at least 60 degrees, that has an inner core portion with a top surface, and whose boundaries are defined by the outer lip and the inner core, where at least part of the top surface is shallower relative to the sliding surface than the outer lip.

[287] While the inventive concept of claim 6 is distinct from the inventive concept of claim 1, both include an inner core with a top surface. I have already concluded that none of the prior art cited by Mr. Diamond in relation to obviousness discloses this element. I have also concluded that

the skilled person would not be able to bridge that difference. Therefore, claim 6 is also non-obvious, as are claims 7, 8, 9, and 10 which depend on claim 6.

(iii) Independent Claim 11

[288] Claim 11 claims:

> A slide feature for an amusement ride adapted to carry a rider or ride vehicle sliding thereon, the slide feature comprising: an inrun permitting ingress of the rider or ride vehicle at a first elevation; an outrun permitting egress of the rider or ride vehicle at a second elevation, wherein the first and second elevations are different; a sliding surface in communication with the inrun and the outrun; a curved outer lip extending from the inrun to the outrun, the outer lip defining an outer boundary of the sliding surface, wherein the outer lip has a height with respect to the sliding surface; and an inner core portion defining an inner boundary of the sliding surface from the inrun to the outrun, the inner core portion having a top surface, wherein at least a portion of the top surface has a height with respect to the sliding surface that is less than the height of the outer lip, wherein the inner core portion defines a curved inner lip of the sliding surface, wherein a height of the inner lip with respect to the sliding surface is less than the height of the outer lip.

[289] I find that the inventive concept of claim 11 is a slide feature with an inrun and outrun at different elevations, the two being connected by a sliding surface whose boundaries are defined by a curved outer lip and an inner core portion with a top surface and a curved inner lip, where the top surface is at least partially, and the inner lip is completely, shallower relative to the sliding surface than the outer lip.

[290] As with claims 1 and 6, I have already concluded that none of the prior art cited by Mr. Diamond in relation to obviousness, nor any mosaic thereof, discloses an inner core with a top

surface. I have also concluded that the skilled person would not be able to bridge that difference. Therefore, claim 11 is also non-obvious, as are claims 13, 14, 15, and 16, which depend on claim 11.

(b) *Overbreadth*

[291] WhiteWater argues that all of the 150 Asserted Claims are overbroad. I have already concluded that the skilled person would consider the following as key aspects of all of the inventions contemplated or made in relation to the 552 Patent Family: (1) the feature being part of a water slide, (2) combining a non-zero roll angle with a pitch angle of zero, and (3) a compounding outer wall.

[292] All of the 150 Asserted Claims lack all of the above elements. Accordingly, all of the 150 Asserted Claims are overbroad.

(c) *Utility*

[293] WhiteWater argues that all of the 150 Asserted Claims lack utility. I have already concluded that the utility of the asserted claims of the 552 Patent Family was soundly predicted. This includes the 150 Asserted Claims.

VII. Costs

[294] The parties shall endeavour to agree on a reasonable costs quantum within 15 days of the Court's decision, failing which they shall provide the Court with submissions on costs within 30 days of the Court's decision.

VIII. Conclusion

[295] None of the AquaSphere, Orbiter, and Tailspin products infringe any of the asserted claims in each of the 601 Patent, the 552 Patent, the 073 Patent and the 150 Patent given there was no making, using, constructing or selling of the Orbiter or Tailspin products in Canada, and no infringement of the AquaSphere product for the reasons given above.

[296] With respect to the 601 Patent, I find that claims 1, 4, 5, 9, 11, 12, 18, 19, 20, 30, 35, and 38 are invalid as lacking utility. Claim 20 is also invalid as being anticipated and obvious.

[297] With respect to the 552 Patent, I find that claims 1, 2, 3, 4, 12, 16, 18, 19, 21, 22, 25, 27, 28, 29, 30, 31, and 32 are invalid as being overbroad.

[298] With respect to the 073 Patent, I find that claims 1, 3, 4, 5, 6, and 8 are invalid as being overbroad.

[299] With respect to the 150 Patent, I find that claims 1, 2, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, and 16 are invalid as being overbroad.

