

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN

PLASTIPAK PACKAGING, INC.,

Plaintiff,

v.

OPINION AND ORDER

20-cv-098-wmc

PREMIUM WATERS, INC.,

Defendant.

In this action, plaintiff Plastipak Packaging, Inc., alleges that defendant Premium Waters, Inc., infringes a number of asserted claims in 12, related patents-in-suit, all concerning the “neck finish” of a plastic bottle. While not disputing that its plastic water bottles infringe Plastipak’s patents-in-suit, Premium Waters asserts several invalidity defenses, a number of which are now the subject of both parties’ cross-motions for summary judgment. (Dkt. ##105, 116.) The court will grant defendant’s motion for summary judgment in light of overwhelming evidence that plaintiff failed to name all of the correct inventors for each of the patents-in-suit in violation of 35 U.S.C. § 102(f).¹

UNDISPUTED FACTS²

A. Overview of the Parties

Plastipak is a Delaware corporation, with its principal place of business located in

¹ Despite plaintiff’s motion for summary judgment as to infringement of all of the asserted claims being unopposed, the parties could not reach a stipulation on infringement, with both sides casting aspersions on the other party. Defendant’s reluctance appears to be rooted mainly in its position that it cannot infringe an invalid patent, but there is nothing to suggest that plaintiff was seeking entry of partial judgment on infringement grounds, rather than entry at the time of final judgment *provided* the patents survive defendant’s myriad invalidity challenges. Regardless, given the court’s finding on defendant’s nonjoinder challenge, this issue is now moot.

Michigan. Plastipak manufactures and sells containers and packaging for consumer products, including bottled water. Defendant Premium Waters is both incorporated and maintains its principal place of business in Minnesota. Premium Waters is a manufacturer and supplier of bottled water products. While it is principally located in Minnesota, Premium Waters also owns and operates a bottled-water manufacturing plant in Chippewa Falls, Wisconsin, which is located within this judicial district.

B. Patents-in-Suit

Plastipak alleges that Premium Waters manufactures, uses and sells plastic water bottles and preforms that infringe the following twelve patents: 8,857,637 (“the ’637 patent”); 9,033,168 (“the ’168 patent”); 9,139,326 (“the ’326 patent”); 9,403,310 (“the ’310 patent”); 9,522,759 (“the ’759 patent”); 9,738,409 (“the ’409 patent”); 9,850,019 (“the ’019 patent”); 10,023,345 (“the ’345 patent”); 10,214,311 (“the ’311 patent”); 10,214,312 (“the ’312 patent”); 10,266,299 (“the ’299 patent”); and 10,457,437 (“the ’437 patent”).³ As directed by the court, Plastipak has reduced its asserted claims to 21 as reflected in the following table:

| Patent | Claim(s) |
|---------------|-----------------|
| '637 patent | 30, 34 |
| '168 patent | 12, 15, 28 |

² Unless otherwise noted, the following facts are material and undisputed. Given the voluminous proposed findings, the court limits this section to the key, overarching facts and addresses other undisputed facts as specific arguments in the opinion that follows.

³ More specifically, Plastipak contends that 10 different products infringe one or more of the asserted claims, including Premium Waters’ 10 oz., 0.5 L, 20 oz., 24 oz., 0.7 L, and 1 L-sized bottled water products, which are then sold under various brand names including Glacier Clear.

| | |
|-------------|-----------------|
| '326 patent | 29 |
| '310 patent | 3,14 |
| '759 patent | 29 |
| '409 patent | 8 |
| '019 patent | 30 |
| '345 patent | 28 |
| '311 patent | 14 |
| '312 patent | 7, 11 |
| '299 patent | 2, 5, 9, 12, 26 |
| '437 patent | 30 |

Each of the patents-in-suit is titled “Lightweight Plastic Container and Preform,” and as suggested by their title, each generally relates to reducing the weight of plastic containers and the plastic preforms from which they are made. The same two individuals, Richard C. Darr and Edward V. Morgan, are named as the sole inventors on all 12 patents.

The '637 patent issued on October 14, 2014, from U.S. Application Serial No. 11/749,501, filed on May 16, 2007.⁴ Application 11/749,501 was itself a continuation-in-party of U.S. Application Serial No. 11/368,860 (“the '860 application”), filed on March 6, 2006, which issued as U.S. Patent No. 7,608,159, which is not asserted in this case. In addition to the '637 patent, the other, 11 related patents were issued between May 19, 2015, and October 29, 2019. The specifications for the '168, '326, '310 and '759 patents all incorporated by reference the entirety of the '860 application, among other earlier patent applications. The remaining six patents were all filed as a continuation of the application from which an earlier patent issued. As a result, the patents-in-suit all claim

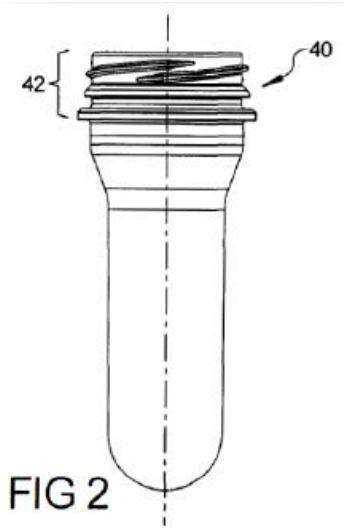
⁴ A Certificate of Correction was issued on January 6, 2015.

priority to the original May 16, 2007, application that issued as the '637 patent, and plaintiff's technical expert purports to opine that all of the asserted claims of the patents-in-suit are "entitled" to that effective filing date.

Plaintiff submits additional findings specific to its motion for summary judgment on infringement (Pl.'s PFOFs (dkt. #119) ¶¶ 200-34), but as explained above, the court will not recount these facts since there is no dispute that the accused products infringe the patents-in-suit. The parties also propose facts relevant to various invalidity challenges, which the court will address as relevant in the opinion below, rather than recite them in detail here.

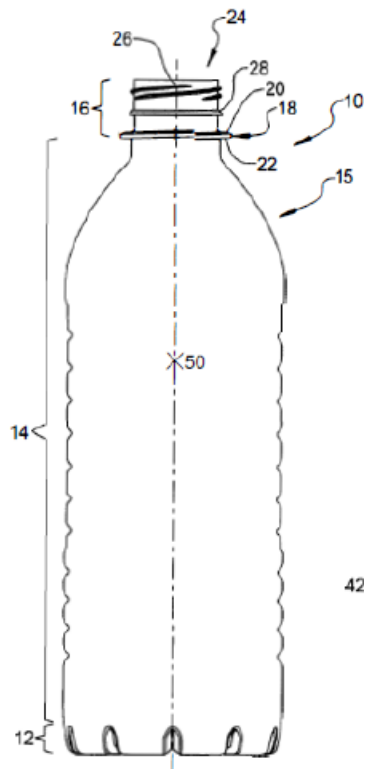
C. Background of Technology

The plastic bottles accused of infringement are comprised primarily of polyethyleneterephthalate ("PET"). Such bottles generally are created using a two-step process: (1) manufacturing a "perform" via "injection molding" and (2) "blow-molding" the preform into a bottle. Figure 2 of the '637 patent depicts a plastic preform as shown below:



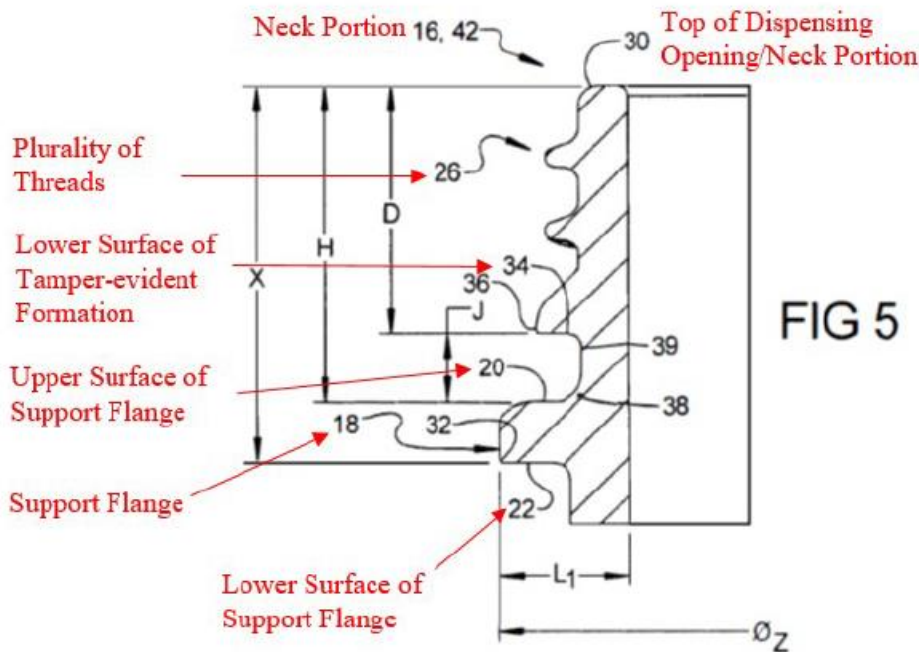
(Def.'s PFOFs (dkt. #107) ¶ 41.) A preform includes a neck portion (often referred to as a “neck finish”), indicated by reference number 42 above, and beneath the neck portion, a lower portion that resembles a test tube.

