THE (UN)CONSTITUTIONALITY OF DESIGN PATENTS UNDER THE INTELLECTUAL PROPERTY CLAUSE

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I.
INTRODUCTION

Embedded within the United States Constitution lies a powerful mandate vested in Congress: "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."[1] This directive, known as the Intellectual Property Clause (the "IP Clause"), reflects the Framers' foundational belief in fostering innovation and creativity for societal advancement. However, the interpretation of the IP Clause has changed over time, giving rise to debates regarding its scope and implications.[2] One area of contention is the design patent system.[3] As this regime was not initially addressed in the Patent Act of 1790, some legal theorists argue that design patents signal a departure from the Framers' intent and are not authorized by the IP Clause.[4]

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1. U.S. Const. art. I, § 8, cl. 8.

2. *See* discussion *infra* Section II.A.

3. *See generally* Gene Quinn, *A Brief History of Design Patents*, IPWatchdog (Jan. 11, 2014, 11:57 AM), https://ipwatchdog.com/2014/01/11/design-patent-history [https://perma.cc/F8ZT-5DH9] ("In 1842 a statute was passed to provide for, among other things, the grant of patents for any new and original: (1) design for a manufacture; (2) design for printing on fabrics; (3) bust or statue; (4) impression to be place [sic] on an article of manufacture; or (5) shape or configuration of any article of manufacture.").

4. *See generally* Ralph D. Clifford & Richard J. Peltz-Steele, *The Constitutionality of Design Patents*, 14 Chi.-Kent J. Intell. Prop. 553 (2015); Peter S. Menell & Ella Corren, *Design Patent Law's Identity Crisis*, 36 Berkeley Tech. L.J. 1 (2021). Some of the Framers who drafted the Constitution were also involved in passing the first patent statute. In his first ever State of the Union, only months after the ratification of the Constitution, President George Washington urged Congress to exercise its powers granted by the IP Clause to enact a patent statute. George Washington, President, First Annual Address to Congress (Jan. 8, 1790) ("I cannot forbear intimating to you the expediency of giving effectual encouragement as well to the introduction of new and useful inventions from abroad, as to the exertions of skill and genius in producing them . . . ."). The First Congress then passed the Patent Act of 1790, which was signed into law on April 10, 1790, just a few months after President Washington's address to Congress. Patent Act of 1790, ch. 7, 1 Stat. 109 (repealed 1793). The statute established a three-member Patent Board to examine and issue patents, and the first board was made up of Secretary of State Thomas Jefferson, Secretary of War Henry Knox, and Attorney General Edmund Randolph. *Milestones in U.S. Patenting*, U.S. Pat. & Trademark Off., https://www.uspto.gov/patents/milestones [https://perma.cc/3GDV-NYRD]. However, the statute did not address design patents, which remained unlegislated for more than four decades until the passage of the Patent Act of 1842. Act of Aug. 29, 1842, ch. 263, § 3, 5 Stat. 543, 543–44 (codified as amended at 35 U.S.C. §§ 171–73, 289). Thus, the Congress that enacted the design patent provision was a different legislative body than the Framers, who drafted the IP Clause and enacted the first Patent Act. As a result, the

This Note explores the complex interplay between the design patent system and the constitutional framework that the Framers set up through the IP Clause.[5] While acknowledging the societal benefits of design patents,[6] it confronts the constitutional concerns arising from potential deviations of the design patent regime from the Framers' original vision of the IP Clause.[7] Part II surveys interpretational controversies around the IP Clause, examines the misalignment with the design patent system, scrutinizes the broader grant of power conferred by the IP Clause, proposes a nuanced understanding of "Progress," and addresses the debate over whether the Framers intended a dichotomous IP regime. Given these ambiguities, Part III recognizes the importance of balancing constitutional imperatives with the need for innovation and explains why the constitutionality of design patents matters: without a clear understanding of what the IP Clause authorizes, the design patent regime faces an identity crisis. On the one hand, as enacted under the utility patent framework, the regime does not fit within the utility patent system due to the nature of design patents; on the other hand, it has been widely exploited as a backdoor to trade dress protection, which causes significant harm to its independence and integrity. This Note proposes two constitutional theories to redress this identity crisis. The design patent regime could be reconceptualized under either the Commerce Clause or the Necessary and Proper Clause. Either approach would establish a unitary and consistent IP framework that reconciles constitutional imperatives with the practical demands of innovation, trade, and business in the modern world.

