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DESIGN PATENT LAW'S IDENTITY CRISIS

Peter S. Menell[†] & Ella Corren[‡]

ABSTRACT

Since its emergence during the Industrial Revolution nearly two centuries ago, U.S. design patent law has suffered from a profound identity crisis. U.S. copyright law did not yet extend to the shape or ornamentation of three-dimensional works. The drafters of the first U.S. design protection regime modeled the law on the British *copyright* regime for surface ornamentation and sculptural features of three-dimensional articles but confusingly labeled the regime “design patent.” Courts and the Patent Office struggled to interpret protection for “useful” designs against the backdrop of a utility patent regime focused on technological inventions. Further complicating design patent’s role, manufacturers used design patents as a nascent form of trademark protection until federal trademark protection emerged. And in 1870, Congress expanded copyright law to protect sculptural works. In 1902, after a persistent split in the courts and the Patent Office over design patent eligibility for functional designs, Congress clarified that design patents were limited to “ornamental” attributes of articles of manufacture and did not extend to functional attributes. Regional federal circuit courts faithfully limited the design patent regime’s reach, but the tests that they enunciated were cautious and incomplete.

In 1982, appellate jurisdiction over design patents shifted to the newly established U.S. Court of Appeals for the Federal Circuit. Later that decade, the Federal Circuit expanded the scope of design patent protection, paving the way for design patent law protection for minimalist and functional features of articles of manufacture. This shift helped to fuel the “smartphone wars” of the past decade. Apple’s design patent claims to rounded rectangles proved to be the most valuable (and profitable) weapon in its seven-year battle with Samsung.

This Article traces the origins of the ornamentality/non-functionality doctrine and shows how several early cases using the “dictated solely by utilitarian considerations” phrasing to deny design patent protection were misinterpreted to be *the* standard for determining whether a design was eligible for design patent protection. These decisions merely explained that designs “dictated solely by utilitarian considerations” were clearly outside of design patent eligibility. They did not mean that designs that only partially affected functionality qualified for design patents. Unfortunately, inattentive and protectionist judicial opinions caused the standard to drift far from these holdings and into direct conflict with the clear language and intent of the 1902 design patent amendments and fundamental, overarching intellectual property law principles reflected in the Supreme Court’s seminal *Baker v. Selden* decision.

This Article aims to correct this fundamental misinterpretation of intellectual property law. Part II tells the remarkable story of how the effort to transplant England’s design copyright regime to the United States spawned a confusingly labeled “design patent” regime and examines the confusion wrought by this mislabeled law during the mid to late 19th century. It also reveals a period in which design patent law served as a proto-federal trademark

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† Koret Professor of Law; Director, Berkeley Center for Law & Technology; Faculty Director, Berkeley Judicial Institute; University of California, Berkeley, School of Law.

‡ University of California, Berkeley, School of Law, J.S.D. Candidate.

registration system before Congress established federal trademark protection in the late 19th century. Remnants of that dalliance still confusingly resonate in the design patent system today. Part III explores the 1902 amendments, which unequivocally limited design patents to the ornamental features of articles of manufacture and made clear that they did not extend design patent protection to functional elements. Part IV traces the emergence and distortion of the ornamentality/non-functionality doctrine. The early decisions clearly grasped the need to exclude functionality from design patents. Unfortunately, later cases misapplied some of the language of those cases, resulting in standards that contradict the 1902 (and 1952) Acts as well as the logic reflected in *Baker v. Selden* and other Supreme Court cases dealing with the structure of the intellectual property system. Part V traces the Federal Circuit's tilting of the ornamentality/non-functionality doctrine toward overbroad protection of functionality within the design patent regime. Part VI explores the forces that have led the design patent regime astray. Part VII proposes ways of rectifying design patent law's wayward drift to restore fidelity to the statutory language and the overarching logic of the intellectual property system.

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I. INTRODUCTION

In one of the most significant and astounding intellectual property decisions of the early 21st century, the Federal Circuit upheld rulings that Apple's design patents for the rounded rectangular faces for a mobile phone and an electronic tablet were valid because those elements are "ornamental" and not functional.¹ The products at issue—Apple's iPhone and iPad—are notable for their *lack* of surface or shape ornamentation. The surfaces are smooth and black. Rounded corners provide shock resistance should the user drop the device on a corner. The size and proportions of the iPhone easily fit in the user's hand and pocket. The iPad size and shape mimic a standard sheet of paper.

The Federal Circuit's decisions upholding the validity of Apple's design patents for the minimalist shape and appearance of the iPhone and iPad illustrate how far the design patent regime has strayed from the fundamental logic and structure of the intellectual property system. Those decisions, in conjunction with Apple's recovery of more than half a billion dollars from Samsung for infringing Apple's design patents, have fueled a surge in design patent applications.²

Soon after his departure from the helm of the U.S. Patent and Trademark Office where he oversaw examination (and granting) of Apple's design patents, David Kappos explained:

The ever increasing functionality of the man-made devices in our lives—from our automobiles to our mobile phones to our clocks—has brought with it increasing complexity. . . .

Enter design. The discipline of design—the "form" that makes "function" accessible—has never been more in demand. Design enables us to simply, intuitively, use all these wonderful product capabilities that otherwise might as well not exist for the vast majority of us.

That is the story of design—innovators blurring the lines of the traditional intellectual property realms of patents, trademarks and copyrights to deliver not just new products, but entirely new markets by matching form with function and making "complicated"

1. *See* Apple, Inc. v. Samsung Elecs. Co., Ltd., 786 F.3d 983, 998–99 (Fed. Cir. 2015); Apple, Inc. v. Samsung Elecs. Co., Ltd., 678 F.3d 1314, 1323–27 (Fed. Cir. 2012).

2. *See* Pat. Tech. Monitoring Team, *U.S. Patent Statistics Chart: Calendar Years 1963–2019*, U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm (last visited Nov. 19, 2020) (reflecting a 55% increase in design patent applications between 2010 and 2018—from 29,059 to 45,083). By contrast, utility patent applications increased only 22% during this period. *See id.*

“simple.” For these innovators, the new frontier for IP now and tomorrow is in the increasing convergence of IP embodied in design. . . .

But for the breakthrough innovators of the 21st century, design has moved onto a much larger stage. *It is where high function meets high style.* And the traditional disciplines of IP—patents, trademarks and copyrights—are no longer ends unto themselves but are now viewed as component parts of a larger whole. . . .

This is not to say that the traditional disciplines are becoming unimportant. They will remain critical as the building blocks of design in the large. But innovative 21st century companies understand that design is larger than these individual components—much larger. Consider the ecosystem that Apple Inc., the standard bearer of design in the large, has created around mobile devices. The magic of the iPhone and iPad is not just in the content that can be accessed on the devices, or in their format, or the software that makes them work. The magic is the overall design—Apple’s ability to manage the convergence of the brand, the inventions and the content to revolutionize a market. And this focus on design as a nexus for IP, with all of its constituent parts, will only continue to grow. . . .³

But this explanation contradicts the fundamental structure of the intellectual property system. The system requires that functional advances meet the higher thresholds of the utility patent system.⁴ Affording protection for functional advances short of applying the *utility* patent law’s more exacting novelty, non-obviousness, and disclosure requirements would be, as the Supreme Court observed in denying copyright protection for a system of accounting (and the associated lined forms), “a surprise and a fraud upon the public”⁵ and undermine free competition.

As this Article shows, the validation of Apple’s iPhone and iPad design patents resulted from the Federal Circuit’s misreading of the design patent regime and the larger structure of intellectual property law. Through a series of decisions beginning in 1988, the Federal Circuit turned the ornamentality/non-functionality doctrine, which is intended to prevent design patent protection from encroaching on the utility patent regime, on its head. According to the Federal Circuit, a design is ornamental and not functional so long as it is not “dictated solely” by functional considerations or alternative designs could not achieve the article of manufacture’s function. How this

3. David J. Kappos, *Design: The New Frontier of Intellectual Property*, NAT’L L.J. (Apr. 22, 2013, 12:00 AM) (emphasis added).

4. *See Baker v. Selden*, 101 U.S. 99, 102 (1879).

5. *See id.*

standard could be consistent with the overall intellectual property landscape—reserving to the utility patent system exclusive authority over functional advances—boggles the mind.

This Article traces the origins of the ornamentality/non-functionality doctrine and shows how several early cases using the “dictated solely by utilitarian considerations” phrasing to deny design patent protection in easy cases were later misinterpreted by the Federal Circuit to be *the* standard for determining whether a design was eligible for design patent protection. These decisions merely explained that designs “dictated solely by utilitarian considerations” were clearly outside of design patent eligibility. They did not mean that designs that only partially affected functionality or where alternative designs were available qualified for design patents. Unfortunately, inattentive or protectionist judicial decision-making caused the standard to drift far from the holdings of those early cases into direct conflict with the clear language and intent of the 1902 design patent amendments⁶ and fundamental, overarching intellectual property law principles reflected in the Supreme Court’s seminal *Baker v. Selden*⁷ decision.

Part II tells the remarkable story of how the effort to transplant England’s design *copyright* regime to the United States spawned a confusingly labeled “design patent” regime and examines the confusion wrought by this mislabeled law during the mid to late 19th century. It also reveals a period in which design patent law served as a proto-federal trademark registration system before Congress established federal trademark protection in the late 19th century. Remnants of that dalliance still confusingly resonate in the design patent system today. Part III explores the 1902 amendments, which unequivocally limited design patents to the ornamental features of articles of manufacture and made clear that design patent protection did not extend to functional elements. Part IV traces the emergence and distortion of the ornamentality/non-functionality doctrine. The early decisions clearly grasped the need to exclude functionality from design patent. Unfortunately, later cases misapplied some of the language of those cases, resulting in standards that contradict the 1902 (and 1952) Acts as well as the logic reflected in *Baker v. Selden* and other Supreme Court cases dealing with the structure of the intellectual property system. Part V traces the Federal Circuit’s tilting of the ornamentality/non-functionality doctrine toward overbroad protection of functionality within the design patent regime. It also explores the nearly decade-long *Apple v. Samsung* decision, which play a significant role in the evolution of design patent law. Part VI explores the forces that have led the design patent regime astray. Part

6. See *infra* Parts IV, V.

7. 101 U.S. 99 (1879).

VII proposes ways of rectifying design patent law's wayward drift to restore fidelity to the statutory language and the overarching logic of the intellectual property system.

II. ORIGINS OF THE DESIGN PATENT LAW'S IDENTITY CRISIS

The emergence and evolution of U.S. design patent law is shrouded in a mist of industrial history, bureaucratic opportunism and amnesia, and political economy distortions. The result is an oxymoronic modern regime that confusingly and inefficiently overlaps with utility patent, copyright, and trade dress protection. This Section traces the roots of the design patent law's identity crisis.

A. SWITCHED AT BIRTH: DESIGN PATENT'S MISBEGOTTEN COPYRIGHT ORIGIN

As the Industrial Revolution unfolded in the early 19th century, advances in iron casting processes paved the way for mass producing decorative stoves, radiators, and other cast-iron consumer goods.⁸ These advances shifted competition toward the decorative elements of cast-iron goods. Such ornamentation of useful articles did not, however, fit easily within utility patent or copyright protection. Although advances in the production processes and casting machinery were eligible for utility patents, the particular *designs* resulting from such processes and machinery did not qualify for utility patent protection. And copyright protection extended only to books, maps, charts, and prints, not to three-dimensional works.⁹

Relatedly, the growth of the textile industries during the Industrial Revolution spawned piracy of popular and attractive rug designs, clothing, and other imprinted goods.¹⁰ England's more developed manufacturing economy

8. See Jason J. Du Mont & Mark D. Janis, *The Origins of American Design Patent Protection*, 88 IND. L.J. 837, 849–51 (2013) [hereinafter *The Origins of Design Patent Protection*]; 2 J. LEANDER BISHOP, A HISTORY OF AMERICAN MANUFACTURES FROM 1608 TO 1860, at 576–77 (3d ed. 1868).

9. Act of Apr. 29, 1802, ch. 36, sec. 2, 2 Stat. 171 (extending copyright protection to “who[mever] shall invent and design, engrave, etch or work, or from his own works and inventions, shall cause to be designed and engraved, etched or worked, any historical or other print or prints”).

10. See *The Origins of American Design Patent Protection*, *supra* note 8, at 854; PAUL E. RIVARD, A NEW ORDER OF THINGS: HOW THE TEXTILE INDUSTRY TRANSFORMED NEW ENGLAND 68–69 (2002).

had already confronted these issues through the enactment of copyright-based design protection regimes.¹¹

Drawing on England's precedent, Jordan L. Mott, a successful American stove manufacturer, along with other industrialists and designers, petitioned Congress to enact design protection.¹² Senator John Ruggles of Maine, former chair of the Senate's Committee on Patents and the Patent Office,¹³ presented Mott's petition. The bill proposed a "sole and exclusive *copy-right*"¹⁴ for the proprietor of any "new and original design" for specified articles of manufacture, including iron products and textiles.¹⁵ The copyright protection was for one year for articles other than metals and three years for metal designs.

Senator Ruggles's bill passed the Senate Committee but was not enacted during that legislative session. Following Ruggles' failed reelection bid, the design protection mantle was taken up by Patent Commissioner Henry Ellsworth, which resulted in an unfortunate drafting twist. In his 1841 Commissioner's Report to Congress, referred to the Senate Committee on Patents and the Patent Office on March 8, 1842, Commissioner Ellsworth called upon Congress to establish a design protection regime under his authority at the Patent Office:

The justice and expediency of securing the exclusive benefit of new and original designs for articles of manufacture, both in the fine and useful arts, to the authors and proprietors thereof, for a limited time are . . . presented for consideration.

11. See An Act to Secure to Proprietors of Designs for Articles of Manufacture the Copyright of Such Designs for a Limited Time 1839, 2 Vict., c. 17 (Eng.); An Act for the Encouragement of the Arts of Designing and Printing Linens, Cottons, Calicoes, and Muslins, by Vesting the Properties Thereof in the Designers, Printers, and Proprietors, for a Limited Time 1787, 27 Geo. 3, c. 38, § 1 (Eng.) (providing protection for "any new and original pattern . . . for printing linens, cottons, callicos, or muslins"); see generally BRAD SHERMAN & LIONEL BENTLY, *THE MAKING OF MODERN INTELLECTUAL PROPERTY LAW: THE BRITISH EXPERIENCE, 1760–1911*, at 63–76 (1999).

12. See *The Origins of American Design Patent Protection*, *supra* note 8, at 854–59.

13. Senator Ruggles had led the effort to pass the significant Patent Act of 1836 re-instituting patent examination. See S. DOC. NO. 24-338 (1836); S. REP. ACCOMPANYING S. 239, 24TH CONG. (1836). His brother Draper Ruggles was a partner in Ruggles, Nourse & Mason, the largest cast-iron plow and agricultural implement company in the United States. See CHARLES G. WASHBURN, *INDUSTRIAL WORCESTER* 132–33 (1917); see generally *The Origins of American Design Patent Protection*, *supra* note 8, at 858 n.139 (discussing other connections between Draper Ruggles and patent law).

14. See Ruggles Design Bill, S. 269, 26th Cong. § 1 (1841) (emphasis added).

15. See *id.*

Other nations have granted this privilege, and it has afforded mutual satisfaction alike to the public and to individual applicants. Many who visit the Patent Office learn with astonishment that no protection is given in this country to this class of persons. Competition among manufacturers for the latest patterns prompts to the highest effort to secure improvements, and calls out the inventive genius of our citizens. Such patterns are immediately pirated, at home and abroad. A pattern introduced at Lowell, for instance, with however great labor or cost, may be taken to England in 12 or 14 days, and copied and returned in 20 days more. If protection is given to designers, better patterns will, it is believed, be obtained, since the impossibility of concealment at present forbids all expense that can be avoided. It may well be asked if authors can so readily find protection in their labors, and inventors of the mechanical arts so easily secure a patent to reward their efforts, why should not discoverers of designs, the labor and expenditure of which may be far greater, have equal privileges afforded them?

The law, if extended, should embrace alike the protection of new and original designs for a manufacture of metal or other material, or any new and useful design for the printing of woollens, silk, cotton, or other fabric, or for a bust, statue, or bas-relief, or composition in alto or basso-relievo. All this could be effected by simply authorizing the Commissioner to issue patents for these objects, under the same limitations and on the same conditions as govern present action in other cases. The duration of the patent might be seven years, and the fee might be one-half of the present fee charged to citizens and foreigners, respectively.¹⁶

Although largely tracking Senator Ruggles's *copyright* bill, Commissioner Ellsworth's proposal shifted to a patent rubric while retaining copyright language lifted from British copyright law.¹⁷ He proposed a *design patent* term of seven years, half of the fourteen-year term for utility patents, and charging half of the application fee for utility patents. Shifting this new regime to the Patent Office expanded Commissioner Ellsworth's portfolio and, importantly, increased funding for the Patent Office, which was struggling to cover a large

16. Thomas B. Hudson, *A Brief History of the Development of Design Patent Protection in the United States*, 30 J. PAT. & TRADEMARK OFF. SOC'Y 380, 380–81 (1948) (quoting COMM'R OF PATS. HENRY LEAVITT ELLSWORTH, 27TH CONG., REP. FROM THE COMM'R OF PATENTS SHOWING THE OPERATION OF THE PATENT OFFICE (1841)).

17. See An Act for Encouraging the Art of Making New Models and Casts of Busts 1798, 38 Geo. 3, c. 71, § 1 (Eng.) (protecting any “new Model, Copy, or Cast, or any such new Model, Copy or Cast in Alto or Basso Relievo” of human or animal figures).

cost overrun in the construction of its new building following a devastating fire in 1836.¹⁸

Congress heeded this recommendation and passed design patent legislation covering

any new and original design for a manufacture, whether of metal or other materials, or any new and original design for the printing of woolen, silk, cotton, or other fabrics, or any new and original design for a bust, statute, bas-relief, composition in alto or basso-relievo, or any new and original impression or ornament to be placed on any article of manufacture, the same being formed in marble or other material, or any new and useful pattern, print, or picture to be either worked into or worked on, or printed, painted, cast or otherwise fixed on any article of manufacture, or any new and original shape or configuration of any article of manufacture not known or used by others before his invention or production thereof, and prior to the time of his application¹⁹

There is no statutory text or legislative history to suggest that Congress intended any more than copyright protection for the ornamental aspects of useful articles.²⁰ While the text refers to “new and *useful* pattern, print, or picture,”²¹ there is no reason to believe that Congress meant to extend protection to functional features. A pattern, print, or picture can be “useful” in an informative and decorative sense and yet not be technologically functional. Congress clearly limited this new regime to the decorative elements of various manufactures. Nor is there any question that Congress intended to exclude protection for functional features, which could only be obtained by satisfying the standards for utility patents. In 1861, Congress replaced the Design Patent Act’s fixed seven-year term with a choice of a term of three and

18. See *The Origins of American Design Patent Protection*, *supra* note 8, at 866–67; William I. Wyman, *Homes of the Patent Office*, 18 J. PAT. OFF. SOC’Y 123, 130 (1936); see also *1836 U.S. Patent Office Fire*, WIKIPEDIA, https://en.wikipedia.org/wiki/1836_U.S._Patent_Office_fire (last visited Nov. 19, 2020).

19. Act of Aug. 29, 1842, ch. 263, sec. 3, 5 Stat. 543, 543–44.

20. See *The Origins of American Design Patent Protection*, *supra* note 8, at 856 (concluding that the 1842 design patent Act “likely sprang from considerations of bureaucratic self-interest, not from any perceived distinction between the relative merits of copyright and patent protection for designs”); *id.* at 868 (“[T]he proposals that ultimately resulted in the first American design patent statute veered from a quasi-copyright proposal to a patent proposal for extrinsic reasons. Our research uncovered no evidence of any debate over the wisdom of the core idea that substantive utility patent law rules should govern a new design protection regime and no indication that drafters of the design patent statute were sufficiently prescient to foresee that copyright and utility patent jurisprudence would evolve along divergent paths in the decades to come.”).

21. 5 Stat. at 543–44 (emphasis added).

a half, seven, or fourteen years (and the ability to extend the term under specified circumstances).²² The 1861 Act referred to five classes of works:

[1] any new and original design, or a manufacture, whether of metal or other material or materials, [2] original design for a bust, statue, or bas relief, or composition in alto or basso relievo, [3] any new and original impression or ornament, or to be placed on any article of manufacture, the same being formed in marble or other material, [4] any new and useful pattern, or print, or picture, to be either worked into or worked on, or printed, or painted, or cast, or otherwise fixed on, any article of manufacture, [and 5] any new and original shape or configuration of any article of manufacture.²³

The 1861 Act omitted the specific protection for designs for woolen, silk, cotton, or other fabrics from eligibility for design patents, retaining a broad language of any “material.”²⁴

B. DESIGN PATENTS AS PROTO-FEDERAL TRADEMARKS

Beyond affording copyright-type protection for ornamental features of useful articles, design patents also became a form of protection for graphic trademarks. By the mid-19th century, commerce was rapidly expanding in the United States and Congress had not yet enacted federal trademark protection. Enterprising businesses began to use design patents as a means to obtain exclusive rights for distinctive labels for their products. Figure 1 illustrates a “Design Patent for a Trade Mark” issued in 1859.²⁵

22. Act of Mar. 2, 1861, ch. 88, sec. 11, 12 Stat. 246, 248; *see also* Jason J. Du Mont, *A Non-Obvious Design: Reexamining the Origins of the Design Patent Standard*, 45 GONZ. L. REV. 531, 546–48 (2009).

23. Act of Mar. 2, 1861, sec. 11.

24. *See id.*

25. U.S. Design Patent No. 1163 (issued Nov. 1, 1859).

Figure 1: Design Patent No. 1163 (Nov. 1, 1959)



The design patent states:

Be it known, that We Thos & Sam Hardgrove, . . . have invented or produced a new and useful Design of Picture to be affixed to our wares and manufactures

Our invention or protection consists in the ornamental design for a trade mark as shown by the accompanying representations.

What we claim and desire to secure by Letters Patent is the within described design of picture to affixes to our wares and manufactures and to be designated as the Peach brand.²⁶

26. *See id.* at 2.

Between 1842 and 1870, the Patent Office granted more than 200 graphic trademark design patents.²⁷ In 1865, the Patent Office issued the following guidelines for procuring design patents for the graphic elements of trademarks:

§ 76. Names, titles, bill-heads, and other matters intended for use as circulars or trade-marks, if printed in the ordinary movable types, are not held to be patentable as designs.

§ 77. When any such matter is the special work of an artist for a specified purpose, as when engraved, it may be patented as a design. Hence when a patent is desired for a design to be used as a trademark, it is recommended that the same be engraved.²⁸

The following year, the share of design patents granted for graphic “Trade-Marks” reached eleven percent of all design patents.²⁹ That number of trademark-type design patents rapidly declined with the passage of federal trademark protection in 1870.³⁰

C. DESIGN/UTILITY PATENT CONFUSION

The 1842 Act extended protection to “any citizen . . . who by his, her, or their own industry, genius, efforts, and expense, may have invented or produced . . . any new and *useful* pattern, or print, or picture, to be either worked into or worked on, or printed or painted or cast or otherwise fixed on, any article of manufacture . . .”³¹ The 1842 Act also authorized the granting of design patents for “any new and original *shape or configuration* of any article of manufacture . . .”³²

The inclusion of the term “useful” and recognition of protection for “shape or configuration” of an article of manufacture led to confusion as to whether the 1842 Act protected functional elements of useful articles. The Patent Office initially took a parsimonious approach, recognizing that the design statute covered artistic designs as distinguished from functional elements.³³

27. See Jason Du Mont & Mark D. Janis, *U.S. Design Patent Law: A Historical Look at the Design Patent/Copyright Interface*, in *THE COPYRIGHT/DESIGN INTERFACE: PAST, PRESENT AND FUTURE* 358 (Estelle Derclaye ed., 2018).

28. See U.S. PAT. OFF., RULES & DIRECTIONS FOR PROCEEDINGS IN THE PATENT OFFICE 23 (1865).

29. See Du Mont & Janis, *supra* note 27, at 358.

30. See *id.*

31. Act of Aug. 29, 1842, ch. 263, sec. 3, 5 Stat. 543, 543–44 (emphasis added).

32. *Id.* (emphasis added).

33. See *Ex parte Crane*, 1869 Dec. Comm’r Pat. 7, reprinted in WILLIAM EDGAR SIMONDS, *THE LAW OF DESIGN PATENTS* 59–61 (Baker, Voorhis & Co. 1874).

The first judicial construction of the 1842 Act, rejecting the Patent Office's interpretation narrow interpretation, illustrates the confusion.³⁴ Jason Crane, the patentee, sought patent protection for a paper box with compartments arranged for holding a set of ladies' furs. After the Patent Office rejected Crane's *utility* patent application, he sought a *design* patent on the same subject matter. The Patent Office rejected his design patent on the ground that

[t]he construction which has been given to that [design patent] act by the office, ever since its passage in 1842, is that it relates to designs for ornament merely; something of an *artistic* character as contradistinguished to those of convenience or utility. It was upon this view of the statute that the application was rejected by the examiner in charge, and, on appeal, by the board of examiners in chief. No judicial construction has as yet been given to this part of the act.³⁵

On appeal to the Patent Commissioner, Commissioner Elisha Foote took a more expansive view of the scope of design patent eligibility:

Considerable reflection upon the subject has satisfied me that the objects and intent of the statute extend beyond the limit assigned to it by the office.

. . . It does not say "ornamental" design, or "artistic" shape or configuration, and I am unable to perceive any good reasons why designs for utility are not fairly and properly embraced within the statute as well as those relating to ornamentation merely.

The line of distinction between what is useful and what is merely ornamental is, in some cases, very indefinite. By some it is said that any form or design that is most useful, is also most pleasing. It would be impossible, in the view of such persons, to make any improvement in utility that did not at the same time add to the ornamental and artistic.

I can perceive no necessity for the distinction. There is a large class of improvements in manufactured articles that are not regarded as new inventions, or as coming within the scope of general patent laws. They add to the market value and salability of such articles, and often result from the exercise of much labor, genius, and expense. They promote the best interests of the country, as well as the creations of inventive talent. It seems to me to have been the intent of Congress to extend to all such cases a limited protection and encouragement.

34. *See id.*

35. *Id.* at 60 (emphasis in original).

Whenever there shall be produced by the exercise of industry, genius, effort and expense, any new and original design, form, configuration or arrangement of a manufactured article, it comes within the provisions and objects of the act creating design patents, whatever be its nature, and whether made for ornament merely, or intended to promote convenience and utility.

The construction given to the statute by the board of appeals seems to me to be erroneous, and I accordingly over rule their decision.³⁶

Notably, Commissioner Foote did not assess the circumstances surrounding the passage of the design patent statute nor the ramifications of its interpretation for the efficacy of the utility patent regime.

In *Ex parte Solomon*³⁷ decided later that year, Acting Commissioner Hodges expanded on *Crane*'s recognition that design patents could extend to functional features of articles of manufacture:

The patent under consideration covers, under this rule, not only the beauty of the inkstand in point of form, but also all those advantages in point of utility and convenience, which result from its configuration, by which, in this connection, must be intended its construction. Some of these are old, it is true, but the combination of the whole is new.³⁸

Whereas *Crane* recognized that an article of manufacture could have functional qualities, *Solomon* expressly extended the design patent's scope to functional features.³⁹

Following this line of reasoning, Commissioner Samuel Fisher adopted a broad reading of *Crane* in *Ex parte Bartholomew*.⁴⁰ The Commissioner first noted that the 1861 Act covered five separate subject matter classes for designs,⁴¹ and

[t]he first three of these classes [—“(1) any new and original design, or a manufacture, . . . (2) an] original design for a bust, statue, or

36. *Id.* at 60–61; *see also* WILLIAM D. SHOEMAKER, PATENTS FOR DESIGNS 133–34 (1929).

37. *See Ex parte Solomon*, 1869 Dec. Comm'r Pat. 49, *reprinted in* HECTOR T. FENTON, THE LAW OF PATENTS FOR DESIGNS 227–29 (William J. Campbell 1889).

38. *Id.* at 228.

39. *See Du Mont*, *supra* note 22, at 555–56 (“Although *Crane* properly taught that the article could have (*i.e.*, *de facto*) functionality, it did not explicitly extend the design patent's scope of protection to those functional features. Rather, Hodge's decision in *Solomon* was the first opinion to indicate this natural progression.”)

40. *See Ex parte Bartholomew*, 1869 Dec. Comm'r Pat. 103, *reprinted in* FENTON, *supra* note 37, at 229–37.

41. *Id.* at 230–31.

bas relief, . . . [(3)] any new and original impression or ornament, or to be placed on any article of manufacture” —] seem[ed] to refer to ornament only; the fourth [—“any new and useful pattern, or print, or picture, to be either worked into or worked on, or printed, or painted, or cast, or otherwise fixed on, any article of manufacture” —], to ornament combined with utility, as in the case of trade-marks; and the fifth [—“any new and original shape or configuration of any article of manufacture” —], to new shapes or forms of manufactured articles, which, for some reasons, were preferable to those previously adopted.⁴²

The language of the 1861 Act—similar to the language of the 1842 Act—included the word “useful” only with regard to the class of “pattern, print, or picture.”⁴³

As in *Crane* and *Solomon*, the Board of Examiners-in-Chief rejected the applicant’s design application (for a rubber eraser) because “[t]he general understanding has always been that the Acts of 1842 and 1861 were intended to cover articles making pretensions to artistic excellence, exclusively.”⁴⁴ Commissioner Fisher rejected this reasoning: “In thus denying that a new ‘shape or configuration’ of an article, whereby utility or convenience is promoted, is the proper subject of a patent . . . the office would seem to have involved itself in the absurdity that if a design is useless it may be patented, whereas if it be useful it is entitled to no protection.”⁴⁵ Further, Commissioner Fisher commented that “[a]rticles have been, and are being constantly, patented as designs which possess no element of the artistic or ornamental, but are valuable solely because, by a new shape or configuration, they possess more utility than the prior forms of like articles.”⁴⁶ Finally, Commissioner Fisher expressed the

42. *Id.* at 231 (bracketed quotations from sec. 11 of the 1861 Act).

43. *See* Act of Mar. 2, 1861, ch. 88, sec. 11, 12 Stat. 246, 248; Act of Aug. 29, 1842, ch. 263, sec. 3, 5 Stat. 543, 543–44. The 1861 Act did not use the term “useful” with regard to the “shape or configuration” class. The 1870 Act added “useful” to that class as well. Act of July 8, 1870.

44. *See Ex parte Bartholomew*, 1869 Dec. Comm’r Pat. 103, *reprinted in* FENTON, *supra* note 37, at 234.

45. *Id.*

46. Of this character are designs for axe-heads, for reflectors, for lamp shades, for the soles of boots and shoes, which have been heretofore patented as designs; and to this class might be added with great propriety that class of so-called “mechanical” patents granted for mere changes of form, such as plowshares, fan blowers, propeller blades, and others of like character. When, therefore, my learned predecessor in *Crane’s* case added to this number a box so designed as to hold, with convenience, a set of furs, he

opinion that the class of cases named in the act arising from “new shape or configuration,” includes within it all those new changes of form which involve increase of utility.

. . . .

. . . [W]here the sole utility of the new device arises from its new shape or configuration, I think it may fairly be included among the subjects which the act of 1842 was designed to protect.⁴⁷

Thus, after initially questioning the availability of design patent protection for functional features of articles of manufacture, the Patent Office reversed course. By 1869, the Patent Office extended design patent protection to functional features of articles of manufacture.

Congress revised the intellectual property statutes in 1870. The 1870 Act’s most relevant design patent amendment deleted the word “useful” from the class of “pattern, print, or picture” and added it to the class of “shape or configuration” of an article.⁴⁸ The result was that a law aimed at protecting appearance and not function now confusingly conjoined “utility” with “shape or configuration.”

The Patent Office continued to struggle with the interplay of design and utility patent protection. In *Ex Parte Fenno*,⁴⁹ an applicant sought a design patent for a damper of stove-pipes after his utility patent application was rejected in light of prior art.⁵⁰ The examiner rejected the design patent application based on lack of ornamentality:

[The] mere shape is but a fractional part of the end desired to be covered by the case . . . [and] the claim for a patent is inadmissible, inasmuch as the device is to perform its function inside a stove-pipe,

did but confirm, and not alter, the practice of the office, so far as it can be gleaned from the patented cases.

Id. at 235; *see also* SHOEMAKER, *supra* note 36, at 134 (noting that, in *Ex parte Bartholomew*, Commissioner Fisher questioned whether the office had a practice of granting patents based solely on ornamentality).

47. *See Ex parte Bartholomew*, 1869 Dec. Comm’r Pat. 103, *reprinted in* FENTON, *supra* note 37, at 235–36.

48. *See* Act of July 8, 1870, ch. 230, secs. 71–76, 16 Stat. 198, 209–10 (“[A]ny new, *useful*, and original shape or configuration of any article of manufacture” (emphasis added)). Du Mont suggests that it is likely that the term “useful” was purposely added to the “shape or configuration” class based on the reasoning in *Bartholomew*, while omitted from the other class by mistake. *See* Du Mont, *supra* note 22, at 565, 565 n.203.

49. *Ex parte Fenno*, 1871 Dec. Comm’r Pat. 52, *reprinted in* FENTON, *supra* note 37, at 250–53.

50. *Id.* at 250–51.

where, from the nature of things, mere beauty of form or ornamental configuration can play no part.⁵¹

While acknowledging that the “applicant is now endeavoring to obtain covertly what he failed to accomplish by direct method upon the former application,” Acting Commissioner Duncan remanded the case to the examiner for reconsideration with the following instructions:

There is [under the 1870 Act] . . . no suggestion that mere beauty of form or ornamental configuration are the ends sought. In fact, the language quoted [from the 1870 Act] expressly implies that utility may be the sole object had in view, in the invention or selection of the particular form to be impressed upon the manufacture; and I am of the opinion that under the present statute, if a new, and at the same time useful shape be devised for a particular article of manufacture, even though no ornamental effect be produced thereby, the inventor of the same is entitled to protection for it under the design section of the patent law.⁵²

Referencing the new language of the 1870 Act, Acting Commissioner Duncan required the design to positively exhibit utility.⁵³

With the appointment of Commissioner Mortimer Leggett in 1871, the Patent Office shifted its position back to limiting design patents to ornamentality and away from backdoor protection for functional features.⁵⁴ In

51. *Id.* at 251.

52. *Id.* at 251–53.

53. *See id.* at 252 (“[I]t would still be incumbent upon him to show that some useful result is produced.”); *see also* SHOEMAKER, *supra* note 36, at 134–35 (noting that the Commissioner in *Ex parte* Fenno required utility to be shown for a design patent).

54. In his 1872 Report, Commissioner Leggett expressed deep skepticism of design patents, characterizing many as little more than anticipated inventions that defraud the public:

This class of patents has been to some extent subversive of the fundamental object of the patent law. Very many design patents which cannot, under the law, be denied, are a fraud upon the public. A man applies for a patent on a cultivator, or hammer, or any other useful tool or device, and finding himself fully anticipated in every principle and useful feature of his application, at once applies for a design patent for the same thing. This application he bases upon some peculiarities of form or color, having nothing whatever to do with the merits or demerits of the article itself, and not being anticipated in these respects, a patent is granted for the new design. The patent gives him no protection whatever, except as to the form or color upon which it is based. He, however, obtains from the Office the right to stamp the word “Patented” upon the article he is manufacturing and thereby deceives the public, wrongs inventors, and brings patented articles into disrepute.

Ex parte Parkinson, Commissioner Leggett criticized the Patent Office's previous approach to granting design patents as "not only liberal but lax."⁵⁵ He forthrightly explained the need to limit design patents to their original purpose and safeguard the utility patent system as the exclusive means of protecting technological advances:

The Legislature never intended by this section (Act of July 8, 1870, Sect. 2) to let down the standard for patents. It was never contemplated to grant a design patent for every possible change of form that might be given to a machine or article of manufacture. By "article of manufacture," as used in this section, the legislature evidently meant only ornamental articles, articles used simply for decoration.

....

The idea of stretching the section in question to cover slight changes in the form of crow-bars, spades, plows, scrapers, &c., is simply ridiculous, and tends to bring the whole system into disrepute.

....

... [T]he man who comes to the office with a machine or article of manufacture and seeks a design patent simply for some slight and unimportant change of form or color, requiring neither inventive nor creative genius, and producing no new or esthetic effect, deserves but little favor or consideration. In general, such men are impostors, and desire a design patent merely to obtain the right to put the word "patented" upon their manufacture, and thereby deceive the public and wrong real inventors

The interests of real inventors, and a proper regard for the public good, demand that design patents be limited exclusively to the field

C. C. Reif, *Mortimer D. Leggett*, 2 J. PAT. OFF. SOC'Y 534, 540 (1920). Commissioner Leggett's suggestion that design patents "deceive the public" anticipates the Supreme Court's similar statement regarding a copyright on bookkeeping methods seven years later:

To give to the author of the book an exclusive property in the art described therein, when no examination of its novelty has ever been officially made, would be a surprise and a fraud upon the public. That is the province of letters-patent, not of copyright. The claim to an invention or discovery of an art or manufacture must be subjected to the examination of the Patent Office before an exclusive right therein can be obtained; and it can only be secured by a patent from the government.

Baker v. Selden, 101 U.S. 99, 102 (1879). This further supports the inference that design patents are analogous to copyrights and not to utility patents in the channeling of intellectual property protection.

55. *Ex parte Parkinson*, 1871 Dec. Comm'r Pat 251, reprinted in FENTON, *supra* note 37, at 259.

herein suggested, and it is clear to my mind that a proper construction of the law fully warrants such limitation.⁵⁶

Accordingly, Commissioner Leggett clarified the new interpretation for the term “useful” in the context of a design patent:

The term ‘useful,’ in connection with machine patents, relates to the office the thing patented fills in producing a desired effect . . . [or] to its adaptation to serve some practical purpose in supplying some physical or tangible want. But the law authorizing design patents was intended to provide for an entirely different class of inventions, inventions in the field of esthetics, taste, beauty, ornament. The question an examiner asks himself while investigating a device for a design patent is not ‘What will it do?’ but ‘How does it look?’ ‘What new effect does it produce upon the eye?’ The term ‘useful’ in relation to designs means adaptation to producing pleasant emotions.⁵⁷

Essentially, Commissioner Leggett set a requirement that the design only be ornamental.⁵⁸

D. SUPREME COURT CONFUSION

Courts and Patent Commissioners continued to shift on the appropriate subject matter and scope of design patents.⁵⁹ The Supreme Court entered the

56. *Id.* at 258–59.

57. *Id.* at 258; *see also* Du Mont, *supra* note 22, at 571–72.

58. *See* Du Mont, *supra* note 22, at 572, 572 n. 244; *see also* FENTON, *supra* note 37, at 8 (“Much difference of opinion has existed as to whether or not design patents were confined to ornamentation only, as defined in the Acts of 1842 and 1861, and as these statutes were construed by the Supreme Court in *Gorham Co. v. White*; since, in the subsequent Act of July, 1870, and the Revised Statutes, the word *useful* appears for the first time in conjunction with the words *new and original* in including form or configuration of an article as patentable subject-matter under the design section. Diametrically opposite opinions on this point are to be found in the earlier decisions of the Patent Office, but better opinion at this time seems to be that *useful*, in the statute, means ornamental utility, and not functional utility. Since the Act of 1870, the Circuit Court for the District of New Jersey, in a well-considered case [*Theberath v. Rubber & Celluloid Harness Trimming Co.*, 15 F. 246] decided in 1883, held that design patents differ from patents for inventions or discoveries in that they have reference to appearance rather than utility; that their object is to encourage the arts of decoration rather than the invention of useful products; and that a picture or design which merely pleases the eye is a proper subject for such a patent, without regard to the question of utility.” (emphasis in original)).

59. *See* Du Mont, *supra* note 22, at 572, 572 n. 245; *see also* *Ex parte* Schulze-Berge, 42 O.G. 293 (1888), *reprinted in* FENTON, *supra* note 37, at 327–28 (“[T]he decisions . . . have given too great importance to the word ‘useful,’ employed in this connection. I cannot avoid the conclusion, from an examination of later authorities, that the subject of design patents was intended by Congress to relate to matters of decoration, of esthetic art, which reach the senses

fray in a series of opinions but failed to resolve the ornamentality/non-functionality controversy.

In *Gorham Co. v. White*,⁶⁰ the Supreme Court stated:

The acts of Congress which authorize the grant of patents for designs were plainly intended to give encouragement to the decorative arts. They contemplate not so much utility as appearance, and that, not an abstract impression, or picture, but an aspect given to those objects mentioned in the acts . . . And the thing invented or produced, for which a patent is given, is that which gives a peculiar or distinctive appearance to the manufacture, or article to which it may be applied, or to which it gives form . . . It is the appearance itself, therefore, no matter by what agency caused, that constitutes mainly, if not entirely, the contribution to the public which the law deems worthy of recompense. The appearance may be the result of peculiarity of configuration, or of ornament alone, or of both conjointly, but, in whatever way produced, it is the new thing, or product, which the patent law regards.⁶¹

Gorham, therefore, held that design patents cover ornamentality, not functionality.⁶²

A decade later in *Lehnbeuter v. Holthaus*,⁶³ however, the Supreme Court downplayed considerations of aesthetics and ornamentality and instead emphasized utility. In assessing the validity of the design patent at issue, the Court concluded:

through the eye. There can be no doubt that an invention to be the subject of a mechanical patent must possess utility or usefulness; but it is a usefulness which relates to mechanics, the modification or control of physical forces. On the other hand, the subject of a design patent may also be useful in an entirely different sense or direction, and I think the word 'useful' in the statute . . . is employed in a different sense. The subject of invention, so far as form, or shape, or configuration is concerned, must be useful in the sense that it tends to promote pleasure, refinement, comfort, depending upon the sense of the beautiful; it must be useful in the sense that it must not be mischievous, obscene, or tending to produce evil or wicked reflections. . . . Congress, by its legislation upon the subject of mechanical and design patents, had clearly marked out two separate and distinct fields of invention, which were purposely made separate and distinct from each other . . ."; SHOEMAKER, *supra* note 36, at 132 ("Some courts have declared that the word 'useful' in the patent law, is in contradistinction to 'mischievous.' The invention should be of some benefit. A design, if not 'mischievous' is useful if it attracts persons to it or to articles made like it. It may not be of great artistic excellence, but if it be attractive it is useful."); WILLIAM SYMONS, *THE LAW OF PATENTS FOR DESIGNS* 18–19, 19 n.1, 20–21 (1914).

60. 81 U.S. 511 (1871).

61. *Id.* at 524–25.

62. *Gorham*, although decided in 1871, applied the 1842 and 1861 Acts and did not refer to the 1870 Act. *See id.*

63. 105 U.S. 94 (1882).

The design patented by the complainants differs essentially from any other which has been called to our attention . . . Whether it is more graceful or beautiful than older designs is not for us to decide. It is sufficient if it is new and useful. The patent is prima facie evidence of both novelty and utility.⁶⁴

Similarly, in *Smith v. Whitman Saddle*,⁶⁵ the Supreme Court reiterated that utility could be a consideration in design patentability. The Court explained that “[t]he first three of [the 1870 Act] classes [eligible for design patent protection] plainly refer to ornament, or to ornament and utility, and the last to new shapes or forms of manufactured articles”⁶⁶ While noting *Gorham*'s observation that Congress authorized the granting of patents for designs for the purpose of enhancing the appearances of articles, rather than their utility or the manner they were produced,⁶⁷ the Court nonetheless explained:

This language [cited from *Gorham*] was used in reference to ornamentation merely, and moreover the word ‘useful,’ which is in section 4929, was not contained in the act of 1842, under which the patent in *Gorham Co. v. White*, was granted; so that now where a new and original shape or configuration of an article of manufacture is claimed, its utility may be also an element for consideration.⁶⁸

The Court further confused the issue by quoting *Northrup v. Adam*,⁶⁹ which held that

the law applicable to design patents ‘does not materially differ from that in cases of mechanical patents . . . To entitle a party to the benefit of the act, in either case, there must be originality, and the exercise of the inventive faculty. In the one, there must be novelty and *utility*, in the other, originality and *beauty* . . .’⁷⁰

64. *Id.* at 96.

65. 148 U.S. 674 (1893).

66. *Id.* at 678.

67. *Id.*

68. *Id.* (citing *Lehnbeuter v. Holthaus*, 105 U.S. 94). It is also worth noting that the Court's statement that the term “useful” was not included in the 1842 Act was not entirely correct. As noted above, the term “useful” can be found in the 1842 and 1861 Acts, but in another class of protection.

69. 18 F. Cas. 374 (1877).

70. 148 U.S. at 679 (quoting *Northrup v. Adam*, 18 F. Cas. 374) (emphases added).

III. THE 1902 DESIGN PATENT ACT: LEGISLATIVE RECOGNITION OF INTELLECTUAL PROPERTY LAW'S FUNCTIONALITY CHANNELING PRINCIPLE

Lacking clear resolution of the scope of design patent protection, the Patent Office eventually pushed Congress to restore design patent law to its original limited purpose of protecting ornamental features of articles of manufacture. In a letter to the Senate Committee on Patents commenting on draft design patent legislation, PTO Commissioner Frederick Allen advocated reform:

In the proposed section the word 'useful' has been eliminated, and the word 'artistic'⁷¹ has been inserted as qualifying the designs covered by the statute. The reason for this change is, that at the present time the construction given to this statute by the courts has reached this position. After the insertion of the word 'useful' by the act of July 8, 1870,⁷² the Supreme Court of the United States passed upon this question in *Lehnbeuter v. Holtbaus* (105 U. S., 94), and said, speaking of the design in this case: 'It is sufficient if it is new and useful. The patent is prima facie evidence of both novelty and utility.' It is perfectly apparent that any other ruling would have been to remove by construction the word 'useful' from the statute, which was beyond the province of judicial construction.

In *Smith v. Whitman Saddle Co.*, decided at the October term, 1892 (148 U. S., 674), Chief Justice Fuller said: '... the word 'useful,' which is in section 4929, was not contained in the act of 1842, under which the patent in *Gorham Co. v. White* was granted. So that now where a new and original shape or configuration of an article of manufacture is claimed, its utility may be also an element for consideration.' (Citing *Lehnbeuter v. Holtbaus*, 105 U. S., 94.)

Although the Supreme Court has thus indicated, in effect, this, that since the word 'useful' is in the statute it must be an element for consideration, it has never been stated what the consideration is which can be given to utility in respect to a design, and the same court stated with approval in the same opinion the language used by Mr. Justice Brown when district judge for the eastern district of Michigan (148 U. S., p. 679): 'To entitle a party to the benefit of the

71. The draft bill proposed the word "artistic" as a replacement for the work "useful." See S. REP. NO. 57-1139, at 1 (1902) ("The committee approve the bill, but suggest and recommend that it be amended by striking out the word 'artistic' . . . and inserting the word 'ornamental' in lieu thereof."); see also Du Mont, *supra* note 22, at 588–89; Jason J. Du Mont & Mark D. Janis, *Functionality in Design Protection Systems*, 19 J. INTELL. PROP. L. 261, 264–65 n. 13 (2012) [hereinafter *Functionality in Design Protection Systems*].

72. It is unclear why Commissioner Allen wrote that the word "useful" was inserted only in 1870, when it was included in the original 1842 Act and the 1861 Act albeit in a different class of eligible subject matter.

act in either case (mechanical inventions or designs) there must be originality and the exercise of the inventive faculty. In the one there must be novelty and utility; in the other, originality and beauty.'

The court of appeals of the District of Columbia, *in re Tournier* (94 O. G., 2166), speaking of these two Supreme Court decisions, said: 'We do not, however, understand the court as intending to go further than this, and to hold that functional utility is to be regarded as a controlling or even an essential element in a patent for a design. For if so, the design patents would virtually be placed upon the same footing and with the same requirements of patents for mechanical inventions.'

The trouble of late years under this statute has been that inventors who have been unable to show any novel function arising from change of form in their mechanical cases, have sought to obtain design patents for the very same subject-matter that had failed to show any mechanical utility. Things had passed finally to this point, that design patents were asked for to cover a lot of things for which it was perfectly evident that the design-patent act was never intended at the time of its passage.

Recently the United States circuit court of appeals for the second circuit, in the case of *Rowe v. Blodgett* (112 Fed. Rep., 61), affirming the decision of the circuit court, quoted and adopted the language which had been used in the court below, as follows: 'I decide this case upon the broader ground that patents for designs are intended to apply to matters of ornament, in which the utility depends upon the pleasing effect imparted to the eye, and not upon any new function . . . Design patents refer to appearance, not utility. Their object is to encourage works of art and decoration, which appeal to the eye, to the aesthetic emotions, to the beautiful. A horseshoe calk is a mere bit of iron or steel, not intended for display, but for an obscure use, and adapted to be applied to the show of a horse for use in snow, ice, and mud. The question an examiner asks himself while investigating a device for a design patent is not 'What will it do?' but 'How does it look?' 'What new effect does it produce upon the eye?' The term 'useful' in relation to designs means adaptation to producing pleasant emotions. 'There must be originality and beauty. Mere mechanical skill is not sufficient.'

The present situation, then, is this: We have the word 'useful' in the statute. The Supreme Court says consideration must be given to it, and now the court says as to the nature of the consideration to be given to it that the term 'useful' is 'adaptation to producing pleasant emotions.' This is something very different from mechanical utility. This is best set forth in the statute if we erase the word 'useful' and insert the word 'artistic,' which is done in the proposed statute.

It is thought that if the present bill shall become a law the subject of design patents will occupy its proper philosophical position in the field of intellectual production, having upon the one side of it the statute providing protection to mechanical constructions possessing utility of mechanical function, and upon the other side the copyright law, whereby objects of art are protected, reserving to itself the position of protecting objects of new and artistic quality pertaining, however, to commerce, but not justifying their existence upon functional utility. If the design patent does not occupy this position there is no other well-defined position for it to take. It has been treated of late years as an annex to the statute covering mechanical cases, since the introduction of the word 'useful' into it. It is thought that this practice should no longer continue.⁷³

Against this backdrop of confusion and disarray,⁷⁴ Congress passed legislation deleting the word "useful" from the design patent statute and replacing it with "ornamental."⁷⁵ Congress also consolidated the several classes of eligible works into a design for an "article of manufacture."⁷⁶ Under the new Act, "[a]ny person who has invented any new, original, and ornamental design for an article of manufacture" could apply for a design patent.⁷⁷ These and additional changes in the Act⁷⁸ aimed to shift the focus of design patents to appearances and ornamentality.⁷⁹ The bill passed both the Senate and the

73. S. REP. NO. 57-1139, at 2–3 (1902).

74. See Du Mont, *supra* note 22, at 588–89.

75. See Hudson, *supra* note 16, at 389–90; Kelsey Martin Mott, *The Standard of Ornamentality in the United States Design Patent Law*, 48 A.B.A.J. 548, 550 (1962); Du Mont, *supra* note 22, at 588–89; *Functionality in Design Protection Systems*, *supra* note 71; SYMONS, *supra* note 59, at 13–14, 18–19.

76. The consolidating term "article of manufacture" for the several alternative classes of protection was adopted based on an amendment from 1887 to Section 289 of the act in relation to infringement remedies. See Hudson, *supra* note 16, at 389; Sarah Burstein, *The Article of Manufacture in 1887*, 32 BERKELEY TECH. L.J. 1, 3 (2017).

77. Act of May 9, 1902, ch. 783, sec. 4929, 32 Stat. 193.

78. See Du Mont, *supra* note 22, at 589–90.

79. See 1902 ANN. REP. COMM'R PATS., at viii (stating the 1902 Act's intent was to clarify that design patents did not protect unimportant mechanical devices unaccompanied by the development of new mechanical functions and that design patents were restricted to manufactured articles' ornamental characteristics that were originally intended to be protected); see also Du Mont, *supra* note 22, at 590 ("Perhaps illustrative of how design patents were granted at a lower patentability threshold, or on account of their functional attributes, from 1901 to 1902 the Patent Office had its largest drop in design patent grants . . .").

House unanimously without substantive discussion or input from the professional community.⁸⁰ The 1902 Act's essential language still holds today.⁸¹

The Senate Report explains the rationale for the reforms—to delineate a clear boundary between design and utility patents and to defuse the confusion caused by the word “useful”:

The object sought by the proposed amendment is to conform the existing law to the manifest requirements of design patent law as distinguished from the law governing the subject of mechanical patents. Under existing law the courts have been compelled to strain the meaning of the word ‘useful’ to its utmost limit in order not to do injustice to design patentees, and in some instances the purpose of Congress in enacting design patent legislation has been conspicuously evaded and aborted because of the inappropriate language found in the Revised Statutes bearing on the subject of design patents.⁸²

The Senate Report reproduced PTO Commissioner Allen's letter supporting the reforms and explaining the underlying rationale.⁸³ Along similar lines, the House Report explained:

Under the existing statute the United States Supreme Court has said that consideration may be given to the word ‘useful’ in the granting

80. See Harold Binney, *Present Status of the Law Relating to Designs*, 25 ANN. REP. A.B.A. 662, 662 (1902); see also Du Mont, *supra* note 22, at 590 n.350 (“The chairman of the House Committee had asked for the Patent Law Association's input on the bill. However, the local patent bars never had an opportunity to submit their findings to Congress because the bill was inadvertently allowed to move forward. Indeed, the bill was passed unanimously in the Senate and House without any substantive discussion at all. After the Patent Law Association contacted the House Committee chairman, he apologized for the oversight and contacted the Secretary of the Interior. A brief was submitted by the members of the House Committee and the Patent Law Association to the Secretary of the Interior prior the bill's signature by the President. As one might guess, over 90% of the Patent Law Association's members were opposed to the bill because of the perceived subject matter change. The day after the brief was submitted to the Assistant Attorney General—to whom the matter was referred by the Secretary of the Interior—the bill was signed by the President.” (internal citations omitted)).

81. Compare 35 U.S.C. § 171(a) (“Whoever invents any new, original and ornamental design for an article of manufacture may obtain a patent therefor, subject to the conditions and requirements of this title.”), with Act of May 9, 1902, ch. 783, sec. 4929, 32 Stat. 193 (“Any person who has invented any new, original, and ornamental design for an article of manufacture . . . may . . . obtain a patent therefor.”). It should be noted, however, that during those years between 1842 to 1902, the Act went through several amendments, and while the requirement that a design be “useful” remained in the act throughout, in the 1870 amendment it changed its location from one class of protection to another. See *infra* note 138 and related discussion.

82. S. REP. NO. 57-1139, at 1 (1902).

83. *Id.* at 1–3.

of a patent. Other courts in attempting to define what consideration shall be given to the word ‘useful,’ define it as ‘adaptation to producing pleasant emotions.’ This has nothing whatever to do with mechanical utility. This state of affairs has brought into the Patent Office much contention and some confusion. *To avoid these difficulties and to make plain the distinction between mechanical patents, where ‘utility’ is an essential element, and design patents, where ‘utility’ has nothing to do with it, but where ornamentation is the proper element of consideration, the amendment offered by this bill is proposed.*⁸⁴

A contemporary practitioner and commentator viewed the 1902 Act as significantly narrowing the scope of design patent protections as regards to minimalist designs:

It would seem then that certainly wherever the aesthetic sense is involved in a design either in respect to ornament, or in respect to the beauty that flows from the *mere neatness and fitness of shapes*, the statute before amendment certainly afforded protection; whereas, now the requirement ‘ornamental’ would seem incapable of so broad a meaning. There is certainly a class of designs wherein neatness or fitness of shape is evolved solely for the purpose of improved appearance or attractiveness, and yet where ornamentation is neither sought for nor present. This field of effort the amended statute leaves unprotected. Secondly, while it is debatable whether merely useful shapes where utility and not appearance is the sole object, were or were not protected under the statute, it is quite certain now that neither the saddle of the *Whitman* case nor the showcase of *Lehnbeuter vs. Holtbaus* would be protected under the amended statute.⁸⁵

IV. JUDICIAL INTERPRETATION OF THE 1902 ACT’S CHANNELING PRINCIPLE: WAYWARD DRIFT BACK INTO CONFUSION

The 1902 legislation clarified Congress’s intent to reinforce the *channeling principle* as between design and utility patents by replacing the word “useful” with “ornamental.”⁸⁶ This change sought to limit design patents to original

84. H.R. REP. NO. 57-1661 (1902) (emphasis added).

85. Binney, *supra* note 80, at 669 (emphasis added).

86. See *Functionality in Design Protection Systems*, *supra* note 71, at 265 (“Commissioner Allen seemed to view the ornamentality criterion as an important channeling device, ensuring that design patent law would occupy ‘its proper philosophical position in the field of intellectual production’” (citing S. REP. NO. 57-1139, at 3 (1902)); *In re Sherman*, 35 App. D.C. 100, 101 (1910) (“The right to a design patent . . . depends upon whether the person applying ‘has invented any new, original, and ornamental design for an article of manufacture, not known or used by others in this country before his invention thereof,’ etc. Prior to May 9th, 1902,

ornamental features and channel functional advances to the utility patent regime.⁸⁷ The 1952 Patent Act retained the 1902 Act approach.⁸⁸ Yet, as reflected in the *Apple v. Samsung* controversy⁸⁹ and countless other cases,⁹⁰ modern courts allow design patent protection to cover functional features of articles of manufacture.

In modern jurisprudence, a design is ornamental and not functional so long as it is not “dictated solely” or “primarily” by functional considerations, thereby affording design patent protection for functional features that meet this ambiguous bar.⁹¹ Such standards directly contradict the unmistakable intent of Congress.

when said section was amended, the invention must have comprised a ‘new, useful, and original shape or configuration of any article of manufacture.’ . . . It will be observed that in the statute as amended the word ‘useful’ is omitted and the word ‘ornamental’ is inserted. It would seem that the purpose of this change was to more carefully differentiate design patents from mechanical patents.”).

87. But it seems that in the early years after 1902 there was some ambiguity as to whether cases decided prior to the 1902 Act, which allowed utility considerations in questions of design patentability, continued to apply after the 1902 amendment. *See, e.g., In re Sherman*, 35 App. D.C. 100, 101 (1910) (“It would seem that the purpose of this change was to more carefully differentiate design patents from mechanical patents. *While in a close case utility may be given some consideration*, the real question is whether there is such originality shown as to call for the exercise of the inventive faculty.” (emphasis added)); *SHOEMAKER*, *supra* note 36, at 130 (“The consensus of legal opinion, however, is that while utility may be considered, it is not an important factor in the determination of design patentability, but is reserved for consideration in a close case.”); *SYMONS*, *supra* note 59, at 21–22.

88. *See* 35 U.S.C. § 171 (“Patents for designs. (a) In General.—Whoever invents any new, original and ornamental design for an article of manufacture may obtain a patent therefor, subject to the conditions and requirements of this title.”).

89. *See infra* Section V(D).

90. *See infra* Sections V(B), V(C), V(E).

91. *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123 (Fed. Cir. 1993) (“[T]he design of a useful article is deemed to be functional when the appearance of the claimed design is ‘dictated by’ the use or purpose of the article. . . . [P]atented design must be *primarily ornamental* . . .” (internal citations omitted) (emphases added)); *Best Lock Corp. v. Ilco Unican Corp.*, 94 F.3d 1563, 1566 (Fed. Cir. 1996) (“[I]f the design claimed in a design patent is *dictated solely* by the function of the article of manufacture, the patent is invalid because the design is not ornamental.” (emphases added)); *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1293–94 (Fed. Cir. 2010) (“[A] design patent, unlike a utility patent, limits protection to the ornamental design of the article. If the patented design is *primarily functional* rather than ornamental, the patent is invalid However, when the design *also* contains ornamental *aspects*, it is entitled to a design patent whose scope is limited to those aspects alone and does not extend to any functional elements of the claimed article.” (internal citations omitted) (emphasis added)); *Auto Body Parts Ass’n v. Ford Glob. Techs., LLC*, No. 2018-1613, 2019 U.S. App. LEXIS 21883, at *5 (Fed. Cir. July 11, 2019) (“[E]stablished law bars design patents on *primarily functional* designs for lack of ornamentality Our precedent gives weight to . . .

How did courts veer so badly off course? This Section explains the inadvertent and inattentive drift that underlies the problem. Rather than referring back to the 1902 legislation, courts gradually lost their compass and, through a flawed common law evolution, developed standards that not only diverged from Congress's clear intent but also contradicted the Supreme Court's seminal intellectual property channeling principle enunciated in *Baker v. Selden*.⁹²

In the first few decades following the 1902 Act, courts sought to evaluate the question of ornamentality directly, focusing on either the manifestation of artistic beauty and aesthetic appeal⁹³ or by addressing the question of visibility,

[the] language [of Section 171 of Title 35], holding that a design patent must claim an 'ornamental' design, *not one 'dictated by function' . . .*" (emphasis added) (internal quotation marks omitted)).

92. 101 U.S. 99 (1879).

93. See J.H. Carnes, *Rules 79 to 84*, 2 J. PAT. OFF. SOC'Y 204, 205 (1919) ("The word ornamental as used in connection with articles of manufacture indicates an article which produces a pleasing appearance on the eye of the observer. It is sometimes stated that if the article of manufacture is beautiful it is also ornamental within the meaning of the statute. The appearance may be grotesque, bizarre, or even ludicrous, and yet be ornamental within the meaning of the statute. Such effects have to the beautiful a relation similar to what in music discords have to concords. They both form part of a larger whole that may be properly comprehended under the terms beauty or harmony, respectively. The pleasing effect produced on the eye must involve invention in order to be patentable."); SYMONS, *supra* note 59, at 14 ("If the object produced is beautiful, it is 'ornamental' within the meaning of the statute. A thing may also be beautiful and therefore ornamental in the sense here used if it is grotesque, bizarre, or ludicrous. The design is 'ornamental' if it appeals to the esthetic emotions. But although it must be 'a thing of beauty' it is not necessary that it show any high degree of esthetic excellence."); see *Functionality in Design Protection Systems*, *supra* note 71, at 264. Later cases shifted away from this approach and focused on conventional aesthetic beauty. See, e.g., *In re Stimpson*, 24 F.2d 1012, 1012 (C.A.D.C. 1928) (invalidating a design patent because it was "lacking in symmetry, wanting in grace, and destitute of any appeal to the senses or emotions"); *In re Koehring*, 37 F.2d 421, 422 (C.C.P.A. 1930) ("[T]he beauty and ornamentation requisite in design patents is not confined to such as may be found in the 'aesthetic or fine arts.'"); *Blisscraft of Hollywood v. United Plastics Co.*, 294 F.2d 694, 696 (C.A.N.Y. 1961) (denying a design patent for a plastic pitcher for lacking a "dominant artistic motif" and for failing to be "the product of aesthetic skill and artistic conception"); see also Perry J. Saidman & John M. Hintz, *The Doctrine of Functionality in Design Patent Cases*, 19 U. BALT. L. REV. 352, 352–53 (1989); William T. Fryer III, *Industrial Design Protection in the United States of America—Present Situation and Plans for Revision*, 70 J. PAT. & TRADEMARK OFF. SOC'Y 820, 831–33 (1988).

namely, the “matter of concern” test.⁹⁴ This approach, however, put judges in the uncomfortable role of an art critic.⁹⁵

As an alternative, courts shifted their focus to the question of functionality—which became the prevalent test.⁹⁶ Early cases correctly invalidated design patents that were solely dictated by functionality, but unfortunately, later decisions misinterpreted these decisions to hold that design patents are available *so long as* articles of manufacture are not “solely” or “primarily” dictated by functionality. Some later courts lost the compass that Congress provided and set upon a treacherous course that undermined the coherence of the intellectual property system. As Part V explains, the Federal Circuit ultimately went down this mistaken path.

94. See *Functionality in Design Protection Systems*, *supra* note 71, at 269. This test is still referenced today. See Sarah Burstein, *Is Design Patent Examination Too Lax?*, 33 BERKELEY TECH. L.J. 607, 621–24 (2018); U.S. PAT. & TRADEMARK OFF., MANUAL OF PATENT EXAMINING PROCEDURE § 1504.01(c)(III) (2018).

95. See *H.C. White Co. v. Morton E. Converse & Sons Co.*, 20 F.2d 311, 312 (2d Cir. 1927) (Hand, J.) (invalidating a design patent on a tricycle on the grounds that the design “has neither proportion, ornament, nor style, which could in our judgment make remotest appeal to the eye,” despite recognizing that “in aesthetics there are no standards” and “that the design need not please such sensibilities as we may personally chance to possess”); E.S. Allen, *Design Patentability*, 9 J. PAT. OFF. SOC'Y 298, 299, 302 (1927) (lamenting that “[i]n no branch of the Patent Office service is there more opportunity for arbitrary judgment on the part of administrative officials, and in no branch is there a more hazy and indefinite line of decisions from which to endeavor to extract principles and rules which should lead to the establishing of definite standards of what is, and what is not, patentable in the way of a design,” while observing that “[t]he thought of the comparison of the very thin watch and a very thin clock model is illustrative of the fact that what might be inventive for one class of articles would not be invention for another”); *cf.* *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 251 (1903) (Holmes, J.) (warning in a copyright case that “[i]t would be a dangerous undertaking for persons trained only to the law to constitute themselves final judges of the worth of pictorial illustrations, outside of the narrowest and most obvious limits”).

96. See *Functionality in Design Protection Systems*, *supra* note 71, at 271; SHOEMAKER, *supra* note 36, at ch. VII; see also *Best Lock Corp. v. Ilco Unican Corp.*, 94 F.3d 1563, 1567 (Fed. Cir. 1996) (Newman, J., dissenting) (“Recognizing that ornamentation is in the eye of the beholder, the courts have sought a more objective standard in the general rule that a design is ‘ornamental’ for purposes of 35 U.S.C. 171 when it is not primarily functional.”); Christopher J. Gaspar, *The Federal Circuit Locks Down the Ornamentality Requirement: Best Lock v. Ilco Unican*, 23 J. CORP. L. 179, 182 (1997) (“According to the most recent pronouncements by the Federal Circuit, ‘ornamental’ means ‘not primarily functional.’ The court now defines the ornamentality of a claimed design solely in terms of its functionality or lack thereof. To put it another way, the Federal Circuit views functionality and ornamentality as mutually exclusive characteristics.”).

A. THE ORNAMENTALITY STANDARD

Early cases indeed contradistinguished the two design qualities—ornamental and useful.⁹⁷ In *Ex parte Hartshorn*, Commissioner Allen rejected an application for a design of a wooden-shaped roller, observing:

[T]here does not appear to be in this case anything present created by invention and placed upon this article of manufacture for the purpose of ornamentation. The subject-matter of a design patent is wholly wanting from this case. The construction shown is created for the accomplishment of a mechanical result, and while it would have been possible to place upon this article some ornamental design for its embellishment the construction presented here seems void of any such design. . . .⁹⁸

In *Rowe v. Blodgett & Clapp Co.*,⁹⁹ an earlier case cited in the legislative history of the 1902 Act,¹⁰⁰ the court denied a design patent for a horseshoe calk¹⁰¹ on similar grounds:

I decide this case upon the broader ground that patents for designs are intended to apply to matters of ornament, in which the utility depends upon the pleasing effect imparted to the eye, and not upon any new function . . . It is significant, in this connection, that the patentee first applied for this essential feature . . . as a mechanical invention, which application was rejected, and that he then attempted to cover the same feature by a design patent. Design patents refer to appearance, not utility. Their object is to encourage works of art and decoration which appeal to the eye, to the aesthetic emotions, to the beautiful. A horseshoe calk is a mere bit of iron or steel, not intended for display, but for an obscure use, and adapted to be applied to the shoe of a horse for use in snow, ice, and mud.¹⁰²

97. Such interpretation seems a return to the Act's origins. *See, e.g., Ex parte Crane*, 1869 Dec. Comm'r Pat 7 ("The construction which has been given to that act by the office, ever since its passage in 1842, is that it relates to designs for ornament merely; something of an *artistic* character as contradistinguished to those of convenience or utility.?).

98. 104 O.G. 1395 (1903), *reprinted in* DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS IN PATENT AND TRADE-MARK AND LABEL CASES 138 (1904).

99. 112 F. 61 (2d Cir. 1901).

100. *See* S. REP. NO. 57-1139, at 2–3 (1902).

101. A horseshoe calk (or caulkin) is a blunt projection on a horseshoe that is often forged, welded, or brazed onto the shoe to improve a horse's balance and grip over uneven surfaces. *See Caulkin*, WIKIPEDIA, <https://en.wikipedia.org/wiki/Caulkin> (last visited Nov. 20, 2020).

102. *Rowe*, 112 F. at 62. For similar decisions, see *Marvel Co. v. Pearl*, 114 F. 946 (C.C.S.D.N.Y. 1902); *Eaton v. Lewis*, 115 F. 635 (C.C.S.D.N.Y. 1902); *Bradley v. Eccles*, 126 F. 945 (2d Cir. 1903); *Williams Calk Co. v. Neverslip Mfg. Co.*, 136 F. 210, 215 (C.C.M.D. Pa. 1905); and *Williams Calk Co. v. Kemmerer*, 145 F. 928 (C.C.M.D. Pa. 1906); *see also* SYMONS, *supra* note 59, at 15–16 (collecting cases).

In *Weisgerber v. Clowney*,¹⁰³ two patents relating to a rolling chair, a utility patent and a design patent, were asserted in an infringement action. The court noted that “the attempt to patent a mechanical function, under cover of a design, is a perversion of the privilege given by the statute.”¹⁰⁴ In overturning the validity of the design patent, the court explained that among other reasons: “The extension of the back and sides of the chair, by which screens for the wheels are formed, is functional rather than ornamental. . . .”¹⁰⁵

Other early cases explicitly pronounced the supremacy of utility patents and recognized that functionality is a channeling principle for distinguishing between utility and design patents. In *Royal Metal Manufacturing Co. v. Art Metal Works*,¹⁰⁶ for example, when discussing an infringement claim relating to the design of a belt, the court found:

The principal things [of the design in question] are the downward dip in front, which appears to have been old, and the shape of the triangular front pieces to produce it by the angular attachments to the bands. *This effect is mechanical. Design patents cover appearances only. A monopoly of operating devices can be secured only by a mechanical patent.*¹⁰⁷

Similarly, the Patent Commissioner in *Ex parte Nickel and Crane*¹⁰⁸ noted:

Since the differences from the prior devices do not add to the beauty of the device, but merely adapt it to perform new functions, *they do not patentably distinguish them as designs. If they involve novelty and the exercise*

103. 131 F. 477 (1904).

104. *Id.* at 480. For similar language, see *Marvel*, 114 F. at 946 (“The design patent sued on in this cause is another instance of a perversion of the statute. Patents for designs are intended to apply to matters of ornament, in which the utility depends upon the pleasing effect imparted to the eye, and not upon any new function. Syringes . . . are not bought because of their artistic beauty, but because they are mechanically useful.” (internal citations omitted)); *Neverslip*, 136 F. at 215 (citing *Weisgerber*); and *Star Bucket Pump Co. v. Butler Mfg. Co.*, 198 F. 857, 863 (W.D. Mo. 1912) (citing *Weisgerber*).

105. *Weisgerber*, 131 F. at 480–81; see also SHOEMAKER, *supra* note 36, at 136–37 (“Any peculiarity of appearance due to configuration designed and employed for the performance of the mechanical result must be eliminated from consideration in determining design patentability” (citing *Ex parte Kern*, 105 O.G. 2061 (1903)).

106. 121 F. 128, 129 (C.C.S.D.N.Y. 1903).

107. *Id.* (emphasis added); see also *Roberts v. Bennett*, 136 F. 193, 194–95 (2d Cir. 1905) (finding that the design patent for a basket with handles was almost identical in shape to the claimant’s prior utility patent; noting that “[f]unctional utility entitled the patentee to the mechanical patent already discussed, but mere functional utility did not entitle him to a design patent for the same article” and “[t]he term ‘useful’ in relation to designs means adaptation to producing pleasant emotions” (citing *Rowe v. Blodgett & Clapp Co.* 103 Fed. 873, 874 (2d Cir. 1901) (some citations omitted)).

108. 109 O.G. 2441 (1903), reprinted in DECISIONS OF THE COMMISSIONER OF PATENTS IN PATENT AND TRADE-MARK AND LABEL CASES, H.R. DOC. NO. 426, at 137 (1905).

*of the inventive faculty, they must be placed in the class of mechanical inventions, which must be protected under section 4886 of the Revised Statutes, and not in the class of designs.*¹⁰⁹

Around the same time, the district court in *Rose Mfg. Co. v. E. A. Whitehouse Mfg. Co.*¹¹⁰ recognized the potential for abuse of the design patent regime to protect mechanical inventions resulting from the advent of photography. In invalidating a design patent for a lamp bracket that was the subject of a utility patent, the court derisively explained that

[a] valid design patent does not necessarily result from photographing a manufactured article and filing a reproduction of such photograph properly certified in the patent office. . . . Indeed, every feature of these patents is mechanical and functional, and not ornamental. Even ordinary rivet heads are made to appear as beautiful circles in this scheme of ornamentation. If, moreover, the braces or supports of patent No. 41,389 were intended for ornamentation, they apparently failed in their mission, but, if otherwise, then every piece of mechanism can, with the aid of photography and the machinery of the Patent Office, be readily crystallized into a design patent.¹¹¹

In 1920, the Second Circuit in *Baker v. Hughes-Evans Co.*¹¹² also confronted the interplay of the utility and design patent regimes and offered a succinct and insightful resolution. The patentee sought to enforce both a utility and a design patent for an inset soap dish wall receptacle with a protruding lip that could be used as a handle.¹¹³

109. *Id.* (emphasis added); see *Ex parte Knothe*, 102 O.G., 1294 (1903) (“Forms modeled only to develop function may receive protection under section 4886, Revised Statutes, if they are functionally distinguishable from other existing forms, and when they cannot stand this test they are not worthy of the protection of the patent law, but are mere changed forms changed for no useful purpose Changed forms which do not produce ornamental effects and which develop no new functions do not promote the progress of the useful arts and are outside of the constitutional power of congress to afford protection to them.”), cited in W.L. POLLARD, DIGEST OF DECISIONS OF LAW AND PRACTICE IN THE PATENT OFFICE AND THE UNITED STATES AND STATES COURTS IN PATENTS, TRADE-MARKS, COPYRIGHTS AND LABELS 1897–1912, at 103 (1912).

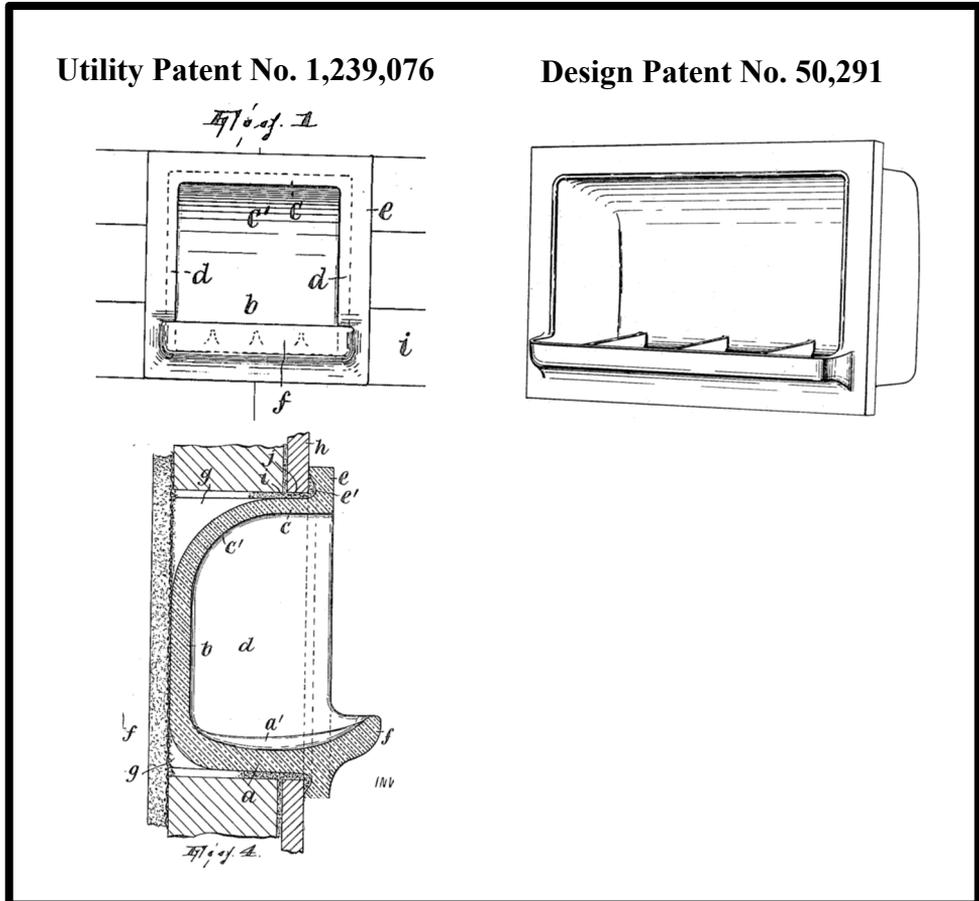
110. 201 F. 926 (D.N.J. 1913).

111. *Id.* at 929–30.

112. 270 F. 97 (2d Cir. 1920).

113. See U.S. Patent No. 1,239,076 (issued Sept. 4, 1917); U.S. Design Patent No. 50,291 (issued Feb. 13, 1917).

Figure 2: Baker Soap Receptacle Patents



In ruling that the design was ineligible for a design patent, the court explained that

the lip receptacle is open to the criticism that its desirable features are functional rather than ornamental. *Weisgerber v. Clowney* (C.C.) 131 Fed. 477. It is true, as pointed out in *Bayley, etc., Co. v. Standart, etc., Co.*, 249 Fed. 478, 161 C.C.A. 436, that the same device or article may exhibit patentable mechanical invention and a patentable design; but it is not true that the design can ever be used to appropriate (per se) the mechanical function. The two inventions must be separable; otherwise, it would be a contradiction in terms to grant two patents for them.¹¹⁴

114. *Baker*, 270 F. at 99 (emphasis added) (citation omitted); see also *Work of the Education Committee*, 3 J. PAT. OFF. SOC'Y 396, 403 (1921) ("If the feature in which the novel esthetic

The court's recognition that a design patent can *never* be used to appropriate a mechanical function aligns with the Supreme Court's fundamental insight in *Baker v. Selden*¹¹⁵ that it would be a "surprise and fraud upon the public" to grant the author of a book "an exclusive property in the art described."¹¹⁶ Such is the exclusive province of the utility patent regime. Furthermore, the Second Circuit's recognition in *Baker v. Hughes-Evans Co.* that the functional and ornamental features must be *separable* parallels the separability limitation on the scope of copyright protection for useful articles.¹¹⁷

Some cases ruled that various categories of articles of manufacture were categorically excluded from design patent protection. The First Circuit reasoned in *Theodore W. Foster & Bro. Co. v. Tilden-Thurber Co.*¹¹⁸ that the 1902 Act did not bar design patents "if the ornamental character consists merely in a new and original shape or configuration given to the article."¹¹⁹ However, the court nonetheless noted that "design patents refer to appearance, not utility"¹²⁰ and that

effect resides is the identical feature which produces the novel function, so that a structure embodying the mechanical invention would, of necessity, embody the design, and vice versa, it is questionable whether two separate patents, one for a design, the other for a mechanical patent, should issue; for neither patent could be practised without infringing the other. In such a situation one patent would necessarily afford complete protection against all infringers" (citing *Bayley & Sons, Inc. v. Standart Art Glass Co.*, 249 F. 478 (2d Cir. 1918)).

115. 101 U.S. 99 (1879).

116. *Id.* at 102 ("To give to the author of the book an exclusive property in the art described therein, when no examination of its novelty has ever been officially made, would be a surprise and a fraud upon the public. That is the province of letters-patent, not of copyright. The claim to an invention or discovery of an art or manufacture must be subjected to the examination of the Patent Office before an exclusive right therein can be obtained; and it can only be secured by a patent from the government."). "Letters-patent" refers to the utility patent regime.

117. *See* 17 U.S.C. § 101 (limiting protection of "[p]ictorial, graphic, and sculptural works" to "artistic craftsmanship insofar as their form but not their mechanical or utilitarian aspects are concerned; the design of a useful article . . . shall be considered a pictorial, graphic, or sculptural work only if, and only to the extent that, such design incorporates pictorial, graphic, or sculptural features that can be identified *separately* from, and are capable of existing independently of, the utilitarian aspects of the article." (emphasis added)). We explore this doctrine in Section VII(A)(1).

118. 200 F. 54 (1st Cir. 1912).

119. *Id.* at 56.

120. *Id.* (quoting *Rowe v. Blodgett*, 103 Fed. 873 (C.C.D. Conn. 1901)); *see also* *Pashek v. Dunlop Tire & Rubber Co.*, 8 F.2d 640, 640–41 (N.D. Ohio 1925) ("[A]n automobile tire tread is not a proper subject for a design patent. . . . The tread surface is broken up and given certain characteristics for reasons of function and utility. . . . Ornamentation and decoration have little if any relation thereto In use the tire tread is not intended to be ornamental or decorative. It is intended for hard wear upon rough surfaces and under all conditions of mud and weather.").

among articles of manufacture there are some incapable of being the subjects of design patents, for want of reason to suppose that their appearance can ever really matter to anybody. Examples of this class are, besides horseshoe calks, syringes, plates joining the ends of machine belts, and thill couplings; also ribbon spools for typewriting machines, and insulating plugs. The shape or configuration of such articles can have value only in so far as it may make them more useful.¹²¹

The court allowed that a “design for an article of manufacture not belonging to this class” was eligible for a design patent if it was novel, original, and ornamental.¹²² Somewhat confusingly, however, the court commented that such a design patent could “give the manufactured article . . . greater utility than any previously used.”¹²³ Importantly, the court then qualified that statement by noting that “[s]uch a patent, indeed, would cover the new shape or configuration only in its ornamental and not in its merely useful aspect, nor would it be infringed by an article securing the same merely useful result through shape or configuration, unless so nearly the same in appearance as to come within *Gorham Co. v. White*.”¹²⁴ This significant caveat presaged Judge Learned Hand’s seminal copyright decision in *Nichols v. Universal Studios*,¹²⁵ which emphasized the need to filter out unprotectable features of copyrighted works in conducting infringement analysis.¹²⁶

Other early cases considered whether the commercial success of an article of manufacture could be attributed to ornamentality or utility.¹²⁷ In *Ex parte Marsh*,¹²⁸ for example, the Patent Commissioner held that the commercial success of a device used in the kitchen to extract grease from waste water was

121. *Theodore W. Foster & Bro. Co.*, 200 F. at 56 (citations omitted) (citing *Rowe v. Blodgett & Clapp Co.*, 112 F. 61 (2d Cir. 1901)); *Williams Calk Co. v. Neverslip Mfg. Co.*, 136 F. 210 (C.C.M.D. Pa. 1905); *Williams Calk Co. v. Kemmerer*, 145 F. 928 (3d Cir. 1906); *Wagner Typewriter Co. v. F. S. Webster Co.*, 144 F. 405 (C.C.S.D.N.Y. 1906); *Williams v. Syracuse & S. R. Co.*, 161 F. 571 (C.C.N.D.N.Y. 1908)); *see also* *Bradley v. Eccles*, 126 F. 945 (2d Cir. 1903) (discussing the inherent lack of design patentability of a design for a washer for thill-couplers).

122. *Theodore W. Foster & Bro. Co.*, 200 F. at 56.

123. *Id.*

124. *Id.* (citations omitted).

125. 45 F.2d 119 (2d Cir. 1930).

126. *See id.* at 121. The Second Circuit generalized Judge Hand’s abstraction-filtration-comparison framework in *Computer Associates International v. Altai, Inc.*, 982 F.2d 693 (2d Cir. 1992), a case which has been influential in addressing the proper scope of copyright protection in computer software cases. *See* Peter S. Menell, *Rise of the API Copyright Dead?: An Updated Epitaph for Copyright Protection of Network and Functional Features of Computer Software*, 31 HARV. J.L. & TECH. 303, 329–30, 334–36 (2018). We explore the relevance of copyright’s limiting doctrines to design patent law in Part VI.

127. *See* SHOEMAKER, *supra* note 36, at 112–13.

128. 322 O.G. 501 (1924).

not sufficient evidence that its value lies in its appearance, as such success depends more upon its functional characteristics.¹²⁹ Similarly, in *Follen v. Lambert Tire & Rubber Co.*,¹³⁰ where the design patent claimed a tire tread surface, the district court concluded that prospective purchasers were motivated principally by the tire's mechanical advantages, rejecting the assertion that the tire appearance accounted for fifty percent of the sales.¹³¹

In other contexts, however, courts found that the ornamental features drove the sales of useful articles and accorded design patent protection. In *General Gaslight Co. v. Matchless Manufacturing Co.*, the court determined that “[t]he evidence establishes beyond doubt that the lamp under consideration met with immediate favor from the public on account of its artistic construction. . . . [The design’s] ornate appearance and novel shape quickly achieved popularity.”¹³² Similarly, the Eighth Circuit in *Boyle v. Rousso* concluded that “[t]he evidence . . . successfully established that [the article of manufacture] proved pleasing and attractive to the eyes of the purchasers of the towel cabinet it described, for they were many and its manufacture and sale was a remarkable commercial success.”¹³³

The design patent regime applied with relative ease to surface ornamentation of articles of manufacture or decorative items.¹³⁴ The application of the ornamentality doctrine to the shape of useful articles

129. *Id.*; see also *Bradley v. Eccles*, 126 F. 945, 949 (2d Cir. 1903) (“The washer, like the horseshoe calk, is not intended for display, but for an obscure use. There is no evidence that its form appeals in any way to the eye, or serves to commend it to purchasers and users as a thing of beauty. There is not a scintilla of evidence that the sale of a single washer was ever induced by reason of any attractiveness in its appearance.”); *Bayley & Sons, Inc. v. Standart Art Glass Co.*, 249 F. 478, 480 (2d Cir. 1918) (“[T]he evidence wholly fails to show whether success is due to the mechanical excellence of the whole article, or the pleasing shape of [it]”); *Circle S Prods. Co. v. Powell Prods.*, 174 F.2d 562, 564 (7th Cir. 1949) (addressing defendants’ reliance “upon commercial success and cases which have held or intimated that in the case of design patents it is ‘a test of patentability.’ The commercial success which they claim for their product we think is of little, if any, benefit in the instant matter. . . . [T]here is nothing in the record to show what portion of the asserted success was due to the mechanical or utility features of the device and what, if any, was attributable to the design.” (internal citations omitted)).

130. *Follen v. Lambert Tire & Rubber Co.*, 8 F.2d 303, 303–04 (N.D. Ohio 1925); SHOEMAKER, *supra* note 36, at 112–13.

131. *Follen*, 8 F.2d at 303–04.

132. 129 F. 137, 139 (C.C.S.D.N.Y. 1904).

133. 16 F.2d 666, 668 (8th Cir. 1926).

134. See SHOEMAKER, *supra* note 36, at 126 (“Where articles are designed for the sole purpose of ornamentation, no question can arise concerning their mechanical function. A badge would fall under this class, also a chain, a necklace, a comb for the hair, a picture frame, etc.”); SYMONS, *supra* note 59, at 14–15 (“There are many articles which all agree are ornamental objects clearly entitled to protection under the design law, such as watch cases, spoons, medals, vases, various kinds of glassware, and many other articles.”).

presented greater difficulty, but even here there was relatively wide agreement that industrial tools and mechanical articles were outside of design patent subject matter.¹³⁵ Nonetheless, it was “well-established” by the mid-1920s that a design patent on an article could not be denied simply because that article had a mechanical or functionality utility.¹³⁶

B. ORIGINS OF THE “DICTATED BY” “UTILITARIAN,” “MECHANICAL,” OR “FUNCTIONAL CONSIDERATIONS” PHRASEOLOGY

The standard for assessing whether a design is within the scope of design patent subject matter evolved over the course of the mid-20th century. As this Section traces, the Second Circuit observed in a relatively straightforward case invalidating a design patent that the design “does not seem to us to have been dictated by other than utilitarian considerations.”¹³⁷ The Seventh Circuit used this formulation in two other straightforward cases. Other courts picked up on this language as well. None of these cases, however, state or even imply that a design that is partially based on functional considerations or in which ornamental elements are inextricably intertwined with functional features are

135. See SHOEMAKER, *supra* note 36, at 126–27 (“There are many structures which are so purely and entirely utilitarian that their ornamentation is a matter of such inconsiderable importance that design patents cannot properly be granted for them. Possibly a frame for a combination lathe, drilling and milling machine is such a device. The United States courts in a number of instances have found design patents invalid because they were based substantially entirely upon a functional feature of a structure.” (citations omitted)); SYMONS, *supra* note 59, at 14–15 (“There are other articles in regard to which there may be strong doubt whether they are proper subject for protection.”).

136. See SHOEMAKER, *supra* note 36, at 128 (citations omitted); *N. British Rubber Co. v. Racine Rubber Tire Co.*, 271 F. 936, 938 (2d Cir. 1921) (“[I]t is not necessarily a fatal objection to a patent of this class that the design itself is exhibited upon a mechanical product devoted to utilitarian purposes, provided that the design per se is (inter alia) the result of invention. But the invention must relate to the design and be distinguishable from that which contrived the mechanical product for commercial purposes.” (citation omitted)); *R. E. Dietz Co. v. Burr & Starkweather Co.*, 243 F. 592, 594 (2d Cir. 1917) (“While design patents are not intended to protect a mechanical function, or to secure to the patentee monopoly in any given mechanism or manufacture as such, it is immaterial that the subject of the design may embody a mechanical function, provided that the design per se is pleasing, attractive, novel, useful and the result of invention. But it is the design that is patented, not the mechanism dressed in the design.” (citation omitted)); *Ashley v. Weeks-Numan Co.*, 220 F. 899, 901 (2d Cir. 1915) (“[T]he subject-matter of a patent is not rendered unfit as a design patent by the mere fact that it is possible somewhere in its construction to discover a mechanical function. . . . The design law was intended to encourage the decorative arts, and therefore deals with the appearance, rather than the structure, uses, or functions, of the article. In a design patent the appearance is the subject-matter of the patent, and the appearance is none the less patentable because a mechanical function is involved. The patentability of a design is determined by its appeal to the eyes, and not by the presence or absence of a mechanical function.” (quotations omitted)).

137. See *Strause Gas Iron Co. v. William M. Crane Co.*, 235 F. 126, 131 (2d Cir. 1916).

eligible for protection. As Section C explains, the U.S. Court of Customs and Patent Appeals (CCPA) deployed the “dictated solely” formulation in the 1960s in two cases that created ambiguity as to the standard for design patent eligibility. These decisions and lax pronouncements from some other courts laid the groundwork for the Federal Circuit to eviscerate the intent behind the 1902 and 1952 Acts,¹³⁸ as will be explored in Part V.

The Second Circuit first used the “dictated by” terminology in the 1916 decision in *Strause Gas Iron Co. v. William M. Crane Co.*¹³⁹ In this litigation, Strause Gas Iron Co. (“Strause”) asserted both a utility patent and a design patent against its competitor. The utility patent claimed a “sad iron,” a clothes iron constructed of solid heavy iron,¹⁴⁰ having mechanical means for supplying air and gas for heating the iron efficiently and without the smell of unconsumed gas.¹⁴¹ The design patent application, filed two years after utility patent application, claimed the outer shape of a sad iron.¹⁴²

138. Congress carried over the text and intent of the 1902 Act in the 1952 Act. *Compare* Act of May 9, 1902, ch. 783, sec. 4929, 32 Stat. 193 (1902), *with* 35 U.S.C. § 171 (1952); *see also* H.R. REP. NO. 7794, at 24.

