2023-2308

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

BALL METAL BEVERAGE CONTAINER CORPORATION,
Plaintiff-Counterclaim Defendant-Appellee,

v.

CROWN PACKAGING TECHNOLOGY, INC.,
CROWN CORK & SEAL USA, INC.,
Defendants-Counterclaim Plaintiffs-Appellants,

v.

REXAM BEVERAGE CAN CO.,
Counterclaim Defendant-Appellee.

Appeal from the United States District Court for the Southern District of Ohio in Case No. 3:12-cv-00033-WHR, Judge Walter H. Rice

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BRIEF OF APPELLEES BALL METAL BEVERAGE CONTAINER CORPORATION AND REXAM BEVERAGE CAN COMPANY

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U.S. Patent No. 6,935,826: Claim 14

14. [A metal can end for use in packaging beverages under pressure and adapted to be joined to a can body by a seaming process so as to form a double seam therewith using a rotatable chuck comprising first and second circumferentially extending walls, said first and second chuck walls forming a juncture therebetween, said can end comprising;

a peripheral cover hook, said peripheral cover hook comprising a seaming panel adapted to be formed into a portion of said double seam during said seaming operation;

a central panel;

a wall extending inwardly and downwardly from said cover hook,

a first portion of said wall extending from said cover hook to a first point on said wall, said first wall portion adapted to be deformed during said seaming operation so as to be bent upwardly around said juncture of said chuck walls at said first point on said wall,

a second portion of said wall extending from said first point to a second point forming a lowermost end of said wall,

a line extending between said first and second points being inclined to an axis perpendicular to said central panel at an angle of between 30° and 60°,]

further comprising an annular reinforcing bead connected to said wall at said second point, said annular reinforcing bead connecting said wall to said central panel.

CERTIFICATE OF INTEREST

Counsel for Appellees Ball Metal Beverage Container Corporation and Rexam Beverage Can Co. certifies as follows:

1. The full name of every party or amicus represented by me is:

Ball Metal Beverage Container Corporation; Rexam Beverage Can Co.

2. The name of the real parties in interest represented by me is:

N/A.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

Ball Metal Beverage Container Corp. is owned by Ball Container LLC, which is owned by the publicly traded Ball Corporation.

Rexam Beverage Can Company is owned by Ball Beverage Can Americas Inc., which is owned by Ball BP Holding Company, which is owned by Ball Inc., which is owned by the publicly traded Ball Corporation.

4. The names of all law firms and the partners or associates that appeared for the party or amicus curiae now represented by me in the trial court or agency or are expected to appear in this Court (and who have not or will not enter an appearance in this case) are:

Nicole S. Nan, Dinsmore & Shohl LLP; Jaci L. Overmann, Dinsmore & Shohl LLP; Lauren E. Ingebritson, Dinsmore & Shohl LLP (no longer with firm); Rachael L. Rodman, Dinsmore & Shohl LLP (no longer with firm).

5. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal:

None.

6. Organizational Victims and Bankruptcy Cases. Provide any information required under Fed. R. App. P. 26.1(b) (organizational

victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6).

None.

Dated: December 29, 2023

/s/ John D. Luken
John D. Luken

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TABLE OF ABBREVIATIONS

Crown	Crown Packaging Technology, Inc. and Crown Cork & Seal USA, Inc.
Ball	Ball Metal Beverage Container Corporation
Rexam	Rexam Beverage Can Company
Anheuser-Busch	Anheuser-Busch Companies Inc.
ARB	Annular reinforcing bead
FEA	Finite element analysis
’826 Patent	U.S. Patent No. 6,935,826
’875 Patent	U.S. Patent No. 6,848,875
’634 Patent	U.S. Patent No. 6,065,634

STATEMENT OF RELATED CASES

This is Crown's second appeal from this civil action. The Court decided the first appeal in *Ball Metal Bev. Container Corp. v. Crown Packaging Tech., Inc.*, No. 2020-1212, 838 Fed. Appx. 538 (Fed. Cir. Dec. 31, 2020) (Wallach, Taranto, and Chen, JJ.). That decision vacated the district court's judgment of indefiniteness and remanded the case to the district court for additional analysis on that issue. This appeal is the direct result of the district court's decision on remand.

Crown has filed other cases against Ball and Rexam asserting the same patents at issue in this appeal. Those cases, which date back to 2005 (the year the patents issued), resulted in three additional appeals to this Court:

- *Crown Pkg. Tech., Inc. v. Ball Metal Bev. Container Corp.*, No. 10-1020, 635 F.3d 1373 (Fed. Cir. 2011) (Newman and Dyk, JJ., and Whyte, District Judge, sitting by designation);
- *Crown Pkg. Tech., Inc. v. Ball Metal Bev. Container Corp.*, No. 12-1258, 492 F. App'x 115 (Fed. Cir. 2012) (Dyk, Moore, and Reyna, JJ.) (affirmed under Rule 36); and
- *Crown Pkg. Tech., Inc. v. Rexam Bev. Can Co.*, Nos. 08-1284, 08-1340, 559 F.3d 1308 (Fed. Cir. 2009) (Bryson, Gajarsa, and Moore, JJ.).

Counsel for Ball and Rexam is not aware of any cases pending in this or any other court or agency that will directly affect, or be directly affected by, this Court's decision in this appeal.

INTRODUCTION

Crown has been litigating its '826 and '875 Patents against Ball and Rexam since they issued in 2005, including for seven years after they expired in 2016. The patents relate to "can ends" (or simply "ends"), which are the lids affixed to aluminum beverage cans. The patents describe increasing the angle of the can end "wall" (called Angle "C" in the specification). Measuring Angle C is easy enough on the patents' preferred embodiment, since its wall is a straight line. However, all of the competitor ends that Crown has accused of infringing over the last two decades have had more intricate, non-linear, curved walls.

Thus, in the continuation applications that issued as the '826 and '875 Patents, Crown moved away from measuring the angle of the "wall" itself. Instead, the asserted claims require measuring the angle of an imaginary line between two points on a cross-section of the wall: an upper "first point" and a lower "second point." The "first point" is not at issue here. However, the district court held the claims indefinite because the patents lack clarity about how to locate the "second point." Without knowing where this point is, one cannot be reasonably certain of the angle of the imaginary line, and thus of infringement.

The specific issue raised by this appeal is narrow. In Crown's last appeal, after the district court had found the claims indefinite, this Court agreed with it that (i) Crown's own expert, Martin Higham, had used at least *three* different methods

to locate the "second point," that (ii) these methods did not always produce the same "second point" when applied to the same can end, and that (iii) the patents provided no guidance about which method to use. *Ball Metal Bev. Container Corp. v. Crown Packaging Tech., Inc.*, 838 Fed. Appx. 538, 541-42 (Fed. Cir. 2020) ("*Ball III*"). However, the Court remanded for the district court to address one last indefiniteness-related issue: whether the different "second points" generated by Mr. Higham's methods would "always" lead to the same answer on infringement, or whether they could potentially produce "materially different" angle results. The Court explained that materially different results would exist if a can end could fall within a claimed angle range under one method but outside the same range under another method.

On remand, following additional discovery and briefing, the district court concluded that the different methods of locating the "second point" *can* yield materially different results for the hypothetical-line angle. Using both their expert and Mr. Higham's own admissions, Ball and Rexam identified, for each claim, numerous specific examples of ends that would meet the required angle range, or not, based solely on the method used to find the "second point." As a result, the district court once again held the claims indefinite.

Crown has shown no error in that decision. It suggests that the only way Ball and Rexam could meet their burden was by proving that the different methods produced materially different angle results on existing, "real-world" commercial

ends—and then *also* submitting what amounts to a full infringement report for each one of those ends to prove that it met *all other* limitations of the asserted claims. However, Crown' super-materiality standard finds no support in this Court's remand order or precedent; would gut the indefiniteness doctrine's prospective "public-notice function," *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 899 (2014), by requiring companies to bring potentially infringing products to market just to be able to assert an indefiniteness defense; and would derail indefiniteness litigation by requiring ancillary infringement mini-trials in order to adjudicate the issue.

Nor is Crown correct that the district court should have denied Ball and Rexam's motion because its new expert (Mr. Higham's replacement) professed disagreement with how Ball and Rexam's expert and *even Mr. Higham* had applied the different methods to certain specific examples. *Even if* Crown's new expert had managed to raise a genuine issue of fact, it was within the district court's purview to resolve any fact questions in deciding indefiniteness (an issue of law inextricably intertwined with claim construction). Regardless, there was no *genuine* dispute that the competing methods of finding the "second point" could yield materially different angles. Even the report of Crown's new expert confirmed that the choice of method could easily affect the angle of the hypothetical line by at least several degrees. And, crucially, neither he nor Crown disputed that a hypothetical-line angle that moved by several degrees could make a material difference to *other* ends that one skilled in

the art would potentially consider designing.

Crown's claims are indefinite. The judgment below should be affirmed.

STATEMENT OF THE ISSUE

All asserted claims require measuring the angle of an imaginary line between the "first" and "second" points on the can end "wall." Where this Court has already found that (i) Crown's own expert had used three different methods to find the "second point," that (ii) these methods did not always produce the same "second point," and that (iii) Crown's patents failed to provide any guidance about which method to use, did the district court clearly err in finding that the methods could yield "materially different" angle measurements, making the claims indefinite?

STATEMENT OF THE CASE

I. The Parties

Crown, Ball, and Rexam are in the market for aluminum beverage cans and ends. Crown makes and sells the "SuperEnd"; Ball and Rexam make and sell "CDL+" ends. Crown has been litigating the '826 and '875 Patents non-stop against Ball (and on-and-off against Rexam) since the patents issued in 2005.

II. Crown's '826 and '875 Patents

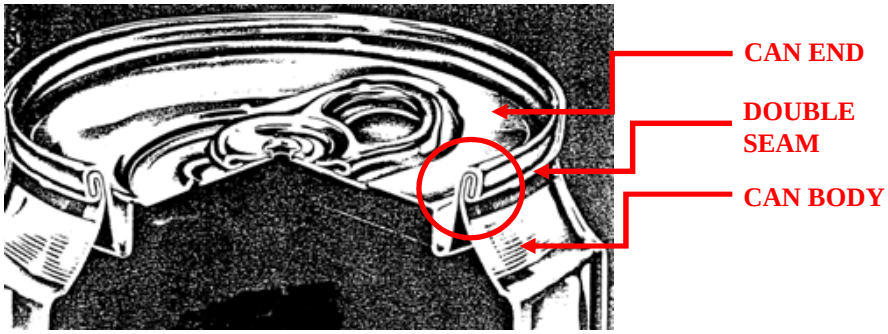
A. The Alleged Invention

Aluminum beverage cans have two parts—the can body and the can end. *Ball III*, 838 Fed. Appx. at 539. The "can body" is a cylindrical container that holds the beverage. The "can end" is a lid affixed to the can body. On the left is a can end

before being joined to a can body; on the right are the two of them joined together:

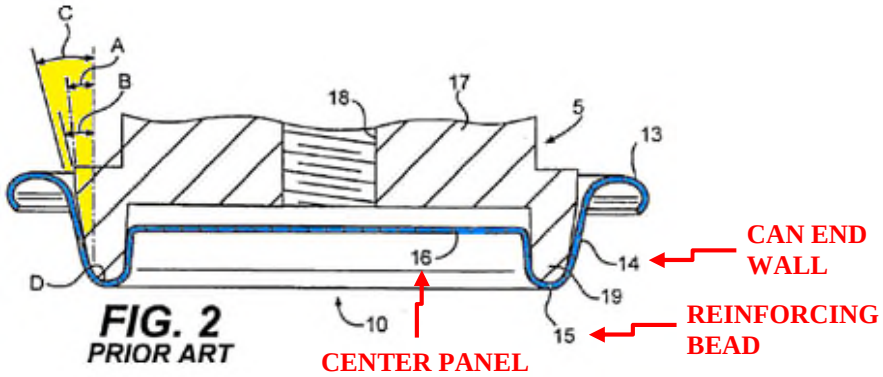


After the can body is filled with beverage, the can end is joined to it using a "seamer" machine. The resulting "double seam" consists of five compressed layers of metal:



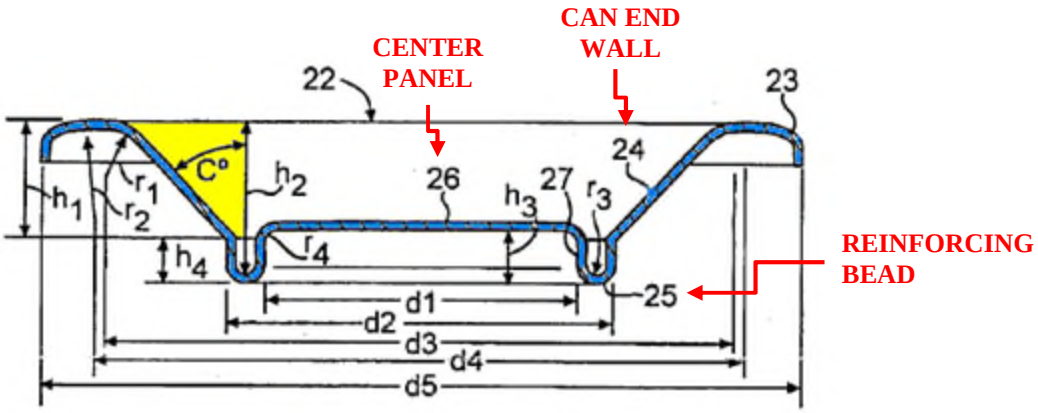
(Appx1061.)