Figure 1 of the '637 patent illustrates a bottle formed from a preform:



(*Id.* ¶ 43.) The neck portion or finish of the bottle, indicated by reference number 16, will have “substantially the same dimensions” as the neck portion of the preform. (Pl.’s Resp. to Def.’s PFOFs (dkt. #153) ¶ 44.)

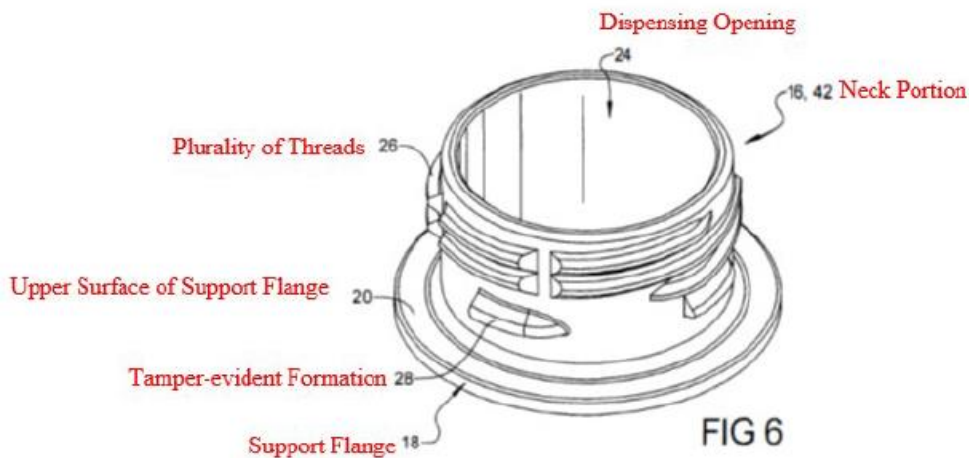
Material to the parties’ motions, “X” is the overall height of the neck finish, measured from the top of the neck finish to the lower surface of the support flange. Plaintiff alleges that one novel aspect of its invention is a neck finish height (or X dimension) of 0.58 inches or less.⁵ Plaintiff further alleges that it discovered through research and development, that plastic bottles could be produced with neck finishes that were lighter as a result of having a shorter X dimension. Figure 5 in the ’637 patent shows the X dimension, among others:



(Def.’s PFOFs (dkt. #107) ¶ 57.)

⁵ The parties dispute whether the use of a tamper-evident formation that is discontinuous, viewed in isolation, is another novel aspect of the patents-in-suit.

The neck finishes described in the patents-in-suit also include certain well-known, structural features present in many neck finish designs. For example, the neck finishes include threads, a temper-evident formation, and a support flange, also known as a support ledge or support ring. The '637 patent illustrates examples of each in Figure 6, reproduced with annotations from the '637 specification:



(Def.'s PFOFs (dkt. #107) ¶ 57.)

OPINION

In its motion, defendant Premium Waters seeks summary judgment on the following bases: (1) the patents-in-suit are invalid under 35 U.S.C. § 102(f) because the patents do not name all or the correct inventors; (2) the asserted claims are invalid as indefinite under 35 U.S.C. § 112; (3) the asserted claims are invalid for lack of enablement, also under § 112; and (4) Plastipak cannot recover pre-notice damages. In its cross-motion, Plastipak Packaging seeks summary judgment on: (1) infringement of all of the asserted claims of the patents-in-suit; (2) defendant's inequitable conduct defense; (3) defendant's anticipation and obviousness contentions, at least with respect to two prior art references;

and (4) other defenses. Because the court concludes that defendant's nonjoinder defense warrants summary judgment in its favor invalidating all of the patents-in-suit, the court need not reach the parties' other bases for summary judgment, although the court will address briefly defendant's indefiniteness challenge, finding significant merit in that defense as well.

I. Nonjoinder / Derivation

A. Relevant Facts Concerning SACMI ML27 System

1. ML27 Design

SACMI Imola is an Italian company located in Imola, in Northern Italy. Alessandro Falzoni is an employee of SACMI, having worked there since 1997. From 2004 through 2007, Falzoni was in charge of a section of SACMI's packaging laboratory, mainly with respect to plastic caps and metal caps. At his deposition, Falzoni testified that he designed a new neck finish and cap combination in 2004. Plaintiff challenges defendant's characterization that Falzoni designed a "neck finish," pointing to testimony that he did not design the lower surface of the support flange. (Pl.'s Resp. to Def.'s PFOFs (dkt. #153) ¶ 96.) Regardless, Falzoni's design became known as the "Multi-Lok 27" or "ML27" for short.

Falzoni testified that there were two objectives to his ML27 design. The first objective was to make a lighter-weight neck and cap combination, which Falzoni testified came from having a shorter neck and closure. The second objective was to provide increased security for the consumer by designing the neck-cap combination so that the

tamper band breaks *before* the seal of the container is lost. The increased security was provided through four lugs of the neck finish that engaged flaps on the closures' tamper band, replacing the continuous bead used in "normal" neck finishes.⁶ Falzoni's description of the objectives of the ML27 design is consistent with that of fellow SACMI employee Claudio Scudellari, who was in charge of the North American market for SACMI packaging machines from 1998 through 2013. The ML27 was designed for use with carbonated soft drinks, but Falzoni testified at his deposition that the neck finish also could be used for still water. (Falzoni Dep. (dkt. #97) 50-51.)

In August 2004, SACMI was preparing to make a mold to produce prototypes of the ML27 or at least of the caps. By early 2005, SACMI had molded prototypes of the closure of the ML27 system. At the same time, Falzoni was preparing presentations to update SACMI's salespeople and potential customers of the features of this neck-cap combination. In one presentation -- delivered only internally -- dated November 16, 2005, Falzoni explained why he thought it was possible to remove weight from the standard neck finish and also why the standard neck finish used unnecessary plastic.

Specifically, Falzoni explained that it was possible to move the tamper bead closer to the support ledge, allowing for a reduction in the neck height by eliminating unused space beneath the threads. A diagram in this presentation shows a neck finish with a distance from the lower surface of the neck support ring to the top of the neck finish that was 14.7 mm, which is equal to 0.5787 inches. Between 2005 and 2007, SACMI proposed

⁶ Plaintiff disputes whether this design actually provided increased security in light of subsequent testing performed by Plastipak inventor Darr.

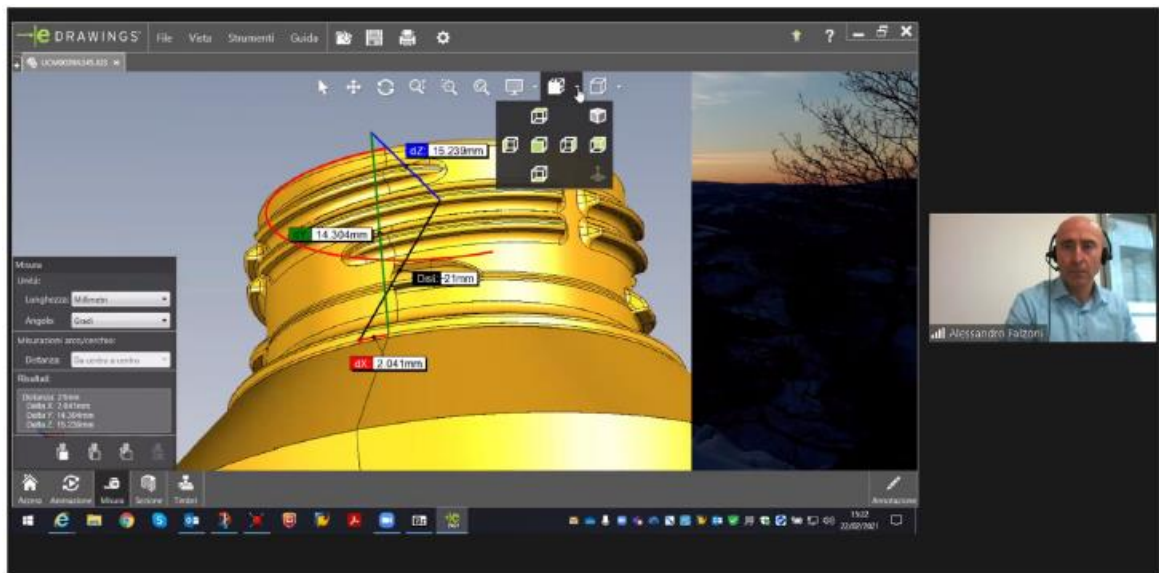
a 14.7 mm neck finish to multiple parties in the United States, including Plastipak, Owens-Illinois and Coca-Cola.

