

## 2 INSIDE THE DESIGN PROCESS

It is not just copyright law that regulates artistic creations; patent law does too. This might come as a surprise to most people. We tend to think of patent law as addressing only the way an article functions, like a machine for separating cotton fibers from their seeds or a method for delivering intravenous fluids to dehydrated patients. But that describes the operation of *utility* patents. *Design* patents are another, less widely known part of the patent system, and they protect the way an article looks rather than the way it works. The original Coca-Cola bottle was the subject of a design patent (pictured in Figure 2.1).<sup>1</sup> So was the Statue of Liberty – the patent allowed the statue’s sculptor to control the sale of miniature versions of the statue to raise money for the construction of the full-size version in New York Harbor.<sup>2</sup>

As with copyright, design patent law covers a broad spectrum of creative output, from sculptures to snack trays to computer screen layouts. Design patents have some disadvantages as compared to other forms of intellectual property. Unlike copyright protection, design patent protection lasts for a relatively short time: fifteen years. Also different from copyright and trademark protection, a design patent’s focus is exclusively visual – there is no such thing as a design patent in a musical composition or the text of a literary work. Instead of springing into being on their own, a patent (design or utility) must issue from a government agency – the US Patent and Trademark Office (PTO) – a process that takes time and money. Design patents do possess one great advantage over other forms of intellectual property protection, however, in that there is no leeway for unauthorized uses that might be considered non-confusing or “fair use.” If someone copies the appearance of your patented design, they are liable for patent infringement – period.



Figure 2.1 Bottle or similar article, US Patent No. D48,160 (Nov. 16, 1915). The design won a national competition sponsored by the Coca-Cola Company to create a new bottle shape for its product.

Design patents have become a key weapon in the legal arsenal of commercial manufacturers. Two federal court decisions, one announcing a doctrinal change making design patent infringement easier to prove and another ratifying a half a billion dollar verdict for Apple Computer, suddenly catapulted design patent law into a starring role.<sup>3</sup> As a consequence, the number of design patent cases filed in the federal courts climbed exponentially.

It turns out that design patent law was not ready for its close-up. A patentable design must be “nonobvious,” which means a design is not protected if “one of ordinary skill would have combined the teachings of the prior art to create the same overall visual appearance as the claimed design.”<sup>4</sup> Although this nonobviousness test naturally invites investigations into the thought processes of designers and comparisons to existing designs, courts have declined the invitation. In fact, despite the letter of the law and its rigorous application in the utility patent context, courts largely fail to police design patent applications for nonobviousness, only denying protection when confronted with a single virtually identical prior design. This makes design patents

laughably easy to obtain. The reason for this judicial lassitude is a belief that scientific innovation can be detected via objective comparison to past inventive activity whereas innovation in the visual arts does not allow for such a comparison. Neuroscience reveals that this art/science double standard is patently false. Instead, every creative endeavor – whether in the sciences or the visual arts – can only be understood with reference to the prior works and shared assumptions of the relevant domain.

### **NONOBVIOUSNESS AND ITS RELATIONSHIP TO DESIGN PATENT ELIGIBILITY**

To understand the current operation of design nonobviousness, it helps to know a bit about the general requirements for design patent protection. There are three essential criteria for a patentable design. According to federal statute, a protectable design must be “ornamental” and “new.” The third requirement, nonobviousness, is judge-made, added through common law decision-making, though subsequently enshrined through legislation.

To be ornamental, the design at issue must not be functional. For example, if a particular shape renders one car mirror more aerodynamic than all other car mirrors, that shape lacks the necessary ornamentality to be protectable. To avoid the establishment of anti-competitive monopolies around features that make products operate better, functional design elements are supposed to be channeled into the differently calibrated system of utility patents and, therefore, excluded from design patent protection. Design patents are meant to protect things that look good, not things that work well.