[300] I have considered the real and substantial potential prejudice to either of the parties if the judgment is not issued as soon as possible and therefore the judgment and reasons will issue prior to translation, that translation to follow in the normal course.

JUDGMENT in T-1449-20

THIS COURT'S JUDGMENT is that:

1. None of the asserted claims in each of the 601 Patent, the 552 Patent, the 073 Patent, and the 150 Patent are infringed.

2. With respect to the 601 Patent, I find that claims 1, 4, 5, 9, 11, 12, 18, 19, 20, 30, 35, and 38 are invalid as lacking utility. Claim 20 is also invalid as being anticipated and obvious.

3. With respect to the 552 Patent, I find that claims 1, 2, 3, 4, 12, 16, 18, 19, 21, 22, 25, 27, 28, 29, 30, 31, and 32 are invalid as being overbroad.

4. With respect to the 073 Patent, I find that claims 1, 3, 4, 5, 6, and 8 are invalid as being overbroad.

5. With respect to the 150 Patent, I find that claims 1, 2, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, and 16 are invalid as being overbroad.

6. Costs to the Defendant. The parties shall endeavour to agree on a reasonable costs quantum within 15 days of the Court's decision, failing which they shall provide the Court with submissions on costs within 30 days of the Court's decision.

"Michael D. Manson"
Judge

Schedule A: Figures from the ProSlide Patents

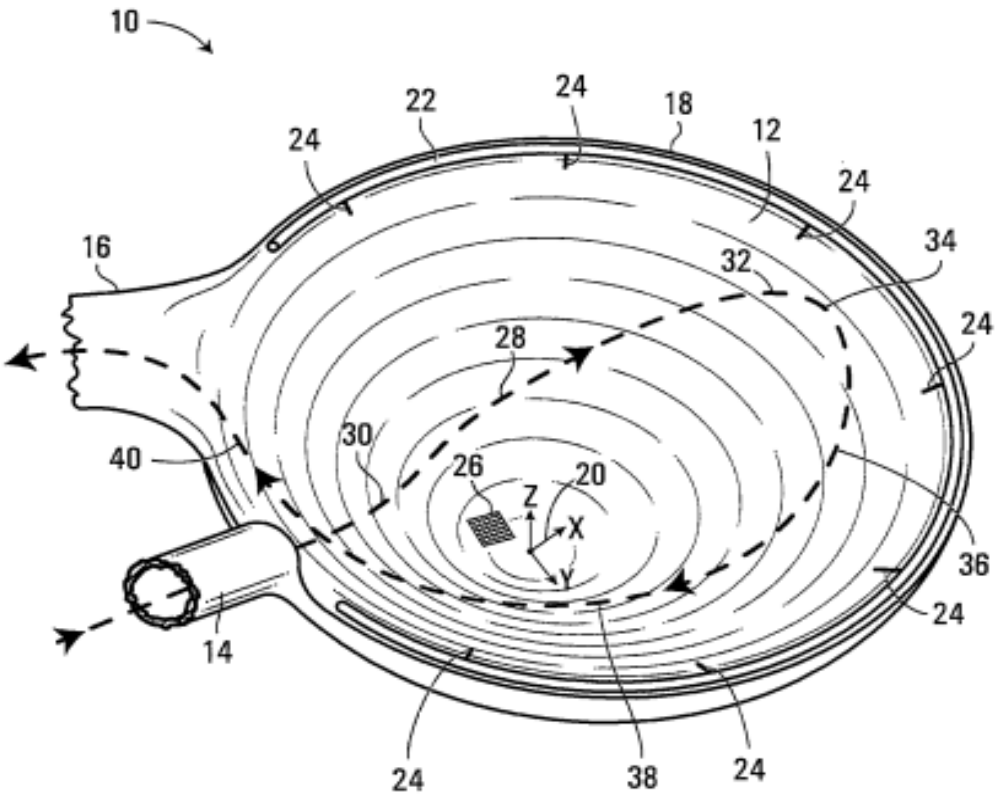
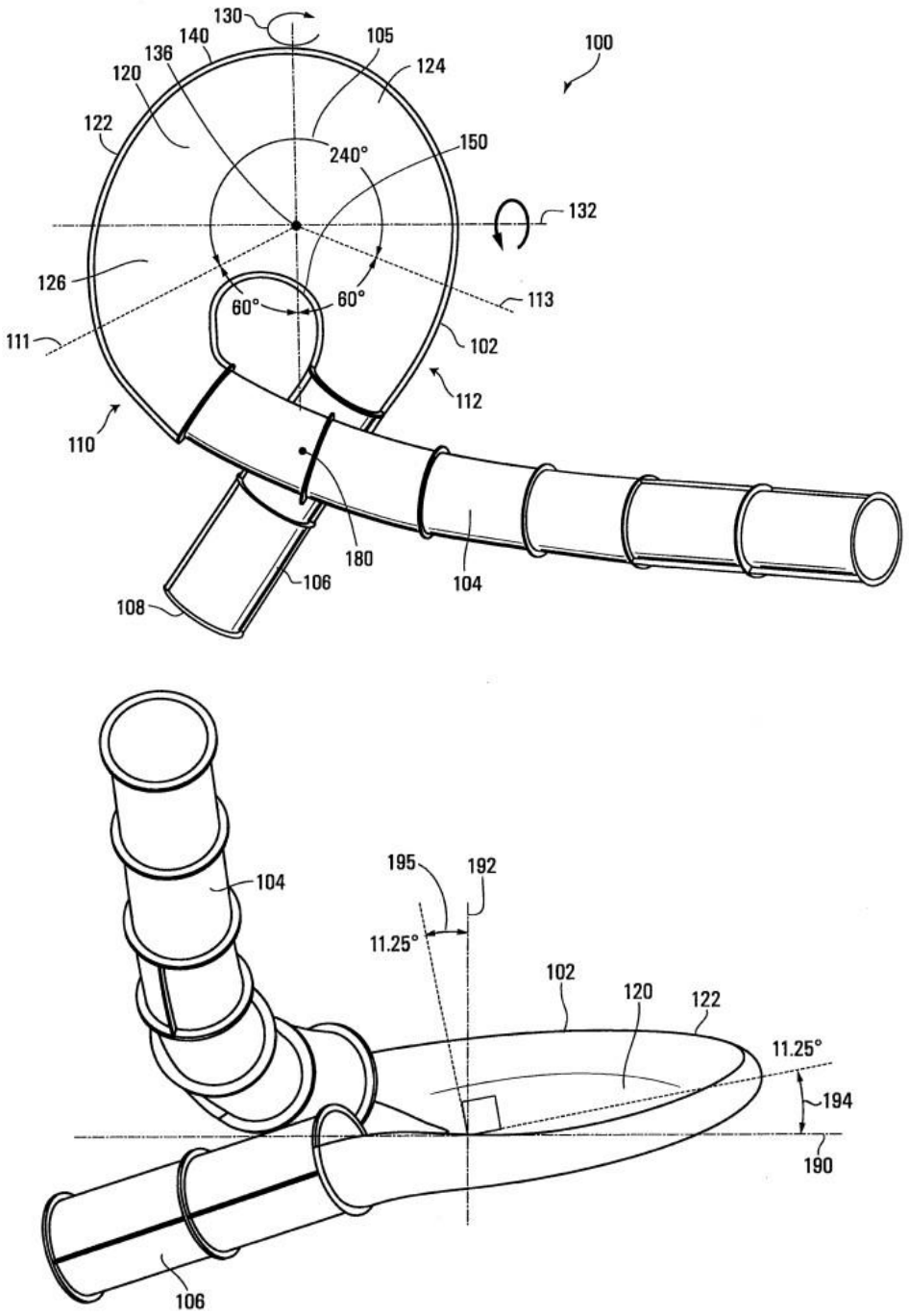


Figure 1 of the 601 Patent.



Figures 1A and 1C in each of the 552 Patent Family.

Schedule B: Images of the Allegedly Infringing Products

Image of WhiteWater's AquaSphere product, taken from the Barrera Affidavit.