II.
QUESTIONABLE CONSTITUTIONAL FOUNDATIONS FOR DESIGN PATENTS IN THE IP CLAUSE

The IP Clause is an unusual clause that stands out in the Constitution because of its unique format.[8] The Clause consists of

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design patent regime was beyond the Framers' contemplation and could deviate from their original vision of the IP Clause.

5. The design patent regime has not been successfully challenged as unconstitutional, but there have been debates over its scope and validity under the U.S. Constitution. This Note describes the current constitutional framework consistent with the Court's jurisprudence and academic scholarship but concludes that the design patent regime may not be constitutional under originalism/intentionalism.

6. *See infra* Part III.

7. *See infra* Part II.

8. Edward C. Walterscheid, *The Nature of the Intellectual Property Clause: A Study in Historical Perspective (Part 1)*, 83 J. Pat. & Trademark Off. Soc'y 763, 765–66 (2001).

two parts: a general goal, "[t]o promote the Progress of Science and useful Arts," and a specific means, "[to] secur[e] for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[9] The Framers could have vested Congress with the general power to "promote the Progress of Science and useful Arts" without specifying the exact implementation. Instead, they created a particular goal-plus-means mechanism of promoting "the Progress of Science and useful Arts" by granting temporary monopolies—specific language that seems to depart from the function of a constitution as a general framework.[10] Due to the lack of sufficiently direct legislative history, legal historians and commentators have long debated the inherent connection between the general goal and the specific means language, as well as how to define the constitutional scope of the IP Clause.[11] This Part will discuss whether the constitutional scope of the IP Clause actually supports the constitutionality of design patents.

Given the unique structure of the IP Clause, determining its precise constitutional limits requires a closer examination of its historical context, a mode of interpretation known as originalism. Although it may not be reasonable to follow the Framers' intent all the time,[12] the Supreme Court has adopted this method when interpreting the IP Clause.[13] In *Eldred v. Ashcroft*, where the Court ruled that a challenged copyright statute was constitutional, all of the Justices relied on originalist arguments. Remarkably, Justice Ginsburg, writing for the majority, stated that "[t]o comprehend the scope of Congress'[s] power under the [IP] Clause, 'a page of history is worth a volume of logic.'"[14] Even Justice Stevens in his dissent

9. *See* Clifford & Peltz-Steele, *supra* note 4, at 558–59; U.S. Const. art. I, § 8, cl. 8.

10. *See* Nora Hedling, Int'l Inst. for Democracy & Electoral Assistance, The Fundamentals of a Constitution 1 (2017), https://www.idea.int/sites/default/files/publications/the-fundamentals-of-a-constitution.pdf [https://perma.cc/CPR7-2H8P].

11. *See* Clifford & Peltz-Steele, *supra* note 4, at 560; Walterscheid, *supra* note 8, at 766–67 ("Through the years [the IP Clause's] format has caused major interpretational difficulty.").

12. *See* Dotan Oliar, *Making Sense of the Intellectual Property Clause: Promotion of Progress as a Limitation on Congress's Intellectual Property Power*, 94 Geo. L.J. 1771, 1821 (2006) ("For example, it was shown that the Framers objected to establishing public institutions to encourage advancement in knowledge. Following the Framers' intent seems to mean that current institutions that do the same, such as the National Science Foundation, National Institutes of Health, and the National Endowment for the Arts, are unconstitutional.").

13. *See* Eldred v. Ashcroft, 537 U.S. 186, 199–202 (2003).