The requirement that a design be “new” is referred to as the novelty requirement. Although novelty is determined by the same general rules that apply in the utility patent context – a claimed item fails to satisfy the requirement if the item already exists in the prior art – design patent novelty is comparatively easy to satisfy. Proof of insufficient novelty demands a strict identity between the prior art and the claimed design at issue. Moreover, only ornamental elements can be part of this matching process; any correspondence between the prior art and

functional elements in the claimed design is irrelevant. As a consequence, like ornamentality, lack of novelty rarely prevents the issuance of a design patent.

The third, and most important, requirement for design patent eligibility is nonobviousness. A design patent must not issue when “differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made.”<sup>5</sup> Though they sound somewhat similar, novelty and nonobviousness are distinct requirements governed by different legal analyses.

Nonobviousness, unlike novelty and ornamentality, is determined from a particular perspective – that of a skilled designer. Nonobviousness is also broader than novelty. For novelty purposes, a successful match requires prior art on all fours with the claimed design. But prior designs, even if not an exact match for the proffered design, can theoretically make the proffered design obvious and therefore invalid. In addition, the nonobviousness assessment can take into account more information than the more restricted novelty determination, which looks only to prior art. For example, the skill of the “ordinary designer” and functional considerations that “teach away” from the claimed design can be considered to assess nonobviousness.

## **NONOBVIOUSNESS BECOMES A NONISSUE**

In the utility patent context, nonobviousness is celebrated as the chief condition for patent protection and one directly linked to patent law’s central purpose. It has been referred to as “the heart of the patent system and the justification of patent grants.”<sup>6</sup> By limiting patent rights to only those creations that display ingenuity beyond that of the ordinary inventor in the field and truly add to the corpus of human knowledge, the nonobviousness requirement directly aligns with the constitutional edict that patent grants “promote the Progress of Science and useful Arts.”<sup>7</sup> As a result, it is generally understood that nonobviousness “stands as the cornerstone of the patent bargain,” outshining other patent requirements in importance and theoretical depth.<sup>8</sup>

Despite this celebration in the utility patent context, various decisions by the Federal Circuit – the federal court of appeals responsible for setting out binding interpretations of patent law – have turned design patent nonobviousness into a dead letter. Thanks to two particular doctrinal moves, nonobviousness challenges to a claimed design rarely succeed, either before the PTO or the federal courts. The subtext for these moves is a belief that creativity in the sciences is so different from that in the arts that they must be analyzed in two completely separate ways.

According to the Federal Circuit, every design is nonobvious to a designer unless a single design already exists that is nearly identical to the claimed design. This is far different from nonobviousness in the utility patent context, where various examples of prior art can be combined to reveal that a claimed invention would have been unsurprising to those skilled in the domain. The Federal Circuit also posits that designers adopt a holistic approach to their craft that treats all visual elements of a design equally, none more important than another. Again, this is not at all like the approach to utility patent nonobviousness, where judges are free to focus on those particular components that are most material to the invention. The effect of these moves is to pay little attention to prior designs in judging whether a claimed design warrants patent protection, thereby rendering the nonobviousness requirement a virtual nonentity.

### Primary References

Thanks to the Federal Circuit, a finding of obviousness demands two separate inquiries:

- (1) assessing whether a single example from the prior art (called a “primary reference”) “creates basically the same visual impression” as the claimed design and (2) determining if that single example, after it has been modified by relevant secondary references, “create[s] a design that has the same overall visual appearance as the claimed design.”<sup>9</sup>

Any secondary references must be “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.”<sup>10</sup> If no suitable primary reference exists, there is no need to proceed to the second inquiry and the claimed design cannot be obvious. The determination of suitable primary and secondary references is made from the perspective of a designer with “ordinary skill in the art.”<sup>11</sup>

