

No. 2023-2427

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

RANGE OF MOTION PRODUCTS, LLC,
Plaintiffs-Appellants,

v.

ARMAID COMPANY INC.,
Defendant-Appellee.

On Appeal from the United States District Court for the
Eastern District of Maine, Case No. 1:22-cv-00091-JDL

**BRIEF OF *AMICUS CURIAE* INSTITUTE FOR DESIGN SCIENCE AND
PUBLIC POLICY IN SUPPORT OF NEITHER PARTY**

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April 17, 2026

CERTIFICATE OF INTEREST

Counsel for amicus curiae Institute for Design Science and Public Policy certifies the following:

1. Represented Entities. Fed. Cir. R. 47.4(a)(1). Provide the full names of all entities represented by undersigned counsel in this case.

Institute for Design Science and Public Policy

2. Real Party in Interest. Fed. Cir. R. 47.4(a)(2). Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities.

None.

3. Parent Corporations and Stockholders. Fed. Cir. R. 47.4(a)(3). Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities.

None.

4. Legal Representatives. Fed. Cir. R. 47.4(a)(4). List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Do not include those who have already entered an appearance in this court.

None.

5. Related Cases. Other than the originating case(s) for this case, are there related or prior cases that meet the criteria under Fed. Cir. R. 47.5(a)?

N/A (amicus/movant).

6. Organizational Victims and Bankruptcy Cases. Fed. Cir. R. 47.4(a)(6).

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).

None.

Dated: April 17, 2026

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STATEMENT OF INTEREST OF *AMICUS CURIAE*

Amicus Curiae Institute for Design Science and Public Policy (“IDSPP”) is an independent, non-profit professional organization founded in 2011 to support the integration of design science and design intellectual property rights. IDSPP’s efforts focus on tracking and supporting critical design research trends relevant to advancing design intellectual property rights in the United States and globally.

IDSPP has an interest in the outcome of this matter based on its longstanding commitment to design rights issues. More specifically, IDSPP has an interest in ensuring that the *Gorham* test for design patent infringement is administered fairly and consistently.

IDSPP has no stake in any of the parties to this litigation or the result of this case.

IDSPP submits this brief with the consent of counsel for Plaintiff-Appellant Range of Motion Products, LLC and Defendant-Appellee Armaid Company, Inc..

STATEMENT OF AUTHORSHIP AND FUNDING

No party or party's counsel authored this brief in whole or in part; no party or party's counsel contributed money that was intended to fund preparing or submitting this brief. No person or entity other than the *amicus curiae*, its members, or its counsel contributed money that was intended to fund preparing or submitting this brief.

INTRODUCTION

This case should be reheard, *en banc*, to correct two errors and better align design patent analysis with the actual perceptions of consumers and the *Gorham* test for design patent infringement.

Firstly, the majority opinion endorses the district court's application of the "plainly dissimilar" language from *Egyptian Goddess*. The "plainly dissimilar" standard is irreparably flawed, dictates outcomes that are inconsistent with the *Gorham* test for design patent infringement, and therefore, should be abandoned.

Secondly, the majority opinion affirms the district court's improper dissection of the claimed design into functional and ornamental aspects. Such dissection is inconsistent with the *Gorham* test for design patent infringement and contrary to how consumers view accused products. Accordingly, such parsing should be eliminated from design patent infringement analysis.

ARGUMENT

I. THE “PLAINLY DISSIMILAR” TEST IS IRREPARABLY FLAWED AND SHOULD BE ELIMINATED

A. The “Plainly Dissimilar” Test Biases Fact Finders Toward a Finding of Non-Infringement

It is well-established that once an observer identifies differences, they cannot be “unseen” and will bias subsequent perception toward dissimilarity. Stephen E. Palmer, *Vision Science: Photons to Phenomenology*, 266 (MIT Press 1999). As illustrated by the Dalmatian image below, prior recognition reorganizes perception and directs attention to meaningful visual differences. Palmer, *Vision Science*, supra, at 266-67.