14. *Id.* at 200 (quoting N.Y. Tr. Co. v. Eisner, 256 U.S. 345, 349 (1921)).

turned to the history of the U.S. IP regime before concluding that "history, in this case, does not provide the 'volume of logic' necessary to sustain the [Act's] constitutionality."[15] Thus, the "Constitution's original meaning serves, at the very least, as the starting point of constitutional analysis."[16]

A. The Structural Ambiguity of the IP Clause and Its Interpretational Challenges

The structure of the IP Clause imposes major interpretational difficulty.[17] As a result, there are three dominant ways to interpret the IP Clause. The traditional approach reads the clause in light of grammar and internal consistency with other enumerated powers granted in Article I, Section 8.[18] This approach focuses on the checks and balances between the general goal and the specific means language by arguing that the grant of power resides in the former, while the latter is perceived as a limitation on the broad grant of power. This reading restricts Congress's power to "promote the Progress of Science and useful Arts" solely to the issuance of temporary monopoly rights of patents and copyrights.[19] This interpretation is also consistent with how Article I, Section 8 is drafted: the grant of enumerated powers in other clauses resides only in the language beginning with "[t]o."[20] This traditional reading of the IP Clause leads to the narrowest constitutional scope—Congress can "promote the Progress of Science and useful Arts" by granting temporary monopolies but can do nothing else.

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15. *Id.* at 233 (Stevens, J., dissenting) (citation omitted).

16. Oliar, *supra* note 12, at 1779. Oliar also argued that originalism is crucial to interpreting the IP Clause because the text of the Clause is too ambiguous to provide any useful guidance. *Id.* at 1778.

17. Walterscheid, *supra* note 8, at 766; Oliar, *supra* note 12, at 1774 ("[T]he structure of the Clause is unique, which makes it hard to interpret. Whereas the other enumerated powers generally consist of 'to' (or ends) clauses that demarcate areas of legitimate federal regulation—such as '[t]o borrow money . . . ' or '[t]o regulate commerce . . . '—Congress's intellectual property power contains, in addition to the 'to' clause, a 'by' (or means) clause." (footnotes omitted)).

18. *See* Walterscheid, *supra* note 8, at 767.

19. *See id.* at 766; Oliar, *supra* note 12, at 1775–76.

20. *See* Walterscheid, *supra* note 8, at 766 n.4 ("Even a cursory look at Article I, § 8 reveals that every other enumerated grant of power resides in the language beginning with 'To.'"); *cf.* King v. Burwell, 576 U.S. 473, 492 (2015) (noting that one sentence in a statute can be interpreted in light of its consistency with the others). *See generally* U.S. Const. art. I, § 8. For example, Congress's power to tax is granted by the language "Congress shall have Power *To* lay and collect Taxes, Duties, Imposts and Excises." U.S. Const. art. I, § 8, cl. 1 (emphasis added).

The modern interpretation of the IP Clause, however, has shifted significantly and the grant of power is now understood to reside primarily in the "securing" language, whereas the introductory language beginning with "[t]o" is often seen merely as a nonbinding preamble.[21] The Clause is thus often treated as if the grant of power reads, "[t]o secure for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[22] This modern approach leads to a little broader but still somewhat narrow reading because it vitiates Congress's broad authority to "promote the Progress of Science and useful Arts" by arguing that it is only a preamble that carries no intention of granting power. This modern approach is often criticized because such a reading twists grammatical construction by willfully neglecting that the Clause begins with "[t]o,"[23] and many scholars have found sound evidence that the "Progress" portion is a substantive limitation rather than a nonbinding preamble.[24] While the modern reading fails to establish a general power, it does not make Congress "expressly limited *only* to the issuance of patents and copyrights for the purpose of promoting 'the Progress of Science and useful Arts.'"[25] As a result, this interpretation leaves open bases of authority granted to Congress under other clauses, such as the Commerce Clause, allowing Congress to "promote the Progress of Science and useful Arts" through methods beyond patents and copyrights.[26]

Edward C. Walterscheid, a leading legal historian in this field who has rejected both approaches, has argued that the specific means language exists only to ensure that the broad congressional power to "promote the Progress of Science and useful Arts" would specifically *encompass* the authority to issue patents and copyrights, rather than

21. Oliar, *supra* note 12, at 1775; Walterscheid, *supra* note 8, at 767. This approach has been adopted by a leading copyright treatise. *See* 1 Melville B. Nimmer & David Nimmer, Nimmer on Copyright § 1.03 (Matthew Bender, rev. ed.), Lexis (database updated Dec. 2024) ("This introductory phrase is, in the main, explanatory of the purpose of copyright without, in itself, constituting a rigid standard against which any copyright act must be measured."); *id.* § 1.03[B][1] ("[T]he introductory phrase, rather than constituting a limitation on Congressional authority, has for the most part tended to expand that authority." (footnotes omitted)).