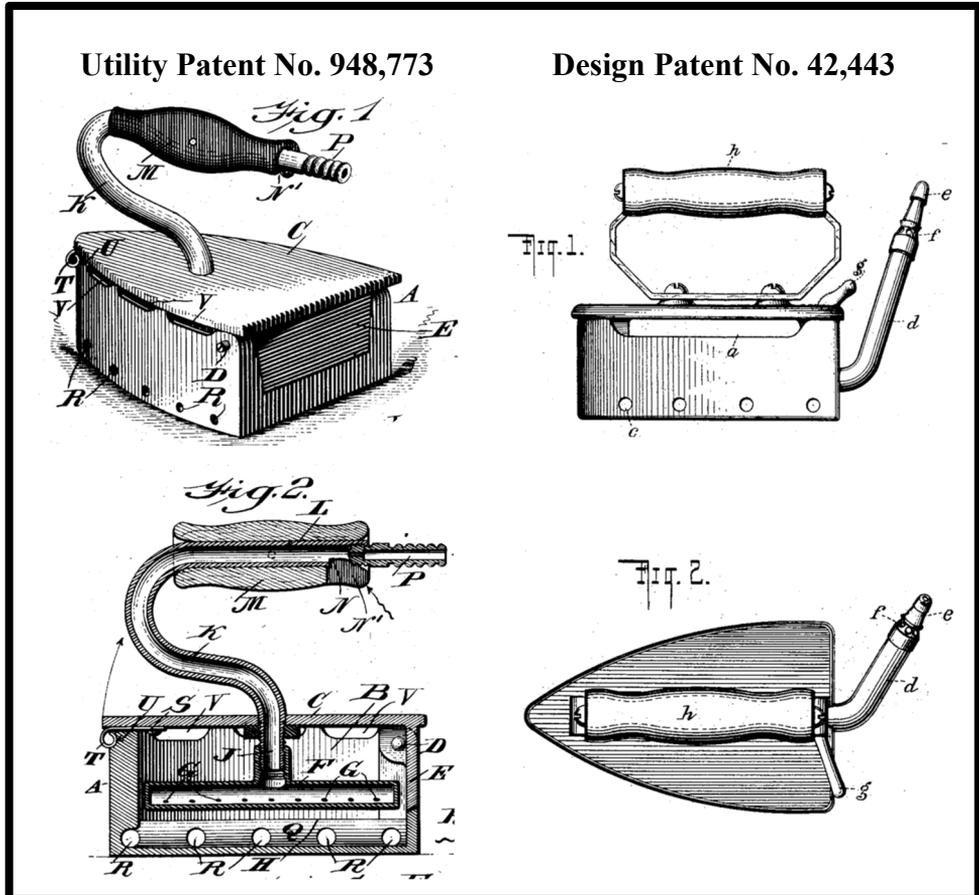
139. 235 F. 126, 131 (2d Cir. 1916). The opinion was written by then-District Judge Learned Hand, sitting with the appellate court.

140. *See History of Ironing*, OLD & INTERESTING, <https://www.oldandinteresting.com/antique-irons-smoothers-mangles.aspx> (last visited Nov. 19, 2020).

141. *See* U.S. Patent No. 948,773 (issued Feb. 8, 1910).

142. *See* U.S. Design Patent No. 42,443 (issued Apr. 30, 1912).

Figure 3: Strause Gas Iron Co. Patents



In affirming invalidation of the design patent, Judge Learned Hand explained:

If there be any room at all in the subject-matter for a design patent, the patentees have not found it. [The court described several similar prior art design patents.] *The modification of these forms into the design patent does not seem to us to have been dictated by other than utilitarian considerations.* To suppose that any inventive effort was necessarily addressed towards pleasing even a most rudimentary aesthetic susceptibility appears to us far-fetched. . . . We believe that any one starting to design sad irons with the art before him, and *governed only by considerations of proportion and plan*, would have had no difficulty in making the plaintiff's iron.¹⁴³

143. 235 F. at 130–31 (emphasis added).

Other courts also found the “dictated by” functionality principle useful as a way of resolving design patent cases. In *Applied Arts Corp. v. Grand Rapids Metalcraft Corp.*,¹⁴⁴ the Sixth Circuit overturned a ruling that a design patent on a combination of ash receiver and electric lighter for use in an automobile¹⁴⁵ was infringed. Although sidestepping the patent validity issue because of an assignor estoppel bar,¹⁴⁶ the court nonetheless used the functional nature of the design in narrowing the infringement determination.

The patented design is comparatively simple, and without ornamentation. In the main its configuration *is made imperative* by the elements which it combines and by the utilitarian purpose of the device. It was certainly not the intent of the law to grant monopoly to purely conventional design which is in itself *little more than a necessary response* to the purpose of the article designed. The scope of a design patent, as well as its originality, must depend on something more than this.¹⁴⁷

Thus, the court engaged in the sort of abstraction-filtration-comparison analysis reflected in Judge Learned Hand’s *Nichols* decision.¹⁴⁸

The Seventh Circuit in *Circle S Products Co. v. Powell Products, Inc.*¹⁴⁹ used the “dictated by” formulation to invalidate a minimalist rectangular design for a photographic lamp holder.

144. 67 F.2d 428 (6th Cir. 1933).

145. U.S. Design Patent No. 84,811 (issued Aug. 11, 1931).

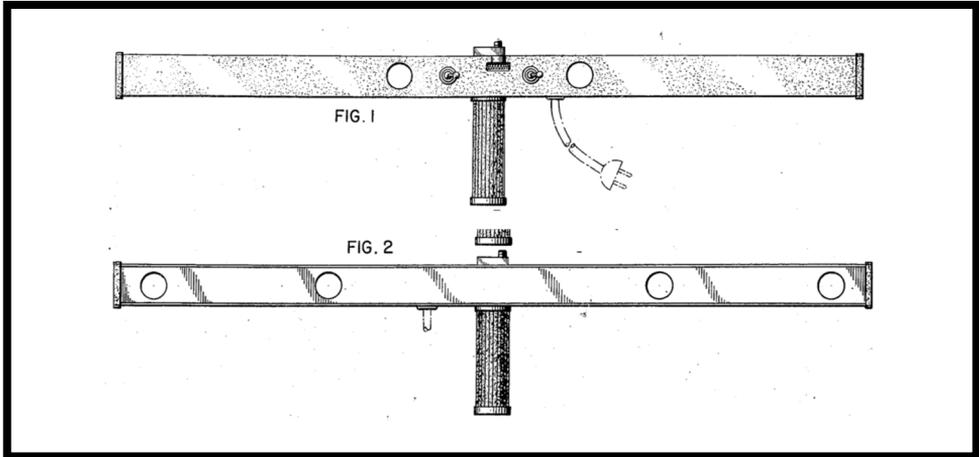
146. *See* 67 F.2d at 429 (discussing Westinghouse Elec. & Mfg. Co. v. Formica Insulation Co., 266 U.S. 342 (1924)).

147. 67 F.2d at 430 (emphasis added).

148. *See supra* text accompanying note 126 (discussing copyright law’s abstraction-filtration-comparison framework).

149. 174 F.2d 562 (7th Cir. 1949).

Figure 4: Des. 148,806 (Feb. 24, 1948)



The district court invalidated the design patent on the ground that

[t]he photographic lamp holder . . . is a mechanical device for providing illumination for photography and *its shape and configuration are dictated by mechanical and functional requirements rather than those of design.*¹⁵⁰

The Seventh Circuit affirmed, explaining that

[t]his finding, if accepted, as we think it must be, negatives any basis for a patentable invention. It has been held that the design patent cannot properly be obtained on the shape of a device which *necessarily results* from its mechanical parts. In the instant case, the [patentee's] device consists of a number of mechanical parts for operating light bulbs. The shape of the device is that resulting from the assembly of those component mechanical parts. A statement pertinent to the instant situation was made in *Applied Arts Corporation v. Grand Rapids Metalcraft Corporation*, 6 Cir., 67 F.2d 428, at page 430, wherein the court in discussing the design before it stated:

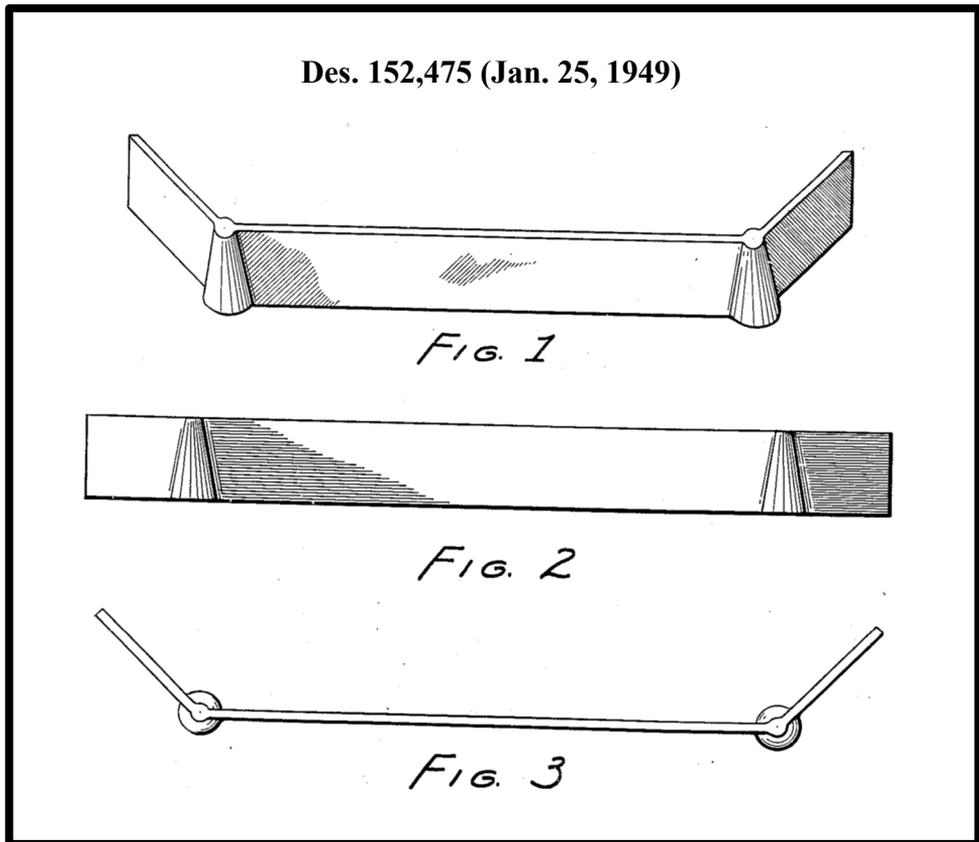
'In the main its configuration is made imperative by the elements which it combines and by the utilitarian purpose of the device. It was certainly not the intent of the law to grant monopoly to purely conventional design which is in itself little more than a necessary response to the purpose of the article designed.'

150. *Id.* at 564 (quoting the district court decision).

Nor do we find any reason to disagree with the lower court in its view that the design is not ornamental, as that term is used in the patent law. . . It has no unusual shape or configuration. It is without decoration and its shape *results from* its mechanical construction.¹⁵¹

Less than a year later in *Hueter v. Compco Corp.*, the Seventh Circuit invalidated yet another minimalist design patent, Hueter's incredibly simple "Article Holding Guard or the Like."¹⁵²

Figure 5: Hueter Article Holding Guard



The Seventh Circuit noted:

The drawing of the patented design was a straight, plain and unadorned front bar, the length of which is approximately seven times its width, with straight wings of the same width at each end which were a little less than one-fourth the length of the front bar at

151. *Id.* (emphasis added).

152. 179 F.2d 416, 417 (7th Cir. 1950).

an angle of about 45 degrees. No ornamentation of any kind is shown on either the front bar or on the wings. The only possible claim for the design being considered as ornamental must be found in the proportion of the length and width of the front bar and wings and in the angle at which the wings extend backward from the front bar.¹⁵³

The district court found that

the shape and configuration of the structure shown in the patent drawing are not ornamental but are *dictated by functional requirements* rather than by those of design. Such shape and configuration fail to exhibit creative artistry and show nothing suggesting the exercise of invention in the creation of a design.¹⁵⁴

The Seventh Circuit had no difficulty affirming the invalidation of this rudimentary minimalist design, reiterating

that the shape and configuration of the structure of the plaintiff's design were not ornamental but were *dictated by functional requirements* rather than by those of design; and that such shape and configuration failed to exhibit creative artistry and show nothing suggesting the exercise of invention. Consideration of the use for which plaintiff's device was designed dictated a front bar for the holder in order to keep articles from falling off the front side of the dashboard, and the wings were likewise necessary to prevent the articles from sliding sidewise and falling to the floor. The purpose and available space for placing the device *necessarily dictated* the approximate length and width of the front bar and of the wings. It would seem that even a child, building a fence on a dashboard to contain articles, would have arrived at approximately the same result.¹⁵⁵

Drawing on these Seventh Circuit cases, the District Court in *Tupper Corp. v. Tilton & Cook Co.*¹⁵⁶ addressed the validity of a design patent on a combined cigarette and match case.¹⁵⁷

153. *Id.* at 417.

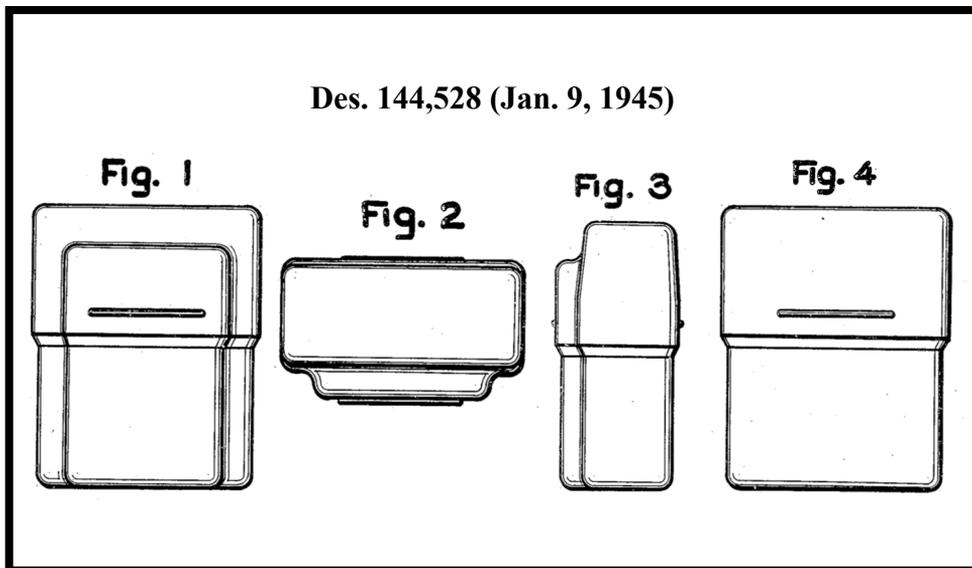
154. *Id.* (emphasis added) (quoting the district court).

155. *Id.* at 417–18 (emphasis added). The court noted that although “in a close case evidence of the commercial success may tip the scales in determining whether an improvement amounts to an invention, . . . it cannot be used to create a doubt where there is lack of invention.” *Id.* at 418. The court was using “invention” here to reference ornamental creativity, not technological advance and concluded that “even if the evidence had shown that the patented design of plaintiff, instead of the utility of the device, had a strong public appeal, and had met with commercial success, such evidence could not have made plaintiff's patent valid.” *Id.*

156. 113 F. Supp. 805 (D. Mass. 1953).

157. U.S. Design Patent No. 144,528 (issued Apr. 23, 1945).

Figure 6: Tupper Design Patent—Des. 144,528 (Jan. 9, 1945)



As the court explained, the design was

composed of two parts, a lower member into which can be placed a package of cigarettes and a book of matches, and a cover member which telescopes over the lower member. In general configuration the lower member is a hollow rectangular container of a size to fit a regular size package of cigarettes with the front wall bulging or protruding sufficiently to form a substantially rectangular compartment for the book of matches. The cover is of the same general shape, being slightly larger so that it will slide down outside the wall of the lower part. . . .¹⁵⁸

Tupper Corp. executed a minimalist design that was contoured to a standard-sized cigarette box and a standard-sized matchbook.

Tupper defended the validity of the design patent on the ground that the design “produces a new and pleasing impression on the aesthetic sense; namely, a symmetrical twin-formed case”¹⁵⁹

The court framed the case as follows:

The essential question is whether the particular combination of elements used by Tupper produced a new and ornamental design which showed invention over the prior art, *S. Dresner & Son, Inc. v.*

158. *Tupper*, 113 F. Supp. at 805.

159. *Id.* at 806 (quoting plaintiff’s proposed findings of fact).

Doppelt, 7 Cir., 120 F.2d 50, 51, and also one which was *primarily ornamental*, rather than a *design dictated by the functional and mechanical requirements* of the subject matter. *Hueter v. Compco Corp.*, 7 Cir., 179 F.2d 416, 417.¹⁶⁰

Therefore, either ground—anticipation or ineligible subject matter—would have invalidated Tupper's design patent.

In invalidating Tupper's design patent, the court noted that the "idea of a case with a telescoping cover is not new" and had "long been made . . . to hold cigars and cigarettes as well as many other products."¹⁶¹ The court cited two utility patents—one for a cigarette case holding a matchbook and another holding a toothbrush and dentifrice—reflecting similar designs involving functional elements.¹⁶² After explaining these bases for invalidating Tupper's design patent, the court then observed:

The general shape and configuration of the Tupper case is *clearly one dictated by functional requirements*. Given the problem of designing a container for a pack of cigarettes and a book of matches, the obvious and natural result would be a case following the general configuration of the cigarette package with a bulge on one side of the size and shape necessary to allow the book of matches to be placed therein. . . . Thus the essential features on which plaintiff relies as producing the new and pleasing aesthetic impression *are merely the natural results of the functional elements* of the Tupper case. . . .

The conclusion must be that the Tupper design patent in suit is invalid because it fails to show invention over the prior art and because the essential features of the design disclosed are *dictated by the functional requirements* of the object designed rather than by ornamental or decorative inventiveness.¹⁶³

Thus, the discussion of eligibility is largely if not entirely dicta. The court was gilding the lily and not setting forth a definitive test for design patent eligibility. It was merely pointing out that Tupper's minimalist design claim was untenable. The First Circuit affirmed the district court in a per curiam opinion.¹⁶⁴

Five years later, the District of Rhode Island in *Jones v. Progress Industries, Inc.*¹⁶⁵ confronted the familiar pattern of an inventor asserting utility and design patents covering the same functional, unadorned, minimalist article of

160. *Id.* (emphasis added).

161. *Id.*

162. *See id.*

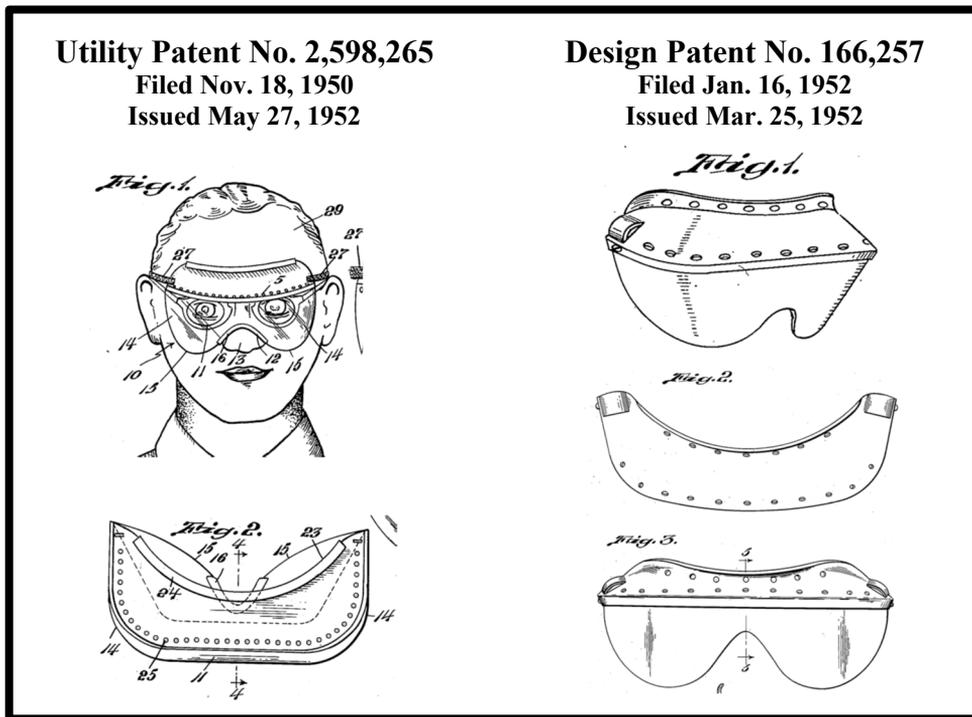
163. *Id.* at 806–07 (emphasis added).

164. 209 F.2d 954 (1st Cir. 1954).

165. 163 F. Supp. 824 (D.R.I. 1958).

manufacture. Jones filed his application for industrial goggles, “which will be sufficiently strong and durable to be suitable for industrial protection of the eyes,” on November 18, 1950.¹⁶⁶ Fourteen months later, he filed a design patent application on “Goggle Front.”¹⁶⁷ As an indication of the Patent Office’s lax examination, the design patent issued on March 25, 1952, two months after filing and two months before issuance of the utility patent.

Figure 7: Jones Goggle Patents



Jones sued Progress Industries for infringement of both patents. As regards to the design patent claim, the court quoted from the statement from *Tupper* that designs must be “primarily ornamental, rather than a design dictated by functional and mechanical requirements of the subject matter” to obtain design patent protection.¹⁶⁸ The court easily concluded that

[t]he general shape and configuration of the plaintiff’s design is *obviously one dictated by functional requirements*. Considering all of the evidence, I am satisfied that the shape, size, and contour of the visor

166. U.S. Patent No. 2,598,265 (issued May 27, 1952).

167. U.S. Design Patent No. 166,257 (issued Mar. 25, 1962).

168. See *Jones*, 163 F. Supp. at 826 (quoting *Tupper Corp. v. Tilton & Cook Co.*, 113 F. Supp. 805, 806 (D. Mass. 1953) (citing *Hueter v. Compco Corp.*, 179 F.2d 416, 417 (7th Cir. 1950))).

and lens section, the recess for the nose, the curved lens, the ventilation ports and holes, the molded lip overhanging the lens at the front of the visor, the loops for receiving the head strap, the acute angle between the head and visor section, the heads of the detachable bolts and all of the essential features of plaintiff's design are functional rather than ornamental. Moreover, having in mind the prior art, much evidence of which was presented by the defendant *and not cited by the examiner*, I am of the opinion that plaintiff's design exhibited no more creative artistic ability than that of which a routine designer in this field would be capable and did not amount to invention. Accordingly I find that said design patent No. 166,257 is invalid because its essential features are *dictated by functional requirements* rather than by ornamental or decorative inventiveness and because it fails to show invention over the prior art.¹⁶⁹

Drawing in part on the language from *Hueter*, the Southern District of New York in *Blisscraft of Hollywood v. United Plastic Co.*¹⁷⁰ invalidated a design patent for a pitcher on the dual grounds that the design lacked invention over the prior art and that it was “dictated solely by functional and mechanical requirements.”¹⁷¹ As Figure 8 illustrates, the design patent at issue in *Blisscraft*,¹⁷² unlike the patents discussed above, possessed decorative elements, such as the scalloped rim surrounding the lid.¹⁷³

169. *Id.* (emphasis added).

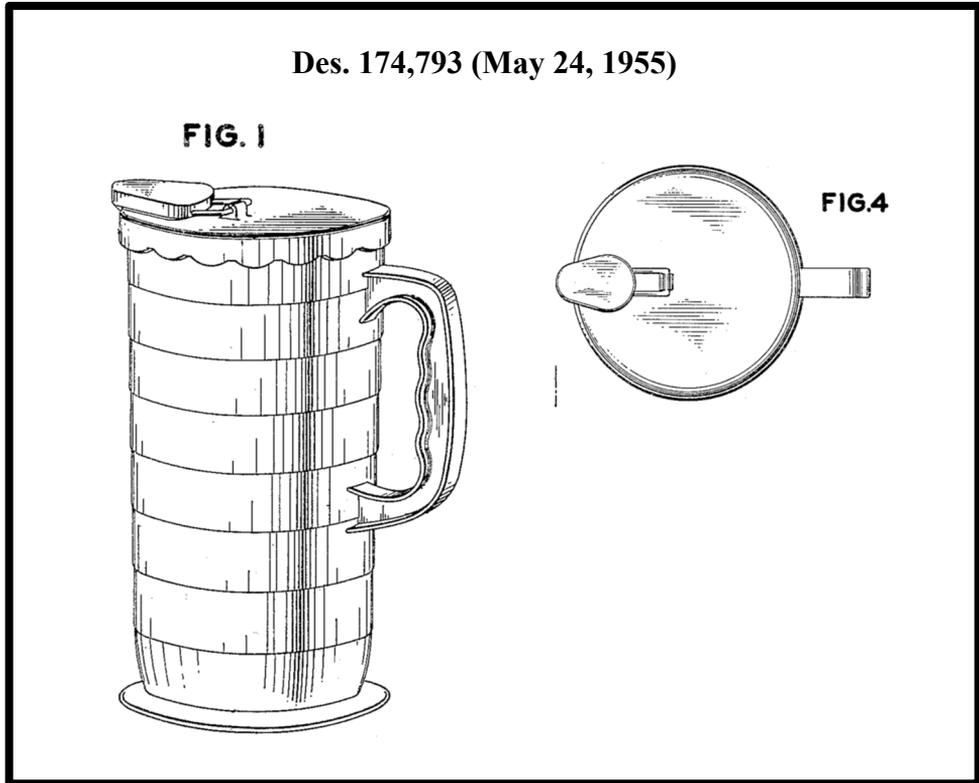
170. 189 F. Supp. 333 (S.D.N.Y. 1960), *aff'd in part, rev'd in part*, 294 F.2d 694 (2d Cir. 1961) (affirming design patent ruling and reversing the trademark ruling).

171. *See id.* at 337 (citing *Gorham Mfg. Co. v. White*, 81 U.S. 511 (1871), *Hueter v. Compco Corp.*, 179 F.2d 416, 417 (7th Cir. 1950), and *Jones v. Progress Indus., Inc.*, 163 F. Supp. 824, 826 (D.R.I. 1958)). This is the first case that uses “dictated *solely* by functional and mechanical requirements.” *Id.* (emphasis added).

172. U.S. Design Patent No. 174,793 (issued May 24, 1955).

173. The finger indentations on the handle are clearly functional. The circular ridges provide a gauge for measuring the amount of liquid in the pitcher.

Figure 8: Bliss Design Patent



The court's analysis focused first on the lack of creative advance over the prior art, noting that "plaintiff's design exhibited no more creative artistic ability than that of a routine designer in the field and does not amount to invention."¹⁷⁴

As regards functionality, the court stated:

The patent is also invalid on the ground that the novelty, if any, is functional rather than ornamental. The spout cover serves to close the spout opening; the handle and the tapered body make for ease in molding. The finger indentations on the 'pistol grip' prevent the pitcher from slipping out of one's hand. The horizontal lines around the body permit measuring and also strengthen the body. The scalloped lower edge of the lid serves to keep the lid on more tightly and to prevent leakage; and the flange or base prevents tipping. Each of these features is basically functional.

The new and pleasing aesthetic impression required to sustain a design patent cannot be merely the natural result of a combination

174. *Blisscraft*, 189 F. Supp. at 337.

of functional arrangements. Here, the design is clearly *dictated by functional or mechanical requirements*, and the so-called pleasing effect is merely a by-product. It is therefore invalid.¹⁷⁵

In view of the court's determination on creativity, the court's analysis of functionality is dicta. On appeal, the Second Circuit affirmed the invalidation of the design patent based on the lack of creativity in combining prior art elements and lack of ornamentation, making it "unnecessary" for the court to determine "whether the utilitarian or mechanical features of the pitcher were so dominant in the design conception as to prevent patentability."¹⁷⁶

None of these cases in which the "dictated by functional considerations" or "functional requirements" language was used to state or even imply that a design that is partially based on functional considerations or in which ornamental elements are inextricably intertwined with functional features are eligible for protection. These were all easy cases in which the courts resolved the controversy by observing that design patents cannot be granted where a design is dictated by functional considerations. In some cases, the observation that the design is "dictated by functional considerations" was secondary as the court had an independent ground (anticipation or obviousness) for its decision.

C. THE CCPA'S ADOPTION OF A "DICTATED SOLELY BY" STANDARD

The Court of Customs and Patent Appeals (CCPA), which had exclusive jurisdiction over appeals from the Patent Office applications, placed its imprint on design patent eligibility with two decisions in the 1960s.¹⁷⁷ Although these decisions affirming rejections of design patents did not reach erroneous results *per se*, they introduced ambiguity as to the proper standard for assessing design patent eligibility.

In *In re Garbo*, the CCPA reviewed an appeal from the decision of the Board of Appeals of the Patent Office which rejected an application for a design patent on obviousness grounds. The CCPA noted that

175. *Id.* (emphasis added).

176. *Blisscraft of Hollywood v. United Plastics Co.*, 294 F.2d 694, 697 (2d Cir. 1961). Shortly thereafter, another Second Circuit panel picked up on the *Blisscraft* District Court's use of the phrase "dictated *solely* by functional and mechanical requirements" (emphasis added) in invalidating a design patent on a soap dish. *See Hygienic Specialties Co. v. H. G. Salzman, Inc.*, 302 F.2d 614, 618 (2d Cir. 1962). Several later decisions referenced the "dictated solely by mechanical or functional requirements" language. *See John Thomas Batts, Inc. v. Hanger, Inc.*, 1972 WL 17705, at *12 (E.D.N.Y. June 14, 1972).

177. *See In re Garbo*, 287 F.2d 192 (C.C.P.A. 1961); *In re Carletti*, 328 F.2d 1020 (C.C.P.A. 1964).

a design may embody functional features and still be patentable, but in order to attain this legal status under these circumstances, the design must have an *unobvious appearance* distinct from that dictated *solely* by functional considerations. We do not find this situation here.¹⁷⁸

The CCPA's terse statement left room for doubt as to the scope of design patent eligibility. What did it mean to say that a design patent "may embody functional features"? Did the CCPA imply that a design patent could extend to functional features so long as they were not "dictated solely by functional considerations"? Could a design that inextricably intertwined aesthetic and functional elements be eligible for a design patent? The regional appellate courts' decisions were far more circumspect in communicating that design patents could not monopolize functional elements.¹⁷⁹

Judge Giles Rich, whose protectionist predilection defined his long career,¹⁸⁰ wrote the CCPA's opinion in *In re Carletti*. The decision affirmed the Patent Office's determination that a design for a gasket for the threaded bunghole of a fifty-five-gallon drum made in compliance with a regulatory specification was not eligible for a design patent.¹⁸¹ The CCPA reiterated its terse statement regarding design patent eligibility from *In re Garbo* and further explained:

It is clear that appellants never invented an 'ornamental design.' The appearance of appellants' gasket seems as much dictated by functional considerations as is the appearance of a piece of rope, which, too, has ribs and grooves nicely arranged. The fact that it is attractive or pleasant to behold is not enough. Many well-constructed articles of manufacture whose configurations are dictated *solely* by function are pleasing to look upon. . . . But it has long been settled that when a configuration is the result of functional considerations *only*, the resulting design is not patentable as an

178. *In re Garbo*, 287 F.2d at 193–194 (emphases added).

179. *See, e.g., Strause Gas Iron Co.*, 235 F. at 130–31; *Applied Arts Corp. v. Grand Rapids Metalcraft Corp.*, 67 F.2d 428, 430 (6th Cir. 1933) (expressing concern about monopolizing conventional designs through design patent protection); *Circle S Prods. Co. v. Powell Prods.*, 174 F.2d 562, 564 (7th Cir. 1949).

180. *See* John F. Witherspoon, *A Tribute to Judge Giles S. Rich*, 100 J. PAT. & TRADEMARK OFF. SOC'Y 4 (2018). Toward the end of his career, he authored the Federal Circuit's opinion in *State Street Bank & Trust Company v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), which opened the way for patenting of business methods. The Federal Circuit and the Supreme Court eventually cast doubt on this decision. *See In re Bilski*, 545 F.3d 943, 959 (Fed. Cir. 2008), *aff'd but criticized by*, *Bilski v. Kappos*, 561 U.S. 593 (2010); *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, 573 U.S. 208 (2014). Judge Rich was advocating for broad protection for industrial designs at the time that he was sitting on the *In re Garbo* and *Carletti* cases. *See Hearings Before the Subcomm. on Patents, Trademarks, and Copyrights of the S. Comm. on the Judiciary on S. 1888*, 87th Cong. 27–36, 83–86 (1961) (testimony of Judge Rich).

181. *See In re Carletti*, 328 F.2d at 1020–22.

ornamental design for the simple reason that it is not ‘ornamental’—was not created for the purpose of ornamenting.¹⁸²

As in *In re Garbo*, the CCPA failed to clarify whether an article of manufacture that inextricably intermingled ornamental and functional considerations could garner design patent protection as a whole, namely, including the functional elements. Unlike some of the early ornamentality cases,¹⁸³ the CCPA did not address whether separability of ornamental and functional features would be necessary.

Thus, these two cases can be read broadly or narrowly. If read broadly, any design for an article of manufacture that is not “solely” dictated by functional considerations is eligible for design patent protection.¹⁸⁴ Under this interpretation, designs that are somewhat dictated by functional considerations could garner design patent protection. If read more narrowly, these cases address only the ineligibility of designs that are clearly dictated solely by functional considerations and which do not include even an iota of ornamentality. Notably, neither decision explores the 1902 Act, the legislative history, or the late 19th century controversy that led to the 1902 reforms.

The scope of design patent eligibility would continue to reverberate across the regional circuits until the establishment of the Court of Appeals for the Federal Circuit in 1982. As explored in Part V, the Federal Circuit would ultimately interpret the doctrine in favor of broad design patent subject matter. Although it was heavily influenced by the CCPA’s jurisprudence, the Federal Circuit also considered other formulations percolating around the country, which we will explore next.

D. OTHER FORMULATIONS

The standard for design patent eligibility continued to mutate as other circuit courts of appeals improvised new language and approaches in defining the line between ornamental and functional. None of these decisions went

182. *Id.* at 1022 (emphasis added) (citing WALKER ON PATENTS, Deller ed., Sec. 138, p. 434); *Conn. Paper Prods. v. N.Y. Paper Co.*, 127 F.2d 423 (4th Cir. 1942); *Hueter v. Compco Corp.*, 179 F.2d 416 (7th Cir. 1950); *Applied Arts Corp.*, 67 F.2d at 428; *In re Garbo*, 287 F.2d at 193.

183. *See Baker v. Hughes-Evans Co.*, 270 F. 97, 99 (2d Cir. 1920) (requiring that the ornamental features be “separable” from the functional features); *Theodore W. Foster & Bro. Co. v. Tilden-Thurber Co.*, 200 F. 54, 56 (1st Cir. 1912) (qualifying that a design patent “would cover the new shape or configuration only in its ornamental and not in its merely useful aspect, nor would it be infringed by an article securing the same merely useful result through shape or configuration, unless so nearly the same in appearance as to come within *Gorham Co. v. White*”).

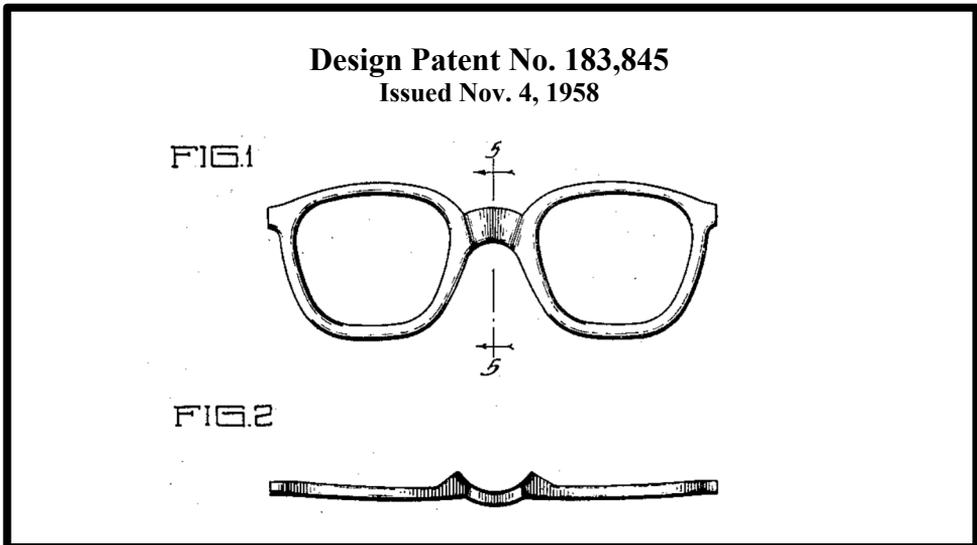
184. *See Saidman & Hintz, supra* note 93, at 355–56.

back to the critical source material: the 1902 Act, the Act’s legislative history, or the Supreme Court’s seminal *Baker v. Selden* logic. Courts increasingly focused on whether a design is “primarily ornamental” or “primarily functional.” We also see the District of Minnesota taking the doctrine in a radical ungrounded direction: assessing whether there are “alternative available designs” as a measure not of functionality but of market preemption. While several of these decisions reached the correct conclusion—invalidating design patents on minimalist and highly functional designs—they unfortunately left in their wake misleading dicta as to the proper standard. As this dicta and variations on this language expanded, the standard drifted ever further from the logic and intent of the 1902 (and 1952) Act.

1. “Primarily Ornamental”

We see the use of the “primarily” language take off in the 1962 *Fendall Co. v. Welsh Manufacturing Co.*¹⁸⁵ decision where Judge Day confronted a minimalist design for an “Eye Protective Industrial Spectacle Frame.”¹⁸⁶

Figure 9: Fendall Patent



The defendant contended that the design patent was invalid because the design is “primarily functional.”¹⁸⁷ In assessing this defense, the court highlighted the patentee’s emphasis on the functional advantages of its design in its marketing brochure: accommodating a wide range of users; reducing the size and cost of

185. 203 F. Supp. 45 (D.R.I. 1962).

186. U.S. Design Patent No. 183,345 (issued Nov. 4, 1958).

187. *Fendall*, 203 F. Supp. at 45.

goggle inventory; lessening fitting time; affording greater comfort; and providing high strength.¹⁸⁸

Drawing on his decision in *Jones*,¹⁸⁹ which built on the decision in *Tupper*,¹⁹⁰ Judge Day proclaimed that “[i]t is well settled that for a design to be patentable it must be *primarily ornamental*; a design dictated by functional or mechanical requirements is not patentable.”¹⁹¹ The court concluded without further elaboration that “the shape and configuration of the plaintiff’s design is obviously one dictated by functional requirements of the object designed rather than by ornamental or decorative inventiveness.”¹⁹²

2. “Primarily Functional”

Beginning with its 1963 decision in *Bliss v. Gotham Industries, Inc.*,¹⁹³ a case involving the same design patent on a pitcher invalidated in *Blisscraft of Hollywood v. United Plastic Co.*,¹⁹⁴ the Ninth Circuit adopted a “primarily functional” standard, holding that a design patent must not be “dictated primarily by functional or mechanical requirements and any ornamental or so-called pleasing effect was merely a byproduct thereof.”¹⁹⁵ Three years later, another Ninth Circuit panel followed this standard in *Bentley v. Sunset House Distributing Corp.*,¹⁹⁶ a case invalidating both a utility patent¹⁹⁷ and a design patent¹⁹⁸ covering the same minimalist, functional scissor-shaped meatball mold.¹⁹⁹

188. *See id.* at 46–47.

189. 163 F. Supp. 824 (D.R.I. 1958).

190. 113 F. Supp. 805 (D. Mass. 1953).

191. *Fendall*, 203 F. Supp. at 47 (emphasis added). *Fendall* was not the first design patent case to use the “primarily ornamental” terminology. The District of Massachusetts referred to “primarily ornamental” in *Tupper*, 113 F. Supp. at 806 (stating that design patents must be “primarily ornamental, rather than a design dictated by the functional and mechanical requirements of the subject matter”). Judge Day used that same language in *Jones*, 163 F. Supp. at 826.

192. *Fendall*, 203 F. Supp. at 47; *see also* *A & H Mfg. Co. v. Contempo Card Co.*, 576 F. Supp. 894, 898 (D.R.I. 1983) (“To be patentable, a design must be *primarily ornamental*; designs dictated by functional considerations are not primarily ornamental and, therefore, are not patentable.” (emphasis added)).

193. 316 F.2d 848 (9th Cir. 1963).

194. 189 F. Supp. 333 (S.D.N.Y. 1960), *affirming invalidation of design patent*, 294 F.2d 694 (2d Cir. 1961); *see supra* text accompanying notes 170–176.

195. *Bliss v. Gotham Indus, Inc.*, 316 F.2d 848, 851 (9th Cir. 1963).

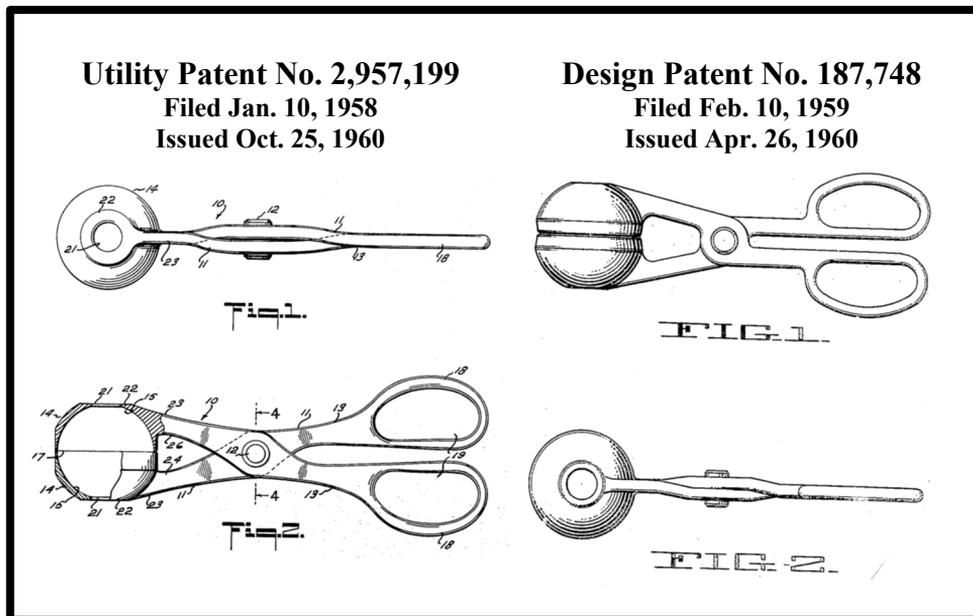
196. 359 F.2d 140, 145 (9th Cir. 1966).

197. U.S. Patent No. No. 2,957,199 (issued Oct. 25, 1960).

198. U.S. Design Patent No. 187,748 (issued Apr. 26, 1960).

199. The Ninth Circuit affirmed the lower court’s judgment notwithstanding the verdict invalidating the utility patent on obviousness grounds. *See Bentley*, 359 F.2d at 143–45.

Figure 10: Bentley Food Ball Mold Patents



The Ninth Circuit based its invalidation of the design patent on the following standard: “Where the ‘design’ of a design patent is dictated primarily by functional or mechanical requirements and any pleasing aesthetic effect is only an inadvertent by-product, the design patent is invalid.”²⁰⁰ The court reasoned that

the device itself ‘is not ornamental and does not appeal to the eye as a thing of beauty; does not relate more to appearance and to matters of ornament than to utility and does not appeal to the aesthetic emotion.’ The law does not require that the device be attractive to us; judges are part of the laity insofar as artistic judgment is concerned. But we must be able to find the design to be the result of invention, not modification, and to be ornamental, ‘the product of aesthetic skill and artistic conception.’ Here we find only modification; two molds in the prior art had finger-loop scissor handles, three had spherical molds, and at least five had a rather circular thickening of the handles where they were joined together. Almost all had horizontal lines, when closed and lying flat, of the degree of straightness which Bentley says is attractive. The ‘balance’ between handle and mold or tongs on many is roughly the same as that of the Bentley mold. Alone, then, or in the aggregate, the features of this tool show no invention. Nor do they show

200. *Bentley*, 359 F.2d at 145 (citing *Bliss*, 316 F.2d at 850–51).

ornamentation; as indicated above, each feature was designed to be and is unabashedly and purely functional.²⁰¹

Other Ninth Circuit cases followed the primarily functional standard, also in cases invalidating design patents.²⁰²

Similarly, the Third Circuit applied a primarily functional standard to invalidate a design patent claiming a minimalist functional design for an electrical conductor.²⁰³ The plaintiff, Methode Electronics, brought a declaratory judgment action seeking to invalidate Elco Corporation's utility patent²⁰⁴ and design patent²⁰⁵ relating to quick detachable electrical connectors. The Third Circuit based its decision invalidating the design patent on the Ninth Circuit's "dictated primarily by functional[ity]" standard: "If the design of the patent is dictated primarily by functional needs the patent is invalid."²⁰⁶

201. *Id.* at 146–47 (citations omitted). The court further noted that the commercial success of the product and copying by the defendant could save the design patent from invalidation. *See id.* at 147.

202. *See Payne Metal Enters., Ltd. v. McPhee*, 382 F.2d 541, 546 (9th Cir. 1967) (liquor pouring spout; "[A] patentable design must . . . be ornamental. This requires that the design be the product of aesthetic skill and artistic conception. This does not mean that a design is not patentable if it also embodies a functional or utilitarian purpose. But the rule is otherwise if the *primary purpose* of the design was functional." (emphasis added) (citations omitted)); *Barofsky v. Gen. Elec. Corp.*, 396 F.2d 340, 342–45 (9th Cir. 1968) (rectangular television cabinet).

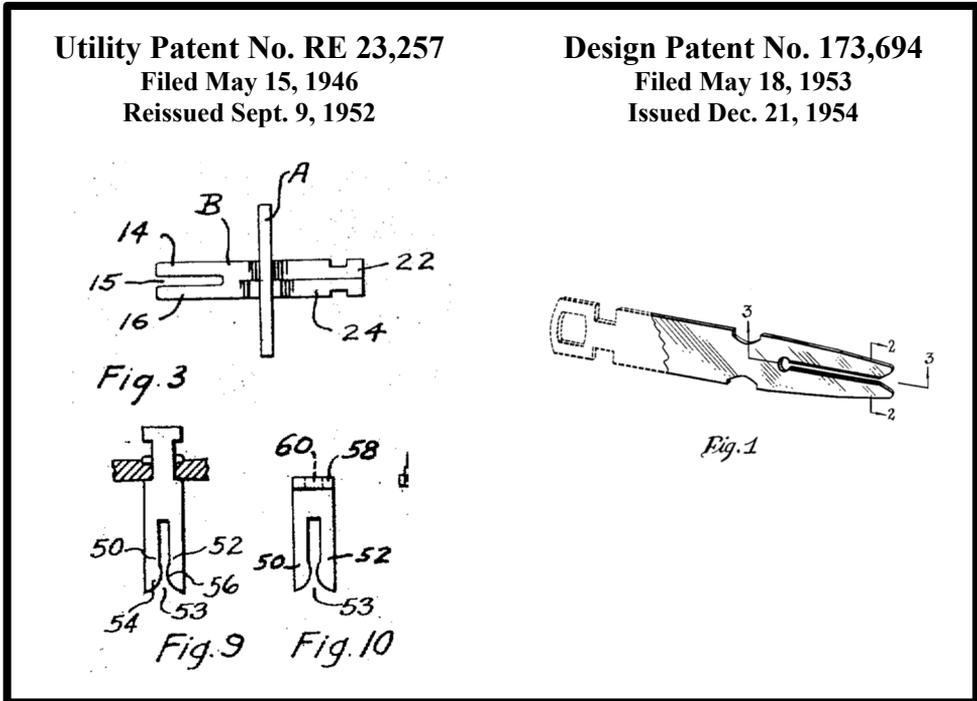
203. *Methode Elecs., Inc. v. Elco Corp.*, 385 F.2d 138, 141 (3d Cir. 1967).

204. U.S. Patent No. RE 23,257 (reissued Sept. 9, 1952).

205. U.S. Design Patent No. 173,694 (issued Dec. 21, 1954).

206. *Methode Elecs.*, 385 F.2d at 141 (citing *Bentley*, 359 F.2d at 145).

Figure 11: Fox Detachable Connector Patents



Thus, the regional circuit courts developed and applied a relatively strict functionality test and generally invalidated design patents that reflected functional design elements. In rare cases, however, courts twisted the standard to uphold the validity of design patents that involved utilitarian features. Two district court decisions that did not receive appellate scrutiny stand out—*L. F. Strassheim Co. v. Gold Medal Folding Furniture Co.*²⁰⁷ and *Bergstrom v. Sears, Roebuck & Co.*²⁰⁸ The second case would later make its way into Federal Circuit jurisprudence.²⁰⁹

In *L. F. Strassheim Co. v. Gold Medal Folding Furniture Co.*,²¹⁰ the Eastern District of Wisconsin rejected the argument that a highly functional design for an arm-rest assembly for a classic Director's chair is primarily functional rather than primarily ornamental.

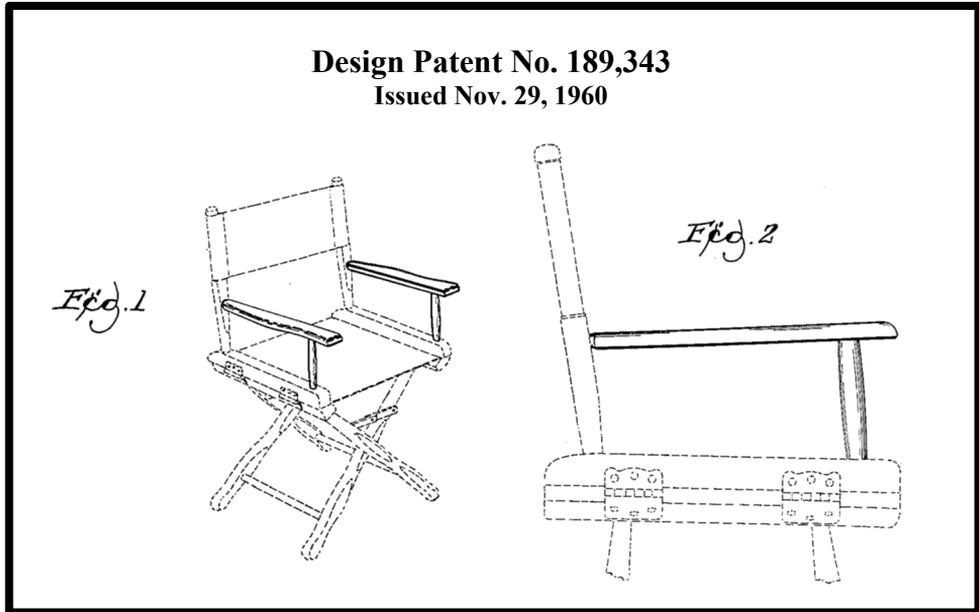
207. 294 F. Supp. 708 (E.D. Wis. 1968).

208. 496 F. Supp. 476 (D. Minn. 1980).

209. See *infra* Section V(B).

210. 294 F. Supp. 708 (E.D. Wis. 1968).

Figure 12: Collapsible Chair



Although the basic contours of the Director's chair traces back to the 15th century,²¹¹ the patentee contended that the design “eliminated the square, boxy appearance found in prior art chairs, and resulted in a definite and salutary distinctiveness and freshness of appearance.”²¹² In upholding the validity of the design patent, the court noted that “the patented feature need not be primarily ornamental, as the plaintiff suggests; it suffices that the patented configuration does not involve its utility alone.”²¹³ It is difficult to see how the standard minimalist arm assembly is not inextricably intertwined with function. Note that the design patent claims only the solid lines: a flat, modestly contoured piece of wood and standard dowel connecting the arm to the seat section of the chair.²¹⁴

211. See *Director's Chair*, WIKIPEDIA, https://en.wikipedia.org/wiki/Director%27s_chair (last visited Nov. 20, 2020); Parts of the Past, *The History of Director's Chair*, YOUTUBE (June 26, 2017), <https://www.youtube.com/watch?v=RTENg4t7AKM>.

212. *L. F. Strassheim Co.*, 294 F. Supp. at 714.

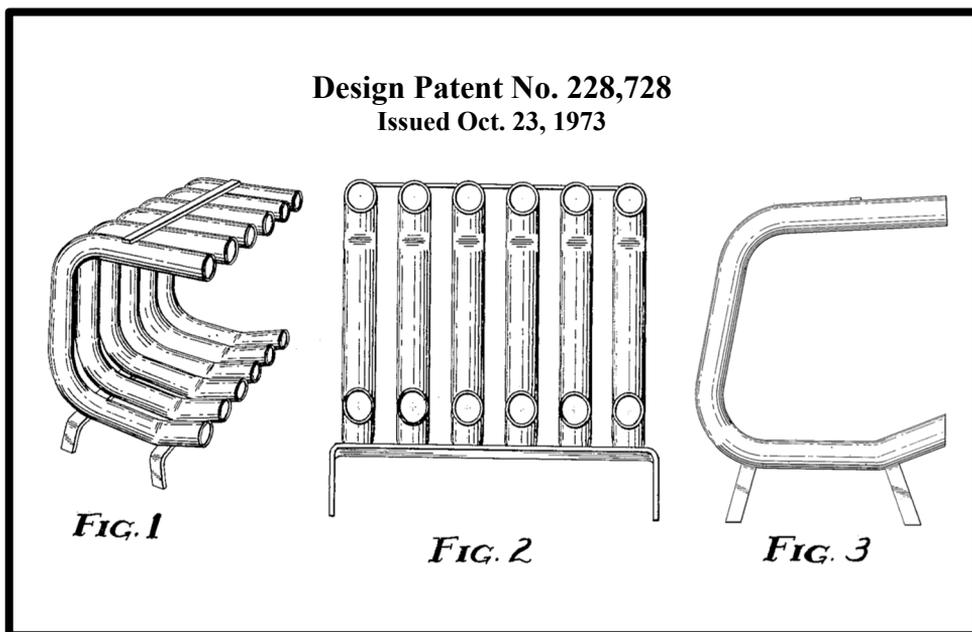
213. *Id.* (citing *Spaulding v. Guardian Light Co.*, 267 F.2d 111 (7th Cir. 1959)).

214. Design patent applicants limit the scope of their design patent drawings through the use of broken or phantom lines to illustrate the environment, but not claimed aspects, of the design. See U.S. PAT. & TRADEMARK OFF., *supra* note 94, § 1504.04 (2018). Only the solid lines constitute the claimed design. See *id.* at 1500–49.

3. “Availability of Alternative Designs”

In 1980, the District of Minnesota in *Bergstrom v. Sears, Roebuck & Co.*²¹⁵ applied a lax new test of design patent eligibility: whether “there are numerous possible design solutions” for the article of manufacture.²¹⁶ The design patent at issue claimed a series of side-by-side C-shaped tubes that function as both a fireplace grate and a heater.²¹⁷ The design heats the ambient air by drawing cool air from the room into the tubes, which is then heated by the fire and then propelling the warm air from the top of the tubes.

Figure 13: Fireplace Grate



Based on the legal standard applied in *Barofsky v. General Electric Corp.*²¹⁸ and *Method Electronics*, the defendants argued that the design was “solely or primarily dictated by functional considerations.”²¹⁹ They contended that the diameter and circular nature of the tubes, the use and size of the legs, the spacing between the tubes, the positioning of the top strap, the angle of incline with respect to the back tube which parallels the slanting back wall of the fireplace, and the upturned lower portion of the air intake tubes were dictated

215. 496 F. Supp. 476 (D. Minn. 1980).

216. *Id.* at 489.

217. U.S. Design Patent No. 228,728 (issued Oct. 23, 1973).

218. 396 F.2d 340, 342–45 (9th Cir. 1968).

219. *See Bergstrom*, 496 F. Supp. at 488.

by the performance of the grate and the capability of the grate to fit into a fireplace.²²⁰ While acknowledging that functional considerations might well dictate the “C” shape of the tubes, the court sidestepped directly addressing the functional considerations by finding that “there are numerous possible design solutions for tubular fireplace grates which operate on convective heat principles” based on prior art patents.²²¹

* * *

Thus by 1980, the standard for assessing design patent eligibility of functional shapes was badly splintered. The use of the “dictated by functional considerations” as a judicial shortcut for disposing of easy cases involving clearly functional designs had opened the door to more lax and subjective standards. The “primarily ornamental” and “primarily functional” standards introduced significant subjectivity and caused the standards to drift farther from the 1902 Act’s text and underlying rationale. As Judge Ely noted in his dissent from the Ninth Circuit’s ruling in *Barofsky*,²²² the “primarily functional” standard is a factual question that arguably should have been tried to a jury.²²³ The *Gold Medal Folding Furniture Co.* decision went even further, allowing design patents on a functional feature so long as the feature “does not involve its utility alone.”²²⁴ The *Bergstrom* decision provided a way of sidestepping the critical separability inquiry by merely asking whether the function could be accomplished through alternative designs. If the design patentee claimed the optimal design, so be it. Note that there were arguably multiple alternative designs for many, if not all, of the designs held to be “dictated by functional considerations” and “primarily functional”—from the sad iron to the protective goggles and scissor food baller. The District of Minnesota’s *Bergstrom* standard threatened to undermine fundamental design patent eligibility restrictions.

None of these decisions referred back to the clear purpose of the 1902 Act to exclude functional features from design patent protection. Inventors and designers increasingly sought to use design patents to protect minimal functional features. The advent of plastics industries and shifts in the industrial design field from surface ornamentation to the merger of form and function revived the tensions that led to the 1902 Act. The soon to be established Court

220. *See id.* at 488–89.

221. *See id.* at 489.

222. *Barofsky v. Gen. Elec. Corp.*, 396 F.2d 340, 345 (9th Cir. 1968).

223. As explored in Part VII below, we believe that the ornamentality/functional question is more properly resolved through a strict separability standard that in most cases would avoid subjectivity.

224. *L. F. Strassheim Co. v. Gold Medal Folding Furniture Co.*, 294 F. Supp. 708, 714 (E.D. Wis. 1968) (citing *Spaulding v. Guardian Light Co.*, 267 F.2d 111 (7th Cir. 1959)).

of Appeals for the Federal Circuit would determine the future of design patent eligibility.

V. THE FEDERAL CIRCUIT'S FUNCTIONALITY JURISPRUDENCE: EXPANDING DESIGN PATENT ELIGIBILITY

With the passage of the Federal Courts Improvement Act of 1981,²²⁵ Congress transferred exclusive appellate jurisdiction over utility and design patent cases to the U.S. Court of Appeals for the Federal Circuit. Congress's principal motivation for establishing the Federal Circuit was to improve the functioning of the federal appellate system by eliminating regional forum shopping that had become severe in the utility patent field.²²⁶ A national patent appellate court would unify patent law interpretation. Advocates of the legislation also believed that the consolidation of patent appeals in a specialized tribunal would strengthen patent law.²²⁷ Policy analysts, legal scholars, and jurists worried that the Federal Circuit would be more prone to political influences and tunnel vision than general jurisdiction appellate courts.²²⁸ More recent studies suggest these concerns have come to pass.²²⁹

225. Pub. L. No. 97-164, 96 Stat. 25 (1982).

226. See H.R. REP. NO. 97-312, at 31 (1981).

227. See *Hearing on S. 21 and S. 537 Before the Subcomm. on Courts of the S. Comm. on the Judiciary*, 97th Cong. at 76 (1981).

228. See *id.* at 211 (“The quality of decision-making would suffer as specialized judges become subject to ‘tunnel vision’ seeing the cases in a narrow perspective without the insights stemming from broad exposure to legal problems in a variety of fields.”); H.R. REP. NO. 97-312, at 31 (1981) (“Several witnesses . . . expressed fears that the Court of Appeals for the Federal Circuit would be unduly specialized or would soon be captured by specialized interests.”); see also Lawrence Baum, *Judicial Specialization, Litigant Influence, and Substantive Policy: The Court of Customs and Patent Appeals*, 11 L. & SOC’Y REV. 823, 845–46 (1977) (arguing that court specialization enhances the likelihood of litigant interest groups affecting substantive policy); LAWRENCE BAUM, *SPECIALIZING THE COURTS* 181, 204 (2011) (noting that corporate support played a key role in creation of the Federal Circuit); Paul R. Gugliuzza, *Rethinking Federal Circuit Jurisdiction*, 100 GEO. L.J. 1437, 1458 (2012) (discussing strong industrial support for creating the U.S. Court of Appeals for the Federal Circuit); F.M. Scherer, *The Political Economy of Patent Policy Reform in the United States*, 7 J. TELECOMM. & HIGH TECH. L. 167, 190 (2009) (noting the strong support from corporate patent counsel); Simon Rifkind, *A Special Court for Patent Litigation?, The Danger of a Specialized Judiciary*, 35 A.B.A.J. 425, 425 (1951) (“Once you segregate the patent law from the natural environment in which it now has its being, you contract the area of its exposure to the self-correcting forces of the law.”).

229. See Laura G. Pedraza-Fariña, *Understanding the Federal Circuit: An Expert Community Approach*, 30 BERKELEY TECH. L.J. 89, 145–49 (2015); WILLIAM M. LANDES & RICHARD A. POSNER, *THE POLITICAL ECONOMY OF INTELLECTUAL PROPERTY LAW* 26–27 (2004) (arguing that “a specialized court is more likely to have a ‘mission’ orientation than a generalist court” and noting that the Federal Circuit “has defined its mission as promoting technological

Congress initially filled the Federal Circuit judgeships by merging the Court of Claims and CCPA judges into a single Article III appellate court.²³⁰ Thus, the CCPA judges, who had already resolved patent appeals from the Patent Office, would continue on in an expanded role. In essence, the Federal Circuit inherited the CCPA's jurisprudence and personnel.

The Federal Circuit took charge of the nation's appellate patent docket in 1982. From the beginning, appeals of utility and design patent cases from the Patent Office and district courts took up a substantial part of its caseload. In one of its first decisions, the Federal Circuit adopted the decisions of the CCPA as binding precedent.²³¹ As a result, the CCPA's jurisprudence in cases such as *In re Garbo* and *In re Carletti* remained especially authoritative because the judges who participated on those decisions would lead the Federal Circuit.

Design patents did not, however, play a substantial role in the Federal Circuit's early caseload. Its first design patent cases involving functional features reflected a cautious approach, using various formulations of the "primarily ornamental"/"primarily functional" test. In a series of cases beginning in the late 1980s, the Federal Circuit increasingly embraced the "alternative design" test as a way of addressing the ornamentality/non-

progress by enlarging patent rights"); William M. Landes & Richard A. Posner, *An Empirical Analysis of the Patent Court*, 71 U. CHI. L. REV. 111, 111–12 (2003) (positing that a specialized patent court is more likely than a generalist court to take a strong stance on its subject matter because "interest groups that had a stake in patent policy would be bound to play a larger role in the appointment of the judges of such a court than they would in the case of the generalist federal courts"); Rochelle Cooper Dreyfuss, *Percolation, Uniformity, and Coherent Adjudication*, 66 S.M.U.L. REV. 505, 530 (2013) ("The core frustration [with the Federal Circuit] is with rigid rules that are not adaptable to new technologies or to new business models and do not take account of the public's interest in access."); Peter S. Menell, *API Copyrightability Bleak House: Unraveling and Repairing the Oracle v. Google Jurisdictional Mess*, 31 BERKELEY TECH. L.J. 1515, 1580, 1587–90 (discussing specialization bias at the Federal Circuit and the how it is has produced protectionist interpretations of copyright law); Hon. Diane P. Wood, Keynote Address, *Is It Time to Abolish the Federal Circuit's Exclusive Jurisdiction in Patent Cases?*, 13 CHI.-KENT J. INTEL. PROP. 1 (2014); Craig Allen Nard & John F. Duffy, *Rethinking Patent Law's Uniformity Principle*, 101 NW. U.L. REV. 1619 (2007) (questioning the insularity of the Federal Circuit); *but see* George C. Beighley, Jr., *The Court of Appeals for the Federal Circuit: Has It Fulfilled Congressional Expectations?*, FORDHAM INTEL. PROP. MEDIA & ENT. L.J. 671 (2011) (defending the Federal Circuit experiment).

230. See Menell, *supra* note 229, at 1518.

231. See *South Corp. v. United States*, 690 F.2d 1368, 1370–71 (Fed. Cir. 1982) (en banc) ("As a foundation for decision in this and subsequent cases in this court, we deem it fitting, necessary, and proper to adopt an established body of law as precedent. That body of law represented by the holdings of the Court of Claims and the Court of Customs and Patent Appeals announced before the close of business on September 30, 1982 is most applicable to the areas of law within the substantive jurisdiction of this new court. It is also most familiar to members of the bar. Accordingly, that body of law is herewith adopted by this court sitting in banc.").

functionality inquiry. This shift, in conjunction with an emphasis on viewing designs as a whole, greatly expanded eligibility of designs with functional attributes. In the late 1990s, the Federal Circuit tempered its broad eligibility standard by discounting or filtering out functional elements in conducting its infringement inquiry. This partial rebalancing, however, conflicted with its emphasis on viewing design patents as a whole. As a result, the court pulled back, resulting in a wayward, incoherent framework that validated Apple's iPhone and iPad design patents and other functional and minimalist designs.

What stands out in the nearly four decades during which the Federal Circuit has developed the modern design patent eligibility landscape is that the court has never once examined the text or legislative history of the 1902 Act that established the design patent ornamentality/non-functionality regime. The Federal Circuit has yet to recognize the copyright origins of the design patent system and the applicability of the channeling principle reflected in *Baker v. Selden* and design patent legislation. We turn to those sources in Part VII in an effort to rectify the design patent ornamentality/non-functionality morass.

A. A CAUTIOUS BEGINNING

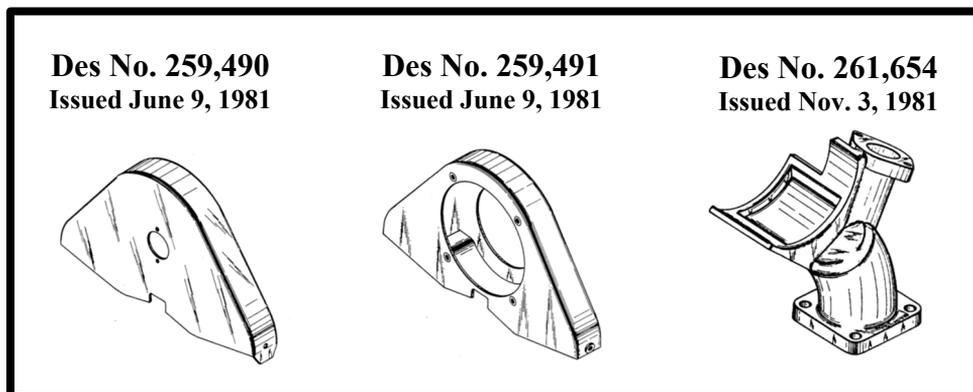
The Federal Circuit first confronted the ornamentality/non-functionality question in *Feuling v. Wood*,²³² a case involving two fan housing designs for an air-cooled engine²³³ and a design for a mounting stand for attaching an accessory to an engine²³⁴ for modifying Volkswagen engines. None of the designs featured surface ornamentation or decorative three-dimensional elements.

232. 758 F.2d 666 (Fed. Cir. 1984) (unpublished/non-precedential; text can be found at 1984 U.S. App. LEXIS 15512). The Federal Circuit first discussed the distinction between utility and design patents in *Carman Indus. v. Wahl*, 724 F.2d 932 (Fed. Cir. 1983), noting that “[u]tility patents afford protection for the mechanical structure and function of an invention whereas design patent protection concerns the ornamental or aesthetic features of a design.” *Id.* at 939 n.13. In applying the double patenting doctrine, the case tangentially touched on ornamentality/non-functionality in holding that design patent on the exterior of a storage bin flow promoter did not render obvious the internal mechanical features of a utility patent. *See id.* at 941.

233. U.S. Design Patent No. 259,490 (issued June 9, 1981); U.S. Design Patent No. 259,491 (issued June 9, 1981).

234. U.S. Design Patent No. 261,654 (issued Nov. 3, 1981).

Figure 14: Feuling Design Patents



The patentee contended that the designs were ornamental because they “are symmetrical when mounted in the engine, and because they are bright and shiny.”²³⁵ Relying on *In re Carletti*’s statement that “[a] design resulting only from functional considerations is not patentable as an ornamental design,” the Federal Circuit had little difficulty finding these designs ineligible.²³⁶ Much like *Carletti* and prior regional court decisions, the Federal Circuit applied the “dictated by functional considerations” standard as a shortcut for rejecting minimal, clearly functional designs.

Later that year, the Federal Circuit sidestepped the ornamentality/non-functionality issue in *Petersen Manufacturing Co. v. Central Purchasing, Inc.*,²³⁷ a case involving a design patent on a needle-nosed wrench.²³⁸ Central Purchasing moved for summary judgment on the grounds that the patent was invalid because the design was not ornamental, being dictated by functional considerations; and obvious in view of Petersen’s own earlier tool design and another prior art tool. The district court found that the design patent was invalid and unenforceable.²³⁹ The Federal Circuit affirmed, holding that “the jaws structure—even assuming it embodies some details which are not dictated solely by function—does not create a non-obvious modification of the appearance of prior art tools.”²⁴⁰ In so doing, however, the court implied that the standard for assessing ornamentality is whether the design is “not dictated solely by function.”

235. 758 F.2d at *5.

236. *Id.*

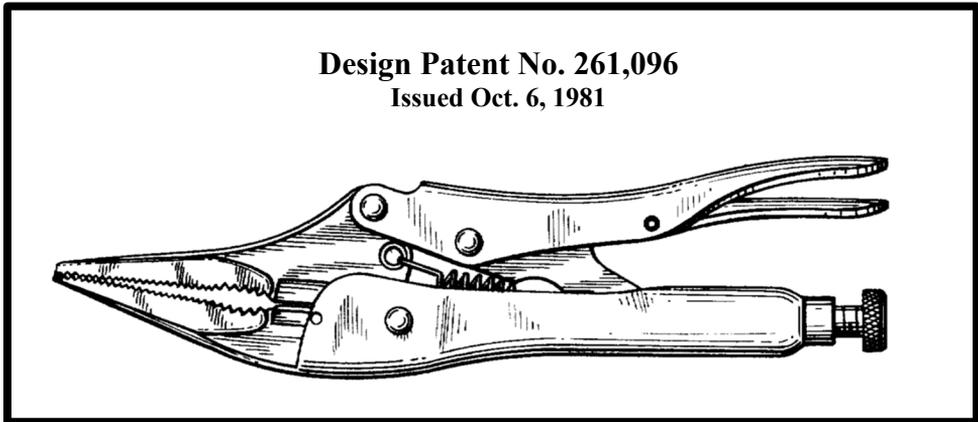
237. *See* 740 F.2d 1541, 1547 (Fed. Cir. 1984).

238. U.S. Design Patent No. 261,096 (issued Oct. 6, 1981).

239. 740 F.2d at 1545.

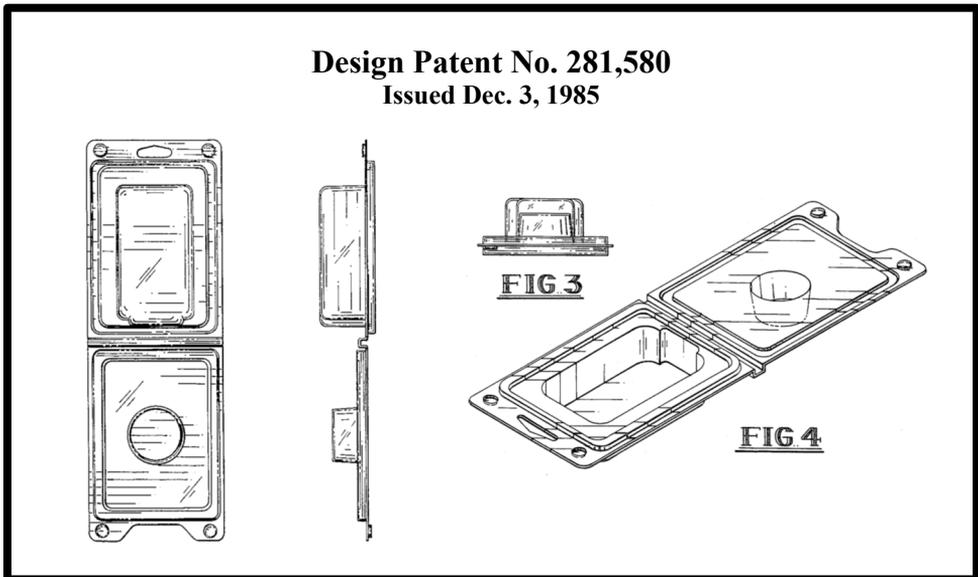
240. *Id.* at 1549.

Figure 15: Hand Tool



In its first precedential decision squarely addressing the ornamentality/non-functionality doctrine, the Federal Circuit in *Power Controls Corp. v. Hybrinetics, Inc.*²⁴¹ overturned a preliminary injunction on the ground that a rectangular packaging container for electrical switches²⁴² was invalid.

Figure 16: Packaging Container for Electrical Switches



241. 806 F.2d 234 (Fed. Cir. 1986).

242. See U.S. Design Patent No. 281,580 (issued Dec. 3, 1985).

The court declared that “[i]f the patented design is primarily functional rather than ornamental, the patent is invalid.”²⁴³ The court based its standard on *In re Carletti*:

Many well-constructed articles of manufacture whose configurations are dictated solely by function are pleasing to look upon. . . . But it has long been settled that when a configuration is a result of functional considerations only, the resulting design is not patentable as an ornamental design for the simple reason that it is not “ornamental”—was not created for the purpose of ornamenting. [Citations omitted.]²⁴⁴

The court did not offer any insight into how to deal with functional elements that are intertwined with ornamental features. In applying the standard, the court emphasized that the inventor acknowledged:

1. The package was made clear so that the product could be viewed by the consumer and so that a paper insert card could be protectively placed inside the plastic package and still be read;
2. The recesses in the front and back of the package were designed to fit snugly around the rotary dimmer switch and were placed as they were to balance the package;
3. The rounded corners and edges, and the angled surfaces were necessary for the production of a workable mold;
4. The rim along the periphery of the package was designed to hold the package rigid and to lock the package together; and
5. The hole for hanging the package on a peg was designed to extend only through the back of the package to obviate the need for precise package alignment during molding and assembly.²⁴⁵

The patentee responded by noting in a conclusory fashion that the design was ornamental in nature and aesthetically pleasing and contended that the court must view the design as a whole, citing *Gorham Manufacturing Co. v. White*,²⁴⁶ and not by its particular features.²⁴⁷

The Federal Circuit distinguished *Gorham*, noting that the design must be analyzed as a whole only in determining infringement, not invalidity.²⁴⁸ The

243. 806 F.2d at 238.

244. *Id.* (quoting *In re Carletti*, 328 F.2d 1020, 1022 (C.C.P.A. 1964)).

245. *Id.* at 239.

246. 81 U.S. 511 (1871) (holding that a patent is infringed when an entire design has an overall effect of resembling the patented design enough to deceive a purchaser).

247. *See* 806 F.2d at 239.

248. *See id.* at 239–40.

court further explained that the purposes of the particular elements of the design must be considered in determining whether a design is primarily functional. Based on this “strong and clear showing of functionality” and the lack of persuasive countervailing evidence, the court concluded that the design patent was functional and hence invalid.²⁴⁹

These early cases involved clearly functional designs without any discernable surface or shape ornamentation. The Federal Circuit was not challenged to go beyond the shortcuts that prior decisions had devised.

B. EXPANDING ELIGIBILITY THROUGH THE “AVAILABILITY OF ALTERNATIVE DESIGNS” TEST AND VIEWING DESIGNS AS A WHOLE

In the late 1980s, the Federal Circuit confronted more challenging design patent functionality cases and began to blaze a new trail. Two 1988 cases suggested different paths: a parsimonious approach that filtered out functional elements as part of infringement analysis and a more permissive approach based on the availability of alternative designs. The latter approach would come to dominate Federal Circuit jurisprudence over the next two decades, but the former approach occasionally resurfaced and eventually gained a stronger foothold in a 2010 case. Section C explores that reemergence.

The design patent in *Lee v. Dayton-Hudson Corp.*²⁵⁰ claimed the “massage implement”²⁵¹ depicted in Figure 17. The device features two opposing balls at one end. Based on the principle that only the “non-functional, design aspects . . . are pertinent to determinations of infringement,”²⁵² the court integrated the functionality inquiry into the infringement analysis. The Federal Circuit upheld the finding of non-infringement, explaining

the district court correctly viewed the design aspects of the accused devices: the wooden balls, their polished finish and appearance, the proportions, the carving on the handle, and all other ornamental characteristics, considered to the extent that they would be considered by “the eye of an ordinary observer.”²⁵³

249. *See id.*

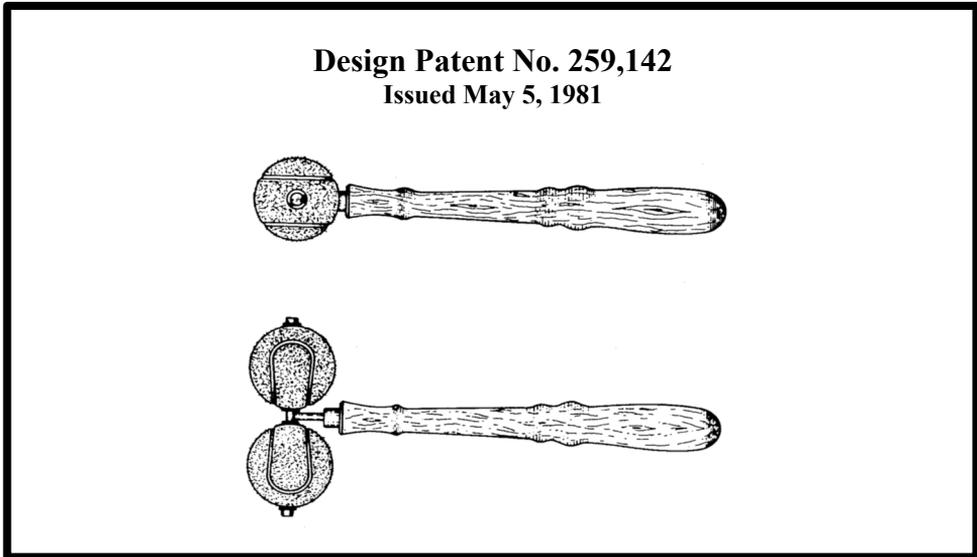
250. 838 F.2d 1186 (Fed. Cir. 1988).

251. *See* U.S. Design Patent No. 259,142 (issued May 5, 1981).

252. 838 F.2d at 1188, 1188 n.3 (“The legal protection of industrial designs was the subject of recent congressional hearings. *See Industrial Innovation and Technology Act: Hearings on S. 791 Before the Subcomm. on Patents, Copyrights and Trademarks of the Senate Comm. on the Judiciary*, 100th Cong., 1st Sess. 8–9 (1987) (statement of Hon. Giles S. Rich): ‘[T]here is definitely no Federal statute today suited to the needs of designers and design owners. . . . [T]he great bulk of industrial design is simply not protectable by design patents.’”)

253. *Id.* (citing *Gorham Co. v. White*, 81 U.S. 511, 528 (1871)).

Figure 17: Massage Implement



The Federal Circuit noted that “a design patent is not a substitute for a utility patent. A device that copies the utilitarian or functional features of a patented design is not an infringement unless the ornamental aspects are also copied, such that the overall ‘resemblance is such as to deceive.’”²⁵⁴ Thus, the court followed a parsimonious approach that avoided protecting the functional aspects of the design.

Later that year, another Federal Circuit panel took a far more permissive approach to functionality in *Avia Group International, Inc. v. L.A. Gear California, Inc.*²⁵⁵ The case involved design patents claiming the sole²⁵⁶ and upper²⁵⁷ for an athletic shoe depicted in Figure 18.²⁵⁸

254. *Id.* at 1189 (citing *Gorham*, 81 U.S. at 528).

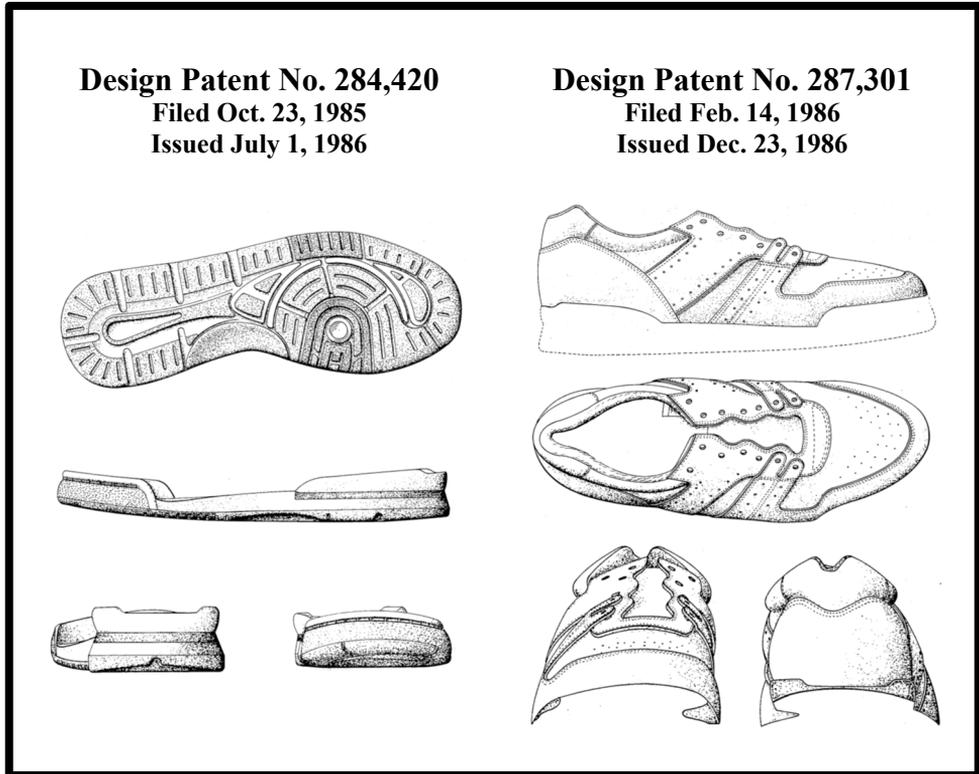
255. 853 F.2d 1557 (Fed. Cir. 1988).

256. *See* U.S. Design Patent No. 284,420 (issued July 1, 1986).

257. *See* U.S. Design Patent No. 287,301 (issued Dec. 23, 1986).

258. We note that both of these patents were prosecuted by the law firm of Saidman, Sterne, Kessler & Goldstein. Perry Saidman emerged as a leading advocate for broad eligibility. We discuss Mr. Saidman’s influence on design patent law in Section VI(A).

Figure 18: Athletic Shoe Design Patents



In affirming summary judgment for the plaintiff on validity and infringement, the Federal Circuit rejected the defendant's approach of identifying numerous functional elements of the design as a way of assessing whether the design patent was invalid. In ruling that the defendant had "not persuasively" shown the design to be functional, the court quoted a portion of the district court's analysis:

But every function which [defendant] says is achieved by one of the component aspects of the sole in this case could be and has been achieved by different components. And that is a very persuasive rationale for the holding that the design overall is not primarily functional. Moreover, there is no function which even defendant assigns to the swirl effect around the pivot point, which swirl effect is a very important aspect of the design.²⁵⁹

259. 853 F.2d at 1563 (quoting the lower court decision, denominated *Pensa, Inc. v. L.A. Gear California, Inc.*, 4 U.S.P.Q.2d 1016, 1019-20 (C.D. Cal. 1987)).

In so doing, the court implicitly approved an alternative design standard for upholding design patents against functionality challenges.²⁶⁰

The following year, the U.S. Supreme Court noted in passing in *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, a case involving federal preemption of state intellectual property legislation, that “[t]o qualify for protection, a design must present an aesthetically pleasing appearance *that is not dictated by function alone*, and must satisfy the other criteria of patentability.”²⁶¹ The Court provided no citation for this statement and it is clear from the context that the statement was pure, and inadequately informed, obiter dicta. No brief filed in the case cited or discussed the federal Design Patent Act nor the “dictated” jurisprudence for ornamentality/non-functionality.²⁶² The case did not address

260. Although the district court and the Federal Circuit did not cite any authority for the alternative design rationale, it appears to be following the District of Minnesota decision in *Bergstrom v. Sears, Roebuck & Co.*, 496 F. Supp. 476 (D. Minn. 1980).

261. 489 U.S. 141, 148 (1989) (emphasis added).

262. See Reply Brief for Petitioner, *Bonito Boats*, 489 U.S. 141 (No. 87-1346); Brief Amicus Curiae of Xenetics Biomedical, Inc., *Bonito Boats*, 489 U.S. 141 (No. 87-1346); Brief Amici Curiae of the Orange County Patent Law Association and the Los Angeles Patent Law Association in Support of Petitioner, *Bonito Boats*, 489 U.S. 141 (No. 87-1346); Brief of Boston Whaler, Inc. as Amicus Curiae, *Bonito Boats*, 289 U.S. 141 (No. 87-1346); Brief of Amicus Curiae Intellectual Property Owners, Inc. in Support of Petitioner, *Bonito Boats*, 489 U.S. 141 (No. 87-1346); Brief of Amici Curiae Marine Industries Association of South Florida and the Attorney General of the State of Florida in Support of Petitioner, *Bonito Boats*, 489 U.S. 141 (No. 87-1346); Brief of Amicus Curiae in Support of Petitioner, *Bonito Boats*, 489 U.S. 141 (No. 87-1346); Brief for the Petitioner, *Bonito Boats*, 489 U.S. 141 (No. 87-1346); see also Official Transcript, *Bonito Boats*, 489 U.S. 141 (No. 87-1346) (making no mention of federal Design Patent Act or ornamentality/non-functionality jurisprudence); Petition for a Writ of Certiorari to the Supreme Court of Florida, *Bonito Boats*, 489 U.S. 141 (No. 87-1346) (making no mention of design patent ornamentality/non-functionality jurisprudence). The “Respondent’s” brief mentions design patents:

The patent laws also provide for the issuance of patents on new and ornamental designs for articles of manufacture. 35 U.S.C. § 171. Dozens of examples of so-called “design patents” on the appearance of boat hulls could be cited, and an illustrative example (U.S. Design Patent No. 235,753, issued to Bremer) is reproduced in the Appendix for the convenience of the court (A-25).⁵

⁵ While “utility” patents issued under 35 U.S.C. § 101 protect the novel and nonobvious utilitarian features of boat hull designs or boat hull manufacturing processes, design patents issued under 35 U.S.C. § 171 protect the non-utilitarian ornamental aspects of the boat’s appearance. As can be seen from inspection of the design and utility patents issued to Bremer reproduced in the Appendix (A-4, 25), it is not uncommon for both design and utility patents to issue on different aspects of the same product. Brief of Amicus Curiae in Support of Judgment below, *Bonito Boats v.*

the standards for design patent eligibility. It is clear from the context of this statement that the Court was viewing the federal utility and design patent regimes monolithically.²⁶³

The “dictated by function alone” language appears to have been dropped into the opinion uncritically. Much of the discussion of intellectual property policy in the case supports a *higher* standard for finding that a design with functional attributes would qualify for design patent protection. The Court explained:

The Patent Clause [of the U.S. Constitution] . . . reflects a balance between the need to encourage *innovation* and the avoidance of monopolies which stifle competition without any concomitant advance in the ‘Progress of Science and useful Arts.’ . . .

From their inception, the federal patent laws have embodied a careful balance between the need to promote *innovation* and the recognition that imitation and refinement through imitation are both necessary to invention itself and the very lifeblood of a competitive economy.²⁶⁴

Thunder Craft Boats, No. 87-1346 (filed Sep. 15, 1988); *See, e.g., Carman Indus., Inc. v. Wahl*, 724 F.2d 932 (Fed. Cir. 1983).

Brief of Amicus Curiae in Support of Judgment Below at 5, 5 n.5, *Bonito Boats*, 489 U.S. 141 (No. 87-1346). The “Respondent’s” brief is filed as an amicus brief because the Supreme Court appointed amicus curiae to brief and argue the case in support of the judgment below. *See id.* at 30. The “Respondent’s” brief closed by arguing that any reevaluation of the balance between competition and incentive for innovation by the patent laws should be to Congress and citing to proposed legislation that would “confer a short-term, copyright-like protection on industrial designs.” *Id.* at 29; *see also* Brief Amicus Curiae of Xenetics Biomedical, Inc., *supra* note 262, at 23–28 (arguing that Congress did not intend for copyright law’s design separability condition to override preemption of state design protection regimes and ongoing federal legislative consideration of design protection). The only and fleeting mention of functionality comes in a brief filed by repair part manufacturers:

A manufacturer who produces a boat hull with new features that improve its performance can obtain a utility patent which accords the manufacturer 17 years of exclusivity in the manufacture, use, or sale of that product. . . .

The inventor of a new boat hull with an aesthetically pleasing and ornamental design can similarly obtain a design patent which would provide the inventor with up to 14 years of exclusivity, even if the design has no improved functional features. . . .

Brief Amici Curiae the Aftermarket Body Parts Association and Keystone Automotive Industries, Inc., in Support of Respondent at 6, *Bonito Boats*, 489 U.S. 141 (No. 87-1346).

263. *See* 489 U.S. at 148 (“Today’s patent statute is remarkably similar to the law as known to Jefferson in 1793.”); *see id.* at 148–52 (summarizing the federal patent system with examples and cases drawn exclusively from the utility patent regime).

264. *Id.* at 146 (emphasis added).

Although the Court does not explicitly explain that it refers to utility patents, the policy reasons it uses are those underlying utility patents, not design patents. The Court was clearly focused on the utility patent system as the engine of promoting *technological* innovation. The 1902 Act makes clear that the design patent system does not cover technological innovations but rather original ornamental designs. The Court concluded *Bonito Boats* by noting:

Congress has considered extending various forms of limited protection to industrial design either through the copyright laws or by relaxing the restrictions on the availability of design patents. *See generally* Brown, *Design Protection: An Overview*, 34 UCLA L. REV. 1341 (1987). Congress explicitly refused to take this step in the copyright laws, *see* 17 U.S.C. § 101; H.R. Rep. No. 94-1476, p. 55 (1976), U.S. CODE CONG. & ADMIN. NEWS 1976, pp. 5659, 5668, and despite sustained criticism for a number of years, it has declined to alter the patent protections presently available for industrial design. *See* REPORT OF THE PRESIDENT'S COMMISSION ON THE PATENT SYSTEM, S.Doc. No. 5, 90th Cong., 1st Sess., 20-21 (1967); Lindgren, *The Sanctity of the Design Patent: Illusion or Reality?*, 10 OKLA. CITY L. REV. 195 (1985). It is for Congress to determine if the present system of design and utility patents is ineffectual in promoting the useful arts in the context of industrial design. By offering patent-like protection for ideas deemed unprotected under the present federal scheme, the Florida statute conflicts with the "strong federal policy favoring free competition in ideas which do not merit patent protection." *Lear, Inc. [v. Adkins]*, 395 U.S. 653, 656 (1969)]. We therefore agree with the majority of the Florida Supreme Court that the Florida statute is preempted by the Supremacy Clause, and the judgment of that court is hereby affirmed.²⁶⁵

Notwithstanding that the Supreme Court's comment regarding the test for ornamentality/non-functionality was ill-conceived dicta, zealous lawyers, inattentive courts, and some scholars have treated this questionable interpretation of design patent law as authoritative.²⁶⁶

265. *Id.* at 167-68.

266. *See, e.g.*, *Static Media LLC v. Leader Assocs. LLC*, 395 F. Supp. 3d 982 (W.D. Wisc. 2019) ("To be 'ornamental,' and thus qualify for protection, 'a design must present an aesthetically pleasing appearance that is not dictated by function alone, and must satisfy the other criteria of patentability.' *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 148 (1989)."); Peter Lee & Madhavi Sunder, *The Law of Look and Feel*, 90 S. CAL. L. REV. 529, 561 (2017) ("The Supreme Court has ruled that '[t]o qualify for protection, a design must present an aesthetically pleasing appearance that is not dictated by function alone.' Because it is relatively easy to find some nonfunctional motivation for a design (even a design that incorporates functional elements), it is relatively easy to avoid the functionality bar in the design patent context."); Brief of Amicus Curiae Apple Inc. in Support of Plaintiff-Appellant's

Over the next several years, the Federal Circuit vacillated on the proper standard for assessing whether a design patent was invalid on functionality grounds. In *Chrysler Motors Corp. v. Auto Body Panels of Ohio, Inc.*,²⁶⁷ a major automobile company sought to use a design patent on its fender design,²⁶⁸ depicted in Figure 19, to enjoin an aftermarket fender manufacturer from selling compatible replacement parts.