2. SACMI's Interactions with Plastipak

At his deposition, Scudellari described several interactions he had with Plastipak, including its President William Young, during his tenure as SACMI's North American market head from 2004 through 2013. In May or June 2005, Scudellari specifically recalled introducing the ML27 design to Plastipak, although he could not remember whether he met with Young or other people at Plastipak. Scudellari also testified that Plastipak was interested in obtaining exclusive rights to SACMI's ML27 design.

There appears to be no dispute that Scudellari also introduced Falzoni to Plastipak's named inventor Richard Darr during this same time frame. Moreover, on June 13, 2005, Falzoni emailed a 3D model of the ML27 design to Darr. Plaintiff clarifies that the attachment to the email was a .zip drive file containing a single IGS file, but as Falzoni's email explained what he sent was "the 3D model of the neck finish," with the "area below the neck support ring . . . left undefined and you can change it at your ease." (Def.'s PFOFs (dkt. #107) ¶ 118.) Plaintiff also contends that this 3D image is not relevant because it is of a "metal testing tool" not a *plastic* neck finish or preform. (Pl.'s Add'l PFOFs (dkt. #153) ¶¶ 347-48.) As Falzoni explained during his deposition, however, "[i]t was the drawing of the testing device, and the dimension of the neck finish were through to plastic dimensions that we wanted to have on the neck finish of the bottles at the time." (Def.'s Resp. to Pl.'s Add'l PFOFs (dkt. #159) ¶ 348.) In other words, the dimensions in the drawing reflect dimensions of a plastic neck finish.

Further, during his deposition, Falzoni actually retrieved the email that he sent to Darr on June 13, 2005, opened the .zip folder that was attached, and presented the contents of the folder on his shared computer screen. Specifically, that folder contained a file named UCM0039a345.IGS.⁷ As Falzoni testified, the 3D model included threads, a discontinuous tamper-evident formation, and a support flange, although as plaintiff points out, the lower surface of the support flange was not represented. In the 3D model of the ML27 neck finish, the distance from the top of the neck finish to the bottom of the support ring (as it is depicted in the image) was 14.304 mm (or 0.563 inches), which Falzoni personally measured and confirmed during his deposition as shown in the below image:



(Def.'s PFOFs (dkt. #107) ¶ 126 (citing Gross Decl., Ex. 29 (dkt. #110-10).) Falzoni also

⁷ Plaintiff raises issues about whether this file was the same as that previously produced by SACMI or whether it was otherwise properly authenticated. Given that Falzoni pulled up the email with the attachment during the course of his deposition, and defendant represents that the 3D model is the one identified by Falzoni at his deposition, the court finds *no* merit to this objection. If anything, Falzoni's deposition *confirmed* that the measurements in the 3D file sent to Darr were the same as the measurements in the 3D file SACMI's counsel produced to Premium Waters.

measured and confirmed that the distance from the top of the neck finish to the lower surface of the tamper bead was 10.31 mm (or 0.4059 inches).

Also, on June 13, 2005, Darr responded to Falzoni as follows: “Thank you for the 3D model. I will be creating a finished drawing using this file and will be sending it back to you for verification before I cut the neck ring.” (Def.’s PFOFs (dkt. #107) ¶ 128 (citing Gross Decl., Ex. 24 (dkt. #110-3)).) Also on that date, Darr sent Falzoni another email stating, “Please see attached PDF of the 27mm finish with the support flange and the estimated weight as compared to the 28 mm PCO finish and the 26.7MM Water finish.” (*Id.* ¶ 129 (citing Gross Decl., Ex. 25 (dkt. #110-4)).) This PDF drawing showed a distance from the bottom of the support ring to the top of the opening of 15.01 mm or .591 inches and a distance from the top of the neck finish to the lower surface of the tamper bead (also known as the “D distance”) of 10.31 mm, which is consistent with the design Falzoni sent to Darr. Falzoni testified at his deposition that the drawing prepared by Darr had a neck height (or X dimension) greater than he had provided in the original 3D model -- 15.01 mm versus 14.304 mm -- because Darr’s drawing had a thicker support ledge.

The very next day after Darr sent his drawing, June 14, 2005, Scudellari and Darr exchanged emails to arrange a meeting between Scudellari, Darr, Young and another Plastipak employee, Bill Slat, in Plymouth, Michigan, on June 22, 2005. On June 29, Scudellari further sent Darr, Young and Slat an email thanking them for their hospitality and discussing closures for the ML27 system, giving rise to a reasonable inference that the June 22 meeting occurred. Regardless, on August 4, 2005, Darr sent an email to yet another SACMI employee, Giuseppe Lesce, copying Scudellari and Slat, discussing an

upcoming meeting at the “drinktec” trade exhibition, during which Darr explained that he would like “to have a discussion . . . regarding the exclusivity that [Plastipak] would like to have on the closure. You should be prepared to offer us a proposal on what you would require from Plastipak to make this happen.” (Def.’s PFOFs (dkt. #107) ¶ 153 (citing Gross Decl., Ex. 34 (dkt. #111-4)).)

On August 8, Lesce responded to Darr that SACMI had decided to present its design -- describing it as “our ML27 cap” -- to a couple of companies, including Plastipak. On August 16, Darr replied, informing Lesce and Scudellari that he intended to visit SACMI on September 12 and wanted to arrange a meeting at drinktec on September 14 to discuss the ML27. Darr emphasized that he would be present in person, along with Young, Slat, and other Plastipak employees. On August 29, Darr again wrote to Lesce and Scudellari indicating that the Plastipak attendees would also include Ed Morgan, President Bill Young’s son-in-law, who would become the other named inventor on the patents-in-suit. Finally, on September 8, 2005, Plastipak provided SACMI with plastic bottles to test the closure and neck finish in advance of their planned meeting.⁸ Plaintiff disputes that the bottles reflected the ML27 design, again based on its contention that the neck finish in the 3D image lacked the bottom surface of a support flange, making it “incomplete.”

In September 2005, SACMI and Plastipak employees met in Munich, Germany, at the drinktec exhibition. On September 27, Scudellari then followed-up by emailing Plastipak employees, including Darr, a quotation for the sale of a machine capable of

⁸ Plastipak also provided SACMI with bottles featuring its own PCO 1810 neck finish for comparison’s sake.

manufacturing a version of the ML27 closure design, which was specifically for use with plastic water containers. On September 28, Lesce next emailed to Darr and Young a proposal under which SACMI would grant Plastipak one year of exclusivity on the production of caps and preforms using the M27 design in the United States. On December 29, Lesce further emailed Darr a more detailed proposal setting forth specific terms under which SACMI was prepared to offer use of the ML27 system, including a *three-year* period of exclusivity on the production of caps and preforms using the ML27 design in the United States market subject to certain limitations.

After Darr responded to Scudellari with a counterproposal on January 2, 2006, however, Scudellari observed on January 27 that “our respective Companies’ positions don’t quite come . . . together.” (Def.’s PFOFs (dkt. #107) ¶ 167.) In particular, Scudellari stated that Plastipak’s commitment to purchase *only* SACMI’s cap-making machines “does not quite get even close to our idea of fair payback, since it would represent a relatively minor aspect of the deal if compared to the technology and machinery volumes engendered by the PET preform’s side of the deal.” (*Id.* (quoting Gross Decl., Ex. 46 (dkt. #112-5)).) Despite additional back and forth between the two sides, the parties failed to reach an agreement on exclusivity on SACMI’s preform design by March 2006, prompting Slat to cancel the order Plastipak had placed with SACMI for a molding machine to produce closures for water bottles.