Therefore, to declare a claimed design obvious, there must be a primary reference already in existence having design characteristics that are “basically the same as the claimed design.”<sup>12</sup> This exacting standard makes obviousness extremely difficult to prove. For example, in *Apple, Inc. v. Samsung Electronics Co.*, the Federal Circuit held that the look of other tablet computers could not serve as a primary reference for Apple’s tablet, the iPad, even though earlier tablets had several ornamental features in common with the iPad. The trial court found that a previous tablet computer had, like the iPad, four rounded corners, a flat glass-like surface without any ornamentation, and an overall design that conveys thinness, thereby creating “basically the same visual impression” and rendering the iPad design unpatentable for obviousness. The Federal Circuit disagreed, explaining that despite these striking similarities, various differences, including a greater contrast between the screen and the rest of the older tablet, meant that the older tablet could not serve as a primary reference for the iPad.<sup>13</sup> Without a primary reference, the game was up: Apple’s design patent had to be considered nonobvious, paving the way for its massive infringement verdict against rival Samsung. The *Apple* trial court notwithstanding, courts rarely identify works exhibiting the necessary degree of similarity to the patentee’s design to be a primary reference. The same holds true for examiners at the PTO.<sup>14</sup>

## Holistic Evaluation

As it demands a nearly identical primary reference, the Federal Circuit also insists that the “ordinary designer” approaches her work in a holistic manner. This means that instead of giving greater attention to design aspects that might be more noticeable or important to consumers, designers (and, by extension, judges and juries) take in everything at once. In other words, all design elements are created equal.

This design agnosticism is gospel when it comes to comparing the claimed work to the prior art. “[T]here are no portions of a design which are ‘immaterial’ or ‘not important,’” explained the Federal Circuit’s predecessor. “A design is a unitary thing and all of its portions are material in that they contribute to the appearance which constitutes the design.”<sup>15</sup> More recent decisions insist only “the visual impressions of the designs as a whole” can be considered, not “selected, separate features of the prior art.”<sup>16</sup> Judges must be cautious even when describing what they see as “[l]isting details of ornamentation is an inappropriate construction because it does not project the overall visual impression of the design.”<sup>17</sup>

This insistence that no one part of a design is more important than another might sound like it would make nonobviousness harder to prove, thereby making it more difficult to claim a valid design patent. Things can look more similar the less detailed your perspective is. If courts can only take a broad view of the entire design, then it might be harder to point out differences between the claimed design and the prior art necessary for a finding of nonobviousness.

In actuality, however, by assuming that designers approach design holistically, the Federal Circuit has made it easier to show nonobviousness. If one detail cannot be prioritized over another, then *any* detail becomes a potential difference from the prior art – a difference that prevents an earlier design from serving as the necessary primary reference. As discussed, in the *Apple* case, the Federal Circuit second-guessed the trial judge’s determination that another tablet possessed the same key stylistic features as Apple’s iPad. The Federal Circuit noted differences that it said made the iPad design nonobvious, but it made no effort to explain why the differences it pointed out were more important than the similarities identified by the district court. The importance or materiality of a particular design feature to the designer (or to consumers) is not part of the nonobviousness analysis, which makes it all the easier for the design patent holder to find at least one legally sufficient difference between its creation and what came before. Even features not visible to onlookers at the point of sale are now considered potential grounds for distinguishing the prior art and declaring a design nonobvious.<sup>18</sup>

## THE FALSE ART–SCIENCE DICHOTOMY

The reason for such an anemic approach to nonobviousness is a belief that interrogation of design inventiveness cannot lend itself to a specific analysis and is, in fact, “impossible.”<sup>19</sup> Even the court with the most expertise on this question, the Federal Circuit, confesses that it is necessarily flying blind. Considering the obviousness of the design of Crocs shoes, the Federal Circuit acknowledged its own lack of discernment: “Courts, made up of laymen as they must be, are likely either to underrate, or to overrate, the difficulties in making new and profitable discoveries in fields with which they cannot be familiar.”<sup>20</sup>

