

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF KENTUCKY
LOUISVILLE DIVISION

GRAHAM PACKAGING)	
COMPANY, L.P.,)	
)	
)	
Plaintiff,)	Case No. <u>3:23-cv-110-GNS</u>
)	
)	COMPLAINT
vs.)	
)	JURY TRIAL DEMANDED
RING CONTAINER)	
TECHNOLOGIES, LLC,)	
)	
Defendant.)	

Plaintiff Graham Packaging Company, L.P. (“Graham Packaging”) alleges as follows for its Complaint for Patent Infringement against Defendant Ring Container Technologies, LLC (“Ring Container”):

Introduction

1. Graham Packaging was founded in the 1970s and since its inception has been a leader in the design, manufacture, and sale of innovative food, beverage, household, and automotive containers.

2. In 2014, a team of scientists and engineers at Graham Packaging developed a novel container with enhanced oxygen scavenging capabilities for use in the food and beverage industry. This new container provided better protection for oxygen-sensitive food and beverage products and also allowed customers to package their products more efficiently and cost effectively.

3. Before Graham Packaging’s invention, containers would need to be manufactured and stored empty for a period of time (days or weeks) to allow beneficial oxygen scavenging characteristics of the packaging material to become active. This period—known as an “induction period” to those skilled in the art—caused significant logistical problems for food and beverage manufacturers who had to store large volumes of empty containers in their manufacturing plants before they could be filled. Containers manufactured by alternative processes available at the time were saddled with different disadvantages, such as increased manufacturing costs and unattractive haze and discoloration.

4. Graham Packaging’s innovative container addressed these and other shortcomings of then-existing container technologies by providing a container that is transparent and also provides oxygen scavenging characteristics without the need for costly and logistically disruptive induction periods.

5. On November 7, 2014, Graham Packaging filed U.S. Patent Application No. 14/535,703, which disclosed its inventive container technology. On May 31, 2022, the U.S. Patent and Trademark Office issued Graham Packaging U.S. Patent No. 11,345,809, entitled *Oxygen Scavenging Compositions Requiring No Induction Period* (“the ‘809 Patent”). See Exhibit 1.

6. In 2018—years after Graham Packaging made its invention—Ring Container began marketing and selling a competing oxygen scavenging container of its own under the BarrierGuard® OxygenSmart™ brand name. In its marketing materials, Ring Container claims that its new container offers many of the same benefits as the container previously disclosed and protected by Graham Packaging’s ‘809 Patent. See Exhibit 2 (<https://www.ringcontainer.com/barrierguard-oxygensmart> (last visited March 8, 2023)) (“More efficient defending against oxygen particles before they reach and degrade the product” ...

“Protects products from drying out, discoloration, loss of aroma, and spoilage due to oxidation” ... you can achieve up to 24 months of shelf life with optimized technology”).

7. Graham Packaging recently obtained a sample of Ring Container’s BarrierGuard® OxygenSmart™ container. Lab testing confirmed that Ring Container’s product infringes the ‘809 Patent. Graham Packaging filed this lawsuit to stop Ring Container from continuing to infringe the ‘809 Patent and also to recover damages for Ring Container’s knowing and willful infringement.

Nature of the Action

8. This is an action for infringement of the ‘809 Patent under 35 U.S.C. § 271 *et seq.* brought by Graham Packaging against Ring Container.

Parties

9. Graham Packaging is a Delaware Limited Partnership with a principal place of business located at 700 Indian Springs Drive, Suite 100, Lancaster, Pennsylvania 17601.

10. Upon information and belief, Ring Container is a Tennessee Limited Liability Company with a principal place of business located in Fayette County at 1 Industrial Park, Oakland, Tennessee 38060-4048.

Jurisdiction and Venue

11. The Court has subject matter jurisdiction over this action under 28 U.S.C. §§ 1331 and 1338(a) because it arises under the patent laws of the United States.

12. The Court has personal jurisdiction over Ring Container in this action because Ring Container conducts business in this District and has committed acts of patent infringement in this District, including by manufacturing, selling, and/or offering for sale infringing containers in this District.

13. Venue is proper in this District under 28 U.S.C. §§ 1391(b)-(d) and 1400(b) because Ring Container has, at least since December 2018, maintained a physical, regular, and established place of business in this District. As stated on Ring Container’s website, “Ring began producing Hunt’s Ketchup bottles using BarrierGuard OxygenSmart in December 2018 at its newest plant, which opened in Louisville, Kentucky last fall.”¹ On information and belief, this plant is located at 5808 Johnsontown Road, Suite B, Louisville, Kentucky.² Venue is also proper in this District because Ring Container has committed acts of infringement in this District, including by manufacturing, selling, and offering to sell infringing containers within the District.