Figure 2 of Crown's '826 and '875 Patents shows, in cross-section, the standard prior art end (highlighted here in blue) before seaming:



(Appx22.) This standard end has a straight can end "wall" **14**,[1] a reinforcing ("anti-peaking") bead **15** below this wall, and a "central panel" **16** (where the pull-tab is located) in the middle. (Appx27, 3:11-17.) Angle C (highlighted here in yellow) defines the angle of the can end wall **14**. The specification asserts that Angle C was generally less than 20° in the prior art, usually 12-15°.[2] (Appx27, 3:14-17.)

The specification suggests that increasing Angle C can lead to "improvements in metal usage." (Appx26, 1:32-34.) Figure 4 shows the patents' only disclosed embodiment:



(Appx23.) Like the standard prior art end, Crown's end has a straight can end wall **24**, a reinforcing bead **25** (the "annular reinforcing bead" in the asserted claims, or

[1] The common specification refers to the can end wall as a "chuck wall," even though a "chuck" is part of the seamer machine and itself has two "walls." The asserted claims refer to the can end wall as simply a "wall." For clarity, the parties and the district court generally referred to it as the "can end wall."

[2] Ball and Rexam have identified prior art can ends with walls inclined at more than 20° and, below, moved for summary judgment that the claims are invalid as obvious. (Appx11596.) That motion is pending and would have to be resolved (along with Ball and Rexam's summary judgment motion on non-infringement) if this Court reversed on indefiniteness and remanded the case.

"ARB" for short), and a center panel **26**. (Appx27, 3:39-45.) The asserted difference is that Crown's end has a larger Angle C, described in the specification as anywhere from 20° to 60°. (Appx27, 3:46-50.) The specification never refers to the can end wall **24** as being anything other than *straight*.

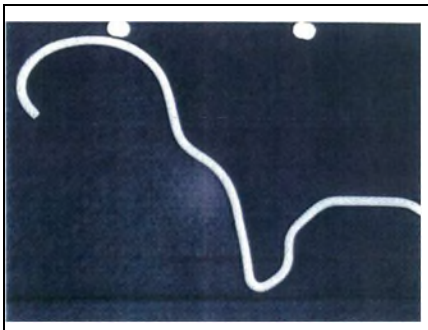
B. The "First" and "Second" Points and the Hypothetical Line

Crown's '634 Patent, its original "SuperEnd" patent and the parent of the '826 and '875 Patents, issued in 2000. (Appx11812.) Claim 1 described a can end with a wall "inclined . . . at an angle between 40° and 60°." (Appx11821, 9:2-14.)

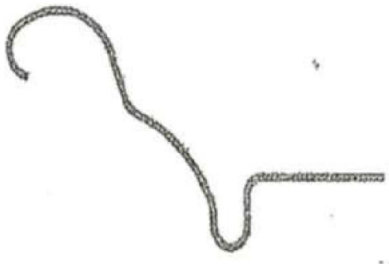
At this time, Crown's commercial SuperEnd mirrored the straight-walled embodiment in Figure 4. (Appx13105-13108.) However, it soon became clear that the SuperEnd suffered from a major design flaw. When a filled can is dropped or subjected to excessive heat, the internal pressures may force the reinforcing bead to invert and form a "peak." But Crown's original SuperEnd not only "peaked," but "peaked catastrophically, leading to [metal] fracture" and allowing the beverage to leak out. (Appx11835, 70:13-22; Appx12946, 23:2-24:2.) This defect was unacceptable to beverage companies like Coca-Cola and Pepsi. (Appx12947, 47:20-49:3; Appx12950, 180:24-181:4.)

Moreover, Crown's key competitors—Ball, Rexam (then still a competitor of Ball as well as Crown), and Anheuser-Busch's subsidiary Metal Container Corporation—had all developed their own new ends. And, by contrast to Crown's

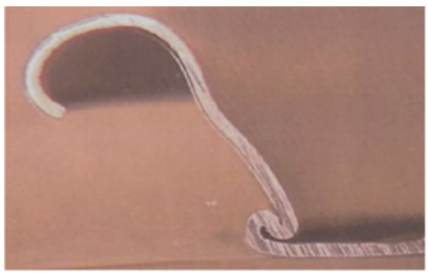
faulty SuperEnd and the patents' Figure 4, *none* of these ends had straight walls. Anheuser-Busch (with Ball's assistance) created the "LOF+," Ball collaborated with Container Development Ltd. on the CDL+, and Rexam developed the "Rexam End":



CDL+
(Appx10151)



LOF+
(Appx2405)



Rexam End
(Appx2395)

Unlike Crown's straight-walled end, these newer ends had more complex profiles with multiple varying curves and angles. Because these types of can end walls arguably did not have a measurable angle (let alone a *single* angle), it was not clear whether the '634 Patent would cover them.[3]

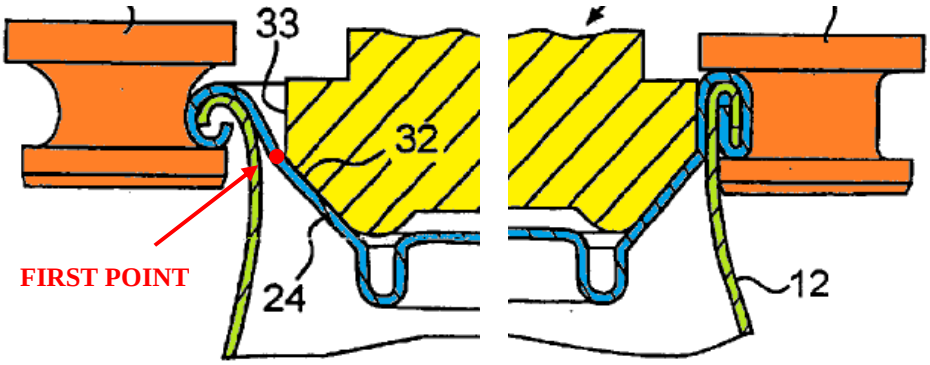
Thus, Crown used the continuation applications for the '826 and '875 Patents to shift its claim drafting strategy. Instead of claiming a can end wall that was itself "inclined" at a certain angle, Crown rewrote the claims to now require locating two specific points on a cross-section of a can end, connecting them with an imaginary straight line, and then measuring this line's angle. (Appx1623-1624; Appx657-662.) The upper of the two points is claimed as the "first point" in the '826 Patent and the

[3] Anheuser-Busch made this exact argument when Crown accused its LOF+ of infringing the '634 Patent. (*See infra* at 13.)

"first location" in the '875 Patent; the lower point is claimed as the "second point" in the '826 Patent and the "transition" in the '875 Patent. (Appx46, 10:37-61; Appx33, 15:8-41.) For brevity, the upper point will be referred to here as simply the "first point" and the lower point as the "second point."

However, while Crown rewrote the claims, it added no new figures, embodiments, or examples to the specification. Thus, neither the new claim terms nor the concept of measuring a hypothetical line are explained in the specification.

The "first point." The claims describe the upper "first point" as the point where the can end wall is bent upwardly around the edge ("juncture") of the seaming chuck during seaming. (Appx46, 10:52-56; Appx33, 15:30-36.) The patents' Figures 6 and 7 (partially reproduced and highlighted below) show the seaming process:

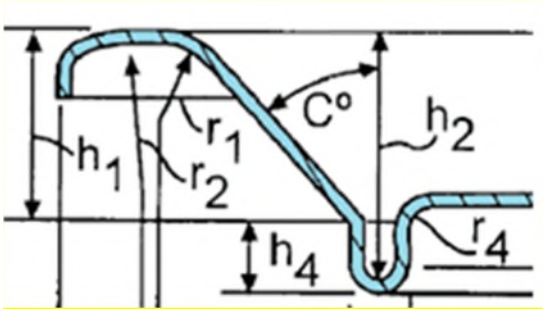


After the can body (green) is filled with beverage and a can end (blue) is placed on top of it, the seaming chuck (yellow) firmly presses the can end onto the can body. This assembly is rotated while the uppermost portions of the can body and can end are rolled together by seaming "rolls" (orange) to form the double seam. (Appx27,

3:4-6, 4:51-54.) In this process, the upper part of the can end wall **24** is bent upwardly around the juncture formed by the chuck's walls **32** and **33**. (Appx27, 4:37-42.) The point where this bending occurs is what the claims call the "first point." (Appx46, 10:52-56; Appx33, 15:33-36.)

The "second point." The claims are much less clear about the lower "second point." They suggest that it is "defined by the location where the [ARB] extends from the lowermost end of the chuck wall." *Ball III*, 838 Fed. Appx. at 540.[4] Essentially, the "second point" is where the wall terminates and changes into the ARB. But the problem is that the surface of a can end is often a smooth, curving, and continuous surface, without any "markers" to demarcate the boundary between the wall and the ARB. The claims provide no criteria for identifying this point.

The specification also lacks any guidance. It only identifies Angle C on the straight-walled embodiment in Figure 4:



[4] *See* Appx46, 10:57-65 (claim 14, '826 Patent: "*a second point* forming a lowermost end of said wall . . . further comprising an [ARB] connected to said wall *at said second point*"); Appx33, 15:17-19 (claim 50, '875 Patent: "said wall and said reinforcing bead forming *a transition* therebetween").

However, this figure is of no help in identifying the wall/ARB border on ends with other, more intricate shapes, including those accused by Crown of infringement over the years. (*See supra* at 8.) Indeed, Crown successfully argued below that Figure 4 does *not* control or even inform the location of the wall/ARB border on other potential embodiments. When Ball proposed construing "second point" as the point where the can end wall is "angularly offset" from the ARB (*i.e.*, where there is a discernable change in angle), Crown accused Ball of importing limitations from the specification. (Appx11493-11496.) It convinced the district court to reject Ball's proposal in favor of its "non-construction," which merely paraphrased the claim language and added no clarity about how to locate the "second point."[5]

C. The Asserted Claims

Crown asserts claim 14 of the '826 Patent and claims 50, 52, 54, 56, 58, and 59 of the '875 Patent. (Appx5.) Claim 14 describes a "metal can end." (Appx46, 10:37-65.) The remaining claims describe methods of seaming a can end to a can body. (Appx33, 15:8-16:26.) "Claim 14 of the '826 patent is representative of the claims of both patents." *Ball III*, 838 Fed. Appx. at 540. Claim 14 (with independent

[5] At Crown's urging, the district court construed the phrase "a *second point* forming a lowermost end of said wall" in claim 14 of the '826 Patent as "a second point that marks the lowest end of said can wall." (Appx2107.) And it construed the phrase "said wall and said reinforcing bead forming a *transition* therebetween" in claim 50 of the '875 Patent as "a place between them at which one changes to another." (Appx2107-2108.)

claim 13 incorporated) reads:

> 14. [**A metal can end** for use in packaging beverages under pressure and **adapted to be joined to a can body by a seaming process** so as to form a double seam therewith using a rotatable chuck comprising first and second circumferentially extending walls, said first and second chuck walls forming a juncture therebetween, **said can end comprising**;
>
> a peripheral cover hook, said peripheral cover hook comprising a seaming panel adapted to be formed into a portion of said double seam during said seaming operation;
>
> **a central panel**;
>
> **a wall** extending inwardly and downwardly from said cover hook,
>
> a first portion of said wall extending from said cover hook to **a first point on said wall**, said first wall portion adapted to be deformed during said seaming operation so as to be **bent upwardly around said juncture of said chuck walls at said first point on said wall**,
>
> a second portion of said wall extending from said first point to **a second point forming a lowermost end of said wall**,
>
> **a line extending between said first and second points** being inclined to an axis perpendicular to said central panel at **an angle of between 30° and 60°**,]
>
> further comprising **an annular reinforcing bead connected to said wall at said second point**, said annular reinforcing bead connecting said wall to said central panel.