22. Walterscheid, *supra* note 8, at 767 (quoting U.S. Const. art. I, § 8, cl. 8).

23. *Id.*

24. *See* Jeanne C. Fromer, *The Intellectual Property Clause's External Limitations*, 61 Duke L.J. 1329, 1339 (2012); Oliar, *supra* note 12, at 1776–77 (presenting "three indications" from the Convention's record that the "Progress Clause" was intended to limit Congress's IP powers).

25. Walterscheid, *supra* note 8, at 767.

26. *Id.* at 767 n.6.

limiting it to them.[27] Walterscheid pointed to evidence that during the state ratifying conventions, the debate over granting Congress the authority to create monopolies was a nearly unresolvable issue.[28] He claims that Congress would not have been able to grant monopolies of patents and copyrights had the specified means of doing so not been included in the first place.[29] This theory is weakened by the evidentiary conflict that, as the limited record shows, the IP Clause was given even less than minimal attention and was unanimously approved without debate.[30] Nonetheless, Walterscheid's theory sets the broadest constitutional scope for the IP Clause: it is so broad that Congress can do whatever it wants to "promote the Progress of Science and useful Arts."

Given the lack of explicit "legislative" history, we are unable to assure which interpretation the Framers intended.[31] Nor can we directly determine whether design patents were contemplated at the time the IP Clause was drafted. Under Walterscheid's broadest interpretation, the design patent regime is constitutional as long as it "promote[s] the Progress of Science and useful Arts." In contrast, under the modern, intermediate-level interpretation, the system remains constitutional as long as it "secur[es] for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." Under the traditional narrowest interpretation, the design patent regime's constitutionality under the IP Clause cannot be established if it fails to "promote the Progress of Science and useful Arts" *and* "secur[e] for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[32]

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27. *Id.* at 767–68.

28. *See id.* at 772–73. Virginia refused to sign the proposed Constitution under which Congress "may grant monopolies in trade and commerce." New York, New Hampshire, Massachusetts, and North Carolina all requested an amendment that Congress "erect no company of merchants, with exclusive advantages of commerce." *Id.*

29. *See id.* at 767–68.

30. *See id.* at 765 ("It was first presented to the convention less than two weeks before it adjourned, and was unanimously approved without debate.").

31. *Cf.* Clifford & Peltz-Steele, *supra* note 4, at 560; Walterscheid, *supra* note 8, at 766–67.

32. This aligns with Professor Fromer's framework of constitutional analysis: "Generally, if a law has only the structural purpose of promoting the progress of science and useful arts, it must comply with the means described in the IP Clause. If it does not comply with those means, it is unconstitutional. If the law lacks the structural purpose of promoting the progress of science and useful arts, it is outside the IP Clause's purview and must be enacted pursuant to another of Congress's powers, as is the case with trademark law." Fromer, *supra* note 24, at 1372. Design patents,

Because there is no well-established convincing framework to assess the constitutionality of design patents under the IP Clause, this Note will start by walking through the general purpose of the design patent regime and explore if the regime "promote[s] the Progress of Science and useful Arts." This Note will then focus on the textualist meaning of the specific means language in the IP Clause to analyze if design patents are "Authors and Inventors' . . . Writings and Discoveries." The analysis in the following Sections will demonstrate that there is uncertainty over whether design patents could meet this two-prong constitutional standard under the IP Clause.

B. Do Design Patents Promote the Progress of Science and Useful Arts?

The first prong of the constitutional standard asks whether the design patent system promotes the "Progress of Science and useful Arts." This question involves several subquestions, all explored below. The first and second steps are to ascertain the meaning of "Science and useful Arts" and "Progress," respectively. Next, in subsection three, I evaluate whether the design patent system promotes the "Progress of Science and useful Arts" even if design patents are not correctly classified as "Science and useful Arts." The fourth and final subsection aims to address whether the "fusion" theory, as a counterargument, could justify the system. The answer to each of these questions is no. Thus, under the IP Clause, it is doctrinally fair to assert that the design patent system is unconstitutional.