That same month, unbeknownst to Scudellari, Falzoni or anyone else at SACMI, Plastipak applied for a patent claiming a plastic container with specific neck finish dimensions and naming Darr and Morgan as the sole inventors. Plastipak did not disclose

the SACMI ML27 system in any documents to the USPTO. Defendant further points out that this system was not disclosed in other Plastipak lawsuits involving the patents-in-suit, although plaintiff points out that the defendant in one case asked SACMI to identify prior art to the Plastipak patents. (Pl.’s Resp. to Def.’s PFOFs (dkt. #160) ¶ 181.)

In September 2006, Falzoni also presented a drawing PPM04898006 to the Reduced Height/Lightweight PCO 1881 Finish Subcommittee of the International Society of Beverage Technologists (“ISBT”), which he represents reflects the ML27 design and shows a neck height of 15 mm (or 0.59 inches) from the top to the bottom of the support ring. A Plastipak employee, Rebecca Vachow-Smith, was also in attendance at that presentation. In addition, the parties stayed in touch with Scudellari visiting Darr in Michigan, and in May 2007, Darr indicated that he and Slat would be interested in visiting SACMI to observe a new compression molding prototype. Darr also indicated that they would “like to receive an update on what you are doing with the ML27 finish.” (*Id.* ¶ 178 (quoting Gross Decl., Ex. 50 (dkt. #112-9)).) However, it appears Darr never discussed that he and Plastipak were seeking a series of patents based on Falzoni’s original design and their subsequent collaboration.

B. Disclosure of Invalidity Contentions Based on SACMI ML27 System

Before turning to the merits of defendant’s invalidity contentions based on the SACMI ML27 design, the court must first determine whether defendant’s untimely disclosure of this contention was justified or harmless. To begin, Premium Waters served its first set of document requests and interrogatories on Plastipak on April 16, 2020, the date of the parties’ Rule 26(f) conference. Interrogatory No. 16 states:

Describe all of Plastipak's prior efforts to design, develop, or manufacture—whether on its own or with a third party—water bottles and preforms for water bottles where the vertical distance from the dispensing opening to the lower surface of the support flange (“Vertical Distance”) was 0.75 inches or less. Plastipak's answer should identify each preform and bottle having a unique Vertical Distance of 0.75 inches or less, the date such designs were created, and the individuals involved in creating the designs.

(Pl.'s Resp. to Def.'s PFOFs (dkt. #153) ¶ 196 n.1.) In response to this interrogatory, Plastipak neither disclosed the ML27 system nor its plans with SACMI to manufacture exclusively caps and preforms using SACMI's design. Similarly, Plastipak produced no documents concerning its dealings with SACMI concerning the ML27 system. At most, plaintiff produced a document *from ISBT* that merely identifies SACMI generally.

By way of explanation, plaintiff contends wholly unconvincingly that the “potential business opportunity with SACMI did not concern a water bottle or a preform for a water bottle, and thus the details of this opportunity are not responsive to Interrogatory No. 16.” (*Id.*) Plaintiff's argument rests on an extremely strained interpretation of SACMI and Plastipak's interactions in 2005 and 2006 just detailed above, focusing on either the initial 3D image that it contends depicts a metal tool or the part of the deal concerning the design and production of caps or closures rather than preforms. Viewing the full interaction between Plastipak and SACMI in 2005 and 2006, and even extending into 2007, defendant's Interrogatory No. 16 required Plastipak to disclose its discussions of and possible involvement in the design, development and manufacture of a bottle with a neck finish well below .75 inches.⁹

⁹ Perhaps Plastipak's aggressive document destruction policy could explain some of its failure to

On July 10, 2020, Premium Waters then served invalidity contentions; and on November 5, 2020, Premium Waters served supplemental invalidity contentions. Unsurprisingly, given the lack of disclosure by plaintiff, neither document identifies SACMI or ML27. However, on November 18, 2020, Premium Waters served a document subpoena on SACMI, and on November 30, Premium Waters received responsive documents, including documents concerning a neck finish and closure system referred to as “ML27.” Moreover, as detailed above, *many* of the documents in SACMI’s production were emails between its personnel and Plastipak personnel concerning the ML27 system, including some with one of the named inventors of all twelve of the patents-in suit, Dick Darr. Specifically, SACMI produced the June 13, 2005, email from Falzoni to Darr, containing the 3D schematic of the ML27 design. Premium Waters also received additional documents from SACMI later in December 2020, and again in January and February 2021.

On December 8, 2020, approximately one week after SACMI’s initial document production, Premium Waters also served its opening invalidity expert report by Dr. Gregory Fisher, in which he opined that the patents-in-suit were invalid based on derivation of SACMI. (Fisher 12/8/20 Rept. (dkt. #86) ¶¶ 637-47.)¹⁰ Dr. Fisher reiterated

disclose documents themselves, but as detailed below, Plastipak eventually produced engineering drawings with the “ML27” label prominently displayed from its own documents.

¹⁰ The court notes that plaintiff Plastipak has moved to exclude Fisher’s testimony as impermissible under Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 591 (1993). (Dkt. #121.) In ruling on Premium Waters’ motion for summary judgment, the court is not relying on the substance of any opinion offered by Fisher, and, therefore, the court need not reach this motion. Fisher’s report is only cited for purposes of establishing when plaintiff was on notice of a § 102(f) defense.

this opinion in his January 27 and February 13, 2021, supplemental reports, appending claim charts and updating based on additional information produced by SACMI in January and February 2021. (Fisher 1/27/21 Rept. (dkt. #89) ¶ 32; Fisher 2/13/21 Rept. (dkt. #90) ¶ 22.) Plastipak’s expert Ottmar Brandau also wisely served a supplemental report to address Dr. Fisher’s opinions regarding SACMI on February 19, 2021. (Brandau 2/19/21 Rept. (dkt. #92) 13-21, 31-32.) Plaintiff does not dispute any of this.¹¹ Indeed, as plaintiff acknowledges in response to defendant’s additional findings of facts, “Plastipak has been on notice of Premium Waters’ theory that the Patents-in-Suit are all invalid under § 102(f) since at least December 8, 2020.” (Pl.’s Resp. to Def.’s Add’l PFOFs (dkt. #163) ¶ 174.)¹²

On December 15, 2020, Premium Waters further sent Plastipak a letter requesting the following:

- Plastipak produce all documents referring to or relating to SACMI’s ML27 finish and any closures for same;
- Plastipak supplement Interrogatory No. 16 to address its activities with SACMI concerning the ML27 finish; and
- Plastipak produce inventors Morgan and Darr for another deposition to address the SACMI ML27 finish.

Also on December 15, Premium Waters served a Rule 30(b)(6) deposition notice that included topics directed to Plastipak’s involvement with SACMI.

¹¹ At most, Plastipak points out that Fisher’s reports mention “derivation” rather than “nonjoinder,” which the court addresses below.

¹² Plaintiff also points out that defendant did not plead an affirmative defense based on 35 U.S.C. § 102(f), but the preliminary pretrial conference order provides that invalidity and unenforceability contentions are “treated as elements of pleading.” (Dkt. #17 at 2.) Moreover, in its contentions, defendant expressly relied on the disclosures in its expert reports.

Counsel and the parties then met and conferred on December 22, concerning SACMI discovery issues. During that meet and confer, counsel for Plastipak represented that it does not have email records from the period when Plastipak and SACMI were communicating about the ML27 system, which is “consistent with its document retention policy.” Specifically, counsel represents that Plastipak does not retain emails, samples and other documents from 2005, although it did locate and produce the engineering drawings related to the neck finishes it designed as detailed below. The parties dispute whether Plastipak was willing to make Darr available for a second deposition. Although only tangentially related to the parties’ dispute over defendant’s invalidity contentions as to the ML27 system with regard to the SACMI revelations, defendant also takes issue with plaintiff’s refusal to appoint Darr as the 30(b)(6) representative on this new topic and the inadequacy of the corporate representative for the SACMI line of questioning.

Regardless, on January 7, 2021, Plastipak ultimately produced 22 documents in response to Premium Waters’ December 15, 2020, letter concerning SACMI. The production did not include email correspondence between Plastipak and SACMI, any notes of discussions or collaborations, or internal correspondence concerning Plastipak’s dealings with SACMI about the ML27 system, draft agreements concerning rights to the ML27 system or physical samples of preforms or bottles Plastipak created with the ML27 neck finish. In particular, the produced documents did not contain the 3D model Falzoni emailed to Darr on June 13, 2005. Again, plaintiff contends that this is all consistent with its practice of regular document destruction under the retention policy.