(Appx46, 10:37-65.)

In claim 14, the angle of the hypothetical line connecting the "first" and "second" points is "between 30° and 60°." The other asserted claims have different angle ranges, as summarized below:

Patent	Claim(s)	Angle
’826 Patent	Claim 14	30°-60°
’875 Patent	Claims 50, 56, 58, 59	20°-60°
	Claim 52	30°-50°
	Claim 54	40°-45°

III. Crown’s Prior Litigations

With its SuperEnd performing poorly (*see supra* at 7), Crown turned to litigation.

Anheuser-Busch v. Crown. Crown first accused Anheuser-Busch’s LOF+ of infringing the parent ’634 Patent in 2003. *Anheuser-Busch Cos. v. Crown Cork & Seal Techs. Corp.*, 121 F. App’x 388 (Fed. Cir. 2004). Anheuser-Busch argued on summary judgment that the curved LOF+ wall was not “inclined . . . at an angle between 40° and 60°” as required by the ’634 Patent because a can end wall could not have a measureable angle of inclination unless it was flat (like in Figure 4). *Id.* at 391. The Wisconsin district court agreed. *Id.* This Court reversed, observing that, like a set of stairs, a can end wall could have an angle despite not being flat. *Id.* at 393. However, the Court did not reach the much more difficult issue of *how* to measure the angle of a non-flat can end wall. Indeed, though a set of stairs may have a single and easily measurable overall angle of inclination (since the steps are typically inclined at a uniform angle), a surface that resembles a curved ski slope, like a can end wall, will not. Its angle can vary depending on where it is measured. But because the case settled on remand (Crown Br. 7), the issue was never litigated.

Crown v. Rexam. The continuation ’826 and ’875 Patents issued in 2005. Crown promptly sued Rexam in Delaware, accusing its Rexam End of infringing both patents. (*See supra* at 8.) The district court granted Rexam summary judgment that one of the two asserted claims was not infringed and the other lacked written description. (Appx2131.) Crown appealed only the first, non-infringement ruling. This Court reversed, finding a triable issue. *Crown Pkg. Tech., Inc. v. Rexam Bev. Can Co.*, 559 F.3d 1308, 1315 (Fed. Cir. 2009). After remand, Crown dismissed the case, again avoiding resolution of the merits. (Appx2131.)

Crown v. Ball. In 2005, Crown also sued Ball for infringement of the ’826 and ’875 Patents. (Appx1920-1925.) That case, which involved the original configuration of the CDL+ end, came before this Court twice. In 2009, the district court granted Ball summary judgment that the asserted claims were invalid as anticipated and lacking written description support. This Court found a fact issue and remanded on anticipation and, in a 2-1 split, reversed on written description. *Crown Pkg. Tech., Inc. v. Ball Metal Bev. Container Corp.*, 635 F.3d 1373, 1375 (Fed. Cir. 2011) (“*Ball I*”). On remand, the district court turned to infringement and ruled in Ball’s favor on one of the several non-infringement grounds raised in its summary judgment motion (declining to address the rest as moot). The court held that the original CDL+ end did not infringe because the upper part of its can end wall

was bent by no more than 10° during seaming.[6] (Appx11459-11463.) This Court summarily affirmed. *Crown Pkg. Tech., Inc. v. Ball Metal Bev. Container Corp*., 492 F. App'x 115 (Fed. Cir. 2012) ("*Ball II*").

IV. The Present Case

This appeal, like the prior one from 2020, involves a slightly different configuration of the CDL+ end, the "New CDL+." With changes in manufacturing, the upper part of the CDL+ can end wall had slightly changed shape and was now bent by more than 10° as required by Crown's patents. Thus, of the several non-infringement grounds asserted by Ball in the earlier Crown/Ball case, the particular ground upon which the district court ruled in Ball's favor (and was affirmed by this Court in *Ball II*) did not apply to the New CDL+. Ball thus filed the present declaratory judgment action to confirm that its New CDL+ also did not infringe the '826 and '875 Patents and that the patents were invalid. (Appx2011-2016.) Crown counterclaimed, alleging infringement of both patents. (Appx2055-2059.)

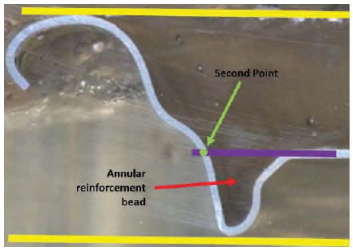
By the time this case began in 2012, Rexam, like Ball, had taken a license from Container Development Ltd. and started making the same CDL+ end as Ball. (Appx2195.) Even so, Crown did not sue Rexam until 2017, after Ball's parent company had acquired Rexam. (Appx2140-2142.)

[6] The court had ruled in its *Markman* order that, during prosecution, Crown disclaimed seaming methods in which the upper can end wall was bent by no more than 10°. (Appx11461.)

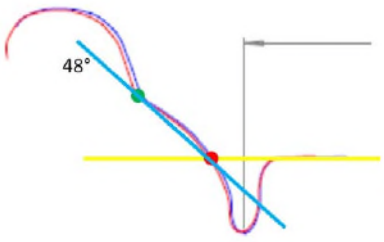
A. The District Court's First Indefiniteness Decision Leading Up to *Ball III*

In 2018, Ball[7] moved for summary judgment of invalidity and non-infringement. Ball argued, *inter alia*, that the asserted claims were indefinite because of the patents' lack of clarity about how to locate the boundary between the can end wall and the ARB—the critical "second point." In addition to arguing that the patents failed to provide sufficient guidance (*see supra* at 10-11), Ball explained that Crown's own expert, Martin Higham, had used at least *three* different inconsistent tests for locating this point.

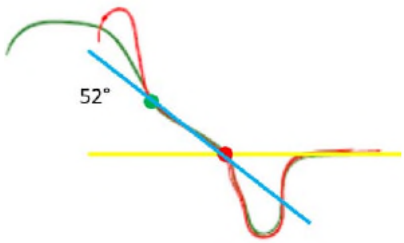
"Across-the-center panel" ("ACP") test. In this case, Mr. Higham drew a straight horizontal line out from the center panel and designated the point where this line intersected the outside of the can end as the "second point." He applied this method to not only the accused New CDL+ but other ends as well (for example, Anheuser-Busch's LOF+ and Crown's own SuperEnd "DA-SP," both of which he evaluated for purposes of secondary considerations of non-obviousness):



New CDL+
(Appx11691)



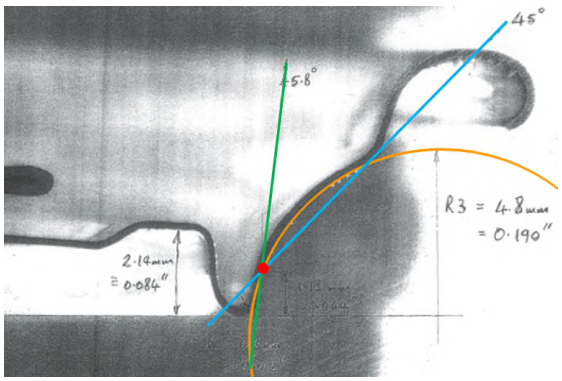
LOF+
(Appx11753)



SuperEnd DA-SP
(Appx11758)

[7] For brevity, Ball and Rexam will be collectively referred to as "Ball" throughout the rest of this brief.

"Change-in-geometry" test. In the earlier *Anheuser-Busch v. Crown* case, Mr. Higham had used a different method to locate the boundary between the can end wall and the ARB. To show that Anheuser-Busch's LOF+ had a wall "inclined" between 40° and 60° as required by the '634 Patent (*see supra* at 7), he identified the end points of the wall's lower portion, drew a straight line between them, and measured its angle. In locating the wall's *bottom* end point, he looked for the "point of juncture" between the wall and the ARB—the equivalent of the "second point." (Appx11712-11714.) To find it, Mr. Higham selected a point where the outside surface of the LOF+ revealed a change in geometry (a "deviat[ion]," in his words):



(Appx11717.) He said that the large, sweeping curve "R3" (marked by the orange circle) defined the lower part of the LOF+ wall; that the straight upright segment below it (marked by the green line) defined the ARB's outer wall; and that the point (the red dot) where the curve changed into the straight line defined the wall/ARB border. (Appx11713-11714.) In contrast to the ACP test, this "change-in-geometry" test led Mr. Higham to locate the wall/ARB border *below* the LOF+'s center panel.

"FEA" test. In the earlier Crown/Ball case, Mr. Higham articulated a third method for locating the "second point." He explained that, to identify the precise bounds of the ARB (and thus the precise place where it abuts the can end wall), he would use computer-based finite element analysis ("FEA") to compare various generally "U-shaped," ARB-like portions of the can end and find the one that provided the *most* reinforcing (or "stiffening") effect. (Appx11707, 24:2-25; Appx11708, 26:3-29:21.) That portion would become the "ARB" and its uppermost outer point, in turn, the "second point."

The district court found Crown's claims indefinite. (Appx2674-2687.) It held that the patents' specification "fail[ed] to reference any test for locating the ['second point']." (Appx2686.) It also agreed with Ball that Crown's expert had employed at least three different methods for locating the "second point." (Appx2685-2686.) It concluded that, "'[b]ecause the methods do not always produce the same results," the choice of method "could affect whether or not a given product infringes the claims.'" (Appx2685 (alteration in original) (quoting *Dow Chem. Co. v. Nova Chems. Corp. (Can.)*, 803 F.3d 620, 634 (Fed. Cir. 2015)).)

B. This Court's Decision in *Ball III*

On appeal, this Court agreed with the district court's key findings. First, it rejected Crown's argument that its expert "ha[d] consistently used the same methodology to determine the location of the second point." *Ball III*, 838 F. App'x

at 541. The Court agreed with the district court that, despite being presented with a "number of opportunities to explain how a skilled artisan would determine the claimed second point," Mr. Higham "ha[d] not been consistent." *Id.* Second, it agreed that Mr. Higham had used at least three methods of locating the "second point." *Id.* Third, it agreed that, "contrary to Crown's argument," these methods "do not necessarily result in selection of the same location for the second point." *Id.* The Court explained that, by contrast to Crown's now-favored ACP method, "the record shows examples of the other tests identifying a location other than the point across from the central panel as the second point." *Id.* at 542. It rejected, *inter alia*, Crown's argument that the FEA method is "simply confirmatory" of the ACP method as "explicitly rebutted by Mr. Higham's deposition testimony." *Id.* Finally, though Crown had argued that the specification clearly directed those skilled in the art to the ACP method, this Court did not agree. *See id.*

Still, while agreeing with the district court that the different methods did not always yield the same location for the "second point," the Court remanded the case and instructed the district court to analyze one last issue: whether these different "second points" could lead to "materially different results for the angle." *Ball III*, 838 F. App'x at 543. Using claim 14 as an example, the Court explained that the differences between Mr. Higham's methods would be "immaterial" if "any conceivable choice of a second point" would "always" lead to an angle between 30º

and 60º for "any operational can end." *Id.* But, if two different methods could produce one angle measurement within the claimed range and one angle measurement outside of it, then this would be a "material[]" difference. *Id.*

C. The Proceedings on Remand

On remand, the district court allowed supplemental expert reports on the materiality issue. (Appx2734-2736.) Ball submitted a report from its long-time expert Ed Gillest. Crown submitted a report from a new expert, Scott Biondich, who in part even disagreed with the now-retired Mr. Higham. (Appx2892-2911.)