Prior experience strongly influences how an image is perceived over time. Once the Dalmatian in the image above is recognized, it cannot be unseen in subsequent viewings, even decades later. Thus, application of the “plainly dissimilar” test leads fact finders to search for differences that, once perceived, are weighted more heavily

than they otherwise would be, particularly when reinforced by repeated emphasis on those differences in briefing and argument by the defendant. As stated by Chief Judge Moore in her dissent in this case, “...focusing on differences makes those differences more significant and causes you to lose sight of the overall similarity.” *Range of Motion Prods., LLC v. Armaid Co. Inc.*, 166 F.4th 981 (Fed. Cir. 2026) (Moore, J., dissenting).

The research cited in our *amicus curae* brief in *North Star Tech Int’l Ltd v. Latham Pool Prods, Inc.* confirms the bias introduced by a fact finder focusing on differences instead of overall similarity. In this research, a large sample of people were shown the claimed design and accused products from *Gorham v. White* and *Apple v. Samsung*, where infringement had been found. A clear majority of the test subjects concluded that the infringing designs were “plainly dissimilar” (72% and 74% for *Gorham v. White*; 62% for *Apple v. Samsung*). Corrected Brief of Amicus Curiae Institute for Design Science and Public Policy in Support of Plaintiff-Appellants’ Combined Petition for Rehearing and Rehearing En Banc, *North Star Tech Int’l Ltd v. Latham Pool Prods, Inc.*, No. 2023-2138, at 3-4 and Exhibit A, (Fed. Cir. filed Jul. 11, 2025)

Based on the foregoing, the “plainly dissimilar” test is irreparably flawed because the process of identifying “dissimilar attributes” between patented and

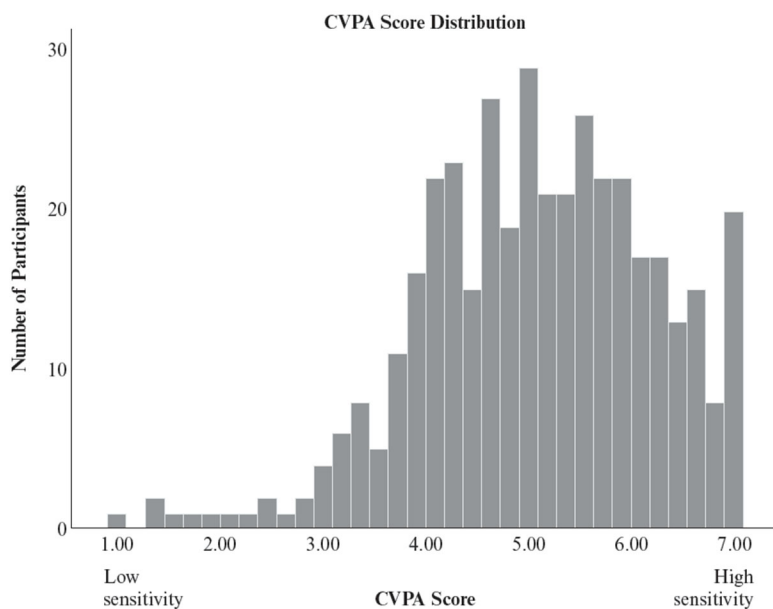
accused infringing products biases the fact finder toward a finding of non-infringement.

B. “Plainly Dissimilar” Bias Amplifies the Summary Judgment Problem

By its nature, assessing how an “ordinary observer” would perceive the similarity in overall appearances of the accused product and the claimed design is an inherently empirical inquiry. As explained herein, this assessment is much more meaningful & accurate when carried out by 6-12 jurors at trial than by a district judge because (a) the jurors themselves more closely approximate “ordinary observers” and (b) having multiple jurors weigh in on the decision more accurately reflects the documented variations in perceptions of consumers. The bias introduced by the “plainly dissimilar” test amplifies this problem because it results in more cases being decided on summary judgment and without the benefit of a jury.