As required by the court, Premium Waters filed a list of 21 enumerated invalidity

defenses on March 10, 2021. The 21st defense was “derivation/nonjoinder relating to unasserted claims” and listed at least two claims for each of the patents-in-suit. (Dkt. #84.) On March 19, 2021, Premium Waters also served a first supplemental response to plaintiff’s Interrogatory No. 6, which seeks disclosure of invalidity contentions under § 102 and § 103. The first supplemental response addresses invalidity under 35 U.S.C. § 102(f), and incorporates by reference the expert reports of Dr. Fisher. (Gopenko Decl., Ex. 6 (dkt. #118-6) 24-26.)

Based on these undisputed facts, the court readily concludes that any delay in disclosing the nonjoinder/derivation invalidity contention based on the ML27 system was justified by plaintiff’s failure to disclose its interactions with SACMI, and in particular, inventor Darr’s interactions with Falzoni in 2005 and 2006 concerning the possible production of an ML27 plastic preform. Indeed, defendant disclosed this invalidity contention by December 8, a little over a week after receiving SACMI’s document production. Arguably, defendant should have also supplemented its invalidity contentions at that time, but its answer to Interrogatory 6 *incorporated* its expert reports. Moreover, defendant included this defense in its March 10 list of 21 invalidity contentions as directed by the court. Finally, Plastipak has only itself to blame for any arguable delay in defendant disclosing its contentions as to ML27, having failed to disclose timely its multiple interactions with SACMI. As such, the court will allow Premium Waters to pursue nonjoinder or derivation challenges -- the only difference, as discussed below, being whether Falzoni was the only inventor or should have been included as an inventor along with Darr and Morgan.

C. Merits

Under 35 U.S.C. § 102(f), a party may assert the “defense that a patent is invalid for failing to name the correct inventors.” *Drone Techs., Inc. v. Parrot S.A.*, 838 F.3d 1283, 1292–93 (Fed. Cir. 2016); *see also Pannu v. Iolab Corp.*, 155 F.3d 1344, 1348–50 (Fed. Cir. 1998).¹³ Section 102(f) provides that “[a] person shall be entitled to a patent unless . . . he did not himself invent the subject matter sought to be patented.” The Federal Circuit has explained that “[s]ince the word ‘he’ refers to the specific inventive entity named on the patent, this subsection mandates that a patent accurately list the correct inventors of the claimed invention.” *Pannu*, 155 F.3d at 1349 (citations omitted).

There are at least three, closely related defenses that fall within § 102(f). Nonjoinder concerns the patent failing to name a co-inventor; misjoinder concerns an inventor being erroneously named; and derivation concerns the named inventor deriving the patented invention from another, unnamed individual. *See Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1381 (Fed. Cir. 2000) (citing *Chisum on Patents* to explain distinction between misjoinder and nonjoinder); *Cumberland Pharms. Inc. v. Mylan Institutional LLC*, 846 F.3d 1213, 1217–18 (Fed. Cir. 2017) (an applicant is not entitled to a patent if “he did not himself invent the subject matter sought to be patented” under the § 102(f) “derivation” defense). Regardless of the specific label, defendant expressly disclosed a

¹³ The American Invents Act (“AIA”) eliminated the § 102(f) improper-inventorship invalidity provision. *See* AIA § 3(b)(1), 125 Stat. at 285–86; *Egenera, Inc. v. Cisco Sys., Inc.*, 972 F.3d 1367, 1377 (Fed. Cir. 2020). However, the AIA only applies to patents with effective filing dates on or after March 16, 2013. *In re Verhoef*, 888 F.3d 1362, 1363 n.1 (Fed. Cir. 2018). There is no dispute that the effective filing date of the patents-in-suit were all well before March 16, 2013. (Pl.’s Resp. to Def.’s PFOFs (dkt. #153) ¶ 35 (not disputing that the patents-in-suit all claim an effective filing date of May 16, 2007).)

claim that the patents-in-suit failed to name Falzoni, whether as the sole inventor or as a joint inventor, and in its motion for summary judgment, defendant appears to be pursuing a “nonjoinder” defense. At minimum, defendant maintains that Falzoni should have been named as a joint inventor.¹⁴

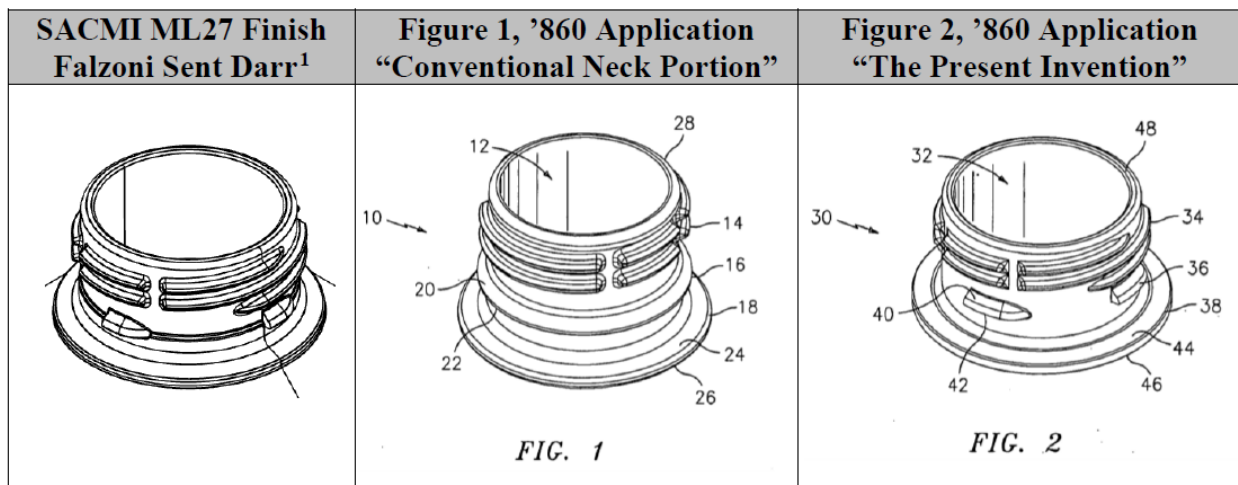
“Inventorship is a question of law with underlying factual issues.” *Checkpoint Sys., Inc. v. All-Tag Sec. S.A.*, 412 F.3d 1331, 1338 (Fed. Cir. 2005). “If nonjoinder of an actual inventor is proved by clear and convincing evidence, a patent is rendered invalid.” *Pannu*, 155 F.3d at 1349 (citations omitted).¹⁵ In determining whether Falzoni should have been named as a co-inventor, “[c]onception is the touchstone of inventorship.” *CODA Dev. S.R.O. v. Goodyear Tire & Rubber Co.*, 916 F.3d 1350, 1358–59 (Fed. Cir. 2019) (citing *Acromed Corp. v. Sofamor Danek Grp., Inc.*, 253 F.3d 1371, 1379 (Fed. Cir. 2001)). As such, “a joint inventor must contribute to the invention’s conception.” *Id.* (citing *Eli Lilly & Co. v. Aradigm Corp.*, 376 F.3d 1352, 1358–59 (Fed. Cir. 2004); *Ethicon, Inc. v. U.S. Surgical Corp.*, 135 F.3d 1456, 1460–61 (Fed. Cir. 1998)). The purported joint inventor, however, “need not ‘make the same type or amount of contribution’ to the invention nor contribute to every claim—a contribution to one claim is enough.” *Id.* (quoting *Ethicon*, 135 F.3d at

¹⁴ Even if defendant were pursuing a derivation defense -- based on an argument that Falzoni should have been named as the *sole* inventor -- the standard is roughly the same. Accordingly, the court rejects any challenge by plaintiff premised on the semantics of these defenses, finding that defendant disclosed a defense based on a theory that the patents-in-suit are invalid because each should have named Falzoni as an inventor under § 102(f).

¹⁵ “If a patentee can demonstrate that inventorship can be corrected as provided by [35 U.S.C. § 256], a district court must order correction of the patent, thus saving it from being rendered invalid.” *Pannu*, 155 F.3d at 1350. However, plaintiff has not sought a correction. Moreover, this correction would only be available where the patentee proves a “lack of deceptive intent.” *Id.*

1460 (quoting 35 U.S.C. § 116)). Furthermore, for joint inventorship, “there must be “some quantum of collaboration.” *Id.* (quoting *Kimberly-Clark Corp. v. Procter & Gamble Distrib. Co.*, 973 F.2d 911, 917 (Fed. Cir. 1992); *see also Eli Lilly*, 376 F.3d at 1359 (referring to the inventors having “some open line of communication during or in temporal proximity to their inventive efforts”)).