Without objective criteria to apply, courts are left to rely largely on their own subjective sense to evaluate nonobviousness. “The essence of a design has been said to reside,” explains one patent authority, “not in the elements individually, but to exist in that indefinable whole that awakens some sensation in the observer’s mind.”<sup>21</sup> An oft-repeated statement of the law dating back to 1900 emphasizes the indescribable nature of a design’s effect on viewers, the exact area of study for nonobviousness:

Design, in the view of the patent law, is that characteristic of a physical substance which, by means of lines, images, configuration, and the like, taken as a whole, makes an impression, through the eye upon the mind of the observer. The essence of a design resides, not in the elements individually, nor in their method of arrangement, but in their tout ensemble – in that indefinable whole that awakens some sensation in the observer’s mind.<sup>22</sup>

The Federal Circuit instructs that a “trial judge may determine almost *instinctively* whether the two designs create basically the same visual impression.”<sup>23</sup>

The design process is so magical and individualized, in the courts’ eyes, that even attempting to discuss their own observation of a design is problematic. Although courts are required to provide some sort of account of their nonobviousness determinations, there is a skepticism as to how such a determination can be articulated into textual or even rational terms: “Words are often an inadequate substitute for the overall visual impression created upon the observer of the item at issue



compared to that of its alleged predecessors.”<sup>24</sup> Given this belief that the design process is unknowable, one can understand why the Federal Circuit prohibits inquiries into the materiality of particular design features and adopts a test for nonobviousness that only involves the simplistic analysis of looking for a single design virtually identical to the claimed design.

Courts hearing copyright cases often follow a similar path, refusing to examine what came before to probe a work’s innovative force. Take the decision of a federal appellate court to award copyright in “a rectangular object having a stone-like appearance and a verse inscribed on the face.” Even though the verse was copied word for word from the public domain, the court of appeals deemed the object original, giving the author creative credit for presenting the verse in a particular font and capitalizing the first letter of each word. The court offered no comparison to other garden sculptures or sculptures in general to support its decision that the author had added “her own imaginative spark” to the work.<sup>25</sup> Along similar lines, another appellate court concluded that the not “particularly novel” face, lips, and eyes of Barbie dolls were copyrightable, brushing aside a trial court determination that similar features already existed in many other dolls. The court proclaimed even if there were many other dolls with “upturned noses, bow lips, and wide-spread eyes,” this should not prevent Barbie and her “current sales exceed[ing] \$1 billion per year” from enjoying copyright protection.<sup>26</sup>

As with design patent law, if a judge hearing a copyright matter strays by comparing a work to the relevant prior art and finding insufficient difference, she can be reprimanded. When a federal court departed from the norm and determined that a photograph of a Skyy vodka bottle against a plain white background lacked adequate creativity, it was reversed by a court of appeals. The lower court compared the photograph to the original bottle, finding the photograph insufficiently creative because any differences between the original bottle and the version in the photograph would be undetectable to a jury. Rather than approving the lower court’s comparison of the photograph against the most important item of prior art – the bottle itself – the appellate court faulted the district court for ignoring precedent holding that almost any photograph is *per se* creative.<sup>27</sup>

But if both copyright law and design patent law fail to rigorously engage with prior art to assess creativity, it is at least possible for judges hearing copyright cases to sometimes consider prior works in their determinations. Copyright law has no “primary reference” requirement – for a finding of insufficient creativity, it is not necessary to locate a single existing work that is exactly the same as the would-be author’s work. If the expressive features of a work can all be attributed to a *combination* of features from other, pre-existing works, then the work is not original and cannot be copyrighted.<sup>28</sup> By contrast, thanks to the Federal Circuit’s primary reference requirement, if there is no single existing design that is “virtually identical” to the claimed design, then all previous designs become irrelevant, even if, in combination, they feature all of the same elements as the claimed design.