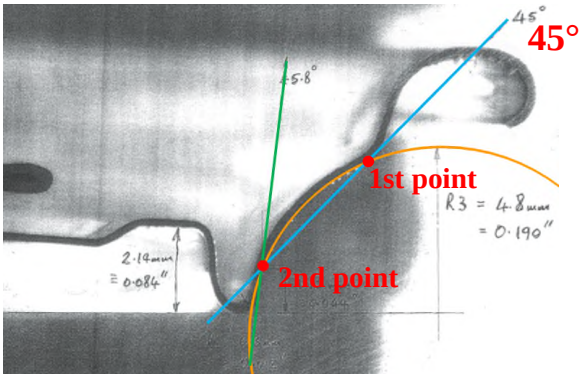
1. Ball's Renewed Indefiniteness Motion

Ball, relying on Mr. Gillest's report, explained that, as a "simple case of geometry," the choice between the methods of locating the "second point" would inevitably impact the infringement inquiry for at least some "operational" ends (*i.e.*, those that would be viewed as realistic design options by persons skilled in the art). (Appx2897 (citing Appx2964).) Ball also cited numerous examples of specific ends ("Examples") to illustrate this point. These Examples included a wide variety of ends that straddled either side of 20°, 30°, 40°, 50°, or 60° depending on the method used to find the "second point." Ball's Examples thus covered the entire breadth of angle ranges described in the claims (20°-60°, 30°-60°, 30°-50°, and 40°-45°).

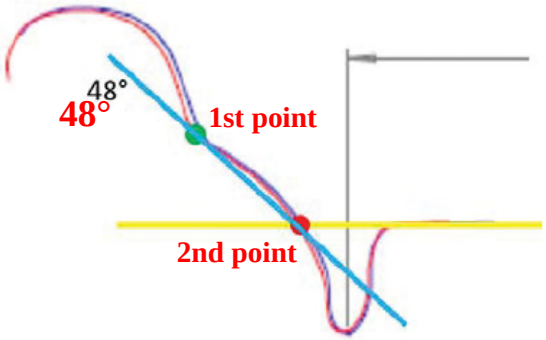
The Examples included, among others, Anheuser-Busch's LOF+ end (**Example 1**). Mr. Higham measured the LOF+ twice—first in Crown's litigation

against Anheuser-Busch, where he used the change-in-geometry method, and later in this case, where he used the ACP method:

Example 1



Change-in-Geometry Measurement



ACP Measurement

(Appx2898-2899; *see also supra* at 16, 17.) The difference in his measurements (45° versus 48°) was material at least to the 40°-45° claim 54.

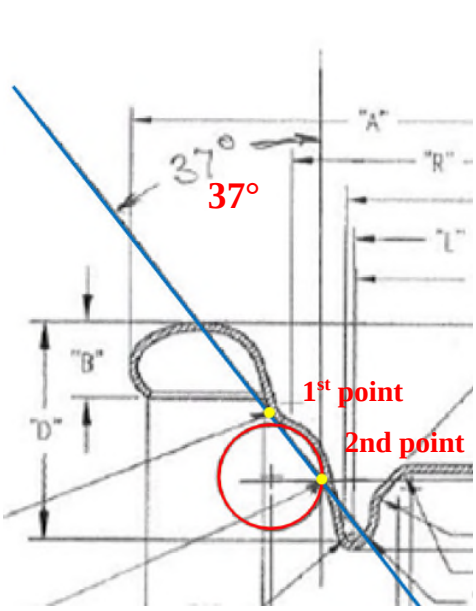
Ball also submitted no less than ten additional ends (**Examples 2-11**) from Mr. Gillest. Applying the change-in-geometry and ACP methods to each one, Mr. Gillest showed how the angle of the hypothetical line varied widely and fell either inside or outside a particular claimed range depending solely on which method was used to locate the "second point."[8] (Appx2946-2964.) Mr. Gillest's Examples included ends hovering around 20° (the lowest angle covered by any of the asserted claims), around 60° (the highest covered angle), and virtually anywhere in between.

For instance, Mr. Gillest applied the change-in-geometry and ACP methods

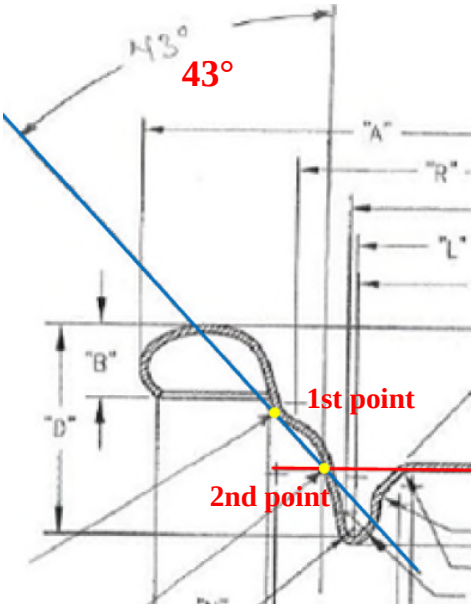
[8] Ball and Mr. Gillest did not need to apply the third method (the FEA method) since materiality was amply demonstrated by the angle measurements produced by Mr. Higham's other two methods.

to Ball's accused New CDL+ (**Example 2**) and showed that, depending on the method used, the angle of the hypothetical line was either 37° or 43°:

Example 2



Change-in-Geometry Measurement

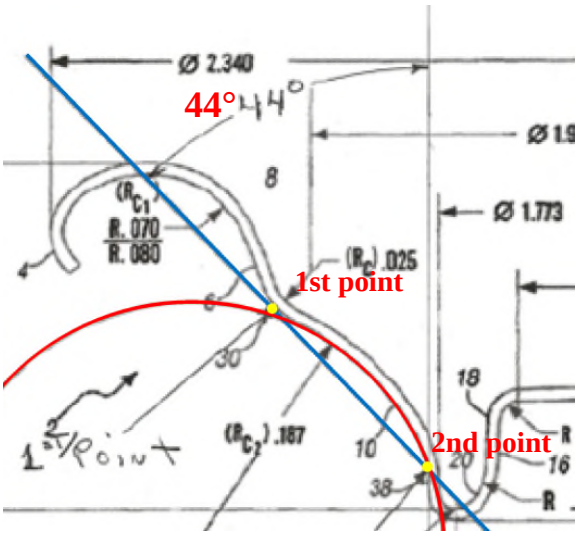


ACP Measurement

(Appx2961-63.)

He did the same for the can end shown in Figure 4B of U.S. Patent No. 7,100,789 (**Example 3**), assigned to Ball Corporation, and showed that these methods resulted in hypothetical-line angles of 44° and 52°, respectively:

Example 3

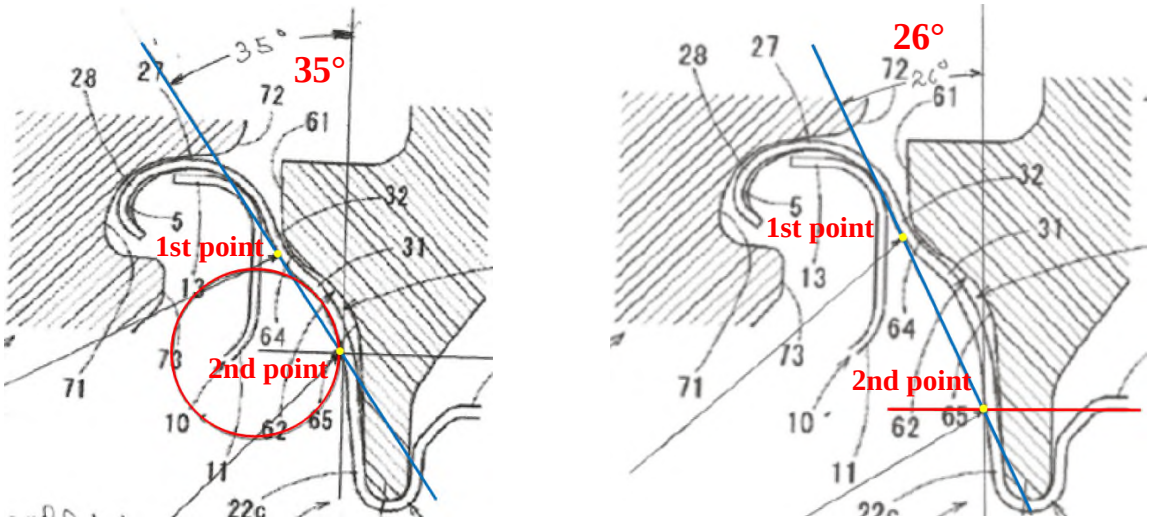


Change-in-Geometry Measurement **ACP Measurement**

(Appx2957-2958.)

Mr. Gillest's analysis of the can end in JP 2018-016371A, a published Japanese application (**Example 4**), showed that the angle of the hypothetical line swung by almost ten degrees (from 35° to 26°) depending on the method used:

Example 4

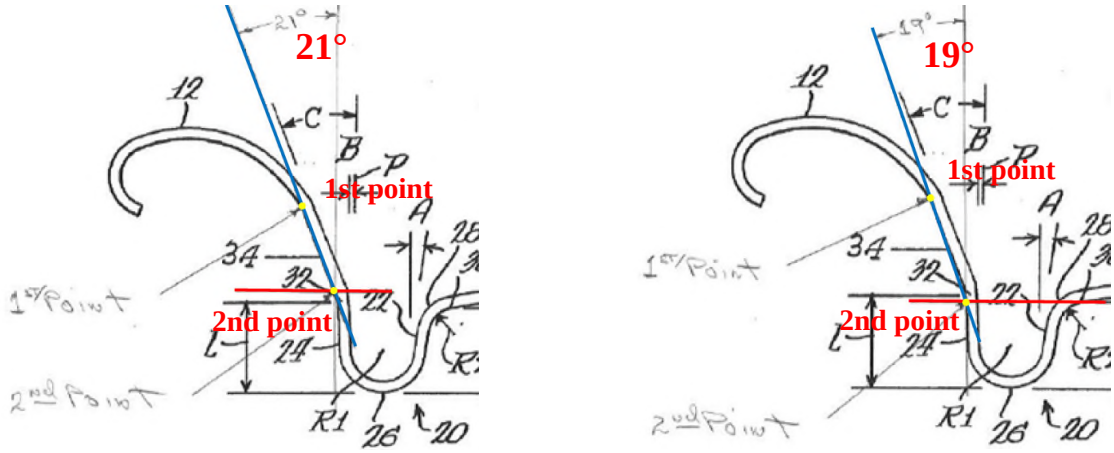


Change-in-Geometry Measurement **ACP Measurement**

(Appx2953-2955.)

U.S. Patent No. 4,217,843, or "Kraska" (**Example 6**), is a key piece of prior art relied upon by Ball for its anticipation and obviousness defenses. (Appx11597-11599.) Mr. Gillest's analysis of Kraska's Figure 4 showed that the choice between the methods of finding the "second point" is critical to determining whether Kraska's hypothetical line measures above or below 20° (the bottom end point of the range in most asserted claims):

Example 6



Change-in-Geometry Measurement **ACP Measurement**

(Appx2947-2948.)

All 11 of Ball's Examples are summarized in the following table, where they are sorted by their change-in-geometry angle measurement (from the lowest to the highest):

#	Example	Change-in-Geometry Meas.	ACP Meas.	Relevant Ranges/Claims
6	U.S. Patent No. 4,217,843	21°	19°	**20°-60°** (claims 50, 56, 58, 59)
10	JP 2015-042411A	26°	38°	**30°-50°** (claim 52) **30°-60°** (claim 14)
5	U.S. Patent No. 6,761,280	30°	22°	**30°-50°** (claim 52) **30°-60°** (claim 14)
11	JP 4388726B2	31°	26°	**30°-50°** (claim 52) **30°-60°** (claim 14)
4	JP 2018-016371A	35°	26°	**30°-50°** (claim 52) **30°-60°** (claim 14)
2	New CDL+	37°	43°	**40°-45°** (claim 54)
3	U.S. Patent No. 7,100,789 (Fig. 4B)	44°	52°	**40°-45°** (claim 54) **30°-50°** (claim 52)
8	U.S. Patent No. 8,490,825 (Fig. 6)	46°	51°	**30°-50°** (claim 52)
1	LOF+	48°	45°	**40°-45°** (claim 54)
9	U.S. Patent No. 8,490,825 (Fig. 10)	48°	57°	**30°-50°** (claim 52)
7	U.S. Patent No. 7,100,789 (Fig. 7A)	63°	60°	**30°-60°** (claim 14) **20°-60°** (claims 50, 56, 58, 59)

(Appx2898-2899; Appx2946-2964.)[9]

Crown's new expert, Mr. Biondich, did not suggest that the choice of method for finding the "second point" could *never* be material for any operational end. (Appx2897 (citing Appx3153, 35:6-25).) He only purported to re-measure some

[9] Crown's appeal brief essentially ignores Examples 8, 9, 10, and 11 because Ball's summary judgment brief supposedly did not sufficiently raise them. (Crown Br. 24.) But Ball's brief specifically cited these Examples and directed the district court to the portions of Mr. Gillest's report where he discussed them. (Appx2906.) And the district court relied on *all* of Mr. Gillest's Examples in its opinion. (Appx14 (citing Appx2944-2964).)