Patent-in-Suit

14. On May 31, 2022, the U.S. Patent and Trademark Office duly and legally issued U.S. Patent No. 11,345,809, entitled *Oxygen Scavenging Compositions Requiring No Induction Period*.

15. Graham Packaging solely owns, by assignment, all rights, titles, and interests in and to the ‘809 Patent, including the exclusive right to bring suit with respect to any past, present, and/or future infringement thereof.

16. The ‘809 Patent is valid and enforceable.

Count I: Ring Container’s Infringement of the ‘809 Patent

17. Graham Packaging realleges and incorporates by reference each allegation made in this Complaint.

¹ See Exhibit 3 (<https://www.ringcontainer.com/newsroom/2019/10/17/ring-container-technologies-partners-with-conagra-brands-on-new-ketchup-bottle-using-barrierguard-oxygensmart> (last visited March 8, 2023)).

² See Exhibit 4 (<https://www.ringcontainer.com/locations> (last visited March 8, 2023)).

18. Ring Container has directly infringed and continues to directly infringe at least claims 1–8, 17, and 21–28 of the ‘809 Patent in violation of 35 U.S.C. § 271(a) by making, selling, offering to sell, and/or using infringing products in the United States (literally or under the doctrine of equivalents), including its BarrierGuard® OxygenSmart™ containers (the “Accused Products”).

19. Ring Container is also indirectly infringing the ‘809 Patent by actively inducing and/or contributing to the direct infringement of others. Ring Container has and continues to intentionally and actively induce others, such as its partners, customers, distributors, and/or retailers, to make, use, offer for sale, and/or sell the Accused Products without the authority of the patent owner in violation of 35 U.S.C. § 271(b). For example, Ring Container’s website indicates that it is collaborating with Conagra Brands, Inc. for the manufacture of Hunt’s Ketchup bottles.³ Upon information and belief, Ring Container aids, instructs, or otherwise acts with the intent to cause its partners, customers, distributors, and/or retailers to make, sell, and/or offer to sell the Accused Products, such that they directly infringe at least claims 1–8, 17, and 21–28 of the ‘809 Patent.⁴

20. Ring Container has offered and sold, and continues to offer and sell, the Accused Products without the authority of Graham Packaging in violation of 35 U.S.C. § 271(c). Ring Container knew at all times relevant to this Complaint that its BarrierGuard® OxygenSmart™ containers are especially made or especially adapted for use in the invention claimed by the ‘809 Patent and are not staple articles of commerce suitable for non-infringing use.

³ See Exhibit 3.

⁴ See, e.g., Exhibit 5 (<https://www.ringcontainer.com> (last visited March 8, 2023)) (“Every container is a collaboration ... We don’t merely work *for* our customers; we work *with* them...”).

21. Ring Container's infringement has caused, and continues to cause, damage and harm to Graham Packaging. Ring Container's future manufacturing, sale, or offers for sale of the Accused Products will result in additional such damage and harm.

22. Ring Container's infringement of the '809 Patent is continuing and is expected to continue unless enjoined by this Court. Ring Container's actions have caused harm to Graham Packaging, which may not be fully compensable by monetary damages. Because Graham Packaging does not have an adequate remedy at law and will be irreparably harmed if Ring Container's infringement of the '809 Patent is permitted to continue, Graham Packaging is entitled to an injunction against further infringement by Ring Container pursuant to 35 U.S.C. § 283.