Design patent law’s narrow approach to nonobviousness stands in marked contrast to utility patent law, which calls for a probing inquiry into whether an invention represents a sufficiently inventive leap from what came before. Unlike their investigation of design patent matters, courts hearing utility patent cases insist that the nonobviousness standard demands objective evaluation, tethering the requirement to various information about other works in the relevant domain. The scope and content of relevant prior art, the level of ordinary skill in the prior art, the differences between the claimed invention and the prior art, and the invention’s role in resolving long felt but unsolved needs are all part of the utility patent nonobviousness inquiry. Rather than insisting on a single reference nearly equivalent to the claimed invention, in utility patent cases, a court is expected to combine multiple references to see if their combination would have been apparent to a person skilled in the art. For example, a packaging device that injects air into a horizontal stack of bags and holds them in place with a pin was considered obvious in light of other packaging devices accomplishing the same end but with vertical stacks and rods instead of pins.<sup>29</sup> To meet utility patent law’s creativity threshold, the inventor must truly distinguish herself from what has come before instead of making a single minor deviation.

The very different treatment of design and utility patent nonobviousness demonstrates a belief that visual art and scientific invention represent two different mental phenomena. The former cannot be

appreciated by outsiders and can only be evaluated, if at all, through instinct. The latter represents a rational, calculated process that invariably relies on previous innovations and can be meticulously analyzed according to objective criteria. This art/science double standard has consequences: the PTO initially rejects nearly 90 percent of all utility patent applications at the same time that it approves 90 percent of all design patent applications, and the differential does not improve when one considers the nonobviousness analysis of the federal courts.<sup>30</sup>

### **ALL CREATIVITY REQUIRES CONTEXT**

Psychologists once had a similar view as to the gulf between artistic and scientific creativity. They divided all creativity into lower- and higher-level processes, placing achievement in the arts at the highest level. Today, however, the consensus is that “artistic creativity may not hold a privileged place in the brain after all.”<sup>31</sup> By observing the same neural phenomena in different kinds of creative tasks, researchers reject old beliefs that divided artistic and scientific creativity into separate camps.

Relatedly, the once widely accepted theory that people are divided into two cognitive tribes – creative, right-brained, free-spirited artists and analytical, left-brained, math/science-oriented logicians – has been thoroughly discredited, even if this conceit still finds its way into popular discourse.<sup>32</sup> It turns out that inventors are no less creative than artists. The supposedly non-creative left hemisphere of the brain is actively involved in all manner of creative tasks.<sup>33</sup> For engineers as well as poets, the same process takes place: coming up with an idea, then building on that idea so that it is useful. This process requires both sides of the brain to be engaged. To the extent design patent law depends on a view of creativity in visual design as different in kind from other creative thought processes, neuroscience shows this view to be mistaken.<sup>34</sup>

What the science reveals about the creative process is the importance of domain-specific knowledge – chiefly knowledge of the prior art – no matter the discipline. Instead of finding differences between creative thought in the arts and the sciences, researchers posit a dual model of creativity with all creators cycling between idea generation

and evaluation of ideas against a benchmark of standards.<sup>35</sup> To learn these standards, it helps to have training in the domain. “Creative people are generally very knowledgeable about a given discipline. Coming up with a grand idea without ever having been closely involved with an area of study is not impossible, but it is very improbable.”<sup>36</sup> It is important to know the norms, techniques, and history of your chosen artistic field before you create. Even for those who seek to break boundaries, it is good to know what you are breaking.

The law of design nonobviousness looks to the designer alone, but creativity must be understood as existing in a larger framework beyond the individual creator. As the psychologist Mikhail Csikszentmihalyi explains it, “an idea or product that deserves the label ‘creative’ arises from the synergy of many sources and not only from the mind of a single person.” According to Csikszentmihalyi’s influential systems model of the creative process, creativity emerges from a dynamic interaction of three elements: (1) the individual: the person (or persons) that produces the creative work; (2) the domain: an area of specialized knowledge; and (3) the field: the hierarchy of people and groups who possess deep knowledge of the domain and act as its gatekeepers.<sup>37</sup> Other creativity models build on the essential insights of the systems model, such as its emphasis on the need to consider the prior art of each relevant domain and the role of the domain’s anointed experts.