1. What Is Science and Useful Arts?

To determine whether design patents promote the "Progress of Science and useful Arts," we need to first ask what are "Science" and "useful Arts." Although the Framers did not leave direct evidence to show their original intention, much can be gleaned from nineteenth-century English common law.[33] James Madison, who had a large influence on the formation of the Constitution, discussed his interpretation of the IP Clause in Federalist 43:

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like trademark law, may be constitutional on grounds other than the IP Clause. But this is beyond the scope of this Note.

33. *See* Sean M. O'Connor, *The Overlooked French Influence on the Intellectual Property Clause*, 82 U. CHI. L. REV. 733, 750 (2015) ("Early American patent law treatises did not directly address the IP Clause. Rather, they used British cases solely to illuminate American statutory patent law." (emphasis omitted) (footnote omitted)).

> The utility of this power will scarcely be questioned. The copyright of authors has been solemnly adjudged, in Great Britain, to be a right of common law. The right to useful inventions seems with equal reason to belong to the inventors. The public good fully coincides in both cases with the claims of individuals. The States cannot separately make effectual provisions for either of the cases, and most of them have anticipated the decision of this point, by laws passed at the instance of Congress.[34]

This piece of Madison's discussion reveals that the Framers were aware of British law and referenced it as a way to justify the newly born IP Clause. By citing British patent cases, the Supreme Court of the United States treated "Science and useful Arts" as a unitary concept.[35] Consistent with that view, early American patent law treatises suggested that "useful arts," "arts," and "mechanical arts" were used interchangeably, without mentioning the fine arts at all.[36] This illuminates that the early understanding of "useful Arts" had a practical or scientific flavor that distinguished it completely from "fine arts," which focused more on ornamental or aesthetic aspects.[37] Throughout the next several decades, American courts advanced this Anglocentric interpretation with British origin.[38] An example is the 1879 case *Baker v. Selden*, which distinguished "useful Arts" from "Science"—as the *expressio unius* canon would suggest—by noting that the former are methods to be practiced, while the latter

34. The Federalist No. 43, at 271–72 (James Madison) (Clinton Rossiter ed., 1961); *see* O'Connor, *supra* note 33, at 750 ("Madison had in fact submitted the proposed powers that formed the basis of the final IP Clause . . . . Thus, Madison's views have significant weight."). Madison served as a member of the Confederation Congress, which proposed that states enact intellectual property laws. *See* Karl Fenning, *The Origin of the Patent and Copyright Clause of the Constitution*, 17 Geo. L.J. 109, 114–15 (1929).

35. *See* Pennock v. Dialogue, 27 U.S. (2 Pet.) 1, 18–19 (1829).

36. *See* Thomas G. Fessenden, An Essay on the Law of Patents for New Inventions 58–59 (Boston, D. Mallory & Co. 1810) (citing Boulton v. Bull (1795) 126 Eng. Rep. 651; 2 H. Bl. 463).

37. *See* O'Connor, *supra* note 33, at 751–52 ("Later IP treatises deepened the Anglocentric account of American IP generally, while also exploring key terms used in the IP Clause. For example, the attorney Albert Walker distinguished the 'useful arts' from *both* 'science' and 'fine arts.' The term 'discoveries' was simply synonymous with 'inventions.' Henry Merwin suggested that 'discoveries' were either practical applications of newly discovered scientific principles or 'great advance[s] in the arts.' Professor William Robinson used 'art' and 'arts' only for the useful arts (or, as he called them, the 'industrial' arts), not the 'fine' arts." (alteration in original) (footnotes omitted)).

38. *Id.* at 752. *McKeever v. United States* reaffirmed a strong British influence on the Framers. *See* McKeever v. United States, 14 Ct. Cl. 396, 420–21 (Ct. Cl. 1878).

are contemplative truths about the world.[39] The *Baker* court further contended: "[Useful arts] are *not intended to apply to ornamental designs*, or pictorial illustrations addressed to the taste. Of these it may be said, that their form is their essence, and their object, the production of pleasure in their contemplation."[40] These lines suggest that "useful Arts" meant something mutually exclusive to ornamental arts. Factoring in the *Baker* court's interpretation of "Science," a plausible reading of the Clause is that "Science" meant natural laws of science or knowledge thereof and "useful Arts" meant the practical methods of application of these natural laws.[41] Thus, the original meaning of "useful Arts" in the founding era was perceived as closer to the contemporary usage of "technologies" or "engineering" rather than the modern term "arts."