Exemplary Asserted Claim

Infringement of Claim 1

23. Each of the allegations set forth throughout this Complaint are incorporated herein by reference.

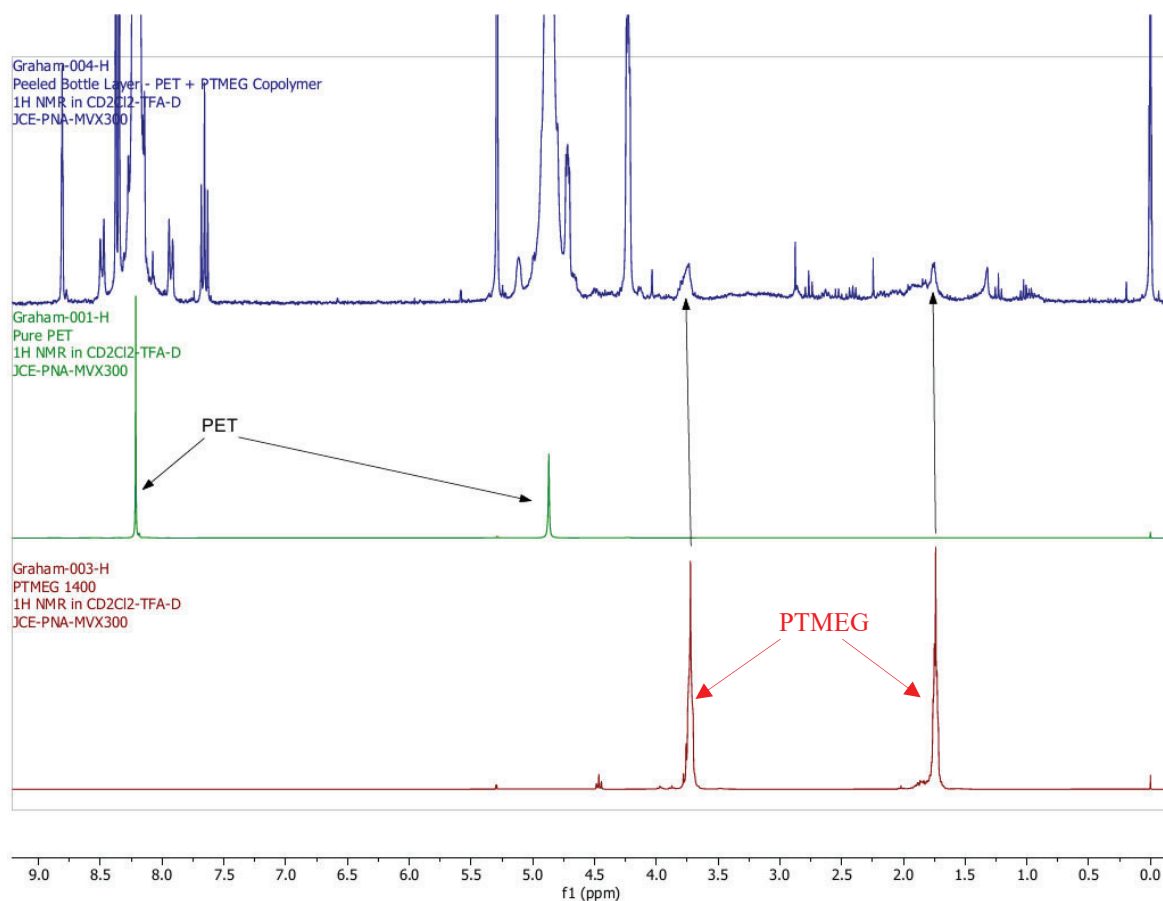
24. Claim 1 of the '809 Patent is directed to a bottle that includes oxygen scavenging compositions that require no induction period.

25. Ring Container's Accused Products are such bottles.

26. Claim 1 of the '809 Patent is for "a bottle comprising a wall" that includes "at least one layer" with "said one layer comprising a composition . . . comprising polyethylene terephthalate ['PET'] that is substantially free of antimony and substantially free of phosphorous."

27. The Accused Products satisfy this limitation. Indeed, comparing a nuclear magnetic resonance ("NMR") spectrum of the oxygen barrier layer of the Accused Products to NMR spectra for reference samples of PET and polytetramethylene ether glycol ("PTMEG")

indicated that the oxygen barrier layer includes PET and PTMEG. In the image below, the top NMR spectrum is for the oxygen barrier layer, the middle NMR spectrum is for a pure PET standard, and the bottom NMR spectrum is for a pure PTMEG standard. The two dominant peaks of the pure PET standard and the two dominant peaks of the pure PTMEG standard are present in the NMR spectrum for the oxygen barrier layer, thereby indicating that the oxygen barrier layer contains both PET and PTMEG.



28. Further, an elemental scan of the oxygen barrier layer indicated that it only includes at most 1 part per million (“ppm”) of antimony and 8 ppm of phosphorus, and thus is substantially free of antimony and phosphorous. In the figure below, the concentrations of each non-gray element present in the Accused Products are indicated in a representative periodic table. Concentrations are shown in $\mu\text{g/g}$, which is equivalent to ppm. These data indicate that the oxygen

barrier layer of the Accused Products includes 1 ppm of antimony, 8 ppm of phosphorus, and 24 ppm of cobalt.