In affirming denial of a preliminary injunction for this truck fender design,²⁶⁹ the Federal Circuit observed that “[t]he question of when the functionality of a design so permeates an article of manufacture that design patent protection is not available under the law is a complex issue and one that continues to be the subject of considerable judicial attention.”²⁷⁰

Petition for Rehearing En Banc at 2, *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288 (Fed. Cir. 2010) (No. 2009-1354) (“The Supreme Court set forth the test for design patent functionality: ‘To qualify for protection, a design must present an aesthetically pleasing appearance that is not dictated by function alone.’ *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 148 (1989).”); Gaspar, *supra* note 96, at 181–82 (“*Bonito Boats, Inc. v. Thunder Craft Boats, Inc.* is the starting point for defining ornamental.”); Hupp v. Siroflex of Am., Inc., 122 F.3d 1456, 1460 (Fed. Cir. 1997) (“As explained in *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 148 (1989), to qualify for design patent protection, a design must have an ornamental appearance that is not dictated by function alone.”); *Best Lock Corp. v. Ilco Unican Corp.*, 94 F.3d 1563, 1566 (Fed. Cir. 1996) (“[I]f the design claimed in a design patent is dictated solely by the function of the article of manufacture, the patent is invalid because the design is not ornamental. See *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 148 (1989) (“To qualify for protection, a design must present an aesthetically pleasing appearance that is not dictated by function alone, and must satisfy the other criteria of patentability.”)). These references do not mention that the Supreme Court’s reference was unsupported dicta; some incorrectly state that the Supreme Court “ruled” on the issue. Unfortunately, scholars have reinforced the ill-considered dicta by arguing to the Supreme Court that design patents cover functional features as part of their argument interpreting copyright protection for useful articles narrowly. See Peter S. Menell & Daniel Yablon, *Star Athletica’s Fissure in the Intellectual Property Functionality Landscape*, 166 U. PA. L. REV. ONLINE 137 (2017). Their analysis regrettably failed to explain that the 1902 Act does not support such a reading and that the Federal Circuit’s misreading of regional circuit law and blindness to *Baker v. Selden* explain the “dictated by functionality” anomaly. Hopefully, this Article’s comprehensive examination of the issue will steer the doctrine back on course. It does not help, however, that Justice Breyer took the bait in his *Star Athletica* dissent. See *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 137 S. Ct. 1002, 1034 (2017) (Breyer, J., dissenting). On the bright side, like the Court’s design patent comment in *Bonito Boats*, Justice Breyer’s statement was dicta.

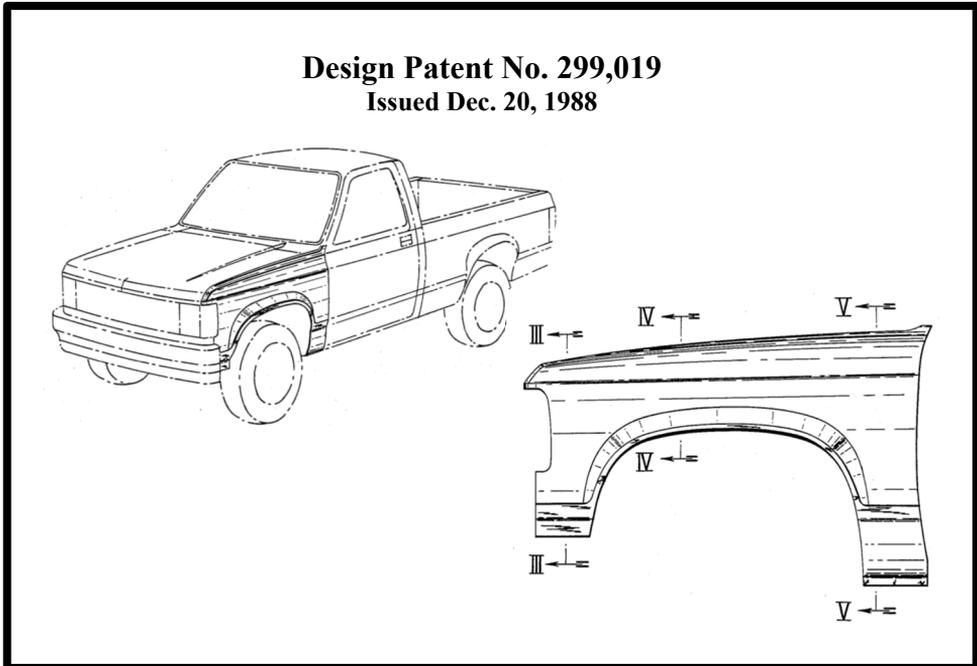
267. 908 F.2d 951 (Fed. Cir. 1990).

268. 908 F.2d at 953–54 (“The district court found the ’019 fender to have been ‘designed according to functional and performance considerations as opposed to aesthetic or ornamental considerations . . .’ and, therefore, that the validity of the ’019 patent was called into ‘serious question.’”).

269. See U.S. Design Patent No. 299,019 (issued Dec. 20, 1988).

270. 908 F.2d at 954 (citing *Avia Group Int’l, Inc. v. L.A. Gear Cal., Inc.*, 853 F.2d 1557, 1562–63 (Fed. Cir. 1988)); *Power Controls Corp. v. Hybrinetics, Inc.*, 806 F.2d 234, 238–40 (Fed. Cir. 1986).

Figure 19: Truck Fender



In *Read Corp. v. Portec, Inc.*,²⁷¹ the Federal Circuit followed the parsimonious approach in *Lee v. Dayton-Hudson Corp.*,²⁷² which filters out unprotectable elements prior to the infringement comparison, to overturn an infringement ruling: “[W]here . . . a design is composed of functional as well as ornamental features, to prove infringement a patent owner must establish that an ordinary person would be deceived by reason of the common features in the claimed and accused designs which are ornamental.”²⁷³

In 1993, the Federal Circuit returned to the alternative design standard for assessing functionality in *L.A. Gear, Inc. v. Thom McAn Shoe Co.*,²⁷⁴ another athletic shoe design case. Learning from its defeat in *Avia* a few years earlier,

271. 970 F.2d 816 (Fed. Cir. 1992).

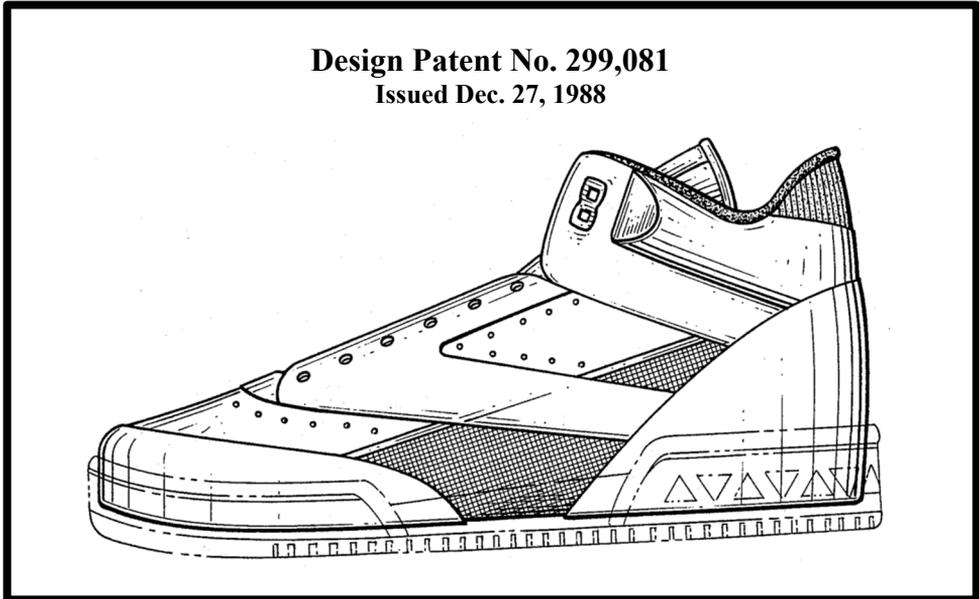
272. 838 F.2d 1186 (Fed. Cir. 1988).

273. 970 F.2d at 825 (citing *Lee v. Dayton-Hudson Corp.*, 838 F.2d at 1188). *Read Corp.* had obtained a design patent on drawings from a nearly contemporaneously filed utility patent. See U.S. Utility Patent No. 4,197,194 (issued Apr. 8, 1970) (Loam Screening Apparatus); U.S. Design Patent No. 263,836 (issued Apr. 13, 1982) (Portable Screening Plant). The court found that Read “failed to submit any evidence directed to either element of infringement . . . : (1) the similarity of the ornamental features of the Portec device and the patented design, and (2) the likelihood that an ordinary person would be confused because of such ornamental similarity.” 970 F.2d at 826.

274. *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117 (Fed. Cir. 1993).

L.A. Gear obtained a design patent on the upper features of an athletic shoe²⁷⁵ depicted in Figure 20.

Figure 20: Shoe Upper



After the district court found infringement, the defendants argued on appeal that each element comprising the design has a utilitarian purpose: The delta wing provides support for the foot and reinforces the shoelace eyelets; the mesh on the side of the shoe also provides support; the moustache at the back of the shoe provides cushioning for the Achilles tendon and reinforcement for the rear of the shoe; and the position of each of these elements on the shoe is due to its function.²⁷⁶ In rejecting an element-by-element analysis of functionality, the Federal Circuit emphasized the need to view the design as whole in assessing “whether the claimed design is dictated by the utilitarian purpose of the article.”²⁷⁷ The Federal Circuit affirmed the district court’s decision based on the

existence of a myriad of athletic shoe designs in which each of the functions identified by [defendant] as performed by the ’081 design elements was achieved in a way other than by the design of the ’081 patent. When there are several ways to achieve the function of an

275. See U.S. Design Patent No. 299,081 (issued Dec. 27, 1988).

276. See 988 F.2d at 1123.

277. *Id.* (citing *Lee*, 838 F.2d at 1189 and *Gorham Co. v. White*, 81 U.S. (14 Wall.) 511, 530 (1872)).

article of manufacture, the design of the article is more likely to serve a primarily ornamental purpose.²⁷⁸

Building on *Avia*, the court's decision in *L.A. Gear* reinforced a permissive approach to the functionality inquiry. The court uncritically adopted the "dictated by" standard for finding functionality without addressing its origin as a shortcut for addressing easy cases.²⁷⁹ In effect, the Federal Circuit converted a sufficient condition for finding a design patent ineligible into a necessary condition. Under this standard, only designs dictated by functionality are ineligible for design patent protection. Hence functional features that are inextricably intertwined with ornamental elements are granted design patent protection without meeting utility patent law's exacting conditions. The Federal Circuit also gave its imprimatur to the alternative design framework without explaining how a defendant could prove that a combination of functional elements resulted in a composite functional design. Moreover, despite *Lee v. Dayton-Hudson* and *Read v. Portec*, the Federal Circuit did not call for filtering out of the functional elements in the infringement inquiry.

Over the next seventeen years, the alternative design standard emerged as the principal framework for assessing ornamentality/non-functionality,²⁸⁰

278. *Id.* (citing *Avia Grp. Int'l, Inc. v. L.A. Gear Cal., Inc.*, 853 F.2d 1557, 1563 (Fed. Cir. 1988)).

279. *See infra* Sections IV(B)–(C).

280. *See Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 671 (Fed. Cir. 2008) (en banc) (citing *L.A. Gear*, 853 F.2d at 1563); *PHG Techs., LLC v. St. John Cos.*, 469 F.3d 1361, 1366 (Fed. Cir. 2006); *Rosco, Inc. v. Mirror Lite Co.*, 304 F.3d 1373, 1378 (Fed. Cir. 2002); *Door-Master Corp. v. Yorktowne, Inc.*, 256 F.3d 1308, 1313 (Fed. Cir. 2001); *Seiko Epson Corp. v. Nu-Kote Int'l, Inc.*, 190 F.3d 1360, 1368 (Fed. Cir. 1999); *Hupp v. Siroflex of Am., Inc.*, 122 F.3d 1456, 1460 (Fed. Cir. 1997); *Best Lock Corp. v. Ilco Unican Corp.*, 94 F.3d 1563, 1566 (Fed. Cir. 1996). *Best Lock* is the rare case where there truly were no alternative designs that could achieve the function of the key blade design: opening a lock designed to be opened by that particular key blade. *See id.* at 1566 ("The parties do not dispute that the key blade must be designed as shown in order to perform its intended function—to fit into its corresponding lock's keyway. An attempt to create a key blade with a different design would necessarily fail because no alternative blank key blade would fit the corresponding lock. In fact, Best Lock admitted that no other shaped key blade would fit into the corresponding keyway, and it presented no evidence to the contrary."). *Best Lock* is the proverbial exception that proves the rule that there is almost always an alternative design. But even in this extreme circumstance, one member of the Federal Circuit panel dissented, *see id.* at 1567–69 (Newman, J., dissenting) ("[T]he fact that the key blade is the mate of a keyway does not convert the arbitrary key profile into a primarily functional design."), and advocates for broad and strong design patent protection argued that this decision would eviscerate design patent protection. *See Perry J. Saidman, Functionality and Design Patent Validity and Infringement*, 91 J. PAT. & TRADEMARK OFF. SOC'Y 313, 318–21 (2009); Perry J. Saidman, *The Demise of the Functionality Doctrine in Design Patent Law*, 92 NOTRE DAME L. REV. 1471, 1488 (2017) (criticizing *Best Lock*

although the Federal Circuit occasionally invoked the *Dayton-Hudson* filtering approach.²⁸¹

The court tempered the alternative design standard in the 1997 case of *Berry Sterling Corp. v. Prescor Plastics, Inc.*²⁸² The design patentee there claimed a cylindrical container designed to fit a vehicle cup receptacle along with a spill-proof lid.²⁸³ The Federal Circuit reversed the district court's invalidation of the design patent on the grounds that the lower court had inappropriately focused its functionality analysis on the limitations of the commercial embodiment of the underlying article of manufacture, failing to view the minimalist design as a whole or consider alternative designs.²⁸⁴ In remanding the case, the Federal Circuit noted that presence of alternative designs was just one factor to be considered. It stated:

and explaining that “if the function of a claimed design is defined in general, broad terms, there will always be alternatives that can perform substantially the same function and not look like the patented design”); Gaspar, *supra* note 96. By contrast, regional circuit courts and Congress appreciated that interoperability is a form of functionality that should not be monopolized short of a utility patent. *See* *Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 534–37 (6th Cir. 2004); *Sony Comput. Ent. v. Connectix*, 203 F.3d 596, 599–608 (9th Cir. 2000); *Comput. Assocs. Int’l v. Altai, Inc.*, 982 F.2d 693, 700, 707–10 (2d Cir. 1992); *Sega Enters. v. Accolade, Inc.*, 977 F.2d 1510, 1526–28 (9th Cir. 1992); 17 U.S.C. § 1201(f)(1) (“[A] person who has lawfully obtained the right to use a copy of a computer program may circumvent a technological measure that effectively controls access to a particular portion of that program for the sole purpose of identifying and analyzing those elements of the program that are necessary to achieve interoperability of an independently created computer program with other programs.”); S. REP. NO. 105-190, at 13 (1998); *see generally*, Peter S. Menell, *Economic Analysis of Network Effects and Intellectual Property*, 34 BERKELEY TECH. L.J. 218 (2019) (tracing the evolution of intellectual property protection for network features of systems and platforms and showing the many ways in which courts and Congress have recognized interoperability as functional); P. Anthony Sammi, Christopher A. Lisy & Andrew Gish, *Good Clean Fun: Using Clean Room Procedures in Intellectual Property Litigation*, 25 INTEL. PROP. & TECH. L.J. 3 (2013) (describing clean procedures for learning the interoperable features of computer software); Peter S. Menell, *An Epitaph for Traditional Copyright Protection of Network Features of Computer Software*, 43 ANTITRUST BULL. 651 (1998) (showing how courts have interpreted copyright law to avoid encroaching on functional features of computer software).

281. *See* *OddzOn Prods. v. Just Toys*, 122 F.3d 1396 (Fed. Cir. 1997) (“It is the non-functional, design aspects that are pertinent to determinations of infringement. . . . Where a design contains both functional and non-functional elements, the scope of the claim must be construed in order to identify the non-functional aspects of the design as shown in the patent.” (citing *Lee v. Dayton-Hudson*)); *see also* *Unidynamics Corp. v. Automatic Prods. Int’l*, 157 F.3d 1311 (Fed. Cir. 1998) (focusing the infringement analysis on the point of novelty, which the Federal Circuit rejected in *Egyptian Goddess*, 543 F.3d at 672–79).

282. 122 F.3d 1452 (Fed. Cir. 1997).

283. *See* U.S. Design Patent 362,368 (issued Sept. 19, 1995).

284. *See* 122 F.3d at 1455–56.

The presence of alternative designs may or may not assist in determining whether the challenged design can overcome a functionality challenge. Consideration of alternative designs, if present, is a useful tool that may allow a court to conclude that a challenged design is not invalid for functionality. As such, alternative designs join the list of other appropriate considerations for assessing whether the patented design as a whole—its overall appearance—was dictated by functional considerations. Other appropriate considerations might include: whether the protected design represents the best design; whether alternative designs would adversely affect the utility of the specified article; whether there are any concomitant utility patents; whether the advertising touts particular features of the design as having specific utility; and whether there are any elements in the design or an overall appearance clearly not dictated by function.²⁸⁵

The court cited no authority for these factors, but they appear to be derived from *In re Morton-Normich Products, Inc.*,²⁸⁶ a CCPA trade dress functionality case.²⁸⁷

Notwithstanding *OddzOn* and *Berry Sterling*, the Federal Circuit quickly shifted back to simply asking whether alternative designs were available.²⁸⁸ *Rosco, Inc. v. Mirror Lite Co.*²⁸⁹ illustrates the Federal Circuit's lax approach to design patent eligibility. As depicted in Figure 21, Rosco claimed a highly convex, curved-surface, three-dimensional, oval, aerodynamic, cross-view mirror with a black, flat metal backing.²⁹⁰

285. *Id.* at 1456.

286. 671 F.2d 1332 (C.C.P.A. 1982).

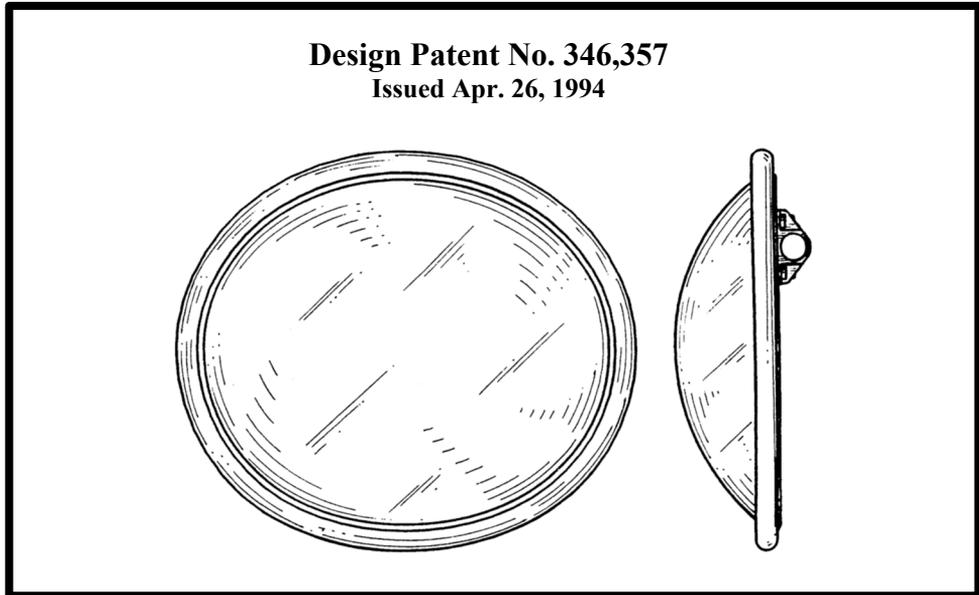
287. *See id.* at 1340–41 (listing the following factors to be considered in trade dress functionality analysis: “(1) the existence of a utility patent disclosing the utilitarian advantages of the design; (2) advertising materials in which the originator of the design touts the design’s utilitarian advantages; (3) the availability to competitors of functionally equivalent designs; and (4) facts indicating that the design results in a comparatively simple or cheap method of manufacturing the product”).

288. *See, e.g.,* *Seiko Epson Corp. v. Nu-Kote Int’l, Inc.*, 190 F.3d 1360, 1368 (Fed. Cir. 1999) (“The ‘ornamental’ requirement of the design statute means that the design must not be governed solely by function, i.e., that this is not the only possible form of the article that could perform its function.” (citing *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117 (Fed. Cir. 1993); *Door-Master Corp. v. Yorktowne, Inc.*, 256 F.3d 1308, 1313 (Fed. Cir. 2001) (concluding that since “[m]any different configurations of [the rear features of a design for an integrated door and frame] (oval, triangular, etc.) could perform the same functions,” the design was not functional) (citing and quoting *L.A. Gear*).

289. 304 F.3d 1373 (Fed. Cir. 2002).

290. *See* U.S. Design Patent No. 346,357 (issued Apr. 26, 1994).

Figure 21: Automotive Mirror



In assessing whether the design was functional, the district court observed that the

oval shape produces angles and images not similarly discernible in convex cross-view mirrors of different shapes. When compared with the Bus Boy mirror, another cross-view mirror, the Rosco mirror provides a more expansive field of view and produces a slightly different distortion of images in the mirror, depending on positioning. Specifically, the Rosco mirror, when mounted perpendicularly to the ground, allows the viewer to view images from above the mirror that the Bus Boy does not when mounted in the same position. Depending on where the school bus on which the mirror is mounted is operating, for example, in an urban area or in a rural area, the ability to see alongside and above the bus may or may not be important to a customer. In short, the oval design has functional capacities that a Bus Boy style mirror does not. The oval design is sufficiently central to the Rosco mirror's use as to render it functional.²⁹¹

For added measure, Judge Sifton noted:

Rosco represented to the patent office that its oval cross-view mirror provided a superb field of view by virtue of its shape. Rosco also advertised that its mirror would offer a more thorough field of view due to its oval shape than other cross-view mirrors, such as Mirror

291. *Rosco, Inc. v. Mirror Lite Co.*, 139 F. Supp. 2d 287, 296 (E.D.N.Y. 2001).

Lite's Bus Boy. 'Why settle for half a mirror when you can have it all. Our new Eagle Eye mirror gives you the big picture.' Rosco also marketed its mirror as more aerodynamic than other cross-view mirrors of different shape. Advertising that highlights features of the product's design as offering a specific utility is a factor that influences the determination of the functionality of a design patent.²⁹²

In reversing the district court's decision, the Federal Circuit noted that "[w]e apply a stringent standard for invalidating a design patent on grounds of functionality: the design of a useful article is deemed functional where 'the appearance of the claimed design is "dictated by" the use or purpose of the article.'"²⁹³ Without appreciating the origins of the "dictated by" terminology in pre-Federal Circuit jurisprudence, Judge Dyk chose the narrowest standard for invalidating a design patent on functionality grounds:

'[T]he design must not be governed solely by function, i.e., that this is not the only possible form of the article that could perform its function.' *Seiko Epson Corp. v. Nu-Kote Int'l, Inc.*, 190 F.3d 1360, 1368 (Fed.Cir.1999). 'When there are several ways to achieve the function of an article of manufacture, the design of the article is more likely to serve a primarily ornamental purpose.' *L.A. Gear*, 988 F.2d at 1123 (citations omitted). That is, if other designs could produce the same or similar functional capabilities, the design of the article in question is likely ornamental, not functional. Invalidity of a design patent claim must be established by clear and convincing evidence.²⁹⁴

The Federal Circuit created a nearly impossible burden for showing functionality:

Mirror Lite has not shown by clear and convincing evidence that there are no designs, other than the one shown in Rosco's '357 patent, that have the same functional capabilities as Rosco's oval mirror. Under these circumstances it cannot be said that the claimed design of the '357 patent was dictated by functional considerations.²⁹⁵

The court's analysis ignores the possibility that some shapes are better than others. So long as there are alternative designs that serve the same functions—even if less well—the design patent is not invalid.

292. *Id.* (citing *Berry Sterling Corp. v. Prescor Plastics, Inc.*, 122 F.3d 1452, 1456 (Fed. Cir. 1997)).

293. 304 F.3d 1373, 1378 (Fed. Cir. 2002) (quoting *L.A. Gear*, 988 F.2d at 1123).

294. *Id.*

295. *Id.* at 1378–79.

In 2007, the Federal Circuit granted en banc review in *Egyptian Goddess, Inc. v. Swisa, Inc.* to assess whether the “point of novelty” should be used in assessing design patent infringement.²⁹⁶ The Federal Circuit’s decision rejecting the “point of novelty” test further narrowed the grounds for invalidating design patents on functionality grounds by commanding that design patents be viewed as a whole.²⁹⁷ The court’s discussion of claim construction in design patent cases, however, breathed new life into the *Dayton-Hudson* filtration approach:

Apart from attempting to provide a verbal description of the design, a trial court can usefully guide the finder of fact by addressing a number of other issues that bear on the scope of the claim. Those include such matters as describing the role of particular conventions in design patent drafting, such as the role of broken lines, *see* 37 C.F.R. § 1.152; assessing and describing the effect of any representations that may have been made in the course of the prosecution history, and distinguishing between those features of the claimed design that are ornamental and those that are purely functional, *see OddzOn Prods., Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1405 (Fed.Cir.1997) (“Where a design contains both functional and non-functional elements, the scope of the claim must be construed in order to identify the non-functional aspects of the design as shown in the patent.”).²⁹⁸

C. PARTIAL REBALANCING THROUGH INFRINGEMENT FILTRATION ANALYSIS

In the first design patent functionality case following its en banc decision in *Egyptian Goddess*, the Federal Circuit took a more measured approach to the functionality issue in *Richardson v. Stanley Works, Inc.*,²⁹⁹ a case involving a quintessential functional product: a multi-function carpentry tool combining a hammer, a stud climbing tool, and a crowbar depicted in Figure 22.³⁰⁰

296. 256 Fed. Appx. 357 (Fed. Cir. 2007).

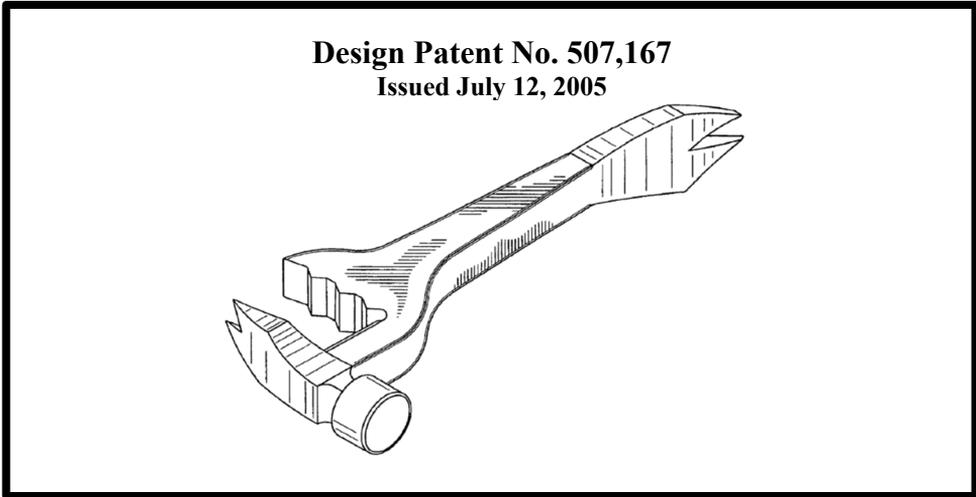
297. 543 F.3d 665, 678 (Fed. Cir. 2008) (en banc).

298. *Id.* at 680. *OddzOn* applied the *Dayton-Hudson* filtration approach. *See supra* text accompanying note 281.

299. 597 F.3d 1288 (Fed. Cir. 2010).

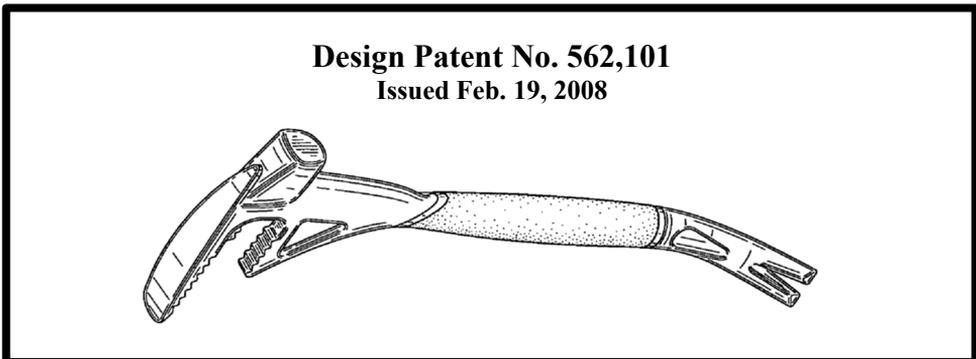
300. *See* U.S. Design Patent No. 507,167 (issued July 12, 2005).

Figure 22: Multi-Function Tool



Richardson brought suit against Stanley Works alleging that its multi-function tool—sold under the FUBAR³⁰¹ trademark—infringed the '167 design patent. The FUBAR contained the same tools but in a sleeker design, depicted in Figure 23.³⁰²

Figure 23: Demolition Tool



The district court drew heavily upon *Dayton-Hudson*: “If a given ‘configuration is made imperative by the elements which it combines and by the utilitarian

301. *Stanley Works* used FUBAR as an abbreviation for functional utility bar. *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1291 (Fed. Cir. 2010). The term is also recognized as a military slang acronym. *See infra* note 445.

302. *See* U.S. Design Patent No. 562,101 (issued Feb. 19, 2008).

purpose of the device,' that configuration is functional and not protected by a design patent."³⁰³ Judge Wake also referenced the alternative design framework³⁰⁴ but tempered it by a range of additional considerations:

Other appropriate considerations might include: whether the protected design represents the best design; whether alternative designs would adversely affect the utility of the specified article; whether there are any concomitant utility patents; whether the advertising touts particular features of the design as having specific utility; and whether there are any elements in the design or an overall appearance clearly not dictated by function.³⁰⁵

Judge Wake observed:

[T]he overall configuration of the[] four elements [the handle, the hammer-head, the jaw, and the crow-bar] is dictated by the functional purpose of the tool and therefore is not protected by his design patent. A designer seeking to incorporate a hammer-head, jaw, and crow-bar on a single handle will naturally and inevitably place the jaw and hammer-head together on one end and the crow-bar on the other end. To place the jaw and hammer-head on opposite ends of the handle would distribute the tool's mass, decreasing the striking force and interfering with the user's swing. It would also adversely encumber the crow-bar, which would have to be placed together with one of the other elements and thus would no longer fit into narrow spaces.³⁰⁶

As a result, Judge Wake concluded that although the configuration of a multi-tool product like that reflected in the '167 patent can take many forms as reflected in the prior art, the "'167 patent does not protect the configuration of the handle, hammer-head, jaw, and crow-bar."³⁰⁷ The design protection only extends to ornamental elements, such as "the standard shape of the hammer-head, the diamond-shaped flare of the crow-bar and the top of the jaw, the rounded neck, the orientation of the crowbar relative to the head of the tool, and the plain, undecorated handle."³⁰⁸

303. *Richardson v. Stanley Works, Inc.*, 610 F. Supp. 2d 1046, 1049 (D. Ariz. 2009) (quoting *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1188 (Fed. Cir. 1988)); *Lee*, 838 F.2d at 1188 (quoting *Applied Arts Corp. v. Grand Rapids Metalcraft Corp.*, 67 F.2d 428, 430 (6th Cir.1933)).

304. *Id.* (quoting *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123 (Fed. Cir. 1993)).

305. *Id.* at 1049–50 (quoting *Berry Sterling Corp. v. Pescor Plastics Inc.*, 122 F.3d 1452, 1456 (Fed. Cir. 1997)).

306. *Id.* at 1050.

307. *Id.*

308. *Id.*

With these limitations in mind, Judge Wake focused on whether the FUBAR's sleek design infringed the '167 patent. Drawing further from *Dayton-Hudson*, the court filtered out the unprotectable elements of the '167 patent—the overall configuration of the handle, the hammer-head, the jaw, and the crow-bar—from the infringement comparison. With these elements eliminated, Judge Wake concluded that the FUBAR did not infringe the '167 patent because “[t]here is little similarity between the ornamental features of Richardson’s and Stanley’s designs.”³⁰⁹ He further noted that “[t]he '167 patent does not give Richardson a monopoly on that basic, wrench-like design for a jaw.”³¹⁰

Richardson appealed to the Federal Circuit, contending that the district court erred by not viewing his patented design as a whole as required by *L.A. Gear* and *Egyptian Goddess*.³¹¹ The Federal Circuit affirmed in an opinion that relied heavily on *OddzOn* and *Dayton-Hudson*.³¹² Writing for the court, Judge Lourie observed:

In *OddzOn*, we affirmed a district court’s claim construction wherein the court had carefully distinguished the ornamental features of the patented design from the overall ‘rocket-like’ appearance of the design of a football-shaped foam ball with a tail and fin structure. *OddzOn Prods., Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1405 (Fed.Cir.1997). We held that ‘[w]here a design contains both functional and non-functional elements, the scope of the claim must be construed in order to identify the non-functional aspects of the design as shown in the patent.’ *Id.*³¹³

The court concluded that

[t]he district court here properly factored out the functional aspects of Richardson’s design as part of its claim construction. By definition, the patented design is for a multi-function tool that has several functional components, and we have made clear that a design patent, unlike a utility patent, limits protection to the ornamental design of the article. *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1188 (Fed. Cir. 1988) (citing 35 U.S.C. § 171). If the patented design is

309. *Id.* at 1052.

310. *Id.*

311. See Brief of Appellant, *Richardson*, 610 F. Supp. 2d at 1049 (No. 2009-1354), Appeal from the United States District Court for the District of Arizona in Case No. 08-Cv-1040, Judge Neil V. Wake, (Jul. 20, 2009) at 13–14, 16–18, 28–30.

312. See *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1293–94 (Fed. Cir. 2010).

313. *Id.* at 1293.

primarily functional rather than ornamental, the patent is invalid.
*Id.*³¹⁴

The *Richardson* decision signaled a shift toward ensuring that design patent protection would not monopolize functional product features or encroach upon the utility patent regime. But even before the *Richardson* decision was final, a campaign was already in motion to limit its influence.

More than a decade before *Richardson*, Steve Jobs began one of the most audacious technology revivals in corporate history.³¹⁵ When Jobs returned to Apple in 1997, eight years after his unceremonious departure, the company was near bankruptcy. Combining collateral advances in computing technology with his flair for elegant simplicity, Jobs launched an ambitious research and development effort to revolutionize consumer electronic products. Beginning with the iPod, Apple introduced a stream of new products that seamlessly combined minimalist design with user-friendly features and dazzling electronics. The iPod, iPad, and iPhone blended form and function to captivate the world and bring the digital revolution to billions of fingertips.

As part of his plan to lead the consumer electronics revolution, Jobs took an aggressive approach to securing intellectual property protection.³¹⁶ At the splashy product introduction for the iPhone in January 2007,³¹⁷ Jobs proudly announced five key characteristics and a clear warning to potential imitators.³¹⁸

314. *Id.* at 1293–94.

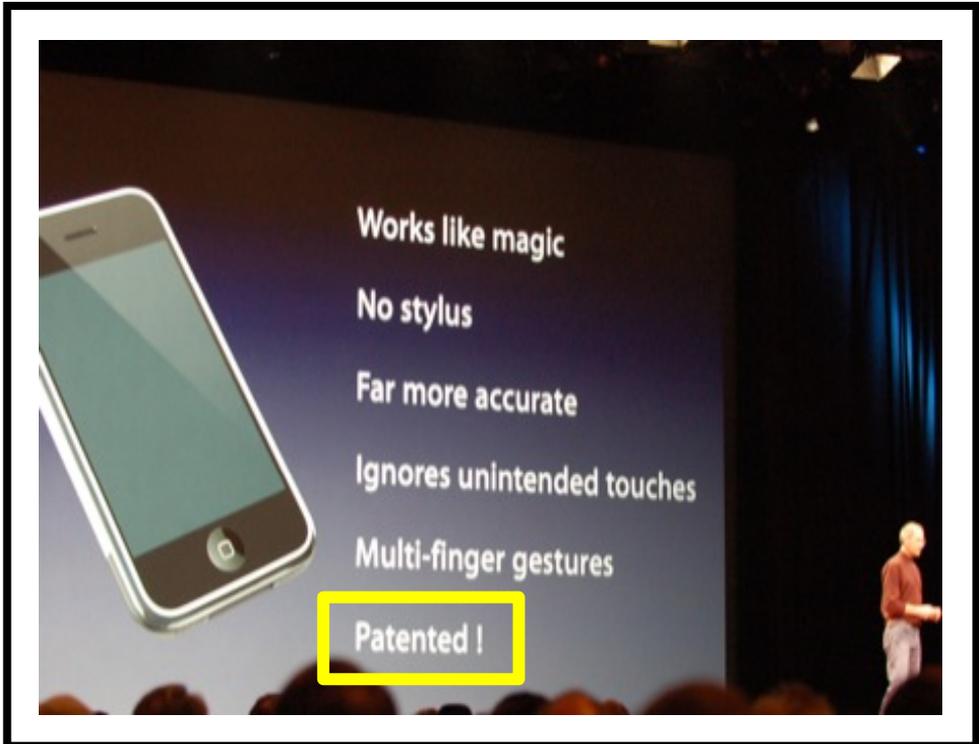
315. See WALTER ISAACSON, *STEVE JOBS* 305–425, 444–51, 465–75, 490–510 (2011).

316. This had long been a part of Jobs's playbook. Apple jealously guarded its intellectual property, see FRED VOGELSTEIN, *DOGFIGHT: HOW APPLE AND GOOGLE WENT TO WAR AND STARTED A REVOLUTION* 172–74 (2013), as reflected in its aggressive and ultimately unsuccessful effort to assert copyright protection for the Macintosh graphical user interface, much of which was derived from Xerox's Star interface, see *Apple Comput., Inc. v. Microsoft Corp.*, 35 F.3d 1435, 1446 (9th Cir. 1994).

317. See John Markoff, *Apple Introduces Innovative Cellphone*, N.Y. TIMES (Jan. 10, 2007), <https://www.nytimes.com/2007/01/10/technology/10apple.html>.

318. See VOGELSTEIN, *supra* note 316, at 172–74.

Figure 24: iPhone Introduction



As it developed the iPhone and the iPad, Apple filed rafts of utility and design patent applications. It also acquired utility patents from others. On the utility patent side, for example, Apple obtained a patent on the slide-to-unlock feature for touchscreens.³¹⁹ Figures 25 and 26 illustrate four of Apple's touchscreen design patents.³²⁰

319. See *Unlocking a Device by Performing Gestures on an Unlock Image*, U.S. Patent No. 7,657,849 (issued Feb. 2, 2010).

320. See U.S. Design Patent No. 618,677 (filed Nov. 18, 2008; issued Dec. 23, 2010); U.S. Design Patent No. 593,087 (filed June 30, 2007; issued May 29, 2009); U.S. Design Patent No. 504,889 (filed Mar. 17, 2004; issued May 10, 2005).

Figure 25: Electronic Devices

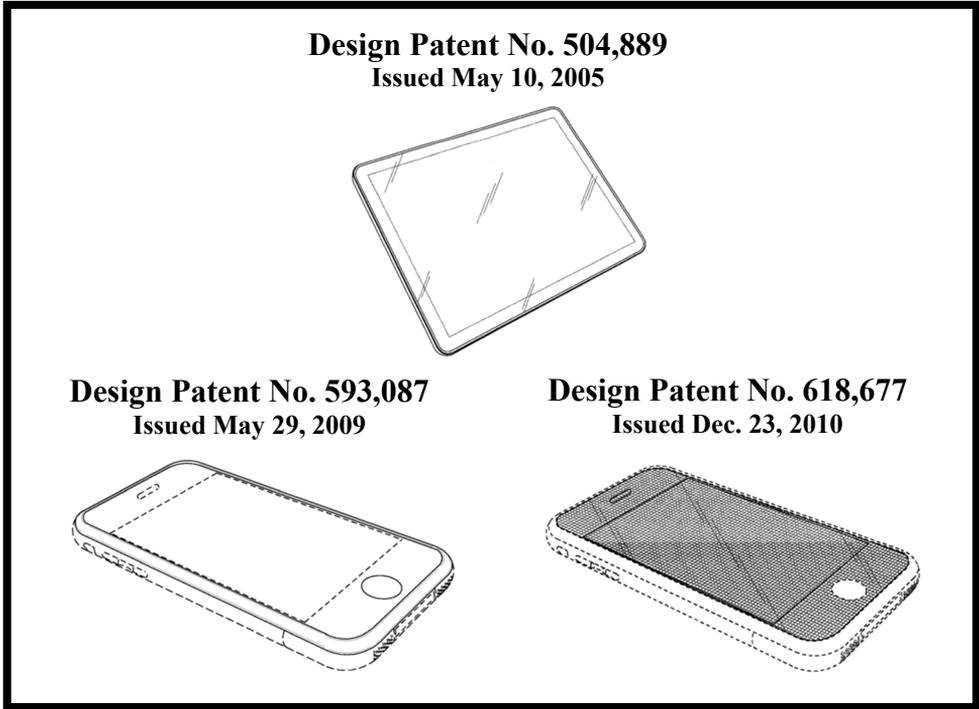


Figure 26: Graphical User Interface for Display Screen or Portion thereof



These design patents were premised on a low threshold for ornamentality and a high threshold for functionality. Apple hoped to ride the *Avia/L.A. Gear* jurisprudence to exclusive control of the mobile phone and tablet touchscreen marketplaces.

The *Richardson* decision, however, potentially stood in the way of Apple's design patent enforcement strategy. Application of a filtration approach exposed Apple's design patents to the risk that there would be nothing left of its rounded rectangular design after discounting the functional elements. By early 2010, smartphones featuring the Android operating system had overtaken Apple iPhone sales.³²¹ Apple was gearing up to launch a multi-front patent battle against the growing tide of Android products inundating the smartphone marketplace.³²²

Jobs was livid that Google's founders, Sergey Brin and Larry Page, whom he had mentored, and Google's CEO Eric Schmidt, whom he had welcomed onto Apple's Board, betrayed him. Apple sued HTC (and, by extension, Android) in June 2010 for infringement of ten of its utility patents.³²³ Apple was gearing up to sue Samsung for infringement of Apple's utility and design patents, as well as its trade dress.³²⁴ Jobs characterized its campaign against the Android iPhone clones in saying:

'Google, you fucking ripped off the iPhone, wholesale ripped us off.' Grand theft. I will spend my last dying breath if I need to, and I will spend every penny of Apple's \$40 billion in the bank, to right this wrong. I'm going to destroy Android, because it's a stolen product. I'm willing to go thermonuclear war on this. They are scared to death, because they know they are guilty. Outside of Search, Google's products—Android, Google Docs—are shit.³²⁵

As insurance to protect its design patent investments and enforcement strategy, Apple enlisted Perry Saidman, the design patent attorney behind the

321. See Gartner, *Global Market Share Held by the Leading Smartphone Operating Systems in Sales to End Users from 1st Quarter 2009 to 2nd Quarter 2018*, STATISTA (2020), <https://www.statista.com/statistics/266136/global-market-share-held-by-smartphone-operating-systems/> [<https://perma.cc/W6CP-92XL?type=image>]; see also Brad Stone, *Google's Andy Rubin on Everything Android*, N.Y. TIMES: BITS (Apr. 27, 2010, 1:02 PM), <https://bits.blogs.nytimes.com/2010/04/27/googles-andy-rubin-on-everything-android/> (predicting that Android will overtake iPhone sales).

322. See VOGELSTEIN, *supra* note 316, at 172–74.

323. See Complaint for Patent Infringement, Apple Inc. v. High Tech. Comput. Corp., No. 10CV00167, 2010 WL 711393 (D. Del. Mar. 2, 2010).

324. See *infra* Section V(D).

325. ISAACSON, *supra* note 314, at 512.

Avia case and a prominent advocate for robust design protection,³²⁶ to overturn the panel's filtration approach and restore the broad standard for design patent eligibility reflected in *Avia*, *L.A. Gear*, *Rosco*, and *Egyptian Goddess*. Apple's amicus brief supporting Richardson's en banc petition laid bare the strategy to eviscerate the functionality limitation on design patent protection:

It is exceptionally important for the Court to reconsider en banc the panel's finding that it is proper to factor out functional aspects of a claimed design prior to determining infringement.

The parsing of ornamental and functional features should be abolished. Whether an individual feature of an overall design performs a function is simply not relevant to design patent infringement.

Functional features that make up an overall design are nearly always themselves ornamental, and those functional features are no more or less relevant to design patent *infringement* than any other feature, all contributing to the overall appearance of the claimed design.

The proper place in design patent law to consider functionality is when evaluating the validity of a design patent, i.e., whether the overall claimed design is dictated solely by function. This use of functionality in the validity inquiry is supported by the Supreme Court's *Bonito Boats* decision.

This Court's *Egyptian Goddess* decision, in rejecting the old deconstructionist analysis of novelty, also changed the underpinning of older case law that similarly dissected functionality element-by-element—a flawed analysis with the same infirmities that led this Court to abolish the point of novelty test in *Egyptian Goddess*.³²⁷

Although the Federal Circuit declined en banc review of *Richardson*,³²⁸ this decision merely postponed the inevitable functionality showdown. Apple could still contend its touchscreen designs, viewed as a whole, were not functional and were infringed by Samsung's touchscreen smartphones.

326. See Perry J. Saidman & Theresa Esquerra, *A Manifesto on Industrial Design Protection: Resurrecting the Design Registration League*, 55 J. COPYRIGHT SOC'Y U.S.A. 423 (2008); Perry J. Saidman, *Design Patents—The Whipping Boy Bites Back*, 73 J. PAT. & TRADEMARK OFF. SOC'Y 859 (1991); Perry J. Saidman & Mark B. Mondry, *Sneakers, Design Patents and Summary Judgments: Opening a New Era in the Protection of Consumer Product Designs*, 71 J. PAT. & TRADEMARK OFF. SOC'Y 524 (1989).

327. Brief of Amicus Curiae Apple Inc. in Support of Plaintiff-Appellant's Petition for Rehearing En Banc at 1, *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288 (Fed. Cir. 2010) ("Summary of Argument").

328. See *Richardson*, 597 F.3d 1288 (noting rehearing en banc denied on May 24, 2010).

D. THE *APPLE V. SAMSUNG* FUNCTIONALITY SHOWDOWN: DESIGN PATENTS RUN AMOK

On April 15, 2011, Apple filed a broad complaint alleging that Samsung's Galaxy phones and tablets infringed numerous utility and design patents, as well as the iPhone and iPad trade dress.³²⁹ This litigation would run for seven years and cost hundreds of millions of dollars, with several appeals to the Federal Circuit, a Supreme Court decision on a question of far less significance than design patent functionality, and ultimately a jury damages award of over a half billion dollars against Samsung based principally on the design patent infringement allegations. At the end of this Dickensian saga,³³⁰ the courts passively reinforced the permissive view of design patent ornamentality/non-functionality.

1. *The 2011 District Court Preliminary Injunction Decision*

On July 1, 2011 Apple moved for a preliminary injunction seeking to enjoin Samsung sales of smartphones and tablet computers arguing among other things that these products infringe upon Apple's design patents.³³¹ Samsung opposed the motion, arguing that Apple had not met the high threshold for this "extraordinary remedy."³³² To prevail on its motion, Apple had to establish: "(1) some likelihood of success on the merits of the underlying litigation; (2) immediate irreparable harm will result if the relief is

329. See Complaint for Patent Infringement, Federal False Designation of Origin and Unfair Competition, Federal Trademark Infringement, State Unfair Competition, Common Law Trademark Infringement, and Unjust Enrichment, Apple Inc. v. Samsung Elecs. Am., Inc., No. 11-CV-01846-LHK, 2011 WL 7036077 (N.D. Cal. Dec. 2, 2011); Amended Complaint for Federal False Designation of Origin and Unfair Competition, Federal Trademark Infringement, Federal Trade Dress Dilution, State Unfair Business Practices, Common Law Trademark Infringement, Unjust Enrichment, and Patent Infringement, *Apple*, 2011 WL 7036077; VOGELSTEIN, *supra* note 316, at 161. Notwithstanding the omnibus nature of its complaint, Apple chose not to assert a copyright infringement cause of action. Adding this cause of action would have required Apple to register copyright protection for the iPhone and iPad, which would likely have encountered pushback from the Copyright Office. Moreover, the court would apply both validity and filtration screens. See *infra* Section VII(A)(2).

330. See generally CHARLES DICKENS, BLEAK HOUSE (1853).

331. Design Patent No. D618,677; Design Patent No. D593,087; Design Patent No. D504,889. See *Apple*, 2011 WL 7036077, at *1, *aff'd in part, vacated in part, remanded*, 678 F.3d 1314 (Fed. Cir. 2012).

332. See *id.* at *5. Under 35 U.S.C. § 283, the decision to grant a preliminary injunction "in accordance with the principles of equity" is within the sound discretion of the district court. See *Abbott Lab's. v. Andrx Pharms., Inc.*, 452 F.3d 1331, 1334 (Fed. Cir. 2006).

not granted; (3) the balance of the hardships to the parties weighs in its favor; and (4) the public interest is best served by granting the injunctive relief.”³³³

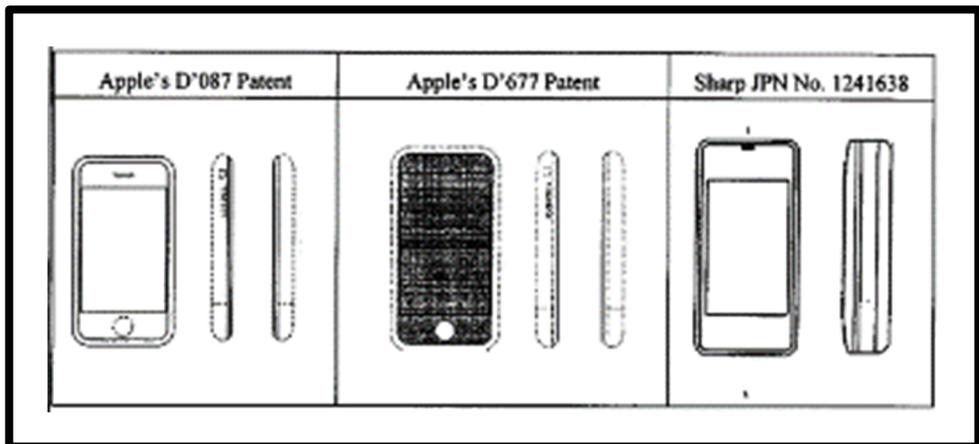
a) The Smartphone Design Patents

With regard to success on the merits of the smartphone design patents, Samsung focused its opposition on their evident minimalism (non-ornamentality) and functionality:

[T]he core of Apple’s D’677 and D’087 patents is ‘minimalistic.’ Under this theory of design, ornamentation is stripped down to pure functionality, and therefore, Samsung argues, the D’677 and D’087 patents are invalid based on functionality. Samsung offers a list of design features found in the D’677 and D’087 patents, which also have functional benefits for the user of the patented article. These design features include the design patents’ (1) rectangular shape; (2) rounded corners; (3) placement of the rounded speaker on the upper portion of the front surface above the display screen; (4) horizontal slot shape of speaker; (5) black color and borders around the screen; (6) bezel; and (7) lack of significant ornamentation. Samsung argues that all of the major elements in the D’677 and D’087 patents are “primarily functional,” and therefore the patents themselves are invalid.³³⁴

Samsung also pointed to anticipation and obviousness based on a Japanese smartphone patent, shown below in Figure 27, published more than one year before the D’677 and D’087 filing dates.

Figure 27: Smartphone Prior Art References and Comparison



333. *See id.*

334. *Apple*, 2011 WL 7036077, at *7 (citations to brief and footnote omitted).

Samsung further contended that Apple would fail to succeed in proving infringement after filtering out the functional design elements under the *Richardson* framework.

In rejecting Samsung's ornamentality/non-functionality arguments, Judge Koh explained:

The standard employed to invalidate a design patent based upon functionality requires that the design itself be *dictated* by the functionality of the item. Just because various elements of Apple's D'677 and D'087 patents *enhance* the user experience does not necessarily mean that the patented design is *dictated* by functionality. The Federal Circuit has previously rejected precisely the type of argument advanced by Samsung. In *L.A. Gear*, the party seeking to invalidate a shoe design patent based on functionality argued that various design elements had utilitarian purposes, increasing the benefit to the wearer of the shoe. 988 F.2d at 1123. The Federal Circuit refused to find that a design patent was invalid as functional because "the utility of each of the various elements that comprise the design is not the relevant inquiry with respect to a design patent." *Id.* Viewing the patents at issue here as a whole, the Court cannot say that the designs are purely functional.

Moreover, Apple has identified numerous alternative smartphone designs in which the functions identified by Samsung as performed by the design elements in the D'677 and D'087 patents were achieved in another way. Evidence of alternative designs may support a finding that the patented design is more likely to serve an ornamental function. See *L.A. Gear*, 988 F.2d at 1123.³³⁵

Judge Koh also found that

the alternative smartphone designs identified by Apple—both other smartphones within the industry, and alternative designs considered and discarded by Apple in the process of designing the D'087 and D'677 patents—establish that there are alternative designs that do not adversely affect the utility of the design. For example, Apple identified alternative designs that had different characteristics that were neither more nor less utilitarian than the design used in the D'677 and D'087 patents. These included alternative designs that contained: more deeply rounded corners that gave an overall less rectangular visual impression; sharper corners; differently shaped speakers; differently sized and placed screens; and alternative designs with additional buttons. Indeed, several of these phone designs had additional buttons on the body of the phone, which are arguably more functional than the one button designs found in the D'087 and

335. *Id.* at *8 (emphasis in original).

D'677 patents. Accordingly, Samsung has failed to meet its burden of raising substantial questions as to the validity of the D'087 and D'677 patents based on functionality.³³⁶

The court nonetheless acknowledged that “certain aspects of the design patents that are dictated by function may limit the claim scope of both the D'087 and D'677 patents.”³³⁷ Applying *Richardson*, Judge Koh found that “a size that can be handheld, a screen that encompasses a large portion of the front face of the smartphone, and a speaker on the upper portion of the front face of the product are non-ornamental.”³³⁸

As regards to invalidity based on anticipation and obviousness, Judge Koh found that Samsung had met its burden and raised substantial questions regarding the validity of the D'087 patent in light of the Sharp Japanese patent.³³⁹ She reached the opposite conclusion regarding the D'677 patent because the Sharp patent did not feature a black transparent and glass-like front surface.³⁴⁰

On the infringement question, Judge Koh acknowledged in a nod to *Richardson* that it was a close call “in light of the claim limitations and other considerations,” but that Apple had met its burden.³⁴¹ She did not, however, explain the filtration analysis and offered only a conclusory judgment.

Weighing these considerations in conjunction with Apple’s allegation of irreparable harm from erosion of design distinctiveness and loss of market share, hardship to the parties, and the public interest, Judge Koh ultimately denied Apple’s preliminary injunction request.³⁴² She emphasized the closeness of the infringement question and that “the design (as opposed to the touch screen technology) of the front view of the smartphone—is but one of many features of the Samsung accused devices. Issuing an injunction on both of these products based on one aspect of the overall product does not advance equitable principles.”³⁴³

b) The Tablet Design Patent

Samsung focused its opposition to the grant of a preliminary injunction with regard to the tablet design patent (D'889) on its minimalism and functionality as well as its obviousness in light of two prior art references: a

336. *Id.* at *9 (citations to declarations omitted).

337. *Id.*

338. *Id.*

339. *See id.* at *13.

340. *See id.* at *14–*15.

341. *See id.* at *17.

342. *See id.* at *23–*24.

343. *See id.* at *23.

1994 tablet intended to be used as a newspaper reader and Compaq's 2002 TC1000 tablet.³⁴⁴

Figure 28: Tablet Prior Art References



Samsung also challenged Apple's likelihood of success on proving infringement based on the *Richardson* filtration framework.³⁴⁵

Judge Koh rejected Samsung's functionality contentions on the same grounds that she applied to the smartphone design patents, emphasizing the narrow "dictated by" standard.³⁴⁶ Regarding obviousness, Judge Koh reasoned:

Apple's D'889 patent is a broad, simple design that gives the overall visual impression of a rectangular shape with four evenly rounded corners, a flat glass-like surface without any ornamentation and a rim surrounding the front surface. The back is a flat panel that rounds up near the edges. The overall design creates a thin form factor. The screen takes up most of the space on the front of the design.

344. *See id.* at *24–*27.

345. *See id.* at *27–*28.

346. *See id.* at *24.

The Court finds that the 1994 Fidler/Knight Ridder tablet creates ‘basically the same visual impression’ as the D’889 patent. The 1994 Fidler/Knight Ridder tablet is also a simple rectangular tablet with four evenly rounded corners. The front screen is a flat reflective surface surrounded by a rim on all four sides. The back-side, though it apparently has four screws, is essentially flat. The area surrounding the screen is admittedly not entirely symmetrical on all four sides, but none of these minor differences distracts from the overall visual appearance of the 1994 Fidler/Knight Ridder tablet as a simple and portable rectangular tablet with the same overall visual impression as the D’889 patent. *See* Durling, 101 F.3d at 103 (‘In comparing the patented design to a prior art reference, the trial court judge may determine almost instinctively whether the two designs create basically the same visual impression.’) (emphasis added).

...

Once a primary reference has been identified, ‘secondary references may only be used to modify the primary reference if they are so related to the primary reference that the appearance of certain ornamental features in one would suggest the application of those features to the other.’ *Burling*, 101 F.3d at 103 (internal quotation marks omitted). Samsung has identified several prior art references, including the 2002 Hewlett-Packard Compaq Tablet PC TC 1000 (“the HP Tablet”), which disclose additional features of the tablet that are related to the primary reference. The HP Tablet may serve as a secondary reference because it is related both in design and in use to the 1994 Fidler/Knight Ridder Tablet. The HP Tablet contains a flat glass screen that covers the top surface of the tablet and a thin rim that surrounds the front face of the device. Thus, the main element that Apple argued was not present in the 1994 Fidler/Knight Ridder Tablet existed in the HP Tablet.³⁴⁷

Consequently, the court determined that Samsung had raised substantial questions as to the validity of the D’889 patent.

As regards to infringement, Judge Koh again nodded to *Richardson* and noted that the infringement analysis must be limited to those aspects of the design that are ornamental and do not extend to any functional elements of the claimed design.³⁴⁸ She noted that in the functionality analysis that “the tablet computer must be a size that allows portability” but that is relatively large to allow users to make effective use of the touchscreen.³⁴⁹ And in view of these constraints, the “screen necessarily must encompass a large portion

347. *See id.* at *26–*27.

348. *See id.* at *27.

349. *See id.* at *25 (citation to declaration omitted).

of the front face of the product.”³⁵⁰ Notwithstanding these limitations, Judge Koh concluded that the design of the Samsung Galaxy Tab 10.1 “is substantially similar to the D’889 patent in the eyes of an ordinary observer.”³⁵¹ As with the smartphone infringement analysis, she offered little explanation of how she conducted the filtration analysis.

Judge Koh concluded that Apple had shown a likelihood of irreparable harm in the absence of a preliminary injunction³⁵² but that substantial questions regarding the D’889 patent—principally the obviousness issue—led her to deny issuing a preliminary injunction with regard to Samsung’s tablet product.³⁵³

2. *The 2012 Federal Circuit Appeal of the Preliminary Injunction Decisions and Remand*

On appeal, the Federal Circuit upheld the district court’s denial of Apple’s request for a preliminary injunction largely on Judge Koh’s findings with regard to irreparable harm,³⁵⁴ but rejected her rulings that the D’087 smartphone design patent is likely anticipated by the Sharp’s Japanese patent³⁵⁵ and that Samsung had raised substantial questions as to the obviousness of the D’889 patent.³⁵⁶ The court vacated the order denying an injunction with respect to the D’889 patent and remanded the case for further proceedings on that portion of Apple’s motion for preliminary relief.³⁵⁷

Although Samsung devoted much of its appellate brief to the ornamentality/non-functionality issue,³⁵⁸ the Federal Circuit sidestepped the

350. *See id.* (citation to declaration omitted).

351. *See id.* at *28.

352. *See id.* at *28–*29.

353. *See id.* at *29.

354. *See Apple, Inc. v. Samsung Elecs. Co., Ltd.*, 678 F.3d 1314, 1323–27 (Fed. Cir. 2012).

355. *See id.* at 1326–27.

356. *See id.* at 1328–31.

357. *See id.* at 1333. Judge O’Malley concurred with regard to upholding Judge Koh’s denial of the preliminary injunction with regard to the smartphone designs but noted that she “might have weighted Apple’s evidence of irreparable harm regarding its smartphones differently had [she] been considering it in the first instance.” *Id.* (O’Malley, J., concurring in part and dissenting in part). But Judge O’Malley agreed with the majority that deference to the district court was appropriate. *See id.* And Judge O’Malley dissented on the handling of the tablet design, contending that the Federal Circuit should have ordered issuance of the preliminary injunction subject only to consideration of an appropriate security bond. *See id.* at 1333–39.

358. *See Corrected Public Non-Confidential Brief of Defendants-Appellees* at 37–42, 60–61, *Apple*, 678 F.3d 1314 (No. 2012–1105), 2012 WL 454641.

question even as it acknowledged the highly functional character of these designs in its background summary of the design patents at issue.³⁵⁹

On remand, Judge Koh preliminarily enjoined Samsung from “making, using, offering to sell, or selling within the United States, or importing into the United States, Samsung’s Galaxy Tab 10.1 tablet computer, and any product that is no more than colorably different from this specified product and embodies any design contained in U.S. Design Patent No. D504,889.”³⁶⁰

3. *The 2012 Trial*

The district court commenced a jury trial in August 2012 to much fanfare.³⁶¹ Apple alleged infringement of four design patents,³⁶² three user-interface software utility patents,³⁶³ and the iPhone and iPad trade dress.³⁶⁴ Samsung defended the design patent allegations by arguing invalidity based on functionality, anticipation, and obviousness, and non-infringement based in part on the *Richardson* filtration framework. Samsung also counterclaimed that Apple products infringed several of its utility patents.³⁶⁵

359. See *Apple*, 678 F.3d at 1317–18 (noting that design patents are for “minimalist” rectangles with rounded corners).

360. See Order Granting Preliminary Injunction at 7, *Apple, Inc. v. Samsung Elecs. Co., Ltd.*, 920 F. Supp. 2d 1079 (N.D. Cal. 2013) (No. 11-CV-01846-LHK), 2012 WL 2401680.

361. See David Kravets, *Who Cheated Whom? Apple v. Samsung Patent Showdown Explained*, WIRED (July 27, 2012, 6:00 AM), <https://www.wired.com/2012/07/apple-v-samsung-explained/>; Nicole Perlroth & Nick Wingfield, *Design and Drama Mark First Day in Apple-Samsung Trial*, N.Y. TIMES: BITS (July 31, 2012), <https://bits.blogs.nytimes.com/2012/07/31/design-and-drama-mark-first-day-in-apple-samsung-trial/>; Cromwell Schubarth, *Apple, Samsung Jury Trial Begins in San Jose*, SILICON VALLEY BUS. J. (July 30, 2012, 9:49 AM), <https://www.bizjournals.com/sanjose/news/2012/07/30/apple-samsung-jury-trial-begins-in.html>.

362. Electronic Device, U.S. Design Patent No. D618,677 (issued Dec. 23, 2010); Electronic Device, U.S. Design Patent No. D593,087 (issued May 29, 2009); Electronic Device, U.S. Design Patent No. D504,889 (issued May 10, 2005); Graphical User Interface for Display Screen or Portion Thereof, U.S. Design Patent No. D604,305 (issued Nov. 17, 2009).

363. List Scrolling and Document Translation, Scaling, and Rotation on a Touch-Screen Display, “Rubberbanding,” U.S. Patent No. 7,469,381 (issued Dec. 23, 2008); Application Programming Interfaces for Scrolling Operations, “Scroll vs. Gesture,” U.S. Patent No. 7,844,915 (issued Nov. 30, 2010); Portable Electronic Device, Method, and Graphical User Interface for Displaying Structured Electronic Documents, “Tap-to-Zoom,” U.S. Patent No. 7,864,163 (issued Jan. 4, 2011).

364. SMS-TRADE DRESS FOR IPHONE SCREEN WITH APP ICONS, UNREGISTERED IPHONE 3G TRADE DRESS, UNREGISTERED COMBINATION IPHONE TRADE DRESS, AND UNREGISTERED IPAD/IPAD 2 TRADE DRESS, Registration No. 3,470,983.

365. Digital Image Capture and Processing System, U.S. Patent No. 7,577,460 (issued Apr. 17, 2012); Method of Controlling Digital Image Processing Apparatus for Efficient Reproduction and Digital Image Processing Apparatus Using the Method, U.S. Patent No. 7,456,893 (issued Nov. 25, 2008); Multi-Tasking Apparatus and Method in Portable Terminal, U.S. Patent No. 7,698,711 (issued Apr. 13, 2010).

Prior to trial, Judge Koh construed the design patents as follows:

1. The D'087 Patent

The D'087 Patent claims the ornamental design of an electronic device as shown in Figures 1–48. The broken lines in the D'087 Patent constitute unclaimed subject matter. Thus, the D'087 Patent claims the front face, a 'bezel encircling the front face of the patented design [that] extends from the front of the phone to its sides,' and a flat contour of the front face, but does not claim the rest of the article of manufacture.

2. The D'677 Patent

The D'677 Patent claims the ornamental design of an electronic device as shown in Figures 1–8. The broken lines in the D'677 Patent constitute unclaimed subject matter. The use of "solid black surface shading" on the D'677 Patent represents the color black. The use of oblique line shading on the D'677 Patent is used to show a transparent, translucent, or highly polished or reflective surface.

3. The D'889 Patent

The D'889 Patent claims the ornamental design of an electronic device as shown in Figures 1–9. The broken lines depicting the human figure in figure 9 do not form a part of the claimed design. The other broken lines in the other figures are part of the claimed design. The D'889 also includes oblique line shading on several of the figures. The oblique line shading in Figures 1–3 and Figure 9 depicts a transparent, translucent, or highly polished or reflective surface from the top perspective view of the claimed design, the top view of the claimed design, and the bottom perspective view of the claimed design.

4. The D'305 Patent

The D'305 Patent claims the ornamental design for a graphical user interface for a display screen or portion thereof, as shown in Figures 1–2. The broken line showing of a display screen in both views forms no part of the claimed design.³⁶⁶

The claim construction, which would be read to the jury as an instruction,³⁶⁷ makes no mention of functional elements that are outside of the scope of design patent protection, despite the fact that Judge Koh recognized many

366. See Order Amending Design Patent Claim Construction, *Apple, Inc. v. Samsung Elecs. Co., Ltd.*, 920 F. Supp. 2d 1079 (N.D. Cal. 2013) (No. 11-CV-01846-LHK). The D'305 claim construction was added later.

367. See Final Jury Instructions at 59–60, *Apple*, 920 F. Supp. 2d 1079 (No. 11-CV-01846-LHK), 2012 WL 3568795 [hereinafter Final Jury Instructions].

functional elements in Apple's design patents in her 2011 preliminary injunction decision.³⁶⁸

Following the close of evidence, Judge Koh read the jury the following instruction to guide them in assessing direct infringement of the design patents:

FINAL JURY INSTRUCTION NO. 46

DESIGN PATENTS—DIRECT INFRINGEMENT

To determine direct infringement of a design patent, you must compare the overall appearances of the accused design and the claimed design.

If you find by a preponderance of the evidence that the overall appearance of an accused Samsung design is substantially the same as the overall appearance of the claimed Apple design patent, and that the accused design was made, used, sold, offered for sale, or imported within the United States, you must find that the accused design infringed the claimed design.

Two designs are substantially the same if, in the eye of an ordinary observer, giving such attention as a purchaser usually gives, the resemblance between the two designs is such as to deceive such an observer, inducing him to purchase one supposing it to be the other. You do not need, however, to find that any purchasers actually were deceived or confused by the appearance of the accused Samsung products. You should consider any perceived similarities or differences between the patented and accused designs. Minor differences should not prevent a finding of infringement.

This determination of whether two designs are substantially the same will benefit from comparing the two designs with prior art. You must familiarize yourself with the prior art admitted at trial in making your determination of whether there has been direct infringement.

You may find the following guidelines helpful to your analysis:

1. The placement and ornamentation of a logo may alter the overall design. However, the use of a mark or logo to identify the source of an otherwise infringing design will not avoid infringement.

2. When the claimed design is visually close to prior art designs, small differences between the accused design and the claimed design may be important in analyzing whether the overall appearances of the accused and claimed designs are substantially the same.

368. See *supra* notes 330–354 and accompanying text.

3. If the accused design includes a feature of the claimed design that departs conspicuously from the prior art, you may find that feature important in analyzing whether the overall appearance of the accused and claimed designs are substantially the same.

4. If the accused design is visually closer to the claimed design than it is to the closest prior art, you may find this comparison important in analyzing whether the overall appearances of the accused and claimed designs are substantially the same.

5. You should not consider the size of the accused products if the asserted design patent does not specify the size of the design.

While these guidelines may be helpful, the test for infringement is whether the overall appearances of the accused design and the claimed design are substantially the same.

Whether Samsung knew its products infringed or even knew of Apple design patents does not matter in determining infringement.³⁶⁹

Samsung objected that this instruction failed to explain to the jury the need to filter out the functional features.³⁷⁰

As regards the ornamentality/non-functionality invalidity defense, Judge Koh provided the following jury instruction:

FINAL JURY INSTRUCTION NO. 52

DESIGN PATENTS—INVALIDITY—LACK OF ORNAMENTALITY

Design patents protect the ornamental appearance, including shape or configuration, of an article of manufacture. If Samsung proves by clear and convincing evidence that the overall appearance of an Apple patented design is *dictated by* how the article claimed in the patent works, the patent is invalid because the design is not “ornamental.” In other words, the inventor did not “design”

369. See Final Jury Instructions, *supra* note 375, at 63.

370. See Samsung's Proposed Disputed Jury Instructions at the Close of Evidence at 45, *Apple*, 920 F. Supp. 2d 1079 (No. 11-CV-01846-LHK), 2012 WL 3000306 [hereinafter Samsung's Proposed Disputed Jury Instructions] (citing *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 825–26 (Fed. Cir. 1992) (“[Where] a design is composed of functional as well as ornamental features, to prove infringement a patent owner must establish that an ordinary person would be deceived by reason of the common features in the claimed and accused designs which are ornamental.”)); *OddzOn Prods., Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1405 (Fed. Cir. 1997); *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1293–94 (Fed. Cir. 2010); *id.* at 1296 (“We also agree that, ignoring the functional elements of the tools, the two designs are indeed different.”).

anything because in order to achieve the function of the design, it had to be designed that way.

When deciding this, you should keep in mind that design patents must be for articles of manufacture, which by definition have inherent functional characteristics. It is normal that claimed designs perform some function—that does not disqualify them from patent protection.

In determining whether a design is dictated by functionality, you may consider whether the protected design represents the best design; whether alternative designs would adversely affect the utility of the specified article; whether there are any concomitant utility patents; whether the advertising touts particular features of the design as having specific utility; and whether there are any elements in the design or an overall appearance clearly not dictated by function.

When there are several other designs that achieve the function of an article of manufacture, the design of the article is more likely to serve a primarily ornamental purpose. However, this may not be true if the other designs adversely affect the utility of the article.³⁷¹

Samsung objected to such narrow framing of the functionality question.³⁷² Samsung contended that jurors should be instructed to “ignore any features that are functional and compare only the ornamental features” and that “[i]n determining whether the overall design is functional, the functionality of each of the various elements that comprise the patented design may be relevant.”³⁷³

After thirteen days of trial and three days of deliberation,³⁷⁴ the jury found that twenty-six of Samsung’s mobile devices infringed three of Apple’s design patents (although not the tablet design), three of Apple’s utility patents, Apple’s registered trade dress, and Apple’s unregistered trade dress for the iPhone 3G.³⁷⁵ The jury rejected Samsung’s utility and design patent invalidity defenses and its utility patent counterclaims.³⁷⁶ The jury awarded

371. See Final Jury Instructions, *supra* note 367, at 70 (emphasis added).

372. See Samsung’s Proposed Disputed Jury Instructions, *supra* note 370, at 59 (disregarding the “dictated by” formulation).

373. See *id.*

374. See *Apple* 920 F. Supp. 2d at 1089.

375. See Amended Jury Verdict Form, *Apple*, 920 F. Supp. 2d 1079 (No. 11-CV-01846-LHK), 2012 WL 10208466.

376. See *id.*

approximately \$1.049 billion to Apple, the majority of which was attributable to infringement of the design patents.³⁷⁷

4. *Post-Trial Motions*

Following the trial, Samsung moved for judgment as a matter of law on multiple grounds, including that no reasonable jury could find that Apple's design patents were valid or infringed by Samsung's products.³⁷⁸ Samsung argued that Judge Koh erred in failing to give the jury a *Richardson* filtering instruction advising jurors to filter out functional design elements in assessing infringement. Samsung also contended that the weight of the evidence established that Apple's designs were functional and hence the design patents were invalid.

Although Judge Koh repeatedly referred to the *Richardson* filtering standard in grounding her denial of Apple's preliminary injunction motions,³⁷⁹ she shifted course and ruled:

[A] "filtering" instruction of the type Samsung requested is not required. The Federal Circuit has explained that a court may aid a jury in determining design patent infringement by construing the claims, *see Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 679–80 (Fed. Cir. 2008) (en banc), and that claim construction may, but need not, include listing functional elements that should be factored out of the claimed design. *See Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1293–94 (Fed. Cir. 2010) (construing a design patent by factoring out functional elements in the context of a bench trial). However, claim construction is a matter of law for the Court. The

377. *See id.* Judge Koh later cut over \$400 million off the judgment and ordered a limited new trial on damages because the jury improperly awarded damages for a period when Samsung lacked notice of some of the asserted patents. *See Apple, Inc. v. Samsung Elecs. Co., Ltd.*, 786 F.3d 983 (Fed. Cir. 2015) (No. 11-CV-01846-LHK), 2014 WL 549324; Greg Botelho, *Judge Orders New Samsung, Apple Faceoff: Strikes \$450 Million in Damages*, CNN Bus. (Mar. 2, 2013, 1:25 PM), <https://www.cnn.com/2013/03/01/tech/california-apple-samsung/index.html>. The second jury trial added \$290 million to the \$639 million remaining from the first trial. *See Apple*, 786 F.3d at 990. Samsung ultimately agreed to pay Apple \$548 million in damages, while reserving a right to reimbursement should it prevail on its Supreme Court appeal. *See James Vincent, Samsung Finally Agrees to Pay Apple \$548 Million, with a Few Caveats*, THE VERGE (Dec. 4, 2015, 6:39 AM), <https://www.theverge.com/2015/12/4/9848348/samsung-apple-patent-548-million-payment>. Of the \$548 million in damages, \$399 million was attributable to design patent infringement. *See* Petition for Writ of Certiorari to the Supreme Court of the United States at 2, *Samsung Elecs. Co. v. Apple Inc.*, 137 S. Ct. 429 (2016) (No. 15-777) [hereinafter *Samsung Certiorari Petition*].

378. *See* Samsung's Notice of Motion and Motion for Judgment as a Matter of Law, New Trial and/or Remittitur Pursuant to Federal Rules of Civil Procedure 50 and 59, *Apple*, 920 F. Supp. 2d 1079 (No. 11-CV-01846-LHK).

379. *See infra* Section V(D)(1).

cases do not suggest that this type of claim construction is appropriate when instructing a jury. The cases engaging in such explicit filtering analysis generally do so in contexts in which a court then rules directly on infringement, such as summary judgment or a bench trial. *See, e.g., Richardson*, 597 F.3d 1288 (bench trial). Indeed, *Egyptian Goddess* warns of the risks of providing an element-by-element construction to a jury, as such instruction could divert the jury's attention from "the design as a whole." *Id.*; *see also* 543 F.3d at 680. Moreover, the Court determined in considering Samsung's request for a jury instruction that Samsung had not shown that the allegedly functional design elements were actually functional under the Federal Circuit's "dictated by function" standard, particularly in light of Apple's evidence that alternative designs existed. *See Richardson*, 597 F.3d at 1294 (applying the "dictated by function" standard during design patent claim construction).³⁸⁰

It is unclear how a jury would understand the need to filter out functional elements without such an instruction. The fact that *Richardson* was a bench trial hardly supports omitting such an instruction in a jury trial. If anything, such an instruction is especially important in enabling a lay jury to apply the infringement standard with due care in cases involving functional designs. Both Judge Koh and the Federal Circuit had previously emphasized the minimalist, functional aspects of Apple's design patents. In her preliminary injunction ruling, Judge Koh emphasized that aspects of Apple's design patents that are dictated by function limit the claim scope of the patents "to those aspects alone that are ornamental and do not extend to any functional elements of the claimed design"³⁸¹ and that "*Richardson* instructs the district court to identify the aspects of the design that are 'dictated by' function and to consider only the remaining aspects of the design in the infringement and anticipation analysis of the design patent."³⁸²

Samsung also argued that no reasonable jury could have found Apple's design patents valid on the basis of functionality. Judge Koh was not persuaded:

Samsung points to expert testimony identifying some allegedly functional elements of the designs. However, invalidity requires not just some functional elements, but that the overall design is "primarily functional." *See PHG Techs. v. St. John Companies, Inc.*, 469 F.3d 1361, 1366 (Fed. Cir. 2006). A design is primarily functional if "the appearance of the claimed design is 'dictated by' the use or

380. *See Apple*, 920 F. Supp. 2d at 1091.

381. *Apple, Inc. v. Samsung Elecs. Co., Ltd.*, No. 11-CV-01846-LHK, 2011 WL 7036077 (N.D. Cal. Dec. 2, 2011), at *10.

382. *Id.* at *9 (citing *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1293 (Fed. Cir. 2010) and *OddzOn Prods., Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1404–05 (Fed. Cir. 1997)).

purpose of the article.” *Id.* (quoting *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123 (Fed. Cir. 1993)). Expert testimony of the type Samsung identifies, stating that individual design elements confer specific functional benefits (e.g., that round corners “help you move things in and out of your pocket,” Tr. 680:9–15), does not constitute clear and convincing evidence that the overall patented designs are dictated by function. Samsung has not identified any other evidence of functionality directed at the designs as a whole.³⁸³

Judge Koh’s comment that Samsung identifies some “allegedly functional elements of the designs” is inconsistent with her earlier ruling. Judge Koh’s detailed ruling denying Apple’s preliminary injunction motion discussed many functional elements of Apple’s design patents,³⁸⁴ as did the Federal Circuit’s opinion reviewing the preliminary injunction ruling.³⁸⁵

Moreover, Judge Koh’s reasoning illustrates how looking at minimalist designs “as a whole” without filtering out the functional features eviscerates the ornamentality/non-functionality limitation on design patents. Apple’s smartphone design patents claimed rounded rectangles without surface ornamentation. There has to be some ornamental aspects in the design to justify finding the design ornamental. The assertion that the mere combination of rounded corners and flat surfaces somehow becomes ornamental is conclusory. It is not surprising that a jury would be misled if not instructed on the need to filter out the functional features.

5. *The 2015 Federal Circuit Appeal*

On appeal, the Federal Circuit resoundingly affirmed Judge Koh’s design patent rulings.³⁸⁶ Samsung argued that it should not have been found liable for infringement of the asserted design patents because any similarity was limited to the basic or functional elements in the design patents. Citing *Richardson and OddzOn*, Samsung contended that the district court erred in failing to exclude functional aspects of the design patents either in the claim construction or elsewhere in the jury instructions.³⁸⁷ In rejecting Samsung’s position, the Federal Court confusingly limited *Richardson* to its facts:

In *Richardson*, the design patent at issue depicted a multifunction tool with numerous components that were ‘dictated by their functional purpose.’ 597 F.3d at 1294. But the claim construction in *Richardson* did not exclude those components in their entirety. Rather, the claim

383. See *Apple*, 920 F. Supp. 2d at 1091–92.

384. See *supra* notes 330–354 and accompanying text.

385. See *supra* notes 355–360 and accompanying text.

386. *Apple Inc. v. Samsung Elecs. Co.*, 786 F.3d 983, 997–99 (Fed. Cir. 2015).

387. See *id.* at 998.

construction included the ornamental aspects of those components: ‘the standard shape of the hammer-head, the diamond-shaped flare of the crow-bar and the top of the jaw, the rounded neck, the orientation of the crow-bar relative to the head of the tool, and the plain, undecorated handle.’ *Richardson v. Stanley Works, Inc.*, 610 F.Supp.2d 1046, 1050 (D.Ariz. 2009). That construction was affirmed on appeal. *Richardson*, 597 F.3d at 1294. As such, the language ‘dictated by their functional purpose’ in *Richardson* was only a description of the facts there; it did not establish a rule to eliminate entire elements from the claim scope as Samsung argues.³⁸⁸

This explanation makes no sense. Unlike the design patent at issue in *Richardson*—which had ornamental qualities—the Apple designs were truly minimalist, as the Federal Circuit acknowledged in its 2012 opinion.³⁸⁹ Furthermore, prior art, such as the Sharp Japanese patent,³⁹⁰ disclosed rounded rectangles and flat surfaces for smartphones. The fact that Apple’s actual product was sleeker should not have mattered. Apple expressly disclaimed those (and all other) aspects of the iPhone design through its use of dotted lines on its design patent drawings. Ultimately, we are left with the unavoidable conclusion that the Federal Circuit’s reasoning cannot be reconciled with the court’s precedent and the minimalist, functional character of Apple’s design patent claims.

While narrowing the meaning of functional for purposes of design patent validity and infringement to nonexistence, the Federal Circuit’s rejection of the lower court’s trade dress infringement ruling on functionality grounds makes the opinion read like a chapter from *Alice in Wonderland*.³⁹¹ Applying Ninth Circuit law,³⁹² the Federal Circuit waxes eloquently about the robust functionality of the iPhone trade dress (which parallel Apple’s design patents):

388. *Id.*

389. *See* *Apple, Inc. v. Samsung Elecs. Co., Ltd.*, 678 F.3d 1314, 1317–18 (Fed. Cir. 2012).

390. *See* *Apple, Inc. v. Samsung Elecs. Co., Ltd.*, No. 11-CV-01846-LHK, 2011 WL 7036077 (N.D. Cal. 2012), at *10.

391. *See* LEWIS CARROLL, *ALICE’S ADVENTURES IN WONDERLAND* (D. Appleton & Co. 1866) (portraying Alice as a young, innocent, youth who does not have the ability to rationalize well enough to discover an exit from Wonderland and telling stories through contradictions, such as Alice struggling not to drown in her own sea of tears, saying “I wish I had not cried so much!”).

392. Regional circuit law binds the Federal Circuit when reviewing questions of law and precedent not exclusively assigned to the Federal Circuit. *See* *ERBE Elektromedizin GmbH v. Canady Tech. LLC*, 629 F.3d 1278, 1287 (Fed. Cir. 2010) (looking to the regional circuit law where the district court sits in reviewing Lanham Act claims); *Atari Games Corp. v. Nintendo of Am., Inc.*, 897 F.2d 1572, 1575 (Fed. Cir. 1990); *see generally* Menell, *supra* note 229, at 1578–81 (explaining the legislative history of the Federal Courts Improvement Act, the legislation that established the Federal Circuit, and Congress’s intention to limit the Federal Circuit’s subject matter jurisdiction).

improving the quality of the iPhone, having utilitarian advantage, the failure of alternative designs to offer the same features, and the substance of Apple's advertisements emphasizing the functionality of multi-touch features on flat screens.³⁹³ All of this led the Federal Circuit to conclude that Apple "failed to show that there was substantial evidence in the record to support a jury finding in favor of non-functionality for the . . . registered and unregistered trade dress."³⁹⁴

In partial defense of the Federal Circuit's analysis, the Ninth Circuit (and other circuits) have set a high bar for non-functionality.³⁹⁵ But that only begs the question of why the Federal Circuit has not come to the same conclusion regarding design patents. We return to that conundrum in Parts VI and VII.

6. *The Supreme Court's Missed Opportunity*

After failing to obtain en banc review at the Federal Circuit,³⁹⁶ Samsung filed a petition for writ of certiorari in the U.S. Supreme Court. Its petition led with the fundamental question of "[w]here a design patent includes unprotected non-ornamental features, should a district court be required to limit that patent to its protected ornamental scope?"³⁹⁷ The petition also posed the question of whether the Federal Circuit properly allowed Apple to recover Samsung's "entire profit" from the sale of products of the infringing devices, as the clear text of Section 289 of Patent Act appeared to require.³⁹⁸

393. See *Apple*, 786 F.3d at 992–95.

394. *Id.* at 994–96.

395. See *Leatherman Tool Grp., Inc. v. Cooper Indus., Inc.*, 199 F.3d 1009, 1011–12, 1013 (9th Cir. 1999) (observing that the protection for source identification must be balanced against "a fundamental right to compete through imitation of a competitor's product," and that a trade dress, taken as a whole, is functional if it is "in its particular shape because it works better in this shape"); *Disc Golf Ass'n v. Champion Discs, Inc.*, 158 F.3d 1002, 1007 (9th Cir. 1998) ("A product feature need only have some utilitarian advantage to be considered functional."); see also *TraFFix Devices, Inc. v. Mktg. Displays, Inc.*, 532 U.S. 23, 33–34 (2001) (explaining that trade dress does "not bar competitors from copying functional product design features" and that there is "no need" "to engage . . . in speculation about other design possibilities").

396. See *Samsung Certiorari Petition*, *supra* note 377, at 4 ("The court of appeals denied rehearing *en banc* on August 13, 2015.").

397. See *id.* at i.

398. See 35 U.S.C. § 289 ("Whoever during the term of a patent for a design, without license of the owner, (1) applies the patented design, or any colorable imitation thereof, to any article of manufacture for the purpose of sale, or (2) sells or exposes for sale any article of manufacture to which such design or colorable imitation has been applied shall be liable to the owner to the extent of his total profit, but not less than \$250, recoverable in any United States district court having jurisdiction of the parties.").

Samsung's petition concisely explained that un rebutted evidence at trial showed

that rounded corners improve a phone's 'pocketability' and 'durability,' that a non-rectangular display element would be difficult and 'expensive' to manufacture and 'completely rare,' that the rectangular shape of the device maximizes the size of the rectangular display it can hold, that a clear flat front surface facilitates finger-touch operation over the entire display, and that the borders surrounding the display efficiently accommodate and hide under-lying components.

Moreover, Apple's witnesses admitted that 'having a clear cover over the display element' was 'absolutely functional,' that 'you need a speaker at the top to hear,' that the bezel keeps the glass from hitting the ground if the phone is dropped, that 'rounded corners certainly help you move things in and out of your pocket,' and that Apple may not own 'a colorful matrix of icons' or 'icons arranged in rows and columns in a grid,' which inform the user that the phone will perform particular functions when specific icons are selected.³⁹⁹

The petition noted the 1902 Act and its purpose of replacing the "useful" rubric with that of "ornamental"⁴⁰⁰ but did not explain the critical historical background of the design patent regime before and after 1902. This was particularly unfortunate because the Supreme Court had not heard a design patent case since the late-19th century, before the foundational 1902 Act clarified Congress's intent to reinforce the *channeling principle* between design and utility.⁴⁰¹ The petition made no reference to the many regional circuit cases, preceding the establishment of the Federal Circuit, that interpreted the design patent regime narrowly and faithfully to the text and language of the 1902 Act.⁴⁰²

Unfortunately, the Supreme Court granted certiorari solely on the damages question: "Where a design patent includes unprotected non-ornamental features, should a district court be required to limit that patent to its protected ornamental scope?"⁴⁰³ The Supreme Court's resolution of that question did nothing to address the critical ornamentality/non-functionality doctrine and did little to clarify design patent damages law.

399. See Samsung Certiorari Petition, *supra* note 377, at 15 (record citations omitted).

400. See *id.* at 5 ("Although design patents were once available for 'useful' product configurations . . . in 1902 Congress eliminated 'the word "useful" as applied to design patents . . . and substitut[ed] the word "ornamental."').

401. See *supra* Part III.

402. See *supra* Sections IV(A)–(B).

403. Samsung Elecs. Co. v. Apple Inc., 136 S. Ct. 1453 (2016).

Samsung prevailed in persuading the Supreme Court to overturn the Federal Circuit's interpretation of Section 289. The Court held that determining profits under Section 289 of the Act involves two steps: "First, identify the 'article of manufacture' to which the infringed design has been applied. Second, calculate the infringer's total profit made on that article of manufacture."⁴⁰⁴ On the first step, the Supreme Court held that the "article of manufacture" for which total profits are awarded was not limited to the product sold to consumers, but may be either "a product sold to a consumer [or] a component of that product."⁴⁰⁵ But the Court "decline[d] to lay out a test for the first step of the § 289 damages inquiry in the absence of adequate briefing by the parties."⁴⁰⁶ The case was therefore remanded back to the Federal Circuit which in turn remanded the case back to the district court.⁴⁰⁷

7. *The 2017 Remand Trial: Samsung's Pyrrhic Victory*

The district court ordered a new damages trial and set forth a four-factor test for determining the relevant article of manufacture for the purpose of § 289.⁴⁰⁸ Judge Koh instructed the jury to identify the articles of manufacture to which Samsung applied Apple's patented designs based on the following factors:

[1] The scope of the design claimed in Apple's patent, including the drawing and written description; [2] The relative prominence of the design within the product as a whole; [3] Whether the design is conceptually distinct from the product as a whole; and [4] The physical relationship between the patented design and the rest of the product, including whether the design pertains to a component that a user or seller can physically separate from the product as a whole, and whether the design is embodied in a component that is manufactured separately from the rest of the product, or if the component can be sold separately.⁴⁰⁹

404. *Samsung Elecs. Co. v. Apple Inc.*, 137 S. Ct. 429, 434 (2016).

405. *Id.*

406. *Id.* at 436.

407. The Federal Circuit held that "the trial court should consider the parties' arguments in light of the trial record and determine what additional proceedings, if any, are needed. If the court determines that a new damages trial is necessary, it will have the opportunity to set forth a test for identifying the relevant article of manufacture for purpose of § 289, and to apply that test to this case." *Apple Inc. v. Samsung Elecs. Co.*, 678 Fed. Appx. 1012, 1014 (Fed. Cir. 2017) (per curiam).

408. Order Requiring New Trial on Design Patent Damages, *Apple Inc. v. Samsung Elecs. Co.*, No. 11-CV-01846-LHK, 2017 WL 4776443 (N.D. Cal. Oct. 22, 2017).

409. *Id.* at *19.

Apple argued that the articles of manufacture to which Samsung applied Apple's patented designs were the whole phones. Samsung countered that the articles of manufacture are a component or collection of components of each phone. Specifically, for the D'677 patent, Samsung contended that the article of manufacture was a phone's round-cornered, black glass front face. For the D'087 patent, Samsung contended that the article of manufacture was a phone's round-cornered, glass front face and surrounding rim or bezel. For the D'305 patent, Samsung contended that the article of manufacture was a phone's display screen.

The jury ultimately awarded Apple \$533 million for infringement of the design patents and \$5.3 million for infringement of the utility patents,⁴¹⁰ approximately 20% *more* than the verdict that Samsung appealed to the Supreme Court.⁴¹¹ A short time later, the parties settled their seven-year smartphone patent battle.⁴¹²

8. *Denouement*

This seven-year saga reinforced the Federal Circuit's lax interpretation of the critical intellectual property channeling doctrine aimed at balancing innovation and competition. *Apple v. Samsung* elevated the broad and lax *L.A. Gear* framework for assessing ornamentality/non-functionality while relegating *Richardson* to a narrow fact-specific decision.

In contrast with Apple's design patent enforcement efforts in the United States, Apple's international enforcement campaign against Samsung's devices was far less successful. After Apple sued Samsung in the United States in April 2011, Samsung retaliated by filing lawsuits in Europe, Asia, and Australia,⁴¹³ and the battle quickly expanded to more than fifty lawsuits covering various intellectual property claims around the world.⁴¹⁴ Notably, Apple got modest

410. See Nick Statt, *Apple Wins \$539 Million from Samsung in Latest Chapter of Ongoing Patent Trial*, THE VERGE (May 24, 2018, 7:37 PM), <https://www.theverge.com/2018/5/24/17392216/apple-vs-samsung-patent-trial-539-million-damages-jury-verdict>.

411. See Samsung Certiorari Petition, *supra* note 377.

412. See Jacob Kastrenakes, *Apple and Samsung Settle Seven-Year-Long Patent Fight over Copying the iPhone*, THE VERGE (June 27, 2018, 2:59 PM), <https://www.theverge.com/2018/6/27/17510908/apple-samsung-settle-patent-battle-over-copying-iphone>.

413. Samuel B. Dordick, *Lay Jurors: The True Casualties of the Apple v. Samsung Smartphone Patent Wars*, 29 TEMP. INT'L & COMP. L.J. 239, 243–46 (2015); Jun Yang, *Samsung Electronics Counter Sues Apple as Patent Row Deepens*, BLOOMBERG (Apr. 21, 2011, 11:05 PM), <https://www.bloomberg.com/news/articles/2011-04-22/samsung-sues-apple-on-patent-infringement-claims-as-legal-dispute-deepens>.