Image of WhiteWater's Orbiter Product, being Figure 90 of Mr. Young’s first report.

Image of WhiteWater's Constrictor product, taken from the Barrera Affidavit.

Image of WhiteWater's Tailspin product, taken from the Barrera Affidavit.

Schedule C: Images of and Figures from the Prior Art Cited by WhiteWater's Expert

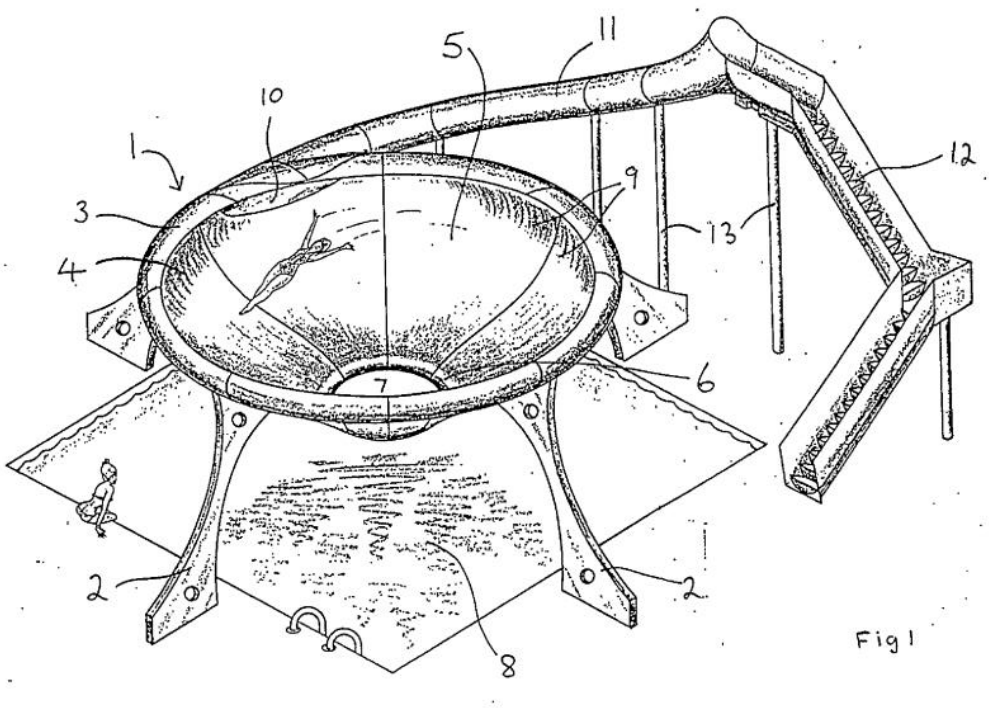


Figure 1 in the 948 Patent.

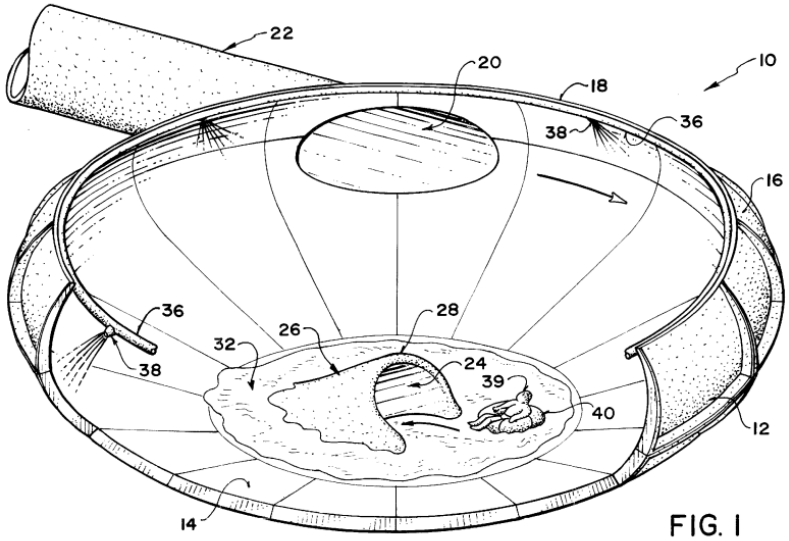


Figure 1 in the 955 Patent.