Elemental Scan
Sample: Graham Peeled Layer
Results in µg/g unless otherwise noted

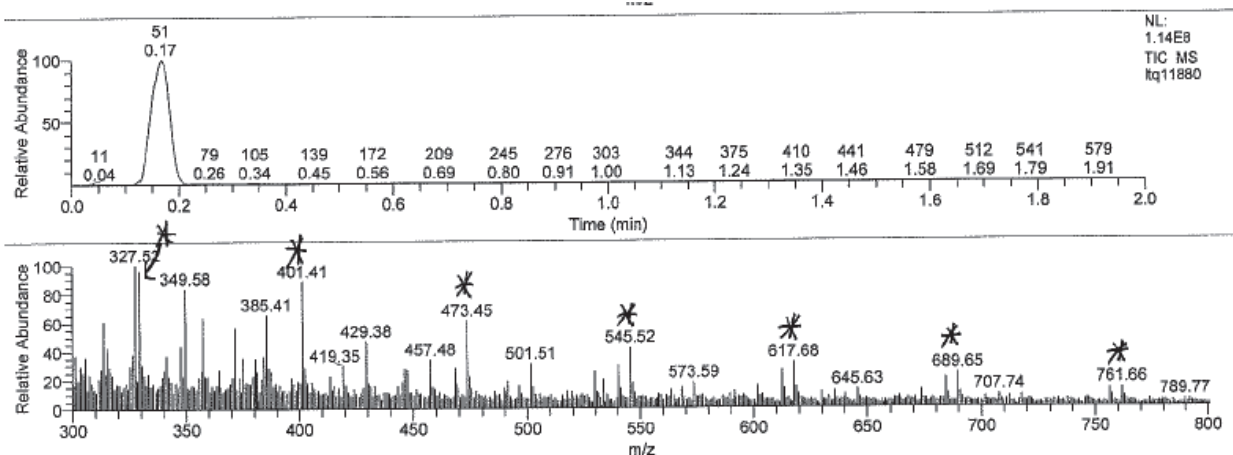
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29. Claim 1 of the '809 Patent also requires “an oxidizable polyether-based additive.”

30. The Accused Products satisfy this limitation. As addressed above, comparing an NMR spectrum of the oxygen barrier layer of the Accused Products to NMR spectra for reference samples of PET and PTMEG indicated that the oxygen barrier layer includes PET and PTMEG.

31. Moreover, comparing a high-performance liquid chromatography-mass spectrometry (“HPLC-MS”) analysis of the oxygen barrier layer of the Accused Products to an HPLC-MS analysis for a reference sample of PTMEG indicated that the oxygen barrier layer of the Accused Products includes PTMEG. In the image below, the top two graphs show the HPLC and MS spectra, respectively, for the oxygen barrier layer of the Accused Products, and the bottom two graphs show the HPLC and MS spectra, respectively, for a pure PTMEG standard. The peaks marked with asterisks on the MS spectrum for the peeled bottle layer of the Accused Products are

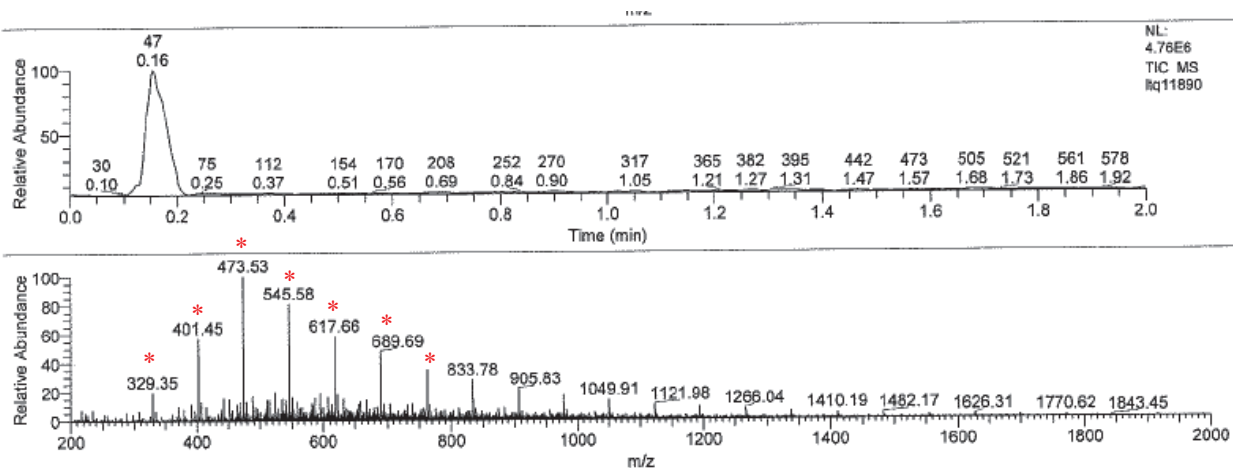
consistent with the peaks marked with asterisks on the MS spectrum for the pure PTMEG standard, thereby indicating that the oxygen barrier layer of the Accused Products contains PTMEG.