414. Geoff Duncan, *Why Are Apple and Samsung Throwing Down? A Timeline of the Biggest Fight in Tech*, DIGIT. TRENDS (Apr. 4, 2014), <https://www.digitaltrends.com/mobile/apple-vs-samsung-patent-war-timeline/> (providing a timeline for the global battle until April 2014);

traction with design claims in Europe, but not in Asia. The utility patent battle largely fizzled.⁴¹⁵ The battle outside of the United States produced mixed results and the parties settled all of the non-U.S. litigation in August 2014.⁴¹⁶

Narumon Saardchom, *Design Patent War: Apple Versus Samsung*, 3 S. ASIAN J. BUS. & MGMT. CASES 221, 221 (2014); Sanjeev Bajwa, *Apple v. Samsung: Is It Time to Change Our Patent Trial System?*, 27 PAC. MCGEORGE GLOB. BUS. & DEV. L.J. 77, 94–95 (2014); Stuart J.H. Graham & Nicolas Van Zeebroeck, *Comparing Patent Litigation Across Europe: A First Look*, 17 STAN. TECH. L. REV. 655, 657 (2013–14).

415. See Leon B. Greenfield, Hartmut Schneider & Joseph J. Mueller, *SEP Enforcement Disputes Beyond the Water's Edge: A Survey of Recent Non-U.S. Decisions*, 27 ANTITRUST 50 (2013) (describing, among others, Apple and Samsung's FRAND disputes in Japan, Korea, the Netherlands, France and Italy); Dordick, *supra* note 413, at 245–46 ("Samsung filed a complaint in the Tokyo District Court of Japan . . . [and] alleged that Apple infringed its patents relating to mobile-communications technologies. Predictably, Apple countersued seeking 100 million yen, or about \$1.2 million in damages, but this time over a patent that involved the synchronization of media content between a computer and a mobile device. Samsung scored a complete defense victory and was awarded various costs, most notably the stamp fee. The Intellectual Property High Court (IP High Court) upheld this decision, and Apple did not appeal to the Supreme Court. The judgment then became final and binding."); *id.* at 246("[I]n response to Apple's initial complaint in April of 2011, Samsung filed claims against Apple in the Seoul Central District Court of South Korea, claiming infringement on its telecommunication standards patents. Only a few months later, in June, Apple also filed a suit in the Seoul Central District Court alleging infringement on their trade dress, design, and utility patents. The Seoul Central District Court handed down its decision in both lawsuits on August 24, 2012—the same day that the jury in the U.S. District Court for the Northern District of California returned a verdict in Apple's favor for \$1.05 billion in damages. The South Korean court concluded that Apple infringed on two of Samsung's five disputed patents and that Samsung had infringed on Apple's 'bounce-back' patent. The decision that Apple infringed on Samsung's patents forced Apple to remove the iPhone 3GS, iPhone 4, iPad 1 and iPad2 [sic] from store shelves in South Korea. Both Apple and Samsung were ordered to pay limited damages, and Samsung was enjoined from selling infringing products, including the Galaxy S2, in South Korea. Apple was awarded a mere \$22,000 in damages."); Duncan, *supra* note 414; Bajwa, *supra* note 414, at 95 (saying that, in Germany, both parties filed lawsuits in several regions of Germany seeking injunctions, "but by the end of 2012, each party's patent infringement claims had either been rejected or stayed until Germany's Federal Patent Court could rule on patent validity; that finally, on April 4, 2013, Germany's Federal Patent Court invalidated Apple's 'slide to unlock' patent on the grounds that it failed to meet the technicity requirement under European patent law," and in Australia after Apple also sought to obtain a preliminary injunction against Samsung's Galaxy Tab 10.1, "[a]n Australian Federal Court Justice determined that 'Apple had a prima facie case that Samsung had infringed two of its patents relating to touchscreens and the gestures that control them'; that Samsung agreed to suspend the sale and distribution of its tablet in the Australian market until the dispute was resolved, but on appeal, the Federal Court of Australia unanimously overturned the ban on the Samsung device").

416. See *infra* note 429.

In Germany, after Samsung filed suit against Apple,⁴¹⁷ Apple countersued over its own European patents, including its European Community Design registration.⁴¹⁸ On August 2011, the Landgericht court in Düsseldorf granted Apple a preliminary injunction across the European Union against Samsung's Galaxy Tab 10.1 for allegedly violating a Community Design registration for the iPad. While the injunction was eventually affirmed by the appellate court of Düsseldorf Higher Regional Court on January 2012, it was restricted to Germany and was affirmed on different grounds—a violation of German unfair competition law⁴¹⁹—rather than a violation of Apple's Community Design.⁴²⁰

417. See Dordick, *supra* note 413, at 243 (claiming that Apple infringed on a number of its 3G technology utility patents).

418. A European Community Design is somewhat similar to a design patent in the United States. See Dennis Crouch, *UK Appellate Court Confirms Pan-European Win for Samsung on iPad Community Design Charges*, PATENTLY-O (Oct. 18, 2012), <https://patentlyo.com/patent/2012/10/apple-samsung-european-community-design.html> (“A registered European Community Design is roughly equivalent to a US Design Patent. However, the Europeans have done away with the examination process and replaced it with registration without considering whether the design is actually novel. Thus, while the European law requires that a registered community design be novel (a lower standard than nonobvious), that issue is not raised in the initial registration process. . . . Because of the in-expense and ease of registration, Community Designs have been quite popular.”). In Europe, designs may be registered or unregistered, provided they meet certain eligibility conditions. See Council Regulation 6/2002, art. 1–8, 2001 O.J. (L 3) 1 (EC). A design is eligible for protection if it meets three requirements: (1) be new; (2) has “individual character”; and (3) not be composed of features solely dictated by their function. See *id.* A Community Design shall also have a “unitary character,” i.e., it shall have an equal effect throughout the Community and shall not be registered, transferred or surrendered or be the subject of a decision declaring it invalid, save in respect of the whole Community. See *id.*

419. See Marc D. Mimler, *The Aspects of Unfair Competition Within the Apple v. Samsung Litigation in Germany*, 3 QUEEN MARY J. INTELL. PROP. 176 (describing that after the German ruling on unfair competition Samsung modified its tablet design and intended to market a 10.1N version of the Galaxy tablet, Apple again took action, but the German courts did not find the redesigned version to violate unfair competition rules).

420. See Dordick, *supra* note 413, at 244; Florian Mueller, *German Appeals Court Upholds Galaxy Tab 10.1 Injunction-But on Different Legal Basis than Apple's Design Right*, FOSS PATS. (Jan. 31, 2012), <https://www.fosspats.com/2012/01/german-appeals-court-upholds-galaxy-tab.html>. But see Samsung Elecs. (U.K.) Ltd. v. Apple, Inc., [2012] EWCA (Civ) 1339 (Eng.), <https://www.bailii.org/ew/cases/EWCA/Civ/2012/1339.html>. In the 2012 decision, the English and Wales court of appeals criticized the German proceedings:

Notwithstanding the withdrawal of the main action [in Germany concerning alleged infringement of the Apple registered design], and then HHJ Birss's final decision [in the English High Court of Justice's Chancery Division] on the merits on 9th July 2012, Apple persisted [in Germany] in its appeal from the refusal on 24th October 2011 to grant a pan-European injunction against SEC in respect of the 7.7 [Samsung's tablet]. On 24th

In the United Kingdom, after Samsung sought a declaration that three of its Galaxy tablet computers (Tab 10.1, Tab 8.9, and Tab 7.7) did not infringe Apple's Community Design, Apple counterclaimed for infringement. In July 2012, the High Court of Justice's Chancery Division ruled that Samsung's Galaxy Tab did not infringe the design of Apple's iPad because the Samsung devices were not as "cool" as Apple's products.⁴²¹ The judge also issued an order forcing Apple to publish its loss in order to correct the commercial harm done to Samsung.⁴²² In October 2012, the English and Welsh court of appeals affirmed the ruling that Samsung's devices did not infringe Apple's Community Design for the iPad as a pan-European decision.⁴²³

July 2012 the German Court of Appeal, the Oberlandesgericht, allowed the appeal and granted a pan-European interim injunction in respect of the 7.7 against SEC, and its German subsidiary. In the course of argument before us, as I shall recount later, Apple undertook to apply forthwith to the German court for that injunction to be completely withdrawn so far as it related to infringement of the registered design. . . . The upshot of all this is that there is now no injunction anywhere based on the registered design or its equivalent.

Id.; see also *infra* notes 421–423 and accompanying text.

421. [2012] EWHC (Pat) 1882, <https://www.bailii.org/ew/cases/EWHC/Patents/2012/1882.html>. The Judge held that:

The informed user's overall impression of each of the Samsung Galaxy Tablets is the following. From the front they belong to the family which includes the Apple design; but the Samsung products are very thin, almost insubstantial members of that family with unusual details on the back. They do not have the same understated and extreme simplicity which is possessed by the Apple design. *They are not as cool. The overall impression produced is different.* . . . The Samsung tablets do not infringe Apple's registered design No. 000181607-0001.

Id. at 190–91 (emphasis added).

422. Samsung Elecs. (U.K.) Ltd. v. Apple, Inc., [2012] EWHC (Pat) 2049, <https://www.bailii.org/ew/cases/EWHC/Patents/2012/2049.html>. The Judge stayed the publishing order until Apple's appeal was heard in October 2012, yet when the case reached the court of appeal, the previous ruling was supported. Charles Arthur, *Samsung Galaxy Tab 'Does Not Copy Apple's iPad Designs'*, THE GUARDIAN (Oct. 18, 2012, 7:25 AM) <https://www.theguardian.com/technology/2012/oct/18/samsung-galaxy-tab-apple-ipad>.

423. Firstly it is common ground that no German court was "first seized" of the claim for a declaration of non-infringement. Indeed given that Apple withdrew its claim for infringement in Germany, no German court appears even now to be seized of a claim for infringement. It is true that Samsung applied for declarations of non-infringement on the same day, 8th September 2011 in Spain, the Netherlands and England and Wales and there could be (but I think rather overtaken by events given that the trial and appeal are over here) a dispute about which case started first in point of time. After all there is now a Community-wide decision on the point,

In the Netherlands, during August 2011, the first instance tribunal in the Hague (Rechtbank's-Gravenhage) held that Apple's registered Community design, albeit valid, was not infringed by Samsung's Galaxy Tab 10.1. On January 2012, the Hague Court of Appeal (Gerechthofte's-Gravenhage) confirmed the first instance decision.⁴²⁴ On 31 May 2013, the Hoge Raad, the Supreme Court of the Netherlands, dismissed Apple's appeal from the decision to reject Apple's claim regarding the infringement of its registered Community design by Samsung's tablet Galaxy Tab 10.1.⁴²⁵

In parallel with the various European court cases, Samsung requested that OHIM (the European Community Designs registry)⁴²⁶ invalidate several of Apple's registered Community Designs. The Community Design⁴²⁷ that was the subject of the European iPad design litigation was found by OHIM to be valid.⁴²⁸

All of the actions between Apple and Samsung outside of the United States came to an end in August 2014.⁴²⁹ The parties dropped all non-U.S. claims without any licensing arrangements but continued their battle in the United States through the post-Supreme Court remand process and eventually settling the U.S. litigation in 2018.

now affirmed on appeal. One would think that ought to put an end to all other litigation about it.

Samsung Elec. (U.K.), [2012] EWCA (Civ) 1339; *see also* Dordick, *supra* note 413, at 245; Crouch, *supra* note 418.

424. Arnaud Folliard-Monguiral & Mikas Miniotas, *Apple v. Samsung: The Hoge Raad Legacy*, 8 J. INTELL. PROP. L. & PRAC. 925, 926–27 (2013); Florian Mueller, *Dutch Appeals Court Says Galaxy Tab 10.1 Doesn't Infringe Apple's Design Right*, FOSS PATS. (Jan. 24, 2012), <http://www.fo SSPATENTS.COM/2012/01/dutch-appeals-court-says-galaxy-tab-101.html>.

425. *See* Mueller, *supra* note 424.

426. Formerly known as the Office for Harmonization in the Internal Market (OHIM), and currently known as the European Union Intellectual Property Office (EUIPO).

427. *See* Registered Community Design No. 000181607-0001 (issued May 24, 2004).

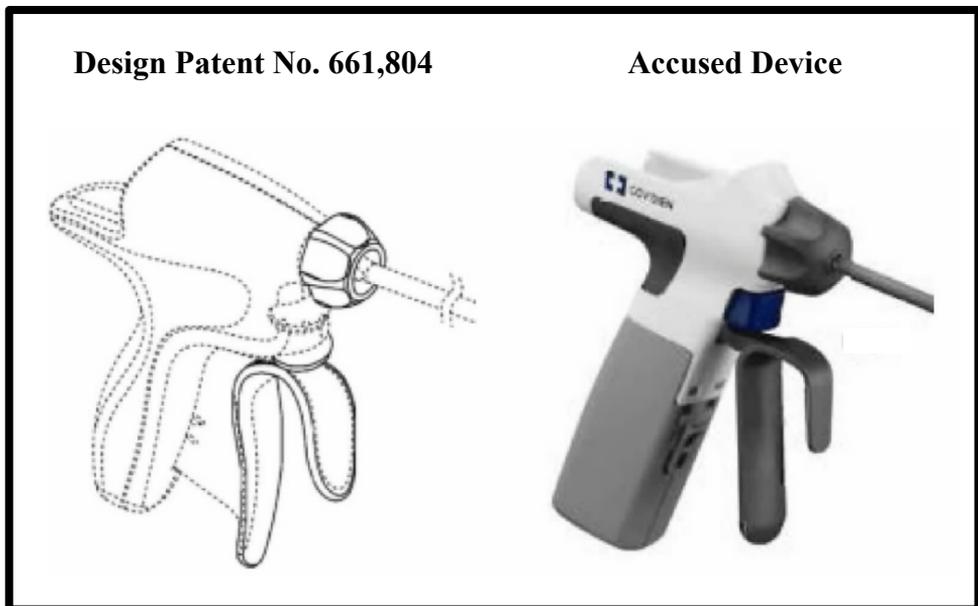
428. *See* OHIM, ICD 8539, COMMUNITY DESIGN 000181607-0001, DECISION OF THE INVALIDITY DIVISION (2013); *see also* Darren Smyth, *Apple's Cool Design Registration Not Invalid According to OHIM*, THE IPKAT (Aug. 6, 2013), <https://ipkitten.blogspot.com/2013/08/apples-cool-design-registration-not.html>. For decisions on the validity of several additional Apple Community Designs, *see* for example Darren Smyth, *OHIM Finally Moves on Invalidity of Apple Designs for Tablet Computers*, THE IPKAT (July 9, 2013) <https://ipkitten.blogspot.com/2013/07/ohim-finally-moves-on-invalidity-of.html>.

429. Amit Chowdhry, *Apple and Samsung Drop Patent Disputes Against Each Other Outside of The U.S.*, FORBES (Aug. 6, 2014, 3:11 PM), <https://www.forbes.com/sites/amitchowdhry/2014/08/06/apple-and-samsung-drop-patent-disputes-against-each-other-outside-of-the-u-s/#17fbc130418c>; Ina Fried, *Apple, Samsung Agree to Drop Non-U.S. Litigation, but Still No Settlement*, VOX (Aug. 5, 2014, 8:06 PM), <https://www.vox.com/2014/8/5/11629578/samsung-and-apple-agree-to-drop-non-u-s-litigation-but-still-no>.

E. THE POST-APPLE TRAJECTORY: FURTHER EROSION OF THE ORNAMENTALITY/NON-FUNCTIONALITY LIMITATION

Following *Apple v. Samsung*, the Federal Circuit reinforced the *L.A. Gear* framework by narrowly interpreting the ornamentality/non-functionality limitation while further marginalizing the *Richardson*, *OddzOn*, and *Dayton-Hudson* line of cases that provided a filtration approach to safeguard against design patents protecting functional features. In *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*,⁴³⁰ the Federal Circuit endorsed the district court's construing design patents to identify the non-functional aspects and even agreed that elements of the designs were functional. Nonetheless, the court held that a minimalist inverted U-shaped design contoured to fit a human hand and a conventional fluted torque knob for a surgical instrument had "some scope," noting that "the trigger has a particular curved design, the torque knob has a particular flat-front shape, and the activation button has a particular rounded appearance."⁴³¹ As reflected in Figure 29, it is difficult to ascertain what aspects of those appearances for a surgical instrument are not functional.

Figure 29: Handle and Torque Knob for Surgical Device



430. See *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1315 (Fed. Cir. 2015).

431. *Id.* at 1329–32.

The decision reinforced the “dictated by” standard and the availability of alternative designs as a basis for finding a design patent valid. Although overturning the district court’s ruling that the design patent was functional, the court affirmed the district court’s ruling that the accused device was not infringing.⁴³² In doing so, the court specifically referenced the *Apple v. Samsung* narrowing of *Richardson*.⁴³³ While recognizing that both designs include an open trigger, a small activation button, and a fluted torque knob in relatively similar positions, the court excluded these features from consideration at a general conceptual level because of their functional character and focused instead on the contours of the components. The Federal Circuit affirmed the district court’s determination that these elements were “plainly dissimilar.”⁴³⁴

In 2016, the Federal Circuit in *Sports Dimension, Inv. v. Coleman Co.* overturned a district court decision finding that a design patent for a personal floatation device was functional and therefore invalid.⁴³⁵ As depicted in the left panel of Figure 30, Coleman’s design patent claimed a wide, form-fitting torso strap with two arm bands that serve as buoyant floatation devices.⁴³⁶ The torso strap is connected using a conventional clip.

Sport Dimension filed a declaratory relief action seeking declarations that that Coleman’s design patent was invalid and not infringed. Following a claim construction hearing, the district court concluded that “the armbands, the armband attachments, the shape of the armbands, the tapering of the armbands, and the tapering of the side torso are all elements that serve a functional rather than ornamental role in the D’714 patent.”⁴³⁷ Accordingly, the court construed the claimed design to be:

The ornamental design for a personal floatation device, as shown and described in Figures 1–8, except the left and right armband, and the side torso tapering, which are functional and not ornamental.⁴³⁸

Based on this claim construction, Judge O’Connell entered a stipulated judgment of non-infringement and the appeal followed.

432. *See id.* at 1334–37.

433. *See id.* at 1333.

434. *See id.* at 1337.

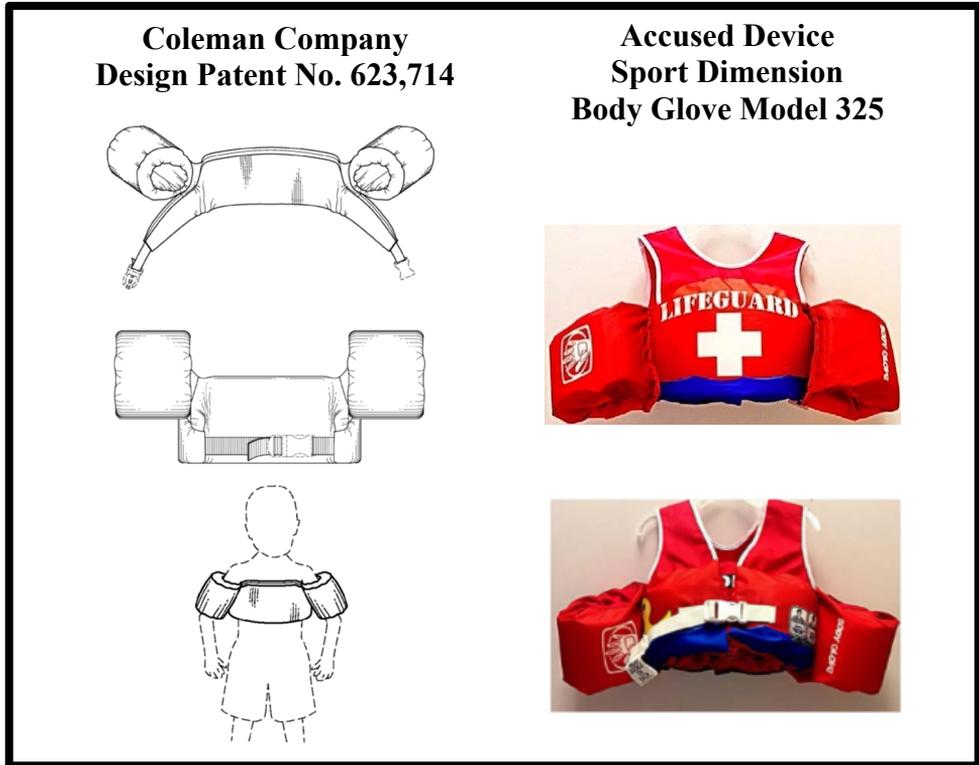
435. *Sport Dimension, Inc. v. Coleman Co.*, 820 F.3d 1316, 1323 (Fed. Cir. 2016).

436. Personal Floatation Device, U.S. Design Patent No. 523,714 (issued Sept. 14, 2010).

437. *Sport Dimension, Inc. v. Coleman Company, Inc.*, No. CV 14-00438 BRO (MRWx), 2015 WL 13309300 (C.D. Cal. Feb. 5, 2015), at *11.

438. *Id.*

Figure 30: Sport Dimension, Inc. v. Coleman Co.



While acknowledging that a district court may use claim construction to help guide the fact finder through issues that bear on a claim's scope, the Federal Circuit faulted the district court's construction for excluding structural elements from the claim.⁴³⁹ While agreeing with Coleman that the claim construction was improper, the panel recognized that the armbands and tapered side torso designs serve a functional purpose. The court further noted that "Coleman filed a co-pending utility patent disclosing the design patent's armbands and torso tapering and touting the utility of those features. And it found Coleman to have promoted the particular utility of the armbands and tapered torso in its advertisements."⁴⁴⁰ Nonetheless, the court overturned the claimed construction "completely removing the armbands and side torso tapering from its construction."⁴⁴¹ The court's insistence that claim construction must include all of the structural elements is difficult to understand considering that it characterized the elements as "minimalist, with

439. *See Sports Dimension*, 820 F.3d at 1320–23.

440. *Id.* at 1322.

441. *Id.*

little ornamentation” and “serving a functional purpose.” The court did, however, comment that “[b]ecause of the design’s many functional elements and its minimal ornamentation, the overall claim scope of the claim is accordingly narrow.”⁴⁴² The court remanded the case for “consideration of infringement and, if necessary, validity consistent with the proper claim construction.”⁴⁴³

F. THE CURRENT STATE OF THE DESIGN PATENT ORNAMENTALITY/
NON-FUNCTIONALITY DOCTRINE: A WAYWARD, INCOHERENT
FRAMEWORK

The foregoing demonstrates that on the Federal Circuit’s watch, the ornamentality/non-functionality doctrine has veered far from the 1842 and 1902 Acts and much of the jurisprudence that preceded the Federal Circuit’s formation. Between 1988 and 2008, the Federal Circuit eviscerated the non-functionality limitation of design patents through its uncritical adoption of the “dictated by” shortcut for dealing with easy cases as *the* test for assessing ornamentality/non-functionality. The Federal Circuit treated designs for which there are alternatives as non-functional, viewed even simple designs comprising functional elements “as a whole,” and categorically rejected the point of novelty viewpoint. After some apparent moderation of these questionable standards through a filtration infringement test in the 2010 *Richardson* decision, the court marginalized the filtration approach in *Apple v. Samsung* and has since further eroded the ornamentality/non-functionality limitation. Many of these decisions, including *Apple v. Samsung* and *Rosco*, reveal the absurdity of the Federal Circuit’s approach. What is especially disconcerting is that to this day the Federal Circuit has never once examined the 1902 legislation that established the critical ornamentality/non-functionality limitation on design patent protection. Patent Commissioner Allen, the principal author and advocate for the 1902 Act, could not have been clearer about the meaning and purpose of the design patent amendment—to preserve the utility patent system’s exclusive role in protecting functional advances:

It is thought that if the present bill shall become a law the subject of design patents will occupy its proper philosophical position in the field of intellectual production, having upon the one side of it the statute providing protection to mechanical constructions possessing utility of mechanical function, and upon the other side the copyright law, whereby objects of art are protected, reserving to itself the position of protecting objects of new and artistic quality pertaining,

442. *Id.* at 1323.

443. *Id.*

however, to commerce, but not justifying their existence upon functional utility. If the design patent does not occupy this position there is no other well-defined position for it to take. It has been treated of late years as an annex to the statute covering mechanical cases, since the introduction of the word 'useful' into it. It is thought that this practice should no longer continue.⁴⁴⁴

The fact that copyright law later expanded to provide parallel coverage of ornamental aspects of useful articles in no way suggests that design patent protection should be shoehorned into protecting functional elements as a way to differentiate its role from copyright's expanded scope. To the contrary, copyright law provides a model for how to ensure that the utility patent regime remains the exclusive means for protecting functional elements. And it further demonstrates that *Baker v. Selden* should apply with equal force to design patent protection.

As one commentator observed: "Design patent law in the USA is what's FUBARed."⁴⁴⁵ *Frankenstein*⁴⁴⁶ provides another apt metaphor for contemporary design patent law: a hideous creature comprised of different parts. The Federal Circuit's articulation of the design patent infringement standard reveals the incongruous combination: "whether an ordinary observer, familiar with the prior art [] designs, would be deceived into believing the [accused device] is the same as the patented [design]."⁴⁴⁷ This test confusingly intermingles copyright, trademark, and utility patent protection standards. Add in the skewed ornamentality/non-functionality doctrine and we have both incoherence and a complete undermining of Congress's intent in clarifying the design patent regime in 1902. Whereas regional circuit law generally applied standards that invalidated design patents embodying functional features, the Federal Circuit switched the polarity of those standards to validate design patents so long as there were alternative ways of achieving similar functionality.

444. See S. REP. NO. 57-1139, at 1-3 (1902).

445. See Dennis Crouch, *Design Patents: Eliminating the Ornamental/Functional Dichotomy*, PATENTLY-O (Apr. 25, 2010). As used in military slang, FUBAR means "F***ed/Fouled Up Beyond All Recognition." *List of Military Slang Terms*, WIKIPEDIA, https://en.wikipedia.org/wiki/List_of_military_slang_terms (last visited Nov. 21, 2020).

446. See generally MARY SHELLEY, *FRANKENSTEIN; OR, THE MODERN PROMETHEUS* (1818).

447. See *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 683 (Fed. Cir. 2008) (en banc).

VI. THE ROLE OF ADVOCATES AND THE FEDERAL CIRCUIT IN DESIGN PATENT LAW'S WAYWARD COURSE

The incoherence of the design patent ornamentality/non-functionality doctrine, as well as the general confusion over the role of the design patent regime within the larger intellectual property landscape, begs the question of how design patent law diverged from what Congress intended.

A. DESIGN PROTECTION ADVOCACY

Since the turn of the 20th century, design industry advocates have sought to expand design protection.⁴⁴⁸ Several of these efforts came close to fruition⁴⁴⁹ but ultimately fell short. As of the mid-1980s, most intellectual property practitioners viewed design patent protection for functional features as unenforceable:

[I]n substantially all [design patent infringement cases], the trial court will rule that the design patent is invalid. Where the trial court determines that a design patent is valid, such determinations are usually overturned upon appeal. Or should the trial court determine that the design patent is valid, no infringement of the design patent will, be found by the trier of fact.⁴⁵⁰

In his 1987 overview of the state of design protection in the United States,⁴⁵¹ Professor Ralph Brown characterized the design patent regime as “a Cinderella who never goes to the ball”:

There are several reasons why design patents are held in low esteem. First, the process that certifies their worth is expensive and time-consuming. The Patent and Trademark Office (PTO) fees come to \$300. It is essential to hire a patent solicitor to draft the claims and specifications. And when, after waiting up to two years, you get a

448. See SYLVAN GOTSCHAL & ALFRED LIEF, *THE PIRATES WILL GET YOU: A STORY OF THE FIGHT FOR DESIGN PROTECTION* (1945); C.F. Hughes, *The Merchant's Point of View*, N.Y. TIMES, Apr. 12, 1936, at F9 (estimating that 90% of patent applications for industrial design were refused); Irene L. Blunt, *Fighting the Design Pirate*, 15 J. PAT. OFF. SOC'Y 29 (1933); see generally Steven Wilf, *The Making of the Post-War Paradigm in American Intellectual Property Law*, 31 COLUM. J.L. & ARTS 139, 184–90 (2008).

449. See generally David Goldenberg, *The Long and Winding Road: A History of the Fight over Industrial Design Protection in the United States*, 45 J. COPYRIGHT SOC'Y U.S.A. 21 (1997) (cataloging dozens of failed design protection bills dating the beginning of the 20th century and concluding that “[g]iven this long history of failure, it is not difficult to predict the future of design legislation”).

450. Thomas B. Lindgren, *The Sanctity of the Design Patent: Illusion or Reality? 20 Years of Design Patent Litigation Since Compro v. Day-Brite Lighting, Inc., and Sears, Roebuck & Co. v. Stiffel Co.*, 10 OKLA. CITY U.L. REV. 195, 198 (1985).

451. See Ralph S. Brown, *Design Protection: An Overview*, 34 UCLA L. REV. 1341 (1987).

design patent, detect an infringer, and bring suit, seven times out of ten your patent will be held invalid, if validity is an issue. In the three out of ten that are held valid, only half will be found to have been infringed. That at least was the situation for the period 1964–83. Now that all patent appeals go to the Court of Appeals for the Federal Circuit, patentees may fare better.⁴⁵²

Professor Brown's rumination about the Federal Circuit proved prescient. The year after his article was published, attorney Perry Saidman escorted design patents to the intellectual property ball, although not with a glass slipper but with a sleek and functional athletic shoe.⁴⁵³ After winning summary judgment, enhanced damages, and attorney fees in the *Avia* athletic shoe case in the lower court,⁴⁵⁴ Saidman persuaded the Federal Circuit to consider the availability of alternative designs as part of the ornamentality/non-functionality doctrine.⁴⁵⁵ This victory changed his own view about design patents: They were no longer a "booby prize" for inventors who failed to surmount the utility patent hurdles. Instead, under the lax ornamentality/non-functionality standard adopted in *Avia*, design patents could be a lower cost path to protecting functional features and opening the door to robust remedies.⁴⁵⁶ Over the next three decades, Saidman spread the design patent gospel. He authored numerous articles in design trade journals praising the cost-effectiveness of design patents.⁴⁵⁷ He also penned a stream of articles in practitioner intellectual property journals advocating lax design patent

452. *Id.* at 1356 (citing Lindgren, *supra* note 450, at 261 app. II); *see also* J. H. Reichman, *Legal Hybrids Between the Patent and Copyright Paradigms*, 94 COLUM. L. REV. 2432, 2460 (1994) ("In practice, . . . the patent process has proved too rigid, slow, and costly for the fastmoving, short-lived products of mass consumption, and too strict in excluding the bulk of all commercial designs on grounds of obviousness." (citations omitted)).

453. *See* Perry J. Saidman, *The Glass Slipper Approach to Protecting Industrial Designs or When the Shoe Fits, Wear It*, 19 U. BALT. L. REV. 167 (1989).

454. *See* *Pensa Inc. v. L.A. Gear Cal. Inc.*, No. CV-86-5549-IH, 1987 WL 125071 (C.D. Cal. June 15, 1987).

455. *See* *Avia Group Int'l, Inc. v. L.A. Gear Cal., Inc.*, 853 F.2d 1557, 1563 (Fed. Cir. 1988); *see also supra* text accompanying notes 255–260.

456. *See* Perry J. Saidman & Mark B. Mondry, *Sneakers, Design Patents and Summary Judgments: Opening a New Era in the Protection of Consumer Product Designs*, 71 J. PAT. & TRADEMARK OFF. SOC'Y 524 (1989) (discussing the virtues of design patents); *see also* Perry J. Saidman, *Design Patentees: Don't Get Unglued by Elmer or the Single Most Important Thing to Know About the Preparation of Design Patent Applications*, 78 J. PAT. & TRADEMARK OFF. SOC'Y 311, 316 (1996).

457. *See* Perry J. Saidman, *The Ten Commandments of Design Patent Protection*, INNOVATION Fall 1990, at 21; Perry J. Saidman, *Design Protection Tools—A Primer*, 3 DESIGN MGMT. INST. NEWS (1991); Perry J. Saidman, *How to Protect Product Design*, 2 DESIGN MGMT. J. 32 (1991); Perry J. Saidman, *Who Owns What? / Design Protection Tools*, INNOVATION, Winter 1992, at 21.

protection standards and reforms to expand industrial design protection outside of the utility patent system.⁴⁵⁸

The relaxation of design patent law's ornamentality/non-functionality doctrine attracted more industrial designers in search of a backdoor for functional design protection.⁴⁵⁹ Even the PTO Director joined the campaign.⁴⁶⁰ The success of this campaign, of course, turned on the Federal Circuit's support.

B. THE FEDERAL CIRCUIT

As Professor Ralph Brown intimated in his 1987 overview of design protection,⁴⁶¹ the Federal Circuit's approach to design patent protection would play a significant role in how that regime developed. As noted earlier,⁴⁶² legislators, judges, and scholars raised concerns that a national appellate patent tribunal could lead to overly protectionist interpretations of patent law. They warned that such a specialty court would be less sympathetic to competition policy concerns and less sensitive to the intellectual property policy balances reflected in the copyright and trademark arenas. As a result, Congress stopped short of entrusting those regimes to the Federal Circuit. The Federal Circuit would only adjudicate such matters if they were part of a patent case, and the Federal Circuit would be required to apply the regional circuit law of the district in which the case arose.

None of these safeguards, however, would apply to design patent law. Although design patent protection is more properly viewed as a close cousin

458. See Saidman & Hintz, *supra* note 93; Perry J. Saidman, *The Crisis in the Law of Designs*, 89 J. PAT. & TRADEMARK OFF. SOC'Y 301 (2007); Perry J. Saidman, *The Dysfunctional Read Test: Missing the Mark(man) Regarding the Test for Design Patent Infringement*, 90 J. PAT. & TRADEMARK OFF. SOC'Y 533 (2008); Saidman & Esquerra, *supra* note 326; Perry J. Saidman, *What Is the Point of the Point of Novelty Test for Design Patent Infringement—Nail Buffers and Saddles: An Analysis Fit for an Egyptian Goddess*, 90 J. PAT. & TRADEMARK OFF. SOC'Y 401 (2008); Perry J. Saidman, *The Ornamental/Functional Dichotomy in Design Patent Law Is Akin to the Idea/Expression Dichotomy in Copyright Law*, 78 PAT., TRADEMARK & COPYRIGHT J. 199 (2009); Perry J. Saidman, *Functionality and Design Patent Validity and Infringement*, 91 J. PAT. & TRADEMARK OFF. SOC'Y 313 (2009); Perry J. Saidman, *The Demise of the Functionality Doctrine in Design Patent Law*, 92 NOTRE DAME L. REV. 1471 (2017).

459. See Pat. Tech. Monitoring Team, *supra* note 2 (showing a steep rise in design patent applications).

460. See Kappos, *supra* note 3. The USPTO prominently showcased Apple patents (including design patents) and trademarks in the entrance to the main campus in Alexandria Virginia. See Press Release, U.S. Pat. & Trademark Off., USPTO Announces New Exhibit Highlighting the Patents and Trademarks of Steve Jobs (Nov. 14, 2011), <https://www.uspto.gov/about-us/news-updates/uspto-announces-new-exhibit-highlighting-patents-and-trademarks-steve-jobs>.

461. See Brown, *supra* note 451.

462. See *supra* text accompanying notes 227–229.

of copyright law than utility patent law, the Federal Courts Improvement Act included design patents within the same exclusive appellate jurisdiction provision as the utility patent regime.⁴⁶³ The Federal Circuit immediately jettisoned regional circuit law in favor of the CCPA soon after it commenced operations.⁴⁶⁴

To the extent that the interpretation of design patent protection served as a test of the warnings about a specialty patent court, the post-1988 case law validates those concerns. Long before design patent protection gained salience, Giles Rich, a storied and revered patent attorney, CCPA judge, and Federal Circuit judge,⁴⁶⁵ had taken up the cause of design protection.⁴⁶⁶ In addition to his role on the Federal Circuit, Judge Rich frequently testified before Congress on intellectual property policy and developed a reputation for promoting robust utility patent protection. He was also one of the main proponents of expanding design protection throughout the mid to late 20th century.⁴⁶⁷ Although he did not write any of the key Federal Circuit design patent decisions, his *In re Carletti*⁴⁶⁸ decision at the CCPA played a significant role in the Federal Circuit's design patent jurisprudence.⁴⁶⁹ Although that decision was

463. See 28 U.S.C. § 1295. As we discuss below, see *infra* Section VII(A)(3), this was possibly an oversight that reflected the relative obscurity of design patent law and its misbegotten copyright pedigree.

464. See *supra* text accompanying note 231.

465. See *Tribute to the Life and Work of the Honorable Giles Sutherland Rich*, 9 FED. CIR. B.J. 1 (1999); Donald R. Dunner, *Giles Sutherland Rich*, 9 FED. CIR. B.J. 71 (1999); Tom Arnold, *My Friend, Giles Rich*, 9 FED. CIR. B.J. 39 (1999) (discussing, among other influential activities, Giles Rich's role as a member of the 1952 Patent Act Drafting Committee and concluding by stating that Judge Rich "served the patent law longer than any other man" and "shaped the patent law more than any other man").

466. See *Design Protection: Hearings on S. 1884 Before the Subcomm. on Pats., Trademarks & Copyrights of the S. Comm. on the Judiciary*, 87th Cong. 27–36, 83–86 (1961) (noting that Judge Rich served as chairman of the Coordinating Committee, Designs, of the National Council of Patent Law Associations and played a key role in drafting S. 1884, "[a] bill to encourage the creation of original ornamental designs of useful articles by protecting the authors of such designs for a limited time against unauthorized copying"); *The Industrial Innovation and Technology Act: Hearings on S. 791 Before the Subcomm. on Pats., Copyrights & Trademarks of the S. Comm. on the Judiciary*, 100th Cong. 22 (1987) (statement of Hon. Giles S. Rich, U.S. Court of Appeals, Federal Circuit, Washington, D.C.).

467. See Goldenberg, *supra* note 449, at 45.

468. 328 F.2d 1020 (C.C.P.A. 1964).

469. See, e.g., *Power Controls Corp. v. Hybrinetics, Inc.*, 806 F.2d 234, 238 (Fed. Cir. 1986); *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1188 (Fed. Cir. 1988); *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123 (Fed. Cir. 1993); *Best Lock Corp. v. Ilco Unican Corp.*, 94 F.3d 1563, 1566 (Fed. Cir. 1996); *Hupp v. Siroflex of Am., Inc.*, 122 F.3d 1456, 1460, 1461 (Fed. Cir. 1997); *Rosco, Inc. v. Mirror Lite Co.*, 304 F.3d 1373, 1378 (Fed. Cir. 2002); *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1328 (Fed. Cir. 2015). All of these cases cite *In re Carletti*, 328 F.2d 1020.

ambiguous regarding whether the “dictated by” inquiry is the exclusive test of whether a design is eligible for protection under the ornamentality/non-functionality doctrine,⁴⁷⁰ the Federal Circuit eventually embraced “dictated by” as *the* test.

As Part V chronicled, the Federal Circuit has pursued an especially protectionist path in its interpretation of design patent law. From *Avia* through *L.A. Gear*, *Egyptian Goddess*, and *Apple v. Samsung*, there is a clear blindness to concerns about encroachment on the utility patent regime and free competition in functional elements that are not protected by utility patents. The Federal Circuit has proven far less sensitive to these concerns than regional circuit courts.⁴⁷¹

VII. RECTIFYING DESIGN PATENT LAW'S ORNAMENTALITY/NON-FUNCTIONALITY DOCTRINE

The design patent saga reveals a distressing level of administrative and judicial amnesia. The Patent Office overcame repeated bouts of amnesia in the mid to late 19th century. It was eventually led out of the fog by Commissioner Frederick Allen at the turn of the 20th century.⁴⁷² Following legislative clarification in 1902, the judiciary made a conscientious and largely successful effort to effectuate Congress's intentions, but common law drift shifted the ornamentality/non-functionality doctrine away from the legislative mooring. The Federal Circuit misinterpreted linguistic shortcuts used to dispose of easy cases, causing the ornamentality/non-functionality doctrine to veer away from Congress's intent to ensure that design patent law did not protect functional features. The resulting jurisprudence twisted the case law so that designs were eligible for design patents so long as they were not *solely* dictated by functionality or if alternative designs to achieve a particular function were not available—a nearly 180-degree shift from the 1902 Act.

The shift can be seen by reviewing the ten circuit court decisions *invalidating* designs in Part IV⁴⁷³ and asking whether they would be upheld under the Federal Circuit's “dictated by functionality”/view designs as a whole/availability of alternative designs approach. The functions of each of these designs could be achieved by alternative designs, which is nearly all that the

470. See *supra* text accompanying notes 177–184.

471. The same can be said about the Federal Circuit's approach to copyright protection of computer software, as is reflected in the epic battle between Oracle and Google over copyright protection for application program interface elements. See *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339 (Fed. Cir. 2014); *Oracle Am., Inc. v. Google Inc.*, 886 F.3d 1179 (Fed. Cir. 2018); see *generally* Menell, *supra* note 126.

472. See *supra* text accompanying note 73.

473. See *supra* Figures 2–11.

federal circuit requires. Furthermore, these designs are more original and ornamental than the iPhone and iPad rounded rectangles. Yet the regional circuit courts found all of the designs in Figures 2–11 to be invalid. It is only happenstance that the enactment of the Federal Courts Improvement Act establishing the Federal Circuit has obscured a profound circuit split.

Beyond contradicting Congress's intent to keep design patent protection from encroaching the utility patent's exclusive domain of protecting functional advances,⁴⁷⁴ the Federal Circuit's expansive standard for design patent eligibility conflicts with the critical channeling principle set forth in the Supreme Court's seminal *Baker v. Selden* decision.⁴⁷⁵ At a minimum, the Federal Circuit should steer the design patent ship back on course. If not, the Supreme Court should correct this wayward shift. *Samsung v. Apple* provided a prime opportunity, but unfortunately the opportunity was missed. *Samsung* did not explain the rationale behind the 1902 Act legislation or the Federal Circuit's misreading of regional circuit law that used the "dictated by functionality" language. We hope that our jurisprudential archeology provides a beacon for returning design patent law to the course that Congress intended.

We do not question the proposition that designs that are dictated by functionality are ineligible for design patent protection, but this proposition is merely one part of a faithful ornamentality/non-functionality doctrine. What is lacking from the Federal Circuit's jurisprudence is that even if a design in its entirety is not dictated by functional considerations, the design or features thereof may embody functional elements that should remain free for others to use and build upon. The proper ornamentality/non-functionality test—as recognized by reasoned regional circuit jurisprudence;⁴⁷⁶ reflected in Congress's crafting of the analogous copyright originality, compilation, and useful article doctrines;⁴⁷⁷ developed in regional circuit law;⁴⁷⁸ and stated in the Supreme Court's trade dress functionality jurisprudence⁴⁷⁹—should have several components.

First, minimal designs do not rise to the modicum of creativity necessary to meet the originality requirement for design patent protection. Minimal or simple combinations of shapes do not merit protection. Second, design patent protection extends only to ornamental design elements or original compilations of ornamental elements that are *separable* from functional

474. See *supra* Part III.

475. 101 U.S. 99 (1879).

476. See *supra* Part IV.

477. See *infra* Section VII(A)(1).

478. See *id.*

479. See *Traffix Devices, Inc. v. Mktg Displays, Inc.*, 532 U.S. 23, 33–34 (2001).

features. Any lesser test would allow designers to obtain exclusive rights to functional elements without meeting the more exacting utility patent law standards. Furthermore, application of these standards must include a filtration infringement test that ensures that competitors and other inventors can use the unprotectable functional features.⁴⁸⁰

Section A explains how these principles can be restored into the design patent regime to return to the legislative design. Section B goes further and suggests that the time is ripe for Congress to reopen the policy debate over design protection. Section C responds to the counterargument that Apple's rebirth supports the notion that design patent protection should extend to functional features of articles of manufacture.

A. RESTORING THE FUNDAMENTAL INTELLECTUAL PROPERTY CHANNELING PRINCIPLE

The Supreme Court's *Baker v. Selden* decision channels functional features to the utility patent regime so as to ensure that only those technological advances meeting the utility patent regime's high requirements are protected and other inventors and competitors are free to imitate and build on technology, methods, and designs that do not meet these standards. In this way, the intellectual property system promotes progress through a balance of time-limited rewards for innovation and robust competition. As a copyright-based regime, design patent law should be cabined in much the same way that copyright and trademark law have been barred from extending to functional features. That was indeed the purpose of the 1902 design patent amendments. However, the Federal Circuit's failure to grasp this fundamental legislative purpose has created an imbalance within the intellectual property system. This imbalance can be corrected by looking to the ways in which copyright and trademark law have dovetailed with the utility patent regime. Beyond these substantive limitations on design patent eligibility, Congress could protect against wayward drift by bringing regional circuit percolation back into the development of design patent jurisprudence.

1. *Guiding the Federal Circuit's Ornamentality/Non-Functionality Jurisprudence Back to the Proper Course*

The Federal Circuit can restore design patent law to its appropriate role first and foremost by reviewing the 1902 Act legislation that established the ornamentality/non-functionality doctrine and the regional circuit jurisprudence that developed in the early 20th century. As those cases make clear, the "dictated by functionality" jurisprudence was never intended to be the exclusive test for ornamentality/non-functionality, it was merely a shortcut

480. See *infra* Section VII(A)(1).

for disposing of easy cases—often where the patentee had sought both utility and design patents on the same features. These decisions recognized the need for separating protectable ornamental elements from functional features, a principle that Congress incorporated into the Copyright Act's useful article doctrine. As reflected in the 1902 Act's legislative history, channeling, and thus separability, was the purpose in the 1902 Act's "ornamentality" requirement.

In drafting the 1976 Copyright Act, Congress incorporated separability into the definition of pictorial, graphic, and sculptural works:

'Pictorial, graphic, and sculptural works' . . . shall include works of artistic craftsmanship insofar as their form but not their mechanical or utilitarian aspects are concerned; the design of a useful article, as defined in this section, shall be considered a pictorial, graphic, or sculptural work only if, and only to the extent that, such design incorporates pictorial, graphic, or sculptural features that can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article.⁴⁸¹

With regard to copyright protection for computer software, a highly functional type of work, Congress explained:

Some concern has been expressed lest copyright in computer programs should extend protection to the methodology or processes adopted by the programmer, rather than merely to the "writing" expressing his ideas. Section 102(b) is intended, among other things, to make clear that the expression adopted by the programmer is the copyrightable element in a computer program, and that the actual processes or methods embodied in the program are not within the scope of the copyright law.⁴⁸²

The Copyright Act's definition of pictorial, graphic, and sculptural works and the treatment of computer software parallel the rationale for the 1902 design patent act amendments.⁴⁸³

Second, the Federal Circuit should give meaning to the design patent act's "originality" requirement.⁴⁸⁴ It is not merely a novelty standard but serves to

481. 17 U.S.C. § 101 (defining "pictorial, graphic, and sculptural works").

482. See H.R. REP. NO. 94-1476, at 57 (1976). Reflecting the Supreme Court's *Baker v. Selden* decision, Section 102(b) provides that "[i]n no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work." 17 U.S.C. § 102(b).

483. See *supra* Part III; see also Christopher Buccafusco & Mark A. Lemley, *Functionality Screens*, 103 VA. L. REV. 1293, 1375 (2017).

484. See 35 U.S.C. § 171(a).

exclude designs that are derived from prior art or that are so minimal or simple as to not merit protection.

Third, along similar lines, the Federal Circuit should restore use of the point of novelty,⁴⁸⁵ or more precisely the point of non-obviousness, to better focus the invalidity inquiry. If the point of novelty of a claimed design is functional, then the design is not eligible for a design patent.

Fourth, the Federal Circuit should abandon the rule that designs are not functional merely because there are alternative designs available.⁴⁸⁶ The design patent rule apparently derives from a Minnesota district court decision that lacks support in prior authority.⁴⁸⁷ It also confusingly overlaps with trade dress law, which imposes a stricter standard.⁴⁸⁸ As applied in design patent law, the availability of alternative design rule validates almost any design since there are almost always alternative ways of achieving function. Yet, the intellectual property system seeks to preserve the freedom to use functional designs unless an inventor comes up with a novel, nonobvious design that meets the utility patent standards.

At a minimum, the Federal Circuit should clarify that designs that offer functional advantages are outside of the design protection regime. The Federal Circuit decision in *Berry Sterling Corp. v. Pescor Plastics, Inc.*⁴⁸⁹ recognized this idea by suggesting that district courts consider a range of factors—including “whether the protected design represents the best design” and “whether alternative designs would adversely affect the utility of the specified article”—

485. See *supra* text accompanying note 297; Mark A. Lemley, *Point of Novelty*, 105 NW. U. L. REV. 1253 (2015).

486. Cf. *Traffix Devices, Inc. v. Mktg Displays, Inc.*, 532 U.S. 23, 33–34 (2001) (“There is no need . . . to engage . . . in speculation about other design possibilities, such as using three or four springs which might serve the same purpose. Here, the functionality of the spring design means that competitors need not explore whether other spring juxtapositions might be used. The dual-spring design is not an arbitrary flourish in the configuration of MDI’s product; it is the reason the device works. Other designs need not be attempted.” (citation to lower court decision omitted)).

487. See *supra* Section IV(D)(3) (discussing *Bergstrom v. Sears, Roebuck & Co.*, 496 F. Supp. 476 (D. Minn. 1980)).

488. See *supra* note 395.

489. 122 F.3d 1452 (Fed. Cir. 1997).

in assessing the availability of alternative designs,⁴⁹⁰ but subsequent Federal Circuit decisions have ignored this important caveat.⁴⁹¹

Beyond invalidity analysis, the Federal Circuit should restore and invigorate the filtration analysis. The Second Circuit in *Computer Associates International, Inc. v. Altai, Inc.*⁴⁹² provides a sound analytical framework for determining copyright infringement of computer code:

In ascertaining substantial similarity . . . a court would first break down the allegedly infringed program into its constituent structural parts. Then, by examining each of these parts for such things as incorporated ideas, expression that is necessarily incidental to those ideas, and elements that are taken from the public domain, a court would then be able to sift out all non-protectable material. Left with a kernel, or perhaps kernels, of creative expression after following this process of elimination, the court's last step would be to compare this material with the structure of an allegedly infringing program.⁴⁹³

The court's abstraction-filtration-comparison (AFC) test framed the ultimate comparison not between the programs as a whole, but between the *protectable* elements of the plaintiff's program and the allegedly infringing program. The way in which the court addressed interoperability, a key functionality consideration for computer software, illustrates how design patent law could systematically ensure that functional elements remain unprotectable. The court held that copyright protection did not extend to those program elements where the programmer's "freedom to choose" is:

490. *See id.* at 1456 ("The presence of alternative designs may or may not assist in determining whether the challenged design can overcome a functionality challenge. Consideration of alternative designs, if present, is a useful tool that may allow a court to conclude that a challenged design is not invalid for functionality. As such, alternative designs join the list of other appropriate considerations for assessing whether the patented design as a whole—its overall appearance—was dictated by functional considerations. Other appropriate considerations might include: *whether the protected design represents the best design; whether alternative designs would adversely affect the utility of the specified article*; whether there are any concomitant utility patents; whether the advertising touts particular features of the design as having specific utility; and whether there are any elements in the design or an overall appearance clearly not dictated by function." (emphasis added)).

491. *See, e.g.,* *Ross v. Sonax Furniture Mfg., Ltd.*, 217 F.3d 860 (Fed. Cir. 1999); *Seiko Epson Corp. v. Nu-Kote Int'l, Inc.*, 190 F.3d 1360 (Fed. Cir. 1999); *Door-Master Corp. v. Yorktowne, Inc.*, 256 F.3d 1308 (Fed. Cir. 2001); *Rosco, Inc. v. Mirror Lite Co.*, 304 F.3d 1373 (Fed. Cir. 2002).

492. 982 F.2d 693 (2d Cir. 1992).

493. *Id.* at 706; *see also* *Apple Comput., Inc. v. Microsoft Corp.*, 35 F.3d 1435, 1446 (9th Cir. 1994) ("[T]he unprotectable elements have to be identified, or filtered, before the works can be considered as a whole.").

circumscribed by extrinsic considerations such as (1) the mechanical specifications of the computer on which a particular program is intended to run; (2) compatibility requirements of other programs with which a program is designed to operate in conjunction; (3) computer manufacturers' design standards; (4) demands of the industry being serviced; and (5) widely accepted programming practices within the computer industry.⁴⁹⁴

The court observed that “[w]hile, hypothetically, there might be a myriad [sic] ways in which a programmer may effectuate certain functions within a program—i.e., express the idea embodied in a given subroutine—efficiency concerns may so narrow the practical range of choice as to make only one or two forms of expression workable operations.”⁴⁹⁵

The Federal Circuit recognized the role of filtration analysis in its 1988 *Lee v. Dayton-Hudson Corp.* decision and later picked up on this precedent in *OddzOn* and *Richardson*. Unfortunately, the Federal Circuit tacked away from these decisions in *Avia*, *L.A. Gear*, *Rosco*, *Egyptian Goddess*, and *Apple v. Samsung*. The filtration step is vital to ensuring that design patent protection does not encroach on utility patent's domain and that competitors and subsequent inventors can imitate and build on non-utility patented functional features.

Such filtration requires that a district court construe design claims and instruct the jury as to those aspects of the claimed designs that are not protectable and hence excluded from consideration in assessing infringement. Although Judge Koh identified functional elements of Apple's design patents in declining to issue a preliminary injunction,⁴⁹⁶ she declined to instruct the jury about those elements in the trial.⁴⁹⁷ Furthermore, the Federal Circuit should accord deference to the district court's resolution of subsidiary factual issues involved in patent claim construction.⁴⁹⁸

Courts should also apply a sliding similarity scale in assessing whether the accused device infringes the appropriately filtered design claim. Where the

494. *Id.* at 709–10.

495. *Id.* at 708.

496. *See supra* text accompanying notes 331–353.

497. *See supra* text accompanying notes 367–373.

498. *See* *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 547 U.S. 318 (2015) (interpreting Federal Rule of Civil Procedure 52(a)(6) and the court's prior decision in *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996), to require that the Federal Circuit accord deference to the resolution of subsidiary factual issues involved in patent claim construction); J. Jonas Anderson & Peter S. Menell, *Restoring the Fact/Law Distinction in Patent Claim Construction*, 109 NW. U.L. REV. ONLINE 187 (2015).

protection is thin, the standard for similarity should be elevated as a safeguard against overprotection.⁴⁹⁹

Relatedly, copyright law's compilation doctrine is analogous and instructive for assessing the scope of design patents. The Copyright Act defines a "compilation" as "a work formed by the collection and assembling of preexisting materials or of data that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship."⁵⁰⁰ The Federal Circuit's emphasis on viewing design patents "as a whole" assumes that the elements of the design are selected and arranged in an original and ornamental/non-functional way. Such an assumption should be scrutinized. Many articles of manufacture combine elements in non-original and functional ways. Take, for example, the surgical device depicted in Figure 29. The form-fitting handle and the tightening knob are likely derived from prior art devices and assembled in a functional configuration. Hence, viewing this design "as a whole" does not comport with the originality and ornamentality/non-functionality limitations on design patents. As with copyright law, competitors should be able to copy unoriginal or functional compilations of elements.

That said, protection can subsist in a compilation of unprotectable elements if there is originality in the selection and arrangements of the constituent elements. As a result, courts must assess both the copyrightability of elements and the way those elements are compiled. As noted above, where the originality is thin—as is true in some categories of compilations—the

499. *Cf.*, *Mattel, Inc. v. MGA Ent., Inc.*, 616 F.3d 904, 913–14 (9th Cir. 2010) ("If there's only a narrow range of expression (for example, there are only so many ways to paint a red bouncy ball on blank canvas), then copyright protection is 'thin' and a work must be 'virtually identical' to infringe."); *Incredible Techs., Inc. v. Virtual Techs., Inc.*, 400 F.3d 1007, 1015 (7th Cir. 2005) ("[T]he video display is afforded protection only from virtually identical copying."); *Satava v. Lowry*, 323 F.3d 805 (9th Cir. 2003); *Apple Comput., Inc. v. Microsoft Corp.*, 35 F.3d 1435 (9th Cir. 1994) ("[T]here can be no infringement [of thinly protected works] unless the works are virtually identical."); *Harper House, Inc. v. Thomas Nelson, Inc.*, 889 F.2d 197 (9th Cir. 1989) ("[C]opyright infringement of compilations consisting largely of uncopyrightable elements should not be found in the absence of 'bodily appropriation of expression'" (quoting *Cooling Systems & Flexibles, Inc. v. Stuart Radiator, Inc.*, 777 F.2d 485, 573 (9th Cir. 1985)); *E. USA, Inc. v. Epyx, Inc.*, 862 F.2d 204, 209 (9th Cir. 1988) (applying a heightened infringement standard for evaluating thinly protected works, such as the audiovisual elements for a videogame).

500. 17 U.S.C. § 101 (defining "compilation").

standard for similarity should be elevated as a safeguard against overprotection.⁵⁰¹

An industrial design for an article of manufacture might be a single element or a compilation of elements. The Federal Circuit should limit its focus to design as a whole only to the extent that it embodies originality in the compilation of features. And it should also ensure that any functional feature embodied in the design is not monopolized simply because the design as a whole has original features.

Applying this framework to the *Apple v. Samsung* design patents, the Federal Circuit should have questioned whether a rounded rectangle is original. Even apart from the fact that the Sharp Japanese patent anticipated this claimed design, the Apple claim should have been held to fall below the modicum of creativity required for originality. Furthermore, the rounded rectangle design element should have been filtered out or discounted in the infringement analysis. These limitations would have left nothing to protect because Apple disclaimed the other aspects of the iPhone shape in its design claim through its use of dotted lines on the drawing.

Finally, the Federal Circuit should instruct district courts (and itself) to apply the presumption of validity accorded to issued patents with due regard for the fact that the ornamentality/non-functionality doctrine drifted from the 1902 standards long ago.⁵⁰² Therefore, courts should be appropriately skeptical of the eligibility of design patents containing functional features.

2. *Jettison Consumer Deception as Part of the Design Patent Infringement Standard*

The Federal Circuit should further clarify design patent protection by abandoning the long-standing reference to consumer deception in the

501. See *supra* text accompanying note 499; *Feist Publ'n, Inc. v. Rural Tel. Serv. Co., Inc.*, 499 U.S. 340, 347–49 (1991) (noting that factual compilations only attract protection to the extent that the facts, which are unprotectable, are arranged in an original way and “[t]his inevitably means that the copyright in a factual compilation is thin”); *Key Publ'ns, Inc. v. Chinatown Today Publ'g Enter., Inc.*, 945 F.2d 509, 514 (2d Cir. 1991) (observing that substantial similarity inquiry is “narrowed” when dealing with compilations).

502. Following Federal Circuit case law, the Patent Office applies an overly broad standard for design patent eligibility. See U.S. PAT. & TRADEMARK OFF., *supra* note 94, § 1504.01(c) (“To be patentable, a design must be ‘primarily ornamental.’ ‘In determining whether a design is primarily functional or primarily ornamental the claimed design is viewed in its entirety, for the ultimate question is not the functional or decorative aspect of each separate feature, but the overall appearance of the article, in determining whether the claimed design is dictated by the utilitarian purpose of the article.’ See *L.A. Gear Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123 (Fed. Cir. 1993) The design for the article *cannot be assumed to lack ornamentality merely because the article of manufacture would seem to be primarily functional.*”).

infringement standard.⁵⁰³ That language dates back to a time when design patent law served as a proto-trademark law.⁵⁰⁴ Yet that era ended well over a century ago and the reference to this factor mischaracterizes the essential copyright nature of design patent protection. Design patent law, like copyright law's useful article protection, is about similarity of original, non-functional design. It should not depend on whether consumers would be confused as to the source of a useful article.

3. *Bring Regional Circuit Percolation Back into Design Patent Jurisprudence*

Another reform that could alleviate the encroachment of design patents into the utility patent regime would be for Congress to reform the exclusive subject matter jurisdiction of the Federal Circuit to allow design patent appeals to be heard by regional circuit courts. Such courts have historically been more sensitive to limiting incursions of copyright, trademark, and, prior to the establishment of the Federal Circuit, design patents into utility patent law's exclusive role in protecting functional features.

There is good reason to believe that Congress would have narrowed the Federal Circuit's exclusive jurisdiction in this way if it had been aware of the copyright nature of design patents.⁵⁰⁵ Congress voiced concern about the Federal Circuit expanding its exclusive patent jurisdiction to other areas, such as antitrust law. The Senate Judiciary Committee noted the risk and specifically warned against manipulating or extending the Federal Circuit's exclusive jurisdiction over patent claims. The Senate Report explained that the establishment of the Federal Circuit

is intended to alleviate the serious problems of forum shopping among the regional courts of appeals on patent claims by investing exclusive jurisdiction in one court of appeals. It is not intended to

503. *See* *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 683 (Fed. Cir. 2008) (en banc) (characterizing the infringement standard as “whether an ordinary observer, familiar with the prior art [] designs, would be *deceived* into believing the [accused device] is the same as the patented [design]” (emphasis added)); *Gorham Co. v. White*, 81 U.S. 511, 528 (1871) (stating the design infringement standard as “if, in the eye of an ordinary observer, giving such attention as a purchaser usually gives, two designs are substantially the same, if the resemblance is such as to *deceive* such an observer, *inducing him to purchase one supposing it to be the other*, the first one patented is infringed by the other” and concluding that “whatever differences there may be between the plaintiffs' design and those of the defendant in details of ornament, they are still the same in general appearance and effect, *so much alike that in the market and with purchasers they would pass for the same thing*—so much alike that even persons in the trade would be in danger of being *deceived*.” (emphases added)).

504. *See supra* Section II(B).

505. *See* Menell, *supra* note 229, at 1578–81.

create forum shopping opportunities between the Federal Circuit and the regional courts of appeals on other claims.⁵⁰⁶

Senator Leahy specifically warned that “[i]n nearly all . . . litigation [other than patent cases], science and technology, when relevant, are related to other human or social issues, and only a generalist court should ever hear such matters.”⁵⁰⁷ The House Report stated that “jurisdiction of an appeal in a case involving a claim arising under any Act of Congress relating to copy rights or trademarks . . . will continue to go to the regional appellate courts, pursuant to section 1294 of title 28.”⁵⁰⁸

When the Federal Courts Improvement Act of 1981 was passed, the design patent regime was a sleepy area. And even many patent practitioners had little appreciation of its copyright origins. It is unlikely that generalist legislators or their staffs were aware of the copyright nature of design patents. The focus of that legislation was on the regional circuit court forum shopping plaguing the utility patent regime. Such technologically complex cases presented special problems for generalist regional circuit jurists. Furthermore, regional circuit courts had been sensitive to the need to prevent design patents from encroaching on utility patent turf.

Congress could bring a wider range of perspectives to the design patent law regime by restoring appellate jurisdiction over design patent cases to the regional circuit courts. The problem of design patents cases brought in conjunction with utility patent infringement claims could be addressed through various approaches.⁵⁰⁹ Although the utility patent and design patent issues may share a common nucleus of operative facts, the disputed issues may be sufficiently distinct that it makes sense for the district court to phase or bifurcate trial of the causes of action. To the extent that the district court keeps the trial and post-trial rulings separate, it is as if separate cases have been adjudicated.

If exclusively utility patent or design issues are appealed, jurisdictional integrity and federalism considerations favor having those issues resolved by the appellate tribunal with primary authority: the Federal Circuit for utility patent issues and the regional circuit court for the design patent issues. Thus, since there is no loss in administrative efficiency for cases in which utility patent issues are not appealed, the most obvious solution would be to vest jurisdiction over the appeal of the design patent issues with the regional

506. See S. REP. NO. 97-275 (1981), as reprinted in 1982 U.S.C.C.A.N. 11.

507. See *id.* at App. B (1981) (providing the additional views of Senator Patrick J. Leahy).

508. H.R. REP. NO. 96-1307, at 23 (1980).

509. This proposal parallels a proposal to alter appellate jurisdiction over copyright cases that plead patent infringement allegations in the complaint. See Menell, *supra* note 229, at 1591–95.

appellate court. This could be accomplished by amending § 1295(a)(1) of Title 28 of the U.S. Code to exclude from the Federal Circuit's appellate jurisdiction cases that do not appeal issues arising under the utility patent provisions of the Patent Act or the Plant Variety Protection Act.

If both utility patent and design issues are appealed, the case would be effectively divided into separate causes of action and the timing of appeals and remands could affect case management. But since the case was already phased or bifurcated, appellate bifurcation would be straightforward and not add significant additional administrative cost. The district court would retain jurisdiction and could adapt any further proceedings based on the outcome and timing of the parallel appellate processes. Section 1295(a) could be amended to provide for cases in which the design issues have been tried separately—whether through phasing or bifurcation—to fall within the appellate jurisdiction of the regional circuit court of appeals.

That leaves cases in which the patent and nonpatent issues are litigated in a combined proceeding and are intertwined. Even in such scenarios, the appeal could be best handled by the regional circuit court if no utility patent issues are appealed. If utility patent issues or utility patent and design patent issues are appealed, then the Federal Circuit has primacy in adjudicating the appeal. But even in this situation, Congress could maintain regional circuit courts in the loop to the extent that distinct design patent issues arise by: (1) providing for certification of design patent questions to regional circuit courts; or (2) providing for review of Federal Circuit interpretations of regional circuit design decisions by a regional circuit panel and/or at the en banc level.

B. SUBSTANTIVE LEGISLATIVE REFORM

A lot has happened since 1902. Copyright has emerged as a significant form of protection not just for “fine arts” but for pictorial, graphic, and sculptural works generally, including useful articles. Moreover, the design field has shifted from decorative ornamentation to industrial design that integrates form and function. As an astute observer recognized half a century ago:

The distinction between ornamental and functional qualities, which the courts have long sought to establish, takes on an almost humorous aspect when its premise is contrasted with the theories underlying modern design. The elaboration of the ornamental standard is based on the notion that design and function are easily separable. Of course, this is not the case, at least not without a more detailed articulation of the reasons for the rule. Even if it were an easy distinction to make, it does not reckon with modern design, which is heavily influenced by Louis Sullivan's dictum ‘Form follows function.’ Contemporary design avoids decoration: ‘The stark simplicity of much modern design, both industrial and architectural,

is a violent reaction against the ginger-bread of the nineteenth century.’ Yet the law in this area is built upon a gingerbread conception of design; it sees design as something added to a product, an ornamentation, an embellishment, not as an integral part of the product itself. The contemporary designer does not take a finished good and decorate it; he helps to create it as much as does the production engineer. The designer does not seek to add something special to the product; rather he seeks, if he is in the vanguard of artistic innovators, to strip away and reveal basic forms. The design patent, in particular its requirement of ornamentation, is not only difficult to apply through the establishment of legally respectable standards; it is also grounded conceptually in an aesthetic outlook inconsistent with the art it seeks to encourage.⁵¹⁰

Although we still believe that the fundamental channeling principle reflected in *Baker v. Selden*—reserving protection for technological advances to the utility patent system—should be preserved and reinforced, there could be significant benefits from clarifying, harmonizing, and unifying design protection in light of the shifts in industrial design theory and practice that have taken place over the past century.

It is important to recognize, however, that advances in industrial design can qualify for utility patent protection. And although design protection advocates emphasize gaps in protection, industrial design is not rocket science or biomedical research. Advocates would need to make a much stronger case that industrial design falling short of the utility patent thresholds faces the technological risk, research and development expenditure, and appropriability problems necessary to justify new or expanded protections.

We are certainly not the first to recommend reexamining the need for design patent protection. There have been nearly perpetual efforts to reform design protection for more than a century.⁵¹¹ But as one scholar intimately familiar with such efforts recognized, “[g]iven this long history of failure, it is

510. See Matthew Nimetz, *Design Protection*, 15 COPYRIGHT L. SYMP. 79, 120–21 (1965) (footnotes omitted).

511. See, e.g., Goldenberg, *supra* note 449; Brown, *supra* note 451, at 1395–1403 (discussing prior reform efforts); PRESIDENT’S COMM’N ON THE PAT. SYS., “TO PROMOTE THE PROGRESS OF USEFUL ARTS” IN AN AGE OF EXPLODING TECHNOLOGY 12–13 (1966) (concluding that another form of design protection should be devised and design patents abandoned); Daniel H. Brean, *Enough Is Enough: Time to Eliminate Design Patents and Rely on More Appropriate Copyright and Trademark Protection for Product Designs*, 16 TEX. INTELL. PROP. L.J. 325, 379–81 (2008) (arguing that the design patent system should either be abolished or should be phased out and replaced with a system more akin to community design protection); Note, *Design Protection—Time to Replace the Design Patent*, 51 MINN. L. REV. 942, 959–61 (1967); Roy V. Jackson, *A New Approach to Protection for the Designs of New Products*, 38 J. PAT. OFF. SOC’Y 448, 449 (1956) (arguing that design patent protection should be converted to a system of “engineering copyright” or “copyright-design”).

not difficult to predict the future of design legislation.”⁵¹² We note, however, that Congress passed sui generis design legislation for vessel boat hull designs the year after that prediction.⁵¹³

The time may be ripe for considering ways of updating design protection. Now that the dust has settled from the *Apple v. Samsung* litigation and the Federal Circuit has doubled down on eviscerating the ornamentality/non-functionality doctrine, it is clearer than ever that the design patent regime has drifted far from what Congress intended more than a century ago. Apple's legal victory, however, has escalated efforts by other electronic device manufacturers, as well as many design industries, to gamble on design patent lottery tickets. The aftermath of the Supreme Court's *Samsung* ruling did little to quell the concern about design patent windfalls. As with the business method gold rush following the Federal Circuit's *State Street Bank* decision upholding business method utility patents,⁵¹⁴ the Federal Circuit's lax standard for assessing ornamentality/non-functionality in conjunction with the outsize *Apple v. Samsung* damages award has produced a surge in offensive and defensive design patenting.⁵¹⁵

This vesting of interests, however, further complicates the political economy of design protection reform.⁵¹⁶ Prior to the smartphone wars, many of the competitors might well have supported a ceasefire so as to reduce the risk of mutually assured destruction resulting from drawn out unpredictable battles over subjective intellectual property claims. But now many of these

512. See Goldenberg, *supra* note 449, at 21.

513. See Vessel Hull Design Protection Act, Pub. L. No., 105-304, 112 Stat. 2860 (1998) (codified as 17 U.S.C. §§ 1301–32). Support for this federal legislation emerged in reaction to the Supreme Court's decision striking down Florida's vessel hull protection legislation as preempted by federal intellectual property law. See *Bonito Boats Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141 (1989).

514. See *State St. Bank & Trust Co. v. Signature Fin. Grp.*, 149 F.3d 1368 (Fed. Cir. 1998); Megan M. La Belle & Heidi Mandanis Schooner, *Big Banks and Business Method Patents*, 16 U. PA. J. BUS. L. 431, 451 (2014) (“While there is no single cause of this surge in patent litigation, allowing patents on business methods has been a contributing factor.”); Gerald H. Kiel & Harry K. Ahn, “*Business Methods*” *Are Broadly Defined: Patent Protection Is Available in Variety of Areas Including Marketing, Sales and Finance*, N.Y.L.J., Feb. 3, 2003, at S9 (noting that *State Street Bank* “opened a floodgate for companies to seek patent protection for new business methods”); Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 BERKELEY TECH. L.J. 577 (1999) (questioning the need for patents on inventions that are easily made).

515. See generally Pat. Tech. Monitoring Team, *supra* note 2.

516. Cf. Peter S. Menell, *The Challenges of Reforming Intellectual Property Protection for Computer Software*, 94 COLUM. L. REV. 2644, 2647–48, 2648 n.19 (1994); William N. Eskridge, Jr., *Politics Without Romance: Implications of Public Choice Theory for Statutory Interpretation*, 74 VA. L. REV. 275, 287–88 (1988) (explaining how formal organization of interest groups leads to substantial influence in the political arena).

companies have armed themselves with design patents. And that is in addition to the traditional opposing forces in the design reform arena—such as fashion designers, manufacturing industries, replacement part manufacturers, and insurance companies. That said, hope springs eternal that a grand compromise can be achieved.

C. RESPONDING TO THE APPLE REVIVAL COUNTERARGUMENT

Prior to the *Apple v. Samsung* litigation, design patent law was a sleepy intellectual property niche that did not have a large impact on commerce or the digital technology industries. The publicity surrounding the smartphone wars and Apple's massive damages award attributable to its design patent claims for rounded rectangles catapulted design patents to prominence in intellectual property law and business strategy. The design patent Cinderella is now a celebrity, leading electronic device manufacturers and a growing range of other industries to pursue design patent applications. Applying the Federal Circuit's lax design patent functionality standards, the Patent Office has been issuing a growing number of design patents embodying clearly functional features.

Defenders of design patent law's emergence point to how the design system fostered Steve Jobs's visionary focus on the integration of form and function in electronic products, reviving a once great but near-bankrupt company to historic financial success, transforming the consumer marketplace, and contributing to the reemergence of American industry.⁵¹⁷ But is this story more mythology than truth? Would Apple have failed without lax design patent eligibility? Are the Federal Circuit's lax standards for ornamentality/non-functionality promoting or impeding "progress"?

While we do not question Apple's contributions to product design, we don't think that it should override the limits that Congress wisely included within the design patent regime nor the fundamental logic of the *Baker v. Selden* channeling principle. Apple's re-emergence is inspiring, but the role of design patents is at least partly mythology spun by one of the most charismatic business leaders in history. Furthermore, the expansion of design patent eligibility is likely to undermine technological progress by cluttering the electronic device and other design markets with minefields of dubious intellectual property rights that threaten cumulative innovation and competition.

We focus first on the role of design patents in Apple's rebirth. The product that revitalized Apple was not the iPhone or the iPad, but the iPod.⁵¹⁸ While

517. See Kappos, *supra* note 3.

518. See generally STEVEN LEVY, THE PERFECT THING: HOW THE IPOD SHUFFLES COMMERCE, CULTURE, AND COOLNESS (2006).

this charismatic device also embodied seamless minimalist design for which it (belatedly) obtained design patents,⁵¹⁹ the key to its success was its ingenious solution to an intractable clash between the content industries (record labels, music publishers, recording artists, and composers) and the digital technology industries. Neither Steve Jobs nor Apple invented file compression, faster and more compact electronics, enhanced battery life, more advanced programming languages, nor other technologies that drove the emergence of a new generation of digital music devices. And while Jobs and Apple deserve credit for integrating these technological advances into a highly successful user-friendly device, the iPod's success turned significantly on Jobs's loosening of the recording industry's controlling licensing practices and creation of a legitimate marketplace (the iTunes store) for acquiring digital downloads of popular music. And even here, we should not overestimate Jobs's role. More than anything else, the emergence of Napster and file-sharing technology drove the recording industry to the negotiating table. And the failure of the recording industry's efforts to develop their own online music stores also played a role. Steve Jobs and Apple deserve tremendous credit for pulling off the iTunes deal quickly. But the context is critically important to assessing their role: They accelerated what was already in motion.

The iPod and the iTunes Store played critical roles in Apple's revival and provided the platform for the expansion of Apple's consumer electronics product catalog. The "iPod-iTunes symbiosis" was a "self-reinforcing" "unassailable fortress" that gave Apple a seventy percent share of the music player marketplace.⁵²⁰ Like Microsoft Windows in the 1990s, the iPod platform created the potential for tremendous network effects.⁵²¹ It also provided a pathway for Apple to enter and dominate the mobile phone marketplace, a far larger business. And with the iPod's synergy of technology and content, Apple could expand its empire into many other markets.

Although Apple acquired design patents on its iPod products, its success in building this marketplace turned significantly on Apple's business acumen and advances in collateral technologies. Apple was not the first company to develop a portable electronic music device or a music download service. Apple

519. See Media Device, U.S. Design Patent No. 516,576 (issued Mar. 7, 2006). Note that Apple did not file the application for this design until 2004, several years after the iPod's introduction. See Chiam Gartenberg, *The iPod Turns 15: A Visual History of Apple's Mobile Music Icon Look Back at 15 Years of iPod History*, THE VERGE (Oct. 23, 2016, 10:00 AM), <https://www.theverge.com/2016/10/23/13359534/ipod-mini-nano-touch-shuffle-15-years-visual-history-apple>.

520. See VOGELSTEIN, *supra* note 316, at 140–45.

521. See Menell, *supra* note 280.

brilliantly integrated various technologies, broke the logjam with the major music industry content owners, and adeptly marketed the iPod.

The utility patent system provided Apple with the means to protect novel and nonobvious *technological* advances in its electronic devices, including the integration of components.⁵²² We don't see why the design patent system should afford Apple additional protection for the functional features of its devices that do not meet the novelty and non-obviousness thresholds of the utility patent system. Apple's first mover advantage, utility patents, integration with its other computers, high manufacturing standards, strong brand loyalty, and adroit marketing afforded Apple ample motivation to pursue research and development of media devices. Vague design patents on minimalist designs may have reinforced these motivations, but it is not at all clear that they were needed.

Which brings us to whether the iPhone and iPad design patents were worth both the economic and legal costs that they imposed on competitors and consumers and the larger effects that they continue to have on many consumer industries as companies accumulate arsenals of design patents of uncertain scope with regard to minimalist and functional features. There is no doubt that the design patents on rounded rectangles created a minefield for competitors and slowed cumulative innovation. The notion that Apple needed such patents to pursue its iPhone and iPad product lines has more to do with Steve Jobs's humorous presentation of the iPhone than economic reality.⁵²³ In discussing Apple's approach to intellectual property, Nancy Heinen, Apple's General Counsel and Senior Vice President from 1997 through 2006,⁵²⁴ explained:

Remember, [Jobs] was the best marketer on the planet. So he was sending a message . . . I've got a sledgehammer, and I am going to use it anytime [cell phone manufacturers] come too close. It's a business strategy. There were true innovations in the iPhone, but we were not the first by a long shot into this area. So if you're not the first in, you have to be robust in covering every possible invention or feature or little thing because it's a crowded environment. You

522. Apple acquired various utility patents associated with the iPod. *See, e.g.*, U.S. Patent No. 7,348,967 (issued Mar. 25, 2008) (Touch Pad for Handheld Device); U.S. Patent No. 7,046,230 (issued May 16, 2006) (Touch Pad Handheld Device).

523. *See supra* Figure 24; VOGELSTEIN, *supra* note 316, at 172–74 (“Nothing illustrates Jobs's obsession with patents as weapons better than his comments about them during the first iPhone launch in 2007 and the private meetings he had surrounding them in 2006. In the fall of 2006, as Apple's engineers were scrambling to ready the iPhone for its January unveiling, the topic of what technologies Apple should patent in the iPhone came up It was a short discussion. . . . Jobs answers it completely and definitively: ‘We are going to patent it all.’ . . . Jobs knew that defending patents is as much about bluster as about the law.”).

524. *See Nancy R. Heinen*, WIKIPEDIA, https://en.wikipedia.org/wiki/Nancy_R._Heinen (last visited Nov. 21, 2020).

don't know what is going to survive [the patent-office and legal challenges], and don't know what other things are going to be coming out from competitors in the space.⁵²⁵

Apple's aggressive intellectual property enforcement campaign was also fueled by Steve Jobs's perception that he had been betrayed by Sergey Brin and Larry Page, Google's co-founders whom he had befriended and mentored, and Eric Schmidt, Google's CEO who served on Apple's Board of Directors.⁵²⁶

Thus, the narrative surrounding design patents is more hype than substance. Jobs had already revived Apple and paved the way for its entry into the smartphone and tablet markets before embarking on the iPhone and iPad projects. Furthermore, Apple's iPhone and iPad products were less breakthroughs than the next stage in the maturation of various collateral technologies. Apple did not invent smartphones, multitouch gestures, or tablet devices.⁵²⁷

These ideas had been floating around Silicon Valley for decades. Alan Kay,⁵²⁸ a noted software engineer at Xerox's Palo Alto Research Center (PARC),⁵²⁹ came up with plans for Dynabook, a progenitor of laptop and tablet computers and the e-book, in 1968.⁵³⁰ In the early 1990s, James Gosling, a legendary software engineer credited with developing the Java programming language, built the Star7, a prototype for a handheld device that combined a Sun SPARCStation motherboard, radio, a four-inch LCD touchscreen, and speakers from the Nintendo Game Boy.⁵³¹

GO Corporation envisioned a touchscreen device that integrated a cell phone, fax machine, modem, microphone, calendar, and word processor in the early 1990s.⁵³² Apple introduced the Newton, a handheld personal digital assistant (PDA), in 1994. Although the Newton was initially successful, the

525. See VOGELSTEIN, *supra* note 316, at 174 (quoting Nancy Heinen).

526. See *id.* at 83–145.

527. See VOGELSTEIN, *supra* note 316, at 101–05.

528. See *Alan Kay*, WIKIPEDIA, https://en.wikipedia.org/wiki/Alan_Kay (last visited Nov. 21, 2020).

529. Xerox PARC is where a young Steve Jobs, along with Steve Wozniak, his Apple co-founder, got some of the ideas for the desktop graphical user interface that contributed the success of the Apple Macintosh line of computers. See Jeremy Reimer, *A History of the GUI*, ARS TECHNICA (May 5, 2005, 1:40 AM), <https://arstechnica.com/features/2005/05/gui/4>.

530. See *Dynabook*, WIKIPEDIA, <https://en.wikipedia.org/wiki/Dynabook> (last visited Nov. 21, 2020).

531. See James A. Gosling, *Star7 Demo*, YOUTUBE (Oct. 19, 2007), <https://www.youtube.com/watch?v=1CsTH9S79qI>. The Star7 was developed as part of Sun Microsystem's Green Project. See Menell, *supra* note 126, at 348–49.

532. See JERRY KAPLAN, *ADVENTURES OF A SILICON VALLEY STARTUP* (1999) (chronicling GO's journey from promising start-up to business failure).

PalmPilot's sleeker size and longer battery life won the PDA market.⁵³³ Microsoft and Compaq introduced tablet devices in the early 2000 period.

Apple's success with the iPhone and iPad was built on a vast body of prior art, the emergence of the internet, and plummeting prices on ever more powerful microprocessors, batteries, and touchscreens resulting from robust innovation and competition. There is no doubt that Apple brought many valuable insights and incremental innovations to its iPhone and iPad products. But it would be a mistake to view Jobs or Apple as a modern-day Prometheus, the Greek mythological hero credited with the creation of humanity from clay and defying the gods by stealing fire and giving it to humanity as civilization.⁵³⁴

And that is why it is ironic that Apple's most powerful weapon in its smartphone intellectual property arsenal turned out to be design patents on rounded rectangles. Without the Federal Circuit's failure to appreciate the limited, copyright-based nature of design patent protection and its unwarranted expansion of design patent protection into the exclusive domain of utility patents, the digital technology industry would have been spared tremendous wasteful litigation that hindered cumulative innovation and competition.

It is doubtful that Apple needed its design patents, and their collateral effects on progress and the intellectual property system are regrettable. While appropriately tailored intellectual property can promote progress, overbroad and vague intellectual property protection undermines progress by imposing costs on follow-on inventors through needless due diligence and the costs of defending against unwarranted protections. We have learned these lessons through the painful experience of utility patents on business methods and efforts to use copyrights on computer software to protect functional features.

Despite their great technology leadership, neither Steve Jobs nor Apple has served the intellectual property system well through their cynical assertion of dubious intellectual property claims. Apple's smartphone war against Android devices was not its first cavalier effort to use dubious intellectual property assets to wreak havoc across the digital computing ecosystem. Recall that Apple pursued a vigorous campaign against Microsoft, Hewlett-Packard, and other computer companies in the late 1980s and early 1990s over the graphical user interface for desktop computers. It took several years to sort out that mess, but Judge Vaughn Walker in the Northern District of California and the Ninth Circuit ultimately resolved that controversy in a way that blocked

533. See VOGELSTEIN, *supra* note 316, at 150.

534. See *Prometheus*, WIKIPEDIA, <https://en.wikipedia.org/wiki/Prometheus> (last visited Nov. 21, 2020).

Apple's monopolistic impulses and promoted both innovation and competition.⁵³⁵

Unfortunately, Apple's design patent campaign has, thus far, had the opposite effect. The Federal Circuit has opened the backdoor to protecting functional features without requiring that the claims meet the utility patent's more exacting requirements. This shift in the law, without due attention to Congress's intention in amending the design patent regime or the wise channeling doctrine reflected in *Baker v. Selden*, threatens to undermine progress. It remains to be seen how far this wayward drift will go, although the buildup of design patent arsenals is an ominous sign.⁵³⁶

VIII. CONCLUSION: THE VERY UNEASY CASE FOR DESIGN PATENT PROTECTION FOR FUNCTIONAL FEATURES

The U.S. design patent regime began as a mislabeled copyright regime, which has continued to plague its efficacy since the mid-19th century. The regime served for a brief period as proto-trademark law until the U.S. Congress established a true federal trademark regime. The early dalliance with trademark law, however, caused lasting confusion as courts continue to apply a trademark-like standard for assessing infringement more than a century and a half later.

During the mid to late 19th century, some patent commissioners and courts, confused by the inclusion of the term "useful" in some classes of design patent subject matter, caused design patent law to encroach on utility patent protection for technological inventions. At the turn of the 20th century, Commissioner Allen righted the ship, persuading Congress to excise the word "useful" from the design patent law and insert an express "ornamentality" requirement so as to properly channel protection between the utility and design patent regimes.

While struggling to assess aesthetics directly, early 20th century courts appreciated that Congress intended the ornamentality requirement to serve as a channeling doctrine to bar design patents from protecting functional features. Without any intention of allowing design patent protection to extend to functional features of articles of manufacture that are intertwined with ornamental elements, several regional circuit courts stated that designs that are "dictated by functionality" are ineligible. This was merely a shortcut to dispose

535. See *Apple Comput., Inc. v. Microsoft Corp.*, 799 F. Supp. 1006 (N.D. Cal. 1992), *aff'd in part, rev'd in part*, 35 F.3d 1435 (9th Cir. 1994).

536. See Sarah Burstein, *Costly Designs*, 77 OHIO ST. L.J. 107, 125–29 (2016) (identifying especially unworthy design patents).

of easy cases. The regional circuit courts generally adhered to the channeling principle.

The establishment of the U.S. Court of Appeals for the Federal Circuit in the early 1980s led to a pronounced shift in design patent eligibility. After a cautious start, the Federal Circuit produced two 1988 decisions pointing in different directions. *Lee v. Dayton-Hudson Corp.*⁵³⁷ respected the channeling principle by holding that “a design patent is not a substitute for a utility patent. A device that copies the utilitarian or functional features of a patented design is not an infringement unless the ornamental aspects are also copied, such that the overall ‘resemblance is such as to deceive.’”⁵³⁸ *Avia Grp. International, Inc. v. L.A. Gear California, Inc.*⁵³⁹ took a far more permissive approach to design patent eligibility, rejecting dissection of function elements of patented designs and suggesting that a design is ornamental and not functional so long as there are alternative designs available.

The Federal Circuit reinforced the alternative design standard a few years later in *L.A. Gear, Inc. v. Thom McAn Shoe Co.*⁵⁴⁰ Without exploring the 1902 Act or the context in which the “dictated by functionality” formulation emerged—i.e., regional circuit decisions employed this test as a shortcut for invalidating straightforward functional design patents—the Federal Circuit adopted the “dictated by” formulation as *the* test for ornamentality/non-functionality. The Federal Circuit reinforced this interpretation in the en banc *Egyptian Goddess* case,⁵⁴¹ which overturned the use of a point of novelty focus. Although the Federal Circuit tempered the ornamentality/non-functionality doctrine in a 2010 decision that filtered out functional features in the infringement assessment,⁵⁴² it largely repudiated that approach in its handling of the blockbuster *Apple v. Samsung* case.⁵⁴³ Its subsequent decisions reinforced the permissive approach.

It is disconcerting that throughout nearly four decades of struggling to make sense of the design patent regime, and particularly its role within the larger intellectual property system, the Federal Circuit has never once referred to the 1902 Act and its rationale. Nor has it seriously examined the rich body of regional circuit authority that sheds light on the key legislation.

Apart from this wayward drift, the design patent regime is an anachronism. Passed as a mislabeled form of copyright protection for useful articles before

537. 838 F.2d 1186 (Fed. Cir. 1988).

538. *Id.* (citing *Gorham Co. v. White*, 81 U.S. (14 Wall.) 511, 528 (1872)).

539. 853 F.2d 1557 (Fed. Cir. 1988).

540. 988 F.2d 1117 (Fed. Cir. 1993).

541. *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 678 (Fed. Cir. 2008) (en banc).

542. *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288 (Fed. Cir. 2010).

543. *See supra* Section V(D).

copyright had expanded to encompass useful articles, design patent protection served a narrow but worthwhile purpose for a century. As copyright law expanded, however, the need for design patent protection has faded. Congress provided clearer language in the Copyright Act to ensure that it did not encroach on the utility patent domain. And the Supreme Court has similarly guarded against trade dress law affording backdoor protection for functional features of product design. Yet the Federal Circuit has allowed the design patent regime to drift into a troubling collision with the utility patent regime. Product designers can now gain protection for functional features without meeting the higher requirements of the utility patent system.

In 1969, then Professor Stephen Breyer wrote a provocative article entitled "The Uneasy Case for Copyright."⁵⁴⁴ While his questioning of the need for copyright for some categories of books may have overshot the mark,⁵⁴⁵ his parsimonious intellectual property framework captured the importance of balancing innovation and competition in pursuing the constitutional aim of promoting progress of expressive and inventive works.⁵⁴⁶ This perspective is especially valuable for protecting forms of expression that combine expressive and functional attributes.⁵⁴⁷

Like computer software, designs are an ideal candidate for the parsimonious framework. Design patents should never have been interpreted so broadly as to protect functional features. We have suggested ways to restore the fundamental channeling principle that undergirds the intellectual property system. We have also explained why the time is ripe for Congress to address the overlap of design and utility patent protection so as to promote design creativity without inhibiting competition in functional features. Designers should not be offered a backdoor for protecting functionality.

544. See Stephen Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281 (1970).

545. See BARBARA A. RINGER, *THE DEMONOLOGY OF COPYRIGHT* 14–15 (R.R. Bowker Co. 1974) ("While mostly disagreeing with his conclusions, I admire Professor Breyer's courage and skill in saying what he thinks, but I must say that at this point he scared me."); Barry W. Tyerman, *The Economic Rationale for Copyright Protection for Published Books: A Reply to Professor Breyer*, 18 UCLA L. REV. 1100 (1970); cf. Stephen Breyer, *Copyright: A Rejoinder*, 20 UCLA L. REV. 75, 80 (1972) (conceding that the claim for *abolishing* copyright protection for important categories of books is not convincing while defending his methodology and refocusing the discussion on *reforming* copyright protection).

546. See U.S. CONST. art. I, § 8, cl. 8.

547. See, e.g., Peter S. Menell, *Tailoring Legal Protection for Computer Software*, 39 STAN. L. REV. 1329 (1987) (analyzing legal protection for computer software).

A PRIMER ON DESIGN PATENT FUNCTIONALITY

Perry J. Saidman[†]

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I. INTRODUCTION

Professor Peter S. Menell and J.S.D. Candidate Ella Corren of the University of California, Berkeley, School of Law have published a paper entitled “DESIGN PATENT LAW’S IDENTITY CRISIS.”¹ That paper

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† Design Lawyer, Perry Saidman, LLC. This essay was prepared for the BCLT Design Patent Symposium (February 19, 2021). It is an explanation of some basic design patent law realities drawn from my many years in private practice. The opinions expressed herein are those of the author only and do not necessarily represent those of any client, past or present.

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1. Peter S. Menell & Ella Corren, *Design Patent Law’s Identity Crisis*, 36 BERKELEY TECH. L.J. 1 (2022).

formed the basis of a conference held February 18, 2021 “Navigating and Rectifying the Design Patent Muddle.” Both of which focused on the issue of design patent functionality. In an extensively researched 145-page paper, they describe the “muddle” thusly:

The [IP] system requires that functional advances meet the higher thresholds of the utility patent system. Affording protection for functional advances short of applying the *utility* patent law’s more exacting novelty, non-obviousness, and disclosure requirements would be, as the Supreme Court observed in [*Baker v. Selden*] denying copyright protection for a system of accounting (and the associated lined forms), “a surprise and a fraud upon the public” and undermines free competition.²

They concluded:

[T]he Federal Circuit has allowed the design patent regime to drift into a troubling collision with the utility patent regime. Product designers can now gain protection for functional features without meeting the higher requirements of the utility patent system...

...Design patents should never have been interpreted so broadly as to protect functional features . . . Designers should not be offered a backdoor for protecting functionality.³

The foregoing encapsulates the wrong-headed thinking that pervades the paper in that two basic design patent principles were overlooked.