Even though the modern interpretation of these terms has changed, the modern definitions are still consistent with the original Anglocentric reading.[42] In *Bilski v. Kappos*, Justice Stevens contemplated the definition of "useful Arts" in his concurrence:

> Noah Webster's first American dictionary defined the term "art" as the "disposition or modification of *things* by human skill, to answer the purpose intended," and differentiated between "*useful* or *mechanic*" arts, on the one hand, and "*liberal* or *polite*" arts, on the other. Although other dictionaries defined the word "art" more broadly, Webster's definition likely conveyed a message similar to the meaning of the word "manufactures" in the earlier English statute. And we know that the term "useful arts" was used in the founding era to refer to manufacturing and similar applied trades. Indeed, just days before the Constitutional Convention, one delegate listed examples of American progress in "manufactures and the useful arts," all of which involved the creation or transformation of physical substances. Numerous scholars have suggested that the term "useful arts" was widely understood to encompass the fields that we would now describe as relating to technology or "technological arts."[43]

In this thoughtful concurrence, Justice Stevens seems to argue that the constitutional scope of "useful Arts" should be construed

39. *See* Baker v. Selden, 101 U.S. 99, 100–05 (1879).

40. *Id.* at 103–04 (emphasis added).

41. *See* Oliar, *supra* note 12, at 1809 ("'[S]cience' was close in meaning to 'useful knowledge.'").

42. *Cf.* Clifford & Peltz-Steele, *supra* note 4, at 569–70.

43. Bilski v. Kappos, 561 U.S. 593, 632–34 (2010) (Stevens, J., concurring) (footnotes omitted) (citations omitted).

in light of what the Framers originally meant although the phrase is nevertheless subject to many meanings.[44] He also quoted John Thomas's law review article, which argued that the Framers were well aware of the distinction between fine arts and mechanical arts, to support this argument.[45] Among all the quotations, Justice Stevens cited a delegate to the Continental Congress, who listed several examples of "useful Arts," which he generalized as "the creation or transformation of physical substances."[46] The list encompassed many items that are undoubtedly called technologies today: "ships and boats, . . . tobacco, . . . iron, bricks, tiles, . . . Windsor chairs, . . . corn-fans, ..."[47] This interpretation of "useful Arts" hardly squares with the definition of a design patent, defined by the Patent Act as "any new, original and *ornamental design* for an article of manufacture."[48] This definition of design patents excludes any "technological" or "practical" arts that were discussed earlier in this Section.

In summary, both historical evidence and contemporary judicial interpretations concur that "Science" meant knowledge and that "useful Arts" pertained to "industrial, mechanical, or manual arts" of "practical use," distinct from aesthetic or ornamental fine arts.[49] Therefore, the subject matter of the design patent system seems to fail to meet this requirement, and "whatever may be advanced by a design patent, it is not the constitutionally mandated 'useful arts.'"[50]

2. What Is Progress?

Once we ascertain the meaning of "Science and useful Arts," we need to identify the general purpose of the design patent scheme.

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44. *See id.*

45. *See* John R. Thomas, *The Patenting of the Liberal Professions*, 40 B.C. L. Rev. 1139, 1164 (1999). "Useful Arts" should be construed as understood by "[the Framers of the Constitution who] undoubtedly contemplated the industrial, mechanical and manual arts of the late eighteenth century, in contrast to the seven 'liberal arts' and the four 'fine arts' of classical learning." *Id.* (citing Robert I. Coulter, *The Field of the Statutory Useful Arts—Part II*, 34 J. Pat. Off. Soc'y 487, 494 (1952) ("The seven historic 'liberal arts' were: grammar, logic (dialectics), rhetoric, arithmetic, geometry, music and astronomy[.] The four 'fine arts' were: painting, drawing, architecture and sculpture; to which were often added: poetry, music, dancing and drama.")).