Defendant asserts that for the 12 patents-in-suit, Falzoni is at least a co-inventor of claims reciting: “(1) a tamper-evident formation that is discontinuous; (2) means for indicating tampering; (3) a neck height of 0.58/0.580 inches; or (4) a neck height if 0.50/0.500 inches.” (Def.’s Resp. to Pl.’s PFOFs (dkt. #151) ¶ 484 (quoting Def.’s 3/19/21 Suppl. Resp. to Interrog. Nos. 4, 6-8 and 10) 25).) In support of this argument, defendant points to a 2D image that it purportedly derived from the 3D file created and produced by Falzoni. Defendant then juxtaposes that image against figures in the ’860 patent application, showing a conventional neck finish and the “present invention”:



(Def.’s Add’l PFOFs (dkt. #152) ¶ 81.) As displayed above, the ’501 patent application essentially contained the same image of the “present invention” -- delineated as Figure 6

in that application -- as did the '860 application in Figure 2. (*Id.* ¶ 92.) Indeed, each of the applications that led to the patents-in-suit included the same Figure 6 as that in the '501 application. (*Id.* ¶ 98.)

Not surprisingly plaintiff objects to defendant's use of this photo for multiple reasons. First, as explained above, plaintiff questions the authenticity of the 3D file displayed by Falzoni during this deposition and produced by Premium Waters to Plastipak. The court, however, rejects this challenge for the reasons already explained above: Falzoni pulled up the file during the course of his deposition and confirmed the measurement of the neck height in real time. Plus, the contemporaneous correspondence *confirms* Darr's receipt of the image, something he never disputed and no reasonable jury would reject.

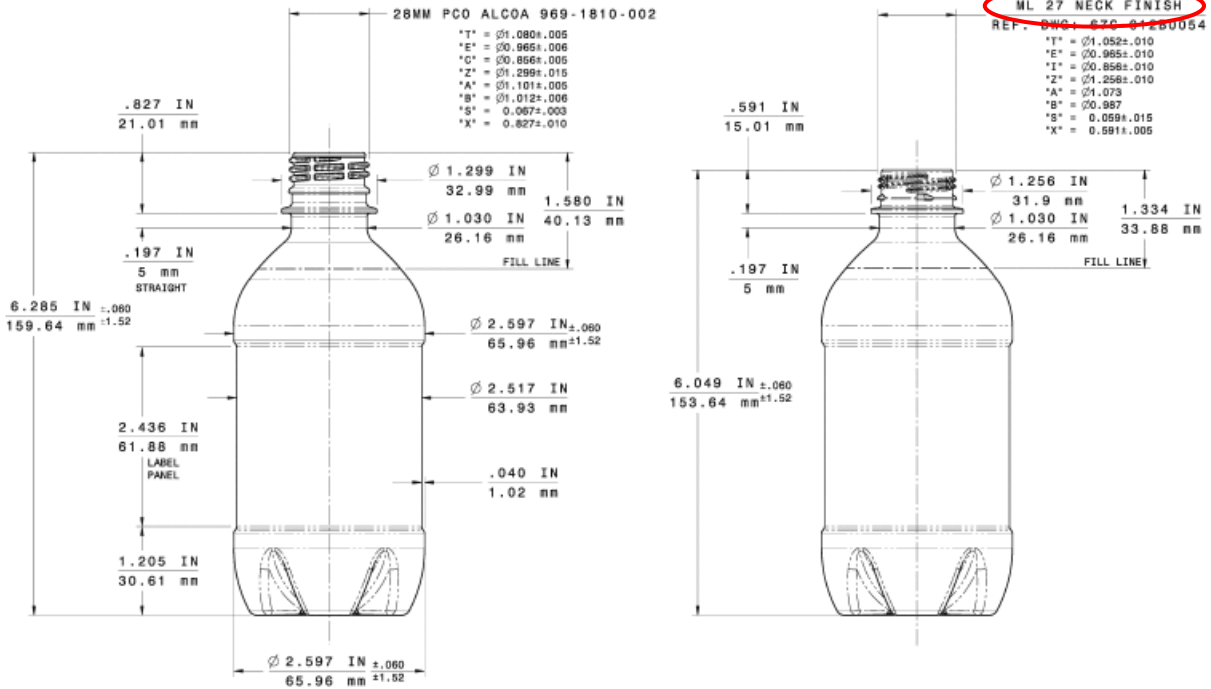
Second, plaintiff objects to the 2D image created by defendant's counsel's from the 3D image sent to Darr. While the court recognizes that this image was not created by Falzoni, and credits plaintiff's criticism that defendant produced the image at a favorable angle for purposes of comparing it to the image of the invention in the patent, the court nonetheless concludes that the similarities between the 2D image and the figure in the specification illustrating the present invention is illuminating, if not compelling by itself.¹⁶ Also particularly telling is Plastipak's failure to offer any alternative rendering of a 2D image. Regardless, the court need not rely on this 2D image in concluding that Falzoni was at least a joint inventor. To the contrary, Plastipak's own (late produced) drawing confirm Darr's collaboration with Falzoni in developing a workable plastic preform with a

¹⁶ Again, for purposes of summary judgment, the court will consider this image, although plaintiff may renew its challenge in pretrial filings for purposes of trial.

reduced neck finish.

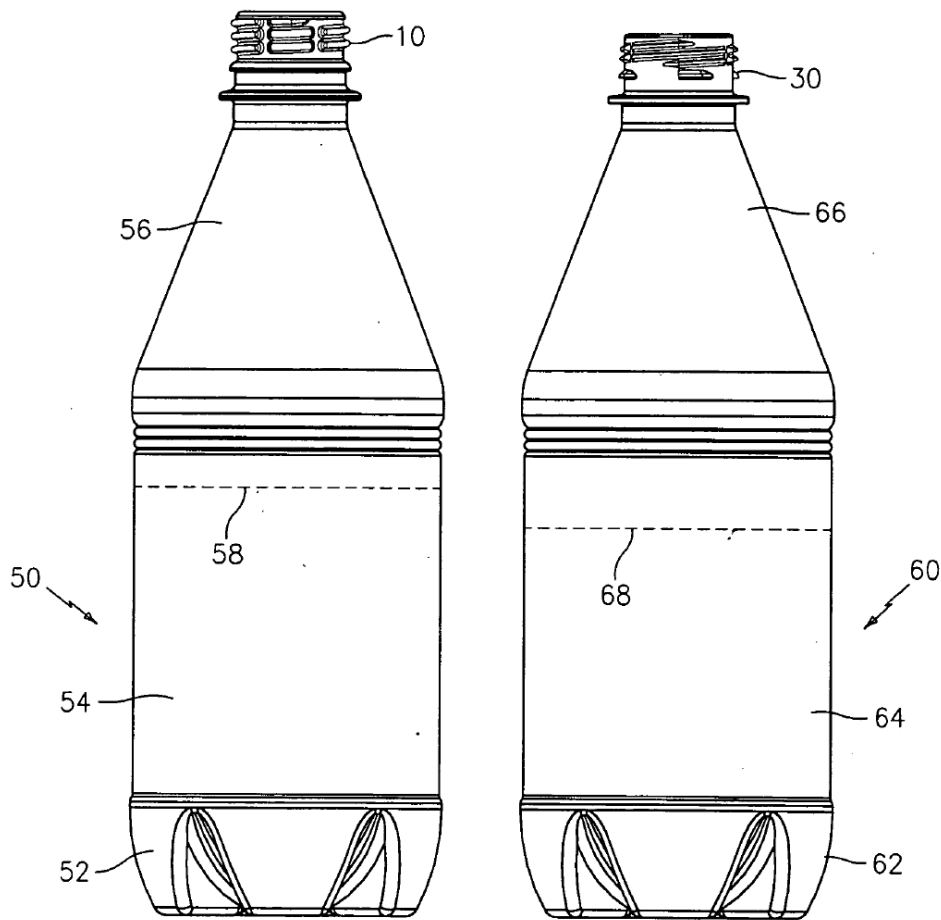
Third, plaintiff reiterates its argument that the 3D image is of a metal testing tool, not a preform, and does not show a complete neck finish. The fact that the 3D image is of a metal testing tool rather than a preform is of little significance given Falzoni's testimony, and plaintiff's complete failure to dispute, that the measurements of this 3D image would be passed through to a plastic preform, not to mention that there appears to be no dispute that the tool's purpose was to create a plastic preform. In other words, a preform created by this tool would have the same X dimension as that of the tool. At minimum, given the standard for finding joint inventorship, plaintiff's arguments do not challenge a finding that Falzoni was at least a *joint* inventor of independent claims in the 12 patents-in-suit, having contributed essentially (if not principally) to the invention's conception. *See CODA Dev. S.R.O.*, 916 F.3d at 1358–59; *see also id.* (The purported joint inventor, however, “need not ‘make the same type or amount of contribution’ to the invention nor contribute to every claim—a contribution to one claim is enough.”).