First, a product that has utilitarian features has an associated appearance that, if claimed in a design patent, must be taken into account in determining patentability/validity.⁴ It is true that obtaining a design patent on a product that has utilitarian (functional) features prevents others from making, using, or selling a product whose overall appearance is substantially the same as the claimed design. However, it does not prevent someone from making, using, or selling a product having the same utilitarian features. In other words, even though the system removes that one patented design from the universe of

2. *Id.* at 106. In *Baker v. Selden*, 101 U.S. 99, 103–04 (1879), the Court explained that a copyright on the particular manner of expression of a bookkeeping system gives the author the exclusive right to that expression, but it does not give an exclusive right to the underlying idea for protection of which the author would need to obtain a utility patent for that. This is analogous to the design patent/utility patent dichotomy: A design patent protects the particular manner of expression, i.e., the appearance of a design, but not the underlying idea. The designer would need to obtain a utility patent to protect the function embodied in the protected expression.

3. Menell & Corren, *supra* note 1, at 145.

4. For the purpose of clarity, wherever possible the word “appearance” will be used rather than “ornamental,” and the word “utilitarian” shall be used rather than “functional.”

designs available to a competitor, it does not remove the competitor's ability to use the same utilitarian features among the many choices of designs open to it. Thus, it is misleading and inaccurate to suggest that a design patent somehow protects a design's utilitarian features. It protects only their appearance in combination with all other features.

Second, Menell and Corren's paper advocates that utilitarian features should be "filtered out" of a patented design, i.e., excluded from consideration, before determining infringement, akin to copyright law.⁵ This is contrary to the fact that such utilitarian features all have an associated appearance that, if claimed, must be taken into account in infringement analysis. The failure of Menell and Corren's paper to take into account these two basic principles undermines their premise that design patents somehow monopolize utilitarian features of a design.

It is notable that copyright applications are not examined by the Copyright Office, whereas design patent applications undergo a rigorous examination by the U.S. Patent and Trademark Office (USPTO) resulting in a design patent that carries a statutory presumption of validity.⁶ In other words, determination of what is copyrightable is left to the courts, while the USPTO determines what is patentable before any court action. This leaves courts in copyright actions to feel free to filter out features that are not novel, too simple, or have solely utilitarian features. In contrast, since a design patent protects the overall appearance of a claimed design, the issued design patent can, and frequently does, consist of features that, when taken alone, are perhaps not novel and/or are simple or utilitarian. It is only when an entire claimed design is not novel or is solely utilitarian will patentability be denied by the USPTO.

Contrary to the assertions in Menell and Corren's paper, the design patent system does not foist a "fraud upon the public,"⁷ nor present a "troubling collision with the utility patent regime."⁸ Given that design patents protect only the appearance of products and not any utilitarian features that may be part of the overall appearance, any purported conflict with utility patents is illusory. Menell and Corren rely on ancient design patent case law decided long before the courts came to properly analyze so-called functionality. Also, the "filtering out" shibboleth propounded by the paper has been quite properly dealt with by recent Federal Circuit decisions.

The rest of this paper will explore these topics. Section II will set forth the role of utilitarian features in determining design patent validity and explain the

5. Menell & Corren, *supra* note 1, at 37, 132.

6. See 35 U.S.C. § 282.

7. Menell & Corren, *supra* note 1, at 6.

8. Menell & Corren, *supra* note 1, at 145.

alternative designs test, now almost universally used to determine design patent functionality. Section III will discuss recent Federal Circuit case law which puts filtration of so-called functional features in its proper place.

II. FUNCTIONALITY AND DESIGN PATENT VALIDITY

This Section first notes that—by statute—design patents must include utilitarian features. It also demonstrates the basic principle that design patents do not protect such utilitarian features, only appearance features. This is because each utilitarian feature has an associated appearance which, if claimed as part of the design patent, is and must be taken into account in determining patentability. Established Federal Circuit case law mandates that a design patent claim be interpreted to include the appearance of every significant feature that is claimed.

In addition, competitors are free to utilize any utilitarian feature claimed in a design patent, as long as their resultant product does not look substantially the same as, i.e., infringes, the patented design.

Only if the overall claimed design is dictated by function will the design patent be invalid.⁹ The alternative designs test has been proven to be an objectively determinable, reliable test in determining whether a design is dictated by function and is almost exclusively used by courts considering the issue.

A. BY STATUTE, DESIGNS MUST BE FOR AN “ARTICLE OF MANUFACTURE” WHICH INHERENTLY HAVE UTILITARIAN FEATURES

A design patent can only protect products which are articles of manufacture, i.e., products that have utilitarian features. To get design patent protection, a person has to “invent[] any new, original and ornamental design for an article of manufacture.”¹⁰

Thus, in order to be patentable, a design must be “for an article of manufacture.”¹¹ It cannot be disputed that all articles of manufacture have features that are utilitarian; it is their inherent nature.¹² As aptly stated by the Federal Circuit in *Avia Group International, Inc. v. L.A. Gear California, Inc.*:

A distinction exists between the [de facto] functionality of an article or features thereof and the [de jure] functionality of the particular design of such article or features thereof that perform a function.

9. *See* *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123 (Fed. Cir. 1993).

10. 35 U.S.C. § 171.

11. *Id.*

12. *See* *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1328 (Fed. Cir. 2015) (“Articles of manufacture necessarily serve a utilitarian purpose. . .”).

Were that not true, it would not be possible to obtain a design patent on a utilitarian article of manufacture, or to obtain design and utility patents on the same article.¹³

In other words, the presence of utilitarian features in a design cannot be a basis for denying design patent protection.

B. ALL UTILITARIAN FEATURES HAVE AN ASSOCIATED APPEARANCE

It is evident that all utilitarian features have an associated appearance and that particular appearance can be claimed in a design patent. Examples abound—a desk, a computer keyboard, a cell phone—all have multiple utilitarian attributes. Yet, they also have an appearance, and it is only that appearance that is protected by a design patent in which they are part of the claim.¹⁴

The scope of a design patent, as with a utility patent, depends on how many elements are in the claim. The fewer elements claimed, the broader the scope; the more elements claimed, the narrower the scope.

Therefore, even though the appearance of utilitarian elements in a claimed design must be taken into account, the scope—either broad or narrow—of the claimed design is necessarily limited by the presence of such elements.¹⁵ In other words, the scope of the patent is broader if utilitarian elements are not part of the claim; conversely, the more utilitarian elements that are included in the claim the more narrow is the claim, having the effect of limiting the universe of products that might infringe it.¹⁶

It cannot be overemphasized: all claimed features—utilitarian or not—of a design patent contribute to the overall appearance of the design, and all must be taken into account in determining validity and infringement.¹⁷

13. 853 F.2d 1557, 1563 (Fed. Cir. 1988).

14. Industrial designers have as their goal the creation of commercially unique designs that ideally blend form and function. *See What Is Industrial Design?*, INDUS. DESIGNERS SOC'Y AM., <https://www.idsa.org/what-industrial-design> (last visited Apr. 27, 2021); *see also* *Brandir Int'l, Inc. v. Cascade Pac. Lumber Co.*, 834 F.2d 1142, 1145 (2d Cir. 1987). Thus, every industrial design inevitably has utilitarian features.

15. *See OddzOn Prods., Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1406 (Fed. Cir. 1997) (“[T]hese functional characteristics do not invalidate the design patent, but merely limit the scope of the protected subject matter.”)

16. *See Sport Dimension, Inc. v. Coleman Co.*, 820 F.3d 1316, 1323 (Fed. Cir. 2016) (“Because of the design’s many functional elements and its minimal ornamentation, the overall claim scope of the claim is accordingly narrow.” (citing *Ethicon*, 796 F.3d at 1334)).

17. *See Ethicon*, 796 F.3d at 1335 (“Where . . . the claimed design includes several elements, the fact finder must . . . compar[e] similarities in overall designs, not similarities of ornamental features in isolation. An element-by-element comparison . . . is procedural error.”)

As noted previously, if design patents were invalid because they claimed utilitarian features, there would be no design patents, since all designs must by statute be “for an article of manufacture.”¹⁸ Although invalid design patents may be the goal of anti-protectionists, it is opposite to the goal of businesses that rely on robust design patent protection to prevent knockoffs from appropriating their unique and valuable visual designs.¹⁹

C. A DESIGN PATENT DOES NOT PROTECT UTILITARIAN FEATURES

Simply stated: even if a claimed design incorporates utilitarian features, it does not prevent a competitor from using the exact same utilitarian features—as long as the overall appearance of the competitor’s product does not look substantially the same as the patented design.

In other words, it is the appearance of whatever is claimed that is protected by a design patent, not the utilitarian features that are part of the claimed design.

Even a simple design—such as a nut for screwing onto a bolt—has appearance features, such as the curvature of the peripheral wrench grips. The function of a nut, such as the threads into which the bolt is screwed, cannot be protected alone by a design patent, only its appearance in combination with other claimed features. Competitors are free to use whatever nut they wish, as long as it does not overall *look like* a nut that is claimed in a design patent.

For example, note the following design patents shown in Figure 1—duly examined for novelty and non-obviousness by the USPTO—that protect appearance features of various nuts:²⁰

(citing *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1295 (Fed. Cir. 2010); *Crocs, Inc. v. Int’l Trade Comm’n*, 598 F.3d 1294, 1303–04 (Fed. Cir. 2010)).

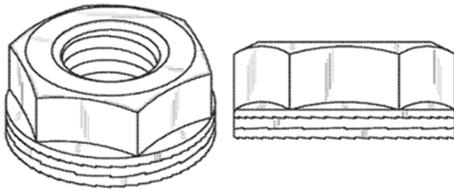
18. 35 U.S.C. § 171.

19. See Perry J. Saidman & Theresa Esquerra, *A Manifesto on Industrial Design Protection: Resurrecting the Design Registration League*, 55 J. COPYRIGHT SOC’Y USA 423, 427 (2008).

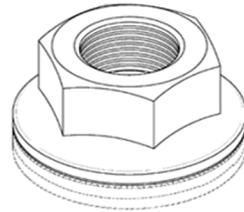
20. U.S. Patent No. D609,999 (filed Feb. 16, 2010); U.S. Patent No. D646,154 (filed Oct. 4, 2011); U.S. Patent No. D582,763 (filed Dec. 16, 2008); U.S. Patent No. D646,153 (filed Oct. 4, 2011); U.S. Patent No. D576,028 (filed Sept. 2, 2008); U.S. Patent No. D371,509 (filed July 9, 1996); U.S. Patent No. D278,029 (filed Mar. 19, 1985); U.S. Patent No. D319,005 (filed Aug. 13, 1991).

Figure 1

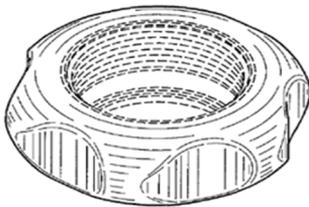
(12) United States Design Patent (19) Patent No.: US D609,999 S
Andersson (45) Date of Patent: ** Feb. 16, 2010



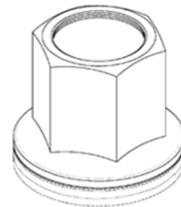
(12) United States Design Patent (19) Patent No.: US D646,154 S
Andersson (45) Date of Patent: ** Oct. 4, 2011



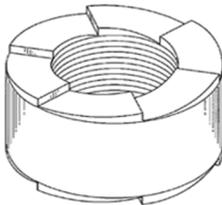
(12) United States Design Patent (19) Patent No.: US D582,763 S
Riedel et al. (45) Date of Patent: ** Dec. 16, 2008



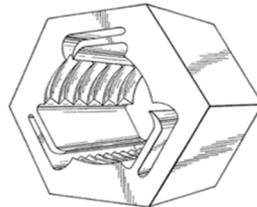
(12) United States Design Patent (19) Patent No.: US D646,153 S
Andersson (45) Date of Patent: ** Oct. 4, 2011



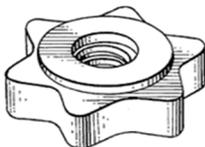
(12) United States Design Patent (19) Patent No.: US D576,028 S
Lin (45) Date of Patent: ** Sep. 2, 2008



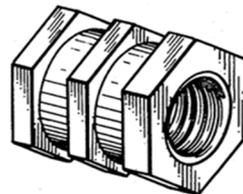
United States Patent (19) (11) Patent Number: Des. 371,509
DiStasio (45) Date of Patent: ** Jul. 9, 1996



United States Patent (19) (11) Patent Number: Des. 278,029
Suponitsky (45) Date of Patent: ** Mar. 19, 1985



United States Patent (19) (11) Patent Number: Des. 319,005
Sakayori et al. (45) Date of Patent: ** Aug. 13, 1991



These various designs illustrate how design patents protect the overall appearance of the claimed nuts beyond their utilitarian components. All of these nuts perform substantially the same broad function: they screw onto and thereby fasten a bolt. Yet, they each have a distinctive appearance which is protected by a design patent. Again, a competitor is entitled to use whatever nut it wishes, but it cannot use a nut whose overall appearance is substantially the same as any of these patented nuts. There are an infinite variety of unpatented nuts from which a competitor can choose, or even better, it can design its own.

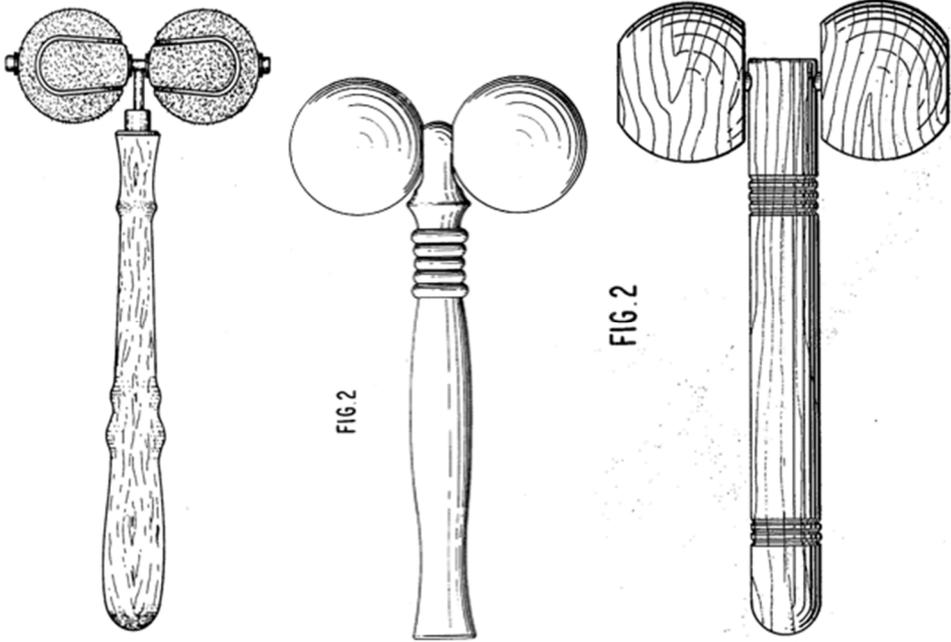
It is clearly possible for a competitor to incorporate the utilitarian features of a claimed design into its product without infringing the design patent that claims those same features. In *Lee v. Dayton Hudson Corp.*,²¹ the patented design, D259,142, is a massage implement having two spherical rollers mounted opposite each other on a rod at one end of a handle, illustrated on the left in Figure 2 below.²² The two accused designs, illustrated on the right in Figure 2,²³ incorporated exactly those same utilitarian features in products that did not look like the patented design and therefore—and quite properly—were found not to infringe the design patent. The utilitarian features were simply not *per se* protected by the design patent. In other words, the design patent could not be used as a utility patent. Had the patent holder wanted to protect the utilitarian features of his massager, he should have applied for a utility patent.

21. 838 F.2d 1186, 1188 (Fed. Cir. 1988).

22. U.S. Patent No. D259,142 (filed Nov. 24, 1978).

23. *Id.*

Figure 2



D. THE ALTERNATIVE DESIGNS TEST WORKS IN DETERMINING FUNCTIONALITY

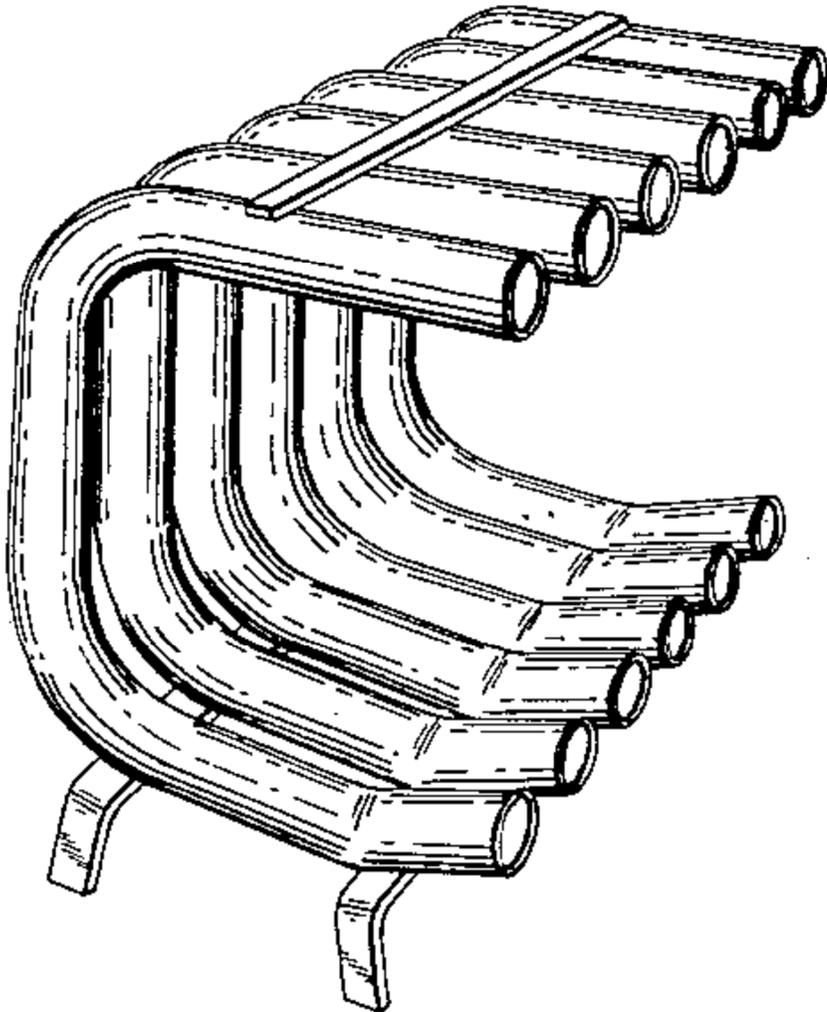
How can a court determine whether a design patent is improperly being used as a utility patent? To assess whether an overall design is impermissibly functional, most courts today have adopted a simple, straightforward, objectively determinable test—the alternative designs test. Namely, if a claimed design has alternative designs that perform substantially the same function, it is solid evidence that the claimed design is not monopolizing that function, maintaining once again the so-called channeling principle.²⁴

This is supported by considering the underlying policy of the functionality doctrine: to prevent design patents from monopolizing functional (utilitarian) features that should only be protectable by a utility patent. And the beauty of this alternative designs test is that it is objectively determinable. The patentee simply needs to introduce evidence of such alternative designs.

24. See *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1329–30 (“We have often focused . . . on the availability of alternative designs as an important—if not dispositive—factor in evaluating the legal functionality of a claimed design.” (emphasis added)).

One of the earliest cases to adopt the alternative designs test is *Bergstrom v. Sears, Roebuck & Co.*,²⁵ involving a design patent for a fireplace grate shown in Figure 3.²⁶

Figure 3



25. 496 F. Supp. 476, 489 (D. Minn. 1980).

26. U.S. Patent No. D228,728 (filed Dec. 14, 1971).

The court said:

The evidence undeniably establishes that there are numerous possible design solutions for tubular fireplace grates which operate on convective heat principles....

...Considerations of function may very well dictate the general “C” shape of the tubular fireplace grate. This does not mean that functional objectives invariably dictate the configuration found in the Bergstrom design, or that any tubular fireplace grate operating on convective heat principles will look the same....

...The myriad of alternatives in terms of the appearance of fireplace grate designs, and the variables which exist in terms of the elements which comprise the overall design, compel the conclusion that the Bergstrom patent is not invalid for functionality.²⁷

Courts have also recognized that just because a design performs a function, it does not disqualify it for design patent protection.²⁸

There are cases that find design patents invalid because no alternative designs exist for performing substantially the same function as the patented design. One such case is *Best Lock Corp. v. ILCO Unican Corp.*²⁹ The patented design is a key blade blank, illustrated in Figure 4.³⁰ The Court, after stating the alternative designs test,³¹ concluded that no other shape of this key blade design would fit into its corresponding mating keyway/lock, and thus the design patent was found invalid.

27. *Bergstrom*, 496 F. Supp. at 489.

28. The USPTO agrees: “The distinction must be maintained between the ornamental design and the article in which the design is embodied. The design for the article cannot be assumed to lack ornamentality merely because the article of manufacture would seem to be primarily functional.” MPEP § 1504.01(c) (8th ed. Rev. 7, Sept. 2008) (emphasis in original).

29. 94 F.3d 1563, 1566 (Fed. Cir. 1996).

30. U.S. Patent No. D327,636 (filed July 7, 1992).

31. *Best Lock*, 94 F.3d at 1566 (“A design is not dictated solely by its function when alternative designs for the article of manufacture are available.”).

Figure 4

United States Patent [19]

[11] Patent Number: Des. 327,636

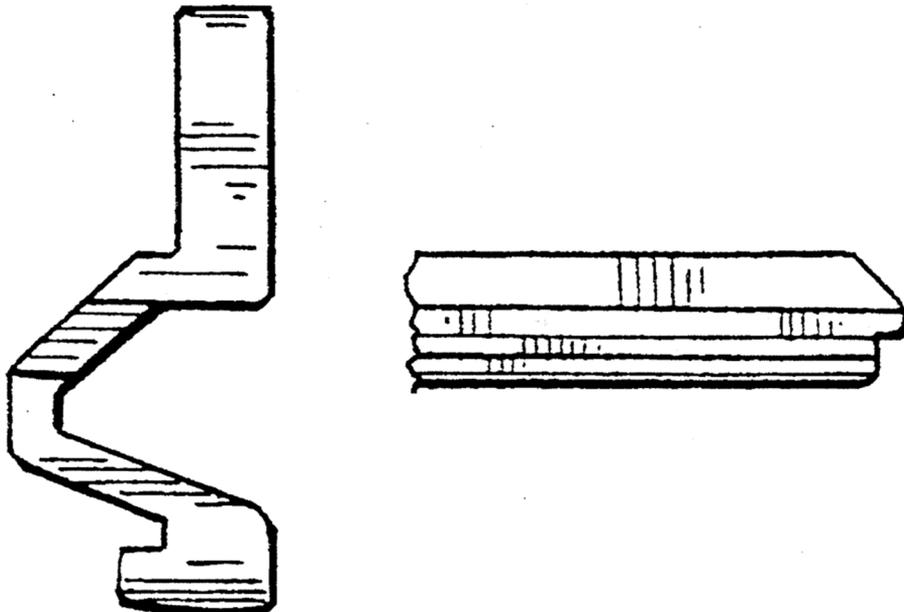
Best et al.

[45] Date of Patent: ** Jul. 7, 1992

[54] PORTION OF A KEY BLADE BLANK

[75] Inventors: Walter E. Best; Timothy R. Bjornson,
both of Indianapolis; James W.
Borgmann, Carmel; Gary R. Jacobs,
Indianapolis, all of Ind.

[73] Assignee: Best Lock Corporation, Indianapolis,
Ind.



Critics may posit that very few visual designs do not have alternatives that perform the same function. This would mean that a vast majority of designs are not legally “functional” within the meaning of 35 U.S.C. § 171.³² However, this does not contradict the policy objective of channeling protection between the utility and design patent regimes because design patents protect the *appearance* of a product, not the function of utilitarian features that may form part of the claimed design. At the risk of being repetitive, anyone may use any of the utilitarian features of a claimed design so long as the product with which those features are used does not *look like* the patented design. There are an infinite number of choices of product designs available to a competitor with which it may use the same utilitarian features without copying the designer’s

32. “Functional” is generally understood to mean not “ornamental,” the latter being a statutory requirement for design patentable subject matter.

specific product. A design patent extracts from those infinite choices one design—one—that has been deemed worthy of a design patent granted by the USPTO. And even that one patented design does not protect the utilitarian features whose appearance may be part of the claimed design. Even a design patent claiming a very minimalist design that includes a functional component only protects the appearance of the overall design, not the function of that component.

Moreover, if the alternate designs test for functionality is believed too lax, the other statutory gateways to patentability nevertheless remain. Namely, a design must still be novel and nonobvious under 35 U.S.C. § 102 and § 103 in order to be patentable.³³ Competitors can still design their own products that function like a patented design, yet do not look like it. There is no necessity for a competitor to copy a patentee's design in order to compete in the utilitarian aspects of the product.

The low bar of the functionality doctrine for validity also makes sense because, as previously emphasized, all designs have utilitarian features, which they must in order to qualify for design patent protection as an article of manufacture.³⁴ *All utilitarian features have an associated appearance.* It is the overall appearance of all claimed features—whether utilitarian or not—that matters in validity determinations.

It is notable that the word “functional” does not appear in the patent statute as a disqualifier for obtaining a design patent. Instead, the word “ornamental” is used.³⁵ It is well accepted that “functional” is the flip side of “ornamental” (i.e., if a design is “primarily ornamental,” it is not “primarily functional”), and the statute is satisfied.³⁶

If there is a low bar for functionality, how should the term “ornamental” be evaluated under 35 U.S.C. § 171? With due regard to the dangers of putting aesthetic judgments in the hands of the courts, the threshold for establishing that a product design is ornamental should be fairly low. Judge Learned Hand

33. A design must also be “original” to be patentable. 35 U.S.C. § 171(a). There is scant case law interpreting “original.” The USPTO rejects designs for lacking originality when they claim a naturally occurring article. *See* MPEP § 1504.01(d) (8th ed. Rev. 7, Sept. 2008) (citing *In re Smith*, 25 U.S.P.Q. (BNA) 359, 360 (C.C.P.A. 1935)).

34. 35 U.S.C. § 171.

35. 35 U.S.C. § 171(a) (“Whoever invents any new, original and ornamental design for an article of manufacture may obtain a patent therefor, subject to the conditions and requirements of this title.”).

36. “To be patentable, a design must be ‘primarily ornamental.’ In determining whether a design is *primarily functional* or *primarily ornamental* the claimed design is viewed in its entirety” MPEP § 1504.01(c) (8th ed. Rev. 7, Sept. 2008) (emphasis in original).

in *HC White Co. v. Morton E. Converse & Son. Co.* had it about right: an “ornamental” design is one that “has at least a rudimentary aesthetic appeal.”³⁷

Both copyright law and design patent law protect appearance features from being copied. Thus, since the standard for establishing “originality” in copyright law is low,³⁸ so too should the standard for establishing “ornamentality” in design patent law be low.

III. FUNCTIONALITY AND DESIGN PATENT INFRINGEMENT

The issue of functionality has also come into play in design patent infringement analysis, with some arguing that functional features should be factored out, or filtered, before analyzing infringement. The illogic of this will be demonstrated by comparing it to copyright’s filtration analysis. It will also be made clear that recent decisions of the Federal Circuit have finally put this doctrine in its proper place, i.e., the dustbin.

A. FILTRATION OF UTILITARIAN FEATURES IN DESIGN PATENTS IS INAPPROPRIATE

Filtration, i.e., factoring out functional features of a design, is discussed extensively in Menell and Corren’s paper with regards to copyright analysis in which courts routinely filter out functional features of a copyrighted work before analyzing infringement. They advocate applying copyright filtration principles to design patent analyses in a misguided effort to prevent a design patent from protecting the function of utilitarian features.

One of the reasons that this is inappropriate is because design patents are examined by the USPTO, while copyrights are merely registered by the Copyright Office without examination. Therefore, it is up to the courts to determine which components of a design are actually copyrightable, while the job of determining patentability has already been done by the USPTO for an issued design patent.

Since the test for copyrightability of a design depends on whether the aesthetic features are separable from the utilitarian features, courts must grapple with the perpetually vexatious issue of separability.³⁹ In the design

37. 20 F.2d 311, 312 (2d Cir. 1927).

38. *See* *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 358 (1991).

39. “Of the many fine lines that run through the Copyright Act, none is more troublesome than the line between protectable pictorial, graphic and sculptural works and unprotectable utilitarian elements of industrial design.” PAUL GOLDSTEIN, *GOLDSTEIN ON COPYRIGHT* § 2.5.3, at 2.67 (3d ed. 2020). This copyright separability muddle was attempted

patent realm, the USPTO has already determined that the overall claimed design, whether including utilitarian features or not, is patentable, so contrary to Menell and Corren's thesis, courts need not perform any separability or filtration analysis on an issued design patent. This is also quite logical, since if a court were to filter or factor out utilitarian features of a claimed design, it would convert the patented design to something other than what was examined, allowed, and issued by the USPTO. It would also defeat the public notice function of an issued patent, i.e., to put the public clearly on notice about what was patented.⁴⁰

Following is a discussion of the development of the notion—now discredited—that one needs to “factor out” utilitarian features of a claimed design before determining infringement.

The Federal Circuit in its seminal *Egyptian Goddess* decision⁴¹ affirmed the requirement that a design patent claim must be construed under *Markman*⁴² to determine its meaning and scope prior to determining infringement. It held that a verbal description of a claimed design is not necessary, and that it would be preferable for a court to simply refer to the design patent drawings in construing the claim.

At the same time, the court stated:

[A] trial court can usefully guide the finder of fact by addressing a number of . . . issues that bear on the scope of the claim. Those include . . . distinguishing between those features of the claimed design that are ornamental and those that are purely functional.⁴³

As difficult as it is to attempt to distinguish between “ornamental” and “purely functional” features, this became an oft-used part of *Markman* claim construction of design patents.⁴⁴

Filtering “ornamental” and “functional” features reached its peak in *Richardson v. Stanley Works, Inc.*, involving a design patent on a construction tool

to be clarified by the Supreme Court in *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 137 S. Ct. 1002 (2017).

40. “The primary purpose of [the] requirement of definiteness of [what the claim covers] is to ensure that the scope of the claim is clear so the public is informed of the boundaries of what constitutes infringement of the patent.” MPEP § 2173 (8th ed. Rev. 7, Sept. 2008).

41. *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 679 (Fed. Cir. 2008).

42. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996).

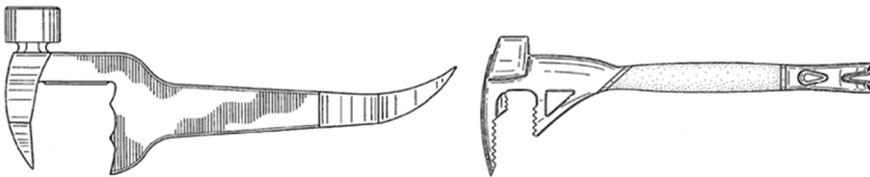
43. *Egyptian Goddess*, 543 F.3d at 680. The origin of this unfortunate statement is discussed in Perry J. Saidman, *The Dysfunctional Read Test: Missing the Mark(man) Regarding the Test for Design Patent Infringement*, 90 J. PAT. & TRADEMARK OFF. SOC'Y 533 (2008).

44. In the Federal Circuit's first case after *Markman*, it held that one cannot avoid infringement by arguing that an accused design is missing functional features claimed in the design patent. See *Elmer v. ICC Fabricating, Inc.*, 67 F.3d 1571, 1576–77 (Fed. Cir. 1995).

that combined the utilitarian features of a hammerhead, crowbar, jaw, and handle,⁴⁵ illustrated in Figure 5.⁴⁶ The Federal Circuit made the following statement that created a bit of chaos in the subsequent case law: “The district court here properly factored out the functional aspects of Richardson’s design as part of its claim construction.”⁴⁷

The underlying rationale of this “factoring out” exercise when analyzing infringement seems to be the same as in validity analysis, i.e., you cannot use a design patent as a utility patent to protect underlying ideas or concepts. This is what Mr. Richardson essentially was attempting to do: enforce his relatively narrow design patent claim against Stanley Works, who had simply used the broad utilitarian concepts of Richardson’s product, but not its design (appearance).

Figure 5



Richardson’s Patented Design

Stanley Works’s Accused Design

The Federal Circuit found that Richardson’s multi-function tool consisted of several elements that were “driven purely by utility.”⁴⁸ The court said, “the handle, the hammer-head, the jaw, and the crowbar are dictated by their functional purpose.”⁴⁹ Yet, the court found that Stanley Works’s product—although incorporating the exact same utilitarian elements—did not infringe the design patent because it simply did not look substantially the same as the patented design.⁵⁰ Competitors are free to use the same utilitarian features because the latter had not been protected by a utility patent. Again, the channeling principle was intact. The bright line between utility patent and design patent protection was maintained.

45. 597 F.3d 1288 (Fed. Cir. 2010).

46. U.S. Patent No. D507,167 (filed Jan. 9, 2004).

47. *Richardson*, 597 F.3d at 1293.

48. *Id.* at 1294.

49. *Id.*

50. *Id.* at 1293–95.

Absent a utility patent claiming the combination of the handle, hammerhead, jaw, and crowbar, those utilitarian features are in the public domain and may be used by anyone, including Stanley Works. Design patent law simply says that Stanley Works's tool cannot look substantially the same in overall appearance as Richardson's, which it does not. No infringement. End of story. Had the Federal Circuit simply said that, much subsequent confusion could have been avoided.

However, the Federal Circuit in its convoluted opinion said that "functional" features need to be factored out before determining infringement, which became a handy weapon for accused infringers. That is, infringers suddenly insisted that courts factor out utilitarian features before determining infringement, leading to an endless waste of court resources in trying to perform this impossible task. It also lost sight of the accepted doctrine that design patent infringement is determined by comparing the overall claimed design to the accused product, not some design that a court has altered by excising various elements.

B. RECENT CASE LAW PUTS SO-CALLED FILTRATION IN ITS PROPER PLACE

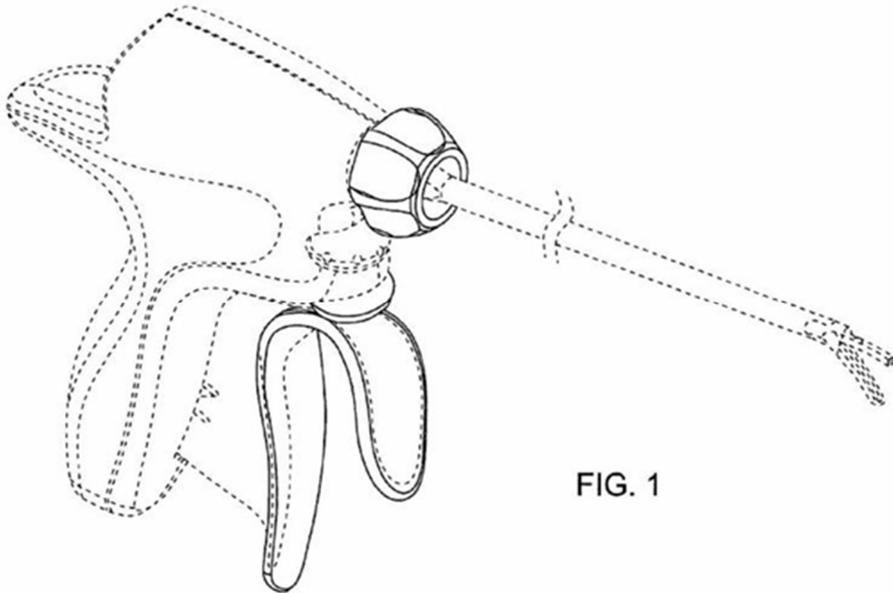
The "factoring out" or filtering exercise of *Richardson* has been logically cabined in recent Federal Circuit case law, particularly the 2015 and 2016 *Ethicon* and *Sport Dimension* cases.⁵¹

Ethicon involved the design of an ultrasonic surgical device. One of the design patents at issue, D661,804, shown in Figure 6, claimed the combination of three elements: a U-shaped trigger, fluted torque knob, and rounded activation button, shown in the figure below.⁵²

51. See generally *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312 (Fed. Cir. 2015); *Sport Dimension, Inc. v. Coleman Co.*, 820 F.3d 1316 (Fed. Cir. 2016).

52. U.S. Patent No. D661,804 (filed June 12, 2012). In a design patent, features shown in solid lines in the patent drawings are claimed as part of the design, while features shown in broken lines are not. MPEP § 1503.02 (8th ed. Rev. 7, Sept. 2008).

Figure 6



The lower court during claim construction “factor[ed] out” each of these so-called “functional” elements, concluding therefore that the ’804 design patent covered “nothing.”⁵³ The Federal Circuit reversed, saying that the lower court failed to account for the particular appearance of the admittedly utilitarian elements.⁵⁴ “[T]he district court ignored the facts that the trigger has a particular curved design, the torque knob has a particular flat-front shape, and the activation button has a particular rounded appearance.”⁵⁵

Thankfully, the Federal Circuit then clarified what it meant by its “factoring out” language in *Richardson*, namely that it is only the broad underlying concepts that cannot be protected—i.e., need to be “factored out” of a design patent claim—in order to avoid using the design patent as a utility patent.⁵⁶ One is always left with the embellishing appearance aspects of those

53. *Ethicon*, 796 F.3d at 1332–33.

54. *Id.* at 1334.

55. *Id.*

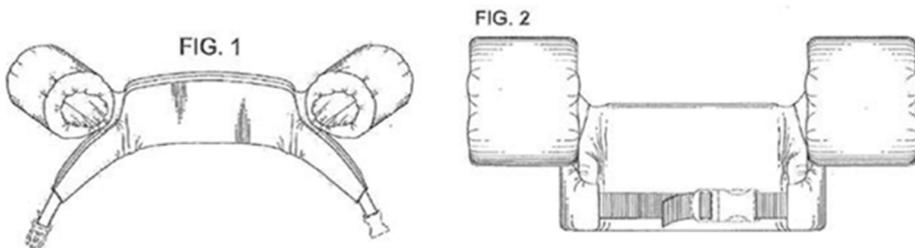
56. *Id.* at 1333 (“[T]he design claim [in *Richardson*] did not broadly protect a multi-function tool with a hammer, crowbar, handle, and claw, but only the specific ornamental aspects of that tool in the depicted configuration.”).

same utilitarian features to compare to the accused product in determining design patent infringement.

This is a very significant analytic approach in determining the scope of a design patent claim prior to determining infringement. All utilitarian elements have a particular appearance. And no matter how visually significant the utilitarian element is, it is the element's particular appearance, in combination with the appearance of all other claimed elements, that is compared to the accused product in determining infringement.

This approach was confirmed by the Federal Circuit in *Sport Dimension*, which involved a design shown in Figure 7 for a flotation device that had several utilitarian features, including two armbands and a tapered torso.

Figure 7



Before reaching a conclusion, the court reviewed *Richardson and Ethicon*.⁵⁷ In discussing *Richardson*, the Court stated that “[the utilitarian elements of the patented design in *Richardson*] were well known in the art, and their basic design was dictated by their respective [utilitarian] purposes. But there were nevertheless [appearance] aspects of the design of those elements . . . the [lower] court’s [claim] construction properly ensured that the claim provided protection, albeit narrow, over those aspects of the tool that [had a particular appearance].”⁵⁸ In discussing *Ethicon*, decided the preceding year, the *Sport Dimension* court noted that “[w]hile [it] agreed that certain elements of the [Ethicon] device were [utilitarian], their functionality did not preclude those elements from having [a] protectable [appearance].”⁵⁹

Afterwards, the court correctly concluded that, “[i]n . . . *Richardson* and *Ethicon*, [the Court] construed design patent claims so as to assist a finder of fact in distinguishing between [utilitarian] and [appearance] features. But in no

57. *Sport Dimension, Inc. v. Coleman Co.*, 820 F.3d 1316, 1321 (Fed. Cir. 2016).

58. *Id.* (citations omitted).

59. *Id.* (citations omitted).

case did [it] entirely eliminate a structural element from the claimed . . . design, even though that element also served a [utilitarian] purpose.”⁶⁰

Critics could argue that omitting the filtration process will give design patent holders monopoly power over the utilitarian aspects of a design, but that concern is unjustified. Omitting filtration of utilitarian features during claim construction will not result in monopolization of the utilitarian aspects of such features; it will only result in the inability of competitors to use in their products substantially the same overall appearance of such features in combination with whatever else is claimed.

Also, critics have suggested that design patents offer designers a “backdoor for protecting functionality.”⁶¹ But, as explained above, since design patents only protect appearance features and not utilitarian features of a product, there is no “backdoor” for designers to walk through.

It is apparent from the foregoing that filtration or factoring out of utilitarian features from a claimed design makes little sense. The USPTO’s examination process takes into account whether such utilitarian features, along with other features, are patentable as part of an overall claimed design. This is contrasted with copyrights, which are merely registered without examination, requiring a court to figure out in the first instance which portion of the work is indeed copyrightable.

Moreover, the Federal Circuit has now made it abundantly clear that factoring out of functional features is inappropriate in design patent infringement analysis.

IV. CONCLUSION

The doctrine of functionality was created by case law to guard against using a design patent to protect utilitarian features, which is the province of utility patents. When the courts realized that all product designs include utilitarian features, they began to understand that you could not invalidate design patents simply because the claimed design had one or more utilitarian functions associated with it. Over time, the courts realized that utilitarian features of a product design cannot be monopolized by a design patent if alternative designs—products that do not look like the claimed design—perform substantially the same function. The existence of alternative designs is incontrovertible proof, using objective evidence, that the design patent is not monopolizing utilitarian features, only the particular appearance of the overall design, including the appearance of such utilitarian features.

60. *Id.* (citations omitted).

61. Menell & Corren, *supra* note 1, at 145.

The fact that very few designs do not have alternatives that perform substantially the same function does no harm to the so-called channeling goal. That is because no matter what is claimed in a design patent, it is the appearance of the claimed design that is protected, not the utilitarian functions. The latter are free to be emulated by a competitor as long as it steers clear from making, using, or selling a product that looks substantially the same as the patented design. In other words, a competitor is encouraged to design its own product rather than knock off another's unique and valuable design, thereby promoting the progress of design innovation.

Regarding design patent infringement, it is now understood that the notion of factoring out utilitarian features during *Markman* claim construction makes no sense. Moreover, conventional tests for design patent infringement require a comparison of the overall claimed design—utilitarian elements included—to the accused product, in light of the prior art.

Design patent law with regards to so-called “functionality” is today in relatively good shape, needs no tinkering, and slams shut the illusory backdoor.

DESIGN PATENTS ARE THEFT, NOT JUST A “FRAUD UPON THE PUBLIC,” WHO NEED LEGISLATION TO RESTORE THEIR REPAIR RIGHTS

Joshua D. Sarnoff[†]

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[†] Professor of Law, DePaul University College of Law; Author of *White Paper on Protecting the Consumer Patent Law Right of Repair and the Aftermarket for Exterior Motor Vehicle Repair Parts: The PARTS Act, S. 812; H.R. 1879, 115th Congress* (Nov. 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3082289, upon which this work builds. I thank Sarah Burstein for her many contributions to my understanding of design patents (including her article, *The Article of Manufacture in 1887*, 32 BERKELEY TECH. L.J. 1 (2017), and comments on this piece), as well as the participants of the symposium (including Mark Janis and his co-author Jason Du Mont for their fine historical work, *The Origins of American Design Patent Protection*, 88 IND. L.J. 837 (2013)). I am also grateful for the opportunity to comment on the important work of Menell and Corren. I just think they are much too polite and that they need to take the kid gloves off in regard to bad legislative drafting and judicial reasoning; I have sought to do so here.

I. INTRODUCTION

As Peter Menell and Ella Corren explain in their excellent and timely historical analysis of design patent law and the awful historical development of its current functionality doctrine:

Affording protection for functional advances short of applying the *utility* patent law's more exacting novelty, nonobviousness, and disclosure requirements would be, as the Supreme Court observed in denying copyright protection for a system of accounting (and the associated lined forms), "a surprise and a fraud upon the public" and undermine free competition.¹

But their cogent analysis fails to focus adequately on the harm to the public from such fraud and restricts the scope of the fraud to functionality. Instead, I argue that design patents and the law surrounding them have been a series of category errors from the beginning. It is therefore unsurprising that things have only become worse since 1842, and not just for functionality doctrine.

The entire concept of a design patent is "a surprise and a fraud upon the public," and it is the public that loses its rights (and pays from its metaphorical wallet) when that fraud occurs. Unfortunately, we have doctrines of judicial and legislative immunity that protect these judicial and legislative "thieves" of (and not just fraudsters on) the public's rights, and these doctrines prevent the stolen money from being compensated (including through takings law, as the public can lose its entire rights to private propertization without compensation, but not the other way around). "Property is theft"² for designs as much as for realty. And treating designs as patents and keeping the public from making those designs without even copying them or when copying only functions unprotected by utility patents,³ under the bad historical developments that

1. Peter S. Menell & Ella Corren, *Design Patent Law's Identity Crisis*, 36 BERKELEY TECH. L.J. 1, 6 (2021) (quoting *Baker v. Selden*, 101 U.S. 99, 102 (1879)).

2. PIERRE-JOSEPH PROUDHON, WHAT IS PROPERTY? OR AN INQUIRY INTO THE PRINCIPLE OF RIGHT AND GOVERNMENT (1840); see generally James Boyle, *The Second Enclosure Movement and the Construction of the Public Domain*, 66 L. & CONTEMP. PROBS. 33 (2002).

3. Note that the focus here is on the nature of the exclusive right and what is protected. This is not to suggest that we should protect designs like copyrights in regard to abstract works not limited to specific things the designs embody, which might then expand design protection scope relative to current design-patent doctrine. Cf. *Curver Luxembourg SARL v. Home Expressions, Inc.*, 938 F.3d 1334, 1339–43 (Fed. Cir. 2019) (restricting design protection to the claimed articles of manufacture of which they are a part); *id.* at 1340 ("For over one hundred years, the Patent Office has made clear that it does not grant patents for designs disembodied from an article of manufacture."); see generally Sarah Burstein, *Not (Necessarily) Narrower: Rethinking the Relative Scope of Copyright Protection for Designs*, 3 IP THEORY Art. 4 (2013). Nor do I mean to suggest that infringement would be found on the basis of copying functional aspects alone, but rather that we might limit infringement to copying only sufficiently creative

Menell and Corren criticize,⁴ only makes the theft more costly to the public. We should eliminate design patents, and if we are to protect the ornamentality of designs for useful articles, I would create a *sui generis* right that incorporates only some aspects of claiming and examination from our design patent regime.

To make my point, principally about judicial theft, but starting with legislative theft and bad drafting, I'll highlight four issues. In Part II, I'll address historical category errors for designs, particularly that the ornamental (aesthetic) aspects are the only ones that are supposed to receive protection, and thus design protection was never appropriately placed within a technological patent statute having doctrines intended for technological evaluations.⁵ Since 1624, we have increasingly restricted the grant of patent rights to *technological* advances.⁶ Design patents are thus an aberration.⁷ In Part III, I'll address some doctrinal errors that build off of this category error concern and off of the insights of Menell and Corren. These include: the failure to appreciate that an "article of manufacture" is neither a "machine" nor a produced product unless that product is functional in itself; and the incongruity that design patent standards for novelty (but not nonobviousness) and for infringement are viewed from the perspective of an ordinary observer rather than the hypothetically skilled technological (or, for designs, aesthetic) artisan. These category errors makes design patent a chimera of trademark and copyright law that should have no place in our intellectual property zoo.⁸ In

ornamentation when also copying functional features, elements, and aspects. *See infra* notes 91–94 and accompanying text; cf. Sarah Burstein, *Intelligent Design and Egyptian Goddess: A Reply to Professors Buccafusco, Lemley & Masur*, 68 Duke L.J. Online 94, 109–14 (2019) (arguing that explicitly filtering out functionality may not change infringement determination outcomes).

4. *See generally* Menell & Corren, *supra* note 1; Jason J. Du Mont & Mark D. Janis, *Functionality in Design Protection Systems*, 19 J. INTELL. PROP. L. 261 (2012).

5. *See, e.g.*, *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 267 (1850) (“[T]hat degree of skill and ingenuity which constitute essential elements of every invention. In other words, the improvement is the work of the skilful [sic] *mechanic*, not that of the inventor.” (emphasis added)).

6. Statute of Monopolies, 21 Jac. I, ch. 3 (1624) (Eng.); *see, e.g.*, Tyler T. Ochoa & Mark Rose, *The Anti-Monopoly Origins of the Patent and Copyright Clause*, 84 J. PAT. & TRADEMARK OFF. SOC'Y 909 (2002).

7. However, I will not address here whether design patents are also unconstitutional as not within the “useful Arts” or as not “Discoveries” of “Inventors,” or are otherwise within Commerce Clause power. U.S. CONST., art. I, § 8, cl. 3, 8.

8. Trademark law, as consumer protection, sensibly focuses on the “ordinary purchaser” of products as the ordinary observer to assess aesthetic confusion. *Hana Fin., Inc. v. Hana Bank*, 574 U.S. 418, 422 (2015) (“‘Commercial impression,’ like most issues in trademark law, should be determined from the perspective of the ordinary purchaser of these kinds of goods or services.” (citation omitted)). Copyright law less sensibly focuses on the ordinary observer (rather than the skilled fine artisan in the relevant field) to assess aesthetic

Part IV, I'll address the most recent important conceptual error—partial (and fragment⁹) design protection authorized in 1980 by Judge Giles S. Rich and the U.S. Court of Appeals for the Federal Circuit in *In re Zahn*¹⁰—that makes functionality doctrine even worse, based on the failure to understand that a design is a whole. Finally, in Part V, I'll address how the partial (and fragment) design patentability doctrine has eliminated the public's right to repair their purchased products using unauthorized third-party parts that embody such partial (or fragment) design patents. This expanded protection is contrary to the patent law repair and exhaustion doctrines, the latter of which the Supreme Court recently held was not merely a function of implied license but rather a matter of fundamental patent policy.¹¹ In short, I complement Menell and Corren's article as a serious critique of the inconsistencies of one particular aspect of the history, theory, and doctrine of design patent law—functionality and ornamentation. But I hope to show that design patent law is unnatural metaphysics and doctrinal jackalopes all the way down.

I. HISTORICAL LEGISLATIVE CATEGORY ERRORS OF UTILITARIAN FUNCTION, AESTHETICS, AND TYPE OF PROTECTION

A. 1842 ORIGINS AND CONFUSING COPYRIGHT AND PATENT

Menell and Corren's article describes the origins of design patent protection in the United States as an “effort to transplant England's design *copyright* regime” by adopting a “misabeled law” of “design patent[s]” that “served as a proto-federal trademark registration system before Congress established trademark protection in the mid to late 19th century.”¹² I won't repeat most of (but will refer extensively to) their ornamental tracing of that

“substantial similarity.” See, e.g., *Abdin v. CBS Broad. Inc.*, 971 F.3d 57, 66 (2d Cir. 2020) (“The standard test for substantial similarity between two items is whether an ordinary observer . . . regard[s] [the] aesthetic appeal as the same” (citation omitted)).

9. For further definition and elaboration, see Sarah Burstein, *How Design Patent Law Lost Its Shape*, 41 CARDOZO L. REV. 555, 568 (2019).

10. *In re Zahn*, 617 F.2d 261 (C.C.P.A. 1980); cf. Menell & Corren, *supra* note 1, at 52 (“Judge Giles Rich[s] protectionist predilection defined his long career . . .”).

11. See *Impression Products, Inc. v. Lexmark Intern. Inc.*, 137 S. Ct. 1523, 1534 (2017) (“The misstep in this logic is that the exhaustion doctrine is not a presumption about the authority that comes along with a sale; it is instead a limit on ‘the scope of the *patentee's rights*.’” (citation omitted)); but see Sean M. O'Connor, *The Damaging Myth of Patent Exhaustion*, 28 Tex. Intell. Prop. L.J. 443, 446 (2020) (“[T]he Supreme Court would not adopt key parts of the modern exhaustion doctrine in cases involving actual sales of goods until decades [after *Bloomer v. McQuewan*, 55 U.S. (14 How.) 539 (1852)]: 1873 for a use right on purchased goods, and 1895 for a right of resale.”).

12. Menell & Corren, *supra* note 1, at 7.

history, although I generally agree with their detailed discussion. In particular, I commend their discussion of how judicial misinterpretation led to confusion over design patents as providing trademark-like or copyright-like protection in the context of a patent statute (a point that I'll return to in the next section). Instead, I want to focus here on a few of the conceptual category errors of Congress (and only secondarily of the courts) during this development.

When first enacted by Congress in 1842, the design patent subject matter eligibility provision applied to the aesthetic aspects of various categories of complete, manufactured, *functionally useful* products. These were: a “manufacture”; printed “fabrics”; impressions or ornaments on “any article of manufacture” in marble or other material; patterns and pictures “worked into or worked on, or printed, painted, cast, or otherwise fixed” on “any article of manufacture”; any “shape or configuration” of “any article of manufacture”; and various kinds of “statue.”¹³ The last category—statues—is commonly understood in the present to have ornamental rather than utilitarian “function.” But the category of statues is notable, as most two-year-olds who play the game “One of These Things” would say, as being “not like the others.” Menell and Corren,¹⁴ and Janis and Du Mont,¹⁵ attribute the inclusion of statues to the political economy of seeking to impose copyright-like protection¹⁶ at a time when copyright did not yet legislatively extend to statues as “writings” of “authors” within the legislative grant of power in the Constitution. But at the time, statues may have been thought to possess a “utilitarian” function in instilling public values,¹⁷ and thus could be better understood for inclusion along with more obviously functional, utilitarian objects like fabrics and articles of manufacture.

Menell and Corren—and earlier Du Mont and Janis—have traced the political economy and international trade concerns behind these category

13. Act of Aug. 29, 1842, ch. 263, sec. 3, 5 Stat. 543, 543–44.

14. See Menell & Corren, *supra* note 1, at 8 (“[C]opyright protection extended only to books, maps, charts, and prints, not to three-dimensional works.”).

15. See Jason John Du Mont & Mark D. Janis, *The Origins of American Design Patent Protection*, 88 IND. L.J. 837, 868 (2013) (“Ellsworth’s proposal (and the design patent legislation as ultimately enacted) covered works of fine art (statues, for example), in addition to traditionally manufactured goods.”).

16. Providing such protection restricted the public’s ability to freely *copy* such works when “publicized,” notwithstanding the “sincerest form of flattery” implied of the sculptor thereby. See, e.g., CHARLES C. COLTON, LACON: OR MANY THINGS IN FEW WORDS, ADDRESSED TO THOSE WHO THINK (1820); see U.S. CONST., art. I, § 8, cl. 8.

17. Cf., e.g., Alisha Ebrahimji, Artemis Moshtaghian & Lauren M. Johnson, *Confederate Statues Are Coming Down Following George Floyd’s Death. Here’s What We Know*, CNN (July 1, 2020), <https://www.cnn.com/2020/06/09/us/confederate-statues-removed-george-floyd-trnd/index.html>.

confusions, in particular the desire of Commissioner Henry Ellsworth to expand the Patent Office's fiefdom.¹⁸ The evidence belies that Congress had in mind any clear understanding of the categories of things for which it was seeking to provide aesthetic protection against copying, using patent concepts of utilitarian exclusive rights that did not require copying to effectuate.¹⁹ Perhaps all of the subsequent category confusions would have been avoided had Congress kept design patent protection as a copyright bill, and had dealt with functionality (albeit also poorly²⁰) under copyright law.²¹

The central point is that Congress legislated the loss of the public's rights to freely copy aesthetic aspects of functional products based on protectionist urges and went well beyond that point. Congress protected even against copying of *functional aspects* not protected by utility patents and independent creation of functional products having the same aesthetic aspects. If Congress was going to pick the public's pocket, one would have hoped that Congress could have done so more cleanly and without generating so much fuss, confusion, and unnecessary litigation.

B. POST-1842 CHANGES TO FOCUS ON ORNAMENTALITY BUT CONTINUED CONFUSION OVER FUNCTIONAL UTILITY

The 1842 Act created substantial confusion over interpretation, given both its unclear purposes and its category-blurring language. Under the 1842 Act, the patent-eligible design had to be “invented or produced” and had to be “new and original,” except for patterns, prints, and pictures that had to be “new *and useful*.”²² Much confusion resulted from including the term “useful” here.²³ As noted by Commissioner Simonds in 1874, the “new and useful” language for prints reflected an understanding by Congress in 1842 and 1861 that the aesthetic aspects were for “the adornment of *useful articles* . . . [and] that induced them to insert the word ‘useful’ into the text when they named as [design] patentable subject matter ‘any new and useful pattern, print or

18. See Menell & Corren, *supra* note 1, at 9–13; Du Mont & Janis, *supra* note 15, at 864–73; Jason J. Du Mont & Mark D. Janis, *U.S. Design Patent Law: A Historical Look at the Design Patent/Copyright Interface*, in *THE COPYRIGHT/DESIGN INTERFACE: PAST, PRESENT & FUTURE* 341, 351, 351 n.44 (Estelle Derclaye ed., 2018).

19. Du Mont & Janis, *supra* note 15, at 868.

20. See *Star Athletica, LLC v. Varsity Brands, Inc.*, 137 S. Ct. 1002, 1007–15 (2017).

21. There are good reasons, however, to provide sui generis rights for designs than copyrights. See, e.g., Barbara A. Ringer, *The Case for Design Protection and the O'Mahoney Bill*, 7 *BULL. COPYRIGHT SOC'Y U.S.A.* 25, 25 (1959).

22. Thomas B. Hudson, *A Brief History of the Development of Design Patent Protection in the United States*, 30 *J. PAT. OFF. SOC'Y* 380, 381–83 (1948) (emphasis added).

23. See *id.* at 385.

picture.’”²⁴ More importantly, Simonds concluded that “it is not reasonable to suppose that the originators of the design patent acts intended to offer another method of protection to things already protected . . . [and thus Congress intended to protect only] designs for ornament applied to articles capable of serving a useful purpose”²⁵

Note in the quoted language of Simonds that the idea that Congress intended to provide protection of function was “not reasonable.” Nevertheless, as Menell and Corren note, “after initially questioning the availability of design patent protection for *functional* features of articles of manufacture, the Patent Office reversed course. By 1869, the Patent Office extended design patent protection to functional features of articles of manufacture.”²⁶

In 1870, Congress further revised the design patent eligibility provisions to be “defined in more concise language.”²⁷ As Menell and Corren further note, although Congress deleted the word “useful” from before the category of prints, Congress “added it to the class of ‘shape or configuration’ of an article. The result was that a law aimed at protecting appearance and not function now confusingly conjoined ‘utility’ with ‘shape or configuration.’”²⁸ This category confusion, like the earlier one, then led to continuing judicial controversy over the term “useful” in one of the subcategories of relevant subject matter.²⁹

In turn, this judicial confusion prompted Congress to further revise the statute in 1902 to make clear that design patent protection applied only to “new, original, and *ornamental*” designs for an “article of manufacture.”³⁰ Note carefully that this choice of categories for design protection did not include ornamental designs for “machines,” which had been a category of utility patent subject matter since 1790. Congress thus eliminated all of the separate, original (and slightly modified) enumerated categories of functional products (and statues) in favor of a single, collective term referring to *functionally useful* articles, i.e., “articles of manufacture.”³¹ As Menell and Corren put it, “[t]his [legislative] change sought to limit design patents to original *ornamental* features and

24. *Id.* at 385 (quoting WILLIAM EDGAR SIMONDS, A SUMMARY OF THE LAW OF PATENTS FOR USEFUL INVENTIONS AND FORMS (1874)) (emphasis added).

25. *Id.* (quoting SIMONDS, *supra* note 24) (emphasis added).

26. Menell & Corren, *supra* note 1, at 18 (emphasis added).

27. Hudson, *supra* note 22, at 383–84.

28. Menell & Corren, *supra* note 1, at 18.

29. See Menell & Corren, *supra* note 1, at 24–27; see also Du Mont & Janis, *supra* note 18, at 359–61 (discussing the purpose of the 1870 Act and the lack of legislative intent to alter subject matter scope for design patents).

30. Act of May 9, 1902, ch. 783, sec. 4929, 32 Stat. 193 (emphasis added).

31. See Hudson, *supra* note 22, at 388–89.

channel functional advances to the utility patent regime.”³² And although Congress in 1887 had addressed the design patent damages provision, there is no indication that Congress then meant to affect the subject matter provision when also referring to “article of manufacture” in regard to profits.³³

In summary, Congress finally (and at least somewhat more coherently) settled on a limitation of design patents and their protection to only the aesthetic aspects of a limited class of functional objects—“articles of manufacture.” But that would not satisfy the appetite of the courts to provide greater, extra-statutory, and more trademark-like and copyright-like protections, even when formally subject to patent-law requirements. Menell and Corren trace the judicially developed standards up to 1980, as well as discuss the Federal Circuit’s further expansions of eligibility under the “availability of alternative designs” test and by “viewing designs as a whole”³⁴ (only the latter of which I agree with, although not how the Federal Circuit approaches such viewing, so I agree with Menell’s and Corren’s criticism of that approach).³⁵ As they correctly conclude, the consequence of these judicial approaches to eligibility was that “[i]nventors and designers increasingly sought to use design patents to protect minimal functional features.”³⁶ That inventors and designers sought such expanded protection is unremarkable. That the courts obliged them without any legislative warrant (and, per Simonds, *unreasonably*) based on the judges’ protectionist instincts and to the public’s detriment is the impolite point that Menell and Corren refuse to state explicitly. As I think that such politesse obscures responsibility and encourages stasis against judicial reinterpretation or legislative correction, I refuse to be quite so polite.

32. Menell & Corren, *supra* note 1, at 28–29.

33. See Act of Feb. 4, 1887, ch. 105, § 1, 24 Stat. 387, 387 (currently codified at 35 U.S.C. § 289); Sarah Burstein, *The “Article of Manufacture” in 1887*, 32 BERKELEY TECH. L.J. 1, 27–31, 53–61 (2017); JOSHUA D. SARNOFF, WHITE PAPER ON PROTECTING THE CONSUMER PATENT LAW RIGHT OF REPAIR AND THE AFTERMARKET FOR EXTERIOR MOTOR VEHICLE REPAIR PARTS: THE PARTS ACT, S. 812; H.R. 1879, 115TH CONGRESS 10 n.33 (Nov. 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3082289; Menell & Corren, *supra* note 1, at 26, 26 nn.76, 79.

34. Menell & Corren, *supra* note 1, at 68; see *id.* at 64–68.

35. See *id.* at 65–66.

36. *Id.* at 61.

C. POST-1870 ACT INTERPRETATIONS TO CREATE EXTRA-STATUTORY COPYRIGHT-LIKE STANDARDS AND TRADEMARK-LIKE PROTECTIONS, AND CONTINUING UTILITY CONFUSION

As Menell and Corren note, “[b]etween 1842 and 1870, the Patent Office granted more than 200 graphic trademark design patents,”³⁷ and the Court in 1871 in *Gorham Manufacturing Company v. White*³⁸ clearly “held that design patents cover ornamentality, not functionality.”³⁹ But in *Gorham*, the Supreme Court nevertheless confused its categories for infringement protection (and hence for validity⁴⁰) by adopting a “substantial similarity” standard of infringement viewed from the perspective of the “ordinary observer.”⁴¹ Doing so provided protection beyond what patent law is supposed to reward—sufficient creativity as recognized by a skilled artisan (whether fine or useful). Instead, the Court created from whole cloth a novel set of copyright-like standards in the service of trademark-like protections for owners of aesthetic designs.⁴² The Court did so by focusing on the appearance to an ordinary observer/purchaser rather than to the skilled (fine) artisan (i.e., designer).⁴³ And it did so based on that time-honored, rhetorical trope for expanding protections to the public’s detriment—piracy⁴⁴:

37. *Id.* at 14.

38. 81 U.S. 511, 524–25 (1871).

39. Menell & Corren, *supra* note 1, at 22.

40. *See Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003) (“[I]t is axiomatic that claims are [to be] construed the same way for both invalidity and infringement.”) (citing *W.L. Gore & Assoc., Inc.*, 842 F.2d 1275, 1279 (Fed. Cir. 1988)).

41. *Gorham Mfg. Co.*, 81 U.S. at 527.

42. *See id.* at 528 (“Experts, therefore, are not the persons to be *deceived* . . . It is persons of the latter class [observers of ordinary acuteness] who are the principal purchasers of the articles to which designs have given novel appearances, and if they are *mised*, and induced to purchase what is not the article they supposed it to be . . . the patentees are injured, and that advantage of a market which the patent was granted to secure is destroyed.” (emphasis added)); *but see Sarah Burstein, The Patented Design*, 83 TENN. L. REV. 161, 177 (2015) (“Read in isolation, this language suggests that design patents are product-specific, because who would be deceived into buying one product when they meant to buy a totally different type of product? However, when read in context, it is clear that *Gorham*'s test is one of visual similarity, not a test of actual deception or trademark-like likelihood of confusion. Indeed, that is how it has been read and interpreted by the Federal Circuit.”).

43. *See Gorham Mfg. Co.*, 81 U.S. at 528 (“[I]f, in the eye of an ordinary observer, giving such attention as a purchaser usually gives, two designs are substantially the same, if the resemblance is such as to *deceive such an observer, inducing him to purchase one supposing it to be the other*, the first one patented is infringed by the other.” (emphasis added)).

44. *Cf., e.g., Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 612–13 (Black, J., dissenting) (“I heartily agree with the Court that ‘fraud’ is bad, ‘piracy’ is evil, and ‘stealing’ is reprehensible. But in this case, where petitioners are not charged with any such

If, then, identity of appearance, or (as expressed in *McCrea v. Holdsworth*) sameness of effect upon the eye, is the main test of substantial identity of design, the only remaining question upon this part of the case is, whether it is essential that the appearance should be the same to the eye of an expert. The court below was of opinion that the test of a patent for a design is not the eye of an ordinary observer. . . . There must, he thought, be a comparison of the features which make up the two designs. With this we cannot concur. Such a test would destroy all the protection which the act of Congress intended to give. There never could be piracy of a patented design, for human ingenuity has never yet produced a design, in all its details, exactly like another, so like that an expert could not distinguish them.⁴⁵

The purpose of the patent laws is “[t]o promote the Progress of Science and useful Arts,”⁴⁶ and even if those categories are not mutually exclusive, nothing in the Constitution suggests a focus on viewing exclusive rights from the perspective of ordinary observers or on protecting consumers from deception (which of course is a perfectly reasonable purpose for legislation under the Commerce Clause⁴⁷ and the Necessary and Proper Clause.⁴⁸ Rather, the constitutional purpose of patent protection is to reward authors or inventors for their aesthetic or technological contributions to society. Why that contribution was thought to be measured from the perspective of ordinary observers, as suggested by the Court in *Gorham*, remains a mystery. And what purchasers being misled has to do with whether a product appropriates an aesthetic advance—particularly without copying—that is made by another is similarly a mystery,⁴⁹ at least if the constitutional basis for the legislation (as it should be for exclusive patent rights) is to “promote the Progress of . . . useful Arts.”⁵⁰

In addition to adopting copyright-like standards while intending trademark-like protections, courts after *Gorham* went on to further confuse its categories by providing protection for utility and functionality in *Lehnbeuter v.*

malevolence, these lofty principles do not justify the Court's sterilization of Acts of Congress and prior decisions, none of which are even mentioned in today's opinion.”)

45. *Gorham Mfg. Co.*, 81 U.S. at 527.

46. U.S. CONST., art. I, § 8, cl. 8.

47. U.S. CONST., art. I, § 8, cl. 3.

48. U.S. CONST., art. I, § 8, cl. 18.

49. See, e.g., *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1189 (Fed. Cir. 1988) (“A device that copies the utilitarian or functional features of a patented design is not an infringement unless the ornamental aspects are also copied, such that the overall ‘resemblance is such as to deceive.’” (quoting *Gorham Mfg. Co.*, 81 U.S. at 528)); see Menell & Corren, *supra* note 1, at 75 (discussing *Lee*).

50. U.S. CONST., art. I, § 8, cl. 8.

Holthaus, Smith v. Whitman Saddle, and *Northrup v. Adam*.⁵¹ As Menell and Corren note, “courts gradually lost their compass and . . . developed standards that not only diverged from Congress’s clear intent but also contradicted the Supreme Court’s seminal intellectual property channeling principle”⁵²

I just want to add here that the reason for these judges “losing their compass” was and remains excessive judicial solicitude for creating private property rights, rather than for protecting the interests of the public, or even for adhering to Congress’s enactments and intentions. I will provide only one example, taken from unaddressed language in two cases that Menell and Corren peripherally address for a slightly different purpose. The first case is *Egyptian Goddess v. Swisa*,⁵³ where the *en banc* Federal Circuit’s apparent focus on protecting consumers (a trademark function⁵⁴) led the court in 2008 to reject the “point of novelty” approach to infringement. This, contrary to the Federal Circuit’s explicitly professed reasoning, was in fact more protective of the public’s rights:

This court has characterized the purpose of the point of novelty test as being “to focus on those aspects of a design which render the design different from prior art designs.” . . . *That purpose can be equally well served*, however, by applying the ordinary observer test through the eyes of an observer familiar with the prior art.⁵⁵

It should be self-evident that that purpose cannot be “equally well served” because the differences of appearance from prior art designs to an ordinary designer are almost certain to be viewed more restrictively than by an ordinary purchaser, i.e., the “ordinary observer.” And the *en banc* Court of Claims and Patent Appeals in *In re Nalbandian*⁵⁶ had made that point much earlier. An “expert’s perception of color in the dyestuff art is necessarily subjective, but

51. See Menell & Corren, *supra* note 1, at 22–23 (citing *Lehnbeuter v. Holthaus*, 105 U.S. 94 (1882); *Smith v. Whitman Saddle*, 148 U.S. 674 (1893); *Northrup v. Adam*, 18 F. Cas. 374 (1877)); cf. Sarah Burstein, *Visual Invention*, 16 LEWIS & CLARK L. REV. 169, 177 (2012) (discussing *Whitman Saddle* as a case addressing invention rather than infringement).

52. Menell & Corren, *supra* note 1, at 19 n.54, 30 (citing *Baker v. Selden*, 101 U.S. 99 (1879)).

53. *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665 (Fed. Cir. 2008) (*en banc*).

54. *Egyptian Goddess*, 543 F.3d at 672 (“As long as the ordinary observer test focuses on the ‘appearance that distinguishes the patented design from the prior art,’ EGI contends that it will enable the fact-finder to address the proper inquiry, i.e., whether an ordinary observer, familiar with the prior art, *would be deceived into thinking that the accused design was the same* as the patented design.” (emphasis added)).

55. *Id.* at 677 (emphasis added).

56. 661 F.2d 1214 (C.C.P.A. 1981) (*en banc*).

nonetheless entitled to more weight than a layman's evaluation of the same color."⁵⁷

The second case I want to highlight, *Nalbandian*, overturned Judge Rich's earlier creation of the "ordinary observer" standard for the obviousness of designs under Section 103 in *In re Laverne*.⁵⁸ In doing so, Judge Nies made crystal clear just how Judge Rich had ignored legislative language and intent. *Laverne* had rejected the "one of ordinary skill in the art" language of Section 103 as referring to a design. This was purportedly because doing so would deny patent protection "for the work of competent designers," based on a false *reductio ad absurdum* that treating the ordinarily skilled designer as the referent would rule "out, as a practical matter, all patent protection for ornamental designs for articles of manufacture."⁵⁹ But as Judge Nies noted, an ordinary designer should be treated like the ordinary mechanic in utility patent law, and in any event, Judge Nies emphasized the need to focus on "the statutory requirement that patents for designs must be evaluated on the same basis as other patents"⁶⁰

In contrast, Judge Rich concurred separately (given that a majority of the Court had decided to overturn *Laverne*): (1) to bemoan the raising of the skill bar for patentable designs (and thus implicitly the reduction of private propertization); (2) to poke at Judge Nies by noting the statutory rather than the Supreme Court origin of the requirement to assess the artisan's skill; and (3) to decry the failure of Congress to pass legislation that he had spearheaded, to make designs subject to copyright registration rather than design patents, because nonobviousness is not a concept that fits with ornamentality or designs.⁶¹ Thus, even when seeking greater protection, Judge Rich understood the category error of protecting designs with patents. "It is time to pass [new legislation] and get the impossible issue of obviousness in design patentability cases off the backs of the courts and the Patent and Trademark Office"⁶²

57. *Id.* at 1217 (citing *In re Neave*, 370 F.2d 961, 968 (C.C.P.A. 1967)); cf. Charles L. Mauro, Chris Morley & Paul W. Thurman, *Development and Initial Validation of an Empirical Ordinary Observer Test for Design Patent Infringement* 8–13 (June 5, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3620088 (discussing neuroaesthetics and the variance between expert perceptions and those of ordinary observers, even hypothetical ones).

58. 35 U.S.C. § 103; see *In re Laverne*, 356 F.2d 1003, 1006 (1966) ("The test must be obviousness, for that is the dictate of section 103, but it must be applied in a way which will implement the legislative intent to promote progress in the field of industrial design by means of the patent incentive Following the mandate of section 103, it would seem that what we have to do is to determine obviousness to the ordinary intelligent man.").

59. *Nalbandian*, 661 F.2d at 1215–17 (quoting *Laverne*, 356 F.2d at 1162).

60. *Id.* at 1217.

61. *Id.* at 1219.

62. *Id.*

In summary, by purporting to protect the public's interest while actually harming it and ignoring the actual legislative language, federal judges have sought to divert attention from what was really at stake and from the extra-statutory activism in which they were engaged. For many judges, apparently no amount of private property protection is too much, and like nature, such judges abhor a vacuum. We thus should remain cognizant of Benjamin Kaplan's important point that legislative gaps are not holes to be filled, but rather reflect important decisions as to what should not be protected so as to protect the public's interests.⁶³ Nevertheless, those materialists among us will not be surprised by these developments, given Mancur Olson's work on the political power of concentrated interests relative to the limited power of diffuse coalitions.⁶⁴

II. HISTORICAL JUDICIAL CATEGORY ERRORS OF REFERENTS AND ARTICLE OF MANUFACTURE

When Congress in 1902 adopted the generic term "article of manufacture" as its category for all of the substantive objects that were to be protectable by patents if they contained ornamental designs (removing the lists of objects as to which design patent protection previously applied), there was already a history since 1790 in patent law of protecting inventions using similar categories as to the types of things that those inventions had to embody. Specifically, the 1790 Act provided authority to grant patents for "any useful art, manufacture, engine, machine, or device, or any improvement therein" that was "invented or discovered."⁶⁵ In 1793, Congress made minor revisions, in particular adding "composition of matter" to the enumerated categories of

63. See Benjamin Kaplan, *An Unhurried View of Copyright: Proposals and Prospects*, 66 Colum. L. Rev. 831, 836 (1966) ("To follow *I.N.S.* and construct a kind of irregular patent or copyright, whether it be called 'unfair competition' or something else, would 'flagrantly conflict with the scheme which Congress has for more than a century devised to cover the subject-matter.' This view was reinforced by a prevision of the difficulties that would arise in conditioning the anomalous rights—should it be done in tune with statute, or in some other way?" (quoting *Cheney Bros. v. Doris Silk Corp.*, 35 F.2d 279, 280 (2d Cir. 1929) (Hand, J.)); but see JESSICA D. LITMAN, *DIGITAL COPYRIGHT* 79 (2nd ed. 2006) ("[Through the mid-1970s, c]opyright was seen as designed to be full of holes If you're dissatisfied with the way the spoils are getting divided, one approach is to change the rhetoric.").

64. See generally MANCUR OLSON, *THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS* (1965).

65. Act of April 10, 1790, ch. 7, § 1, 1 Stat. 109, 110; see also WILLIAM C. ROBINSON, *THE LAW OF PATENTS FOR USEFUL INVENTIONS* § 69, at 107 n.2 (1890) ("The words 'engine' and 'device' convey no idea not embraced in 'manufacture' and 'machine,' and no phrase is introduced which clearly covers a substance formed by the intermixture of ingredients, though this could have been here, as it was in England, included under 'manufacture.'").

things that could be patented if invented (removing “or discovered”), as well as adding “new and useful” before the enumeration.⁶⁶ This change then suggested that “useful” was meant as a series modifier (just like “new”) and, in a utilitarian, functional sense, applicable to all of the enumerated categories of things, not just to “useful art” as in the 1790 Act.⁶⁷ Thus, the inclusion of “new and useful” as a series modifier in 1793 implied the exclusion of fine arts and objects whose purpose and creative advance was ornamental, by employing that most important of interpretive tools, *expressio unius est exclusio alterius*, or “by stating one thing the alternatives are excluded.”⁶⁸ This created a perceived need in some legislators for some *other* enactment to cover designs that were not then protected by copyright as “writings” of “authors,”⁶⁹ which perceived need was not affected when the 1836 Patent Act restored “discovered” and otherwise preserved the categories set out in the 1793 Act.⁷⁰

In 1842, when Congress created protection for designs, it chose the various categories described above but included the category of “a manufacture” preceded by “new and original design for,” as well as the category of “any article of manufacture” preceded alternately by “any new and original impression to be placed on,” “any new and useful pattern . . . or otherwise fixed on,” or “any new and original shape or configuration of”⁷¹ It is unclear why Congress adopted the differing terminology of “manufacture” and

66. Act of February 21, 1793, ch. 11, § 1, 1 Stat. 317–19.

67. *See, e.g.,* Lockhart v. United States, 136 S. Ct. 958, 962–68 (2016) (applying the “rule of the last antecedent” rather than the “series qualifier” canon of construction to a statute); *id.* at 965 (“This Court has long acknowledged that structural or contextual evidence may ‘rebut the last antecedent inference.’ . . . [T]his Court declined to apply the rule of the last antecedent where ‘[n]o reason appears why’ a modifying clause is not ‘applicable as much to the first and other words as to the last’ and where ‘special reasons exist for so construing the clause in question.’ . . . [T]his Court declined to apply the rule of the last antecedent where ‘there is no reason consistent with any discernable purpose of the statute to apply’ the limiting phrase to the last antecedent alone Likewise . . . the Court suggested that the rule would not be appropriate where the ‘modifying clause appear[s] . . . at the end of a single, integrated list.’ ” (quoting *Jama v. Immigration and Customs Enforcement*, 543 U.S. 335, 345, 344 n.4 (2005), *Porto Rico Railway, Light & Power Co. v. Mor*, 253 U.S. 345 348 (1920), and *United States v. Bass*, 404 U.S. 336, 341 (1971)). In the current context, the last shall be first. *Matthew* 20:16 (King James).

68. *See, e.g.,* *Barnhart v. Peabody Coal Co.*, 537 U.S. 149, 168 (2003) (“As we have held repeatedly, the canon *expressio unius est exclusio alterius* does not apply to every statutory listing or grouping; it has force only when the items expressed are members of an ‘associated group or series,’ justifying the inference that items not mentioned were excluded by deliberate choice, not inadvertence.”); *see* Kaplan, *supra* note 63.

69. *See* Menell & Corren, *supra* note 1, at 9–12; Du Mont & Janis, *supra* note 15, at 854–55, 864–65.

70. Act of July 4, 1836, ch. 357, § 6, 5 Stat. 117, 119.

71. Act of Aug. 29, 1842, ch. 263, sec. 3, 5 Stat. 543, 543–44.

“article of manufacture,” although it may have been to distinguish designs that applied to an entire category of manufactures from designs applying to particular instantiations (embodiments) of a manufacture (a particular “article”).⁷² Or perhaps it was just a function of bad drafting. But there is no indication that anything significant was meant by adding “article of” to “manufacture” that would distinguish these categories, and there is also no indication that the term “useful” as applied to patterns was meant to mean anything other than a referent to the functional utility of the object for which pattern (as ornamentation) was the protectable feature of the object (as patent law already protected the useful functions, subject to the much more developed standards for inventions).⁷³ Being functionally “useful” thus was a necessary, inherent character of an “article of manufacture” or of an “art, machine, manufacture, or composition of matter,” to which the patent law (both for designs and inventions) applied.⁷⁴

The 1861 Patent Act did not change the “new and useful” before “patterns” for “articles of manufacture.”⁷⁵ In 1870, when Congress substantially revised the Patent Act, including addressing designs, it essentially kept the same prior eligible category terminology both for inventions and for designs, although it kept “useful” between “new” and “original shape or configuration of any” before “article of manufacture.”⁷⁶ The 1887 Patent Act adopted a particular damages remedy for infringement for “articles of manufacture,”⁷⁷ but without any suggestion of a change to the meaning of “article of manufacture.”⁷⁸ And, as described by Menell and Corren, the

72. It is also possible that the longer phrase “article of manufacture” was simply carried over without attention from the English copyright act on which the 1842 Act was based. *See* Du Mont & Janis, *supra* note 15, at 860–61.

73. *See, e.g.*, Menell & Corren, *supra* note 1, at 11; Du Mont & Janis, *supra* note 15, at 854–55, 864–66.

74. *See, e.g.*, Menell & Corren, *supra* note 1, at 32–39; *cf.* Avia Group Intern., Inc. v. L.A. Gear California, Inc., 853 F.2d 1557, 1563 (Fed. Cir. 1988) (“[A] distinction exists between the functionality of an article or features thereof and the functionality of the particular design of such article or features thereof that perform a function. Were that not true, it would not be possible to obtain a design patent on a utilitarian article of manufacture”). Again, statues may (or may not) have been viewed as functionally useful. *See supra* notes 14–17 and accompanying text.

75. Act of Mar. 2, 1861, ch. 88, sec. 11, 12 Stat. 246, 248–49. The 1861 Act appears to have typographical errors, eliminating “P” and adding a comma before “any manufacture,” and eliminating “any” before “original design” in regard to the various kinds of statutes, while also removing the category of particular kinds of fabrics in favor of the generic “material.” *Id.*

76. Act of July 8, 1870, ch. 230, §§ 24, 71, 16 Stat 198, 209–10.

77. Act of Feb. 4, 1887, ch. 105, 24 Stat. 387, 387.

78. *See* Menell & Corren, *supra* note 1, at 26–28, 26 n.76 (citing, among others, Sarah Burstein, *The Article of Manufacture in 1887*, 32 BERKELEY TECH. L.J. 1, 3 (2017)).

continued inclusion of “useful” before only one of the categories of attributes for “articles of manufacture” created much judicial confusion, eventually leading to the removal of the modifiers “new, useful, and original” before “shape or configuration of an article of manufacture” in favor of “new, original, and ornamental designs for an” before “article of manufacture” in 1902.⁷⁹

Given this legislative history, one would have thought that limiting design protection in 1902 to designs for “articles of manufacture” would necessarily exclude designs for “machines,” as much as it would exclude designs for “compositions of matter” or “processes” (if one could create an intangible design), even if both are “manufactured” in the sense of not occurring in nature but by the hands of man.⁸⁰ At least by 1890, William Robinson in his magisterial treatise had described the distinction between a machine and a manufacture (or article thereof) as an “instrument . . . when set in motion, of producing, *by its own operation*, certain *predetermined* physical effects.”⁸¹ In contrast, “[a] manufacture is an instrument created by the exercise of mechanical forces and designed for the production of mechanical effects, *but not capable*, when set in motion, of attaining *by its own operation* to any predetermined result.”⁸² But again, the problem of providing statutorily unauthorized protection where judges think it is warranted got in the way. Most of this story of judicial vacillation over distinguishing manufactures from machines, and of treating parts of machines as manufactures under the design patent act rather than as things that simply were not covered (recall Benjamin Kaplan’s emphasis on lacuna), has already been told by Sarah Burstein and by myself elsewhere.⁸³

Here, I wish to note three important logical inferences from the statute, which the history created by these judges has ignored. First, providing protection for parts of machines as an “article of manufacture” fails to comport with the careful delineation of the terms defining the objects for

79. Act of May 9, 1902, ch. 783, sec. 4929, 32 Stat. 193; see Menell & Corren, *supra* note 1, at 24–28.

80. *Cf.* *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (“[T]he 1952 Act inform[s] us that Congress intended statutory subject matter to ‘include anything under the sun that is made by man.’” (citation omitted)).

81. ROBINSON, *supra* note 65, §§ 173, 175 at 257–59 (“A machine differs from all other mechanical instruments in that its rule of action resides within itself.”).

82. ROBINSON, *supra* note 65, § 182, at 269 (emphasis added); see also *id.* at 269–70 (“In this absence of ‘principle’ or ‘modus operandi’ lies the distinction between a manufacture and a machine,—the former requiring the constant guidance and control of some separate intelligent agent, the latter operating under the direction of that intelligence with which it was endowed by its inventor when he imposed on it its structural law.”).

83. See Burstein, *supra* note 78, at 26–53; SARNOFF, *supra* note 33, at 9–11.

utility patent protection as separate categories, on the assumption that “article of manufacture” has the same meaning as “manufacture.” (Recall *expressio unius*, as well as the canon of statutory construction that use of the same terms in the same statute is meant to have the same meaning.⁸⁴) Congress was obviously aware of the utility patent enumeration throughout the history of design patent law when using the terms “manufacture” and “article of manufacture” in 1842 and ultimately settling in 1902 on “article of manufacture.” So, whole or parts of machines simply should be outside of the protection afforded by the Act, by *expressio unius* (even if the parts of machines are separately produced or sold). Second, even if parts of machines were to be included in design patent protection, nothing would thereby suggest that fragments of such “article of manufacture” machine parts (as subparts of parts of machines) should therefore be objects of protectable subject matter for designs.⁸⁵ And the reason for this is that the Court in *Gorham Manufacturing Company* was quite right when it said that a design is something that is understood as a whole.⁸⁶ Third, and perhaps most importantly, nothing in that history should suggest that the class of objects to be protected when they also embodied designs were to be non-functional by themselves, permitting protection based on the fact that they may have been separately produced and then assembled into a functional whole (as parts of an article of manufacture intended to function collectively by themselves or as subparts of parts of machines that then were further assembled into machines).

Nevertheless, as both Menell and Corren and as Sarah Burstein have traced, the Patent Office and the courts expanded protection by treating “articles of manufacture” to include separately manufactured or separately sold products that were only intended to function in conjunction with other products (whether part of and incorporated into a larger article of manufacture or as part of a machine).⁸⁷ Again, it is important to reiterate how and why this blurring of the lines happened. As Menell and Corren note, “inattentive *and protectionist* judicial opinions caused the standard to drift far from these holdings

84. See, e.g., *Est. of Cowart v. Nicklos Drilling Co.*, 505 U.S. 469, 479 (1992) (noting “the basic canon of statutory construction that identical terms within an Act bear the same meaning” (citing *Sullivan v. Stroop*, 496 U.S. 478, 484 (1990))).

85. See Burstein, *supra* note 9, at 620–22.

86. See *Gorham Mfg. Co. v. White*, 81 U.S. 511, 530 (1871) (“[T]hough variances in the ornament are discoverable, the question remains, is *the effect of the whole design* substantially the same?” (emphasis added)).

87. See Menell & Corren, *supra* note 1, at 62–82; Burstein, *supra* note 78, at 50–53; cf. SARNOFF, *supra* note 33, at 6–9 (explaining why separate production or sale alone does not and should not qualify a product as an “article of manufacture,” which requires functionality by itself of the product).

and into direct conflict with the clear language and intent of the 1902 design patent amendments⁸⁸

Changing our focus from categories of objects to categories of concepts and to the doctrines on which patent law is based that are inapplicable to designs, the Section 103 (which applies to both designs and inventions) requirement of “obviousness” should, and under *Nalbandian* is, to be determined from the vantage of “the *designer* of ordinary capability who designs articles of the type presented in the application.”⁸⁹ Yet, as we have seen, because of erroneous categorical reasoning tracing to *Gorham Manufacturing Company*, infringement under Section 271 and—at least since *Egyptian Goddess*—novelty under Section 102 are to be determined from the vantage of the “ordinary observer.”⁹⁰ Not only are such perspectives incompatible, particularly as obviousness under Section 103 requires evaluation in light of prior art under Section 102. But also, and more importantly for present purposes, the move to the ordinary observer viewpoint tends to provide protection where it would not otherwise exist and to find infringement where it would not otherwise be found to occur. After all, if both the ordinary observer and the skilled designer are aware of the prior art when viewing the design as a whole for the relevant comparisons, it is more likely that the former than the latter will view a departure as a sufficiently significant one for novelty, and then view the novelty as having been appropriated.⁹¹

This only highlights the difficulty of performing conceptual severability in the analysis of ornamental designs for functional products. But although that is the focus of Menell and Corren, it is not mine here. We need to extirpate illogic and overprotection by their roots if we are to keep design patents from claiming functional aspects. Some form of conceptual severability is required to identify as protectable *only* the aesthetic aspects of an article of manufacture. Because designs are viewed as a whole,⁹² we therefore need some form of abstraction, filtration, and imaginative reconstruction to evaluate the novel

88. Menell & Corren, *supra* note 1, at 7 (emphasis added).

89. *In re Nalbandian*, 661 F.2d 1214, 1216 (C.C.P.A. 1981) (en banc) (emphasis added).

90. *See supra* notes 37–55 and accompanying text.

91. This is true without regard to whether an ordinary observer could or could not meaningfully follow instructions to focus *only* on the novel features that provide “originality” to an overall design when assessing anticipation, obviousness, or infringement.

92. *Cf. Mauro et al., supra* note 57, at 12–13 (using neuroscience to describe how ordinary observers view designs as a whole, unlike experts); *id.* at 13 (“It is well understood, based on modern shape perception research, that the human information processing system produces a wide range of perceptual biases that impact how we view the world and make decisions. These biases have a profound impact on the finder of fact’s decision-making as they apply the OOT in infringement analysis.”).

aesthetic aspects of the designs as part of some kind of a whole article.⁹³ This would be something like how copyright law has to conceptually sever and abstract protected expression from the underlying ideas being expressed in writing, music, and painting⁹⁴ but also requires imaginative reconstruction because the protected expression cannot be compared directly to the allegedly infringing expression at the level of the whole design.

The important point to reiterate is just how far off course the 1842 Act (when combined with the 1952 Act's Section 103) and *Gorham* have taken us. They did so based on the idea of treating differently (by adopting different perspectives) the basic scope of protectable ornamental subject matter—what the design patent *claims* in regard to a design for an article of manufacture—depending upon which *particular* validity doctrine is applied.⁹⁵ And again, the reason for that departure from conceptual coherence and good sense is the unrequited love of private property as a means of inducing innovation (or of rewarding its creators).⁹⁶

93. *Cf.* *Barofsky v. Gen. Elec. Corp.*, 396 F.2d 340, 343 (9th Cir. 1968) (“To predicate this functional test upon a consideration only of the individual features of the design, Barofsky contends, is ‘to break the fagot stick by stick,’ a process which Justice Holmes condemned in connection with a copyright infringement question.”); Tyler T. Ochoa, *What is a “Useful Article” in Copyright Law After Star Athletica?*, 166 U. Pa. L. Rev. 105, 110 (2017) (“[I]f the allegedly separable feature has any utilitarian aspects, one must repeat the process [of identifying any separately identifiable aesthetic feature and then asking if it can exist separately from utilitarian aspects, in other words physical separability] until one succeeds (or fails) in identifying a feature that does *not* have any utilitarian aspects.”).

94. *See, e.g.*, *Lotus Development Corp. v. Borland Intern., Inc.*, 49 F.3d 807, 814 (1st Cir. 1995) (“The *Altai* test involves three steps: abstraction, filtration, and comparison . . . [The abstraction] step enables courts to identify the appropriate framework within which to separate protectable expression from unprotected ideas.” (citing *Computer Assoc. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693, 707 (2d Cir. 1992)), *aff'd*, 516 U.S. 233 (1996); *cf.* *Skidmore as Tr. for Randy Craig Wolfe Tr. v. Led Zeppelin*, 952 F.3d 1051, 1064 (9th Cir.) (“[B]ecause only substantial similarity in protectable expression may constitute actionable copying that results in infringement liability, ‘it is essential to distinguish between the protected and unprotected material in a plaintiff’s work.’” (citation omitted)), *cert. denied sub nom. Skidmore as Tr. for Randy Craig Wolfe Tr. v. Zeppelin*, 141 S. Ct. 453 (2020), *reh'g denied*, 141 S. Ct. 946 (2020).

95. *Cf. supra* note 40 and accompanying text (discussing axiomatic scope equivalency for validity doctrines and infringement).

96. For arguably better alternatives than exclusive intellectual property rights for inducing or generating innovation or rewarding creators, see generally, e.g., Joshua D. Sarnoff, *Government Choices in Innovation Funding (with Reference to Climate Change)*, 62 EMORY L.J. 1087 (2013).

III. DESIGN AS A WHOLE AND THE EXACERBATION OF FUNCTIONAL PROTECTION THROUGH PARTIAL DESIGN PATENTS

I refer the reader to my earlier discussion of how Judge Rich in *Zahn*⁹⁷ created partial design patents, contrary to the Patent Office's rejection of such protection,⁹⁸ by holding that "a design for an article of manufacture may be embodied in less than all of an article of manufacture"⁹⁹ I will just add three points.