(but not all)[10] of the specific Examples cited by Ball—including, remarkably, the LOF+ (Example 1), where he attempted to revise *Mr. Higham's* own measurements. (Appx3262-3266.) Mr. Biondich asserted that, when he applied Mr. Higham's change-in-geometry and ACP methods to the LOF+ and the other Examples he re-measured, both angle measurements turned out to be inside or outside the applicable claim ranges. (Appx3264.) But Mr. Biondich conceded that he did not apply at least the change-in-geometry method in the same way that Mr. Higham had. (Appx3166, 87:1-88:25; *see also infra* at 47.) Moreover, even though Mr. Biondich contorted his angle measurements of specific Examples to fit either inside or outside the claimed ranges, his own results confirmed that the hypothetical-line could still vary by as much four or five degrees based on the method used to plot the "second point." (*See* Appx3330 (obtaining angles of 45° and 40° on Example 3); Appx3337 (obtaining angles of 39° and 34° on Example 10); Appx3349 (obtaining angles of 25° and 29° on Example 5).) Mr. Biondich did not dispute that a hypothetical-line angle that varied by four or five degrees would create infringement uncertainty for at least some ends that those skilled in the art would reasonably consider designing.

2. The District Court's Decision Holding the Claims Indefinite

The district court again held the claims indefinite. It explained that,

[10] Mr. Biondich offered no competing angle measurements for Examples 8, 9, and 11. (Appx3338-3339; Appx3351-3357.)

"[c]onsistent with the scope of the remand," Ball "ha[d] applied two of Mr. Higham's methods" to each asserted claim; "indicate[d] the measurements" obtained using the methods; and explained how "'materially different' results exist for the angle of the hypothetical [line] depending on which of Mr. Higham's methods is used." (Appx14.) The court cited approvingly both the LOF+ Example (Appx16) and the ten additional Examples analyzed by Mr. Gillest. (Appx13; Appx15.)

The court also found that Crown's new expert, Mr. Biondich, had failed to cast any genuine doubt on the accuracy of Mr. Gillest's measurements of the Examples. Among other things, the court noted that, rather than faithfully apply *Mr. Higham's* methodologies to those can ends and attempt to show that *those* methodologies invariably produced identical infringement outcomes, Mr. Biondich had applied methodologies that were *different* from Mr. Higham's. (Appx15-16.) Finally, the court rejected Crown's argument that some of Ball's Examples were not of "operational" ends. Although Crown had argued that ends depicted in patent drawings are not "operational" because they are "just lines on paper" and not physical, tangible articles (Appx3234), the court agreed with Mr. Gillest that, to be "operational" for purposes its analysis, an end only needed to be "*capable* of being manufactured, filled and seamed." (Appx16 (emphasis added).)

SUMMARY OF THE ARGUMENT

This is a classic case of post-*Nautilus* indefiniteness. After 18 years of litigation, one still cannot understand with reasonable certainty what products the claims would, and would not, cover. The claims thus do not "particularly point[] out and distinctly claim[]" the invention, as 35 U.S.C. § 112(b) requires. The district court's judgment of indefiniteness should be affirmed, and this litigation should be put to an end, finally.

The specification describes a can end with a larger angle of inclination for the can end "wall." The specification's only disclosed embodiment has a straight can end wall, with a single, easily measurable angle of inclination. The claims in Crown's original '634 Patent tracked this embodiment and required simply measuring the angle of the can end "wall." But, after watching its competitors design can ends with more complex, curving walls, with multiple angles, Crown shifted its claiming strategy in the continuation applications that ultimately resulted in the two patents at issue here. The asserted claims thus require measuring not the angle of the "wall" itself but of an imaginary line that connects two points on the wall: an upper "first point" and a lower "second point." However, though Crown significantly re-drafted its claims, it did not add a single word or figure to the specification (presumably to maintain the original priority date). The specification is thus silent on how to locate the "second point."

In addition, as this Court found in *Ball III*, Crown's own long-time expert Martin Higham has used *three* different methods to locate this "second point." 838 Fed. Appx. at 541. And this Court also found that these methods "do not necessarily result in selection of the same location for the second point," and thus do not always result in the same angle for the imaginary line. *Id.* The Court remanded the case with instructions to the district court to consider only one narrow remaining question: could applying Mr. Higham's methods of locating the "second point" produce "materially different" angle measurements, or would those methods "always" produce consistent infringement outcomes? *Ball III*, 838 F. App'x at 543.

On remand, the district court did just as this Court instructed. It re-opened expert discovery on the materiality issue and requested additional briefing. And, not surprisingly, it found that using different methods to locate the "second point" could, in fact, result in materially different angles for the hypothetical line. Accordingly, the court again found the claims indefinite. Crown identifies no error in its decision.

First, Crown completely mischaracterizes the district court's analysis when it suggests that the court relied solely on the LOF+ Example to invalidate all asserted claims. The court plainly relied on all of the evidence before it, including Ball's remaining Examples (Nos. 2-11), in finding the asserted claims indefinite.

Second, Crown did not avoid indefiniteness by having its new expert (Mr. Biondich) disagree with Ball's expert (Mr. Gillest) and even Crown's prior expert

(Mr. Higham) about their measurements of some of the specific Examples. Crown's argument incorrectly assumes that the district court was bound by the FED. R. CIV. P. 56 summary judgment standard. It was not. To the extent answering the materiality question required the court to resolve competing expert testimony, it could do so. And Crown makes no argument that, if the court *could* act as a finder of fact, it made any "clear error" in crediting Mr. Gillest's (or Mr. Higham's) angle measurements over Mr. Biondich's.

In any event, there was no *genuine* disagreement for the court to decide. As the court found, Mr. Biondich did not even apply Mr. Higham's methods reliably. Moreover, his measurements *confirmed* that the choice of method for locating the "second point" could change the angle of the hypothetical line by at least several degrees. And Mr. Biondich did not dispute that a variance of this magnitude could make a material difference to at least *some* ends that a person of ordinary skill would reasonably design, *regardless* of whether it made a material difference to the specific Examples he attempted to measure.

Third, Crown's contention that Ball needed to prove materiality by reference to "real-world" commercial products is also meritless. It runs contrary to this Court's remand order in *Ball III*, its indefiniteness precedent, and *Nautilus*. Most fundamentally, it disregards the indefiniteness doctrine's *prospective* "public-notice function" that requires claims to be sufficiently clear to allow *potential* competitors

to determine if they are infringing *before* they have brought a product to market.

Fourth, Crown is wrong to suggest that, to establish materiality, Ball needed to put on a separate infringement case for each of its Examples and prove that they would have definitely infringed the asserted claims *but for* the uncertainty regarding the hypothetical-line angle. Crown's suggestion that the district court was required to hold a series of side trials to determine whether Ball's Examples infringed the asserted claims finds zero support in either this Court's remand order or any case law and confuses infringement with indefiniteness.

The claims are indefinite, and the district court's decision should be affirmed.

STANDARD OF REVIEW

This Court "review[s] a district court's grant of summary judgment that a claim is indefinite de novo, applying the same standards as the district court." *Cox Communs., Inc. v. Sprint Commun. Co. LP*, 838 F.3d 1224, 1228 (Fed. Cir. 2016) (citing *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 149 F.3d 1309, 1315 (Fed. Cir. 1998)). The ultimate conclusion that a claim is indefinite is a "legal conclusion," which is "review[ed] de novo." *Id.* (citing *Eidos Display, LLC v. AU Optronics Corp.*, 779 F.3d 1360, 1364 (Fed. Cir. 2015)). "As in claim construction," this Court "review[s] a district court's underlying factual determinations for clear error" only. *Id.* (citing *Eidos*, 779 F.3d at 1364; *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 840 (2015)).

ARGUMENT

Following *Ball III*, the only question that remained for the district court to address on remand was whether Mr. Higham's methods of finding the "second point" could potentially yield materially different results for the angle of the hypothetical line. The court correctly answered that question in the affirmative.

I. The District Court Correctly Determined That the Different Methods for Locating the "Second Point" Can Produce Materially Different Angle Results.

The district court had ample evidence to conclude that the differences between the competing methods of locating the "second point" are material. Ball's expert Mr. Gillest explained that, as a "simple case of geometry," different methods of locating the "second point" would be expected to produce materially different angle measurements for at least some can ends because of their complex shapes. (Appx2964.) By contrast, Crown's new expert, Mr. Biondich, did not purport to opine that the choice of method could *never* be material. (Appx3153, 35:6-:25.) That is, he did not even attempt to answer this Court's question, *i.e.*, whether "any conceivable choice of a second point" obtained using Mr. Higham's methods would "always" produce consistent infringement results. *Ball III*, 838 F. App'x at 543.

Ball also provided multiple *specific examples* of can ends to illustrate how the differences between Mr. Higham's methods could yield widely varying and materially different angles. The Examples included the LOF+ (Example 1), Ball's own accused New CDL+ (Example 2), and numerous additional can ends from

various patents and applications (Examples 3-11). (*See supra* at 25.) Between them, these Examples had walls inclined at angles across the entire spectrum of claimed ranges. For to the LOF+, Ball pointed to *Mr. Higham's own* inconsistent measurements of that can end, which confirmed that the choice between his change-in-geometry and ACP methods could materially affect infringement of *at least* the 40°-45° claim 54. (*See supra* at 21.) And for the other Examples, Ball relied on Mr. Gillest, who showed that the angle of the hypothetical line on each of those Examples could fall either *inside* or *outside* a claimed range based solely on whether the change-in-geometry or ACP method was used to find the "second point." (*See supra* at 21.)

The district court cited *all* of Ball's Examples, including Mr. Gillest's Examples as well as the LOF+ Example. (Appx14 (citing Appx2944-2964); Appx 16.) In concluding that Ball "sufficiently addressed and satisfied the remand order," the court found that Ball had, for each claim, (i) applied two of Mr. Higham's methods, (ii) explained the measurements obtained using the methods, and (iii) established that the methods led to materially different angle results. (Appx14.)

The court correctly concluded (*see infra* at 48) that Mr. Biondich failed to meaningfully challenge Mr. Gillest's measurements of Examples 2-11. It explained, *inter alia*, that his competing measurements did not reflect a reliable application of

Mr. Higham's methodologies.[11] (Appx15-16.) And the court also correctly rejected Crown's argument (*see infra* at 52-53) that patent drawings could not depict "operational" ends, agreeing with Mr. Gillest that they could, as long as the depicted end was "capable of being manufactured, filled, and seamed." (Appx16.)

No more was required of the court to support its conclusion of materiality. Indeed, Ball's materiality showing exceeded what was necessary. In other cases involving multiple methods of measurement, this Court has found claims indefinite without requiring the accused infringer to provide any specific examples to illustrate materiality.

For example, in *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1338 (Fed. Cir. 2015), the Court found it sufficient for indefiniteness that three different measures of "molecular weight" produced "different values" in a "typical polymer sample." It did not require specific proof that differences in these molecular weight values could lead to different infringement outcomes. *See id.*

Similarly, in *Dow*, 803 F.3d at 634, the Court explained that the claims were indefinite because there were multiple methods of calculating the slope of "strain hardening," these methods "d[id] not always produce the same [slope value]," and the choice of method "could" decide "whether or not a given product infringes."

[11] As discussed *supra* at 26, Mr. Biondich had gone even further with the LOF+ (Example 1) and attempted to revise *Mr. Higham's* own specific measurements of that end.