46. *See Bilski*, 561 U.S. at 633–34 (Stevens, J., concurring).

47. Tench Coxe, An Address to an Assembly of the Friends of American Manufactures 18–19 (Philadelphia, R. Aitken & Son 1787).

48. 35 U.S.C. § 171(a) (emphasis added).

49. *See supra* notes 38–41 and accompanying text; Clifford & Peltz-Steele, *supra* note 4, at 570 (first quoting Thomas, *supra* note 45, at 1164; and then quoting Random House Unabridged Dictionary 2096 (2d ed. 1993)).

50. Clifford & Peltz-Steele, *supra* note 4, at 570.

The Patent Act of 1790 did not include design patents.[51] The Patent Act of 1842 stated that design patents covered "new and original design for a manufacture, whether of metal or other material . . . , or any new and original design for the printing of woollen . . . , or any new and original design for a bust . . . , or any new and original impression or ornament."[52] While the original 1842 Act did not define "design," Congress later stated in the Patent Act of 1952 that "[w]hoever invents any new, original and ornamental design for an article of manufacture may obtain a patent therefor."[53] As the United States Patent & Trademark Office ("USPTO") explains:

> In general terms, a "utility patent" protects the way an article is used and works, while a "design patent" protects the way an article looks. The ornamental appearance for an article includes its shape/configuration or surface ornamentation applied to the article, or both. Both design and utility patents may be obtained on an article if invention resides both in its utility and ornamental appearance.[54]

That suggests that the design patent and utility patent are two exclusive separate legal rights, where the design patent protects the non-functional aspects of an ornamental design displayed in a patent.

The next question is that, given the design patent's purpose to protect the ornamental aspects of an article, does this regime promote the "Progress of Science and useful Arts"? As discussed previously, "Science and useful Arts" typically refers to "knowledge and technologies,"[55] whereas "Progress" presents significant interpretational challenges in this context. Malla Pollack's research has shown that there are three possible meanings of the term as used in the Framers' era: (1) qualitative improvement, (2) quantitative improvement, and (3) "spread" or distribution to the population.[56]

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51. *See supra* notes 3–4 and accompanying text.

52. Act of Aug. 29, 1842, ch. 263, § 3, 5 Stat. 543, 544 (codified as amended at 35 U.S.C. §§ 171–73, 289).

53. Patent Act of 1952 § 171, 35 U.S.C. § 171(a).

54. USPTO Manual of Patent Examining Procedure, MPEP § 1502.01 (9th ed. Rev. 01.2024, Nov. 2024) [hereinafter USPTO Manual] (citations omitted) (citing 35 U.S.C. §§ 101, 171).

55. *See supra* Section II.B.1.

56. Malla Pollack, *What Is Congress Supposed to Promote?: Defining "Progress" in Article I, Section 8, Clause 8 of the United States Constitution, or Introducing the Progress Clause*, 80 Neb. L. Rev. 754, 756 (2001). Qualitative improvement is defined as an increase in the quality of the knowledge base; quantitative improvement is defined as the expansion of the knowledge base, measured numerically or economically;

To determine the Framers' intent among the three, Pollack conducted an empirical study by examining the frequency of words used alongside "progress" during the Framers' era.[57] While Pollack's study suggests that "spread" is the interpretation with the most support,[58] I argue that a contextual reading of the words closely surrounding Constitution-related texts warrants an interpretation of qualitative improvement.

Pollack's empirical study has a fatal statistical flaw which undermines the credibility of its generalization. She ran a text search of "progress" in all existing issues of the *Pennsylvania Gazette* printed from its inception through the end of the eighteenth century and located 575 uses of the word "progress."[59] She then divided the occurrences into six categories based on the meaning of the word; the top three categories with the most occurrences were "physical movement without implication of qualitative improvement, e.g. progress of a fire or a traveler" (213/575=37%), "change or action towards a preset goal, e.g. progress towards finishing a book" (125/575=21.7%), and "qualitative improvement" (124/575=21.6%).[60] However, it is far-fetched, both logically and statistically, to claim that these results—which show that the most common meaning in newspapers at that time was "physical movement"—do not support the interpretation that "Progress" in the IP Clause means qualitative improvement. Pollack seemed to conflate local probability with generalization. To be more specific, setting aside the fact that 575 data points may be too small a sample to generalize any statistically significant conclusion, the probabilities themselves—37% of the use of "Progress" meant "spread" yet only 21.6% suggested qualitative improvement—are far from sufficient to disprove that the latter meaning was not widely used. For example, the word "cold" can mean either physical temperature or attitudinal distance. The fact that the former meaning is used more *frequently* does not *delegitimize* the latter one, which could be used in another context.