First, Judge Rich was able to reach this conclusion by treating the inherently visual nature of the ornamental designs as permissible claims when covering only a portion of an overall article of manufacture and its design. Judge Rich did so by using another rhetorical trope, the "dotted line," which is intended to create the fiction of hiding what "thing" the claimed part is a part of:

[T]he board erred in treating the claim as directed to a drill tool and only to the shank portion of a tool—the article itself rather than the design for the article. That is the same flaw that persists in [the Patent Office's guidance], which speaks of the "designed article" and prohibits dotted lines therein, because, quoting what we said in *Blum*, "There are no portions of a design which are 'immaterial' or 'not important.'" We did not there speak of a "designed article" but of a design.... An article may well have portions which are immaterial to the design claimed."¹⁰⁰

Note how this conflicts with the "design as a whole" approach of *Gorham* and how the ordinary observer views the design for the article of manufacture as a whole.¹⁰¹ So, Judge Rich's approach was just dotted. More importantly, *Gorham's* holding was binding law that Judge Rich was obligated to follow and to apply faithfully. To quote Judge Rich himself: "It is mutiny. It is heresy. It is illegal."¹⁰²

97. *In re Zahn*, 617 F.2d 261 (C.C.P.A. 1980).

98. *Id.* at 264 (rejecting the claim for an inseverable portion of the manufactured article, relying upon *In re Blum*, 374 F.2d 974 (C.C.P.A. 1967)).

99. *Id.* at 267.

100. *Id.*; *cf.* *Curver Luxemburg SARL v. Home Expressions Inc.*, 938 F.3d 1334, 1341 (Fed. Cir. 2019) ("The Patent Office's guidelines governing examination procedure make clear that a design patent will not be granted unless the design is applied to an article of manufacture.").

101. *See supra* notes 41–50, 57, 93 and accompanying text.

102. *Atl. Thermoplastic Co. v. Faytex Corp.*, 974 F.2d 1279, 1281 (Fed. Cir. 1992) (en banc) (Rich., J., dissenting).

Second, allowing partial (and fragment) design patents provides protection of smaller and smaller portions of overall designs for portions of some article of manufacture.¹⁰³ This treatment is presumably based on the view that separate sales or separate production make an “article of manufacture.” Instead, the determination of what is an article should be based on whether the “thing” (the ornamentation of which is to be considered for protection) performs *externally* imposed functions, as described by Robinson.¹⁰⁴ But under Judge Rich’s approach, it should not matter if the claim were to an inseverable portion of a machine, or to a part or to an inseverable portion of a part of a machine, because the rest of the machine could also be dotted out, leaving for design protection the fragment, part, or fragment of a part that is claimed. But the irony of this approach is that it clearly identifies the claimed protection as the “point of novelty” of the *overall* design, contrary to the later rejection of that approach in *Egyptian Goddess* for the *claimed* design,¹⁰⁵ given that the point of novelty approach reduced the potential for protection of the overall design. Apparently, you can’t have it both ways.

Third, and most importantly, because patent protection was provided by Judge Rich for parts of larger things, the infringement right then expands to cover anything incorporating the infringing design (assuming that it remains a “matter of concern” by being visible once so incorporated,¹⁰⁶ or even perhaps not if the article of manufacture is to be judged by what is separately sold or produced rather than what is functionally used).¹⁰⁷ This then permits a finding of design patent infringement when the *overall* article of manufacture is being repaired to its original appearance without “reconstruction,” but the part that is being repaired may then be considered “reconstructed” and that conduct is

103. See *supra* note 94.

104. See Burstein, *supra* note 78, at 65 (“It is true that, in 1887, an article of manufacture had to be a ‘product’ in the sense it had to be complete enough to be sold to someone. But that ‘someone’ did not have to be the ultimate or end consumer. It could be another manufacturer or artisan An item either was an ‘article of manufacture’ or it was not Thus, in 1887, an article of manufacture had to be a vendible item. But not all vendible items were articles of manufacture.” (citations omitted)); *supra* notes 81–87 and accompanying text; cf. Burstein, *supra* note 78, at 24 n.142 (“*Zahn* itself did not purport to interpret ‘article of manufacture,’ although some commentators have read it that way.”).

105. See *supra* notes 53–55, 91, and accompanying text.

106. See, e.g., *In re Stevens*, 173 F.2d 1015, 1016 (C.C.P.A. 1949) (“Articles which are concealed or obscure[d] are not proper subjects for design patents, since their appearance cannot be a matter of concern.”).

107. But see *In re Webb*, 916 F.2d 1553, 1557 (Fed. Cir. 1990) (“Our predecessor court has affirmed the rejection of design applications that cannot be perceived *in their normal and intended uses*.” (emphasis added)).

then deemed infringing.¹⁰⁸ Thus, an owner's legal conduct has been converted to intellectual property "theft," even if the amount of damages may then be limited by apportionment to the part that is then considered the "article of manufacture" as to which he or she has to pay the "total profit."¹⁰⁹ In other words, Judge Rich's approach not only takes away the rights of the public, it also turns the public into the butt of the rhetorical joke that the public is the thief of others' property. And it does so even though Congress never contemplated as much, but rather defined total profits in regard to total articles. How "warped" and "frustrated" is that?¹¹⁰

IV. PARTIAL DESIGN PATENTS AS THEFT OF THE PUBLIC'S RIGHT OF REPAIR

I refer the reader to my discussion of how, under *Aro Manufacturing Co. v. Convertible Top Replacement Co.* (*Aro I*),¹¹¹ purchasers have the right in patent law to repair legally purchased automobiles (and other machines and manufactures), so long as they do not "reconstruct" those products as a whole.¹¹² The repair doctrine finds its source in the patent exhaustion doctrine. If an automobile is a machine (and it is), then it should not be the subject of a design patent unless and until Congress legislates protection of ornamental designs for "machines." As Sarah Burstein and I have discussed previously, and as noted above, the vacuum of legislative protection led the court to permit parts of machines to be treated as "articles of manufacture" by focusing on separate sale or production rather than on separate use. But *Zahn* then permits ever-smaller components of machines (or of articles of manufacture) to

108. See *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 346 (1961); *infra* Part IV.

109. 35 U.S.C. 289. Note the similarity to the problem in the utility patent context of determining the damages of a claim to an automobile containing a nonobvious windshield wiper, which is the only point of novelty. A claim to the wiper would base damages on the infringing wiper. But the claim to the car containing the wiper would base damages on the infringing car, without any larger inventive contribution by the inventor to the public than the wiper. See, e.g., *Seymour v. McCormick*, 57 U.S. (16 How.) 480, 490–91 (1853) ("By this doctrine even the smallest part is made equal to the whole, and 'actual damages' to the plaintiff may be converted into an unlimited series of penalties on the defendant. We think, therefore, that it is a very grave error to instruct a jury 'that as to the measure of damages the same rule is to govern, whether the patent covers an entire machine or an improvement on a machine.'"). Avoiding such an unjust result of owing damages based on an infringing car rather than on an infringing wiper requires conceptual severability of the utility patent claim, which just isn't done. Cf., e.g., *Diamond v. Diehr*, 450 U.S. 175, 188 (1981) ("[C]laims must be considered as a whole.").

110. IT'S A WONDERFUL LIFE (Liberty Films 1946).

111. *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336 (1961).

112. *Id.* at 346.

themselves be treated as “articles of manufacture” (and fragments to be protected even if not separately sold or produced). In turn, this permits an ever-smaller denominator in the reconstruction doctrine when considering the fraction repaired when restoring the original ornamental appearance of the article of manufacture. As the denominator is ever smaller, the portion needing repair is then held to be “reconstructed” (or a replacement part that is “made” without authority is protected) and thus constitutes an act of infringement under Section 271. Again, *Zahn* makes the ordinary consumer (or parts manufacturer) into a thief when exercising what would otherwise be their right to repair (and to make repair parts for) the products that consumers have legally purchased. Instead, design patent law should treat as an “article of manufacture” only a product that is functional by itself.¹¹³

I won’t say anything here about the bad environmental consequences of such a legal rule. (Whoops, I just did.) Nor will I discuss that the patent holders have already received the “full” reward to which they are entitled through the purchase price on the product embodying the patented design or invention.¹¹⁴ Rather, I want to focus on two points that relate to the problem of category errors and patent versus non-patent protection for designs.

First, and again, we would not have this particular set of problems were it not for the confusion created by placing design protection in patent law. We would not then be trying to figure out what the “article of manufacture” is for a design. And if we were to adopt *sui generis* protection for designs for useful products, we could then clearly specify that the protected object for which the design (and the design’s scope) is to be determined is a functional object and that both that object and the design are to be determined “as a whole.” Eliminating partial-design patent protection thus would avoid taking away the public’s rights to repair purchased products and to obtain new replacement parts to do so, without reconstruction of the product as a whole, when designs are only part of the functional products that a consumer purchases. But the public will continue to be prohibited from reconstruction of the whole, and

113. Of course, difficult line drawing will be needed to distinguish products that are intended to perform functions by themselves and should be treated as articles of manufacture (such as a mirror, even if it can be incorporated into a larger product) from articles that are intended to perform their functions only in regard to incorporation into a larger article of manufacture or a machine (which should not be considered functional by themselves, even if one can use a car mirror to shave with). But such line drawing can’t be any worse than what we already do with utility subject matter and claims under Section 101. *See* 35 U.S.C. § 101.

114. *See* *Aro Mfg. Co. v. Convertible Top Replacement Co. (Aro II)*, 377 U.S. 476, 497 (1964) (plurality opinion) (“[A]n agreement authorizing use of the patented product necessarily also authorized repairs to it; ‘so far as the use of it was concerned, the patentee had received his consideration, and it was no longer within the monopoly of the patent.’” (quoting *Adams v. Burke*, 84 U.S. (17 Wall.) 435, 456 (1873))).

third parties from unauthorized making of the entirety of such purchased products (or enough of them as to constitute a reconstruction). That seems to strike a fair balance and to sufficiently protect design innovation incentives for society, just as much as it was back in 1850 when *Wilson v. Simpson* first created the repair “right” for patented products.¹¹⁵

Second, it is important to note that the Supreme Court’s recent *Impression Products* decision¹¹⁶ made exhaustion, and thus repair rights, a matter of *federal patent law policy*. Thus, the consumer repair right is not (and probably should never have been viewed as) a matter of a defeasible, default presumptive implied license against which explicit contracts for the purchase of patented products were to be written, and which rights might then be “voluntarily” waived in purchase contracts.¹¹⁷ Accordingly, contractual restrictions on federal patent law repair rights should be considered *preempted* by the

115. *Wilson v. Simpson*, 50 U.S. (9 How.) 109, 123 (1850).

116. *Impression Prods., Inc. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523 (2017).

117. *See id.* at 1532–33 (“This Court accordingly has long held that, even when a patentee sells an item under an express [contractual] restriction, the patentee does not retain patent rights in that product.”). Nevertheless, I agree with Sean O’Connor that exhaustion *originated* as a doctrine of implied license, which *could* be defeated by express language in contracts, which are creatures of state law (even though federal common law of contracts for patented goods would make much more sense). *See* O’Connor, *supra* note 11, at 461–81. But we are no longer (if we ever were) living in a constitutional world of contractual protections *uber alles* (or even *uber mostes*). *Compare, e.g.*, *Lochner v. State of New York*, 198 U.S. 45, 64 (1905) (finding a state labor protection law to be an arbitrary exercise of police power in violation of liberty protected by the due process clause of the U.S. Constitution, Amend. XIV, § 1), *with Stone v. Mississippi*, 101 U.S. (11 Otto) 814, 819–21 (1879) (“No legislature can bargain away the public health or the public morals. The people themselves cannot do it, much less their servants The contracts which the Constitution protects are those that relate to property rights, not governmental Certainly the right to suppress them is governmental, to be exercised at all times by those in power, at their discretion.”); *but cf.* *Home Bldg. & Loan Assn. v. Blaisdell*, 290 U.S. 398, 449(1934) (Sutherland, J., dissenting) (“If the contract impairment clause [U.S. CONST., Art. I, § 10, cl. 1], when framed and adopted, meant that the terms of a contract for the payment of money could not be altered in invitum by a state statute enacted for the relief of hardly pressed debtors to the end and with the effect of postponing payment or enforcement during and because of an economic or financial emergency, it is but to state the obvious to say that it means the same now.”); *see generally* Stephen A. Siegel, *Understanding the Nineteenth Century Contract Clause: The Role of the Property-Privilege Distinction and Takings Clause Jurisprudence*, 60 S. CAL. L. REV. 1 (1986). And at least since *Aro I*, we properly consider the public as having the “right” to repair their legally purchased, patented products without having to give up that right by contract (even if they would be willing to do so in exchange for a lower price or are compelled to do so as the quid pro quo for obtaining the product because the seller will not sell except on those conditions). As *federal* patent rights of repair effectuating federal patent policy, any such state-law-based *contractual* provisions purporting to restrict repair rights of purchasers through *contract* remedies should now be treated as preempted, just as much as such contractual “rights” to restrict consumer repair rights through *patent* remedies simply do not exist.

Supremacy Clause of the U.S. Constitution,¹¹⁸ as contrary to and as conflicting with the “purposes and objectives” of federal (patent) policy,¹¹⁹ as articulated in *Aro I* and in *Impression Products*. Nothing should be viewed as to the contrary in the Supreme Court’s dicta regarding the ability to enforce prohibitions against repair under contract law¹²⁰ and to preserve restrictions on licensees in regard to making and sale authority (but apparently not use, which might then imply that the license was actually a restriction-prohibited sale).¹²¹ At a bare minimum, the Patent Act should not be understood to preempt any state laws that would prohibit contractual or licensing restrictions that would prevent legitimate purchasers from making repairs, on the misguided belief that such state laws conflict with the infringement rights that patent law protects (and to prevent state law from diminishing the value of the patent rights that create exclusive suppliers that can charge monopoly prices¹²²). State laws protecting federal repair rights do not create a “theft” of those purported infringement rights to prohibit repairs, even if such a restriction on the value of any contractual restrictions thereby prohibited would not amount to a compensable regulatory taking.¹²³ Rather, once we recognize that a federal patent policy exists to protect repair rights, states should be free to prohibit

118. U.S. CONST., art. VI, para. 2.

119. *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941) (stating that state law that “stands as an obstacle to accomplishment and execution of the *full* purposes and objectives” of federal law is preempted (emphasis added)).

120. *See Impression Prods.*, 137 S. Ct. at 1535 (“The purchasers might not comply with the restriction, but the only recourse for the licensee is through contract law, just as if the patentee itself sold the item with a restriction.”).

121. *See id.* at 1534 (“[The Federal Circuit reasoned that i]f patentees can employ licenses to impose post-sale restrictions on purchasers that are enforceable through infringement suits . . . it would make little sense to prevent patentees from doing so when they sell directly to consumers. The Federal Circuit’s concern is misplaced. A patentee can impose restrictions on licensees because a license does not implicate the same concerns about restraints on alienation as a sale A patentee’s authority to limit *licensees* does not, as the Federal Circuit thought, mean that patentees can use licenses to impose post-sale restrictions on *purchasers* that are enforceable through the patent laws.”); *id.* at 1535 (“Once a patentee decides to sell—whether on its own or through a licensee—that *sale exhausts its patent rights, regardless of any post-sale restrictions the patentee purports to impose*, either directly or through a license.” (emphasis added)). Note that treating any contractual authorization for use as a sale rather than as a license (or lease) avoids the potential for creating a post-sale culture, intended by the seller to avoid giving the public any purchaser rights to which the public would otherwise be entitled. *Cf.* AARON PERZANOWSKI & JASON SCHULTZ, *THE END OF OWNERSHIP* (MIT Press 2016).

122. *See, e.g.*, Promoting Automotive Repair, Trade, and Sales Act, S. 812, 115th Congress, 1st Sess. (2017) (PARTS Act); Promoting Automotive Repair, Trade, and Sales Act, H.R. 1879, 115th Congress, 1st Sess. (2017) (same).

123. *Cf.* Siegel, *supra* note 117, at 75–102 (discussing limits on takings claims by sovereign overriding of contract rights).

contracting to the contrary. In that way, states will effectuate federal patent policy rather than undermine it.

V. CONCLUSION

It is long past time to legislate protection from design patent infringement for both purchasers of and aftermarket manufacturers of automobile repair parts.¹²⁴ But it is also long past time to boldly go where no Congress has gone before, by correcting the mistakes of the past and removing designs from patent law and placing them in a *sui generis* regime (particularly given the overextension of copyright duration and protections). Perhaps such a result would *not* make Judge Rich roll over in his grave. After all, he bemoaned keeping designs within patent law.¹²⁵ And even if he would not get his wish to place design protection in copyright law, at least he would no longer suffer indigestion at having to stomach the category error of the nonobviousness of designs, as determined from the perspective of the designer of ordinary skill in the art. He thus could have the last laugh that *Nalbandian* would be legislated off the books.

Given the propensity of Congress and the courts to create and protect private property out of the public's right to copy or to independently make use of intangible designs, however, I do not expect such changes to happen in my lifetime. But I'm in the game for the long haul. Until then, perhaps Menell and Corren's fine contribution will at least induce Congress or the courts to clean up functionality doctrine (and apportionment of total profits) as much as can be done within the constraints of a patent system that should have nothing to do with designs but has been forced to live with them. That is unless we can convince the Supreme Court that such category blurring, creating property rights that protect private designers at the expense of the public, is unconstitutional under the Authors and Inventors (not Designers) Clause.¹²⁶

124. *Cf.* *Biotechnology Indus. Org. v. D.C.*, 496 F.3d 1362, 1372–74 (Fed. Cir. 2007) (“The plaintiffs urge that the Act conflicts with Congress's intention to provide their members and other pharmaceutical patent holders with the pecuniary reward that follows from the right to exclude granted by a patent Of course, the patent laws are not intended merely to shift wealth from the public to inventors The Act is a clear attempt to restrain those excessive prices, in effect diminishing the reward to patentees in order to provide greater benefit to District drug consumers. This may be a worthy undertaking on the part of the District government, but it is contrary to the goals established by Congress in the patent laws.”).

125. *See In re Nalbandian*, 661 F.2d 1214, 1218–19 (C.C.P.A. 1981) (en banc) (Rich, J., concurring) (discussing his 1952 Act and subsequent legislative efforts).

126. U.S. CONST., Art. I, § 8, cl. 8.

FIXING FUNCTIONALITY IN DESIGN PATENT LAW

Mark P. McKenna[†]

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I. INTRODUCTION

Design patent is not a copyright-based system.¹ Though the proponents of design protection in the United States might originally have been inspired by the British extension of copyright to design,² design protection in this country was operationalized as a patent system.³ Copyright has since expanded to also cover many types of design, but that has never changed the fundamental structure of design patent as a patent system. That's important because many of the challenges in design patent law are specifically the result of that

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† Professor of Law, UCLA School of Law; Co-Director, Ziffren Institute for Media, Entertainment, Technology and Sports Law. Thanks to Sarah Burstein, Graeme Dinwoodie, Jessica Silbey, and Rebecca Tushnet for comments on earlier drafts of this essay and/or discussions of the ideas herein.

1. Cf. Peter S. Menell & Ella Corren, *Design Patent Law's Identity Crisis*, 36 BERKELEY TECH. L.J. 1, 9 (2021) (describing design patent as a “copyright-based regime”).

2. *Id.* at 108–09. For a thorough account of the origins of design patent protection in the United States, see Jason J. Du Mont and Mark D. Janis, *The Origins of American Design Patent Protection*, 88 IND L.J. 837 (2013).

3. See Act of Aug. 29, 1842, ch. 263 sec. 3, 5 Stat. 543. The categories of copyright and patent were not as crystallized or distinct in the mid-nineteenth century, so it's not clear that the proponents the original design protection had a strong sense of what rode on the copyright/patent distinction. See Mark P. McKenna & Katherine J. Strandburg, *Progress and Competition in Design*, 17 STAN. TECH. L. REV. 1, 32–36 (2013); see generally BRAD SHERMAN & LIONEL BENTLY, *THE MAKING OF MODERN INTELLECTUAL PROPERTY LAW: THE BRITISH EXPERIENCE, 1760–1911* (1999) (demonstrating that the categories of intellectual property law were still emergent in the mid-nineteenth century and hadn't yet fully taken shape in modern form). But American law has never deviated from the design patent model, despite the difficulties that has entailed.

institutional design choice—they derive from our attempts to use concepts like invention and obviousness in relation to design.⁴

Of course, the fact that design patent is a patent system doesn't mean that we shouldn't worry about its relationship to utility patent law. Congress created a separate patent system for design because it believed design was different from the subject matter of utility patent law and therefore not readily protectable under that system (or any other then-existing intellectual property (IP) system). It would be odd to interpret design patent law's eligibility rules in ways that ignore that system's distinct role—either by making design patent redundant of utility patent or, even worse, by enabling parties to use design patent as a backdoor form of utility patent protection.⁵

The principle that IP systems should refuse protection to “useful” or “functional” features because those features are the exclusive province of utility patent law is what Kathy Strandburg and I have called the “utility patent supremacy principle.”⁶ That principle manifests, in different forms, in every other area of IP. As we described, “each of [the other IP] systems subordinates its own policy goals to the dynamic competition goals of utility patent law, reserving to utility patent the responsibility for determining the circumstances under which utilitarian features may be copied by others.”⁷ Deference to utility patent animates trademark law's functionality doctrine, for example, and several copyright doctrines, including the principle of *Baker v. Selden* and the useful articles doctrine.

As Menell and Corren thoroughly demonstrate in their important new piece, after some initial years in which courts and the U.S. Patent and Trademark Office (USPTO) vacillated between very different approaches to design patent eligibility,⁸ Congress made clear that ornamentality was supposed to play this role in design patent law.⁹ Ornamentality is meant to be juxtaposed with “utility” and therefore to distinguish design patent subject matter from utility patent. And at least on its face, that concept remains central to the definition of design patent subject matter to this day.¹⁰

4. See McKenna & Strandburg, *supra* note 3, at 38–44 (describing the misfit of utility patent law's cumulative notions of Progress, particularly in its concept of nonobviousness, in the context of design).

5. *Id.*; see also Mark P. McKenna & Christopher Jon Sprigman, *What's In, and What's Out: How IP's Boundary Rules Shape Innovation*, 30 HARV. J.L. & TECH. 491, 516–23 (2017).

6. McKenna & Strandburg, *supra* note 3, at 18–19.

7. *Id.* at 19.

8. See Menell & Corren, *supra* note 1, at 14–21.

9. Act of May 9, 1902, ch. 783 sec. 4929, 32 Stat. 193.

10. See 35 U.S.C. § 171 (“Whoever invents any new, original and ornamental design for an article of manufacture may obtain a patent therefor . . .”).

Because ornamentality should be design patent law's point of demarcation, I very much agree with Menell and Corren that we should pay a lot more attention to that requirement. Their central criticism of the modern iteration of that doctrine is that it does not exclude functional design features aggressively enough.¹¹ In my view, however, Menell and Corren actually identify two distinct but related problems. First is the fact that the Federal Circuit has reduced the concept of ornamentality to nonfunctionality: the only question courts and the USPTO ask in considering whether a design meets the statutory requirement of ornamentality is whether the design features are nonfunctional. The second problem is that the Federal Circuit defines functionality nearly exclusively in terms of the availability of alternative designs.

These are related but distinct problems. Ornamentality is not simply nonfunctionality; for configuration, at least, it is commonly the case that features are *both* ornamental and functional, just in different proportions.¹² And even where functionality is the right question, the availability of alternative designs need not, and should not, be its only measure.

II. ORNAMENTALITY IS NOT MERELY NONFUNCTIONALITY

One of the central problems in IP law's treatment of design is its incorrect insistence that aesthetic value and functionality are opposites. Our various functionality doctrines do not simply determine whether features are functional or ornamental; they set the threshold at which we disqualify features because the balance between functionality and ornamentality tips too strongly in the direction of function.¹³ Take, for example, the “knurling” design on the plaintiff's rifle scopes in *Leapers, Inc. v. SMTS, LLC*.¹⁴

11. See Menell & Corren, *supra* note 1, at 125.

12. McKenna & Strandburg, *supra* note 3, at 46–48.

13. See, e.g., Chris Buccafusco & Mark A. Lemley, *Functionality Screens*, 103 VA. L. REV. 1293, 1313–16 (2017) (describing “threshold” screens and dual-nature features).

14. 879 F.3d 731 (6th Cir. 2018).

Figure 1: Knurling Designs in *Leapers, Inc. v. SMTS, LLC*

Knurling is texture that allows users to grip the rifle scopes more easily and to make fine-tuned adjustments.¹⁵ The knurling design on Leapers’s rifle scopes was therefore unquestionably functional in a textbook sense—it was the feature that enabled users to adjust the scopes. And yet Leapers contended that its *particular* knurling pattern was not necessary for that function (it was not particularly more effective than alternatives) and was designed for an aesthetic purpose—“to make the scopes stand out from the competition.”¹⁶

What conclusion one thinks the court should have drawn in *Leapers* surely depends on the extent to which alternative designs ought to matter to functionality determinations (an issue I address below). The point here is the duality of design. Many designs, like the knurling in *Leapers*, are plausibly described in both functional and ornamental terms. The question isn’t really whether the features are functional or not; it’s whether we should care more about the functionality or ornamentality. When the Federal Circuit reduces ornamentality to nonfunctionality, it distorts the issue in design patent by taking ornamentality out of the equation.

For many years before the Federal Circuit gained exclusive jurisdiction over design patent cases, courts treated ornamentality as a meaningful concept distinct from nonfunctionality. Take, for example, *Theodore W. Foster & Bro. Co. v. Tilden-Thurber Co.*, in which the First Circuit suggested that some types of goods were categorically excluded from design patent protection “for want of reason to suppose that their appearance can ever really matter to anybody.”¹⁷ According to that court, ornamentality requires that the design’s appearance

15. *Id.* at 733 (“Knurling can be found on a wide variety of everyday items such as door handles, coin edges, and bottle lids.”).

16. *Id.* at 738 (internal quotation marks omitted). The court found that argument plausible enough that a jury needed to make the call. *Id.*

17. 200 F. 54, 56 (1st Cir. 1912) (“Examples of this class are, besides horseshoe calks . . . , syringes, plates joining the ends of machine belts, and thill couplings . . . ; also ribbon spools for typewriting machines and insulating plugs. The shape or configuration of such articles can have value only in so far as it may make them more useful.” (citations omitted)).

be material. Extending that idea, several courts insisted that designs were ornamental only when the appearance of the article drove its sales.¹⁸ Even some decisions of the Federal Circuit's predecessor required more than mere nonfunctionality, finding designs patentable only when the articles were aesthetically pleasing, or at least not ugly.¹⁹ As those courts understood, ornamentality and functionality are not opposites, and we should put more affirmative content into the ornamentality requirement no matter how we reform functionality doctrine.

Menell and Corren suggest that courts stopped treating ornamentality as a meaningful requirement for the same reason that courts in copyright cases shied away from a more robust originality standard. Specifically, giving meaning to ornamentality would require courts to confront a series of hard questions: What does it mean for features to be “ornamental”? Is there an ornamentality threshold, and how would it be measured? From whose perspective do we judge ornamentality? Can ornamentality be judged objectively?²⁰

Those are, to be sure, difficult questions. But they are not different in kind from the questions courts must answer to evaluate functionality: What does it mean for a feature to be functional? What is the functionality threshold? From whose perspective do we judge functionality? Menell and Corren's discussion often implies that those questions are easier or more objective than our experience with functionality in trademark law suggests.²¹ In many trademark cases, there is at least an implicit dispute about how to characterize the function of the features at issue, and therefore what legal rules should apply. There is also a pervasive question about what constitutes a relevant and disqualifying function.

In the Second Circuit's recent decision in *Sulzer Mixpac AG v. A&N Trading Co.*, for example, the court considered the functionality of Mixpac's

18. See Menell & Corren, *supra* note 1, at 38, 38 n.129 (citing cases).

19. See *In re Koehring*, 37 F.2d 421, 422 (C.C.P.A. 1930); *Contico Int'l, Inc. v. Rubbermaid Com. Prods., Inc.*, 665 F.2d 820, 825 (8th Cir. 1981) (“Perhaps it is too much to expect that a trash-can dolly be beautiful. It is enough for present purposes that it is not ugly . . .”). For a critical take on these cases, see Jason J. Du Mont & Mark D. Janis, *Functionality in Design Protection Systems*, 19 J. INTEL. PROP. L. 261, 267–68 (2012) (discussing a period of ornamentality jurisprudence involving “raw artistic judgments from the bench”).

20. Cf. *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 251 (1903) (“It would be a dangerous undertaking for persons trained only to the law to constitute themselves final judges of the worth of pictorial illustrations, outside of the narrowest and most obvious limits.”). For a critical take on the standard interpretation of *Bleistein*, see Barton Beebe, *Bleistein, the Problem of Aesthetic Progress, and the Making of American Copyright Law*, 117 COLUM. L. REV. 319 (2017).

21. See Menell & Corren, *supra* note 1, at 134–36.

trade dress—its use of specific colors for mixing tips used by dentists to create impressions of teeth for dental procedures.²² According to the court, those features were not essential to the use of the product; color-coded mixing tips and cartridges were not analogous to the dual-spring design at issue in *TrafFix*.²³ Nevertheless, the court held the features functional because the colors had an informational function: the mixing tips' colors “signif[ie]d] diameter, which in turn assist[ed] users with selecting the proper cartridge for their needs.”²⁴

Though I agree with that conclusion, it demonstrates how difficult it can be to distinguish types of functionality. Why was signifying diameter a relevant function, and how did the court know the color-coding system sufficiently affected the cost or quality of the mixing tips to make the colors functional? More generally, are informational functions utilitarian or aesthetic functions? The answer to that question seems especially unclear when users rely on the informational content of aesthetic features to make physical use of the articles.²⁵ And yet, categorization is often critical in these cases because the legal rules are different depending on which type of functionality is at issue. If the colors at issue in *Sulzer Mixpac* served an aesthetic function, then the court should have considered alternative designs and determined whether exclusive use of the color coding would have put competitors at a “significant non-reputation-related disadvantage.”²⁶

Millennium Labs v. Ameritox is another example.²⁷ That case involved the design of reports for presenting the results of urine tests. Does the layout and design of those reports serve a utilitarian function? An aesthetic one? The Ninth Circuit never answered that question and instead treated the traditional *Inwood* test and the non-reputation-related disadvantage test as two sequential steps in determining functionality.²⁸ In other words, it considered *both* whether the features were “essential to the use or purpose” of the reports or “affect[ed]

22. 988 F.3d 174, 174 (2d. Cir. 2021).

23. *Id.* at 182–83.

24. *Id.* at 183.

25. Somewhat ironically, the Supreme Court's test for functionality comes from a case in which colors had this same sort of informational function. In *Inwood v. Ives*, the Supreme Court considered the potential functionality of the color of pills, which pharmacists relied on to differentiate types of medicine. 456 U.S. 844 (1982).

26. *TrafFix Devices, Inc. v. Marketing Displays, Inc.*, 532 U.S. 23, 33 (2001) (“It is proper to inquire into a ‘significant non-reputation-related disadvantage’ in cases of esthetic functionality . . .”).

27. 817 F.3d 1123 (9th Cir. 2015).

28. *Id.* at 1129–31.

[their] cost or quality,” *and* whether there were alternatives available such that there would be no competitive disadvantage.²⁹

This issue of what functions are relevant is not unique to trademark law—indeed, it is a persistent issue in the useful articles context in copyright. What qualifies as a “useful” article? Years of experience demonstrate that copyright has no theoretically consistent answer to that question.

Consider copyright’s differential treatment of apparel and toys. Apparel, even the most aesthetically rich sort, such as a designer dress, is treated as useful because it covers the body.³⁰ That’s true even though that’s not why anyone buys a designer dress—they buy it because of the way it looks. Toys, by contrast, serve the useful purpose of entertaining. Certainly, toys can be attractive, but most people don’t buy toys to look at them. They buy them so someone can play with them. But copyright often ignores that fact and doesn’t classify toys as useful articles.³¹

Costumes are another difficult case. On one hand, costumes seem merely to portray their appearance. On the other hand, costumes don’t just hang on the wall; they are meant to be worn and to transform the wearer into something else. You don’t wear a Batman costume just because it looks nice—you wear it to look like Batman. Does that make a Batman costume a useful article? According to the Copyright Compendium, fanciful costumes may be considered useful articles, but only because they serve the useful function of clothing the body.³²

This question of what kinds of utility count in determining whether a pictorial, graphic, or sculptural (PGS) work should be classified as a useful article was also implicated in *Star Athletica*, where the question was what

29. *Id.*

30. This paragraph is derived from McKenna & Sprigman, *supra* note 5, at 536.

31. *See* Compendium of U.S. Copyright Practices Chapter 910 [hereinafter Compendium] (noting that, “[a]s a general rule,” “toys, dolls, stuffed animals, and puppets, and other sculptural works” are “not considered useful articles for purposes of registration, because in most cases they merely portray their own appearance or the item the work represents”); *see also* *Gay Toys, Inc. v. Buddy L Corp.*, 703 F.2d 970, 973 (6th Cir. 1983) (“[A] toy airplane is merely a model which portrays a real airplane. To be sure, a toy airplane is to be played with and enjoyed, but a painting of an airplane, which is copyrightable, is to be looked at and enjoyed. Other than the portrayal of a real airplane, a toy airplane, like a painting, has no intrinsic utilitarian function.”). Of course, “in general” is not “never.” *See, e.g., Lanard Toys Ltd. v. Novelty, Inc.*, 375 F. App’x 705, 710 (9th Cir. 2010) (“The determination [of] whether a toy is a pictorial, graphic, or sculptural work, and not an uncopyrightable ‘useful article’ is a fact-intensive one that must be decided on a case-by-case basis . . .”).

32. Compendium, *supra* note 31, at Chapter 911.

functions chevrons and other design features played in the context of cheerleading uniforms.³³

Figure 2: Cheerleading Uniform Designs in *Star Athletica*



Though the Supreme Court ignored the issue, it divided the Sixth Circuit.³⁴ The majority of the Sixth Circuit panel concluded that the designs were not useful.³⁵ Speaking generally, the court held that, before addressing separability, a court should ask “[w]hat are the utilitarian aspects of the useful article?”³⁶ Here the example the court gave was telling: “the utilitarian aspect of a chair is to provide a place for a person to sit.”³⁷ The court felt compelled to focus

33. *Varsity Brands, Inc. v. Star Athletica, LLC*, 799 F.3d 468, 470 (6th Cir. 2015), *aff’d sub nom.* *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 137 S. Ct. 1002 (2017).

34. *Varsity Brands*, 799 F.3d 468.

35. *Id.* at 493.

36. *Id.* at 487.

37. *Id.*

its inquiry at that level of generality because, under the statutory definition, “portray[ing] the appearance of the [useful] article” and “convey[ing] information” do not count as functions that make the article “useful.”³⁸ So, for example, masquerading is not a useful function because it involves only “portray[ing] the appearance of something (like a lion, ladybug, or orangutan).”³⁹ Turning to the cheerleading uniforms at issue, the majority described the relevant utilitarian functions simply as “cover[ing] the body, wick[ing] away moisture, and withstand[ing] the rigors of athletic movements.”⁴⁰ Identifying the wearer as a cheerleader did not count, so the claimed design features were separable from the utilitarian function.

The dissent disagreed, especially regarding the level of generality at which the majority described the function of the uniforms. As the dissent noted, the majority’s definition “could be used to describe all athletic wear.”⁴¹ That wasn’t good enough for the dissent, because “[w]ithout stripes, braids, and chevrons, we are left with a blank white pleated skirt and crop top,” which the reasonable observer would not associate with cheerleading.⁴² For the dissent, making clothing recognizable as a cheerleading uniform is a function, and the design was not separable from that function.⁴³

It’s not important here whether the majority or dissent had the better view of the functions of cheerleading uniforms. The point is merely that rules for separating out “functional” matter all require determinations of which functions count, and every area of IP struggles in this respect. Notably, for all of their emphasis on functionality, Menell and Corren never define function—in fact, the paper uses the terms “function,” “utility,” “utilitarian,” and “useful” more or less interchangeably to refer to the features they want to exclude from design patent protection.⁴⁴ Since the paper is animated by channeling concerns,

38. *Id.*; see 17 U.S.C. § 101 (“A ‘useful article’ is an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information.”).

39. *Varsity Brands*, 799 F.3d at 488 (quoting *Chosun Int’l, Inc. v. Chrisha Creations, Ltd.*, 413 F.3d 324, 329–30 n.3 (2d Cir. 2005), *abrogated by* *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 137 S. Ct. 1002 (2017)).

40. *Id.* at 490.

41. *Id.* at 495 (McKeague, J., dissenting).

42. *Id.*

43. In their amicus brief to the Supreme Court, Chris Buccafusco and Jeanne Fromer argued that the chevrons and other features also served the function of affecting the perception of the wearer. See Brief of Professors Christopher Buccafusco and Jeanne Fromer as Amici Curiae in Support of Petitioner, *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 137 S. Ct. 1002 (2017) (No. 15-866), 2016 WL 3971299; see also Christopher Buccafusco & Jeanne C. Fromer, *Fashion’s Function in Intellectual Property Law*, 93 NOTRE DAME L. REV. 51 (2017) (expanding on the argument).

44. See, e.g., Menell & Corren, *supra* note 1, at 1–2.

those terms appear to be shorthand for the subject matter of utility patent law, which the authors seek to exclude from design patent.⁴⁵ Menell and Corren suggest that matter can be characterized as having “technological” utility, but utility patent subject matter is not actually so straightforward.⁴⁶ One reason is that objects often look the way they do because of the laws of physics or engineering principles, and it can therefore be hard to know whether the features that produce those visual impressions should be deemed “technological.”⁴⁷

Take, for example, the Southern District of New York’s decision in *Prestige Jewelry*.⁴⁸ In that case, *Prestige* argued that the claimed design of diamond jewelry was functional because, as the designer admitted, this arrangement “performed the best” in light box refraction tests, having “the best refraction.”⁴⁹

Figure 3: Diamond Jewelry Setting in *Prestige Jewelry*

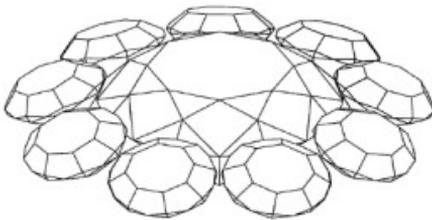


FIG. 1

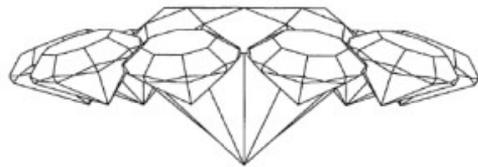


FIG. 2

The court rejected that argument, which it characterized as “incorrectly blur[ring] the distinction between ornamental and functional designs.”⁵⁰ The designer’s statements about the performance of the design “d[id] not change the fact that the ultimate purpose of the [patented] design is to have a pleasing appearance—a quintessentially ornamental purpose.”⁵¹ That was true even though “[the] inventor experiment[ed] with alternative designs or use[d]

45. *See id.* at 129–30.

46. *See generally* McKenna & Sprigman, *supra* note 5.

47. *Id.* The material in the following paragraphs is derived in part from McKenna & Sprigman, *supra* note 5, at 518.

48. *Prestige Jewelry Int’l, Inc. v. BK Jewelry HK*, No. 11-CV-2930 (S.D.N.Y. Sept. 15, 2014).

49. *Id.* at 31.

50. *Id.*

51. *Id.*

rudimentary tools and tests.”⁵² The design was “unquestionably ornamental,” according to the court, because it was “arranged solely to be pleasing to the eye.”⁵³

But even if that arrangement of diamonds is properly considered design patent subject matter because its purpose is to be pleasing to the eye, the production of that visual impression is *also* the kind of utility that makes the arrangement utility patent subject matter. The USPTO has routinely issued utility patents on precisely this sort of invention, in some cases allowing design and utility patents on the exact same design.⁵⁴ Indeed, several of the pieces of prior art the *Prestige Jewelry* court considered were utility patents that claimed nothing more than the arrangement of diamonds in a setting.⁵⁵ This is not unique to jewelry either: there are many patented inventions the relevant utility of which is some visual or psychological appeal, including a method of producing imitation grill marks on food, imitation wood flooring, and an imitation hamburger.⁵⁶ And many cases have held that “the unique inventive contribution reflected in an ornamental design can be identical to the unique inventive contribution of a mechanical process.”⁵⁷

Perhaps these kinds of inventions shouldn’t be subject to utility patent protection. But the fact that they are suggests that, as it currently operates, utility patent law is open to much more than the “technological” utility most ascribe to it. That’s a challenge if we expect design patent law to internalize utility patent law’s conception of its own subject matter. As Chris Sprigman and I previously argued, it’s hard to know what to keep *out* of design patent on channeling grounds if we aren’t clear about what belongs *in* utility patent.⁵⁸

This is certainly not to say that channeling rules aren’t important, or that functionality should be irrelevant to design patent subject matter. It’s only to

52. *Id.*

53. *Id.* at 31–32.

54. *See, e.g.*, U.S. Patent No. 7,146,827 (explaining that the claimed “mixed cut gemstone enables the appreciation of the desirable characteristics of a diamond in ways that prior art cuts do not allow.”); U.S. Design Patent No. 467,833.

55. *See* U.S. Patent No. 7,762,104.

56. *See, e.g.*, U.S. Patent No. 5,762,968 (method for producing imitation grill marks on food without using heat); U.S. Patent No. 5,899,038 (laminated flooring imitating wood); U.S. Patent No. 5,571,545 (imitation hamburger). The Federal Circuit’s predecessor found measuring cups marked with fractional cup gradations patentable subject matter because those markings helped alleviate the “mental strain” on cooks who were attempting to make fractional recipes. *Application of Miller*, 418 F.2d 1392, 1394 (C.C.P.A. 1969).

57. *Wahl v. Rexnord, Inc.*, 624 F.2d 1169, 1179 (3d Cir. 1980) (citing *Transmatic, Inc. v. Gulton Indus., Inc.*, 601 F.2d 904 (6th Cir. 1979)); *Ropat Corp. v. McGraw-Edison Co.*, 535 F.2d 378 (7th Cir. 1976); *Application of Thorington*, 418 F.2d 528, 536 (C.C.P.A. 1969).

58. *McKenna & Sprigman, supra* note 5, at 516–23.

say that functionality is not straightforward, and certainly no more straightforward than it would be to develop a positive vision of ornamentality. The Federal Circuit's reduction of ornamentality to nonfunctionality is one significant reason we see patented designs that are not ornamental in any sense that corresponds to common usage of that term.

III. FUNCTIONALITY ISN'T JUST LACK OF ALTERNATIVES

Of course, the relationship between ornamentality and functionality depends a lot on how we measure functionality. On that issue, I agree with Menell and Corren that design patent law overemphasizes alternative designs. As we have seen in the trademark context, measuring functionality by reference to alternative designs nearly always means the features will be found nonfunctional, because there are almost always alternatives. That is especially true when the relevant function is defined at a high enough level of generality.

Here it's important to emphasize that the reason courts focus on alternatives in the trademark context is that those courts believe that functionality is fundamentally concerned with competitive necessity to copy and not with channeling protection of useful features to utility patent.⁵⁹ In its decision in *In re Morton-Norwich*, which was hugely influential in trademark law before *TrafFix*⁶⁰ and still has lingering influence, the Federal Circuit's predecessor described competitive need as the “crux” of functionality.⁶¹ That way of thinking about functionality has long competed with the channeling view, and many courts—here most importantly, the Federal Circuit—continue to describe functionality in those terms.⁶²

It cannot be a coincidence that the Federal Circuit's test for functionality in the design patent context is so similar to the one articulated in *Morton-Norwich*.⁶³ Nor can it be a surprise that, having embraced the *Morton-Norwich*

59. See Mark P. McKenna, *(Dys)Functionality*, 48 HOUS. L. REV. 823, 825–26 (2011).

60. *TrafFix Devices, Inc. v. Marketing Displays, Inc.*, 532 U.S. 23 (2001).

61. *In re Morton-Norwich Prods., Inc.*, 671 F.2d 1332, 1341 (C.C.P.A. 1982).

62. See *Valu Eng'g, Inc. v. Rexnord Corp.*, 278 F.3d 1268 (Fed. Cir. 2002); see also *McAirlaids, Inc. v. Kimberly-Clark Corp.*, 756 F.3d 307 (4th Cir. 2014).

63. *Compare Berry Sterling Corp. v. Prescor Plastics, Inc.*, 122 F.3d 1452, 1456 (Fed. Cir. 1997) (“As such, alternative designs join the list of other appropriate considerations for assessing whether the patented design as a whole—its overall appearance—was dictated by functional considerations. Other appropriate considerations might include: whether the protected design represents the best design; whether alternative designs would adversely affect the utility of the specified article; whether there are any concomitant utility patents; whether the advertising touts particular features of the design as having specific utility; and whether there are any elements in the design or an overall appearance clearly not dictated by function.”), with *In re Morton-Norwich*, 671 F.2d at 1340–41 (listing the following factors for evaluating functionality in the trade dress context: (1) the existence of a utility patent disclosing the

view of functionality, in practice the Federal Circuit became obsessed with alternative designs in design patent cases, notwithstanding nominal suggestions in a few cases that other factors were also relevant.⁶⁴ If the question is whether exclusive use of a claimed feature would put competitors at a disadvantage, it's natural to ask what alternatives are available to those competitors.

We should reject a primary focus on alternative designs in the design patent context for the same reasons we should reject it in the trademark context—because that focus misunderstands the purpose of the functionality doctrine. “Functionality . . . is not simply about competitive need for product features; it is also, even primarily, intended to police the boundary between trademark and [utility] patent law,” and between design patent and utility patent, “by channeling protection of useful product features exclusively to the [utility] patent system.”⁶⁵

When functionality is understood in channeling terms, alternative designs become much less important. The question is whether the claimed features play a role in the function of the article, not whether there are other ways to achieve the function.⁶⁶ That there are other ways to achieve the function just means there are other functional designs.⁶⁷

Many of the cases Menell and Corren identify as having embraced a more rigorous functionality rule are, in my view, simply asking the functionality question in this way: do the features play a role in the function of the article?⁶⁸

utilitarian advantages of the design; (2) advertising materials in which the originator of the design touts the design's utilitarian advantages; (3) the availability to competitors of functionally equivalent designs; and (4) facts indicating that the design results in a comparatively simple or cheap method of manufacturing the product).

64. See Menell & Corren, *supra* note 1, at 82–84.

65. See McKenna, *supra* note 59, at 827–28; see also McKenna & Strandburg, *supra* note 3, at 48–51.

66. See *Eppendorf-Netheler-Hinz GmbH v. Ritter GmbH*, 289 F.3d 351, 355 (5th Cir. 2002) (“Under this traditional definition, if a product feature is ‘the reason the device works,’ then the feature is functional. The availability of alternative designs is irrelevant.” (quoting *Traffix Devices, Inc. v. Marketing Displays, Inc.*, 532 U.S. 23, 33–34 (2001))).

67. *Cf. Specialized Seating, Inc. v. Greenwich Indus., L.P.*, 616 F.3d 722, 727 (7th Cir. 2010) (“A design such as Clarin’s x-frame chair is functional not because it is the only way to do things, but because it represents one of many solutions to a problem. . . . What this says to us is that all of the designs are functional, in the sense that they represent different compromises along the axes of weight, strength, kind of material, ease of setup, ability to connect (“gang”) the chairs together for maximum seating density, and so on.”).

68. See, e.g., *Tupper Corp. v. Tilton & Cook Co.*, 113 F. Supp. 805, 805, 807 (D. Mass. 1953), *aff'd*, 209 F.2d 954 (1st Cir. 1954) (describing the “general shape and configuration” and “essential features” of the claimed design as being dictated by functional considerations);

It's notable in those cases just how conclusory the courts' judgments about the role of the claimed features were—the courts made little effort to characterize the relevant function or to explain why the features were dictated by those functions. Approaching the question at that level of abstraction allowed the courts to elide many of the hard questions about how to describe the functions of the articles.

The older cases are also notable for their focus on the role of individual elements in the overall function of the article rather than the precise shapes of the design features at issue. Those courts commonly asked whether the “general shape” of the article was dictated by functional considerations, or whether the “features” were dictated by function.⁶⁹ In evaluating those questions, courts often went feature by feature and asked merely whether the features related to the overall function of the article, abstracting away from the specific design characteristics of any of those features.⁷⁰

In contrast, more recent design patent cases tend to focus on the precise *shapes* of the design features, usually with an emphasis on the overall design (the collection of features, not the function of individual features).⁷¹ When courts consider whether the claimed design is “dictated by function,” they ask whether there are other designs that would produce that same overall function. If there are, then the design is not dictated by function. The older approach disqualifies designs when the features have a relationship to the function of the article; current doctrine disqualifies designs only when no other collection of specific design features could accomplish the same function.

Of course, a rule that considers whether design features play a role in an article's function requires a threshold: because many designs have both ornamental and functional value, the real question is *how much* of a role the

Hueter v. Compco Corp., 179 F.2d 416, 417–18 (7th Cir. 1950) (describing the role of each feature in the claimed design but not considering alternative designs).

69. See, e.g., *Tupper Corp.*, 113 F. Supp. at 805; *Jones v. Progress Indus., Inc.*, 163 F. Supp. 824, 826 (D.R.I. 1958) (describing the general shape and configuration of the plaintiff's design as “obviously one dictated by functional requirements,” with reference to the “shape, size, and contour of the visor and lens section” of the claimed design for goggles, and “the recess for the nose, the curved lens, the ventilation ports and holes, the molded lip overhanging the lens at the front of the visor, the loops for receiving the head strap, the acute angle between the head and visor section, the heads of the detachable bolts”).

70. See, e.g., *Blisscraft of Hollywood v. United Plastics Co.*, 189 F. Supp. 333, 337 (S.D.N.Y. 1960), *aff'd in part, rev'd in part sub nom. Blisscraft of Hollywood v. United Plastics Co.*, 294 F.2d 694 (2d. Cir. 1961); *Tupper Corp.*, 113 F. Supp. at 806–07; *cf. Eppendorf*, 289 F.3d at 355 (“[I]f a product feature is ‘the reason the device works,’ then the feature is functional.”) (quoting *Traffix Devices, Inc. v. Marketing Displays, Inc.*, 532 U.S. 23, 34 (2001)).

71. See, e.g., *Apple, Inc. v. Samsung Elecs., Ltd.*, 786 F.3d 983 (Fed. Cir. 2015); *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312 (Fed. Cir. 2015).

features must play relative to the function of the article in order to be disqualified. Or, put somewhat differently, what must be the relative weight of the functional and ornamental aspects of the design for it to be considered functional?

In my view, there are good reasons for design patent law's functionality threshold to be different from trademark law's. One is that the availability of design patents, with their limited duration and narrow scope, partly justifies limitations on trade dress protection for product designs.⁷² Another reason for having different thresholds is the fact modern designers often affirmatively seek to integrate form and function,⁷³ and aggressively disqualifying features that play any role in the function of an article would eliminate design patent protection for all such designs.⁷⁴

Indeed, if Menell and Corren are serious about excluding from design patent protection all designs in which ornamentality and functionality are intertwined, then they are really rejecting protection for configuration (save, perhaps, busts and statues). That would indeed make design patent seem more like a species of copyright, since copyright would extend to essentially all of the remaining design patent subject matter. But it's notable that configuration has always been design patent subject matter, and the drafters of the original design patent statute believed that form of protection filled a gap precisely because configuration was *not* copyright or trademark subject matter.

It's true that a higher functionality threshold would be problematic without other doctrinal features that limited the availability and scope of design patent rights. More specifically, allowing protection of designs that have a greater proportion of functional matter requires a nonobviousness rule that meaningfully limits eligibility for protection⁷⁵ and infringement rules that emphasize the narrow scope of design patent rights. Requiring a very high degree of similarity between the accused product and the patented design would ensure, in cases in which features have both ornamental and functional

72. *Cf.* Wal-Mart Stores, Inc. v. Samara Bros., Inc., 529 U.S. 205, 214 (2000) (noting that the availability of design patent protection for product designs ameliorates any unfairness in refusing protection for any designs that lack secondary meaning).

73. For a project currently in progress, Jessica Silbey and I have interviewed a wide range of designers to learn how they understand design practice and how they define excellent design. "Integration" is an extremely prominent theme. *See* Mark P. McKenna & Jessica Silbey, *Investigating Design* (Aug. 2, 2021) (unpublished manuscript) (on file with author).

74. That is the result for which Menell and Corren argue. *See* Menell & Corren, *supra* note 1, at 145.

75. *See* Sarah Burstein, *Visual Invention*, 16 LEWIS & CLARK L. REV. 169, 197 (2012) (criticizing the nonobviousness rule in design patent and offering suggestions for improving it).

value, that designs would be considered infringing only when they are similar in terms of their ornamental aspects.⁷⁶ Both the nonobviousness and infringement doctrines would be improved, as Menell and Corren suggest, with a renewed focus on the point of novelty—a concept courts used to employ in design patent cases precisely to draw attention to the features that made the design patentable.⁷⁷

IV. MIND THE (DISAPPEARING) GAP

Beyond the many specific doctrinal questions Menell and Corren address, their article raises the hard question of how the legal system should respond when the conditions that led to the creation of particular legal rights no longer obtain.

Design patent law was created to fill a perceived gap—to offer protection for designs that were not protected by utility patent, copyright, or trademark law. But since the time of the original statute, both copyright and trademark have expanded significantly, and both now reach many forms of design. Indeed, design patent, copyright, and trademark now frequently overlap, enabling parties to use the various forms of protection cumulatively or as substitutes.⁷⁸ So what do we do with a system that was created to fill a gap that no longer exists?

One answer—the one Menell and Corren point toward,⁷⁹ and the one that Josh Sarnoff explicitly endorses⁸⁰—is to eliminate the design patent system, or at least to alter the regime to make it much more like copyright. But that response represents a sort of copyright imperialism. Rather than accepting the expansion of copyright and eliminating design patent, we might instead reject the expansion of copyright and focus design patent on the niche it was meant to serve. Menell and Corren argue that copyright is preferable because it has better limiting doctrines, particularly in the rule of *Baker v. Selden* and the

76. See Theodore W. Foster & Bro. Co., 200 F. at 56 (“Such a patent, indeed, would cover the new shape or configuration only in its ornamental and not in its merely useful aspect, nor would it be infringed by an article securing the same merely useful result through shape or configuration, *unless so nearly the same in appearance as to come within Gorham v. White.*”) (emphasis added).

77. See Mark A. Lemley & Mark P. McKenna, *Scope*, 57 WM. & MARY L. REV. 2197, 2261–65 (2016) (explaining the problems with *Egyptian Goddess’s* elimination of the point of novelty approach).

78. See Jeanne C. Fromer & Mark P. McKenna, *Claiming Design*, 167 U. PA L. REV. 123, 193–201 (2018).

79. See Menell & Corren, *supra* note 1, at 135–38.

80. Joshua D. Sarnoff, *Design Patents Are Theft, Not Just a “Fraud on the Public,” We Need Legislation to Restore Their Repair Rights*, 36 BERKELEY TECH. L.J. 169, 171 (2021).

abstraction/filtration rules copyright uses in some contexts at the infringement stage.⁸¹ I'm not convinced.

For one thing, despite their repeated characterization of design patent as a copyright-based system and their argument for a separability doctrine in design patent law, Menell and Corren never engage with the actual law of separability in copyright. They present *Baker v. Selden* as the central copyright case—indeed they suggest that case organizes all of IP law.⁸² But most design patent cases, if they were copyright cases, would not be analyzed under *Baker v. Selden*. They would be analyzed under *Star Athletica*,⁸³ which is entirely missing from Menell and Corren's analysis. Indeed, Menell and Corren cite *Star Athletica* only in a footnote and only for the purpose of criticizing scholars (and Justice Breyer) for suggesting that design patent law protects designs with functional characteristics.⁸⁴ There's some irony here, since, for all of design patent law's warts, copyright's separability doctrine is notoriously problematic, and *Star Athletica* has been roundly criticized.⁸⁵ The most trenchant criticisms—

81. See Menell & Corren, *supra* note 1, at 119, 126.

82. Even assuming that suggestion is not meant to be taken literally but is instead a claim that the idea of *Baker v. Selden* (specifically its notion that copyright cannot be used to protect the sorts of things utility patent law protects) animates limitations in all the areas of IP, Menell and Corren's invocation of *Baker v. Selden* misses important differences in the way trademark law has traditionally treated unpatented designs. Until the latter half of the twentieth century, product design was categorically excluded as trademark subject matter. Nevertheless, narrower unfair competition remedies were often available when the defendant's conduct risked passing off. Those remedies typically were limited to labeling or packaging requirements and did not allow the plaintiff to control use of the design as such. Modern law now uses functionality doctrine as a substitute for those former rules, having assimilated unfair competition into trademark law proper. For a more complete description of this evolution, see Caitlin Canahai & Mark P. McKenna, *The Case Against Product Configuration Trade Dress*, in RESEARCH HANDBOOK ON TRADEMARK LAW REFORM 137 (Graeme Dinwoodie & Mark Janis eds., 2021).

83. *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 137 S. Ct. 1002, 1002 (2017).

84. Menell & Corren, *supra* note 1, at 73 n.266.

85. See, e.g., Rebecca Tushnet, *Shoveling a Path After Star Athletica*, 66 UCLA L. REV. 1216, 1218 (2019) ("The best I can say about the case is that my copyright students' situation has improved: Instead of having to learn up to nine incompatible approaches to copyright protection for useful articles, as in the past, they only have to learn one that's self-contradictory."); Barton Beebe, *Star Athletica and the Problem of Panaesthetics*, 9 U.C. IRVINE L. REV. 275 (2019); *From Shovels to Jerseys: A Guide to Apply Star Athletica v. Varsity Brands*, 166 U. PA. L. REV. ONLINE (2017), https://scholarship.law.upenn.edu/penn_law_review_online/vol166/iss2/; Mark P. McKenna, *Knowing Separability When We See It*, 166 U. PA. L. REV. ONLINE 127 (2017).

including from Menell himself⁸⁶—take *Star Athletica* to task for enabling copyright protection for functional features.⁸⁷

Nor is it clear that we should prefer copyright's infringement rules. As Menell and Corren note, some copyright cases do indeed use filtration to focus protection on expressive features.⁸⁸ That approach is especially popular when parties claim copyright protection for software or other highly functional works. But many other cases, especially those involving visual works, embrace a “total look and feel” approach.⁸⁹ There's some uncertainty about which of those approaches would predominate in design cases, but there's some reason to think it would be the latter, especially given the difficulties determining which functions are relevant and the common exhortations to consider designs as a whole. The “total look and feel” approach would very likely result in much broader protection for designs than we see in the design patent context.

Design patent law has many challenges, and Menell and Corren very helpfully highlight its deficient enforcement of the ornamentality requirement. But given copyright law's approach to useful articles and its looser infringement standard, copyright isn't obviously a superior framework for dealing with design. And that's to say nothing of duration, which surely doesn't argue for copyright over design patent.⁹⁰ The best approach here may well be to address design patent's flaws directly, particularly by developing a more robust concept of ornamentality that doesn't reduce to nonfunctionality and that doesn't measure nonfunctionality solely by reference to alternative designs.

86. See Peter S. Menell & Daniel Yablon, *Star Athletica's Fissure in the Intellectual Property Functionality Landscape*, 166 U. PA. L. REV. ONLINE 137 (2017).

87. *Id.* at 139 (“Taken together, the majority and dissenting opinions threaten substantial harm to the intellectual property system by recognizing protection for functionality outside of the strictures of *utility* patent law.”); see also Christopher Buccafusco & Jeanne C. Fromer, *Forgetting Functionality*, 166 U. PA. L. REV. ONLINE 119, 119 (2017) (arguing that *Star Athletica* “makes it substantially easier for copyright claimants to obtain protection for utilitarian aspects of designs, contrary to copyright statute and policy”).

88. See Menell & Corren, *supra* note 1, at 37 (discussing the seminal case establishing copyright's use of filtration, *Nichols v. Universal Studios*, 45 F.2d 119 (2d. Cir. 1930)).

89. See Lemley & McKenna, *supra* note 77, at 2235.

90. For works created on or after January 1, 1978, copyright endures for the life of the author plus 70 years, or for anonymous works, pseudonymous works, and works made for hire, copyright endures for 95 years from year of first publication or 120 years from the year of creation (whichever expires first). 17 U.S.C. §§ 302(a), (c). Design patents last 15 years from the date of issue. 35 U.S.C. § 173.

ALL OR NOTHING AT ALL: DESIGN PATENT'S ORNAMENTALITY REQUIREMENT AND THE FAILINGS OF FEATURE FILTRATION

Christopher V. Carani[†]

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† Christopher V. Carani is a partner and shareholder at the Chicago-based IP law firm of McAndrews, Held & Malloy, Ltd., practicing in all areas of IP with particular emphasis on design law, which focuses on the protection of the appearance of products using a strategic combination of design patents, utility patents, trade dress, and copyrights. Chris has extensive experience litigating design law cases, including high profile matters before U.S. district courts, the Federal Circuit, the International Trade Commission, and U.S. Supreme Court. Chris is on the faculty at Northwestern University School of Law teaching IP Fundamentals. Prior to joining McAndrews in 1995, Chris served as a law clerk to the Honorable Rebecca R. Pallmeyer at the U.S. District Court for the Northern District of Illinois. Chris earned his B.S. in Engineering from Marquette University and J.D. from University of Chicago. He is licensed to practice before the United States Patent and Trademark Office.

I. INTRODUCTION

“Functionality” is a general prohibition grossly applied across the field of design intellectual property (“Design IP”), which encompasses design patents, trade dress, and copyrights. Generally speaking, the functionality bar is viewed as a way to prevent Design IP from being used to secure a right to exclude others from functional ideas or concepts, which is strictly the province of utility patents. In design patent jurisprudence that prohibition is tied to the requirement of ornamentality; in copyright law, it is tied to the merger doctrine; and in trade dress law, it is tied to the non-functionality requirement. While the term “functionality” is often used loosely in each of the three Design IP regimes, the policies and underpinnings for the respective doctrines and requirements are quite different, and it is a mistake to assume that the functionality doctrines of each regime are interchangeable between the different branches of Design IP. Indeed, the rights afforded by each regime are different, carrying different terms, qualifications, and processes for protection, tests for infringement, and available remedies.

In design patent jurisprudence, the notion of functionality has arisen in two distinct contexts—one proper and one not. The proper context is as a matter of statutory compliance with 35 U.S.C. § 171, the provision in the Patent Act setting forth the eligible subject matter for design patents. As will be discussed herein, § 171 does not use the term “non-functional,” but instead only requires that the design be “ornamental.”¹ The statute asks whether the overall appearance of the claimed design as a whole is “ornamental” and also whether the overall appearance of the claimed design is “novel” and “original.”² Importantly, the statute is directed at the “design” as a whole, not at individual portions thereof. The statutory requirement of ornamentality aligns with the policy goal of promoting the decorative arts, but also safeguards against design patent protection being used to monopolize functional ideas.

The second context regards ill-advised attempts to exclude individual visual features (i.e., portions, aspects, elements, parts, etc.) of an overall claimed design. Attempts to neatly divvy up designs into ornamental and functional bits is reminiscent of misguided and prohibited attempts to divide designs into novel and non-novel bits, and even significant and insignificant bits. But designs cannot, and should not, be dissected into individual portions like this. A design is an amalgam—the net visual result of all of its visual parts. Filtering out visual elements leads to unwanted and unintended consequences such as broadening the design patent claim beyond that which the patentee

1. *See infra* Part II.

2. *See id.*

created and that which the U.S. Patent and Trademark Office (USPTO) examined and granted. All visual portions of a claimed design, even those with appearances that are functionally driven, have a visual relationship with the other constituent parts and ultimately contribute to the visual whole of the claimed design. Notably 35 U.S.C. § 171 (and TRIPS Article 25(1)) are not directed at screening functionality at the individual feature level;³ rather the inquiry is rightfully, and solely, focused on the “design” as a whole. Further, there is no principled policy reason to gut out individual visual portions from the overall claimed design. There are no independent rights afforded to individual visual portions of an overall claimed design; and for this reason, it is impossible for the appearance of an individual portion, even if purely driven by functional consideration, to monopolize a functional idea. But the concern over the inclusion of individual features having appearances that are driven partially, or even wholly, by functional consideration is often the cited reasoning for engaging in the wrongful filtration practice. It cannot be overemphasized that the “right to exclude” afforded by a design patent claim extends, and only extends, to the design *as a whole*, as claimed; the design patent claim does not provide any independent protection for individual visual features thereof. Accordingly, no individual visual features of the overall claim should be filtered out. A design patent claim rises and falls on its overall appearance. All or nothing at all.

Attempts to filter out functional features are not without a history in Federal Circuit case law.⁴ After bottoming out in 2010 with its filtration-heavy opinion in *Richardson v. Stanley Works, Inc.*,⁵ the Federal Circuit has bounced back with three forcefully written opinions rejecting feature filtration: *Apple, Inc. v. Samsung Electronics Co.*,⁶ *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*,⁷ and *Sport Dimension, Inc. v. Coleman Co.*⁸ *Apple*, *Ethicon* and *Sports Dimension* have all made

3. *See id.*

4. *See generally* Jason J. Du Mont & Mark D. Janis, *Functionality in Design Protection Systems*, 19 J. INTEL. PROP. L. 261 (2012); Frederick L. Medlin, *Functionality of Individual Features in Design Patents: A New Role After Egyptian Goddess*, 77 PAT. TRADEMARK & COPYRIGHT J. 139 (2008); Perry J. Saidman, *Functionality and Design Patent Validity and Infringement*, 91 J. PAT. & TRADEMARK OFF. SOC'Y 313 (2009); Perry J. Saidman & John M. Hintz, *The Doctrine of Functionality in Design Patent Cases*, 19 U. BALT. L. REV. 352 (1989); Robert G. Oake, Jr., *Design Patent Perspective: Understanding Functionality in Design Patent Law Part I*, INTEL. PROP. TODAY (Oct. 2011); *see DePaoli v. Daisy Mfg. Co.*, No. 07-cv-11778-DPW, 2009 U.S. Dist. LEXIS 62057, at *8–9 (D. Mass. July 14, 2009).

5. 597 F.3d 1288 (Fed. Cir. 2010).

6. 786 F.3d 983 (Fed. Cir. 2015), *cert. granted in part*, 136 S. Ct. 1453 (2016), *rev'd and remanded*, 137 S. Ct. 429 (2016).

7. 796 F.3d 1312 (Fed. Cir. 2015).

8. 820 F.3d 1316 (Fed. Cir. 2016).

clear that claimed visual features will not be excluded from a design's scope of protection, even if a feature has an appearance that is driven solely by function.⁹ Despite the Federal Circuit's recent seemingly clear jurisprudence, the urge to filter continues to percolate, including in district courts¹⁰ and

9. Although the Federal Circuit has made progress in clarifying the proper approach to determining the scope of protection, there is still more work to be done. See Jason J. Du Mont & Mark D. Janis, *Functionality in U.S. Design Patent & Community Design Law*, in RESEARCH HANDBOOK ON DESIGN LAW (forthcoming) (manuscript at 27), <https://ssrn.com/abstract=2773070> (“While *Ethicon* and *Sport Dimension* seem likely to become the foundation for a new line of analysis on scope functionality, the Federal Circuit still has much work to do in refining both its validity and scope functionality tests[.]”).

10. Despite this clear guidance from the Federal Circuit in the *Apple*, *Ethicon*, and *Sports Dimension* decisions, district courts continue to analyze “functionality” inconsistently. Many district courts properly continue to decline to “factor out” functional aspects of a design. See, e.g., *SZ DJI Tech. Co. v. Autel Robotics USA LLC*, No. CV 16-706-LPS, 2019 WL 6840357, at *3 (D. Del. Dec. 16, 2019) (“The D’514 Patent does not attempt to claim functional elements; rather it claims a design that happens to have function. The design is not governed solely by function, as the design is not the only possible form of the article that could perform its function.”); *Graphic Packaging Int’l, LLC v. Inline Packaging, LLC*, No. 15CV03476ECTLIB, 2019 WL 4786148, at *5 (D. Minn. Oct. 1, 2019); *Lanard Toys Ltd. v. Toys “R” Us-Delaware, Inc.*, No. 3:15-CV-849-J-34PDB, 2019 WL 1304290, at *12 (M.D. Fla. Mar. 21, 2019); *Daimler AG v. A-Z Wheels LLC*, 334 F. Supp. 3d 1087, 1102 (S.D. Cal. 2018); *Hafco Foundry & Mach. Co., Inc. v. GMS Mine Repair & Maint., Inc.*, No. CV 1:15-16143, 2018 WL 2970754, at *2–3 (S.D.W. Va. June 13, 2018) (“[A] design may embody functional features and still be patentable. . . . Based on the foregoing, GMS did not meet its burden to show by clear and convincing evidence that the ’684 patent is dictated by functional considerations.”), *aff’d on other grounds and remanded*, 953 F.3d 745 (Fed. Cir. 2020); *Magnolia & Vine Inc. v. Tapestry, Inc.*, No. 17-CV-4382 (JNE/DTS), 2018 WL 2208316, at *3 (D. Minn. May 14, 2018) (“Nothing in Magnolia and Vine’s amended complaint indicates that the stringent standard for invalidating a design patent due to functionality is satisfied with regard to the asserted design patents.”); *HFA, Inc. v. Trinidad/Benham Corp.*, No. 6:17-CV-00343-RWS, 2018 WL 1210880, at *4 (E.D. Tex. Mar. 7, 2018) (“While the nested pans serve a functional purpose, that does not deem them excluded from the claim, particularly whereas here they are also ornamental in nature.”); *Auto. Body Parts Ass’n v. Ford Glob. Techs., LLC*, 293 F. Supp. 3d 690, 704 (E.D. Mich. 2018), *aff’d*, 930 F.3d 1314 (Fed. Cir. 2019), *cert. denied*, No. 19-1002, 2020 WL 1124449 (U.S. Mar. 9, 2020); *Crocs, Inc. v. Effervescent, Inc.*, No. 06-CV-00605-PAB-KMT, 2017 WL 2787589, at *14 (D. Colo. June 27, 2017) (“The Court finds that Dawgs’ proposed construction, which seeks to exclude ‘the existence of a heel strap and the connectors that attach the heel strap to the upper,’ would improperly eliminate features that contribute to the ornamental design of the ’789 Patent.” (internal citation omitted)); *Fecon, Inc. v. King Kong Tools, LLC*, No. 1:16-CV-1137, 2017 WL 4869000, at *5 n.5 (S.D. Ohio June 27, 2017); *Skechers U.S.A., Inc. v. Eliya, Inc.*, No. CV1602820SJOAGR, 2017 WL 3449594, at *6 (C.D. Cal. Mar. 14, 2017); *Equalia, LLC v. Kushgo LLC*, No. 216CV02851RFBCWH, 2017 WL 114084, at *7 (D. Nev. Jan. 11, 2017) (“As a preliminary matter, the Court notes that however the function is defined . . . the Court finds that the overall design of the board is not dictated by its function.”). However, a troubling number of district courts are still tempted to engage in the legal error of entirely factoring out functional elements. See, e.g., *Covves, LLC v. Dillard’s, Inc.*, No. 218CV08518RGKAFM, 2019 WL 8227455, at *6

scholarship.¹¹ In this Article, I set out to: (1) generate a better awareness of the proper and limited role of functionality in design patent jurisprudence, namely, statutory compliance with § 171; and (2) explain the wrongheadedness of filtering out individual visual features of a design patent claim, whether on grounds of functionality, novelty, or otherwise.

II. THE REQUIREMENTS OF 35 U.S.C. § 171 PERTAIN TO THE CLAIMED DESIGN AS A WHOLE, NOT INDIVIDUAL FEATURES THEREOF

The functionality inquiry for design patents is limited to, and derived from, the need for statutory compliance with the governing statute for design patents, which reads:

§ 171: Whoever invents any new, original and *ornamental* design for an article of manufacture may obtain a patent therefor, subject to the conditions and requirements of this title.¹²

To begin, it is worth noting that the statute does not impose a “non-functionality” requirement. Instead, the statute sets forth a positive requirement that the design be “ornamental.” By phrasing it this way, the statute does not require that the design for an article of manufacture be devoid of functionality or any functional aspects. Like “usefulness” for utility patents in 35 U.S.C. § 101, the “ornamental” requirement in § 171 is a minimal

(C.D. Cal. Dec. 20, 2019) (“[T]he Court finds that the innermost ring of the D’370 patent is a functional rather than ornamental feature. The Court therefore construes the D’370 patent’s claim as the ornamental design for an inflatable beverage holder, as shown in figures 1 through 6 of the D’370 patent, excluding the inner ring shape.”); *Static Media LLC v. Leader Assocs. LLC*, 395 F. Supp. 3d 982, 995 (W.D. Wis. 2019); *Kao v. Snow Monster Inc.*, No. CV1708934RSLGJSX, 2019 WL 2164192, at *3 (C.D. Cal. May 16, 2019) (“[A] design patent infringement analysis should be construed to only the ornamentation of the product and not to the functional features.”); *Artskills, Inc. v. Royal Consumer Prod., LLC*, No. 3:17-CV-1552 (VAB), 2019 WL 1930751, at *17 (D. Conn. May 1, 2019); *Dyson, Inc. v. SharkNinja Operating LLC*, No. 14-CV-779, 2018 WL 1906105, at *6 (N.D. Ill. Mar. 29, 2018), *appeal dismissed*, No. 18-1915, 2018 WL 5733514 (Fed. Cir. Aug. 1, 2018); *Boiling Point Grp., Inc. v. Fong Ware Co.*, No. 216CV01672RGKJEM, 2017 WL 2930838, at *3 (C.D. Cal. Apr. 27, 2017) (“[T]he Court construes the claim . . . ‘excluding the functional aspects of the frustoconical bowl and of the prongs around the rim thereof to hold the hot pot in place, and of openings to allow air flow.’”); *Snap-on Inc. v. Harbor Freight Tools USA, Inc.*, No. 16-C-1265, 2017 WL 44833, at *3 (E.D. Wis. Jan. 4, 2017) (“I will use claim construction to ‘factor out the functional aspects’ of the design.” (quoting *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1293 (Fed. Cir. 2010))).

11. See, e.g., Peter S. Menell & Ella Corren, *Design Patent Law’s Identity Crisis*, 36 BERKELEY TECH. L.J. 1 (2021); Christopher Buccafusco, Mark A. Lemley & Jonathan S. Masur, *Intelligent Design*, 68 DUKE L.J. 75 (2018); Sarah Burstein, *Intelligent Design & Egyptian Goddess: A Response to Professors Buccafusco, Lemley & Masur*, 68 DUKE L.J. ONLINE 94 (2019).

12. 35 U.S.C. § 171 (emphasis added).

gatekeeper requirement to ensure that the policy goals of each of these two branches of patent law are met, respectively.

Feature filtration finds no support in the plain language of § 171. The statute only requires that the “design” be “new, original and ornamental.”¹³ The statute does not require that *individual features* of a design meet those requirements. This makes sense as the right afforded by a design patent is limited to the overall appearance of the claimed design, not individual portions thereof. This holistic approach is consistent with other tests in design patent jurisprudence, including those for infringement,¹⁴ novelty, non-obviousness, indefiniteness, and written description; the *overall appearance*¹⁵ of the claimed design is all that matters.¹⁶

13. Notably, the sole inquiry of § 171, which is directed at the design, and not features of the design, is consistent with the design functionality provision of TRIPS. Article 25(1) of TRIPS states the following: “Members may provide that such protection shall not extend to designs dictated essentially by technical or functional considerations.” Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, art. 25(1), 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994) (as amended on Jan. 23, 2017).

14. *See, e.g.,* *Crocs, Inc. v. Int’l Trade Comm’n*, 598 F.3d 1294, 1303 (Fed. Cir. 2010) (“[T]his court will uphold a finding of infringement. In other words, the deception that arises is a result of the similarities in the overall design, not of similarities in ornamental features in isolation. The ordinary observer test applies to the patented design in its entirety, as it is claimed.” (citing *Braun, Inc. v. Dynamics Corp. of Am.*, 975 F.2d 815, 820 (Fed. Cir. 1992)) (internal quotation marks omitted)). Contrast this holistic approach with copyright law where, for example, there can be infringement when only one chapter of a twenty-chapter book is copied.

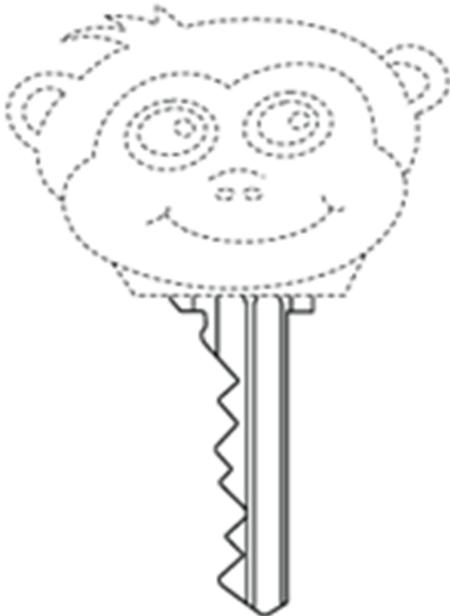
15. Note that when I refer to the design’s overall appearance, I am referring to the overall appearance of the claimed design, not the overall appearance of the entire product. Further, when I am referring to a design’s features or elements, I am referring to visual features and elements, not abstract underlying qualities of the article of manufacture to which the design is applied.

16. *See, e.g.,* *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123 (Fed. Cir. 1993) (“However, the utility of each of the various elements that comprise the design is not the relevant inquiry with respect to a design patent. In determining whether a design is primarily functional or primarily ornamental the claimed design is viewed in its entirety, for the ultimate question is not the functional or decorative aspect of each separate feature, but the overall appearance of the article, in determining whether the claimed design is dictated by the utilitarian purpose of the article.”).

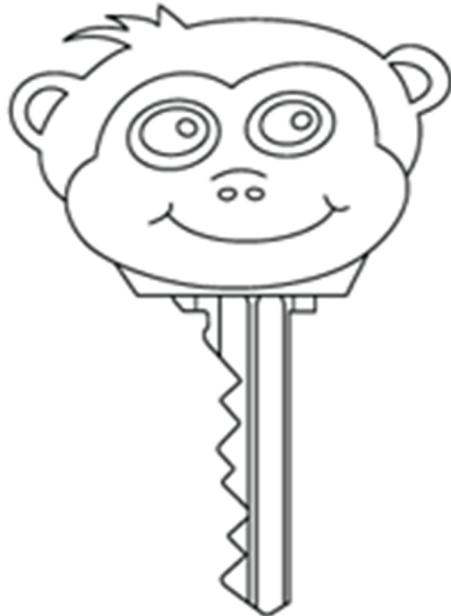
III. A DESIGN PATENT CLAIM PROVIDES NO INDEPENDENT PROTECTION FOR INDIVIDUAL VISUAL FEATURES THEREOF, EVEN IF PURELY FUNCTIONAL, PRESENTS NO LEGITIMATE MONOPOLY CONCERN

The justification for feature filtration is often premised on a misguided fear that, unless the feature is filtered out, the design patentee will be granted the right to exclude others from using that individual feature. In other words, the design patentee will possess a monopoly over the individual functional feature. If this were possible, the concern posited by proponents of feature filtration would be accurate. But design patents do not provide independent protection for individual portions of the claimed design. The right to exclude provided by a design patent only regards the overall appearance of the claimed design. As a result, there can be no legitimate monopoly concerns at the individual feature level. Of course, if the claim is directed at only a portion of the article of manufacture with an appearance dictated by function, then the claim as a whole is invalid for lacking ornamentality. But when the claimed design includes portions that are not driven solely by function, monopoly concerns are eliminated. A simple hypothetical illustrates this point.

Figure 1: Monkey Key Example



Example 1.1



Example 1.2

In Example 1.1 of Figure 1, the key head is disclaimed and only the key blade is claimed. In Example 1.2 of Figure 1, the entire key is claimed including its key head and key blade. The claimed design of Example 1.1 would not be deemed ornamental while the claimed design of Example 1.2 would be. The claimed design of Example 1.1, which is directed at just the key blade, runs the risk of monopolizing the functional mating relationship between the key blade shape and its corresponding keyhole. Example 1.2, on the other hand, presents no monopoly concern over that functional relationship; the design patent of Example 1.2 claims the appearance of the key blade *with* the key head. The protection for the key blade of Example 1.2 is always tethered to, and limited by, the key blade's relationship with the claimed key head.

The plain language of § 171 rightly regards only the design as a whole; it does not provide support for feature filtration.

IV. FEATURE FILTRATION IS COUNTER TO THE BEDROCK PRINCIPLE THAT DESIGN PATENTS PROTECT THE OVERALL APPEARANCE OF A CLAIMED DESIGN

A fallacy of the feature filtration approach is that visual features reside in isolation and thus can be surgically excised from the claimed design. To the contrary, the visual appearance of every feature, even those with appearances that are driven partly or exclusively by function, visually impacts and interacts with the remainder of the design. The “controlling consideration” of a design patent claim is the overall appearance, including the relative and spatial relationships of each and every solid line in the claim. A design patent protects the overall effect of all of the depicted design elements, whether such elements are new or old, functional or ornamental, significant or insignificant.¹⁷ Because it is the overall appearance that is protected, the traits and substance of any individual elements are irrelevant. As an overarching theme, design patent discourse should move away from element-by-element utility patent speak and refocus on the actual protected right—the overall appearance of the claimed design. As the U.S. Court of Customs and Patent Appeals succinctly stated:

17. See *Int'l Seaway Trading Corp. v. Walgreens Corp.*, 589 F.3d 1233, 1246 (Fed. Cir. 2009) (Clevenger, J., dissenting) (criticizing the majority for its “dissection of designs into component parts,” namely “significant” and “insignificant” elements, and noting that such dissections “prohibit assessment of designs as a whole, in violation of long-standing law, starting with *Gorham*”).

“A design is a *unitary thing* and *all of its portions are material* in that they contribute to the appearance which constitutes the design.”¹⁸

That a particular portion of an overall claimed design has an appearance that is driven by function, even if exclusively driven by function, should not matter. Protection extends to the entire overall appearance (including all contributing elements), so long as the *overall appearance* is not purely functional (i.e., “ornamental”). Indeed, the combination of two functional elements, even two purely functional elements, can yield an ornamental design; ornamentality can reside in the spatial relationships of the elements, the relative sizes of the elements, etc. Whether speaking of infringement or validity, what counts in design patent law is the *overall appearance* of the claimed design. The feature filtration approach, by removing certain visual elements of the whole, runs afoul of this principle.

Feature filtration does not only affect the infringement analysis. As we know from the more developed utility patent case law, it is axiomatic that the same claim construction that is used for infringement also must be used for validity.¹⁹ You cannot exclude aspects of a claimed design when conducting an infringement analysis and then in the next breath include the features when assessing validity. In any event, feature filtration should not be used in either context.

While visual features should not be filtered out, it is proper to instruct the factfinder that design protection is directed to the overall appearance of the claimed design and further that such protection does not extend to any abstract, functional attributes, concepts, or characteristics embodied in the article of manufacture to which the claimed design is applied. When employed incorrectly, instead of excepting non-visual functional attributes, concepts, or characteristics from protection, courts often use claim construction to coarsely lop off *visual* features, elements, and portions from the claimed design that are considered “functional.”²⁰ The correct approach maintains the sanctity of the

18. *In re Blum*, 374 F.2d 904, 907 (C.C.P.A. 1967) (emphasis added); *see also* *Elmer v. ICC Fabricating, Inc.*, 67 F.3d 1571, 1577 (Fed. Cir. 1995) (holding that all solid lines shown in design patent drawings form part of the claimed design).

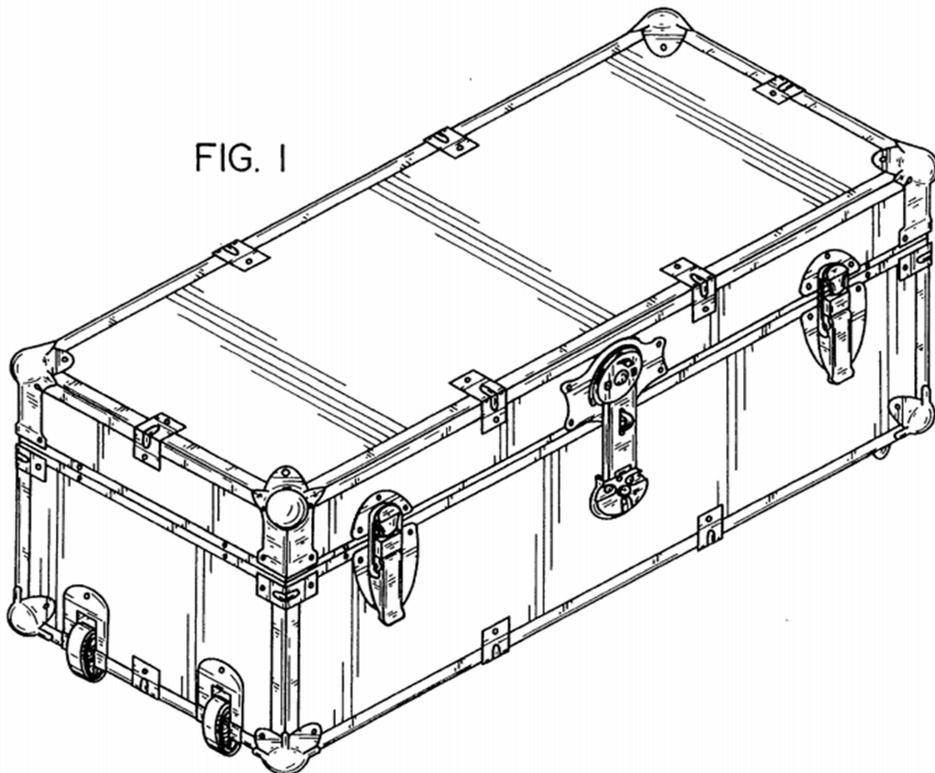
19. *See, e.g.*, *Source Search Techs., LLC v. LendingTree, LLC*, 588 F.3d 1063, 1075 (Fed. Cir. 2009) (“As this court has repeatedly instructed in the past, ‘[i]t is axiomatic that claims are construed the same way for both invalidity and infringement.’ ” (quoting *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003))).

20. *See, e.g.*, *Great Neck Saw Mfg. v. Star Asia U.S.A. LLC*, 727 F. Supp. 2d 1038 (W.D. Wash. July 23, 2010) (“Given its functional nature . . . th[is] blade lock means is not entitled to design protection”); *see also* *Boiling Point Grp., Inc. v. Fong Ware Co.*, 2017 U.S. Dist. LEXIS 171234 (C.D. Cal. Apr. 27, 2017) (excluding from its design patent claim construction the shape of the frustoconical bowl and prongs for a hot pot holder).

claimed design; the incorrect approach corrupts it. No attempt should be made to factor out visual features, elements, and portions of a claimed ornamental whole.

By way of example, take the trunk shown below in Figure 2 that includes a lock to secure the trunk's lid.²¹ As a matter of claim construction, the fact that the trunk is lockable (i.e., a functional attribute) should be wholly irrelevant to the design patent claim's scope of protection.

Figure 2: Trunk Example



But while this functional attribute of the trunk should be of no moment, the lock's depicted shape, size, and spatial relationship as it relates to the remainder of the trunk is claimed and thus part of the design's scope of protection. This should be true even if the lock's visual appearance were purely functional (which it is clearly not) because the depicted lock is but a portion of

21. U.S. Patent No. D351,502, fig. 1 (filed May 4, 1993).

an ornamental claimed whole.²² Regardless of whether the lock is functional or even purely functional, no attempt should be made to dissect out the appearance of the lock. Notably, with respect to utility patent claims, no effort is undertaken to identify and dissect out ornamental elements.²³ The same should be true with respect to design patents and functional elements—no effort should be made to identify and dissect out any functional elements. In both contexts, the patent protects the overall claim as issued, not the claim’s constituent elements in isolation.²⁴

Design patent claim construction methodology that purports to separate functional and ornamental elements of the overall claimed design is wrongheaded. Like the now defunct point of novelty approach (which sought to separate out new and old elements),²⁵ the feature filtration approach (which seeks to separate out ornamental and functional elements) conflicts with the

22. *See* *Good Sportsman Mktg. LLC v. Li & Fung Ltd.*, No. 6:07-cv-395, 2010 U.S. Dist. LEXIS 65458 at *10 (E.D. Tex. June 29, 2010) (“The utility of individual elements is irrelevant to the question of functionality, as it is the design in its entirety that provides the basis for the patent.”).

23. Consider a utility patent claim directed at a resealable container where, among other things, the base is claimed to be cylindrical and the lid frustoconical. While the combination of the claimed shapes of the base and lid yield an ornamental appearance, no attempt is made in the utility patent context to factor out these constituent elements, regardless as to whether they are ornamental or purely ornamental. The same should hold true for design patent claim construction as it related to functional or purely functional elements.

24. For examples where the courts fell into the feature filtration trap, see, for example, *Poly-America, L.P. v. API Indus., Inc.*, No. 13-693-SLR, 2014 U.S. Dist. LEXIS 49618, at *3 (D. Del. Apr. 10, 2014) (“[W]here a design contains both ornamental and functional features, it is proper to separate the functional and ornamental aspects because the scope of the design claim must be construed in order to identify the non-functional aspects of the design as shown in the patent. . . . [T]o the extent the . . . features identified above are considered functional, they should not be considered design elements that would be observed by the ordinary observer.” (internal quotation marks omitted)); *Keurig, Inc. v. JBR, Inc.*, No. 11-11941-FDS, 2013 U.S. Dist. LEXIS 73845, at *22 (D. Mass. May 24, 2013) (dissecting out a “functional aspect of the patented design” and concluding that it “cannot be considered in the [infringement] comparison”); *Safco Prods. Co. v. Welcom Prods., Inc.*, 799 F. Supp. 2d 967, 977 (D. Minn. 2011) (articulating list of ornamental features); *Mag Instrument, Inc. v. JS Prods., Inc.*, 595 F. Supp. 2d 1102, 1108 (C.D. Cal. 2008) (“Assuming, for the sake of argument, that Plaintiff’s [patents] contain both functional and non-functional elements, the Court, in the usual course of issuing a claim construction order, will construe the challenged claims to identify the non-functional aspects of the design as shown in the patent.” (internal quotation marks omitted)); *Hsin Ten Enter. USA, Inc. v. Clark Enters.*, 149 F. Supp. 2d 60, 64–66 (S.D.N.Y. 2001) (making a “determination of whether each element of the . . . patent is functional or non-functional”); *Butler v. Balkamp, Inc.*, 2014 U.S. Dist. LEXIS 122464, at *4–5 (S.D. Ind. Sept. 3, 2014) (“[T]he ’646 patent does not protect either the front or rear square drives of the tool handle because those aspects of the design are purely functional.”)

25. *See* *Egyptian Goddess v. Swisa, Inc.*, 543 F.3d 665 (Fed. Cir. 2008) (abrogating the point of novelty test).

tenet that a design patent protects the overall appearance of the claimed design and is fraught with logistical problems. Instead, claim construction functionality concerns could be addressed with an instruction to the fact-finder (whether judge or jury) that design patents only protect the appearance of the overall design depicted in the drawings and not any functional attributes, purposes, or characteristics embodied in the claimed design.

V. FEATURE FILTRATION LEADS TO AN UNWANTED BROADENING OF THE DESIGN PATENT CLAIM THEREBY UNDERMINING THE STATUTORY PRESUMPTION OF VALIDITY AND PUBLIC NOTICE FUNCTION OF PATENT CLAIMS

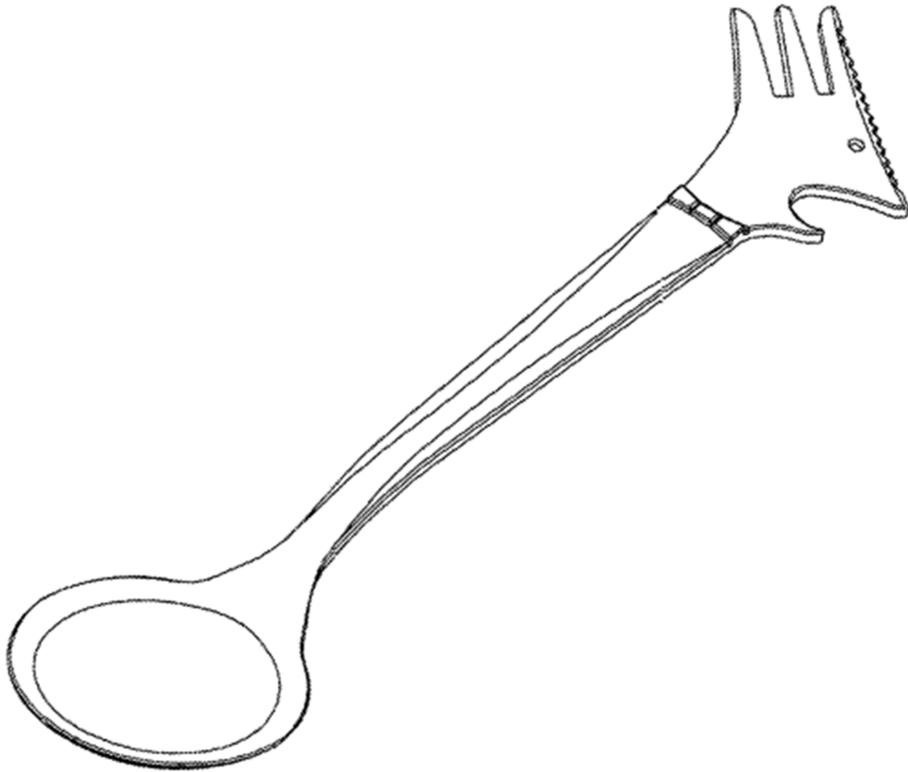
Feature filtration undermines the validity of design patents and also hinders the requisite public notice function of patent claims. Once a design patent application emerges from USPTO examination, an issued design patent enjoys a presumption of validity, just like any other patent.²⁶ The USPTO requires that patent claims be disclosed and described with a high level of certainty so that the public can understand the metes and bounds of the claims with reasonably certainty. Feature filtration undermines that important public notice function by fundamentally changing the scope of the claimed design after issuance, meaning the public can no longer rely on the claim as made by the designer and approved by the USPTO.