However, the Court did *not* also require the accused infringer to prove the last point (materiality) using specific examples. *See id.*

Saso Golf, Inc. v. Nike, Inc., 843 F. App'x 291 (Fed. Cir. 2021), another non-precedential decision issued shortly after *Ball III*, is also instructive. The claim described a golf club and required the radius of curvature between the club head's "toe" and its "most rearwardly point" to exceed the radius of curvature between the club head's "heel" and the same point. *Id.* Measuring these radii, in turn, required identifying the precise locations of the "toe" and "heel." This Court affirmed the judgment of indefiniteness. It first concluded that the district court had "not clearly err[ed]" in finding that the terms "toe" and "heel" were susceptible to multiple interpretations. *Id.* at 295. Quoting *Ball III*, the Court next considered whether "application of the different methods result[s] in materially different outcomes for the claim's scope." *Id.* at 296. It noted that, "unless the sides of the golf club are segments of a perfect circle, changes in the starting point of the measurements can change the results of the measurement"; that "[a]lmost every golf club" is "more complex than a segment of a perfect circle"; and that the defendant's expert had generally "opin[ed] that 'applying a different interpretation' of 'toe' and 'heel' would make the patent cover different clubheads." *Id.* This established materiality.

This case is very similar to *Saso Golf*. Just as most golf clubs are not shaped like segments of a perfect circle, most can ends do not have walls shaped like

segments of a straight line. Even before the remand, the record was full of examples of can end walls with complex, curved profiles. (*See* Appx2395 (Rexam End); Appx2405 (LOF+); Appx2483 (CDL+).) Mr. Gillest's report identified multiple new examples. (Appx2944-2964.) Therefore, applying *Saso Golf*'s reasoning, it was enough that Ball's expert had shown that the choice of method for locating the "second point" would be expected to make a material difference to at least some ends as a "simple case of geometry." (Appx2964.)

But Ball went even further. It also applied two of Mr. Higham's different methods to numerous specific Examples and showed that, for every claimed range, there were multiple Examples illustrating how the angle of the hypothetical line could fall *within* the required range under one method but *outside of* it under another. Ball thus provided the type of claim-by-claim, example-by-example granular analysis that went above and beyond what this Court has found sufficient to prove indefiniteness in other multiple-methods-of-measurement cases. Because the district court correctly concluded that Ball met its burden, this Court should affirm.

II. Crown's Challenges to the District Court's Analysis of the So-Called "Broad Claims" (Claims 14, 50, 52, 56, 58, and 59) Are Meritless.

Crown mainly defends what it calls the "Broad Claims": claim 14 (30°-60°), claim 52 (30°-50°), and claims 50, 56, 58, and 59 (20°-60°). It spends little time on claim 54 (40°-45°), a tacit acknowledgment that Mr. Higham's own inconsistent measurements of the LOF+ (Example 1) provide irrefutable evidence of materiality

as to that claim. However, none of Crown's arguments regarding the broader claims have any merit, either.

A. The District Court Relied on All of the Examples of Record—*Not* Solely the LOF+—to Invalidate the Asserted Claims.

Crown suggests that the district court erred by supposedly relying on one, and only one, Example (the LOF+) to invalidate *all* asserted claims. (Crown Br. at 3, 25, 33-35.) Crown mischaracterizes the district court's opinion.

Crown concedes that Ball relied on numerous other Examples. (Crown Br. 23-24.) And though the district court did refer to the LOF+ (Appx16), it *never* suggested that it was invalidating all claims based solely on that Example. On the contrary, the court expressly cited Mr. Gillest's report. (Appx 13-14 (citing Appx2944-2964).) And Mr. Gillest did not analyze the LOF+; he did not need to, because *Mr. Higham's* own measurements of that end established materiality at least as to claim 54. (*See supra* at 21.) Mr. Gillest did, however, analyze all of Ball's *other* Examples (Nos. 2-11). (Appx2944-2964.) And of those Examples, at least Nos. 3-11 applied to the broader claims 14, 50, 52, 56, 58, and 59. (Appx2946; *see also supra* at 25.)

Mr. Gillest's analysis was more than sufficient to establish materiality with respect to those broader claims. And the district court explicitly relied on that analysis, explaining that, "through Mr. Gillest," Ball had shown that "'application of the different methods' of Mr. Higham 'result[s] in materially different outcomes

for the claim's scope." (Appx15 (quoting *Ball III*, 838 Fed. Appx. at 542-43).)

Despite the court's reliance on Mr. Gillest's analysis, Crown insists that the court must have relied on the LOF+ (the one Example Mr. Gillest did *not* discuss) to invalidate all claims. (Crown Br. 33.) Crown says that since the court only specifically referred to the LOF+ by name, this means the LOF+ had to be the only Example it considered relevant to its analysis. The court referenced the LOF+ in addressing Crown's argument that none of Ball's Examples qualified as "operational." Since the LOF+ was indisputably an "operational" end, the court mentioned it as one reason why Crown was wrong. (Appx16.) But this does not mean that the court must have focused solely on the LOF+ to the exclusion of all other Examples. Indeed, it explicitly agreed with Mr. Gillest's general definition of an "operational" end as one that is "capable of being manufactured, filled and seamed." (Appx 16.) And there was no dispute that, under *that* definition, all of Ball's Examples, and not just the LOF+, qualified as "operational." Mr. Biondich conceded that he did not disagree with Mr. Gillest on that point. (Appx3179, 139:8-141:11; *see also infra* at 53.) There was therefore no need for the court to specifically list each Example by name.

Crown also points to the district court's finding that its new expert, Mr. Biondich, "use[d] measurements that were different from those originally made by Mr. Higham." (Crown Br. 34-35.) Crown says this finding could have referred only

to Mr. Biondich's effort (*see supra* at 25-26) to revise Mr. Higham's measurements of the LOF+ and make the angle of its hypothetical line fit outside of the 40°-45° range of claim 54 under *both* the change-in-geometry and ACP methods. Crown again misreads the court's decision. In context, the court was clearly making a *broader* finding about Mr. Biondich's failure to reliably apply Mr. Higham's methodologies throughout his report. (Appx16 (explaining that Mr. Biondich "effectively disregarded" the question of whether Mr. Higham's "different methodologies . . . result in materially different outcomes").) The court did not suggest its finding was limited to the LOF+, as Crown claims.

In sum, Crown's suggestion that the district court relied on a single Example to invalidate *all* asserted claims flatly ignores the district court's analysis.

B. The Competing Angle Measurements of Crown's New Expert Did Not Preclude a Finding of Materiality.

Crown attempts to set up the materiality issue as a battle between experts. According to Crown, Ball's expert (Mr. Gillest) applied two of the methods for locating the "second point" to various Examples and found they produced materially different results; Crown's new expert (Mr. Biondich) applied the same two methods to some of those Examples and found they did not produce materially different results; and so the district court was obligated to let a jury sort out indefiniteness. (Crown Br. 36-38.)

Crown is incorrect. First, it wrongly assumes that the district court could not

make factual findings in answering the materiality question. Second, even if the summary judgment standard applied to the court's decision, there were no genuine disagreements between the experts that prevented the court from ruling in Ball's favor.

1. Like Claim Construction, Indefiniteness Is an Ultimate Question of Law, and Any Underlying Factual Questions Can Be Resolved by the Judge.

Crown's contention that the district court was required to submit any conceivable factual dispute to a jury (Crown Br. 28-32) is foreclosed by *Ball III* and controlling precedent.

First, Crown already made the same argument, unsuccessfully, in the last appeal, where it asserted that the Seventh Amendment entitled it to have a jury resolve any factual disputes underlying indefiniteness. ECF No. 16, at 65-66, *Ball Metal Bev. Container Corp. v. Crown Packaging Tech., Inc.*, No. 2020-1212 (Fed. Cir. Feb. 4, 2020). This Court disagreed. Its decision explicitly stated that it had considered *all* of the parties' arguments and, unless otherwise stated, "f[ound] them unpersuasive." *Ball III*, 838 F. App'x at 544. And while the Court remanded the case for another reason (to allow the district court to address materiality), nothing in its opinion suggested it saw any merit in Crown's jury argument.

Accordingly, *Ball III* expressly instructed "the district court" to analyze materiality. 838 Fed. Appx. at 544. The remand instructions did not suggest that

the district court would have to defer to a jury on that question.

More generally, nothing in this Court's precedent requires factual disputes underlying indefiniteness to be resolved at trial—quite the opposite. In *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1376 (Fed. Cir. 2001), the Court rejected the patentee's argument that, because the indefiniteness issue turned on a question of fact, it could not be adjudicated without a trial. *Id.* *Exxon* stressed that indefiniteness is a "legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims." *Id.* (internal citations omitted). And all questions of claim construction are, of course, decided by the court, not the jury, *even when* they turn on an issue of fact. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996).

This Court rejected the same argument Crown makes here as recently as in *Saso Golf*, a case closely analogous to this one. (*See supra* at 35.) Much like Crown, the patentee in *Saso Golf* argued that, because indefiniteness depended on a "factual question" (there, whether a skilled artisan would know the precise bounds of the club head's "toe" and "heel"), it "should have gone to the jury." 843 F. App'x at 295. But the Court explained that "that was not necessary" since questions implicating the "meaning of a patent term" are always for the judge, even though answering them may require the judge to make fact findings, for example about experts' credibility. *Id.* (citing *Markman*, 517 U.S. at 389). The issue of whether Crown's

patents provide sufficient clarity about the location of the "second point" is also a quintessential question about claim meaning—and so this issue and any underlying fact questions, including materiality, were appropriate for the district court to address.

Indeed, the standard of review this Court applies to indefiniteness is the same as the standard it applies to claim construction. It reviews the trial court's ultimate conclusion *de novo* and any "underlying factual determinations for clear error" only. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1363 (Fed. Cir. 2018) (holding that the district court's factual findings were not "clearly erroneous" and affirming its indefiniteness determination); *HZNP Meds. LLC v. Actavis Labs. UT, Inc.*, 940 F.3d 680, 691 (Fed. Cir. 2019) (same); *IBSA Institut Biochimique, S.A. v. Teva Pharms. USA, Inc.*, 966 F.3d 1374, 1381 (Fed. Cir. 2020) (same); *Saso Golf*, 843 F. App'x at 295 (same). The Court does *not* review the trial court's fact findings under the FED. R. CIV. P. 56 summary judgment standard, by asking whether a reasonable jury could have found for the non-movant.

District courts are thus fully expected to make fact findings in ruling on indefiniteness, and this Court reviews those findings deferentially. The Court applies "clear error" review *even where* indefiniteness is technically raised and decided at the summary judgment stage. *Cox*, 838 F.3d at 1228; *EON Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616, 620 (Fed. Cir. 2015);

Synchronoss Techs., Inc. v. Dropbox, Inc., 987 F.3d 1358, 1364-65 (Fed. Cir. 2021); *Capital Sec. Sys. v. NCR Corp.*, 725 F. App'x 952, 955-56 (Fed. Cir. 2018); *GE Lighting Sols., LLC v. Lights of Am. Inc.*, 663 F. App'x 938, 939-40 (Fed. Cir. 2016).

Crown attempts to distinguish between two types of indefiniteness-related fact questions—"subsidiary" ones, which it says can be resolved by a court, and "primary" ones, which it says must be resolved by a jury. (Crown Br. 30.) But Crown cites no authority for this distinction, and none exists. Precedent is clear that *all* factual questions underlying indefiniteness, regardless of their nature, are within the trial court's fact-finding authority and subject to deferential "clear error" review. *See, e.g.*, *IBSA*, 966 F.3d at 1378 (explaining that "any factual findings about extrinsic evidence relevant to the [indefiniteness] question" are "reviewed for clear error").

Finally, Crown's reliance on *Bombardier Recreational Prod. Inc. v. Arctic Cat Inc.*, 785 F. App'x 858 (Fed. Cir. 2019), a non-precedential decision (Crown Br. 29), is misplaced. *Bombardier* explained that indefiniteness is "amenable" to resolution by a jury when it depends on underlying questions of fact. *Id.* at 867. Thus, a trial court does not err when it chooses to delegate indefiniteness to a jury in those circumstances. But *Bombardier* did not purport to suggest, contrary to

precedent, that a jury *must* decide indefiniteness if the facts are disputed.[12]

In light of the Court's rejection of Crown's jury argument in *Ball III*, its remand instructions to the district court, and its controlling precedent, the district court could make whatever factual findings were necessary to its decision on materiality. And, with the pull of this single thread, Crown's entire argument unravels, since it *never* attempts to argue in the alternative, *i.e.*, that if the district court *did* have the leeway to act as a fact-finder, it still "clearly erred" in crediting Mr. Gillest's angle measurements of the Examples over Mr. Biondich's. Thus, the court's judgment should be affirmed on this basis alone.