In addition to the 3D image shared with Darr, defendant rightly emphasizes Plastipak's own engineering drawings of a plastic preform that are expressly *based* on the SACMI ML27 design and referred to as “SACMI/PPK ML27” drawings. Specifically, defendants point to: a preform drawing (PL_PW0118614), dated September 1, 2015; and a bottle drawing (PL_PW0118605) dated October 21, 2005. (Gopenko Decl., Exs. 17, 18 (dkt. ##118-17, 118-18).) As defendant notes, the latter drawing actually *contains* a reference to the “ML 27 neck finish” as indicated below by the court's red circle:



(Def.'s Add'l PFOFs (dkt. #151) ¶ 85 (citing Gopenko Decl., Ex. 18 (dkt. #118-18)).)

Defendant then juxtaposes the above images against Figures 3 and 4 from the '860 application as displayed below:



(*Id.* (citing Gross Decl., Ex. 13 (dkt. #149-13).) Here, too, the court (and a reasonable jury) cannot help but be struck by the similarity between Plastipak's engineering drawings that reference the ML27 design and the image of the patented invention disclosed in an early patent application.

Finally, in response, plaintiff can only point to: (1) Falzoni's and Scudellari's deposition testimony that Darr was nice and friendly; (2) the fact that SACMI's own patents concern closures and caps but not neck finish height; (3) SACMI's knowledge of the Plastipak patents; and (4) whether the discontinuous thread was a novel aspect of Falzoni's ML27 design. (Pl.'s Add'l PFOFs (dkt. #153) ¶¶ 338-51.) *None* of this, however,

attacks Falzoni's role in contributing to the patented invention, and thus, no reasonable jury could ignore this overwhelming evidence.

While the court typically is reluctant to grant summary judgment on an invalidity claim in light of the heightened standard of proof, the undisputed evidence here establishes the defense beyond reasonable dispute. Thus, the court finds as a matter of law that defendant has demonstrated by clear and convincing evidence that Falzoni was at least a joint inventor of the patented invention, having initially disclosed to Darr a design of a neck finish measuring less than 0.580 inches, even accounting for a thicker support ledge, where the neck also has a tamper-evident formation that is discontinuous. Further, the 3D image of a metal tool constitutes clear and convincing evidence of this disclosure, and the record reflects that while the ML27 design disclosed in the 3D image did not show the bottom surface of the support flange, there is no doubt that the image still contributed significantly to the conception of a complete neck finish. Similarly, as explained above, the fact that the image is of a metal tool carries no weight given that there is no dispute that the intent of the metal tool was to create a plastic preform; indeed, that was the *very purpose* of Plastipak and SACMI's interactions.¹⁷

Finally, and ultimately controlling, the record is robust in demonstrating the further collaboration between Falzoni and Darr in arriving at the essential invention. Indeed, the *same day* that Falzoni sent Darr the 3D image, Darr responded with two emails describing

¹⁷ In addition to Falzoni's testimony that the measurements of the metal tool would be passed through to the plastic preform itself, the court notes that it is undisputed that patented invention discloses that the neck portion or finish of the bottle will have "substantially the same dimensions" as the neck portion of the preform. (Pl.'s Resp. to Def.'s PFOFs (dkt. #153) ¶ 44.)

his reaction to the 3D image and creation of drawings based on it. The cherry on top for this court, and it is confident for any *reasonable* jury, is that any potential business relationship between Plastipak and SACMI with respect to joint use of the ML27 design fell apart in March 2006, the same month that the '860 application was filed, calling into question any basis for Darr claiming an honest mistake in failing to name Falzoni as an inventor.

One final note is required with respect to the § 102(f) defense. In its March 10 disclosure of 21 invalidity contentions, defendant disclosed nonjoinder and derivation with respect to a number of “unasserted claims” -- in other words, claims that were *not* listed on plaintiff’s list of its 21 claims for infringement purposes. To be fair, a number of the listed claims are independent claims underlying asserted dependent claims, and therefore, still in play for purposes of an invalidity challenge. *See Honeywell Int’l Inc. v. Universal Avionics Sys. Corp.*, 488 F.3d 982, 995 (Fed. Cir. 2007) (Because [i]nfringement of a dependent claim also entails infringement of its associated independent claim,” the “withdraw[ing of] independent claims from the litigation” while still “maintain[ing] causes of action based on certain dependent claims,” leaves “the entire subject matter of the [] claims at issue.”). However, at least for the period relevant to these patents, the § 102(f) defense goes to the validity of a patent as a whole, not specific claims. *See Pannu*, 155 F.3d at 1359 (“[I]f nonjoinder of an actual inventor is proved by clear and convincing evidence, . . . a patent

is rendered invalid.” (internal citations omitted).¹⁸ Here, Falzoni’s contribution implicates all 12 patents-in-suit. (Def.’s Opening Br. (dkt. #106) 22-24.) As such, the court concludes that all patents are invalid under § 102(f).

II. Indefiniteness

Having concluded that the patents-in-suit are invalid for failing to join an inventor, the court need not address the other invalidity challenges raised in the parties’ cross-motions for summary judgment. However, given the strength of the evidence and argument regarding defendant’s indefiniteness challenge concerning the asserted claims use of the term “or less,” the court will briefly address the defendant’s motion for summary judgment as to this defense as well.

A. Relevant Facts Concerning Indefiniteness Challenge

As described above, a number of the asserted claims disclose a vertical distance of the neck finish at an “X dimension” of “0.580 inches or less.” (Def.’s PFOFs (dkt. #107) ¶¶ 71-73.) Other claims similarly disclose (1) a measurement of a specific height (e.g., in .5 inches or cm) “or less” or (2) measurements of a specific weight or mass (e.g., 3.0 oz or grams) “or less.” Specifically, Claim 30 of the ’637 patent depends on unasserted, independent claim 29, both of which recite:

29. A method for making a container: providing a preform having a dispensing opening, a tamper-evident formation, a support flange with a lower surface, and a lower portion

¹⁸ Perhaps the court’s requirement that defendant identify its 21 invalidity contentions by claim contributed to this confusion, but the court has little trouble applying this defense as applying to the entire patents in suit, rather than to individual claims, especially given Plastipak’s having effectively (if not intentionally) hidden the ML27 design until late in discovery.

between the support flange; wherein the vertical distance from the dispensing opening to the lower surface of the support flange, including threads and tamper-evident formation, is *0.580 inches or less*, and the lower portion has an initial axial length; and forming a container.

30. The method of claim 29, including stretching the lower portion at least 3 times the initial axial length.

(Def.'s PFOFs (dkt. #107) ¶ 71 (citing dkt. #1-1 at 10) (emphasis added).)

Defendant's expert, Dr. Gregory Fisher, opined that "[a]ll of these 'or less' limitations literally encompass weights and dimensions down to zero." (Fisher 12/8/20 Rept. (dkt. #86) ¶¶ 650, 656, 661, 666, 671, 677, 687, 694).) At his deposition, Fisher acknowledged that a person of ordinary skill in the art ("POSITA") would understand that certain weights and dimensions could not actually be zero, but he still opined that a POSITA would not necessarily know how close to zero the various "or less" dimensions" could be.

In contrast, plaintiff's expert, Ottmar Brandau, contends that the "or less" language refers to values lower than the expressly stated value, but only down to an undisclosed "inherent" lower limit. (Brandau 1/25/21 Rept. (dkt. #87) 181; *see also* Brandau Dep. (dkt. #99) 114).) Specifically, Brandau opined that:

Just as a POSITA would understand that distance or weight dimensions could not be zero, a POSITA would understand that these dimensions could not go below what is feasible for the claimed inventions. A POSITA would understand there is an 'inherent' lower limit to these claims.

(Brandau 1/25/21 Rept. (dkt. #87) 181.) From the teachings of the May 6, 2007, patent application that led to the '637 patent, Brandau further opined that a POSITA "would have determined through routine experimentation the approximate minimums for each

section, and would have ultimately determined that the overall X dimension for the neck finish could be as short as approximately 0.25 inches.” (Def.’s PFOFS (dkt. #107) ¶ 261 (quoting Brandau 1/25/21 Rept. (dkt. #87) 178).)¹⁹ Brandau testified that the shortest commercial neck finish that he was aware of in the market was 0.31 or 0.32 inches.