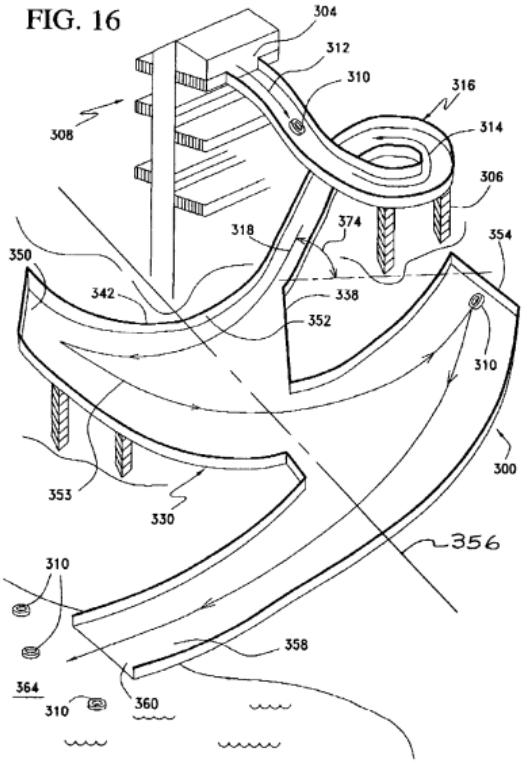


Figure 16 in the 107 Patent.

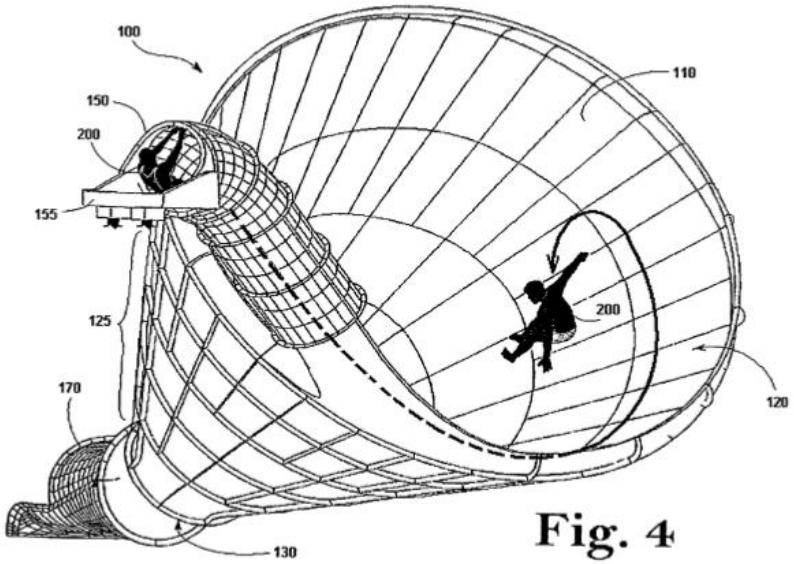


Figure 4 in the 220 Patent.

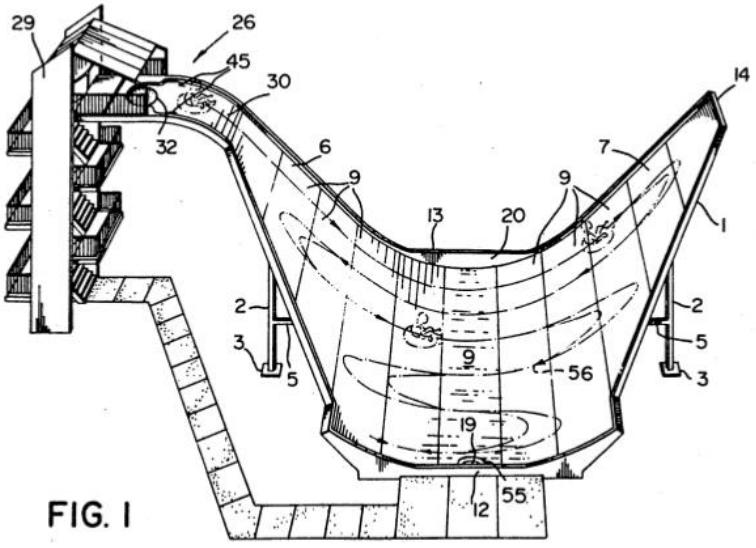


Figure 1 in the 497 Patent.