2. Even if the District Court Was Bound by the Summary Judgment Standard, There Was No Genuine Disagreement That the Application of the Different Methods Could Lead to Materially Different Angle Results.

There was, in fact, no genuine disagreement between Ball's expert (Mr. Gillest) and Crown's new expert (Mr. Biondich) that applying different methods of locating the "second point" to an operational product could "conceivabl[y]" produce

[12] *ImmunoGen, Inc. v. Hirshfeld*, No. 2021-1939, 2022 U.S. App. LEXIS 7855, at *7-11 (Fed. Cir. Mar. 25, 2022), an appeal from a 35 U.S.C. § 145 civil action to obtain a patent, is the only decision cited by Crown (Crown Br. 29) where a panel of this Court reversed an indefiniteness determination because the district court supposedly erred by resolving "disputed questions of material fact" against the non-movant. But *ImmunoGen* did not cite *Exxon* or reference the correct "clear error" standard of review and instead applied, without explanation, the Rule 56 summary judgment standard. *See id.* Therefore, not only is *ImmunoGen* not binding, it is also plainly incorrect.

inconsistent infringement outcomes. *Ball III*, 838 F. App'x at 543. Mr. Biondich did *not* even try to answer this question, even though this Court had expressly posed it in *Ball* III. He conceded he was *not* opining that the different methods would *always* produce consistent infringement results for operational ends. (Appx3153, 35:6-:25.)

Instead, Mr. Biondich only attempted to nitpick at Mr. Gillest's measurements of some of the specific Examples. He reapplied the change-in-geometry and ACP methods to several Examples[13] and, conveniently, managed to slide each pair of angle measurements either inside or outside the applicable claim range. (*See* Crown Br. 37.) However, Crown's reliance on Mr. Biondich's angle measurements misses the forest for the trees.

Thus, Mr. Biondich's measurements actually confirmed that the angle of the hypothetical line could vary significantly—by as much as four or five degrees for some Examples—depending on which method was used to locate the "second point." (*See, e.g.*, Appx3330; Appx3337; Appx3349.) Mr. Biondich observed these significant differences in a wide variety of ends, including those with relatively small wall angles in the "20s," those with relatively large ones in the "40s," and those in between. (*See supra* at 26.) So the fact that, for each Example he re-measured, Mr.

[13] Mr. Biondich did not attempt to re-measure Examples 8, 9, and 11. (Appx3338-3339; Appx3351-3357.)

Biondich managed to contort his angle measurements to fit either inside or outside a particular claimed range does not suggest that the difference in the angles obtained using Mr. Higham's methods could never be material. Even assuming, for argument's sake, that there was any real question about whether the choice of method was material to *the specific* Examples Mr. Biondich re-measured, the significant variability in his own angle measurements only confirms Mr. Gillest's broader, undisputed point—that, as a "simple case of geometry," the choice between the methods would be expected to produce materially different angle results *for at least some ends* that skilled artisans could potentially design. (Appx2964.)

Aside from this broader issue, Mr. Biondich did not even genuinely challenge the accuracy of Mr. Gillest's measurements of any of the specific Examples. He did not disagree with where Mr. Gillest located the "second point" when applying the *ACP* method to any of the Examples. He only professed disagreement with how Mr. Gillest applied the *change-in-geometry* method to some of the Examples (*e.g.*, Examples 2, 4, and 7). (Appx3299-3301; Appx3330.) And, for those Examples where he could not muster any reason to disagree with Mr. Gillest's placement of the "second point" under the change-in-geometry method, Mr. Biondich resorted to questioning Mr. Gillest's location of the upper "*first* point." (Appx3305-3307; Appx3357.) However, even assuming that the district court was bound by the summary judgment standard (and, as explained *supra* at 40-44, it was not), neither

of Mr. Biondich's reasons for disagreeing with Mr. Gillest's measurements created a *genuine* issue of fact.

First, Mr. Biondich did not explain why Mr. Gillest's application of the change-in-geometry method to some of the Examples was unreliable. He suggested that some of the "second points" he obtained using the change-in-geometry method were different from Mr. Gillest's only because he and Mr. Gillest applied this method using two different "methodologies." (Appx3166, 87:1-88:19.) As conceded by Mr. Biondich, Mr. Gillest replicated what Mr. Higham had done in *Anheuser-Busch v. Crown* by using a protractor to identify where a can end profile transitioned from one radius of curvature to another. (Appx3166, 88:22-25; Appx3167, 91:25-93:3.) Mr. Biondich, by contrast, drew circles in Microsoft PowerPoint to try to find the transition. (Appx3160, 64:8-65:5.) So, if anyone failed to faithfully apply Mr. Higham's method, it was Mr. Biondich. Indeed, that Crown's new expert managed to come up with a different "methodology" for applying the change-in-geometry method—itself one of three inconsistent methods for finding the "second point"—only highlights the indefiniteness of Crown's claims.

Second, Mr. Biondich's criticisms of Mr. Gillest's "first point" on some of the Examples suffered from the same problem. Mr. Gillest located the "first point" on those Examples in one of two ways. On Kraska (Example 6), Mr. Gillest put the "first point" in literally the same place where Mr. Higham had previously put it on

that specific end. (Appx2947.) And, for those Examples where Mr. Gillest had no specific "first point" location to copy from Mr. Higham, he instead followed the general approach Mr. Higham had endorsed for identifying the "first point." Specifically, Mr. Gillest plotted the "first point" in the middle of the curve connecting the upper portion of the can end wall to the seaming panel. (*See, e.g.*, Appx2945; Appx2294.) So, to the extent Mr. Biondich disagreed with Mr. Gillest's "first point" locations, he was once again disagreeing not with Mr. Gillest but with *Crown's* own prior expert.

Ball's motion took the district court through many of Mr. Gillest's Examples, explaining for each one how Mr. Biondich had been able to manufacture a disagreement with Mr. Gillest's angle measurements only by deviating from *Mr. Higham's* methodologies for locating the "second" and "first" points. (Appx2900-2902; Appx2904-2905.) Crown's opposition did not attempt to rebut Ball's explanation. It only asserted that, since Mr. Biondich disputed Mr. Gillest's measurements, there was a genuine issue of fact that required denying Ball's motion. (Appx3240.) But the district court was not required to accept this conclusory assertion, and its decision specifically noted that, though he claimed to disagree with Mr. Gillest's angle measurements, Mr. Biondich had been able to arrive at his competing measurements only by "effectively disregard[ing]" Mr. Higham's actual methodologies. (Appx15-16.)

There was, in short, no *genuine*, *plausible* dispute that Mr. Higham's methods could lead to materially different angle results, either generally or for the specific Examples cited by Ball.

C. Ball Did Not Need to Prove That the Choice Between Mr. Higham's Methods Is Material to "Real-World" Commercial Can Ends.

In *Ball III*, this Court explained that, if the different methods of locating the "second point" would "always lead to an angle that was within [a claimed range] for any operational can end," then that particular claim would not be indefinite. 838 F. App'x at 543. Crown seizes on a single word in that passage—"operational"— and then takes it entirely out of context. It suggests that Ball should have been permitted to prove materiality only by using "real-world" commercial ends as its examples. (Crown Br. 40-43.) Thus, Crown dismisses the patents and applications cited by Ball because Ball did not show that they corresponded to "actual products" like the New CDL+ or other commercial ends (*e.g.*, Rexam's "Millenium" and "Dynamic III" ends). (Crown Br. 40-43.) Crown's argument finds no support in *Ball III* and, worse still, turns the law of indefiniteness on its head.

As a threshold matter, Crown expressly disclaimed this position below. Although Mr. Biondich asserted that, to be "operational," Ball's Examples needed to be "commercially successful" (meaning sold "in the billions") (Appx3516, 46:22-47:4), Crown chose to distance itself from its new expert in its district court brief. In fact, Crown expressly told the court that it was "not contending" that Ball was

"required to prove materiality by reference to commercial products only." (Appx3237 (internal citation and quotation mark omitted).)

In any event, Crown's new argument fundamentally misunderstands the law of indefiniteness. The definiteness requirement serves a *prospective* "public-notice function" by requiring patentees to "appris[e] the public of what is still open to them in a manner that avoids a zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims." *Nautilus*, 572 U.S. at 899 (internal citations and quotations marks omitted). To avoid this competition-chilling effect, claims must be "precise" enough to allow a "*potential* competitor to determine whether or not [it] is infringing," *Amgen Inc. v. Hoechst Marion Roussel*, 314 F.3d 1313, 1342 (Fed. Cir. 2003) (emphasis added), *before* it has invested millions in bringing a product to market. And yet Crown suggests that, here, *potential* product designs that its competitors might have reasonably considered implementing (for example, designs described in third-party patents) are completely irrelevant as evidence that the asserted claims lack sufficient clarity. In essence, Crown argues that, to even challenge its patents as indefinite, a competitor would first have to take an actual plunge into a "zone of uncertainty," spend millions on commercializing a potentially infringing product (exposing itself to damages and even treble damages), and then wait for Crown to sue.

Moreover, patent examiners often have to examine claims for indefiniteness

before there are commercial embodiments of the invention by the patentee, let alone potentially infringing products by competitors. By definition, then, indefiniteness must be capable of being determined without reference to commercial products. Thus, Crown's backwards view of indefiniteness is not, and *cannot* be, the law.

Crown manufactures its entire argument from *Ball III*'s one-time use of the word "operational." But, tellingly, it points to nothing else in *Ball III* that would support its extreme interpretation of the materiality requirement. At no point did the Court suggest that materiality could only be proven by reference to "real-world" commercial products. And nothing in *Ball III* suggested that the panel was deviating from settled indefiniteness doctrine.

Further, no other indefiniteness decisions involving multiple inconsistent methods of calculating a claimed parameter have required an accused infringer to prove materiality by applying those multiple methods to "real-world" products. As discussed *supra* at 34-35, neither *Dow*, *Teva*, nor *Saso Golf* required the accused infringer to provide examples of *any* specific products—much less commercially available products—in order to prove that the different methods of measurement could lead to inconsistent infringement results.

Taken to its logical conclusion, Crown's extreme view of materiality would upend not just the *Dow-Teva-Saso Golf* line of cases, but the law of indefiniteness more generally. If Crown is right that, in a multiple-methods-of-measurement case,

a claim is indefinite only if those methods are shown to yield inconsistent infringement outcomes for "real-world" products, then the same principle would have to apply to *any* indefiniteness case. Take, for example, a claim with a potentially vague term of degree like "approximately" around a certain parameter. Under Crown's view, the patentee could prevent the definiteness of its claim from being tested simply by asserting that all *past or current* commercial products would either clearly meet or clearly not meet the parameter under any plausible interpretation of "approximately"—*even if* the vagueness of that term created a "zone of uncertainty" around *potential* products that a competitor might reasonably consider implementing. Nothing in *Nautilus* or this Court's precedent suggests that this mode of analysis is proper. And it plainly would not be, given the prospective "public-notice function" of the definiteness requirement.

Ultimately, Crown reads entirely too much into *Ball III*'s single use of the word "operational." At most, this reference should only keep Ball from proving materiality with examples of can ends that are completely unrealistic or inconceivable from a technical point of view—the type of designs that could never put a potential competitor at the risk of entering the "innovation-discouraging zone of uncertainty" because they would never be considered as viable possibilities by those skilled in the art. *Nautilus*, 572 U.S. at 911. But that is not what Ball did here. Instead, its Examples consisted of, if not commercial ends like the LOF+ and New

CDL+ (Examples 1 and 2), then at least ends conceived of by real-world inventors and described in real-world patent documents (Examples 3-11).[14] (*See supra* at 25.)

Ball also submitted testimony from Mr. Gillest explaining that, based on his perspective as a person skilled in the art, an "operational" end was one that was simply "capable of being manufactured, filled, and seamed." (Appx2944.) The district court cited Mr. Gillest's testimony with approval. (Appx15.) And Mr. Gillest further confirmed, based on his extensive experience "designing and commercializing can ends," that all Examples, including Nos. 3-11, were "operational" under this definition. (Appx2944.) This testimony was *unrebutted*. Mr. Biondich admitted he "d[idn't] have an opinion" that some or all of the Examples could *not* be successfully manufactured and seamed. (Appx3179, 139:8-141:11.) Thus, the court did not err by relying on Ball's Examples in its analysis.