In support of its indefiniteness challenge, defendant also points to the inventors’ own testimony about the lower bound of “or less” dimensions, with Morgan testifying that the X dimension could be as small as about 0.25 inches, but he was not aware of Plastipak ever making a neck finish of 0.275 inches to date. (Def.’s PFOFs (dkt. #107) ¶ 253 (quoting Morgan Dep. (dkt. #101) 114).) In contrast, Darr testified that “I think it would be challenging to try to get the features under 0.275,” and 0.45 or “very close to that dimension” was the smallest X dimension that would be functional, adding that “we didn’t feel anything shorter than that would be acceptable by the consumer.” (*Id.* ¶¶ 254-55 (quoting Darr Dep. (dkt. #104) 125-27).)

B. Merits

“[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). “‘Reasonable certainty’ does not require absolute or mathematical precision.” *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360,

¹⁹ In another infringement case brought by Plastipak based on the same patents at issue in this case, Brandau opined that a POSITA “would come to [a] similar conclusion, maybe .15, maybe .2, maybe .25” would be the minimum height for the X dimension. (Def.’s PFOFs (dkt. #107) ¶ 257.)

1365 (Fed. Cir. 2017). Whether a claim is indefinite is a question of law for the court. *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 516 (Fed. Cir. 2012). Moreover, like other invalidity challenges, a party asserting it bears the burden of proving invalidity by clear and convincing evidence. *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 97 (2011); *see also* 35 U.S.C. § 282.²⁰

Neither party sought claims construction of the term “or less.” According to this court’s pretrial conference order, claim terms are otherwise to be given their plain meaning as “understood by a person of ordinary skill in the art.” (Pl.’s Resp. to Def.’s PFOFs (dkt. #153) ¶ 248 (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005)).) Nevertheless, as reflected above, the parties’ experts dispute the plain meaning of the term to a POSITA. However, as the court understands it, defendant’s indefiniteness challenge rests in substantial part on *plaintiff’s* definition of “or less” for purposes of summary judgment.

Tied to its lack of enablement, or at least part of that defense, Premium Waters’ indefiniteness challenge contends that any patent claims disclosing heights or weights followed by the “or less” language and encompassing inches or ounces down to zero is not enabled. Alternatively, it adopts plaintiff’s view that the “or less” language encompasses some “inherent” lower limit, making the claims indefinite. Specifically, defendant

²⁰ In addition to defendant’s motion for summary judgment in its favor on this defense, plaintiff cross-moves, asserting that the indefiniteness defense fails as a matter of law. However, its only argument for seeking summary judgment in its favor rests on an odd argument that defendant waives the defense if it fails to move on it. (Pl.’s Opening Br. (dkt. #120) 73-74.) Regardless, since defendant moved for summary judgment on this defense, plaintiff’s motion is moot.

contends that this definition of “or less” neither gives notice of the legal protection afforded by the patent, so that competitors and the public at large can avoid infringement, *Oakley, Inc. v. Sunglass Hut Int’l*, 316 F.3d 1331, 1340 (Fed. Cir. 2003), nor does it “inform, with reasonable certainty, those skilled in the art about the scope of the invention,” *Nautilus*, 572 U.S. at 901.

In response, plaintiff argues that defendant’s only evidence of indefiniteness is its expert’s opinion, which it both challenges in a *Daubert* motion and contends is disputed by plaintiff’s expert. As to the latter, plaintiff relies on Brandau’s opinion that a POSITA “would have determined through routine experimentation the approximate minimums for each section, and would have ultimately determined that the overall X dimension for the neck finish could be as short as approximately 0.25 inches.” (Brandau 1/25/21 Rept. (dkt. #87) 178.) However, Brandau’s opinion rests on a legal standard that is not supported by current caselaw: “[a]ll that is required is that the person of ordinary skill in the art be able to determine a reasonable lower limit with ‘reasonable certainty,’ which can be done through experimentation.” (Pl.’s Opp’n (dkt. #155) 37 (citing *Nautilus*, 572 U.S. at 901 & 910; *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1336 (Fed. Cir. 2010)).)

While the “reasonable certainty” language comes from *Nautilus*, plaintiff relies on *Enzo Biochem* for the concept that if a POSITA could understand the scope of the patent simply by engaging in “some experimentation,” then the claims are definite. For this proposition, the *Enzo Biochem* court cited to *Exxon Research & Engineering Company v. United States*, 265 F.3d 1371, 1379 (Fed. Cir. 2001). However, in *Nautilus*, the Supreme Court

rejected the Federal Circuit’s standard for determining indefiniteness as defined in *Exxon*.²¹ As such, the court agrees with defendant that neither plaintiff nor its expert can rely on a POSITA’s “experimentation” to render a patent claim’s uncertain lower limit definite.

Putting aside plaintiff’s reliance on a rejected legal standard, plaintiff’s expert’s testimony and the testimony of the two named inventors illustrate some uncertainty surrounding this lower inherent boundary. As detailed above, Brandau testified that the lower limit of the X dimension is 0.25 inches, although he has testified in other cases that the number could be as low as 0.15 inches. For their part, the named inventors themselves offered different opinions, with Morgan testifying that the lower limit could be 0.25, but Darr testifying that it would be difficult to achieve anything less than 0.275, *and* from a commercial standpoint, anything less than 0.45 would not be feasible. Given that neither the inventors nor plaintiff’s expert can agree on a definite bottom, it begs credulity that a

²¹ The parties continue to squabble over the correct standard in a proposed sur-reply by plaintiff (dkt. #169) and in an opposition by defendant to plaintiff’s motion to file a sur-reply (dkt. #170). The court has reviewed both submissions, but only accepts the proposed sur-reply and the portion of the opposition to that sur-reply dealing with the correct standard, post-*Nautilus*. All other arguments could have been raised in plaintiff’s opposition and defendant’s reply. Moreover, having reviewed portions of the parties’ submissions, the court remains convinced that the Supreme Court’s rejection of any standard for indefiniteness that relies on an “amenable to construction” standard, does not allow a patent holder to rely on experimentation to save a claim term from an indefiniteness challenge. Said another way, relying on “some experimentation,” as plaintiff and its expert do, does not comport with the requirement that a claim “provide objective boundaries” for the public and a POSITA as its scope. *See Liberty Ammunition, Inc. v. United States*, 835 F.3d 1388, 1396 (Fed. Cir. 2016) (“While our post-*Nautilus* cases indicate that terms of degree are not “inherently indefinite” in light of the Supreme Court’s decision, we have recognized that claims having terms of degree will fail for indefiniteness unless they provide objective boundaries for those of skill in the art when read in light of the specification and the prosecution history.”) (internal citation and quotation marks omitted). Still, given that there is some uncertainty as to the appropriate standard, the court opts not to grant summary judgment to defendant on this basis, especially given whatever enablement issue exists, one can argue that “or less” is clear as a lower limit of zero.

POSITA could arrive at such a boundary with any meaningful certainty. While the court need not resolve this invalidity contention in light of the court's conclusion that the patents-in-suit are invalid under § 102(f), the court would be remiss not to note that defendant's challenge that the claims encompassing dimensions of a specific amount "or less" are indefinite as to an inherent bottom also has merit.

ORDER

IT IS ORDERED that:

- 1) Defendant Premium Waters, Inc.'s motion for summary judgment (dkt. #105) is GRANTED as to defendant's nonjoinder invalidity defense under 35 U.S.C. § 102(f). In light of this finding, the court need not reach the other bases asserted for summary judgment in its favor. Therefore, the remaining portions of the motion are DENIED AS MOOT.
- 2) Plaintiff's motion for summary judgment (dkt. #116) is DENIED AS MOOT.
- 3) Plaintiff's motion to exclude testimony from Dr. Gregory Fisher (dkt. #121) is DENIED AS MOOT.
- 4) Plaintiff's motion for leave to file surreply in opposition to Premium Waters' motion for summary judgment (dkt. #169) is GRANTED IN PART AND DENIED IN PART.
- 5) Defendant's motion for leave to serve supplemental expert report (dkt. #171) is DENIED AS MOOT.
- 6) Defendant's motion for leave to file reply in support of motion for leave to serve supplemental expert report (dkt. #177) is DENIED AS MOOT.

- 7) The clerk of court is directed to enter final judgment in defendant Premium Waters' favor as all of the patents-in-suit are invalid for failing to name an inventor in violation of 35 U.S.C. § 102(f). The clerk of court also is directed to close this case.

Entered this 19th day of August, 2021.

BY THE COURT:

/s/

WILLIAM M. CONLEY
District Judge