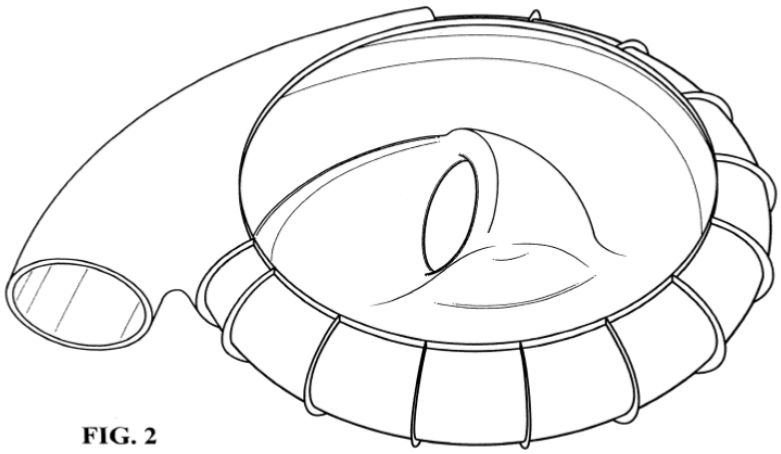


Figure 2 in the D810 Patent

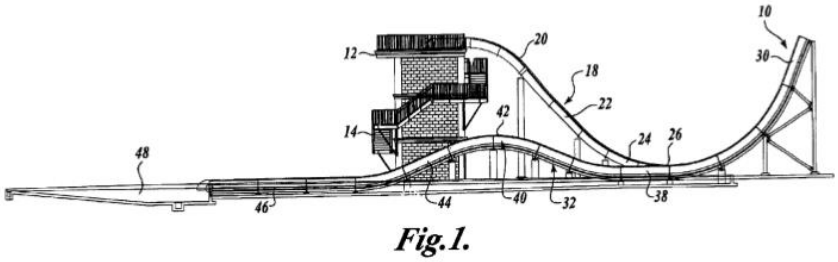


Fig.1.

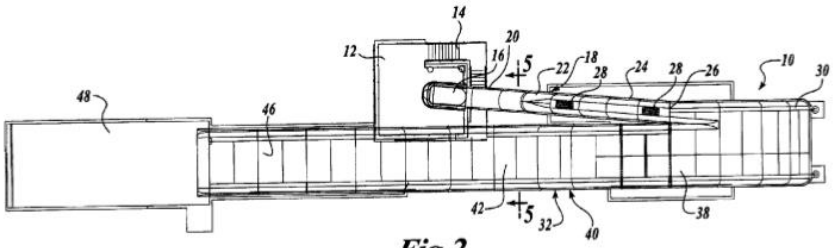


Fig.2.