It is well established in the field of neuroaesthetics that ordinary observers (consumers) purchasing a product in the marketplace come to the assessment of the ornamental design of a product with a wide range of visual design sensitivity. As part of the analysis conducted by Mauro, Morley, and Thurman during the creation of the Empirical Ordinary Observer Test (the “Mauro, Morley, and Thurman Study”), 400 respondents were evaluated using the Centrality of Visual Product Aesthetics scale, which quantifies the degree to which individuals notice, value, and

respond to product design. Charles L. Mauro, Christopher D. Morley & Paul W. Thurman, *Development and Initial Validation of an Empirical Ordinary Observer Test for Design Patent Infringement* (June 5, 2020), <https://ssrn.com/abstract=3620088>; Charles L. Mauro & Christopher D. Morley, *How Different Is Different? Modern Neuroscience and Its Impact on Design Law*, in *Research Handbook on Design Law* 530–32 (2021). The findings of that analysis, revealed a wide and continuous distribution of design sensitivity across the samples, as seen in the figure below.



Some individuals demonstrated a very high level of sensitivity to visual design differences, while others showed relatively low sensitivity, with many individuals distributed across the full range. The Mauro, Morley, and Thurman Study demonstrates that these dimensions vary significantly across the population,

reinforcing that there is no single “average” observer whose perception can be reliably substituted for the group as a whole. It is also well-documented that such diversity in design sensitivity has a major impact on how consumers assess the ornamental design of a product. Peter H. Bloch, Frederic F. Brunel & Todd J. Arnold, *Individual Differences in the Centrality of Visual Product Aesthetics: Concept and Measurement*, 29 *J. Consumer Rsch.* 551 (2003); William D. Hoyer & Nicole E. Stokburger-Sauer, *The Role of Aesthetic Taste in Consumer Behavior*, 40 *J. Acad. Mktg. Sci.* 167 (2011). Thus, the ordinary observer is not a single person but a distribution of perceptual sensitivity.

Research shows perception is shaped by experience and expertise, affecting attention, pattern recognition, and how visual information is organized. *See, e.g.,* Stephanie Brams et al., *The Relationship Between Gaze Behavior, Expertise, and Performance: A Systematic Review*, 145 *Psychol. Bull.* 980 (2019), James W. Tanaka & Victoria Philibert, *The Expertise of Perception: How Experience Changes the Way We See the World*, Cambridge Univ. Press (2022). Further, it has been demonstrated that the perceptions of multiple observers, even small groups, are more accurate than those of a single individual due to error cancellation and diversity of perception. *See, e.g.,* Janet A. Sniezek & Rebecca A. Henry, *Accuracy and Confidence in Group Judgment*, 43 *Org. Behav. & Hum. Decision Processes* 1 (1989), Tatsuya Kameda, Wataru Toyokawa & R. Scott Tindale, *Information*

Aggregation and Collective Intelligence Beyond the Wisdom of Crowds, 1 Nat. Rev. Psychol. 345 (2022), Maximilian Zellner, Ali E. Abbas, David V. Budescu & Aram Galstyan, *A Survey of Human Judgement and Quantitative Forecasting Methods*, 8 R. Soc’y Open Sci. 201187 (2021), Kate Radcliffe, Helena C. Lyson, Jill Barr-Walker & Urmimala Sarkar, *Collective Intelligence in Medical Decision-Making: A Systematic Scoping Review*, 19 BMC Med. Informatics & Decision-Making 158 (2019). Supporting the use of juries or large-sample methods over a single judge, particularly with perceptual comparison, is central.

These findings demonstrate why a jury is better suited to evaluate the *Gorham* “ordinary observer” test than a district judge at summary judgment. Elimination of the “plainly dissimilar” test will result in fewer cases being improperly withheld from a jury. Accordingly, the Court should consider eliminating the “plainly dissimilar” test and reserve design patent infringement determinations for juries except in very clear-cut cases.

II. PARSING THE CLAIMED DESIGN INTO FUNCTIONAL AND ORNAMENTAL ASPECTS IS CONTRARY TO PRECEDENT AND HOW ORDINARY OBSERVERS VIEW DESIGNS

As explained by the Industrial Designers Society of America in its *amicus curae* brief in support of *en banc* rehearing in this case, parsing the claimed design into functional and ornamental aspects is contrary to the decisions of this Court, as well as the Supreme Court’s decisions in *Gorham*. Brief of Amicus Curiae Industrial

Designers Society of America in Support of Neither Party, *Range of Motion Prods LLC v. Armaid Co. Inc.*, No. 23-2427, at 7-10, (Fed. Cir. filed Apr 10, 2026) (*citations omitted*). Moreover, such parsing is fundamentally at odds with how consumers view the appearance of a product.