It is only recently that psychologists have gained a markedly better understanding of the creative process so that these models can actually be tested. Though by no means offering a complete map of the creative process, neural measurements confirm the broad outlines of the systems model. At the individual level, as discussed in the previous chapter, motivation to create turns out to be of central importance for creative activity and accidental production of innovative works rare. But creativity can only be understood by also looking beyond the individual to the larger creative environment. A flood of experiments show that creativity requires a comparison between the expressive product at issue and the past work and shared practices of the relevant artistic community. Without this domain-specific referent, the systems model explains, there is no basis for determining what is creative and what is not. This is why highly creative people tend to be creative in

one particular domain instead of several; “it takes a lot of experience, knowledge, and training to be able to identify good problems.”<sup>38</sup>

This is not to say that creativity is only a matter of directly applying domain-specific expertise. An innovative designer still needs to find ways to combine elements in new formations that are not obvious or conventional. But domain-specific knowledge is critical to creative success. Without first learning what has already been done, a person doesn't have the raw material to create with. That's why a critical part of the creative process is to first become very familiar with prior works, and internalize the symbols and conventions of the domain.<sup>39</sup> A good illustration of this comes from the world of automotive design. Many of the most important car designs of the past century – from Cadillac's introduction of tail fins to the retro look of Chrysler's PT Cruiser – owe significant debts to earlier automotive styling cues, either as a point of departure or a planned homage.<sup>40</sup>

Even though domain-specific expertise is essential for visual creativity, as it is for all other kinds of creativity, it is typically ignored when judging the patentability of a design. Rather than examining the relevant universe of prior art in the domain and comparing it against the design at issue, courts can dispense with nonobviousness through a simplistic look for the claimed design's identical twin. This search for a single overlapping reference is problematic. It does not align with what we now understand about the creative process, particularly the great importance of familiarity with relevant prior art to that process. Tellingly, there is no primary reference requirement when it comes to determining utility patent nonobviousness, thus revealing a double standard in patent law's treatment of science versus visual art.<sup>41</sup> Chapter 4 offers more detail on how prior art can be evaluated in a way that resembles the creative process and generates a more rigorous screen for design patent nonobviousness.

## Notes

<sup>1</sup> U.S. Patent No. D48,160 (Nov. 16, 1915).

<sup>2</sup> U.S. Patent No. D11,023 (Feb. 18, 1879).

<sup>3</sup> *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665 (Fed. Cir. 2008) (eliminating old requirement that the accused device contain substantially the same points of novelty that distinguished the patented design from the

prior art; now the accused design must only appear “substantially similar” to that patented design to the “ordinary observer”); Jury Verdict, Apple, Inc. v. Samsung Elecs. Co., No. 11-CV-01846-LHK (May 24, 2018), ECF No. 3806 (approving jury award of \$533 million for Samsung’s infringement of Apple’s design patents).

<sup>4</sup> Walter E. Durling v. Spectrum Furniture Co., 101 F.3d 100, 103 (Fed. Cir. 1996).

<sup>5</sup> Litton Systems, Inc. v. Whirlpool Corp., 728 F.2d 1423, 1441 (Fed. Cir. 1984).

<sup>6</sup> Hon. Giles S. Rich, *Laying the Ghost of the ‘Invention’ Requirement*, 1 AIPLA Q.J. 26 (1972).

<sup>7</sup> U.S. CONST. art I, § 8, cl. 8.

<sup>8</sup> Laura G. Pedraza-Fariña & Ryan Whalen, *A Network Theory of Patentability*, 87 U. CHI. L. REV. 63, 65 (2020).

<sup>9</sup> MRC Innovations, Inc. v. Hunter Mfg., 747 F.3d 1326, 1331 (Fed. Cir. 2014).