D. Ball Did Not Need to Prove That Every Example It Provided to Prove Indefiniteness Met Every Element of the Asserted Claims.

According to Crown, not only did Ball have to prove that the competing

[14] Citing *Krippelz v. Ford Motor Co.*, 667 F.3d 1261, 1268 (Fed. Cir. 2012), Crown suggests that this Court has "cautioned against overreliance on [patent] drawings that are neither expressly to scale nor linked to quantitative values in the specification." (Crown Br. 43.) *Krippelz*, an anticipation case, is inapposite. Ball is not trying to prove anticipation by extrapolating certain measurements from drawings that appear in prior art patents and applications. For purposes of indefiniteness, the only question is whether the patent drawings cited by Ball (Examples 3-11) depict "operational" ends—that is, ends that would be capable of being manufactured and seamed. As explained below, Ball's expert, Mr. Gillest, opined that they do; Crown's expert, Mr. Biondich, offered no opinion on that issue.

methods of locating the "second point" produced materially different angle measurements for "real-world" commercial products, it also had to prove that each of these products would have definitely infringed Crown's claims *but for* the uncertainty about the location of the "second point." (Crown Br. 58.) Applying the law of infringement, Crown contends that, for each of its Examples, Ball needed to provide expert testimony "explain[ing] in detail" how the Example met "each element" of the claims. (Crown Br. 58 (internal citation omitted); *see also* Crown Br. 31.) In effect, Crown suggests that Ball needed to provide *infringement* expert analysis for each Example it relied on to prove *indefiniteness*. This argument is wrong and again finds no support in either *Ball III* or any indefiniteness precedent.

As before, Crown pins its entire argument on a single sentence in *Ball III*, which observed, in relevant part, that "differences in measurement methods must matter for determining whether or not a claim limitation is met by *those who might realistically be practicing the other claim limitations*." 838 Fed. Appx. at 542 (emphasis added). From this, Crown infers that the Court meant to turn the indefiniteness-related materiality issue into a series of mini-trials on infringement. However, Crown again takes the Court's statement completely out of context. The statement simply summarized the Court's existing multiple-methods-of-measurements jurisprudence. *See id.* (discussing *Takeda Pharm. Co. v. Zydus Pharms. USA, Inc.*, 743 F.3d 1359, 1366-67 (Fed. Cir. 2014); *Teva*, 789 F.3d at 134;

Dow, 803 F.3d at 634; *Pacific Coast Bldg Prods., Inc. v. CertainTeed Gypsum, Inc.*, 816 F. App'x 454, 460 (Fed. Cir. 2020)). But, as discussed earlier, *none* of the Court's decisions in this area have even required the accused infringer to submit any specific product examples in order to establish materiality, *much less* provide an element-by-element infringement analysis for each example used. (*See supra* at 34-35.) And nothing in *Ball III*'s remand instructions to the district court suggested that Ball would have to carry that additional infringement burden in this case. *Id.* at 543-44.

In context, the panel's reference to "those who might realistically be practicing the other claim limitations" means only that the materiality inquiry must focus on the same *type of product* described in the patent-in-suit. To use *Teva* as an example, the patent there covered a drug for treating multiple sclerosis (MS) and required its active ingredient to have "a molecular weight of 5 to 9 kilodaltons." *Teva*, 574 U.S. at 322. The problem was the existence of multiple methods of measuring "molecular weight." *Id.* at 323-24. But it would make little sense if a party challenging that patent as indefinite could prove materiality by providing examples of other, *non-MS* drug formulations whose "molecular weight" could swing either inside or outside of the 5-9 kDA range depending on the measurement method. By definition, such formulations could not put someone at the risk of entering the "zone of uncertainty" around that particular patent. Similarly, here, it

would have made little sense if Ball tried to prove materiality by applying Mr. Higham's different methodologies not to various beverage can ends but to some other type of container closure. But, of course, Ball did not do that. All of its materiality evidence, including its Examples, was directed specifically to beverage ends.

In addition to finding zero support in this Court's case law, Crown's suggestion that Ball was required to put on a separate infringement case for each of its Examples simply makes no sense. Imposing this requirement on Ball and others in its position would do nothing to further the indefiniteness doctrine's prospective "public-notice function." It would do the exact opposite by distracting courts and litigants from the core § 112(b) inquiry—does the claim inform those skilled in the art about the scope of the invention with "reasonable certainty"?—and diverting their attention and resources to a series of ancillary infringement mini-trials.

The district court did not err by declining to require proof that each of Ball's Examples would infringe the asserted claims. Rather, it correctly focused its inquiry on whether Ball had proven that Mr. Higham's different methods for locating the "second point" could produce materially different results for *the angle of the hypothetical line*. This was the sole question this Court had asked the district court to consider on remand; it followed that instruction and correctly found the claims indefinite.

* * *

Crown has identified no error, factual or legal, in the district court's decision to hold the so-called "Broad Claims" (claims 14, 50, 52, 56, 58, and 59) indefinite. The district court's judgment as to those claims should be affirmed.

III. Crown's Challenges to the District Court's Analysis of Claim 54 Also Fail.

Mr. Higham's own application of the change-in-geometry and ACP methods to the LOF+ (Example 1) showed how the differences between those methods could impact infringement of claim 54 (the 40°-45° claim). (*See supra* at 21.) Given its expert's iron-clad admissions, Crown unsurprisingly makes only a half-hearted defense of that particular claim.

First, it suggests that it created a genuine dispute of fact by having its *new expert* (Mr. Biondich) revise *his predecessor's* (Mr. Higham's) measurements of the LOF+. (Crown Br. 48-49.) In essence, Crown tries to manufacture an issue of fact by having its *own* experts disagree with each other—a facially untenable interpretation of Rule 56. Regardless, the district court was not bound by the summary judgment standard and could weigh the experts' testimony as appropriate. (*See supra* at 40-44.) Indeed, it specifically found that Mr. Biondich's angle measurements were unreliable because he "effectively disregarded" this Court's mandate and, instead of applying *Mr. Higham's* methodologies to Ball's Examples, applied methodologies that were *different* from Mr. Higham's. (Appx15-16.) And

Crown does not argue that this finding was "clearly erroneous."

Second, Crown attacks the other Example Ball cited for claim 54—the accused New CDL+ (Example 2). (Crown Br. 50-52.) Crown suggests that, because Mr. Biondich applied the change-in-geometry and ACP methods to the New CDL+ and, by contrast to Mr. Gillest, managed to slide both of his angle measurements outside of 40°-45°, that required denying Ball's motion with respect to claim 54. (Crown Br. 50-51.) Given that the LOF+ Example is more than sufficient to invalidate claim 54, Crown's challenge to the New CDL+ Example is moot. In any event, its argument still fails for the reasons discussed at length in Section II.B with respect to the other Examples analyzed by Mr. Gillest and "disputed" by Mr. Biondich. The district court's judgment that claim 54 is indefinite should be affirmed.

IV. The Court Should Deny Crown's Request to Reassign the Case If It Is Remanded.

Crown asserts that, if this case is remanded, it should be reassigned to a different judge. (Crown Br. 51-55.) **"**Reassignment is an extraordinary power and should be rarely invoked." *United States ex rel. Williams v. Renal Care Grp., Inc.*, 696 F.3d 518, 533 (6t Cir. 2012) (internal citation and quotations marks omitted). Crown has not come close to showing that it would be appropriate for the Court to invoke that extraordinary power here.

Under Sixth Circuit law, a case may be reassigned to a different judge if (i)

the original judge is shown to have a "personal bias" against a party, (ii) he or she would have "substantial difficulty in putting out of his or her mind previously-expressed views or findings determined to be erroneous or based on evidence that must be rejected," or (iii) reassignment is needed to "preserve the appearance of justice." *Renal Care*, 696 F.3d at 533 (internal citations and quotations marks omitted). Crown does not clearly articulate which of these factors supposedly warrants reassignment. Crown certainly has not shown that the district judge has some personal bias against it. It mainly complains that it has been "prejudiced" by the "delays" in this case, which it blames on the district judge. (Crown Br. 52.) However, in doing so, Crown neglects to mention that the length of this case is largely attributable to its own tactics.

For example, when Ball initially filed this declaratory judgment action in 2012, Rexam, though still years away from being acquired by Ball, was already making the same CDL+ as Ball under a license from Container Development Ltd. (*See supra* at 15.) Crown, however, made a strategic decision not to add Rexam as an infringement defendant at that time. When Crown finally expressed interest in suing Rexam in 2016, after Ball had announced a plan to acquire it, discovery in this case was nearing completion. At Crown's suggestion, the case was stayed for more than a year pending completion of the acquisition. (Appx11566-11568.) And after the stay was lifted in 2017 and Crown finally named Rexam as a counterclaim

defendant (Appx2140-2142), the district court had to issue a revised, extended schedule to accommodate the Rexam-related discovery. (Appx11573-11575.)

Similarly, though Crown complains about the length of time between the *Ball III* remand and the district judge's decision on Ball's renewed indefiniteness motion (Crown Br. 16), it glosses over the fact that, on remand, it clogged up the court's docket with many unnecessary motions. For example, Crown (i) opposed Ball's request to file supplemental briefing and evidence on the materiality issue (Appx2716-2717); (ii) insisted on a non-standard schedule for the supplemental expert discovery that would have required Ball's expert to be deposed before he had a chance to review the rebuttal report from Crown's expert (Appx13200-13201); and, (iii) after the close of supplemental discovery, belatedly asked the court to modify the schedule so that it could file its own cross-motion for summary judgment on indefiniteness. (Appx8-11.) Crown even opposed Ball's motion for leave to designate another expert in Mr. Gillest's place after he was forced to retire following discovery due to his wife's illness—even though Ball had not opposed Crown's own motion for leave to replace the retiring Mr. Higham. (Appx16; Appx3204-3203.) All of these Crown motions needlessly delayed the filing and/or resolution of Ball's renewed indefiniteness motion.

Crown also suggests that reassignment would be warranted because the district judge supposedly just keeps getting things wrong. (Crown Br. 55.) Not true.

This is Crown's fourth appeal from the district judge's rulings. In the first, this Court reversed on anticipation and written description but, on the latter, only in a 2-1 decision. *Ball I*, 635 F.3d at 1375. In the second appeal, it summarily affirmed on non-infringement. *Ball II*, 492 F. App'x at 115. And, in the third, it agreed with the majority of the district judge's indefiniteness findings and remanded only for consideration of the narrow materiality issue. *Ball III*, 838 Fed. Appx. at 541-42. The district judge's record in this Court is simply not what Crown portrays it to be.

Finally, Crown's attempt to analogize this case to *TriMed, Inc. v. Stryker Corp.*, 608 F.3d 1333 (Fed. Cir. 2010), also fails. There, in granting the defendant summary judgment on two occasions, the district judge "simply sign[ed] Stryker's proposed statement of law and facts." *Id.* at 1344. This Court reversed both times and, after the second appeal, reassigned the case to "preserve the appearance of justice." *Id.* There are no parallels between *TriMed* and the district judge's decision on remand here. The district judge did not merely copy and paste from Ball's brief. He conducted his own independent analysis, made numerous findings of fact and conclusions of law, and clearly answered the question posed by this Court in *Ball III*, just as instructed.

The judgment below should be affirmed. But if the case is remanded, there is absolutely no legitimate reason why it should have to be reassigned to another judge.

CONCLUSION

The Court should affirm.

Dated: December 29, 2023

Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that today, December 29, 2023, I filed a true and accurate copy of the foregoing BRIEF OF APPELLEES BALL METAL BEVERAGE CONTAINER CORPORATION AND REXAM BEVERAGE CAN COMPANY with the Clerk of Court using the CM/ECF system, which will send notice of such filing to all counsel of record.

Dated: December 29, 2023

/s/ John D. Luken
John D. Luken

CERTIFICATE OF COMPLIANCE

Pursuant to Federal Rules of Appellate Procedure 32(g)(1), I certify that the foregoing BRIEF OF APPELLEES BALL METAL BEVERAGE CONTAINER CORPORATION AND REXAM BEVERAGE CAN COMPANY complies with the type-volume limitation of Federal Circuit Rule 32(a).

1. The brief complies with the type-volume limitation of Federal Circuit Rule 32(a) because it contains 13,946 words, excluding the parts exempted by Federal Rule of Appellate Procedure 32(f) and Federal Circuit Rule 32(b).

2. The brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word in 14-point Times New Roman font.

Dated: December 29, 2023

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