As an initial matter, at the USPTO, the patentability determination for a claimed design is premised solely on the *overall appearance* of the depicted design.²⁷ Yet, the presumption of validity and its underpinnings easily fall apart under the feature filtration approach because a judicially construed claim (with portions of the whole “factored out”) can be *fundamentally* different from the claim examined and issued by the USPTO. This conflict can be illustrated with a simple example.

26. See 35 U.S.C. § 282.

27. See U.S. PAT. & TRADEMARK OFF., MANUAL OF PATENT EXAMINING PROCEDURE § 1503.02 (9th ed. June 2020) (“When the inconsistencies are of such magnitude that the *overall appearance* of the design is unclear, the claim should be rejected under 35 U.S.C. 112(a) and (b)” (emphasis added)); *id.* § 1504.01(c) (“[O]rnamamentality must be based on the *entire design*” (emphasis added)); *id.* § 1504.03 (“In determining patentability under 35 U.S.C. 103, it is the *overall appearance* of the design that must be considered.” (emphasis added)).

Figure 3: Spork Example



As shown in Figure 3 (above), a designer created and secured a design patent on the overall appearance of the eating utensil as shown above.²⁸ Like most industrial design, the net visual appearance is driven by both aesthetic and utilitarian considerations. Some elements are driven mainly by function, others by aesthetics, and still others by a bit of both. While the utensil, an article of manufacture, combines various functionalities, including a spoon, a fork, a knife, and a can opener, care was given to creating the overall visual appearance of the item—the *tout ensemble*.

During prosecution, the USPTO examined the overall appearance of the design for compliance with § 171, including the ornamentality requirement. An ornamentality challenge under § 171 would most likely (and rightfully) fail as the overall appearance of the design cannot be said to be dictated by function alone; it is not hard to imagine other appearances for a utensil with the same or similar functionality. During claim construction under the feature filtration approach,

28. See U.S. Patent No. D876,907, fig. 1 (filed Nov. 13, 2018).

however, several visual elements of the overall claim would be excised as being functional, including at least (1) the bowl of the spoon, (2) the tines of the fork, (3) the serrated edge of the knife, and (4) the can opener mouth. Filtration would leave behind a generic claim for only the handle, detached and isolated from the remainder of the utensil. Feature filtration leads to an unwanted, post hoc, *broadening* of the design patent claim.

Further, not only is this “filtered” claim scope not what the designer originally designed, it is not what the USPTO examined and granted. Is just the remaining handle itself novel? Nonobvious? Ornamental? It no longer makes sense to offer the presumption of validity once the claim is construed in a manner that renders it as having so little resemblance to the claim that was before the USPTO. This potential disparity in claim scope irreconcilably undermines the presumption of validity and its underpinnings. For this reason alone, the feature filtration approach should not be adopted.

It is true that filtration has been used in the context of copyright infringement claims, albeit with limited success and great confusion. But this does not provide reason for importing this practice into design patent law because there are fundamental differences between design patents and copyrights counseling against such practice. First, unlike copyright registrations, design patents are substantively examined and approved. There is a formal claim presented by the applicant that is reviewed by the USPTO for statutory compliance and, if allowed, published by way of a letters patent to provide public notice. This is not the case for copyright registrations. Second, design patents are intended to protect articles of manufacture, which will necessarily possess some utilitarian purpose. This is not the case for copyright law, which has steadfastly refused to protect applied art, and further industrial design. Third, the term of copyright is much longer than that of design, and thus as a matter of policy, copyright law is less willing to protect functionally driven expression.

VI. FEATURE FILTRATION PROVIDES FOR UNWANTED PIECEMEAL INVALIDITY ATTACKS

Taken to its logical conclusion, the feature filtration approach could yield a result where, upon claim construction, each and every individual element of the design patent is found to be “functional.” For instance, and continuing with the spork example above, what if the court concludes that the handle is functional as well? Under these facts, the claim is whittled away to nothing, effectively neutering the enforceability of an issued design patent without an invalidity challenge ever having been mounted.

Of course, invalidity challenges are confronted with the demanding safeguards that cloak a presumptively valid design patent, including most importantly the “clear and convincing” evidence standard.²⁹ The feature filtration approach to functionality provides an unwanted backdoor validity attack made under the guise of claim construction where the lesser preponderance evidentiary standard applies.³⁰

VII. FEATURE FILTRATION IS UNWORKABLE

Moreover, any attempt to dissect and separate an overall design into elements is unworkable. Most often, and particularly with modern day design, the elements of a design are fully integrated into, and inseparable from, the overall design, making fool’s errands of the feature filtration approach’s identification and excision steps.³¹ For example, consider a claim covering the ornamental handlebar depicted in Figure 4 below.³² The claimed design is an example of the seamless melding of form and function. While a court might go through the feature filtration exercise, the reality is that it is impossible to meaningfully identify and surgically separate ornamental and functional elements.³³ In short, factoring out and ignoring functional portions is an

29. *See, e.g.*, *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123 (Fed. Cir. 1993) (requiring clear and convincing evidence to invalidate design patent on grounds of functionality and further noting that 35 U.S.C. § 282 includes a presumption of ornamentality).

30. This extreme example of feature filtration is not a mere hypothetical. District courts operating under the false belief that individual visual features having functionally driven appearances must be removed have gone so far as to filter every aspect of the claimed design. Notably, those courts did not invalidate the overall claim for lack of ornamentality under § 171. *See Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, No. 1:11-CV-871, 2014 WL 10212172, at *9 (S.D. Ohio Jan. 22, 2014) (“[T]he shape and placement of the U-Shaped Trigger, Torque Knob, and Rounded Button elements of the Design Patents are all based on functional considerations and therefore all of these elements must be ‘factored out’ of the claimed design.”).

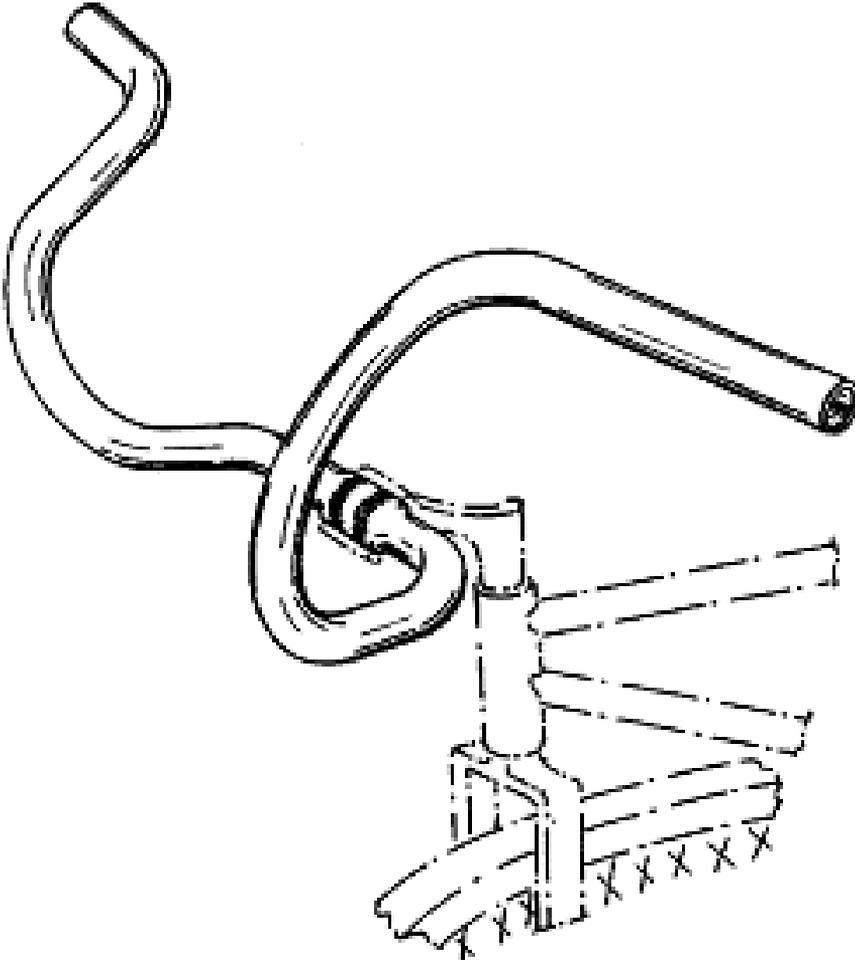
31. Copyright law has struggled for years with how to implement the separability doctrine, spawning a multitude of tests, one more confusing than the next. While the Supreme Court in *Star Athletica v. Varsity* sought to clean up the mess, truly it just served as a reset. Justice Thomas, ever the textualist, set forth a separability test that merely rephrases the statute. The most significant aspect of the opinion was that it wiped the slate clean from the many confusing and contradictory tests that had bounced around the regional circuits for decades. The sheer mess created by the copyright experience with feature filtration is reason alone to refrain from importing it into design law. *See Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 137 S. Ct. 1002, 1009 (2017).

32. U.S. Patent No. D387,316, fig. 1 (filed May 29, 1996).

33. *See Carlini Enters. v. Paul Yaffe Design, Inc.*, 2014 U.S. Dist. LEXIS 113941 at *5–6 (C.D. Cal. Aug. 12, 2016) (noting logistical difficulties in trying to separate out ornamental and functional elements in an overall design).

artificial enterprise that not only can distort the claimed design but also, practically speaking, is an unworkable approach.

Figure 4: Handlebar Example



VIII. CONCLUSION

Consistent with the Federal Circuit's recent opinions in *Apple*, *Ethicon*, and *Sport Dimensions*, and despite the calls from academia, courts should continue to resist the urge to attempt to identify and filter out any individual features, elements, or portions of the whole ornamental design. Per the plain language of design patent law's governing statute 35 U.S.C. § 171, it is the "design," not

individual features thereof, that are the only relevant consideration. Any attempts at feature filtration are unnecessary, fatally flawed, and should be prohibited.

Design patents do not protect any underlying non-visual functional attributes, purposes, or characteristics of an article of manufacture, but rather only protect the overall appearance of the claimed design depicted in the drawings. Design patent protection incentivizes and stimulates the exercise of inventive faculty in improving the appearance of articles of manufacture, which in turn forwards the meritorious policy goal of promoting the decorative arts.

THE DESIGN PATENT EMPEROR WEARS NO CLOTHES: RESPONDING TO ADVOCATES OF DESIGN PATENT PROTECTION FOR FUNCTIONALITY

Peter S. Menell[†] & Ella Corren^{‡†}

ABSTRACT

In *Design Patent Law's Identity Crisis*, we traced the origins of design patent law's ornamentality/non-functionality doctrine and showed how the Federal Circuit, the nation's de facto design patent emperor over the past four decades, has turned the doctrine on its head: it has upended the 1902 Act's intent and reversed three-quarters of a century of regional circuit jurisprudence. So much so that the post-1902 Act regional circuit design patent cases invalidating design patents on functionality grounds would come out oppositely under the Federal Circuit's lax standards. Those standards led to the absurd result that Apple could disgorge Samsung's profits on its smartphones because they employed rounded rectangular shapes. We showed that the applicable legislation limited design protection to original, ornamental articles of manufacture and excluded protection for functionality.

This Article responds to the practitioners and academics who have defended the Federal Circuit's interpretation of design patent law in commenting on our article. While none of the commentators question, no less refute, our core finding that the Federal Circuit has flipped the ornamentality/non-functionality doctrine, several offer fig leaves to clothe the Federal Circuit's lax standards for design patent eligibility and infringement. We discuss the significant areas of agreement and show why the defenses of the Federal Circuit's interpretation of the design patent standards are mistaken as a matter of statutory interpretation and are bad intellectual property policy. We conclude by addressing ways in which the Supreme Court or the Federal Circuit could faithfully implement the design patent statute, the fundamental intellectual property channeling principle reflected in *Baker v. Selden*, and sound intellectual property policy.

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† Koret Professor of Law; Director, Berkeley Center for Law & Technology; Faculty Director, Berkeley Judicial Institute; University of California at Berkeley School of Law.

‡† University of California at Berkeley School of Law, J.S.D. Candidate.

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I. INTRODUCTION

Our lead article for this symposium, which traces a statutory and jurisprudential roller coaster that spans nearly two centuries, reveals how the U.S. Court of Appeals for the Federal Circuit, established in 1982, upended the 1902 Act’s intent and reversed three-quarters of a century of regional circuit jurisprudence.¹ In view of this extraordinary finding, we wanted to be sure that we did not overlook any critical pieces of the puzzle. Accordingly, we invited influential design patent practitioners and scholars to participate in the Berkeley Center for Law & Technology (BCLT)/*Berkeley Technology Law Journal* (BTLJ) Symposium, *Navigating and Rectifying the Design Patents Muddle*. More than 300 people attended the online event held on February 21, 2021, which was recorded and posted on BCLT’s website.²

We invited leading practitioners and scholars to discuss our findings. Four practitioners prepared commentaries for this symposium volume: Perry

1. See Peter S. Menell & Ella Corren, *Design Patent Law’s Identity Crisis*, 36 BERKELEY TECH. L.J. 1 (2021) (hereinafter cited as “*Identity Crisis*”).

2. BCLT/BTLJ *Design Patents Symposium: Navigating and Rectifying the Design Patent Muddle*, <https://www.law.berkeley.edu/research/bclt/bcltevents/bclt-btlj-symposium-navigating-and-rectifying-the-design-patent-muddle/> (last visited Nov. 14, 2021).

Saidman, who successfully litigated *Avia Group Int'l, Inc. v. L.A. Gear Cal., Inc.*,³ the 1988 Federal Circuit case that significantly expanded design patent eligibility, and advocates for broad design patent protection; Christopher V. Carani, a design patent specialist who edited a volume surveying functionality and scope of design protection⁴ around the world and who also advocates for broad design patent protection; and Charles L. Mauro and Christopher Morley, industrial design researchers. In addition, Mr. Mauro has served as an expert witness in design patent cases. Two academic scholars also contributed to this volume: Professor Mark McKenna and Professor Joshua Sarnoff. Several other design patent practitioners and academics provided comments at the BCLT/BTLJ Symposium. Their presentations and our responses are contained in the recordings that are archived on BCLT's website.⁵

While the symposium produced some fireworks, no participant rebutted our core finding: the Federal Circuit, the nation's de facto design patent emperor since 1982, has flipped design eligibility doctrine on its head. As Part II of this response shows, the post-1902 Act regional circuit design patent cases invalidating design patents on functionality grounds would come out oppositely under the Federal Circuit's lax standards. In Part III, we explain why the design patent practitioners' defense of the Federal Circuit's jurisprudence misapprehends the 1902 Act and the broader contours of the intellectual property landscape. We also respond to Professor McKenna's support for interpreting design patent law to protect functionality, even if only modestly. We conclude by addressing ways in which the design patent regime could be brought back into harmony with the design patent statute, the fundamental intellectual property channeling principle reflected in *Baker v. Selden*,⁶ and sound intellectual property policy.

II. OUR CORE FINDING: THE FEDERAL CIRCUIT HAS FLIPPED DESIGN PATENT ELIGIBILITY IN DISREGARD OF THE 1902 ACT AND REGIONAL CIRCUIT AUTHORITY

Although drafters of the U.S. design regime modeled the 1842 Act on the British *copyright* regime for surface ornamentation and sculptural features of three-dimensional articles,⁷ the statute was confusingly mislabeled "design

3. 853 F.2d 1557, 1563 (Fed. Cir. 1988).

4. DESIGN RIGHTS: FUNCTIONALITY AND SCOPE OF PROTECTION (Christopher V. Carani ed., 2017).

5. See *supra* note 2.

6. 101 U.S. 99 (1879).

7. See *Identity Crisis*, *supra* note 1, at 10.

patent” for reasons involving the Patent Commissioner’s bureaucratic opportunism.⁸ The statute’s confusing reference to “useful” in one category of protected works—“new and *useful* pattern, or print, or picture”⁹—caused some courts and the Patent Office to misread “useful” as authorizing protection for functionality. Further complicating design patent’s role, manufacturers used design patents as a nascent form of trademark protection until federal trademark protection emerged.¹⁰ The confusion and overlap with other regimes grew when Congress expanded copyright law to protect sculptural works in 1870.¹¹ Although the Supreme Court’s 1871 decision in *Gorham v. White* held that design patents covered ornamentality and not functionality,¹² two later Supreme Court decisions downplayed considerations of aesthetics and ornamentality while emphasizing utility.¹³

This confusion led Patent Commissioner Frederick Allen, at the turn of the twentieth century, to urge Congress to reform the design patent regime to “occupy its proper philosophical position in the field of intellectual property production.”¹⁴ He proposed deleting the term “utility” and ensuring that design patents “protect[] objects of new and artistic quality pertaining . . . to commerce, but not justifying their existence upon functional utility.”¹⁵ The 1902 Act followed this suggestion, deleting the word “useful” from the design patent statute and replacing it with “ornamental.”¹⁶ The Senate Report incorporated Commissioner Allen’s letter explaining the rationale for the change and noted that “[t]he object sought by the proposed amendment is to conform the existing law to the manifest requirements of design patent law as distinguished from the law governing the subject of mechanical patents.”¹⁷ The House Report explained that the reform legislation was intended “to make plain the distinction between mechanical patents, where ‘utility’ is an essential

8. *See id.*

9. *See* Act of Aug. 29, 1842, ch. 263, sec. 3, 5 Stat. 543, 543–44 (emphasis added).

10. *See Identity Crisis*, *supra* note 1, at 12–14.

11. *See* Act of Jul. 8, 1870, ch. 230, sec. 86, 16 Stat. 198 (providing that “the author, inventor, designer, or proprietor of any book, map, chart, dramatic or musical composition, engraving, cut, print, or photograph or negative thereof, or of a painting, drawing, chromo, statue, statuary, and of models or designs intended to be perfected as works of the fine arts . . . shall, upon complying with the provisions of this act, have the sole liberty of printing, reprinting, publishing, completing, copying, executing, finishing, and vending the same.” (emphasis added)).

12. 81 U.S. 511, 524–25 (1871).

13. *See* *Lehnbeuter v. Holthaus*, 105 U.S. 94, 96 (1882); *Smith v. Whitman Saddle Co.*, 148 U.S. 674, 678 (1893).

14. *See* Letter from PTO Commissions Frederick Allen, S. REP. NO. 57-1139, at 3 (1902).

15. *See id.*

16. *See* Act of May 9, 1902, ch. 783, sec. 4929, 32 Stat. 193.

17. S. REP. NO. 57-1139, at 1 (1902).

element, and design patents, where ‘utility’ has nothing to do with it, but where ornamentation is the proper element of consideration.”¹⁸

Contemporary practitioners and commentators viewed the 1902 Act as closing the door on design patent protection for functional designs.¹⁹ The cases following 1902 Act clearly understood Congress’s intent to prevent design patents from protecting functionality. In *Ex parte Hartshorn*, Commissioner Allen rejected an application for a design of a wooden-shaped roller, observing that “[t]he construction shown is created for the accomplishment of a mechanical result, and while it would have been possible to place upon this article some ornamental design for its embellishment the construction presented here seems void of any such design.”²⁰ In *Weisgerber v. Clowney*,²¹ the district court noted that “the attempt to patent a mechanical function, under cover of a design, is a perversion of the privilege given by the statute.”²² In *Royal Metal Manufacturing Co. v. Art Metal Works*,²³ the district court confirmed that “[a] monopoly of operating devices can be secured only by a mechanical patent.”²⁴ In *Bradley v. Eccles*,²⁵ the Second Circuit discussed the inherent lack of design patentability of a design for a washer for thill-couplers, a device for connecting the shaft of a cart or carriage to the animal drawing it.²⁶ A decade later, the First Circuit categorically excluded substantial categories from design patent eligibility:

18. H.R. Rep No. 57-1661, at 2 (1902).

19. See, e.g., Harold Binney, *Present Status of the Law Relating to Designs*, 25 ANNU. REP. A.B.A. 662, 669 (1902) (observing that the 1902 Act “in respect to the beauty that flows from the *mere neatness and fitness of shapes*, the statute before amendment certainly afforded protection; whereas, now the requirement ‘ornamental’ would seem incapable of so broad a meaning. . . . [W]hile it is debatable whether merely useful shapes where utility and not appearance is the sole object, were or were not protected under the statute, it is quite certain now that neither the saddle of the *Whitman* case nor the showcase of *Lehnbeuter vs. Holthaus* would be protected under the amended statute.” (emphasis added)).

20. 104 O.G. 1395 (1903), reprinted in DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS IN PATENT AND TRADE-MARK AND LABEL CASES 138, at 171–72 (1904).

21. 131 F. 477 (1904).

22. *Id.* at 480.

23. 121 F. 128 (C.C.S.D.N.Y. 1903).

24. *Id.* at 129.

25. 126 F. 945 (2d Cir. 1903).

26. See *id.* at 949 (“The washer, like the horseshoe calk, is not intended for display, but for an obscure use. There is no evidence that its form appeals in any way to the eye, or serves to commend it to purchasers and users as a thing of beauty. There is not a scintilla of evidence that the sale of a single washer was ever induced by reason of any attractiveness in its appearance.”).

[A]mong articles of manufacture there are some incapable of being the subjects of design patents, for want of reason to suppose that their appearance can ever really matter to anybody. Examples of this class are, besides horseshoe calks, . . . syringes, plates joining the ends of machine belts, and thill couplings. . . also ribbon spools for typewriting machines and insulating plugs.²⁷

Judges recognized the potential for abuse of the design patent regime to protect mechanical inventions: “a valid design patent does not necessarily result from photographing a manufactured article and filing a reproduction of such photograph properly certified in the patent office. . . . Indeed, every feature of these patents is mechanical and functional, and not ornamental.”²⁸

When the courts referred to designs “dictated by functionality” or “utilitarian considerations” as being ineligible, they did not intend by such a rubric to set a minimal threshold that could be easily cleared by showing that a design intertwined functional and nonfunctional elements or the availability of alternative designs. Rather, they were using this formulation to invalidate what they considered to be plainly ineligible subject matter. Design patents could not protect functionality. The courts were especially skeptical of design patents claiming simple and geometric shapes.²⁹ By the mid-1980s, intellectual

27. *Theodore W. Foster & Bro. Co. v. Tilden-Thurber Co.*, 200 F. 54, 56 (1st Cir. 1912) (citations omitted).

28. *Rose Mfg. Co. v. E. A. Whitehouse Mfg. Co.*, 201 F. 926, 929 (D.N.J. 1913).

29. *See, e.g., Applied Arts Corp. v. Grand Rapids Metalcraft Corp.*, 67 F.2d 428, 430 (6th Cir. 1933) (discussing a design patent on a combination of ash receiver and electric lighter for use in an automobile and overturning an infringement ruling noting that “[t]he patented design is comparatively simple, and without ornamentation. In the main its configuration is made imperative by the elements which it combines and by the utilitarian purpose of the device. It was certainly not the intent of the law to grant monopoly to purely conventional design which is in itself little more than a necessary response to the purpose of the article designed. The scope of a design patent, as well as its originality, must depend on something more than this.”); *Hueter v. Compco Corp.*, 179 F.2d 416, 417 (7th Cir. 1950) (invalidating a design patent for “Article Holding Guard or the Like” and noting that “[t]he drawing of the patented design was a straight, plain and unadorned front bar, the length of which is approximately seven times its width, with straight wings of the same width at each end which were a little less than one-fourth the length of the front bar. The wings extend back from the front bar at an angle of about 45 degrees. No ornamentation of any kind is shown on either the front bar or on the wings. The only possible claim for the design being considered as ornamental must be found in the proportion of the length and width of the front bar and wings and in the angle at which the wings extend backward from the front bar.”); *Tupper Corp. v. Tilton & Cook Co.*, 113 F. Supp. 805, 805–06 (D. Mass. 1953) (invalidating a design patent on a combined cigarette and match case and noting that “composed of two parts, a lower member into which can be placed a package of cigarettes and a book of matches, and a cover member which telescopes over the lower member. In general configuration the lower member is a hollow rectangular container of a size to fit a regular size package of cigarettes with the front wall bulging or protruding sufficiently to form a substantially rectangular compartment for the book of matches. The

property practitioners viewed design patent eligibility for the shape of articles of manufacture, as opposed to surface ornamentation, as very limited.³⁰

The establishment of the U.S. Court of Appeals for the Federal Circuit in 1982 ushered in a new era that upended the 1902 Act's intent and reversed three-quarters of a century of regional circuit jurisprudence.³¹ Between 1988 and 2008, the Federal Circuit eviscerated the non-functionality limitation of design patents through its uncritical adoption of the "dictated by" short cut for dealing with easy cases as *the* test for assessing ornamentality/non-functionality, treating designs for which there are alternatives as non-functional, and viewing even simple designs comprising functional elements "as a whole." This jurisprudence enabled protection for minimalist and functional features of articles of manufacture, paving the way for the design patent flank of the "smartphone wars." After some apparent moderation of these questionable standards by employing a filtration infringement test in the 2010 *Richardson* decision,³² the Federal Circuit marginalized the filtration approach in *Apple v. Samsung*³³ and has since further eroded the ornamentality/non-functionality limitation,³⁴ causing the design patent muddle.

The symposium included contributions from leading design patent practitioners. Perry Saidman's advocacy in *Avia v. L.A. Gear*³⁵ played a critical role in steering the Federal Circuit away from the longstanding interpretation of limited design patent eligibility. He advocates broad design protection, and

cover is of the same general shape, being slightly larger so that it will slide down outside the wall of the lower part. . . . [The] idea of a case with a telescoping cover is not new [and had] long been made . . . to hold cigars and cigarettes as well as many other products.").

30. See Thomas B. Lindgren, *The Sanctity of the Design Patent: Illusion or Reality? Twenty Years of Design Patent Litigation Since Compco v. Day-Brite Lighting, Inc., and Sears, Roebuck & Co. v. Stiffel Co.*, 10 OKLA. CITY U. L. REV. 195, 198 (1985); Ralph S. Brown, *Design Protection: An Overview*, 34 UCLA L. Rev. 1341, 1346 (1987); see also C.F. Hughes, *The Merchant's Point of View*, N.Y. TIMES, Apr. 12, 1936, at F9 (estimating that 90% of patent applications for industrial design were refused).

31. See *Identity Crisis*, *supra* note 1, at Sections V(B), (C), (E), (F).

32. *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1293–94 (Fed. Cir. 2010) (stating that "[t]he district court here properly factored out the functional aspects of Richardson's design as part of its claim construction. By definition, the patented design is for a multi-function tool that has several functional components, and we have made clear that a design patent, unlike a utility patent, limits protection to the ornamental design of the article." (citing *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1188 (Fed. Cir. 1988) (citing 35 U.S.C. § 171 (1988))).

33. See *Apple Inc. v. Samsung Elecs. Co.*, 786 F.3d 983, 998 (Fed. Cir. 2015) (limiting *Richardson* to its facts); *Identity Crisis*, *supra* note 1, at 105–7.

34. See *Identity Crisis*, *supra* note 1, at 115–18.

35. See *Pensa, Inc. v. L.A. Gear California, Inc.*, 4 U.S.P.Q.2d 1016 (C.D. Cal. 1987), *aff'd sub. nom.*, *Avia Group International, Inc. v. L.A. Gear California, Inc.*, 853 F.2d 1557 (Fed. Cir. 1988).

represented Apple in seeking to overturn the *Richardson* decision.³⁶ Christopher Carani edited a volume on design protection and functionality and has advocated for a low eligibility bar in design protection law. We challenged them to scrutinize our finding that the Federal Circuit has turned its back on the 1902 Act and regional circuit law. To paraphrase Pat Benatar, we invited these advocates to “hit us with their best shot.”

While the symposium certainly produced some fireworks, no participant rebutted our core finding that the Federal Circuit flipped design eligibility doctrine on its head. We offered a straightforward test of the proposition: would the regional circuit cases come out differently under the Federal Circuit’s standards?

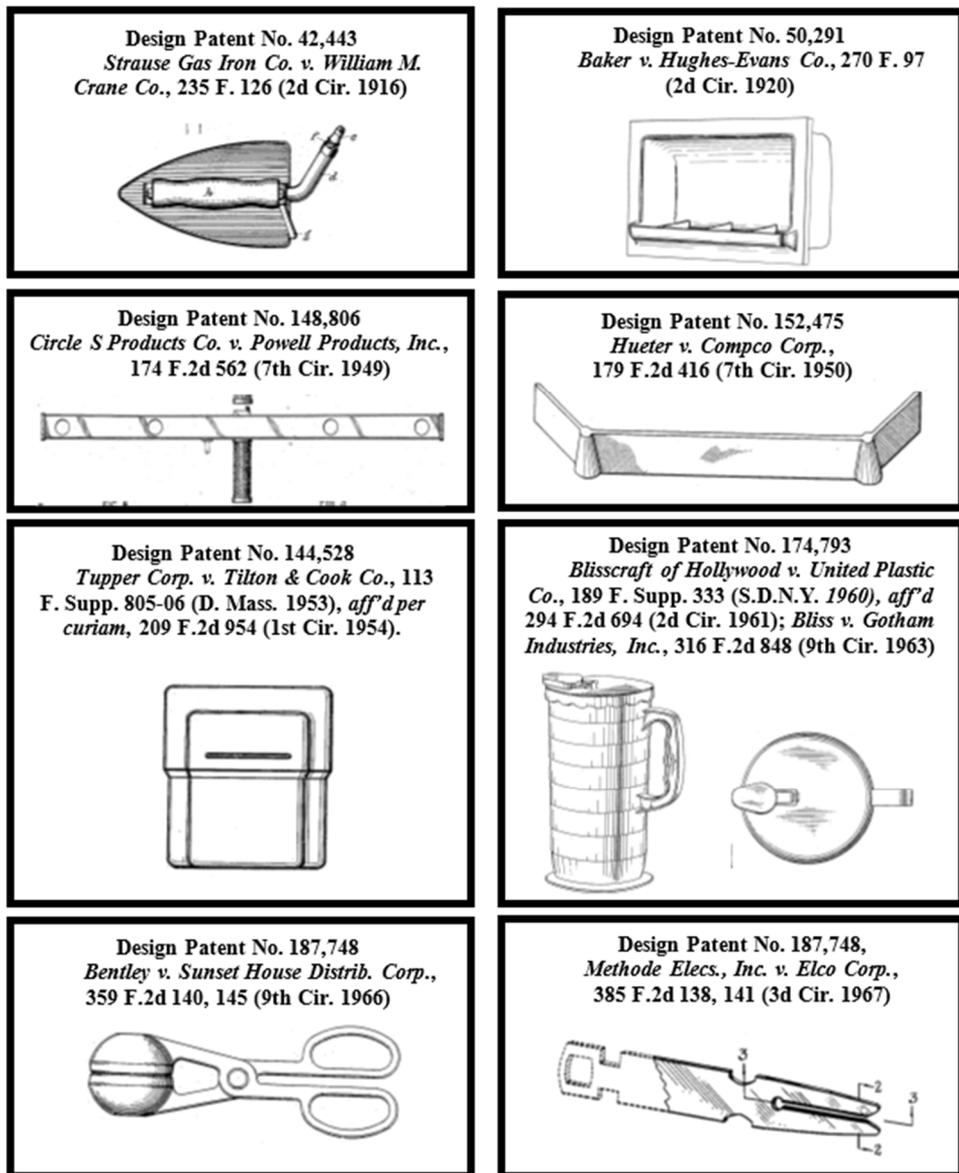
Figure 1 illustrates the major regional circuit design patent cases, all of which invalidated design patents. Taken together, the pre-Federal Circuit jurisprudence indicated that the non-functionality bar was considerable and based on the utility patent supremacy principle. As the Second Circuit explained in *Baker v. Hughes-Evans Co.*, while “the same device or article may exhibit patentable mechanical invention and a patentable design; it is not true that the design can ever be used to appropriate (per se) the mechanical function. The two inventions must be separable; otherwise, it would be a contradiction in terms to grant two patents for them.”³⁷ Practitioners and scholars viewed the doctrine in that way at the time that the Federal Circuit was established.³⁸

36. See Perry J. Saidman & Theresa Esquerra, *A Manifesto on Industrial Design Protection: Resurrecting the Design Registration League*, 55 J. Copyright Soc’y U.S.A. 423 (2008); Perry J. Saidman, *Design Patents—The Whipping Boy Bites Back*, 73 J. PAT. & TRADEMARK OFF. SOC’Y 859 (1991); Brief of Amicus Curiae Apple Inc. in Support of Plaintiff-Appellant’s Petition for Rehearing En Banc at 2, *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288 (Fed. Cir. 2010) (No. 2009-1354).

37. 270 F. 97, 99 (2d Cir. 1920).

38. See Brown, *supra* note 30; Lindgren, *supra* note 30.

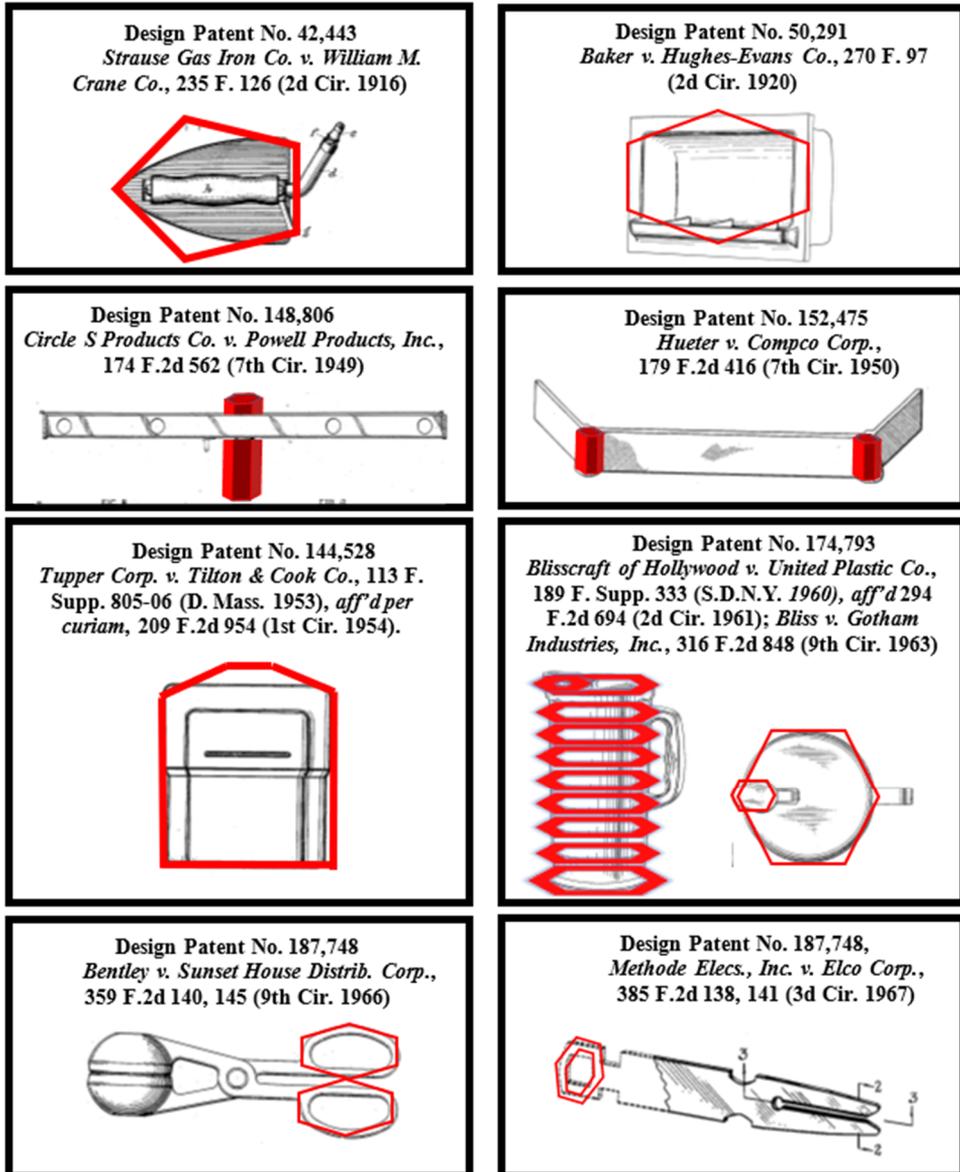
Figure 1: Regional Circuit Design Patent Eligibility Cases



As Figure 2 illustrates, each of these claimed designs could be reimagined, for example, using hexagons or pentagons in place of circular, oval, or square features. We don't think that the regional appellate courts were unaware of such options. Yet under Federal Circuit law, and the lax standards advocated by Mr. Saidman and Mr. Carani, all of these invalidated design patents would

pass muster today based on the Federal Circuit's "alternative designs" standard.

Figure 2: Regional Circuit Design Patent Eligibility Cases



The Federal Circuit, perhaps unwittingly, effected a drastic and profound shift in the law. As we noted in the lead article, the Federal Circuit has never referenced the critical 1902 Act nor seriously engaged the substantial and

harmonious regional appellate jurisprudence that preceded the Federal Circuit's establishment.³⁹

Mr. Saidman's and Mr. Carani's silence about our core thesis speaks volumes. Rather than engage with our examination of the 1902 Act, its legislative history, and the 80 years of regional circuit jurisprudence prior to the establishment of the U.S. Court of Appeals for the Federal Circuit, they essentially argue that design patents should protect functionality. The implication that Commissioner Allen, members of Congress at the turn of the 20th century, or regional circuit courts from 1902 through the early 1980s did not appreciate that "form follows function" in design is baseless. The concept traces back to Roman architect Marcus Vitruvius Pollio 2,000 years ago,⁴⁰ and was popularized in modern design theory by Louis Sullivan in the late nineteenth century.⁴¹ Furthermore, functional design had been protectable since at least 1790 as part of the utility patent regime!⁴²

We share the practitioners' admiration for the design accomplishments and wisdom of designers such as Dieter Rams, Charles Eames, and Louis Sullivan. Where we differ is that we see them as industrial designers and architects, not legislators or judges. The key issue, which Mr. Saidman and Mr. Carani overlook, is the utility patent supremacy principle. Congress and the regional appellate courts understood that function must enter the intellectual property domain through the utility patent door. How to operationalize that foundational principle of U.S. law is the challenge to which we now turn.

III. DESIGN PATENTS ARE SUBJECT TO THE SUPREMACY OF UTILITY PATENTS

Rather than challenging our core historical, interpretive, and jurisprudential findings, Mr. Saidman and Mr. Carani offer an approach that treats design patent examination as a rubber stamp, affording broad protection for functional overall designs, functional elements, and simple geometric shapes, without meeting the more exacting standards of the utility patent regime.⁴³ They ignore the 1902 legislation underlying the design patent regime

39. See *Identity Crisis*, *supra* note 1, at 64.

40. See Vitruvius, WIKIPEDIA (Nov. 2, 2021), <https://en.wikipedia.org/wiki/Vitruvius>; see also De architectura, WIKIPEDIA (Oct. 23, 2021), https://en.wikipedia.org/wiki/De_architectura.

41. See Louis Sullivan, *The Tall Office Building Artistically Considered*, LIPPINCOTT'S MONTHLY MAGAZINE March 1896, at 403; Louis Sullivan, WIKIPEDIA (Nov. 5, 2021), https://en.wikipedia.org/wiki/Louis_Sullivan.

42. See Patent Act of 1790, 1 Stat. 109.

43. Mr. Saidman bases his defense of the design patent regime (and his objection to courts filtering out unprotectable elements) in part on the relative rigor with which the Patent

and the need to fit design patent protection within the broader intellectual property schema.

Mr. Mauro and Mr. Morley ignore the challenge of disentangling form and function by contending that neuroscience shows “that no individual judge, lawyer, or legal academic can ever represent the hypothetical ordinary observer. . . .because there is too much real variation in how a given consumer population judges the shapes of objects in our everyday world.”⁴⁴ Thus, even if their preliminary empirical analysis is correct, it is of little relevance to the problem at hand. Congress in the 1902 Act and the Supreme Court in *Baker v. Selden* require courts to bar design patent protection for functionality. This limitation does not present a problem for original surface ornamentation or even many creative three-dimensional objects, but it does come into play for simple geometric and minimalist product designs.

Professor McKenna, by contrast, states that he supports the principle of utility patent supremacy and agrees with much of our research but nonetheless advocates preserving a role for design patent protection for functionality.⁴⁵ He also resists our suggestions for drawing on beneficial lessons from copyright and trademark law to prevent design patent law from encroaching upon utility patent supremacy. His opposition is based on a few outlier cases rather than

Office carries out its examination duties. See Perry J. Saidman, *A Primer on Design Patent Functionality*, 36 BERKELEY TECH. L.J. 147, 160 (2021) (“It is notable that copyright applications are not examined by the Copyright Office, whereas design patent applications undergo a rigorous examination by the U.S. Patent and Trademark Office (USPTO) resulting in a design patent that carries a statutory presumption of validity.” (emphasis added)). As we demonstrate below, see *infra* text accompanying notes 128–152, Mr. Saidman’s assertion is wrong as a matter of Copyright Office procedure and practice. The Copyright Office has been far more rigorous and faithful to statutory authority than the Patent Office in assessing non-functionality and originality. Mr. Carani bases his objection to courts filtering out unprotectable elements in part on the notion that a design has to be seen “as a whole,” including any functional features. See Christopher V. Carani, *All or Nothing At All: Design Patent’s Ornamentality Requirement and The Failings of Feature Filtration*, 36 BERKELEY TECH. L.J. 213, 215 (2021), (“All visual portions of a claimed design, even those with appearances that are functionally driven, have a visual relationship with the other constituent parts and ultimately contribute to the visual whole of the claimed design. . . . It cannot be overemphasized that the ‘right to exclude’ afforded by a design patent claim extends, and only extends, to the design *as a whole*, as claimed; the design patent claim does not provide any independent protection for individual visual features thereof.”). His analysis, however, overlooks or downplays the functionality and unoriginality of compilations of elements in useful articles. Many of the examples below illustrate this point. See *infra* Section III(A)(2).

44. Charles L. Mauro & Christopher Morley, *Why The Future of Design Patent Protections Will Rely on Modern Neuroscience, Not Constitutional and Legal Reversionism*, 36 BERKELEY TECH. L.J. 277, 282 (2021).

45. See Mark P. McKenna, *Fixing Functionality in Design Patent Law*, 36 BERKELEY TECH. L.J. 195, 208–10 (2021).

the most authoritative decisions addressing the landscape of intellectual property law.

A. RESPONDING TO THE DESIGN PATENT PRACTITIONERS

Mr. Saidman, Mr. Carani, and Mr. Mauro and Mr. Morley focus their commentaries on two propositions: (1) that any design, including minimal geometric shapes, should be eligible for design patent protection so long as there are alternative ways of achieving the same general type of utility, regardless of the efficacy of the claimed design; and (2) that it is improper for courts to filter out functional elements of a design, even if the overall design is trivially minimal, in assessing infringement.⁴⁶

1. *The Alternative Design Doctrine Is Limitless and Effectuates an Improper Rubber Stamp for Design Patent Eligibility*

The design patent practitioners contend that articles of manufacture that integrate form and function qualify for design patent protection so long as there are alternative designs capable of achieving the same general function. For them, the growing interest in viewing design as integrating form and function warrants expanding design patent protection to encompass functionality. Yet, this approach of form integrated with function is not something new that did not exist before the 1980s: minimal and functional designs existed in the nineteenth century and even before that time—the shape of a scythe, the configuration of a typewriter, or the design of a stove or radiator are but a few examples. In fact, stove and radiator manufacturers pushed for *copyright* protection for the decorative features of their wares precisely because the most significant utility patents had expired and they were looking for ways to differentiate their products in the growing marketplace.⁴⁷ As much as the design patent practitioners wish it were so, notable designers such as Dieter Rams, Charles Eames, and Louis Sullivan designed furniture and buildings, not design protection law. The 1902 Act remains the design patent law. Notwithstanding dozens of efforts to expand design protection over the past century, Congress has declined to do so.⁴⁸ And where it has

46. In addition, Mr. Mauro and Mr. Morley suggest that modern neuroscience research provides a solution to the confusion surrounding design patent protection. See Mauro & Morley, *supra* note 44, at 278–80. We will note that their suggestion, which is based on debatable neuroscience theory and empirical methods, overlooks the central role of judges and juries in assessing eligibility and infringement. It is difficult to see how their proposal adds much beyond another battle of the experts, as occurs in trademark survey evidence.

47. See *Identity Crisis*, *supra* note 1, at 8.

48. See David Goldenberg, *The Long and Winding Road: A History of the Fight over Industrial Design Protection in the United States*, 45 J. COPYRIGHT SOC'Y U.S.A. 21, 26–61 (1997).

reformed the law, it has installed guardrails to prevent monopolization of functionality.⁴⁹ Furthermore, even if Congress were to take up reform, there are good reasons for retaining utility patent supremacy as a core channeling principle of intellectual property law.⁵⁰

The Supreme Court clearly recognized that Selden's accounting methods reflected integration of form and function.⁵¹ As illustrated in Figure 3, Selden implemented his accounting system through the use of graphic forms with lines and labels. Yet the Court concluded that accounting methods could not be protected through the backdoor of copyright law, even though there was good reason to doubt that the utility patent regime would protect Selden's accounting methods, which amounted to business methods and printed matter.⁵² The U.S. Constitution does not require Congress to grant intellectual property protection to all types of creativity and innovation. To the contrary, it merely authorizes Congress to establish such protections where it believes such protections will promote progress.⁵³

49. See Copyright Act of 1976, 17 U.S.C. § 101 (definition of pictorial, graphic, and sculptural works); Semiconductor Chip Protection Act, Pub. L. 98-620, 98 Stat. 3335 (1984), codified at 17 U.S.C. § 901-14 (providing for reverse engineering and independent development); Vessel Hull Design Protection Act, Pub. L. 105-304, 112 Stat. 2860 (1998), codified at 17 U.S.C. § 1301-20 (excluding unoriginal, staple, and commonplace ("standard geometric") designs, and designs dictated solely by utilitarian considerations).

50. See *Identity Crisis*, *supra* note 1, at 140, 149.

51. See *Baker v. Selden*, 101 U.S. 99, 104-05 (1879).

52. See R. CARL MOY, *MOY'S WALKER ON PATENTS* § 5:29 (4th ed. 2007) ("Until recently it had been considered well established that [business] methods were non-statutory."); Peter S. Menell, *Forty Years Of Wondering In The Wilderness And No Closer To The Promised Land: Bilski's Superficial Textualism And The Missed Opportunity To Return Patent Law To Its Technology Mooring*, 63 STAN. L. REV. 1289, 1292-95 (2011) (tracing the roots of utility patent eligibility and the business method exclusion); DONALD S. CHISUM, *CHISUM ON PATENTS* § 1.02[4], at 1-25, 26 (2009) (explaining that the "printed matter doctrine" dictates that "information recorded in [a] substrate or medium" is not eligible for patent protection if the advance over the prior art resides in the "content of the information"); Morton C. Jacobs, Note, *The Patentability of Printed Matter: Critique and Proposal*, 18 GEO. WASH. L. REV. 475, 476 (1950) (noting that printed matter doctrine originated as a corollary of the exclusion of business method from patent eligibility); *Hotel Security Checking Co. v. Lorraine Co.*, 160 Fed. 467 (2d Cir. 1908) (bookkeeping form); *Ex parte Bierce*, 1877 C. D. 46 (Comm. of Pat. 1877) (ticket); *Ex parte Berolzheimer*, 1870 C. D. 33 (Comm. of Pat. 1870) (bank check); *Ex parte Abraham*, 1869 C. D. 59 (Comm. of Pat. 1869) (method of using stamps to identify fraud).

53. See U.S. CONST. art. I, § 8, cl. 8.

Figure 3: Selden's Accounting Form

CONDENSED LEDGER.													
Brought Forw'd.		ON TIME.		DATE:				DISTRIBUTION.		TOTAL.		BALANCE.	
DR.	CR.	DR.	CR.	DR.	CR.	EQUIPMENTS & SERVICES.		DR.	CR.	DR.	CR.	DR.	CR.
						CASH.							
						DR. CR.							
						\$	\$						
						Carried Forward..							

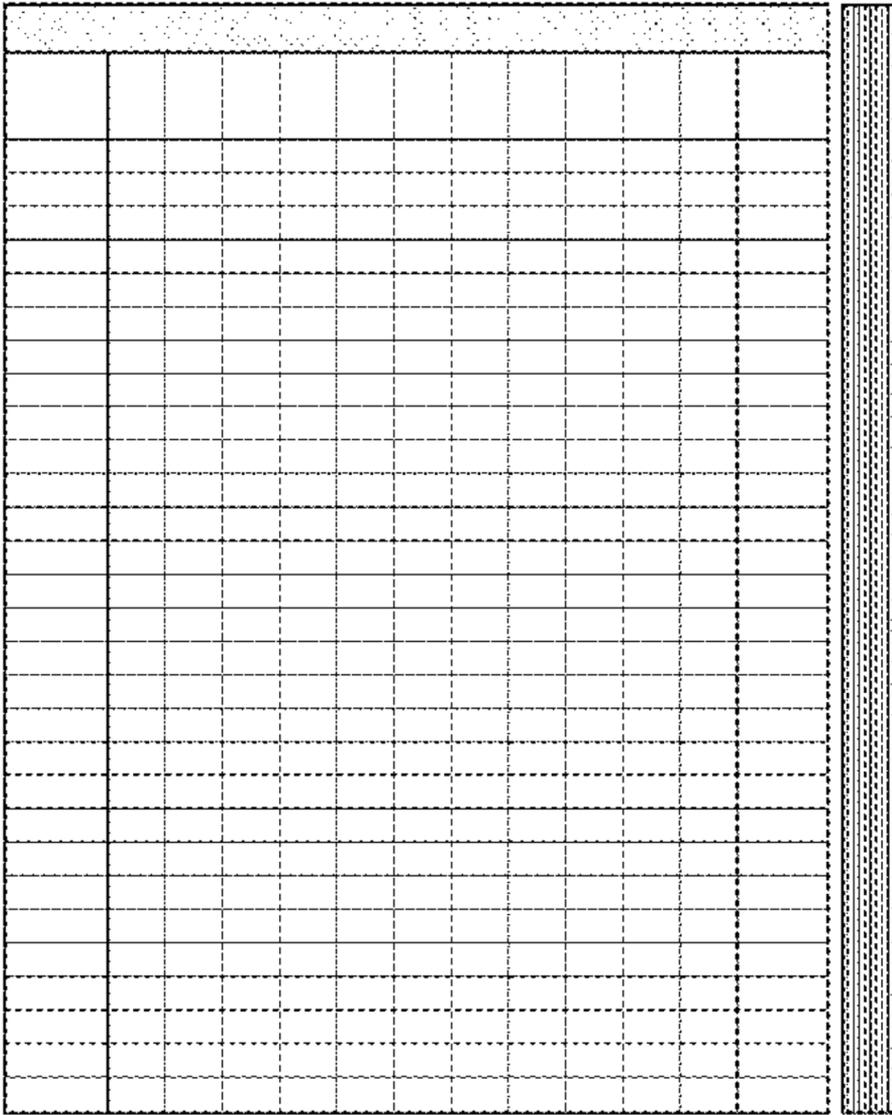
As with the Copyright Act, Congress did not intend design patent law to serve as a backdoor for protecting functionality. Like the Copyright Act of 1976, the 1902 design patent act aimed to protect against that very subterfuge. As our lead paper chronicles, contemporary courts, practitioners, and treatise writers fully appreciated that limitation. And regional circuit courts throughout the nation guarded against such stratagems for eighty years.⁵⁴

Notwithstanding the 1902 Act's intent and the logic of the Supreme Court's seminal *Baker v. Selden* decision, the Patent Office has taken the Federal Circuit's lax standards as gospel. Just last year, the Patent Office granted design patent protection for a writing tablet that, by comparison, elevates Selden's forms to high art.⁵⁵

54. See *Identity Crisis*, *supra* note 1, at 28–31.

55. See U.S. Design Patent D902,303 (Nov. 17, 2020) (writing tablet with tab lines).

Figure 4: U.S. Design Patent D902,303



The inappropriateness, indeed absurdity, of this design patent is on par with the simple geometric bolts that Mr. Saidman uses to support his view that nearly any functional or minimal design qualifies for design patent eligibility.⁵⁶ We are reminded of the Second Circuit's observation at the time that the 1902 Act was passed that "[t]he washer, like the horseshoe calk, is not intended for

56. See Saidman, *supra* note 43, at 153.

display, but for an obscure use. There is no evidence that its form appeals in any way to the eye, or serves to commend it to purchasers and users as a thing of beauty. There is not a scintilla of evidence that the sale of a single washer was ever induced by reason of any attractiveness in its appearance.”⁵⁷ Even the CCPA, in an opinion penned by Judge Giles Rich, questioned the notion that a gasket for the threaded bunghole of a fifty-five gallon drum could qualify for a design patent.⁵⁸ Yet Mr. Saidman considers granting of design patents for bolts to be evidence of a well-functioning and balanced design patent system.

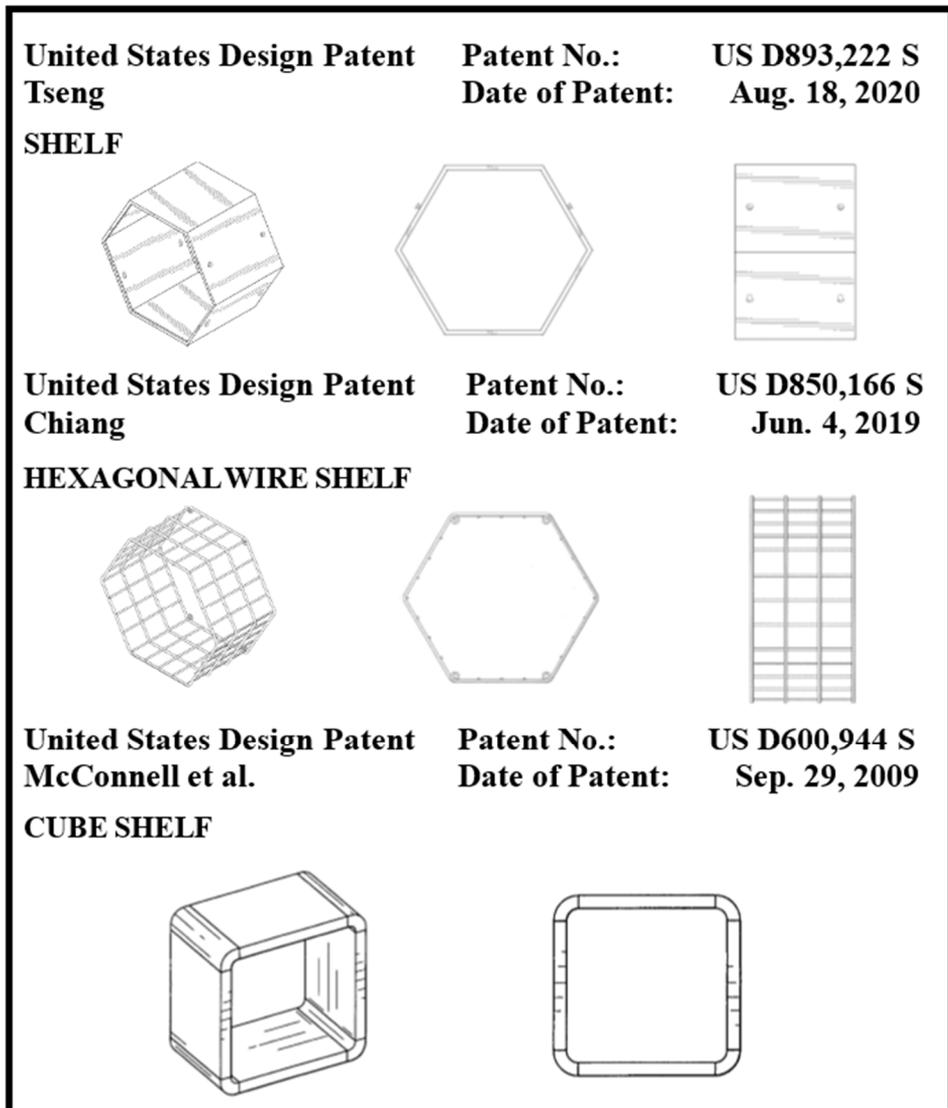
A plethora of other design patents claiming simple geometric shapes shows just how far the design patent law has drifted from its legislative mooring. Figure 5 illustrates some recent doozies.⁵⁹

57. *Bradley v. Eccles*, 126 F. 945, 949 (2d Cir. 1903).

58. *See In re Carletti*, 328 F.2d 1020, 1022 (C.C.P.A. 1964) (observing that “[t]he appearance of appellants’ gasket seems as much dictated by functional considerations as is the appearance of a piece of rope, which, too, has ribs and grooves nicely arranged. The fact that it is attractive or pleasant to behold is not enough. Many well-constructed articles of manufacture whose configurations are dictated solely by function are pleasing to look upon. . . . But it has long been settled that when a configuration is the result of functional considerations only, the resulting design is not patentable as an ornamental design for the simple reason that it is not ‘ornamental’—was not created for the purpose of ornamenting.”).

59. *See* U.S. Design Patent, D893,222 (Aug. 18, 2020) (“Shelf”); U.S. Design Patent, D850,166 (Jun 4, 2019) (“Hexagonal Wire Shelf”); U.S. Design Patent, D600,944 (Sep. 29, 2009) (“Cube Shelf”).

Figure 5: Simple Geometric Shapes



The granting of the cube shelf design patent possibly explains the low bar applied to Apple's smartphone and tablet designs.

There can be little doubt that the Federal Circuit has reduced the design patent system to a registration system with little risk of invalidation. The Federal Circuit's recognition of the alternative design test as a test for ornamentality/non-functionality eligibility has overridden Congress's intent to ensure a meaningful constraint on design patent protection for functionality. As we show in the lead paper, the alternative design test serves as a rubber

stamp for design patent eligibility and imposes a nearly impossible burden on those seeking to invalidate design patents on functionality grounds. It ignores the possibility that some shapes are better than others. Under this test, as long as there are alternative designs that achieve the same general function, regardless of efficacy, the design patent is not invalid.⁶⁰ As basic logic and jurisprudence show, there are almost always alternative designs “available.”

In line with our analysis, the European Court of Justice has recently questioned the alternative design test, also known as the multiplicity of forms test.⁶¹ In response to DOCERAM’s action asserting infringement of its EU Community Design, CeramTex brought an invalidity counterclaim asserting that the features of appearance of the applicable products were dictated solely by their technical function.⁶² The case focused on the interpretation of Article 8(1) of the European Union Community Designs Regulation, which provides that “[a] Community design shall not subsist in features of appearance of a product which are solely dictated by its technical function.”⁶³ The European Court of Justice held:

Article 8(1) of Regulation No 6/2002 excludes protection under the law on Community designs for features of appearance of a product where considerations other than the need for that product to fulfil its technical function, in particular those related to the visual aspect, have not played any role in the choice of those features, *even if other designs fulfilling the same function exist...* Therefore... Article 8(1) of Regulation No 6/2002 must be interpreted as meaning that in order to determine whether the features of appearance of a product are exclusively dictated by its technical function, *it must be established that*

60. See *Identity Crisis*, *supra* note 1, at 61.

61. See Case C-395/16, DOCERAM GmbH v. CeramTec GmbH, EU:C:2018:172 (Mar. 8, 2018). According to a survey conducted as part of a larger legal review ordered by the European Commission, the majority of EU industry stakeholders favored looking at the design at hand to determine whether each feature is dictated by technical function over the alternative designs (multiplicity of forms) test. See *Legal review on industrial design protection in Europe*, at 84 (Apr. 15, 2016), <https://op.europa.eu/en/publication-detail/-/publication/43fd4a5c-6c26-4639-ac9a-281ab57687de>. This contradicts Mr. Saidman’s and Mr. Carani’s suggestion that their view is representative of industry preferences. Just to be clear, we do not believe that this issue should be decided by industry preferences. Rather, courts should faithfully apply the law. And while industry preferences are relevant to statutory reform, policymakers should ensure that all segments of the market and society are considered.

62. DOCERAM, EU:C:2018:172, ¶ 12.

63. Article 8(1), Council Regulation (EC) No 6/2002 of 12 December 2001 on Community designs (OJ 2002 L 3, p. 5).

*the technical function is the only factor which determined those features, the existence of alternative designs not being decisive in that regard.*⁶⁴

The European Court of Justice held that such interpretation is supported by the objective reflected in the Community Designs Regulation to prevent “technological innovation from being hampered by granting design protection to features dictated solely by a technical function of a product”⁶⁵ and is in line with Recital 10 of the Community Designs Regulation.⁶⁶ Essentially, the European Court of Justice held that the functionality exclusion of Article 8(1) is about the role of competition in promoting technological innovation. In that context, the European Court of Justice explained that

if the existence of alternative designs fulfilling the same function as that of the product concerned was sufficient in itself to exclude the application of Article 8(1) of Regulation No 6/2002, a single economic operator would be able to obtain several registrations as a Community design of different possible forms of a product incorporating features of appearance of that product which are exclusively dictated by its technical function. That would enable such an operator to benefit, with regard to such a product, from exclusive protection which is, in practice, equivalent to that offered by a [utility] patent, but without being subject to the conditions applicable for obtaining the latter, which would prevent competitors offering a product incorporating certain functional features or limit the possible technical solutions, thereby depriving Article 8(1) of its full effectiveness.⁶⁷

Hence, the European Court of Justice found that not only does the alternative design test do a bad job at weeding out functionality, it is also prone to manipulation and risks a single firm obtaining a monopoly over functional

64. *DOCERAM*, EU:C:2018:172, ¶¶ 31–32 (emphases added); see also *id.* at ¶¶ 37–38 (“[S]uch an assessment must be made, in particular, having regard to the design at issue, the objective circumstances indicative of the reasons which dictated the choice of features of appearance of the product concerned, or information on its use or the existence of alternative designs which fulfil the same technical function, provided that those circumstances, data, or information as to the existence of alternative designs are supported by reliable evidence. Having regard to the foregoing considerations . . . Article 8(1) of Regulation No 6/2002 must be interpreted as meaning that, in order to determine whether the relevant features of appearance of a product are solely dictated by its technical function, within the meaning of that provision, the national court must take account of all the objective circumstances relevant to each individual case. In that regard, there is no need to base those findings on the perception of an ‘objective observer.’”).

65. *Id.* at ¶ 29.

66. Council Regulation (EC) No 6/2002 of 12 December 2001 on Community designs (OJ 2002 L 3, p. 2), Recital 10.

67. *DOCERAM*, EU:C:2018:172, ¶ 30.

features akin to a utility patent. In the BCLT Symposium discussion, Mr. Saidman acknowledged the legitimacy of this point.⁶⁸

It is easy to see why some design patent practitioners applaud the current lax regime. But it is difficult to see how it comports with the 1902 Act, *Baker v. Selden*, or the needs of a coherent intellectual property system. Because they specialize in the design protection field and advocate for designers,⁶⁹ they miss the intellectual property forest for the design patent trees.

2. *Infringement Stage Filtration Serves a Vital Role in Ensuring That Design Patents Do Not Monopolize Functionality*

In addition to advocating rubber stamping of all manner of functional design patent applications, the design patent practitioners oppose bringing functionality policy concerns into the infringement stage of analysis. In 1988, the same year that Mr. Saidman prevailed in his appeal of *Avia v. L.A. Gear*, the Federal Circuit appeared receptive to taking functionality considerations into account in assessing infringement.⁷⁰ Such an approach paralleled Judge Learned Hand's seminal abstraction-filtration-comparison (AFC) framework,⁷¹ an approach that gained renewed traction in ensuring that copyright protection for computer software did not monopolize functionality.⁷² Similarly, regional circuit courts have augmented the AFC framework to ensure that copyrights on useful articles do not monopolize functional features.⁷³

68. See Practitioners and Comparative Law Panel, from 00:56:22 to 00:57:00.

69. In an effort to appear balanced, Mr. Saidman points to the Federal Circuit's decision in *Best Lock Corp. v. ILCO Unican Corp.*, 94 F.3d 1563 (Fed. Cir. 1996), a case holding that the cut pattern on a key blade is not eligible for design patent protection because it uniquely opens a corresponding lock, as an example of a design dictated solely by functionality. He grudgingly characterizes this case as the exception that proves the rule that nearly every design is capable of alternative configurations. See Saidman, *supra* note 43, at 158–59 (asserting that “critics may posit that very few visual designs do not have alternatives that perform the same function” and “[t]here are an infinite number of choices of product designs available to a competitor with which it may use the same utilitarian features without copying the designer's specific product”).

70. See *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1188–89 (Fed. Cir. 1988).

71. See *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930).

72. See *Comput. Assocs. Int'l v. Altai, Inc.*, 982 F.2d 693, 700, 707–10 (2d Cir. 1992); Peter S. Menell, *Rise of the API Copyright Dead?: An Updated Epitaph for Copyright Protection of Network and Functional Features of Computer Software*, 31 HARV. J.L. & TECH. 303, 329–30, 334–36 (2018).

73. See *Mattel, Inc. v. MGA Ent., Inc.*, 616 F.3d 904, 913–14 (9th Cir. 2010) (“If there's only a narrow range of expression (for example, there are only so many ways to paint a red bouncy ball on blank canvas), then copyright protection is ‘thin’ and a work must be ‘virtually identical’ to infringe.”); *Incredible Techs., Inc. v. Virtual Techs., Inc.*, 400 F.3d 1007, 1015 (7th

Design patent practitioners would love a clear, bright, and broad scope of protection.⁷⁴ While we certainly appreciate the benefits of clear rights, it is important to recognize that we are operating in a domain that requires careful balancing of competition and innovation concerns.

Navigating the design patent-utility patent boundary is analogous to navigating copyright law's idea-expression dichotomy and useful article separability doctrine and trademark law's functionality doctrine. As Judge Learned Hand recognized nearly a century ago, achieving the proper balance inevitably entails some subtlety, finesse, and uncertainty:

Cir. 2005) (“[T]he video display is afforded protection only from virtually identical copying.”); *Satava v. Lowry*, 323 F.3d 805, 811 (9th Cir. 2003) (addressing a jelly fish sculpture: “a combination of unprotectable elements is eligible for copyright protection only if those elements are numerous enough and their selection and arrangement original enough that their combination constitutes an original work of authorship”); *Apple Comput., Inc. v. Microsoft Corp.*, 35 F.3d 1435, 1446 (9th Cir. 1994) (“[T]here can be no infringement [of thinly protected works] unless the works are virtually identical.”); *Harper House, Inc. v. Thomas Nelson, Inc.*, 889 F.2d 197, 205 (9th Cir. 1989) (addressing layout for a day planner and stating “copyright infringement of compilations consisting largely of uncopyrightable elements should not be found in the absence of ‘bodily appropriation of expression’” (quoting *Worth v. Selchow & Rughter Co.*, 827 F.2d 569, 573 (9th Cir. 1987))).

74. Mr. Saidman contends that courts ought not to filter out unprotectable aspects of designs because design patents, unlike copyrights, come with a presumption of validity. *See* Saidman, *supra* note 43, at 149, 152, 160, 161, 166. The presumption of validity applies to validity analysis, not infringement analysis. Both valid copyrights and valid design patents are subject to jurisprudential infringement doctrines. *See* *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1293 (Fed. Cir. 2010) (“The district court here properly factored out the functional aspects of Richardson’s design as part of its claim construction.”); *Unidynamics Corp. v. Automatic Prods. Int’l*, 157 F.3d 1311, 1323–24 (Fed. Cir. 1998) (explaining that “the accused device must appropriate the novelty in the patented device which distinguishes it from the prior art” (quoting *Litton Sys., Inc. v. Whirlpool Corp.*, 728 F.2d 1423, 1444 (Fed. Cir. 1984) (quoting *Sears, Roebuck & Co. v. Talge*, 140 F.2d 395, 396 (8th Cir. 1944)))); *OddzOn Prods., Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1405 (Fed. Cir. 1997) (“Where a design contains both functional and non-functional elements, the scope of the claim must be construed in order to identify the non-functional aspects of the design as shown in the patent.”); *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 825 (Fed. Cir. 1992) (“Where . . . a design is composed of functional as well as ornamental features, to prove infringement a patent owner must establish that an ordinary person would be deceived by reason of the common features in the claimed and accused designs which are ornamental.”); *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1188 (Fed. Cir. 1988) (holding that a design patent, unlike a utility patent, limits protection to the ornamental design of the article and “[t]hus it is the non-functional, design aspects that are pertinent to determinations of infringement” and quoting in a footnote Hon. Giles Rich’s statement to Congress that “the great bulk of industrial design is simply not protectable by design patents.” (quoting *Industrial Innovation and Technology Act: Hearings on S. 791 Before the Subcomm. on Patents, Copyrights and Trademarks of the Senate Comm. on the Judiciary*, 100th Cong., 1st Sess. 8–9 (1987) (statement of Hon. Giles S. Rich))). Such doctrines play a critical role in ensuring the integrity of the overall intellectual property system.

Upon any work . . . a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the play is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected, since otherwise the playwright could prevent the use of his 'ideas,' to which, apart from their expression, his property is never extended. Nobody has ever been able to fix that boundary, and nobody ever can.⁷⁵

A filtration framework is essential to achieving balance within the intellectual property system. Mr. Mauro and Mr. Morley's neuroscience-based empirical ordinary observer test (EOOT) ignores the central legal question and brings into play a needless battle of the neuroscience experts. Even if EOOT was reliable, which we cannot assess based on the limited disclosures in Mr. Mauro and Mr. Morley's paper, it provides no mechanism for assessing the critical balances required by intellectual property law.

Design patent judges can and should use filtration to frame the infringement analysis so as to ensure that they and their juries do not inadvertently allow monopolization of functionality through the backdoor of design patents. The Symposium revealed that the design patent practitioners misapprehended the filtration framework. Using *Richardson v. Stanley Works, Inc.*⁷⁶ to illustrate his critique of our analysis, Mr. Saidman asserted that filtration meant airbrushing out the *entirety* of the three components of the multi-function tool design at issue.⁷⁷ The AFC jurisprudence does not use such a broad-brush approach.

The litigation concerning whether the Bratz line of fashion dolls infringed the drawings on which the dolls were based illustrates how such claim construction can be conducted usefully in design cases.⁷⁸ The copyright protected drawings were based significantly on human features and prior works. After extensive pre-trial briefing, the court provided the following jury instruction to aid the jury in evaluating whether the Bratz dolls infringed the protectable elements of the drawings:

75. *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930) (citations omitted).

76. 597 F.3d 1288 (Fed. Cir. 2010).

77. *See* Practitioners and Comparative Law Panel, from 00:11:50 to 00:13:30.

78. *See* *Bryant v. Mattel, Inc.*, 2011 WL 13238416 (C.D. Cal. Apr. 21, 2011); *Mattel, Inc. v. MGA Entertainment, Inc.*, 616 F.3d 904 (9th Cir. 2010). In the interests of full disclosure, we note that Peter Menell consulted for MGA on the use of AFC in the Bratz litigation.

Table 1: Jury Instruction in the Bratz Litigation⁷⁹

COPYRIGHT INFRINGEMENT — PROTECTABLE/UNPROTECTABLE ELEMENTS: DOLL DRAWINGS	
Protectable Elements Include:	Unprotectable Elements Include:
The precise shape, size, and placement of the dolls' anatomical features	The resemblance or similarity to human form (the presence of hair, head, eyes, a nose, mouth, lips, ears, a neck, legs, arms, and a torso)
Hair-dos	Exaggerated features, including but not limited to an oversized head, oversized eyes, large lips, oversized feet, slim arms, a diminished nose, and a long torso
Face paint	Idealized features, such as luscious lips, high cheekbones, almond-shaped eyes, a slim waist, a small nose, and long limbs
Fashion outfits and accessories	The idea of a young, fashion-forward female with an attitude, and the expression traditionally associated with that idea, including but not limited to heavy make-up, an "urban" look, defiant poses, defiant gazes, angular eyebrows, trendy clothing, shoes and accessories
The precise combination of features	Features shared by a particular race or ethnicity (e.g., skin tone)

Judge Carter did not airbrush out the entirety of the dolls' forms. Rather, he filtered out unoriginal features and unoriginal compilations of elements while reinforcing the protection of the particular expression associated with those features and elements.

Employing such case management procedures in design patent litigation would substantially assist judges and juries in applying the careful balances involved in addressing the functionality and non-originality limitations on design patent protection. To focus the analysis for design patents, we suggest a separability-filtration-comparison (SFC) framework. SFC begins with separability, which has the analogous function to abstraction—but instead of abstracting to differentiate expression (protectable) from idea (unprotectable), separability divides the ornamental (protectable) from the functional (unprotectable). Judges should construe the design patent claim to distinguish between protectable and unprotectable aspects, similar to a *Markman* pre-trial hearing.⁸⁰

79. Bryant v. Mattel, Inc., 2011 WL 13238416 (C.D. Cal. Apr. 21, 2011) (Instruction No. 47).

80. See Peter S. Menell, *Economic Analysis of Intellectual Property Notice and Disclosure*, in RESEARCH HANDBOOK ON THE ECONOMICS OF INTELLECTUAL PROPERTY LAW, VOLUME I:

The separability/filtration framework is not merely an approach imported from copyright. It bears similarity to copyright jurisprudence because both regimes apply the utility patent supremacy principle reflected in *Baker v. Selden*. Design patent jurisprudence has long recognized the separability imperative⁸¹ and even some Federal Circuit cases apply separability/filtration to exclude or discount functional features.⁸² This line of cases should be used to correct the Federal Circuit's over-protective course.

SFC provides a further safety valve at the comparison stage. Where designs are mostly functional and are only narrowly ornamental, courts should require a higher standard of virtual identity⁸³ rather than merely "sameness of appearance"/substantial identity.⁸⁴ Similarly, although copyright law generally refers to the standard for infringement as "substantial similarity of protected expression," regional circuit courts have implemented a sliding scale that adjusts the similarity threshold to protect against overprotecting thinly protected works. Where works are only thinly protected, courts require virtual identity rather than merely substantial similarity.⁸⁵

THEORY 453–54 (Ben Depoorter & Peter S. Menell eds., 2019) (discussing systematic judicial procedures for determining copyright scope); *Harbor Software v. Applied Sys.*, 925 F. Supp. 1042, 1046 (S.D.N.Y. 1996) (observing that copyright "filtration analysis is a matter of law for the Court, rather than for the jury" based on an analogy to *Markman v. Westview Instruments*, 517 U.S. 370 (1996)).

81. See *Baker v. Hughes-Evans Co.*, 270 F. 97, 99 (2d Cir. 1920) (explaining that "it is not true that the design can ever be used to appropriate (per se) the mechanical function. The two inventions must be separable; otherwise, it would be a contradiction in terms to grant two patents for them.").

82. See *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1293 (Fed. Cir. 2010); *Unidynamics Corp. v. Automatic Prods. Int'l*, 157 F.3d 1311, 1323–24 (Fed. Cir. 1998); *OddzOn Prods. v. Just Toys*, 122 F.3d 1396, 1405 (Fed. Cir. 1997); *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 825 (Fed. Cir. 1992); *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1188 (Fed. Cir. 1988).

83. See *Applied Arts Corp. v. Grand Rapids Metalcraft Corp.*, 67 F.2d 428, 430 (6th Cir. 1933) ("The patented design is comparatively simple, and without ornamentation. In the main its configuration is made imperative by the elements which it combines and by the utilitarian purpose of the device. It was certainly not the intent of the law to grant monopoly to purely conventional design which is in itself little more than a necessary response to the purpose of the article designed. The *scope* of a design patent, as well as its originality, must depend on something more than this." (emphasis added)); *Theodore W. Foster & Bro. Co. v. Tilden-Thurber Co.*, 200 F. 54, 56 (1st Cir. 1912) (noting a design patent "would cover the new shape or configuration only in its ornamental and not in its merely useful aspect, nor would it be infringed by an article securing the same merely useful result through shape or configuration, unless so nearly the same in appearance as to come within *Gorham Co. v. White*" (citation omitted)).

84. See *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 670 (2008).

85. See *Mattel, Inc. v. MGA Ent., Inc.*, 616 F.3d 904, 913–14 (9th Cir. 2010) ("If there's only a narrow range of expression (for example, there are only so many ways to paint a red

At the Symposium, Mr. Carani and Mr. Saidman contended that using a filtration framework would be out of step with design protection standards.⁸⁶ However, as Professor Estelle Derclaye pointed out⁸⁷ and as explicated in Mr. Carani's edited book about functionality in design rights,⁸⁸ European Union design law applies filtration to designs that include unprotectable functional features. Moreover, Recital 10 of the European Union Community Designs Regulation specifically instructs:

Technological innovation should not be hampered by granting design protection to features dictated solely by a technical function. It is understood that this does not entail that a design must have an aesthetic quality. Likewise, the interoperability of products of different makes should not be hindered by extending protection to the design of mechanical fittings. *Consequently, those features of a design which are excluded from protection for those reasons should not be taken into consideration for the purpose of assessing whether other features of the design fulfil the requirements for protection.*⁸⁹

Thus, the European Union considers filtration to be an appropriate, indeed essential, part of a balanced design protection regime.⁹⁰

Mr. Carani also contended that filtration would run against the need to look at the design “as a whole.” He argued that designs should not be dissected, as all parts of a given design participate in the visual end result.⁹¹ We

bouncy ball on blank canvas), then copyright protection is ‘thin’ and a work must be ‘virtually identical’ to infringe.”); *Incredible Techs., Inc. v. Virtual Techs., Inc.*, 400 F.3d 1007, 1015 (7th Cir. 2005) (“[T]he video display is afforded protection only from virtually identical copying.”); *Satava v. Lowry*, 323 F.3d 805, 812 (9th Cir. 2003); *Apple Comput., Inc. v. Microsoft Corp.*, 35 F.3d 1435, 1446 (9th Cir. 1994) (“[T]here can be no infringement [of thinly protected works] unless the works are virtually identical.”); *Harper House, Inc. v. Thomas Nelson, Inc.*, 889 F.2d 197, 205 (9th Cir. 1989) (“[C]opyright infringement of compilations consisting largely of uncopyrightable elements should not be found in the absence of ‘bodily appropriation of expression.’” (quoting *Worth v. Selchow & Rughter Co.*, 827 F.2d 569, 573 (9th Cir. 1987))); *Data E. USA, Inc. v. Epyx, Inc.*, 862 F.2d 204, 209 (9th Cir. 1988) (applying a heightened infringement standard for evaluating thinly protected works, such as the audiovisual elements for a videogame).

86. See Practitioners and Comparative Law Panel, e.g., from 00:15:15 to 00:15:48 (Mr. Carani) and from 00:11:50 to 00:13:30 (Mr. Saidman).

87. See Practitioners and Comparative Law Panel, from 1:04:48 to 1:12:26, and Professor Estelle Derclaye's slides, at slide 7.

88. See Susie P. Arnesen, *European Union, in DESIGN RIGHTS: FUNCTIONALITY AND SCOPE OF PROTECTION* 53–82 (Christopher V. Carani ed., 2017).

89. See Council Regulation (EC) No 6/2002 of 12 December 2001 on Community Designs (OJ 2002 L 3, p. 1), Recital 10 (emphasis added).

90. See *supra* text accompanying notes 61–68.

91. See Carani, *supra* note 43, at 217 (“But the concern over the inclusion of individual features having appearances that are driven partially, or even wholly, by functional

disagree for several reasons. First, Section 171 does not restrict the ornamentality/non-functionality examination.

Second, design patents are often obtained for *a specific part, component, or feature* of a design for an article of manufacture, and therefore often do not represent the whole design of such an article.⁹² Many designs, by virtue of including claimed and unclaimed parts, protect distinct features and not whole designs. There is no point in treating partial designs as “whole.”⁹³

Third, when conducting a novelty or non-obviousness examination, the design patent examiner or the court considers distinct features of previous designs as prior art and does not merely look at previous designs “as a whole.” Since a novelty or non-obviousness examination is in essence a backward-looking infringement examination, infringement analysis should follow a similar logic. In other words, just as a patent examiner or an accused device maker can raise Section 102 or 103 arguments against a design patent applicant or design patentee seeking to monopolize a design, the accused device maker ought to be able to dissect the claimed design into relevant and non-relevant elements as part of its infringement defense. Although the Federal Circuit rejected the “point of novelty” test and instructed lower courts to view design

consideration is often the cited reasoning for engaging in the wrongful filtration practice. It cannot be overemphasized that the ‘right to exclude’ afforded by a design patent claim extends, and only extends, to the design *as a whole*, as claimed; the design patent claim does not provide any independent protection for individual visual features thereof. Accordingly, no individual visual features of the overall claim should be filtered out. A design patent claim rises and falls on its overall appearance. All or nothing at all.” (emphasis in original)).

92. See, e.g., Ms. Elizabeth Ferill’s comment in the Practitioners and Comparative Law Panel, starting on 11:13:45; see also *In re Zahn*, 617 F.2d 261, 268 (C.C.P.A. 1980).

93. See Sarah Burstein, *Whole Designs*, 92 U. Colo. L. Rev. 182, 191 (2021) (“Importantly, for both continuation and other applications, neither the USPTO nor the Federal Circuit limit fragment claims to important, distinctive, or salient design features. So it is not unusual for applicants to claim very small or visually insignificant fragments of a larger design.”). Professor Sarah Burstein points out that this is problematic for ever-greening reasons. See *id.* at 191–92; Sarah Burstein, *How Design Patent Law Lost Its Shape*, 41 Cardozo L. Rev. 555, 603–04 (2019) (“One limit on continuation and divisional applications is that they are not supposed to contain any ‘new matter.’ According to the USPTO, changing a solid line to a broken line or vice versa in a design patent drawing does not constitute the addition of ‘new matter.’ Therefore, an applicant can significantly alter the scope of their claims over time by filing a string of related applications with different lines—or parts thereof—shown in solid and broken lines. This ‘daisy-chain’ technique allows design patent applicants to claim basically whatever they want, whenever they want. They can even go back to the USPTO and capture competing products that were introduced after the first design patent application was filed—even if those competing products did not infringe the original patent claim.”(citations and some quotation marks omitted)).

patents as a whole in *Egyptian Goddess*,⁹⁴ the court recognized and endorsed the use of filtration in infringement analysis.⁹⁵

Fourth, and most importantly, when form and function merge—whether it happens in a partial or a whole design—protecting the form *is* protecting the function. Thus, unless such design meets the higher threshold of utility patents, design patent protection would constitute a “surprise and a fraud upon the public”⁹⁶ and undermine legitimate free market competition.

The design patent practitioners also contend that filtration analysis leads to broader claim scope by recognizing protection for components of overall designs and undermines the statutory presumption of validity.⁹⁷ Neither assertion holds water if courts faithfully conduct their analysis. Filtering out elements that should not have been granted protection in the first place is not a problem. Similarly, claim construction does not undermine the presumption of validity. It is an essential part of faithfully implementing patent law.

94. See *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 672–79 (Fed. Cir. 2008) (en banc).

95. See *Identity Crisis*, *supra* note 1, at 82; *Egyptian Goddess, Inc.*, 543 F.3d at 680 (“Apart from attempting to provide a verbal description of the design, a trial court can usefully guide the finder of fact by addressing a number of other issues that bear on the scope of the claim. Those include such matters as describing the role of particular conventions in design patent drafting, such as the role of broken lines, see 37 C.F.R. § 1.152; assessing and describing the effect of any representations that may have been made in the course of the prosecution history . . . and distinguishing between those features of the claimed design that are ornamental and those that are purely functional (emphasis added)).

96. *Baker v. Selden*, 101 U.S. 99, 102 (1879).

97. For the argument that filtration leads to broader claim scope, see, for example, Carani, *supra* note 43, at 216–17 (“Filtering out visual elements leads to unwanted and unintended consequences such as broadening the design patent claim beyond that which the patentee created, and that which the [USPTO] examined and granted.”), and at 228 (“Feature filtration leads to an unwanted, post hoc, *broadening* of the design patent claim.”); Saidman, *supra* note 43, at 151 (“[T]he scope of the patent is broader if utilitarian elements are not part of the claim; conversely, the more utilitarian elements that are included in the claim the more narrow is the claim, having the effect of limiting the universe of products that might infringe it.”). Mr. Saidman and Mr. Carani offer similar comments on the Practitioners and Comparative Law Panel, from 1:12:40 to 1:13:23. For the argument that filtration undermines the statutory presumption of validity, see Carani, *supra* note 43, at 226 (“[T]he presumption of validity and its underpinnings easily fall apart under the feature filtration approach because a judicially construed claim (with portions of the whole ‘factored out’) can be *fundamentally* different from the claim examined and issued by the USPTO.”), and Ms. Ferill’s and Mr. Carani’s comments in the Practitioners and Comparative Law Panel, from 1:13:24 to 1:15:44.

B. PROFESSOR MCKENNA'S CRITIQUE OF THE LESSONS FROM
COPYRIGHT AND TRADEMARK LAW AND APPARENT DEFENSE OF
DESIGN PATENT PROTECTION FOR FUNCTIONALITY

Although Professor McKenna agrees with much of our analysis, we disagree with aspects of his commentary. At several places he substitutes inaccurate characterizations for our position, as we explain below. To the extent that Professor McKenna contends that the 1902 Act, the regional case law pre-Federal Circuit, or *Baker v. Selden* support or enable affording protection for functionality under design patent law, we strongly disagree. Furthermore, we are skeptical that extending design protection to encompass functionality, as Professor McKenna seems to suggest, would be sound intellectual property policy.

Professor McKenna begins his commentary by asserting that the design patent regime is not copyright-based, suggesting we claim that design patents *today* are really, positively, a *form* of copyright protection.⁹⁸ To be clear, we fully recognize that design patents are governed by Title 35 and not Title 17 of the U.S. Code, but for purposes of the functionality inquiry, it is a distinction without a difference. Appearances, labels, and U.S. Code designations can be deceptive. That is the reason for our reference to design patent law's *identity crisis*. Our article presents two principal lines of analysis, one historical and one substantive. As regards history, the design patent statute was modeled after the English design copyright statute and in its early draft proposed a "sole and exclusive copy-right" for the proprietor of any "new and original design" for specified articles of manufacture.⁹⁹ The 1902 Act, as faithfully interpreted by regional circuit courts, implemented a parsimonious approach to design patent protection that respected the utility patent supremacy principle. Unfortunately, the Federal Circuit ignored and misread the statute and that jurisprudence. As regards the substance (design patent subject matter), the design patent regime is far closer in character and prudential concerns about eligibility to the copyright regime than it is to utility patents. Professor McKenna appears to agree with us on both lines of analysis.

Professor McKenna defends design patent protection for functionality. He supports this position by contending that the central problem in intellectual property law's treatment of design is the perception that ornamentality and functionality are opposites.¹⁰⁰ Just to be clear, we did not suggest ornamentality and functionality are inherently opposite. Professor McKenna acknowledges

98. See McKenna, *supra* note 45, at 195.

99. See *Identity Crisis*, *supra* note 1, at 9.

100. See McKenna, *supra* note 45, at 197.

that ornamentality and functionality can be antipodal and offers little explanation for why this distinction is of great significance for design patent law. Based on other aspects of design patent law and the history surrounding the ornamentality/non-functionality issue, we are skeptical that renewed focus on ornamentality as an aesthetic requirement is worth the candle for the following reasons.

As we explain in the lead paper, judges shifted their focus from assessing ornamentality to non-functionality relatively soon after the passage of the 1902 Act for the pragmatic reason that they were ill-equipped by training to assess art.¹⁰¹ Justice Oliver Wendell Holmes warned the same in a contemporaneous copyright case: “[i]t would be a dangerous undertaking for persons trained only to the law to constitute themselves final judges of the worth of pictorial illustrations, outside of the narrowest and most obvious limits.”¹⁰² Professor McKenna suggests that courts once treated ornamentality as a meaningful concept distinct from non-functionality,¹⁰³ but the cases he invokes do not support this point. In one case the court pointed out that there are articles so clearly functional that their design could not ever be considered ornamental.¹⁰⁴ Other cases exemplify how the ornamentality rubric, when detached from non-functionality, becomes empty and useless.¹⁰⁵ Furthermore, if ornamentality meant simply having a visual effect on an observer,¹⁰⁶ then it is a low threshold and overlaps with the originality requirement. It is also reminiscent of the matter of concern doctrine, which equates ornamentality with mere visibility.¹⁰⁷ Professor McKenna does not explain why

101. See *Identity Crisis*, *supra* note 1, at 30–31.

102. *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 251 (1903).

103. See McKenna, *supra* note 45, at 198–99.

104. See *id.* at 198 n.17 and accompanying text. At footnote 17, Professor McKenna cites *Theodore W. Foster & Bro. Co. v. Tilden-Thurber Co.*, 200 F. 54, 56 (1st Cir. 1912), where the court says, after giving a list of examples for such type of articles, that “[t]he shape or configuration of such articles can have value only in so far as it may make them more *useful*.” *Id.* (emphasis added).

105. See McKenna, *supra* note 45, at 199 nn. 18–19 and accompanying text. The question of whether the appearance of the article drove its sales was quickly abandoned by courts, and it is unclear that it was ever a good or feasible distinction or how it brought meaning to the ornamental rubric. And requiring that designs be “not ugly” is both an extremely low bar and the sort of art assessment that judges did not feel comfortable making, as we explain above.

106. See McKenna, *supra* note 45, at 198–99 nn. 17–19 and accompanying text.

107. See *In re Stevens*, 173 F.2d 1015, 1016 (CCPA 1949) (noting that “that articles which are concealed or obscure in normal use are not proper subjects for design patents, since their appearance cannot be a matter of concern”); *Bradley v. Eccles*, 126 F. 945, 949 (2d Cir. 1903) (invalidating the coupling washer because it “is not intended for display, but for an obscure use”); Jason J. Du Mont & Mark D. Janis, *Functionality in Design Protection Systems*, 19 J. INTELL. PROP. L. 261, 269–71 (2012) (tracing the history of the doctrine and noting that “several

acknowledging that ornamentality and functionality need not be opposites adds much to the clarification or interpretation of design patent law. Nor does he address the legislative intent behind the addition of the ornamentality requirement, which aimed at drawing a fundamental line between utility patent protection and design patent eligibility.¹⁰⁸

In our view, it continues to make sense to view ornamentality principally as a channeling doctrine that excludes functionality and maintains utility patent supremacy. That was Commissioner Allen’s intention in advocating what became the 1902 Act.

Surprisingly, Professor McKenna argues that the “ornamentality” and “functionality” inquiries are comparably subjective as a central pillar of his critique.¹⁰⁹ While we believe that the courts can better elucidate some functionality questions, we do not find Professor McKenna’s argument persuasive. Sometimes at the margins functionality questions can be context-dependent or a matter of intellectual property policy, but functionality is hardly as subjective as ornamentality. Functionality principally relates to mechanical engineering, whereas ornamentality relates to aesthetics. It is comparatively easy to recognize functionality, as is also evident in the anecdotal cases Professor McKenna presents.¹¹⁰ On the contrary, recognizing ornamentality (in the sense of beauty or art, and not in the sense of non-functionality) is a subjective task which makes it incoherent and difficult to apply, as reflected in judges’ disinclination to assess artistic expression or aesthetics.¹¹¹ The focus on functionality aligns with the 1902 Act. Courts can and should develop a clearer interpretation of functionality, but the perfect ought not be the enemy of the good¹¹² and the utility patent supremacy principle illuminates the path.

decades of effort to wrest legal standards from the ornamentality rubric has yielded little progress. Construed as a referendum on visual aesthetics, ornamentality fails because it is too subjective.”).