<sup>10</sup> Titan Tire Corp. v. Case New Holland, Inc., 566 F.3d 1372, 1381 (Fed. Cir. 2009).

<sup>11</sup> Campbell Soup Co. v. Gamon Plus, Inc., 939 F.3d 1335, 1339 (Fed. Cir. 2019).

<sup>12</sup> *In re Leon Rosen*, 673 F.2d 388, 391 (C.C.P.A. 1982).

<sup>13</sup> Apple, Inc. v. Samsung Elecs. Co., 678 F.3d 1314, 1331–32 (Fed. Cir. 2012).

<sup>14</sup> Sarah Burstein, *Is Design Patent Examination Too Lax?*, 33 BERKELEY TECH. L.J. 607, 616–17 (2018).

<sup>15</sup> *In re Blum*, 153 U.S.P.Q. 177, 179–80 (C.C.P.A. 1967).

<sup>16</sup> *In re Harvey*, 12 F.3d 1061, 1065 (Fed. Cir. 1993).

<sup>17</sup> Ashley Furniture Indus., Inc. v. Lifestyle Enter., Inc., 574 F. Supp. 2d 920, 928 (W.D. Wisc. 2008). See also Titan Tire Corp. v. Case New Holland, Inc., 566 F.3d 1372, 1383 (Fed. Cir. 2009) (cautioning against “the tendency to draw the court’s attention to individual features of a design rather than the design’s overall appearance”).

<sup>18</sup> Contessa Food Products, Inc. v. Conagra, Inc., 282 F.3d 1370, 1381 (Fed. Cir. 2002).

<sup>19</sup> Judge Giles Rich, the “dean” of the Federal Circuit, referred to “obviousness in design patentability cases” as the “impossible issue.” *In re Nalbandian*, 661 F.2d 1214, 1219 (C.C.P.A. 1981) (Rich, J., concurring).

<sup>20</sup> Crocs, Inc. v. ITC, 598 F.3d 1294, 1310 (Fed. Cir. 2010) (quoting Safety Car Heating & Lightning Co. v. Gen. Elec. Co., 155 F.2d 937, 939 (2d Cir. 1946)).

<sup>21</sup> 3 JOHN GLADSTONE MILLS ET AL., PATENT LAW FUNDAMENTALS § 8:5 (2d ed. 2020).