Research shows that consumers perceive products rapidly and holistically, relying on overall shape, style, and appearance rather than discrete feature analysis. Shimon Ullman, *Visual Routines: Where Bottom-Up and Top-Down Processing Meet*, 2 *Pattern Recognition by Humans & Machines* 178 (1986). At no point in the viewing process do consumers parse out or isolate individual elements in the manner, as the district court did in this case. *Range of Motion Prods. LLC v. Armaid Co. Inc.*, No. 1:22-CV-00091-JDL, 2023 WL 5530768 at *10 (D. Me. Aug. 28, 2023), *aff'd*, 166 F.4th 981 (Fed. Cir. 2026) (“...the rub for ROM is that most of the Armaid2's similarities to the D’155 patent are likenesses to the latter's functional features. These functional features are not protected by the D’155 patent and, therefore, do not bear on the ordinary-observer test.”)

In addition, functionality is not perceived by consumers as a detachable visual component. James J. Gibson, *The Ecological Approach to Visual Perception* 127–29, 134 (Houghton Mifflin 1979), Anthony Chemero, *Radical Embodied Cognitive Science* 98–103 (MIT Press 2009), Don Norman, *The Design of Everyday Things*

11–19 (rev. & expanded ed., Basic Books 2013). Once a product is recognized, its function is integrated into its perceived form; observers do not separate or discount functional elements. Instead, function and appearance are perceived as a unified whole, with experience linking a product’s visual design to its features and use. A consumer’s visual perception of an object is “constructed by the knowledge [the consumer] has of [that object].” Daniela Büchler, *How Different Is Different? Visual Perception of the Designed Object* 84–85 (VDM Verlag Dr. Müller 2011).

As with perception of differences, prior experience is an essential component of this process. Accordingly, when a consumer encounters a familiar product, or an infringing copy, the consumer associates the product’s visual appearance with its underlying functional features. In other words, design “subsumes all the other factors.” Del Coates, *Watches Tell More Than Time: Product Design, Information, and the Quest for Elegance*, 15 (McGraw-Hill 2003), Nathan Crilly, James Moultrie & P. John Clarkson, *Seeing Things: Consumer Response to the Visual Domain in Product Design*, 25 *Design Stud.* 547, 547 (2004). Further, research has established factors that affect whether a feature influences overall perception, and cautions against isolating and weighting individual features without regard to the design as a whole. See, e.g., Hoffman & Singh, *Salience of Visual Parts*, 63(1) *Cognition* 29–78 (1997) (demonstrating that a feature affects overall design only if it meaningfully

alters holistic perception, based on factors such as relative size, impact on outer contour, and boundary strength).

Based on the foregoing, attempting to parse the claimed design into functional and ornamental features is inconsistent with neuroscience and the *Gorham* ordinary observer test. Eliminating this practice aligns design patent analysis with actual consumer perception and *Gorham*'s requirement to assess overall visual impression.

III. CONCLUSION

For the reasons cited herein, this Court should grant the petition for rehearing *en banc* to abandon (a) the “plainly dissimilar” test and (b) parsing of the claimed design into functional and ornamental features, as both relate to the design patent infringement analysis.

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**CERTIFICATE OF COMPLIANCE
WITH TYPE-VOLUME LIMITATIONS**

The undersigned hereby certifies that the foregoing brief complies with the relevant type-volume limitations of the Federal Rules of Appellate Procedure and Federal Circuit rules because:

1. The brief has been prepared using a proportionally-spaced typeface and includes 2,055 words.

2. The brief has been prepared using Microsoft Word for Office 365 in 14-point Times New Roman font. As permitted by Fed. R. App. P. 32(g), the undersigned has relied upon the word count feature of this word processing system in preparing this certificate.

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