Figures 1 and 2 of the 936 Patent

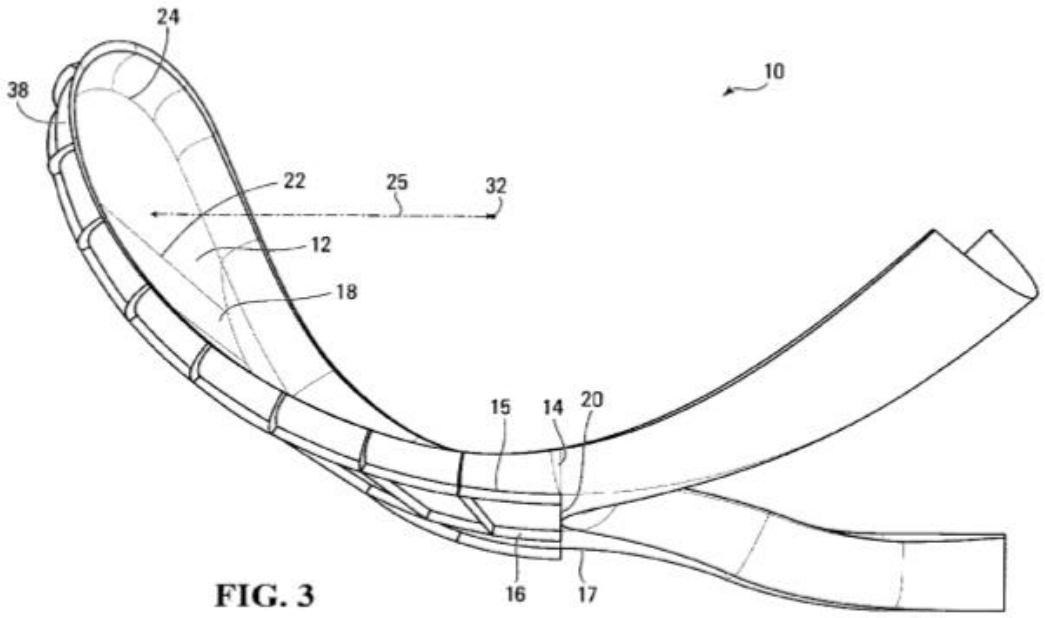


FIG. 3

Figure 3 in the 492 Patent

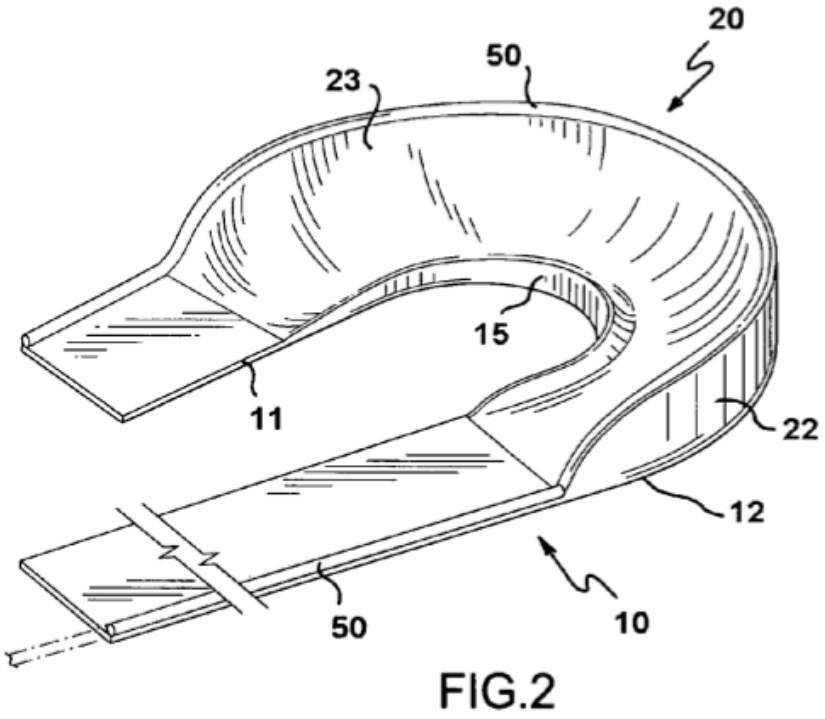


FIG.2

Figure 2 in the 895 Patent.

FEDERAL COURT

SOLICITORS OF RECORD

DOCKET:	T-1449-20
STYLE OF CAUSE:	PROSLIDE TECHNOLOGY, INC V WHITEWATER WEST INDUSTRIES, LTD
PLACE OF HEARING:	TORONTO, ONTARIO
DATE OF HEARING:	JUNE 17-21, 24-26 AND JULY 11, 2024
PUBLIC JUDGMENT AND REASONS:	MANSON J.
DATED:	SEPTEMBER 13, 2024

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CASSELS BROCK & BLACKWELL LLP Barristers and Solicitors Toronto, Ontario	FOR THE DEFENDANTS / PLAINTIFFS BY COUNTERCLAIM