108. See *Identity Crisis*, *supra* note 1, at Part III.

109. See McKenna, *supra* note 45, at 199–206.

110. See *id.*

111. In this regard, the Supreme Court’s recent decision in *Google LLC v. Oracle America, Inc.*, 141 S. Ct. 1183 (2021), illustrates the difference. Although it might have been better for the Court to have held categorically that interface declarations are ineligible for copyright protection, the Court emphasizes a wide range of evidence bearing on the functionality of the Java declarations in ruling that Google’s copying of the declarations constituted fair use. See Peter S. Menell, *Google v. Oracle and the Grateful (API) Dead: What a Long Strange Trip It’s Been*, 127 S.F. DAILY JOURNAL No 69, at 1 (Apr. 21, 2021).

112. Scholars have long recognized the difficulty of providing a “perfect” definition of functionality, but that is not a persuasive reason to abandon the effort. Drawing on the lessons of copyright and trade dress jurisprudence, we identify numerous tools and approaches for promoting coherence. Somewhat like Judge Learned Hand’s seminal observation about the

As we discussed above,¹¹³ the European Union regime has a similar approach. As directed in Recital 10 of the European Union Community Design Regulation, “[t]echnological innovation should not be hampered by granting design protection to features dictated solely by a technical function. It is understood that this does not entail that a design must have an aesthetic quality.”¹¹⁴

Much of Professor McKenna’s response discusses a few flawed copyright and trade dress cases to imply that our endorsement of the utility patent supremacy channeling principle jurisprudence¹¹⁵ will founder. Professor

idea expression dichotomy, “[n]obody has ever been able to fix that boundary, and nobody ever can.” *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930).

113. See *supra* text accompanying notes 61–67.

114. Council Regulation (EC) No 6/2002 of 12 December 2001 on Community Designs (OJ 2002 L 3, p. 1), Recital 10.

115. See *Google LLC v. Oracle America, Inc.*, 141 S. Ct. 1183, 1201, 1202 (2021) (finding that Google’s copying of the Java API declarations was fair use significantly because they are “inextricably bound together with a general system, the division of computing tasks,” “idea of organizing tasks into what we have called cabinets, drawers, and files,” and “the use of specific commands known to programmers”); observing that “the declaring code is, if copyrightable at all, further than are most computer programs (such as the implementing code) from the core of copyright”); *TraFFix Devices, Inc. v. Mktg. Displays, Inc.*, 532 U.S. 23, 33–34 (2001) (explaining that trade dress does “not bar competitors from copying functional product design features” and that there is “no need” “to engage . . . in speculation about other design possibilities”); *Leatherman Tool Grp., Inc. v. Cooper Indus., Inc.*, 199 F.3d 1009, 1011–12, 1013 (9th Cir. 1999) (observing that “the protection for source identification must be balanced against ‘a fundamental right to compete through imitation of a competitor’s product,’” and that a trade dress, taken as a whole, is functional if it is “in its particular shape because it works better in this shape”); *Lotus Development Corp. v. Borland Int’l, Inc.*, 49 F. 3d 807, 815–19 (1st Cir. 1995) (holding a menu command hierarchy is an uncopyrightable method of operation), *aff’d by an equally divided court*, 516 U.S. 233 (1996); *Comput. Assocs. Int’l v. Altai, Inc.*, 982 F.2d 693, 709–10 (2d Cir. 1992) (holding that copyright protection did not extend to “extrinsic considerations such as (1) the mechanical specifications of the computer on which a particular program is intended to run; (2) compatibility requirements of other programs with which a program is designed to operate in conjunction; (3) computer manufacturers’ design standards; (4) demands of the industry being serviced; and (5) widely accepted programming practices within the computer industry”); *Sega Enters. v. Accolade, Inc.*, 977 F.2d 1510, 1522 (9th Cir. 1993) (ruling that the “functional requirements for compatibility with the Genesis [video game console are] aspects of Sega’s programs that are not protected by copyright” (citing 17 U.S.C. § 102(b)); *Baker v. Selden*, 101 U.S. 99, 102 (1879) (“To give to the author of the book an exclusive property in the art described therein, when no examination of its novelty has ever been officially made, would be a surprise and a fraud upon the public. That is the province of [utility] patent, not of copyright. The claim to an invention or discovery of an art or manufacture must be subjected to the examination of the [utility division of the] Patent Office before an exclusive right therein can be obtained; and it can only be secured by a patent from the government.”).

McKenna overlooks the most authoritative cases¹¹⁶ and our criticism of copyright and trade dress cases that diverge from that principle. Just to be clear, we do not endorse the Supreme Court's *Star Athletica* decision¹¹⁷ and are not suggesting that design patent law follow its confusing analysis. That decision also offers little if any purchase on three-dimensional designs. Importantly though, Professor McKenna agrees with our critique of the alternative design test.¹¹⁸

Professor McKenna devotes the remainder of his response to arguing for a lower threshold for design patent eligibility than that reflected in the copyright and trade dress regimes as a gap filler. The key difference between our views is that Professor McKenna thinks that design patent law, in contrast to copyright law and trade dress law, fills a product configuration gap.¹¹⁹ But Professor McKenna is not dealing with the actual law, but a post hoc rationalization for design patent law.¹²⁰

As our article explains, the 1842 Act was originally modeled after copyright law, not utility patent law. It was meant to fill a gap in copyright protection at that point in history with a copyright-type design protection regime. Although copyright and trademark law later expanded to cover design, Congress never amended design patent law to encompass functionality. To the contrary, the 1902 Act is where Congress last confronted functionality in the context of the design patent regime. Regional appellate courts interpreted the 1902 Act faithfully to exclude functionality for 80 years. Congress has thus far declined efforts to expand such protection. The fact that design patent, copyright, and

116. *See id.*

117. 137 S. Ct. 1002 (2017).

118. *See* McKenna, *supra* note 45, at 206–10.

119. *See* McKenna, *supra* note 45, at 209 (asserting that “it’s notable that configuration has always been design patent subject matter, and the drafters of the original design patent statute believed that form of protection filled a gap precisely because configuration was *not* copyright or trademark subject matter”); *id.* at 210 (“Design patent law was created to fill a perceived gap—to offer protection for designs that were not protected by utility patent, copyright, or trademark law.”).

120. *See* Peter S. Menell & Daniel Yablon, *Star Athletica’s Fissure in the Intellectual Property Functionality Landscape*, 166 U. PA. L. REV. ONLINE 155, 158–61(2017) (explaining that Professor McKenna mistakenly argued that “the union of form and function can readily be protected through the law of design patent, as Congress intended” and citing Brief Amicus Curiae on Behalf of Intellectual Property Professors in Support of Petitioner at 4–6, *Star Athletica, LLC v. Varsity Brands, Inc.*, 137 S. Ct. 1005 (2017) (No. 15-866), 2016 WL 8118845, at 15 (citing Mark P. McKenna & Katherine J. Strandburg, *Progress and Competition in Design*, 17 STAN. TECH. L. REV. 1, 48–51 (2013) (emphasis added)). Note that Professors McKenna and Strandburg do not claim in their article that design patent protection as currently interpreted covers functional features. Rather they advocate that such protection would promote “integration of form and function.” McKenna & Standburg, *id.* at 48–51.

trade dress overlap does not justify courts affording design patent protection for functional designs in direct conflict with the 1902 Act and the utility patent supremacy principle. Rather, the Federal Circuit should apply the channeling principle, as regional circuit courts and the Supreme Court have done when creators have sought to protect functionality through copyright or trade dress law. Implementing such guardrails in the design patent regime is essential to restoring coherence and balance to the intellectual property system.

Professor McKenna offers two policy justifications for a permissive design patent functionality doctrine. First is that “the availability of design patents, with their limited duration and narrow scope, partly justifies limitations on trade dress protection for product designs,” citing the Supreme Court’s *Samara* decision.¹²¹ The reference to *Samara* is hardly support for this proposition. The pertinent passage from *Samara* explains:

It is true, of course, that the person seeking to exclude new entrants would have to establish the nonfunctionality of the design feature . . . Competition is deterred, however, not merely by successful suit but by the plausible threat of successful suit, and given the unlikelihood of inherently source-identifying design, the game of allowing suit based upon alleged inherent distinctiveness seems to us not worth the candle. That is especially so since the producer can ordinarily obtain protection for a design that is inherently source identifying (if any such exists), but that does not yet have secondary meaning, by securing a design patent or a copyright for the design—as, indeed, respondent did for certain elements of the designs in this case. . . .¹²²

The Supreme Court’s reference to the availability of *copyright* protection for nonfunctional designs contradicts Professor McKenna’s point; the *Samara* court did not suggest that copyright—or design patents—protect functional features, and as for limited duration, life of the designer plus 70 years is not very limited.

Professor McKenna’s second justification for a more permissive design patent functionality doctrine is that “modern designers often affirmatively seek to integrate form and function, and aggressively disqualifying features that play any role in the function of an article would eliminate design patent protection for all such designs.”¹²³ It is not surprising that designers advocate for broad protection for their works, just as other creators and inventors have advocated

121. See McKenna, *supra* note 45, at 210 n. 72 (“[*Wal-Mart Stores, Inc. v. Samara Bros., Inc.*] not[es] that the availability of design patent protection for product designs ameliorates any unfairness in refusing protection for any designs that lack secondary meaning[.]”).

122. *Wal-Mart Stores, Inc. v. Samara Bros., Inc.*, 529 U.S. 205, 214 (2000).

123. McKenna, *supra* note 45, at 209.

for longer and broader protection for their works. Designers' arguments have repeatedly been brought to Congress's attention, as have the contentions of consumers, competing manufacturers, and insurers opposing expanding design protections.¹²⁴

Professor McKenna suggests our view is an extreme position, tantamount to rejecting design protection for "configuration (save, perhaps, busts and statues)."¹²⁵ As reflected in Figure 6, there are many product configurations beyond busts and statues for which the ornamental features are separable from the functional elements.¹²⁶

124. See Steven Wilf, *The Making of the Post-War Paradigm in American Intellectual Property Law*, 31 COLUM. J.L. & ARTS 139, 184–90 (2008) (chronicling the failed efforts to expand design protection through legislation and private cartels during the early to mid-twentieth century); Goldenberg, *supra* note 48 (cataloging dozens of failed design protection bills dating the beginning of the 20th century).

125. See McKenna, *supra* note 45, at 210.

126. See, e.g., House of Antique Hardware, Decorative Door Knobs, <https://www.houseofantiquehardware.com/decorative-metal-door-knobs> (last visited Nov. 14, 2021); Metal Mosaic Outdoor Furniture, https://www.lakeside.com/atalog/productDetailPage.jsp?productId=prod4080102&_requestid=8289086 (last visited Nov. 14, 2021).

Figure 6: Ornamental, Nonfunctional Chair Design



And there are numerous sculptures that are not functional, even though they have functional components.¹²⁷ Furthermore, and critically, utility patent law is available to protect aspects of articles of manufacture that combine form and function in novel and non-obvious ways. If a designer cannot meet those requirements for inseparable features, then the designer must face free market

127. *See, e.g.*, Alexander Calder, *Mobile* (1932), <https://www.tate.org.uk/art/artworks/calder-mobile-l01686> (last visited Nov. 14, 2021); Jean Tinguely, *La Tour* (Bern Zynglogge) (1960), <https://aestheticmagazine.com/jean-tinguely-hauser-wirth-frieze-masters-london-2/> (last visited Nov. 14, 2021).

competition. First-mover advantage and reputation can provide an edge, but the designer cannot leverage design patent protection to bar competition for separable or inseparable functional elements. As our article reveals, it was the creation of the Federal Circuit, with exclusive appellate jurisdiction over patents, that vastly expanded design patent protection into the realm of functionality, not legislative change nor a sudden interpretive realization at the Federal Circuit or the Supreme Court. While Professor McKenna acknowledges the utility patent supremacy principle, his suggestions operate in the opposite direction and effectively nudge design patent law over the functionality line.

The proper approach is to interpret intellectual property laws faithfully—i.e., to exclude protection for functional features outside of the utility patent regime. Neither design patent law, trade dress law, nor copyright law protect functional elements of designs. The fact that they have different durations does not alter the essential utility patent supremacy principle needed for a coherent intellectual property system. Until Congress takes up design protection reform, courts should apply the law as written. The Federal Circuit’s lack of appreciation for the statutory basis for design patent protection and the rich regional circuit jurisprudence ought to be corrected, not condoned.

Professor McKenna’s implication at the end of his commentary that it is copyright protection, and not design patent protection, that is the real overprotection culprit in the design field does not bear scrutiny and undermines his central line of argument against aligning design patent functionality doctrine with copyright’s useful article doctrine. First, the *Compendium of U.S. Copyright Practices*,¹²⁸ in contrast to the *Manual of Patent Examining Procedure*,¹²⁹ implements limiting doctrines in relatively clear and concise terms. As regards originality, the *Compendium* states that copyright law does not protect “words and short phrases,”¹³⁰ “familiar symbols and designs,”¹³¹ “mere variations of coloring,”¹³² spatial format and layout design,¹³³ blank forms,¹³⁴ and common geometric shapes, “either in two-dimensional or

128. See U.S. COPYRIGHT OFFICE, COMPENDIUM OF U.S. COPYRIGHT PRACTICES (Jan. 2021), <https://www.copyright.gov/comp3/> (hereinafter “COMPENDIUM”).

129. See U.S. PATENT AND TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE (June 2020), <https://www.uspto.gov/web/offices/pac/mpep/index.html>.

130. See COMPENDIUM, *supra* note 128, at § 313.4(C).

131. *Id.* at § 313.4(J).

132. *Id.* at § 313.4(K).

133. *Id.* at § 906.5.

134. *Id.* at § 906.6.

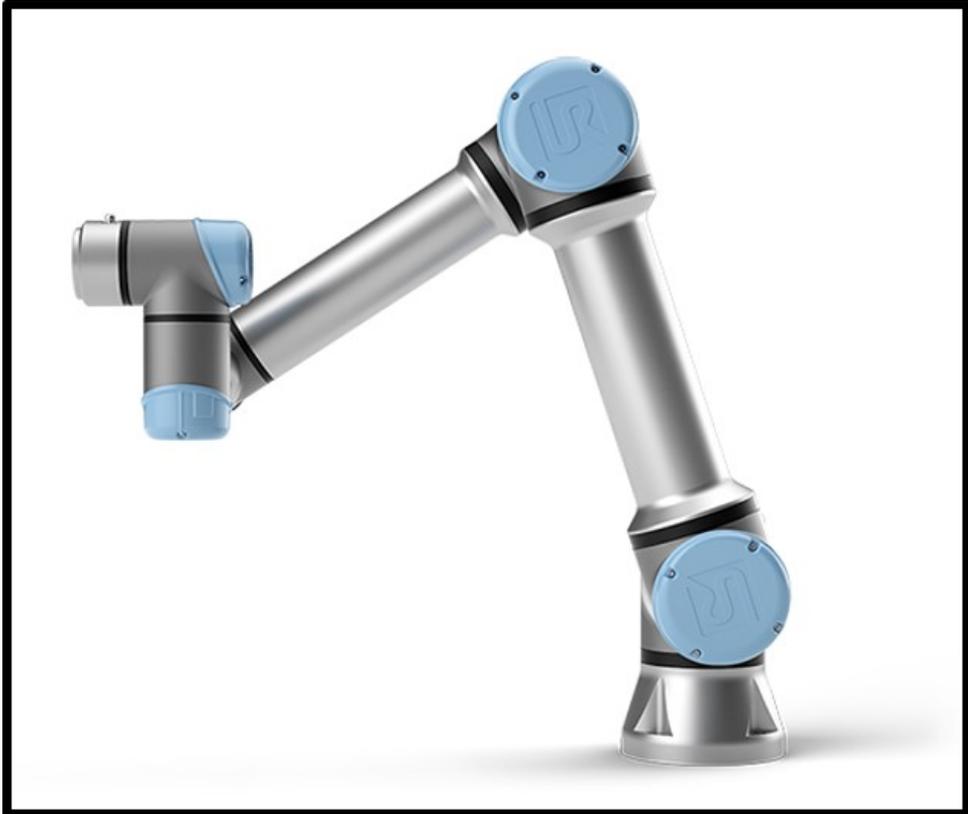
three-dimensional form.”¹³⁵ As Figures 4 and 5 illustrate, the Patent Office applies no such limitations, notwithstanding that the design patent statute specifically requires that articles of manufacture be original to obtain design patent protection. Furthermore, the *Compendium* also sets forth guidelines for assessing separability.¹³⁶

Second, the Patent Office has shown far greater propensity to protect functionality through design patent grants than has the Copyright Office through its registration system. Recent examples illustrate this point. In 2015, Universal Robots (UR) sought to register its “UR5” robot arm as a sculptural work.

135. *Id.* at § 906.1 (noting that “[t]here are numerous common geometric shapes, including, without limitation, straight or curved lines, circles, ovals, spheres, triangles, cones, squares, cubes, rectangles, diamonds, trapezoids, parallelograms, pentagons, hexagons, heptagons, octagons, and decagons”).

136. *Id.* at §§ 924–25.

Figure 7: Universal Robot “UR5” Robot Arm



The Copyright Office refused registration on the ground that UR5 “is a ‘useful article’ which does not contain any separable authorship.”¹³⁷ Universal Robots appealed the decision to the Copyright Office in April 2016, arguing that the UR5 contains conceptually separable artistic elements that are not necessary to its performance of its utilitarian function, namely its “raised circular caps containing the stylized ‘UR’ design,” and the “‘T’ shaped, modular interlocking wrist.”¹³⁸ The Copyright Office affirmed its rejection, explaining that the UR5 “does not contain any separable, copyrightable features” because “the caps and wrist of the arm are both integrated parts of

137. See Letter from Larisa Pastuchiv, Registration Specialist, to Cynthia Walden (Jan. 5, 2016), quoted in Catherine Rowland, Copyright Office Review Board, Re: Second Request for Reconsideration for Refusal to Register UR5; Correspondence ID: 1-1SJKBAB; SR # 1-2982365095 (Oct. 23, 2017) at 2, <https://www.copyright.gov/rulings-filings/review-board/docs/ur5.pdf>.

138. See *id.*

the ‘overall shape’ of the arm.”¹³⁹ In September 2016, Universal Robots filed a second appeal for reconsideration, in which it contended that since the blue caps are “capable of being physically removed from the robotic arm without altering the useful aspects of the article” and “are not necessary to the utilitarian functioning of the device,” they are “conceptually separable, artistic and protectable.”¹⁴⁰ Universal Robots also asserted that the T-shaped piece was “designed to achieve a sleek, modern and aesthetically pleasing appearance,” is “not necessary to the utilitarian function of the article,” and could have been designed in many other ways, rendering this part protectable as well. Universal Robots claimed that these elements of the Work “embody more than the mere ‘modicum’ of creativity that is required for copyright registration,” highlighting that the designers are Danish and inspired by the Danish Modern movement.¹⁴¹

In rejecting the second appeal, the Copyright Office concluded, based on the Supreme Court’s *Star Athletica* decision, “that the elements Universal Robots identifies as expressive—namely the plastic caps and the T-shaped piece—could be visualized as works of authorship separate and independent from the Work’s utility.”¹⁴² And that “[e]ven if those features could be deemed separable, however, they simply are not sufficiently original to warrant copyright protection.”¹⁴³

Minding a gap that should not exist, Universal Robots filed a design application for the UR5 in January 2020.¹⁴⁴ The Patent Office granted the design patent in April 2021.¹⁴⁵

139. See Letter from Stephanie Mason, Attorney-Advisor, to Cynthia Johnson Walden (Aug. 12, 2016), quoted in *id.* The Copyright Office also noted that the UR logo “does not reflect a sufficient amount of original and creative authorship to support a copyright registration” because it consists only of the stylized letters “U” and “R” centered within a square, and “typographic ornamentation [and] lettering” are not copyrightable. *Id.*

140. See *id.*

141. See *id.*

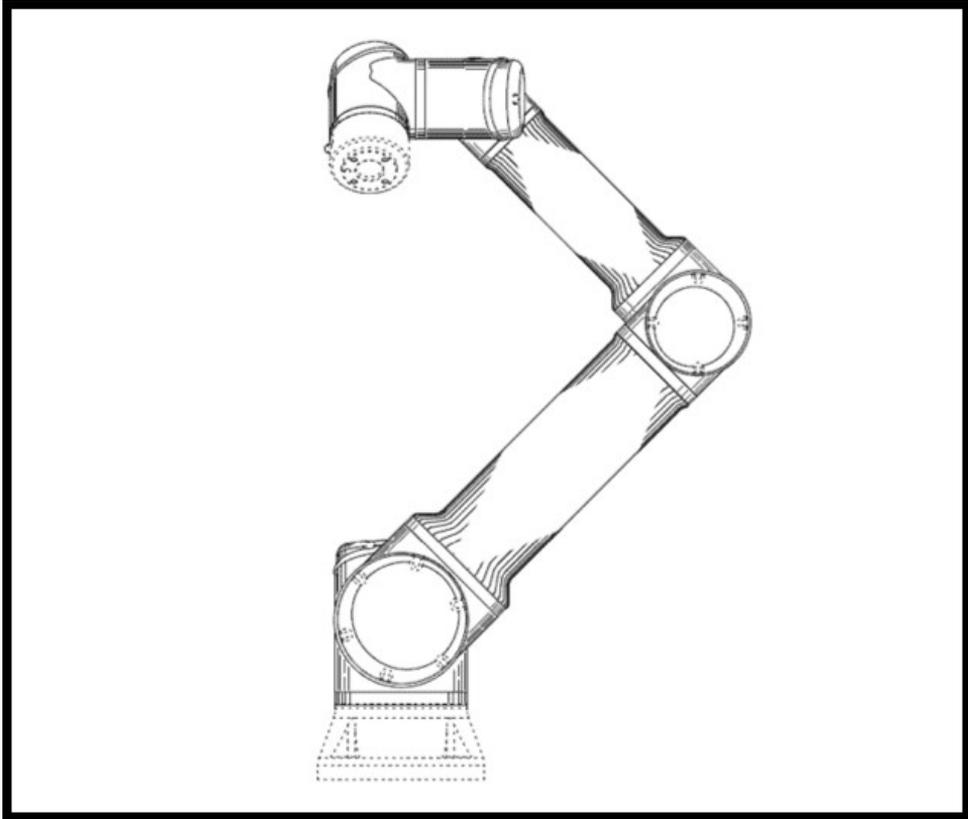
142. *Id.* at 5.

143. *Id.*

144. See U.S. Design Patent No. D915,487 (Apr. 6, 2021).

145. See *id.*

Figure 8: Universal Robot Design Patent



Robotic arms with similar functional configuration have long been the subject of utility patents.¹⁴⁶

This pattern of copyright registration refusal/design patent grant is, unfortunately, a common occurrence. Figure 9 shows six other designs that were refused copyright registration on functionality grounds and granted design patent protection in recent years: an oil filter change device (funnel),¹⁴⁷

146. *See, e.g.*, U.S. Patent No. 4,273,506 (Jun. 16, 1981) (“Industrial Manipulator for Placing Articles in Close Proximity to Adjacent Articles”).

147. *See* Copyright Review Board Decision, Second Request for Reconsideration for Refusal to Register Filter Funnel (SR 1-7786584619) and Plier Pro (SR 1-7648505741); Correspondence ID: 1-3X5PEX1 (May 18, 2021) (affirming refusal to register an orange funnel with a broad, U-shaped body that narrows into a spout; finding that the device’s “shapes, curvatures, lengths, and angles allow it to fit in place around a motorcycle filter and guide fluid into a single point for draining and refilling liquid” and that the device “has straight and curved lines, many of which are symmetrical while others are consistent with the shape of a funnel”), <https://www.copyright.gov/rulings-filings/review-board/docs/filter-funnel-plier-pro.pdf>; U.S. Design Patent D697,539 (Jan. 14, 2014).

a vehicle light,¹⁴⁸ a hub cap/wheel design,¹⁴⁹ a tool storage rack,¹⁵⁰ a shipping box,¹⁵¹ and a pillow.¹⁵²

148. See Second Request for Reconsideration for Refusal to Register D SERIES, SR # 1-7651878481; D SERIES FLUSH MOUNT, SR # 1-7651972429; Correspondence ID: 1-3RESXKF (Oct. 20, 2020) (explaining that the Board “is skeptical that the Works contain separable elements”; noting that “the shape of the lights’ outer casing is useful in that it protects the mirror, bulbs, and wiring. Similarly, the six screws, which ‘attach the faceplate to the body of the lamp,’ . . . serve the useful function of attaching the face to the body and holding the lights together. The Works’ fins also appear to serve the useful purpose of allowing heat to escape from the body to cool the bulbs. Because of the elements’ clear utilitarian functions, the Board is doubtful that they have ‘the capacity to exist apart from the utilitarian aspects’ of the light and stand ‘on [their] own’ ” (quoting *Star Athletica*, 137 S. Ct. at 1010); concluding that the Works do not “possess more than a *de minimis* quantum of creativity”; and further concluding that the Works, viewed as a whole, lack sufficient originality in the “selection, coordination, and arrangement of the elements”), <https://www.copyright.gov/rulings-filings/review-board/docs/d-series.pdf>; U.S. Design Patent 704,364 (May 6, 2014) (“Vehicle Light with Flanges”).

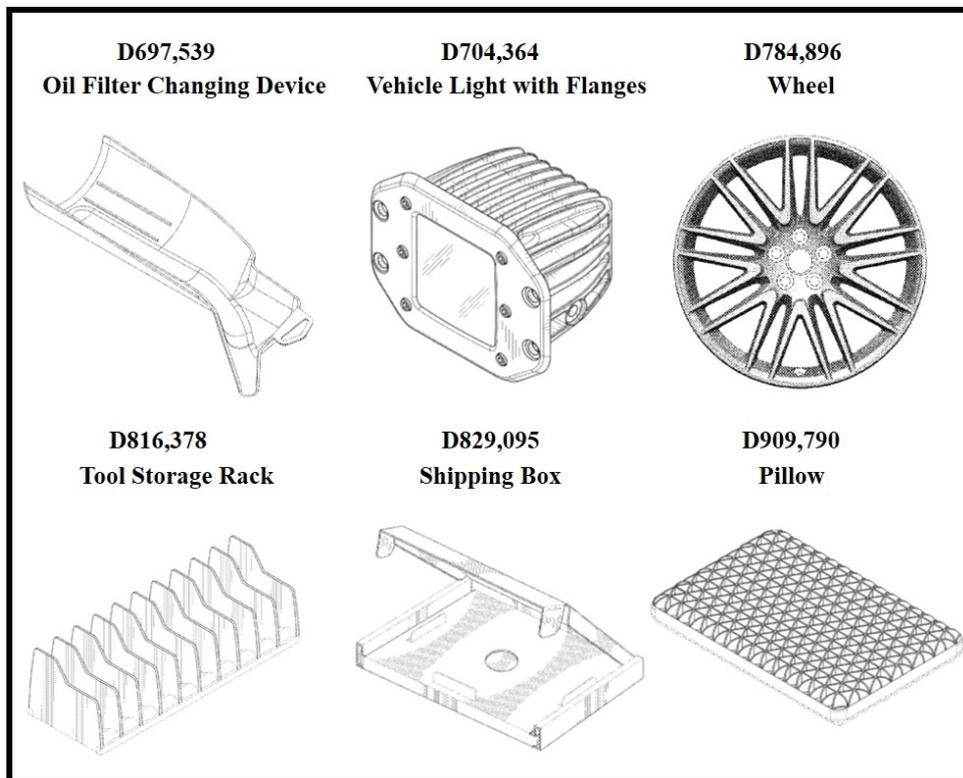
149. See Copyright Review Board Decision, Second Request for Reconsideration for Refusal to Register Vortex; Correspondence ID: 1-JT9UJ9 (Apr. 26, 2016) (affirming refusal to register a hub cap design consisting of a “hub” where the Work can be connected to a vehicle using five bolts, a starburst-like feature that surrounds and connects to the “hub,” and seven “V” shaped spokes that connect from the Work’s outer rim to the starburst design that surrounds the “hub”; noting that the design is “so intertwined with the basic functioning of a standard vehicle wheel cover that it is impossible to imagine a way to physically or conceptually separate these elements from the wheel cover without destroying its basic function”) (citing *Mazer v. Stein*, 347 U.S. 201 (1954)), <https://www.copyright.gov/rulings-filings/review-board/docs/vortex.pdf>; U.S. Design Patent D784,896 (Apr. 25, 2017) (“Wheel”).

150. See Copyright Review Board Decision, Second Request for Reconsideration for Refusal to Register Filter Funnel (SR 1-7786584619) and Plier Pro (SR 1-7648505741); Correspondence ID: 1-3X5PEX1 (May 18, 2021) (affirming refusal to register a device used for sorting, separating, and storing tools; observing that “the curvature, the spacing of elements, the lengths, [and] the angles” “are not merely artistic features” but are “useful features, dictated and constrained by the functional purpose of the article”; and that the device has “has a predictable pattern of identical, evenly spaced and symmetrical panels,” indicating that it does not possess more than a *de minimis* quantum of creativity”), <https://www.copyright.gov/rulings-filings/review-board/docs/filter-funnel-plier-pro.pdf>; U.S. Design Patent D816,378 (May 1, 2018) (“Tool Storage Rack”).

151. See Second Request for Reconsideration for Refusal to Register Box Design I; Correspondence ID: 1-2WE3Z9Z; SR 1-4915853861 (Jan. 8, 2019) (finding that the circle within the box is conceptually separable, but lacking sufficient creativity to meet the originality standard), <https://www.copyright.gov/rulings-filings/review-board/docs/box-design.pdf>; U.S. Design Patent D829,095 (Sept. 25, 2018) (“Shipping Box”).

152. See Second Request for Reconsideration for Refusal to Register Pillow Sculpture, SR # 1-7297601341; Correspondence ID: 1-3L2SVS6 (Jun. 26, 2020) (finding that the overall shape is not protectable and “the interior grid of hollow triangles is also incapable of conceptual separation from the useful article. The triangles have an “intrinsic utilitarian function” and thus are useful articles themselves”; noting that Purple’s marketing materials make “clear that these triangles are wholly utilitarian,” including that the Work’s “hundreds of little triangles . . . give the core of the pillow lateral strength so it retains its oh-so supportive,

Figure 9: Copyright Registration Refused/Design Patent Granted



These minimalist designs raise serious functionality and originality concerns. They reinforce the rubber stamp quality of the Patent Office and place Professor McKenna's conjecture about "minding the gap" in actual context. There should not be a gap when it comes to the utility patent supremacy principle.

As these examples indicate, the design patent system as currently administered results in significant overprotection of functional features and designs. And even though design patents have "only" 15 years of duration,

head-cradling comfort all night" and emphasizing the word 'SCIENCE!' in all capital letters; and "[e]ven if the grid of triangular prisms was not functional, however, it would not be a basis for copyrightability. 'The Copyright Act does not protect common geometric shapes' including triangular prisms." (citing COMPENDIUM (THIRD) § 906.1; 37 C.F.R. § 202.1(a)), <https://www.copyright.gov/rulings-filings/review-board/docs/pillow-sculpture.pdf>; U.S. Design Patent 909,790 (Feb. 9, 2021) ("Pillow"). The patentee continues to emphasize the ergonomic advantages of its pillow design. *See* <https://purple.com/pillows> (last visited Nov. 14, 2021) ("Unique to the Purple Harmony Pillow, the Deluxe Hex Grid is specially formulated and engineered for head and neck support. The soft hexagon-shaped air channels optimize the dynamic response and airflow for unbelievable comfort.").

that length of time can be an eternity in some design markets and substantially diminish competition. It is important to note that the utility patent supremacy/channeling principle is about preserving competition in exactly the same way as trademark's functionality doctrine¹⁵³—the channeling of functionality protection exclusively to utility patents is meant to subject all other, not sufficiently innovative, functional features to unimpeded market competition. The suggestion to “mind the gap” is neither a faithful interpretation of intellectual property statutes nor good intellectual property policy. Courts, the Patent and Trademark Office, and the Copyright Office should interpret the intellectual property statutes faithfully and implement the utility patent supremacy principle. As highlighted earlier, both the intertwining of form and function and the hierarchical logic of the intellectual property system are long-standing. Courts should not remake that logic without legislative change.

IV. CONCLUSION

We are grateful to the practitioners and scholars who participated in the BCLT/BTLJ design patent symposium. Although we did not achieve consensus on rectifying the design patent muddle, we confirmed that the Federal Circuit has ignored the 1902 Act's intent, misinterpreted 80 years of regional circuit jurisprudence, and flipped design patent eligibility on its head. The symposium also more fully revealed the role of design patent advocates in and the political economy surrounding the design patent muddle.

It is ironic that design advocates who celebrate the logic of industrial design would fail to recognize the logic and need for coherent design of the intellectual property system itself. As the Supreme Court recognized 140 years ago, “[t]he claim to an invention or discovery of an art of manufacture must be subjected to the examination of the Patent Office before an exclusive right therein can be obtained; and it can only be secured by a patent from the government.”¹⁵⁴ The Court obviously meant *utility patent* examination and protection. It did not want to see graphical functional designs rubber stamped through the backdoor. The Copyright Office is applying a more stringent threshold for design protectability than the Patent Office.¹⁵⁵ The 1902 Act, which reformed and clarified design protection, codified this basic principle as applied to ornamental designs. As Justice Brennan observed just forty years

153. Cf. McKenna, *supra* note 45, at 207 (“Here it’s important to emphasize that the reason courts focus on alternatives in the trademark context is that those courts believe that functionality is fundamentally concerned with competitive necessity to copy and not with channeling protection of useful features to utility patent.”).

154. Baker v. Selden, 101 U.S. 99, 102 (1879).

155. See *supra* notes 136–153.

ago, “[t]he patent laws attempt to reconcile th[e] Nation’s deep-seated antipathy to monopolies with the need to encourage progress.”¹⁵⁶

For more than a century, Congress has steadfastly declined to expand design protection to reach novel functional advances.¹⁵⁷ As our research has demonstrated, the Federal Circuit, perhaps unwittingly, has drastically expanded design patent protection with unfortunate results for competition and legal clarity. Its undermining of the utility patent supremacy principle destabilizes the intellectual property system. The time is ripe for the Federal Circuit or the Supreme Court to implement and reinforce guardrails aimed at restoring the coherence of the intellectual property system. In addition, Congress should examine the design protection muddle and explore ways of harmonizing intellectual property protection.

156. *Diamond v. Chakrabarty*, 447 U.S. 303, 319 (1980) (Brennan, J., dissenting).

157. *See* Wilf, *supra* note 124, at 184–90; Goldenberg, *supra* note 48 (cataloging dozens of failed design protection bills dating the beginning of the 20th century).

WHY THE FUTURE OF DESIGN PATENT PROTECTIONS WILL RELY ON MODERN NEUROSCIENCE, NOT CONSTITUTIONAL AND LEGAL REVERSIONISM

Charles L. Mauro[†] & Christopher Morley^{††}

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† Primary Investigator, President and Founder of Mauro Usability Science, LinkedIn.

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†† Director of Research, Director of Research at Mauro Usability Science, LinkedIn.

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I. INTRODUCTION

Our academic colleagues describe the current design patent protections system as a muddle, which the Oxford English Dictionary defines as “a state of disorder or . . . confusion.”¹ We would posit that the current design patent system is not in a state of disorder or confusion. Rather, the system is suffering from large-scale variability in critical legal decision-making by the finders of fact, be they judges or juries. The ability to protect design rights grows increasingly unreliable for design patent owners. Litigation to protect highly valued design assets in an increasingly competitive marketplace has become costly, time-consuming, and unpredictable. There are two proposed approaches to solving this problem: 1) turn to outdated and unproven legal tests and methods from other intellectual property (IP) domains in the hope that new case law and methods will solve the problem or 2) turn to science to better understand the problem related to inconsistent outcomes and develop methods that objectively solve the problems impacting design IP litigation outcomes. We urge adoption of the second approach to push design patent litigation forward through the application of science and empiricism, not backward based on application of outdated and structurally flawed legal precedents. The problem we face is one of decision variability, not basic structural mechanics related to how one actually determines infringement or non-infringement.

The problems with design patent law are not best characterized as a muddle, but one of decisional inconsistency. How does one deal with inconsistency? In the past two decades, other major systems have solved this problem very effectively, but they did not do so by dismembering their core structural systems. Instead, they applied rigorous science to better understand the underlying problems and produce far more robust and reliable decision-making systems that led to massive advances in decision-making outcomes.

1. *Muddle*, OXFORD ENGLISH DICTIONARY (3d ed. 2003).

The examples are everywhere we look, including professional sports,² medicine,³ finance,⁴ and even military strategy.⁵ These massively successful and rapidly evolving systems can show us how to use science to understand problems and optimize decision-making variables that led to the problems in the first place. In the last five years, neuroscience-based research has been adopted in some fields of law to better inform case decisions. A new research domain referred to as “NeuroLaw” has emerged to describe these efforts.⁶ Top-tier law schools such as Harvard Law School have dedicated lectures and discussions on the implications of neuroscience for criminal law, tort law, and general legislation in the United States.⁷ However, such research has yet to be utilized in design patent law or any other U.S. utility patent, copyright, or trademark frameworks.

In each of the commercial systems mentioned above, those domain experts most closely integrated into the historical framework and existing daily operations were the least likely to initially accept integrating science to improve decision-making. It took outsiders to bring science into these systems to fundamentally improve problem definition and, eventually, overall system performance. For example, when building their rosters in the past, Major League Baseball (MLB) scouts and managers would look for tangible and intangible professional baseball player qualities (e.g., hitting power, hitting average, arm strength) that would indicate to them that a certain player was the right choice. Data analysis and statistics were moreso used as talking points for sportscasters, sports journalists, and fans. However, with popularization and success of strategies such as the “Moneyball Theory” (i.e., employing statistical analysis focused on variables predictive of winning games rather than

2. See, e.g., Matt McLaughlin, *Sports Data Analytics: How Teams Use Data To Gain Edge*, BIZTECH (Dec. 13 2018), <https://biztechmagazine.com/article/2018/12/how-data-analytics-revolutionizing-sports>.

3. See, e.g., S. Swaroop Vedula & Gregory D. Hager, *Surgical Data Science: The New Knowledge Domain*, 2 INNOVATIVE SURGICAL SCI. 109 (2017).

4. See, e.g., Jennifer Huttunen, Jaana Jauhiainen, Laura Lehti & Annina Nylund, *Big Data, Cloud Computing and Data Science Applications in Finance and Accounting*, 8 ACRN J. FIN. RISK PERSP. 16 (2019).

5. See generally ROBERT GANGER, JOHN COLES, JACOB EKSTRUM, TIMOTHY HANRATTY, ERIC HEILMAN, JASON BOSLAUGH & ZACHARY KENDRICK, ARMY INTELLIGENCE DATA SCIENCE WORKSHOP SUMMARY REPORT (2018).

6. See, e.g., Francis X. Shen, *The Law and Neuroscience Bibliography: Navigating the Emerging Field of NeuroLaw*, 38 INT’L J. LEGAL INFO. 352 (2010).

7. Francis Shen, Neuroscience and the Law event at the Harvard Law School hosted by the Law and Behavioral Sciences Association (Sept. 18, 2019), <https://hls.harvard.edu/event/prof-francis-shen-neuroscience-and-the-law-hosted-by-law-and-behavioral-sciences-association-labs/>.

individual player performance),⁸ science now prevails as the primary means for assessing player performance and improving management decision-making.⁹ The same transformation can occur with respect to the evaluation of visual design of products and their protection in the prevailing design patent framework through the capture of large sample data sets and robust statistical analysis. The important point is that seemingly subjective variables such as the visual design of products can be subjected to the same analytical rigor now common in other professional fields, where prior decision-making was once driven by personal intuition rather than science-based analytical methods.

The next evolution in design patent decision-making will not yield to a recasting of outdated legal tests scraped from other IP systems, such as copyright or trade dress. Support for this view is found in the fields of neuroaesthetics and shape perception science. Such fields have made possible development of new science-based consumer testing methods focused on understanding how consumers (ordinary observers) perform in the established ordinary observer test (OOT) framework. It turns out that modern neuroscience can and will help the finders of fact understand the complexity and biases inherent in shape perception and ornamental design assessments related to matters of infringement.

II. NOT SO SIMPLE

There are many lawyers, judges, and even legal scholars that fail to realize that the primary questions surrounding the ordinary observer test are now quantifiable science that can provide objective proof of infringement. These are not new methods but established scientific processes and statistical analyses. The world has changed in ways that have turned muddles into robust, high-functioning, new decision-making systems. Design patent infringement is going to be radically altered by modern neuroscience, whether our academic colleagues like it or not. This is not a battle that can be won by proffering outdated legal theory or practice. Science marches on, and as Galileo said, “Measure what can be measured, and make measurable what cannot be measured.”¹⁰

8. See generally MICHAEL LEWIS, *MONEYBALL: THE ART OF WINNING AN UNFAIR GAME* (W. W. Norton & Company 2003).

9. Rocco P. Porreca, *General Managers and the Importance of Using Analytics*, SPORT J. (Sept. 15, 2016), <https://thesportjournal.org/article/general-managers-and-the-importance-of-using-analytics/>.

10. Quote by Galileo Galilei, GOODREADS (Apr. 6, 2021), <https://www.goodreads.com/quotes/41204-measure-what-can-be-measured-and-make-measurable-what-cannot>.

We urge our professional and academic colleagues to join in this empirical research approach and help move design IP into the future. There is nothing wrong with the core framework for determining design patent infringement, that is the OOT. It is worth noting here that our academic colleagues Professor Peter Menell and Ms. Ella Corren have not criticized the OOT in any meaningful manner in their guiding paper for this conference but have instead attacked the other processes that are upstream from the OOT itself.¹¹ They have attributed the muddle in design patent law to improper segmentation of claimed product shape and propose adopting outdated legal tests, such as filtration and abstraction, to address the so-called functional feature protection problem. Adopting such outdated tests will dramatically increase the complexity and cost of cases and further degrade the consistency of design patent outcomes. Instead, what we need is a scientifically driven, empirical ordinary observer test (EOOT) that provides finders of fact with valid and reliable data related to how representative consumers view the designs in question according to the key components of the OOT. Such an empirical test can significantly improve the accuracy and consistency of design patent infringement decision-making. We explain why below.

III. THE REAL PROBLEM IS VARIABILITY, NOT MUDDLE

Recent design patent infringement decisions, and specifically those made at summary judgment, suggest that judges, lawyers, and academics approach the judgment of product shape infringement as a simple, intuitive process.¹² Much like judging pornography...they know it when they see it.¹³ The impression that visual design assessment is intuitive and can be based on personal opinion is driven in large part by the fact that the human mind processes shapes of products extremely quickly and without any perceptible cognitive effort.¹⁴ The human mind is a masterful and highly efficient processor of the shapes of things that populate our everyday world. However, such speed and lack of perceptual effort does not equal simplicity or lack of bias. Modern neuroscience has shown that the process is far more complex, as

11. Peter S. Menell & Ella Corren, *Design Patent Law's Identity Crisis*, 36 BERKELEY TECH. L.J. 1, 125–26 (2021).

12. See, e.g., *Lanard Toys, Ltd. v. Dolgencorp LLC*, 958 F.3d 1337 (Fed. Cir. 2020); *Dyson, Inc. v. SharkNinja Operating LLC*, No. 14 C 9442, 2019 U.S. Dist. LEXIS 56028 (N.D. Ill. Mar. 31, 2019).

13. See *Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964) (Stewart, J., concurring) (acknowledging the difficulty in defining “what may indefinable” but stating one knows it when one sees it).

14. Shimon Ullman, *Visual Routines: Where Bottom-Up and Top-Down Processing Meet*, 2 PATTERN RECOGNITION BY HUMS. & MACHS. 178 (1986).

judgments of shapes and similarity specifically involve several levels of visual and higher order cognitive processing that are replete with judgment biases.¹⁵ It turns out that answering the question of “how different is different” is far more complex than almost anyone in the current legal system understands. Yet there are validated and science-based methods for answering this exact question.¹⁶ The most important insight from modern neuroscience is that no individual judge, lawyer, or legal academic can ever represent the hypothetical ordinary observer. This is simply because there is too much real variation in how a given consumer population judges the shapes of objects in our everyday world, as well as in response to the critical components of the OOT.

IV. HOW HUMAN VARIABILITY DRIVES DESIGN PATENT LITIGATION OUTCOME VARIABILITY

The central problem facing design patent litigation today is a lack of decision-making consistency. It was our hypothesis, based on extensive experience in consumer decision-making and shape perception science, that consumers are inconsistent when judging the design of products. It is a fact that the most effective real assessment of infringement is the consumer’s very first viewing of the product, without context or biases being applied by the actual legal design patent infringement process. Even when removing such context and biases to the extent possible, humans still innately vary in their sensitivity to design,¹⁷ which directly impacts their design patent infringement decision-making. In this critical regard, the U.S. Supreme Court (SCOTUS) has called for a “hypothetical” ordinary observer.¹⁸ However, a review of case law shows that there has been virtually no attempt to define the hypothetical observer using experimentally validated and statistically rigorous research. Such research would provide critical information for reducing the variability in design patent infringement decision-making. We have designed and executed such research to address this problem.

15. STEPHEN E. PALMER, *VISION SCIENCE: PHOTONS TO PHENOMENOLOGY* (MIT Press 1999).

16. DANIELA BÜCHLER, *HOW DIFFERENT IS DIFFERENT?: VISUAL PERCEPTION OF THE DESIGNED OBJECT* (VDM Verlag Dr. Müller 2011).

17. Peter H. Bloch, Frédéric F. Brunel & Todd J. Arnold, *Individual Differences in the Centrality of Visual Product Aesthetics: Concept and Measurement*, 29 J. CONSUMER RSCH. 551, 552 (2003).

18. Elizabeth D. Ferrill & Clare A. Cornell, *Ordinary Observer and Informed User Walk into a Bar: A Transatlantic Conversation About Design Infringement*, FINNEGAN (Dec. 14, 2017), <https://www.finnegan.com/en/insights/ordinary-observer-and-informed-user-walk-into-a-bar-a-transatlantic-conversation-about-design-infringement.html>.

V. DEFINING A STATISTICALLY VALIDATED HYPOTHETICAL ORDINARY OBSERVER

In the following summary, we describe the design and execution of the first scientifically validated study to define the hypothetical ordinary observer utilizing a modern large-sample online study and related data capture methods. This was the first step in the validation of an empirical ordinary observer test,¹⁹ discussed later in this paper. The study involved a comprehensive and statistically valid examination of how consumer sensitivity to the visual design of products varies across a sample of properly recruited, screened, and compensated consumers for a given product category. Specifically, the validation study utilized a sample of 400 consumers screened for their intent and experience related to purchasing flatware. The sample user profile was derived from a database of over one million consumers based on screening criteria developed and validated to yield a statistically reliable sample of U.S. adult consumers. The product category selected was based on the landmark SCOTUS design patent case, *Gorham Mfg. Co. v. White* (hereinafter *Gorham v. White*),²⁰ which dealt with flatware design. The formal empirical ordinary observer test validation study also utilized the flatware designs related to *Gorham v. White* as a product category.²¹ The hypotheses tested and confirmed with this research were: 1) consumer variation in terms of sensitivity to visual product design can be scientifically determined; 2) such consumer variation has a measurable impact on how consumers evaluate the visual design of products; 3) utilizing such research methods leads to the most accurate hypothetical ordinary observer definition, a fact of significant value to the finders of fact; and 4) taking into account the variability in ordinary observers' decision-making related to the visual design of products improves our understanding of the problem with design patent litigation outcome variability and can form the basis for the development of an empirical ordinary observer test.

VI. THE STUDY DESIGN AND RELATED FINDINGS

We confirmed the variability in innate design sensitivity for a population of consumers using the validated research tool known as the Centrality of Visuality Products Aesthetics Scale (CVPA).²² The CVPA is used to assess

19. Charles Mauro, Chris Morley & Paul Thurman, *Development and Initial Evaluation of an Empirical Ordinary Observer Test for Design Patent Infringement* 19–36 (June 5, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3620088.

20. *Gorham Mfg. Co. v. White*, 81 U.S. 511 (1871).

21. Mauro et al., *supra* note 19, at 19–36.

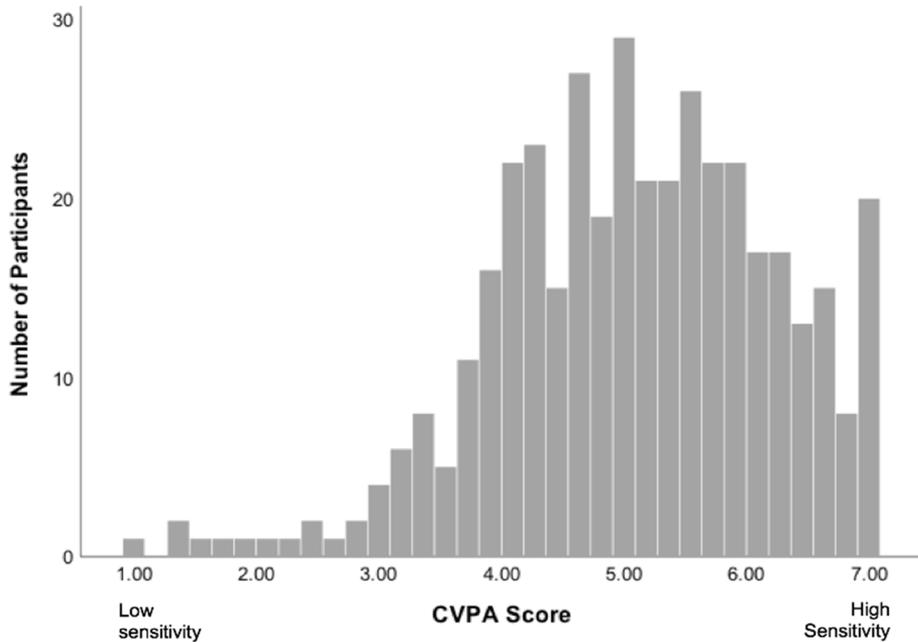
22. Bloch et al., *supra* note 17, at 551–65.

individuals' innate sensitivity to visual design when examining products. The CVPA tool includes eleven items that encompass three dimensions: personal and social value of design, acumen, and level of response. For example, one CVPA item is "Being able to see subtle differences in product designs is one skill that I have developed over time." Respondents rate their agreement or disagreement with each item on a 7-point Likert scale (1 denotes Strongly Disagree, 4 denotes Neither Agree Nor Disagree, 7 denotes Strongly Agree) and their responses are averaged to calculate a CVPA score. As the CVPA items all describe factors that suggest the individual exhibits innate design sensitivity, higher CVPA scores indicate higher agreement with such statements and thus, higher sensitivity to visual design. In the 400-respondent online survey study described above, we observed substantial variability in design sensitivity from the respondent sample (Mean CVPA score = 5.04, Median = 5.09, Standard Deviation = 1.14). As can be seen in Figure 1 below, the data demonstrate a slight negative skew (i.e., the left tail is long relative to the right tail, indicating a tendency toward ratings slightly higher than average) and were not normally distributed according to a Shapiro-Wilk Test of Normality ($p < .001$).²³ This negative skew may be explained by the well-known psychological phenomena of superiority bias, which describes how individuals often rate their own abilities as greater than average.²⁴ The CVPA data distribution aligns with the authors' expectations with respect to the validated data sample, focusing on population variance for human physical, cognitive, and attitudinal attributes of a given population of consumers. The authors have observed such a non-normal, slightly negatively skewed CVPA score distribution in later empirical ordinary observer test applications in which CVPA data were collected for the study sample. Ongoing advanced statistical analyses are being conducted to investigate how well a sample of twelve jurors can represent the entire relevant consumer population in terms of innate design sensitivity, as measured by CVPA.

23. *See generally* S. S. Shapiro & M.B. Wilk, An Analysis of Variance Test for Normality (Complete Samples), 52 *BIOMETRIKA* 591 (1965).

24. Vera Hoorens, Self-enhancement and Superiority Biases in Social Comparison, 4 *EUR. REV. SOC. PSYCH.* 113, 117 (1993).

Figure 1: CVPA Score Distribution



As can be seen in the data plot in Figure 1, on the right are consumers with high design sensitivity and on the left are consumers with low design sensitivity. One can think of these data as the first actual statistically validated hypothetical ordinary observer. As can be seen clearly from the data above, there is a wide range of actual human variation in terms of design sensitivity, as measured by the CVPA instrument. Deeper analysis also confirmed that the observed variation in design sensitivity (as measured by the CVPA) impacts how consumers actually evaluate product designs in a measurable and meaningful way. Specifically, we discovered via logistic regression analysis that individual CVPA items such as “Being able to see subtle differences in product designs is one skill I have developed over time” ($p = .04$) and “I see things in a product’s design that other people tend to pass over” ($p = .03$) were significant predictors of similarity/difference judgments between patented design, accused design, and prior art. This confirmed that variability in design sensitivity does lead individuals to judge products differently and is likely a substantial contributor to the current variation in design patent litigation outcomes.

VII. WHY ARE THESE DATA CRITICAL TO UNDERSTANDING THE VARIATION IN DESIGN PATENT LITIGATION OUTCOMES?

There is virtually no way to understand the extent to which a jury or judge represents the decision-making of the consumer population purchasing a given product unless data are collected from a large sample of representative consumers for the given product category. This problem becomes even more pronounced when decision-making is executed by a single judge who only represents a single point on the design sensitivity distribution. Judges and juries do not submit to a CVPA test and receive no special training in the science of shape perception and the well-understood biases that reside in their decision-making model as currently applied. It can be assumed that the variability depicted in Figure 1 is also present in judge and jury populations. Thus, if a judge's CVPA score happens to be at either extreme end of the distribution, their assessment of whether two designs are substantially the same or not is nothing more than a biased personal opinion without any basis in how the actual population of consumers judges the designs in question. This insight may explain why we are seeing such staggering variability in design patent infringement determinations, especially those executed by judges at summary judgment. Based on these data described above, it is clear that no judge should proffer a decision on summary judgement without the benefit of a scientifically validated survey of ordinary observers responding through the framework of an empirical ordinary observer test. It is simply not possible for a judge to understand and make decisions based on the hypothetical ordinary observer without such a survey.

VIII. THE CURRENT LITIGATION PROCESS FUNDAMENTALLY BIASES OUTCOMES IN FAVOR OF THE DEFENDANT

Another important problem facing design patent litigation is how patented and accused designs are presented to the finder of fact in court. When an ordinary observer is presented a product for examination, their perception of the shape of the product is highly influenced by their prior experiences and expectations for the product, so much so that the shape they perceive may not directly match the physical shape of the object in the real world.²⁵ Modern neuroscience research suggests that, to increase the efficiency of our object recognition, we automatically draw inferences about the visual data entering

25. Anil Seth, *How We Build Perception from the Inside Out*, AEON (June 30, 2020), <https://aeon.co/videos/anil-seth-on-why-our-senses-are-fine-tuned-for-utility-not-for-reality>.

our eye based on our expectations and prior experience.²⁶ Such inferences modify our processing and subsequent perception of the visual data. When an individual has substantial prior experience with a product shape, they establish a mental model for the product shape that facilitates immediate and robust inferences for object recognition whenever that shape is viewed. In general, we apply visual processing shortcuts whenever possible to quicken our object recognition and require very little detail about the product shape to confirm our inferences. This speedy and nearly automatic processing leads us to frequently identify products based only on the overall product shape.²⁷ We often do not process product details any further after the overall product shape is identified.

In the context of design patent litigation, the finder of fact's prior experience and expectations will greatly influence their perception of the product shapes. Not only does each finder of fact enter their infringement decision with different prior experience, expectations, and design sensitivity (as described in the Section above, such variability across finders of fact can lead to inconsistent design patent litigation outcomes), but lawyers in design patent litigation often cue the finder of fact to details of the products that an ordinary observer would likely not examine when viewing the products in the marketplace (i.e., it is most likely that the ordinary observer would rely only on overall product shape in the marketplace for most efficient object recognition). Lawyers focusing the finder of fact on such details likely biases the finder of fact in favor of non-infringement, as the finder of fact is artificially influenced to attend to and process details of the designs that they would not process when viewing the products in the real-world marketplace. Such behavior leads to an artificial examination of the products compared to what would be exhibited by an ordinary observer in the real world. Importantly, once the finder of fact is cued to details and differences between the two designs, they cannot "unsee" such differences in later viewings, due to the large influence of prior experience and already formed mental models on shape perception and object recognition.²⁸

A more valid and reliable approach would involve presenting patented and accused designs to a large sample of representative consumers without cueing them to examine the designs in any specific way. This approach would eliminate the biases that defendants often insert into design patent litigation when they cue the finder of fact to differences between patented and accused designs. It is scientifically valid to say that the only reliable impression in terms of the "the eye of an ordinary observer, giving such attention as a purchaser

26. PALMER, *supra* note 15, at 85.

27. Ullman, *supra* note 14, at 178.

28. See PALMER, *supra* note 15, at 85.

usually gives”²⁹ is the initial viewing of the shape.³⁰ All subsequent viewing is revisionist history.

IX. THE CURRENT SUMMARY JUDGMENT PROCEDURE IS FUNDAMENTALLY FLAWED

An additional critical bias present in the current design patent legal system is related to judgments of similarity/difference being undertaken at the summary judgment stage without reference to prior art (i.e., in the first stage of summary judgment in which the judge determines whether the designs in question are sufficiently distinct/plainly dissimilar or not).³¹ As described above, our perception of product shape is highly based on prior experiences and expectations.³² Building a robust mental model for a product shape involves several factors including length and frequency of exposure, focus of the observer, and familiarity with similar products (i.e., prior art). Consideration of prior art in matters of design patent infringement is critical, as our familiarity with similar products greatly informs our mental models, inferences, and perception of products currently under examination. Current design patent law allows summary judgment decisions to occur without examining or referring to prior art when a judge deems a patented and accused design to be sufficiently distinct/plainly dissimilar from one another.³³ This further pushes design patent infringement decision-making away from the ordinary observer’s actual experience in the marketplace. Simply put, examining products for similarities and differences without familiarity of relevant prior art is unrepresentative of how the ordinary observer would experience and examine such products in the marketplace. Thus, it is critical for prior art to be taken into consideration, even at the first stage of summary judgment when the judge decides whether the two designs are sufficiently distinct or not.

Related to this issue, we ran a study to examine the impact of prior art on design patent infringement decision-making. We again used the flatware

29. *Gorham Mfg. Co. v. White*, 81 U.S. 511, 528 (1871).

30. PALMER, *supra* note 15, at 85.

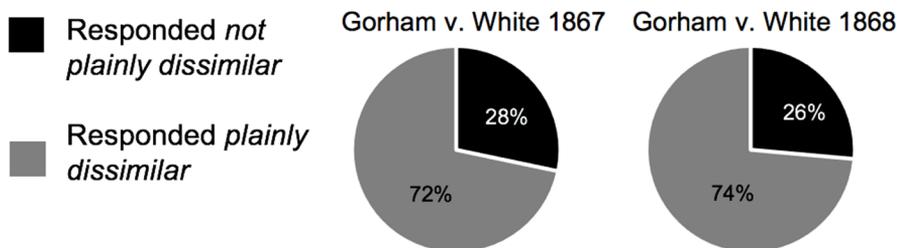
31. *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 678 (Fed. Cir. 2008).

32. Seth, *supra* note 25.

33. *See, e.g.,* Wallace v. Ideavillage Prods. Corp., No. 06-cv-5673, 2014 WL 4637216, at *4 (D.N.J. Sept. 15, 2014) (stating, pursuant to the teaching of *Egyptian Goddess*, district courts have granted summary judgment based solely on comparison between accused and patented designs, without referring to prior art, and citing examples of such cases); *Voltstar Tech., Inc. v. Amazon.com, Inc.*, No. 13-C-5570, 2014 WL 3725860 (N.D. Ill. July 8, 2014) (recognizing that courts consistently grant summary judgment without examining the prior art and citing examples of cases).

designs from the seminal SCOTUS design patent case, *Gorham v. White*. We presented 106 consumer survey respondents, who were screened for intent and experience related to purchasing flatware, the patented Gorham design, and one of the accused White designs. There were two accused White flatware designs in the *Gorham v. White* case; participants in our study were either assigned to evaluate *Gorham v. White* 1867 or *Gorham v. White* 1868. Respondents were asked to indicate whether the designs they were presented were plainly dissimilar or not plainly dissimilar in terms of overall visual design without referencing any prior art. As seen in Figure 2 below, the majority of respondents reported that the patented and accused designs were plainly dissimilar for both the *Gorham v. White* 1867 and *Gorham v. White* 1868 pairs. One-sample binomial tests confirmed that the percentage of respondents who indicated that the designs were plainly dissimilar was significantly greater than chance probability (i.e., 50%) for both *Gorham v. White* 1867 ($p = .002$) and *Gorham v. White* 1868 pairs ($p = .001$).

Figure 2: Percentage of Plainly Dissimilar and Not Plainly Dissimilar Responses for *Gorham v. White* Simulated Summary Judgment Task



Such findings suggest that, even the cornerstone example of design patent infringement, *Gorham v. White*, would have ended at summary judgment and a decision of non-infringement if the decision was made without consideration of prior art. Interestingly, when a different sample of 400 respondents screened according to the same criteria³⁴ were presented with the *Gorham v. White* 1867 or *Gorham v. White* 1868 designs and the relevant prior art and were asked to

34. The same respondent sample was not presented both tasks, as repeated exposure to the designs and execution of different tasks involving such designs may lead to carryover effects that influence response behavior in unpredictable ways. See Ludvig Daae Bjorndal, *Carryover Effects: What Are They, Why Are They Problematic, and What Can You Do About Them?*, STUDENTS FOR BEST EVIDENCE (Aug. 23 2018), <https://s4be.cochrane.org/blog/2018/08/23/carryover-effects-what-are-they-why-are-they-problematic-and-what-can-you-do-about-them/>.

report whether the design pairs were substantially the same or not substantially the same (according to the text of the OOT), the majority of respondents reported that the design pairs were substantially the same. Specifically, 68.9% of respondents reported that the *Gorham v. White* 1867 designs were substantially the same and 56.1% of respondents reported that the *Gorham v. White* 1868 designs were substantially the same. Based on these data, the *Gorham v. White* designs would have been considered infringing if the decision was made based on the OOT rubric and familiarity with prior art. There is clearly an impact of familiarity with prior art on similarity/difference judgments related to design patent infringement determinations and an issue with how summary judgments are currently conducted.

X. THE NEED FOR AN EMPIRICAL ORDINARY OBSERVER TEST

The very nature of the variability in consumer design sensitivity and prior experience demands the use of science to actually resolve the muddle problem. When a scientist encounters such a problem, they use the scientific process to analyze it. The scientific process involves sampling a large number of individuals from the representative population to participate in scientifically valid experiments. Using proper study design and statistical analysis, one can derive valid conclusions regarding how the population responds to critical questions related to the problem of interest. A scientifically-driven empirical ordinary observer test that relies on well-understood study design and reliable statistical methods to better inform design patent infringement decision-making would prove very useful to solving the muddle problem. Critically, such a methodology would not replace the finder of fact, but provide the finder of fact valid and reliable data to better inform their design patent infringement decision-making.

The current OOT process is full of perceptual biases and all manner of experts who claim to represent the ordinary observer. There is a reason why the case law defines the ordinary observer as “hypothetical.” The ordinary observer is not intended to represent any single individual with specific characteristics. The ordinary observer is often defined in the courts as the ordinary purchaser of the accused infringing product or, in some cases, an industrial purchaser.³⁵ If the ordinary observer is not meant to represent a

35. Elizabeth D. Ferrill & Clare A. Cornell, *Ordinary Observer and Informed User Walk into a Bar: A Transatlantic Conversation About Design Infringement*, FINNEGAN (last visited Apr. 4, 2021), <https://www.finnegan.com/en/insights/ordinary-observer-and-informed-user-walk-into-a-bar-a-transatlantic-conversation-about-design-infringement.html>; see also *Goodyear Tire & Rubber Co. v. Hercules Tire & Rubber Co., Inc.*, 162 F.3d 1113, 1117 (Fed. Cir. 2008), *abrogated on other grounds by* *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665 (Fed. Cir. 2008) (finding

single individual, how would a single individual be able to accurately proffer an opinion on behalf of the ordinary observer's perspective, especially considering the variability in design sensitivity and prior experience across consumers, as discussed above?

It is also important to note that in design patent cases, there is a startling lack of rigor related to analysis, proffering of opinions, and provision of data that meets Daubert³⁶ and Federal Rule of Evidence 702 and 703 rules.³⁷ Industrial design experts routinely proffer opinions on consumer perception related to the ordinary observer test without formal education or training in shape perception science, or actual supportable research made possible through application of the neuroscience-based empirical methods. A review of undergraduate and graduate industrial design curriculum from well-regarded industrial design programs clearly reveals no formal coursework in neuroscience, neuroaesthetics, shape perception science, or research study design and statistical analysis.³⁸ Expertise in such topics is required to proffer reliable opinions related to the ordinary observer test under Daubert and Federal Rule of Evidence 702 and 703 rules. Why is this acceptable in design patent litigation when it would never be allowed in utility patent matters? Is it a lack of focus on the actual legal standards for expert testimony? Is it a lack of scholarship on the part of design patent academics? Or is it simply, as we would proffer now, a failure on the part of the U.S. design patent system to embrace a science-based approach to the application of the ordinary observer test? We know the problem begins with human variation in terms of prior experience and innate sensitivity to ornamental design. The effects of this problem are seen in the aggressive series of recent case decisions that continue to dilute the effectiveness of design patent protections in terms of both theory and practice.³⁹

the ordinary observer to be the truck or fleet operator); *Minka Lighting, Inc. v. Craftmade Int'l, Inc.*, No. 3:00-cv-888, 2001 WL 36186585, at *12 (N.D. Tex. May 16, 2001) (“[T]he viewpoint for determining infringement is that of a person who is the ordinary purchaser of the article charged to be in infringement.”).

36. *Daubert Standard*, LEGAL INFO. INSTT., https://www.law.cornell.edu/wex/daubert_standard (last visited Apr. 4, 2021).

37. FED. R. EVID. 702, 703.

38. *Undergraduate Curriculum*, GA. TECH SCH. INDUS. DESIGN, <https://id.gatech.edu/academics/bsid/undergraduate-curriculum> (last visited Apr. 4, 2021); *Graduate Industrial Design Course of Study*, ARTCENTER COLL. DESIGN, <http://www.artcenter.edu/academics/graduate-degrees/industrial-design/course-of-study/overview.html> (last visited Apr. 4, 2021).

39. See Perry Saidman, *Federal Circuit Dodges Design Patent Damages Issue and Goes Loco Over Infringer's Logo*, DESIGNLAW PERSPS. (Nov. 17, 2019), <https://www.designlawperspectives.com/blog/federal-circuit-dodges-design-patent-damages-issue-and-goes-loco-with-infringers-logo>; Perry Saidman, *Chalk Up Another for the Copycats*,

Determining design patent infringement from the perspective of the ordinary observer clearly calls for surveying a large sample of representative consumers regarding the critical legal questions surrounding the OOT and executing appropriate statistical analyses on the resulting data. To increase reliability in any system, it is necessary to first determine the true range of variability and then apply robust scientific testing. This is how problems similar to the variability in design patent litigation outcomes have been solved historically. Science is the answer, not reversion to structural changes in the design patent system, which are not based on any real validated research. Much legal precedent in design patent litigation up to this point has been based on faulty decision-making and ever greater reliance on intuition, instead of scientific investigation.

In summary, the core problem facing design patent litigation outcomes is variability in the application of the ordinary observer test due to large variation in how humans perceive and make decisions related to product shapes. Importantly, the problem is not the OOT itself or how the design patent system is structured in terms of allowable art. Perhaps the simplest way to think about what is perceived as a muddle is really nothing more than a scientific variance problem.

XI. THE EMPIRICAL ORDINARY OBSERVER TEST

How does one build a reliable and empirical ordinary observer test? The most important question to be answered by a reliable and empirical OOT is what level of similarity between patented and accused design constitutes design patent infringement according to the critical components of the OOT legal test. Collecting data related to the critical components of the OOT from a large sample of representative consumers for the product would provide reliable insights regarding how the hypothetical ordinary observer views the patented and accused design according to the OOT. Importantly, such a reliable and empirical OOT would not replace the decision-making of the finder of fact. Rather, such an empirical OOT would provide the finder of fact with data to better inform their design patent infringement decision-making.

Mauro, Morley, and Thurman recently developed a valid and reliable methodology for providing the finder of fact with such data, which was recently accepted in court based on three studies.⁴⁰ The EOOT methodology

DESIGNLAW PERSPS. (May 19, 2020), <https://www.designlawperspectives.com/blog/chalk-up-another-one-for-the-copycats-1>.

40. Delta T, LLC v. Dan's Fan City, Inc., No. 8:19-CV-1731-VMC-SPF, 2021 WL 458022 (M.D. Fla. Feb. 9, 2021) (denying *Daubert* Motion to Disqualify Charles L. Mauro and Exclude His Testimony and finding Mr. Mauro's methodologies "sufficiently reliable under *Daubert*").

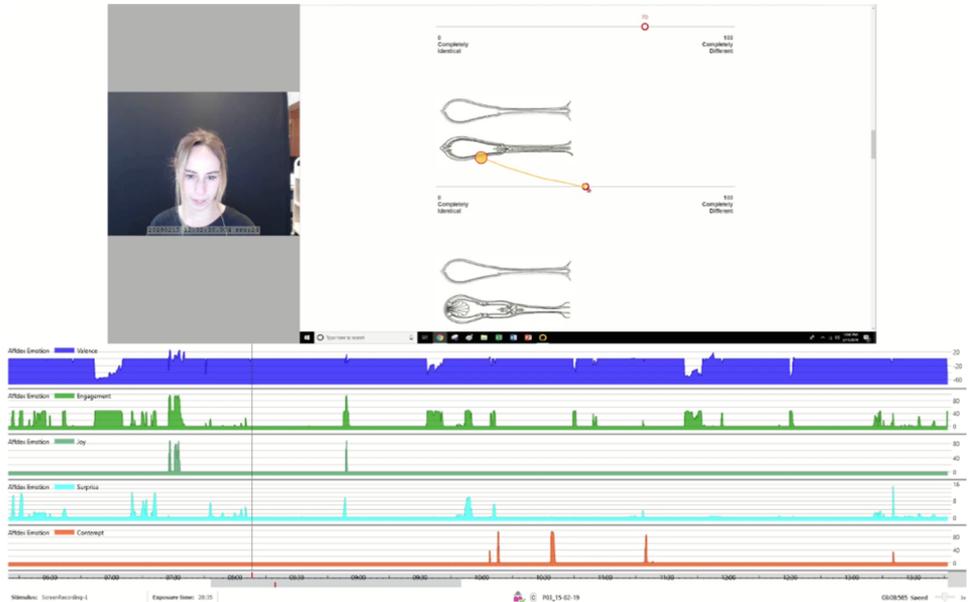
leverages modern neuroscience study design, data capture, and related statistical analysis to mitigate evaluative bias in the application of the ordinary observer test.⁴¹ The EOOT collects data from a large sample of representative consumers of the product in question regarding each critical component of the OOT. The EOOT features tasks and question sets that capture data useful to the finder of fact related to each critical component of the OOT under *Gorham v. White*, as well as under *Egyptian Goddess, Inc. v. Swisa, Inc.*⁴² Specifically, data are captured related to (1) the eye of an ordinary observer, giving such attention as a purchaser usually gives, (2) an ordinary observer, familiar with the prior art, (3) two designs are substantially the same, and (4) if the resemblance is such as to deceive such an observer, inducing him to purchase one supposing it to be the other.

The EOOT is primarily an online survey-based methodology. However, lab-based applications are available, which allow for use of more advanced and high-precision neuroscience-based methodologies including eye-tracking, micro-facial expression analysis (MFEA), galvanic skin response, and electroencephalography, which provide deeper insights into the perspective of the ordinary observer. Figure 3 below shows a participant completing an EOOT task that involves rating the similarity/difference of relevant designs (flatware) on a sliding scale while eye-tracking and MFEA data are collected.

41. Mauro et al., *supra* note 19.

42. *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 672 (Fed. Cir. 2008) (saying that the ordinary observer is familiar with the prior art).

Figure 3: Participant Completing an EOOT Task



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Importantly, the EOOT is designed to meet Federal Rule of Evidence 703 requirements⁴³ and guidance from the Federal Judicial Center Reference Manual on Scientific Evidence⁴⁴ to ensure proper respondent sampling, study design, and data analysis.⁴⁵ The EOOT was validated on the designs from the landmark SCOTUS design patent infringement case *Gorham v. White*.⁴⁶ It was designed to be a versatile methodology that can be customized for different design patent litigation matters, as well as different product types. The EOOT offers a solution to the aforementioned issues related to finders of fact varying in how they perceive designs due to different design sensitivity and prior experience. Consistent application of the EOOT may result in more standardized design patent infringement decision-making across cases, ultimately resulting in a stronger and fairer design patent protection system in the United States.

43. FED. R. EVID. 703.

44. See SHARI SEIDMAN DIAMOND, REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 359–417 (3d ed. 2011), <https://www.fjc.gov/content/reference-guide-survey-research-2>.

45. See Sarah Butler & Kent Van Liere, *The Use of Surveys in Litigation: Recent Trends*, NERA ECON. CONSULTING (2010).

46. Mauro et al., *supra* note 19, at 50.

XII. DESIGN PATENTS COVERING PARTIAL DESIGNS ARE ESSENTIAL AND VALID

Another key variable often raised when discussing current issues with design patent protections and litigation is design patents covering partial designs. Some of our academic colleagues argue that design patents should only be granted for whole designs.⁴⁷ However, modern vision science and shape perception research supports that partial designs can provide enough information to allow recognition of the design as a whole, as well as ornamental value. Related to this concept is the well-established principle of cognitive minimization, which suggests that the human information processing system limits the mental effort required to process objects as much as possible to better manage the vast and complex information present in our everyday world.⁴⁸ As described earlier, we routinely leverage our prior experience and expectations to shortcut the visual processing required to recognize objects. We do not build our mental images directly from visual input from the real world, but instead confirm our expectations based on the least amount of information possible.⁴⁹ Accordingly, it is often the case that a partial design provides enough information for source identification, as our information processing system is well-tuned for object recognition based on limited visual information.

The salience of the partial design relative to the whole design, however, may impact source identification. Much shape perception research has been conducted regarding the salience of parts of designs in relation to total design. For example, Hoffman and Singh identified three factors that determine the salience of parts of objects and provide insight into whether a given element of a design provides enough information to allow recognition of the design as a whole.⁵⁰ The factors Hoffman and Singh identified are (1) the size of the part relative to the whole object, (2) the degree to which a part protrudes from the whole object, and (3) the strength of the part's boundaries. Each of these factors impact the ordinary observer's perception of a product design and, thus, should be taken into consideration in infringement of design patents covering partial designs.

Based on the principle of cognitive minimization and research on the salience of parts of designs, it is clear that partial designs can allow source identification. However, the degree to which partial designs provide enough information for source identification may be impacted by the salience of the

47. Sarah Burnstein, *Whole Designs*, 92 U. COLO. L. REV. 181 (2020).

48. Ullman, *supra* note 14, at 178.

49. Seth, *supra* note 25.

50. Donald D. Hoffman & Manish Singh, *Salience of Visual Parts*, 63 COGNITION 29, 29 (1997).

partial design relative to the whole design. Thus, partial designs should be protected under design patent law, but the salience of the partial design relative to the total design should be considered when weighing the impact of a partial design on design patent infringement and related damages calculation. In sum, the issue of partial designs is a question of weight rather than admissibility or exclusion.

XIII. ORNAMENTAL DESIGN AND UTILITARIAN FEATURES

Another issue often debated in design patent litigation is whether ornamental design can be a means of expressing and claiming underlying utilitarian features of the product. Often judges, lawyers, and juries fail to understand that ornamental design represents all of the underlying utilitarian features in a product, and not an individual utilitarian functional feature in the same manner as engineering-based functional features.⁵¹ Our academic colleagues also exhibit this misunderstanding, which has led to all manner of hand-wringing and prognostication on the topic of claiming utilitarian features by securing an ornamental design patent.

Modern neuroscience shows that the visual/ornamental aspects of a product shape are category-defining and behavior-directing attributes. They are not another utilitarian feature protected by the utility patent process. An ornamental design encapsulates a given product's utilitarian features. One can think of this in much the same way that the face of an individual is the way in which we identify the whole person; however, the human face tells us little about the trustworthiness, behavior, attitudes, and capabilities of that individual. This is a fundamental difference with respect to the concept of protecting utilitarian features by way of design patent.

An additional example is when you first viewed the iPhone rounded rectangle, you did not see one feature, but instead, the total composite of the product's capability, meaning, and status. This is because shape conveys the total product in the mind of the ordinary observer (consumer).⁵² Our academic colleagues have failed to integrate this basic neuroscience-based fact and would have us treat ornamental design of the iPhone as a "feature," such as memory capacity, processor speed, screen resolution or even higher level features such as email or web browsing.⁵³ This failure to grasp the neurological components

51. Brief of Amici Curiae 113 Distinguished Industrial Design Professionals and Educators In Support of Respondent at 6, *Samsung Elecs. Co. v. Apple Inc.*, 137 S. Ct. 429 (2016) (No. 15-777) [hereinafter Brief for Respondent].

52. *Id.*

53. Claudia Townsend & Sonjay Sood, *The Inherent Primacy of Aesthetic Attribute Processing*, in *PSYCHOLOGY OF DESIGN* 208 (Rajeev Batra, Colleen Seifert & Diann Brei eds., 2016) (stating that consumers respond differently to ornamental design compared to functional

of ornamental design can lead legal teams to use improper research methods for determining the value of design. Research methods such as conjoint analysis are useful to obtain a basic understanding of how consumers assign value to different utilitarian features; however, conjoint analysis cannot accurately assess the value of ornamental design because ornamental design is processed in entirely different ways neurologically compared to utilitarian features.⁵⁴ Importantly, the use of improper research methodologies to assess value of ornamental design can undervalue ornamental design severely.

With this understanding in mind, it is the authors' opinion that, in the *Samsung v. Apple* case, the District Court awarded the proper level of damages, given that neuroscience defines the relative importance of the ornamental design presented in the Apple design patents.⁵⁵ It is important to note that the Apple design patents asserted against Samsung did, in aggregate, cover the core brand-identifying visual design attributes presented to consumers in the marketplace. This way of thinking is apparently lost on our academic colleagues but has profound impact on the “muddle” problem described by Menell and Corren in their guiding paper for this conference.⁵⁶ The shape of a product is not a feature in the way that utility patents cover features. Any feature of a product that is present in the visual inspection of the product shape is by definition carrying information different from its underlying functional operation. We emphasize that shape conveys the total product in the mind of the ordinary observer.⁵⁷ By the total product, we mean the underlying functions in aggregate, as well as variables examined in early stages of information processing, including product category, brand attributes, meaning and emotional engagement. These attributes can all be measured scientifically using new research methods including MFEA and others.

XIV. LEVERAGING AVAILABLE SCIENCE TO SOLVE THE MUDDLE PROBLEM AND PROTECT DESIGN IP

Relying on case law and legal precedent for resolution of the muddle problem facing design protections completely ignores the last decade of valuable neuroscience research related to shape perception. Design patent protection has been flying blind in the hands of judges and juries who are following methods that have no basis in actual human perception or behavior research. This has produced a staggering level of variation in legal outcomes,

attributes, i.e., features, as ornamental design is processed more quickly and with less effort from the visual system compared to functional attributes).

54. *Id.*

55. *Samsung Elecs. Co. v. Apple Inc.*, 137 U.S. 429 (2016).

56. Menell & Corren, *supra* note 11, at 118–119, 125–26.

57. Brief for Respondent, *supra* note 51, at 10–13.

driven up litigation costs, and empowered an academic trajectory to weaken design patent protections.

Our academic colleagues have been clipping at the edges of the design patent protection framework, most aggressively since *Samsung v. Apple*. They have relentlessly attacked the *Samsung v. Apple* case and related damages, claiming it to be an example of design protections “run amok.”⁵⁸ However, this was a once in a lifetime event, which was made possible in the end by Apple yielding to Samsung and their core article of manufacture theory. We doubt Apple or other design-driven entities will make such a decision again.

XV. APPLICATION OF COPYRIGHT FILTRATION AND ABSTRACTION TO DESIGN PATENT INFRINGEMENT ANALYSIS AND WHY IT WILL NEVER WORK

In the primary paper for our academic colleagues’ push to resolve the design patent muddle problem, Menell and Corren proposed the introduction of a concept from copyright law for dealing with, what they believe to be, the issue with functional features in design patents.⁵⁹ In general terms, the proposed concept is known as filtration and abstraction. The proposed analytical framework is based on the legal test for determining copyright infringement, which involves both an extrinsic test, which “considers whether two works share a similarity of ideas and expression as measured by external, objective criteria,” and an intrinsic test, which looks to determine whether “subjectively[,] the ‘ordinary, reasonable person would find the total concept and feel of the [two works] to be substantially similar.’”⁶⁰ Both extrinsic and intrinsic tests are applied to determine whether the copyright-protected elements are substantially similar to those of the accused works.⁶¹ Accordingly, it is necessary to first distinguish between the protected and unprotected material in a plaintiff’s work before applying the extrinsic and intrinsic tests.⁶² This is where filtration and abstraction come into play.

58. *Id.*

59. *Id.*

60. *Swirsky v. Carey*, 376 F.3d 841, 845, 847 (9th Cir. 2004) (quoting *Three Boys Music Corp. v. Bolton*, 212 F.3d 477, 485 (9th Cir. 2000), *overruled on other grounds by Skidmore as Tr. for Randy Craig Wolfe Tr. v. Led Zeppelin*, 952 F.3d 1051 (9th Cir. 2020)).

61. *See, e.g., Jada Toys, Inc. v. Mattel, Inc.*, 518 F.3d 628, 637 (9th Cir. 2008) (“This Court has traditionally employed a two-part test to determine whether two works are substantially similar: an extrinsic test and an intrinsic test.”).

62. *See, e.g., Lanard Toys Ltd. v. Novelty, Inc.*, 511 F. Supp. 2d 1020, 1037–38 (C.D. Cal. 2007) (“Because the requirement is one of substantial similarity to *protected* elements of the copyrighted work, a court must distinguish between the protected and unprotected material in a plaintiff’s work.”).

Filtration is the identification of unprotectable functional features. Abstraction is the removal of the unprotectable functional features from the protected design in an effort to define the features of the copyright-protected useful article that remain for infringement analysis. At first glance, this seems like a reasonable approach. However, based on extensive experience as an expert in copyright infringement and executing filtration and abstraction analyses a number of times, it is immediately clear that filtration and abstraction as a concept for dealing with functional features in the design patent context is simply not workable. Below are three reasons why:

1) The legal framework for obtaining a copyright is fundamentally different from the legal framework for obtaining a design patent. The U.S. Copyright Office does undertake an examination of a copyright application and that examination process includes “whether the work constitutes copyrightable subject matter.”⁶³ However, any analysis of unprotectable functional elements executed by the Copyright Office during the copyright application process is much less detailed than that executed by the U.S. Patent and Trademark Office (USPTO) during the design patent application process. Accordingly, copyright litigation cases often require a strict functionality test, including filtration and abstraction, simply because the Copyright Office has not yet dealt with this question in a rigorous way prior to the onset of litigation. Therefore, the filtration and abstraction rubric is an essential aspect of copyright jurisprudence and copyright infringement analysis. On the other hand, the design patent legal framework, for the most part, allows for some advanced identification of functional features by the patent examiner during the patent application process. Thus, there is usually no need to conduct a second analysis during design patent litigation that focuses on filtration and abstraction based on what the defendant may proffer as features dictated purely by function. However, it is also true that during the examination process, the USPTO may fail to identify aspects of a design patent application that can later be seen by the court as dictated by function and, therefore, are not protectable under current design patent law. In litigation where the defendant can make a convincing case for the presence of such features, the court can rule accordingly. However, such instances are rare and certainly do not require adoption of the filtration and abstraction as a required legal procedure in all design patent litigation matters before the court.

2) There is no clearly defined methodology for conducting a filtration and abstraction analysis. When actually applied at trial, filtration and abstraction are simply a give-and-take between the litigating parties and their experts,

63. *See* U.S. COPYRIGHT OFF., COMPENDIUM CHAPTER 600—EXAMINATION PRACTICES 3 (2017), <https://www.copyright.gov/comp3/chap600/chap600-draft.pdf>.

focusing on the dismembering of the product in ways that often make little sense and lack underlying science-based decision-making. In the end, judges often slice up the useful article equitably, hoping to appease each party. Such a process is rarely an informed science-based analysis but, instead, is generally a subjective balancing act based on what may appear as logically correct based on the arguments of the litigating parties. Critically, judges in these cases rarely proceed based on information derived from science-based research focused on what is or is not actually purely functional. It is understandable that such an approach leads to an increasing level of inconsistency across copyright cases for useful articles. Furthermore, requiring filtration and abstraction dramatically drives up the cost of litigation by expanding the length of cases, increasing the complexity of decisions made by the court, increasing the number of briefs and filings, increasing the number of experts, and opening up the courts for more appeals and reversals. Often the results are near total chaos, leaving the finder of fact to consider whether or not the protected and accused works are substantially similar or not based on examination of a dismembered and fragmented jumble of component parts. Adoption of filtration and abstraction in design patent litigation would only add jumble to the muddle.

3) Adopting filtration and abstraction would further complicate damages calculation, especially after the SCOTUS decision in *Samsung v. Apple*, which allows for damages to be determined on less than total profits based on the definition of the article of manufacture.⁶⁴ The high court in *Samsung v. Apple* allowed for scaled damages⁶⁵ but failed entirely to proffer how to execute the required analysis, leaving the problem to the lower courts. Adding filtration and abstraction to this already degraded design IP framework will do nothing to solve the muddle and will in fact further degrade the design patent system. Whereas the SCOTUS decision was death by dismemberment, filtration and abstraction is death by a thousand cuts.

There is virtually nothing in the current body of design patent case law and certainly nothing in neuroaesthetics research that supports filtration and abstraction of ornamental features which have underlying functional attributes. These practices run contrary to modern neuroscience related to the perception of the shape and ornamental design of useful articles. Again, a useful analogy is the human face: one cannot simply filter and abstract facial features without altering the visual processing and subsequent identification, recognition, and meaning of the face being manipulated. The point is that the ornamental features of the human face, in much the same way as ornamental

64. *Samsung Elecs. Co. v. Apple Inc.*, 137 S. Ct. 429, 434–36 (2016).

65. *Id.*

features of a product, have underlying functions such as hearing, smell, vision, or speech, that are not actually described in functional terms by a given individual's unique ear, nose, mouth, or eye ornamental visual shapes. Abstraction of any ornamental features from a patented product should never be undertaken as a means of ensuring that ornamental design is not protecting functional features better protected by utility regimes.

XVI. LOOKING BACK AND NOT AHEAD

In the end, the opinions expressed by our academic colleagues are not based on a single case or legal outcome that supports their views. Similar unsupported opinion-proffering occurred when *Samsung* pushed through the *Samsung v. Apple* article of manufacture SCOTUS decision based on the now famous car and cup holder example,⁶⁶ likely inspired by the thinking in Professor Mark Lemley's *Brief Amici Curiae of 27 Law Professors in Support of Appellant Samsung*.⁶⁷ The attacks on design patent protections from our academic colleagues are becoming more frequent and expansive, as well as less supported by legal decisions or empirical research.

XVII. CONCLUSION

The U.S. Constitution, Article 1 Section 8, Clause 8 states, “[The Congress shall have Power] To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”⁶⁸ It is clear from this Clause that protection of discoveries was a core tenet embraced by the Framers of the Constitution. Notably this Clause is surprisingly general in nature, leaving the exact implementation to Congress. However, make no mistake: protection of discoveries was a front-and-center concern in the drafting of the Constitution. For example, in personal correspondences between Thomas Jefferson and James Madison, the two discussed how the protection of discoveries might lead to “monopoly power” on the part of those who would seek extraordinary or unintended use of the U.S. IP system.⁶⁹ This remains a valid concern today in other IP frameworks but has not been objectively proven to be present in design patent litigation matters.

66. Ami Shin & Dara Brown, *Samsung Electronics Co. v. Apple*, LEGAL INFO. INST. (last visited Apr. 4, 2021), <https://www.law.cornell.edu/supct/cert/15-777>.

67. Brief Amici Curiae of 27 Law Professors In Support of Appellant Samsung at 7–15, *Samsung Elecs. Co. v. Apple Inc.*, 809 F.3d 633 (Fed. Cir. 2015) (No. 2014-1335, 1368).

68. U.S. CONST. art. I, § 8.

69. Stephen G. Calabresi & Larissa Leibowitz, *Monopolies and the Constitution: A History of Crony Capitalism*, 36 Harv. J.L. & Pub. Pol'y 983, 1010–11 (2013).

There are virtually no actual examples in design patent case law of “monopoly power” derived from the ornamental design of an article of manufacture. Our academic colleagues’ constant use of the iPhone “rounded rectangle” as such an example is without scientific support or legal precedent. Modern shape perception science shows exactly what Samsung could have done to alter the design of the infringing phones, but failed to do. Apple does not claim all rounded rectangles, but most specifically the rounded rectangle that is associated with the iPhone. It is high time our academic colleagues stopped proffering hypothetical instances of such events and instead focus on science-based legal scholarship leading to properly validated methods for addressing the “monopoly power” question.

Neither the Framers of the Constitution, nor Congress declared that the methods and formal legal tests for design patent infringement must remain mired in outdated 18th-century legal academic thinking and ignore advances in modern decision-making and analytical neuroscience research. In fact, leveraging such scientific advances would greatly improve the design patent protection system’s ability to ensure that monopoly power is not given to those who seek it. The future of design patent theory and practice will utilize science-based analytical methods to rebut attempts at monopoly power, as well as validate and strengthen the rights of those who seek to obtain valid protection for their often significant investments in ornamental design innovations. This view does not rest solely on the opinion of the authors, but on the increasing importance of ornamental design as a primary and protectable discovery and business asset. As Thomas J. Watson said in 1973, “good design is good business.”⁷⁰ Today we now know, based on valid research, that companies employing design as a strategic advantage outperform their peer group on a market asset value basis of 228%.⁷¹

Despite the extensive and sometimes overwrought prognostications of our academic colleagues, the outcome of *Samsung v. Apple* was not an aberration or example of monopoly power, but a foreshadowing of what is to come. It is even more true today that good design is good business and protecting good design is a business imperative. The authors predict that design patents will soon rise dramatically in both importance and value as the underpinnings of modern neuroaesthetics reveals how ornamental design drives much of human behavior in an increasingly complex and competitive global marketplace.

70. Anne Quito, *Why Are We Still Arguing for the Business Value Of Design?*, QUARTZ (Oct. 23, 2018), <https://qz.com/1431875/revisiting-ibms-good-design-is-good-business-slogan/>.

71. Jeneanne Rae, *What Is the Real Value of Design?*, DMI 33 (2013), https://cdn.ymaws.com/sites/www.dmi.org/resource/resmgr/pdf_files/TheRealValueOfDesign.pdf.

Ornamental design is not a feature of a product, but is the product in the eyes and mind of the consumer.

Our academic colleagues have the right to ponder and draft on the question of monopoly power in the design patent system. However, their reliance on outdated legal tests and case law may simply be a problem attributable to a lack of awareness of the newly developing fields of neuroaesthetics and science-based empirical methods finding their place in many aspects of the law and, more recently, landing in the intellectual property domain of design patents and copyright. In this context, the authors welcome a collaboration with our academic colleagues and feel that empirical methods will benefit all players in the increasingly complex design patent litigation space. In the opinion of the authors, there is a lack of empirical and science-based academic scholarship on the part of the current legal academic community. Much of the current academic publications on design patents is overcited and under-researched, leading to literature that is of minimal use to legal professionals who would likely rely, in-part, on well-researched and validated empirical legal scholarship.

We agree with our academic colleagues that design patent litigation lacks decisional consistency and is in a state of rapid change. However, we disagree as to the source of the problems, and most importantly, we disagree entirely on the appropriate solutions. At the heart of the disagreement are differences in expertise, perspective, and vision. Our academic colleagues would have us look backward to conceptual frameworks that were never successful to begin with. We propose looking forward and adopting changes to design patent law based on modern neuroscience and empirical research.

We challenge our academic colleagues to abandon their quasi-strict constitutionalism and adopt scholarship informed by empirical process, modern neuroscience and neuroaesthetics. Robust empirical methods can address the issue of “monopoly power” and, at the same time, ensure those who have obtained valid design patent rights can protect them with confidence. In this context, we firmly believe that science will lift all boats. A move to science-based design patent legal frameworks will benefit both the plaintiff and the defendant in important and measurable ways.

As technology moves into the age of quantum computing, our academic colleagues call for reversion to the age of vacuum tubes. This is not going to happen. Science will remake design patent protections and other IP regimes as well. It is not a matter of if, but when.