- <sup>22</sup> Application of Zahn, 617 F.2d 261, 270 (C.C.P.A. 1980) (Baldwin, J., dissenting) (quoting Pelouze Scale & Mfg. Co. v. American Cutlery Co., 102 F. 916, 918 (7th Cir. 1900)).
- <sup>23</sup> Spigen Korea Co. v. Ultraproof, Inc., 955 F.3d 1379, 1383–84 (Fed. Cir. 2020) (quoting Durling v. Spectrum Furniture Co., 101 F.3d 100, 103 (Fed. Cir. 1996)) (emphasis added).
- <sup>24</sup> Thomas B. Lindgren, *The Sanctity of the Design Patent: Illusion or Reality? Twenty Years of Design Patent Litigation Since Compcoc v. Day-Brite Lighting, Inc. and Sears, Roebuck & Co. v. Stiffel Co.*, 10 OKLA. CITY U. L. REV. 195, 225 (1985).
- <sup>25</sup> Kay Berry, Inc. v. Taylor Gifts, Inc., 421 F.3d 199, 207 (3d Cir. 2005).
- <sup>26</sup> Mattel, Inc. v. Goldberger Doll Mfg. Co., 365 F.3d 133, 135 (2d Cir. 2004).
- <sup>27</sup> Ets-Hokin v. Skyy Spirits, Inc., 225 F.3d 1068, 1077 (9th Cir. 2000).
- <sup>28</sup> Copyright law does offer limited protection to compilations involving the creative selection or arrangement of elements that would be uncopyrightable on their own. See *Feist Publ'ns v. Rural Tele. Serv. Co.*, 499 U.S. 340, 348 (1991).
- <sup>29</sup> *In re Winslow*, 365 F.2d 1017 (C.C.P.A. 1966).
- <sup>30</sup> Burstein, *supra*, at 610; Vic Lin, *Design Patents vs Utility Patents: What Are the Differences?*, PATENT TRADEMARK BLOG, <https://www.patenttrademarkblog.com/design-patents-vs-utility-patents-differences/>. When amended patent applications responding to an initial disallowance are considered, the utility patent allowance rate reaches 55 percent – still far below the 90 percent allowance rate for design patents. Michael Carley et al., *What Is the Probability of Receiving a U.S. Patent?*, 17 YALE J.L. & TECH. 203, 209 (2015).
- <sup>31</sup> Malinda J. McPherson & Charles J. Limb, *Artistic and Aesthetic Production: Progress and Limitations*, in CAMBRIDGE HANDBOOK OF THE NEUROSCIENCE OF CREATIVITY 517, 524 (Rex E. Jung & Oshin Vartanian eds. 2018).
- <sup>32</sup> Allison B. Kaufman et al., *The Neurobiological Foundation of Creative Cognition*, in CAMBRIDGE HANDBOOK OF CREATIVITY 216, 219 (James C. Kaufman & Robert J. Sternberg eds. 2010).
- <sup>33</sup> A. R. Aghababayan et al., EEG REACTIONS DURING CREATIVE ACTIVITY, 33 HUMAN PHYSIOLOGY 252, 252–53 (2007). See also Arne Dietrich & Riam Kanso, *A Review of EEG, ERP, and Neuroimaging Studies of Creativity and Insight*, 136 PSYCH. BULL. 822, 825 (2010) (cataloging EEG studies of divergent thinking to show that the notion of lateralized brain creativity is unsubstantiated for either side of the brain).
- <sup>34</sup> Jared A. Nielsen et al., *An Evaluation of the Left Brain vs. Right Brain Hypothesis with Resting State Functional Connectivity Magnetic Resonance Imaging*, 8 PLOS ONE e712275 (2013).
- <sup>35</sup> Oded M. Kleinmintz et al., *The Twofold Model of Creativity: The Neural Underpinnings of the Generation and Evaluation of Creative Ideas*, 27 CURRENT OP. BEHAV. SCI. 131, 131 (2019).

- <sup>36</sup> Ulrich Kraft, *Unleashing Creativity*, 16 *SCIENTIFIC AMERICAN MIND* 21, 22 (2005). See also Carlos Blanco, *Philosophy, Neuroscience, and the Gift of Creativity*, 1 *REVISTA ARGUMENTA* 95, 108 (2017) (contending that “knowledge of the present status of a certain discipline . . . underlie[s] the great triumphs of human creativity”).
- <sup>37</sup> MIHALY CSIKSZENTMIHALYI, *CREATIVITY: FLOW AND THE PSYCHOLOGY OF DISCOVERY AND INVENTION* 6 (1996).
- <sup>38</sup> R. KEITH SAWYER, *EXPLAINING CREATIVITY: THE SCIENCE OF HUMAN INNOVATION* 65 (2d ed. 2012).
- <sup>39</sup> *Id.* at 93.
- <sup>40</sup> Larry Printz, *The Rise and Fall (and Rise Again) of Retro Car Design*, *ARS TECHNICA*, Jan. 15, 2021.
- <sup>41</sup> Another problem with the primary reference rule is that it conflates the nonobviousness and novelty requirements, making one of them superfluous. In interpreting legislation, courts are meant to avoid redundancy by construing potentially overlapping terms to have independent meanings. See *Lutheran Day Care v. Snohomish Cnty.*, 829 P.2d 746, 751–52 (Wash. 1992) (“Statutes should not be interpreted in such a manner as to render any portion meaningless, superfluous, or questionable”).