LTQ11878

Type: Unknown ID: 39 Row: 4

Sample Name: Sample 1-Peeled Layer, Methanolysis Products of 50.0mg in 5mL MeOH, 200C/24hr with 100ppm w/w Manganese (II) Acetate Catalyst (No Concentration) in Positive Ion Mode

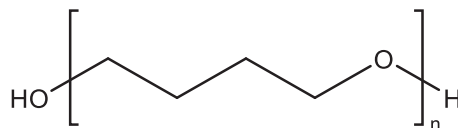


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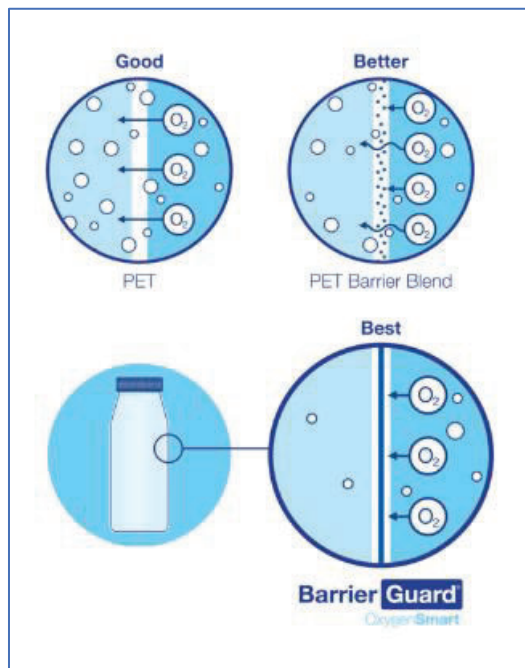
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Sample Name: PTMEG 1400 Reference Standard, 0.1mg/mL in Methanol in Positive Ion Mode

32. PTMEG is an oxidizable polyether possessing the following chemical structure:



33. Ring Container’s website (as depicted in the image below) further indicates that the Accused Products are useful as an oxygen barrier in PET bottles, “block[ing] or absorb[ing] up to 30% more oxygen versus competitive barrier systems.”⁵



34. Claim 1 of the ‘809 Patent also requires “a transition metal catalyst, wherein the transition metal catalyst comprises cobalt.”

35. The Accused Products satisfy this limitation. As addressed above in Paragraph 28, an elemental scan of the oxygen barrier layer of the Accused Products indicates that it includes 24 ppm of cobalt.

36. Finally, Claim 1 of the ‘809 Patent requires “wherein the wall has an oxygen permeability of not more than about $3.0 \text{ cm}^3 \text{ mm} / (\text{m}^2 \text{ atm day})$ immediately after the package is formed.”

⁵ See Exhibit 2.

37. The Accused Products satisfy this limitation. This oxygen permeability requirement is satisfied as a result of the inherent properties of the barrier layer. As addressed above, comparing an NMR spectrum of the oxygen barrier layer of the Accused Products to NMR spectra for reference samples of PET and PTMEG indicated that the oxygen barrier layer includes PET and PTMEG. Moreover, as addressed above in Paragraph 31, comparing a high-performance liquid chromatography-mass spectrometry (“HPLC-MS”) analysis of the oxygen barrier layer of the Accused Products to an HPLC-MS analysis for a reference sample of PTMEG indicates that the oxygen barrier layer of the Accused Products includes PTMEG. Ring Container’s website further indicates that its technology is useful as an oxygen barrier in PET bottles, “block[ing] or absorb[ing] up to 30% more oxygen versus competitive barrier systems.”⁶

Ring Container’s Infringing Conduct is Willful

38. For roughly 20 years, from on or about April 19, 1996, until January 28, 2016, Graham Packaging employed an individual named Paul Vincent Kelley as an Engineer—and later Lead Engineer—in its Product Development department.

39. While at Graham Packaging, Mr. Kelley helped to research and develop oxygen scavenging technologies. Mr. Kelley acted as an engineer on the very program that culminated in the technology described and protected by Graham Packaging’s ‘809 Patent.

40. In his role as Lead Engineer, Mr. Kelley was privy to Graham Packaging’s intellectual property, intellectual property strategies, and its patent prosecution activities—including those relating to the patent application that resulted in the ‘809 Patent now asserted in this lawsuit.

⁶ See Exhibit 2.

41. Upon information and belief, approximately six months after terminating his employment with Graham Packaging in 2016, Mr. Kelley accepted a position at Ring Container as Executive Director of Product Development and Technology.

42. Upon information and belief, in his role as Executive Director of Product Development and Technology, Mr. Kelley assisted Ring Container in the development of methods and systems for manufacturing containers that incorporate Graham Packaging's oxygen scavenging technology and infringe on Graham Packaging's '809 Patent, including the BarrierGuard® OxygenSmart™ products.

43. At least through Mr. Kelley's involvement in Ring Container's research and development activities, Ring Container was on notice of Graham Packaging's intellectual property, including the '809 Patent, and the fact that Ring Container's BarrierGuard® OxygenSmart™ products infringe the '809 Patent.

44. At a bare minimum, through Mr. Kelley's role as Executive Director of Product Development and Technology⁷ and his involvement in the development of Ring Container's BarrierGuard® OxygenSmart™ products, Mr. Kelley and others at Ring Container subjectively believed there was a high probability that Ring Container's products infringed Graham Packaging's intellectual property, including the '809 Patent, and Ring Container deliberately avoided taking steps to learn or confirm that fact.

45. On February 8, 2023, Graham Packaging sent a certified letter to Ring Container to demand that it cease the manufacture and sale of its BarrierGuard® OxygenSmart™ products. In that letter, Graham Packaging specifically identified the '809 Patent to Ring Container and

⁷ On information and belief, Mr. Kelley is now the Vice-President of Product Development. *See* Exhibit 6 (<https://www.ptonline.com/articles/staying-ahead-of-the-curve-how-a-blow-molder-thrives-as-a-technology-company> (last visited March 8, 2023)).

explained that Ring Container's BarrierGuard® OxygenSmart™ products infringed the '809 Patent.

46. Ring Container did not respond to Graham Packaging's letter and, on information and belief, continued thereafter to manufacture and sell its infringing BarrierGuard® OxygenSmart™ products.

47. Accordingly, since first issuance of the '809 Patent, or at the very least since February 8, 2023, Ring Container has engaged in knowing and willful infringement of the '809 Patent through its continued manufacture, use, sale, offer for sale and/or inducement or contribution to the making, using, or selling of its BarrierGuard® OxygenSmart™ products.

Prayer for Relief

On motion or after a trial by jury, Graham Packaging respectfully requests that the Court grant the following relief:

- A. Permanently enjoin Ring Container and those in active concert or participation with it from further infringing the '809 Patent pursuant to 35 U.S.C. § 283;
- B. Enter judgment that Ring Container infringes one or more claims of the '809 Patent;
- C. Enter judgment that Ring Container's infringement of the '809 Patent has been willful;
- D. Award Graham Packaging monetary damages in an amount sufficient to compensate Graham Packaging for the harm caused by Ring Container's infringement, including all lost profits, but not less than a reasonable royalty for the use made of the inventions, along with pre- and post-judgment interest pursuant to 35 U.S.C. § 284;
- E. Award Graham Packaging enhanced damages for Ring Container's infringement pursuant to 35 U.S.C. § 284;

- F. Award Graham Packaging supplemental monetary damages for any infringing acts after judgment and before entry of a permanent injunction;
- G. Declare this case exceptional and award Graham Packaging its costs, expenses, and attorneys' fees pursuant to 35 U.S.C. § 285; and
- H. Award Graham Packaging such other and further relief as the Court finds just and proper.

Demand for Jury Trial

Graham Packaging respectfully demands a jury trial on all claims and issues so triable.

Dated: March 8, 2023

Respectfully submitted,

/s/ E. Kenly Ames

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