Pollack also argued that the qualitative reading of the word would render it redundant because "promot[ing] the Progress

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"spread" is defined as the extent to which knowledge is disseminated among the population. *Id.*

57. *See id.* at 794–809.

58. *Id.* at 757.

59. *Id.* at 798.

60. *Id.* The other three categories are "movement through time, i.e., a chronologically arranged account without implication of qualitative improvement" (80/575=13.9%), "numerical increase without implication of qualitative improvement" (21/575=3.7%), and a mere "quote of the phrase in the Constitution" (6/575=1%). *Id.*

of Science and useful Arts" must mean something different from "promoting Science and useful Arts" if the Clause is not to contain surplusage; however, both ultimately boil down to "encouraging the investment of time and money into work in science and the useful arts."[61] This argument does not stand even on its face. While she was correct that both readings imply the investment of time and money, the one with "Progress" indicates the specific subset of "Science and useful Arts" that Congress can invest in—not just any "Science and useful Arts," but those that would build upon existing ones to foster "Progress." Thus, the addition of "Progress" is not an indication of surplusage, but rather an example of *expressio unius est exclusio alterius*, as the inclusion of "Progress" excludes other "Science and useful Arts" that do not embed technological increments.

Pollack's anti-redundancy argument is also difficult to substantiate from a policy perspective because the "spread" theory, at least on its own, leads to an absurdly unbalanced quid pro quo that would not warrant the grant of monopolies. The patent system is justified as a quid pro quo,[62] and it would be absurd for the Framers to exchange monopoly rights for the mere spread of existing knowledge and technology without any furtherance of substantive advancement. The stakes involved here are very high: the Framers were hostile to monopolies, as evidenced by the debate between Madison and Jefferson over the IP Clause.[63] This could explain why the Framers included the seemingly redundant word "Progress" after the verb "promote." They could not emphasize enough, or clarify even further, that the grant of monopoly rights entailed not only the "spread"

61. *Id.* at 788 ("'Quality improvement' makes the language redundant. Telling a legislature 'to promote the quality improvement of science and the useful arts' is the same as instructing it to 'to promote science and the useful arts'; both reduce to encouraging the investment of time and money into work in science and the useful arts.").

62. *See* Brenner v. Manson, 383 U.S. 519, 534–35 (1966).

63. *See* Walterscheid, *supra* note 8, at 769–70 (explaining that a strand of literature developed around whether the IP Clause—and perhaps other parts of the Constitution—were expressly designed as antimonopoly protections); Oliar, *supra* note 12, at 1775–76 (describing how some argued that "the Framers abhorred monopolies" while others believed the hostility was not widespread). *Compare* Tyler T. Ochoa & Mark Rose, *The Anti-Monopoly Origins of the Patent and Copyright Clause*, 84 J. Pat. & Trademark Off. Soc'y 909, 922–25 (2002) ("It is clear that many of the Framers were concerned with restraining monopolies of all kinds."), *with* Thomas B. Nachbar, *Intellectual Property and Constitutional Norms*, 104 Colum. L. Rev. 272, 328–49 (2004) ("[T]here is no indication that the concern over the possibility of federal monopolies was widespread.").

(dissemination) of knowledge and technologies but qualitative advancement and substantive progress in these areas.

By rejecting Pollack's theory, I look to the actual context of the original written materials to determine the meaning of "Progress." The contextual uses of "progress" in the Framers' writings shed light on its qualitative nature.[64] For example, Alexander Hamilton during the Founding era described the newly born America as a country "imperfectly settled and progressive in improvement."[65] The "imperfectly" suggests that "progressive in improvement" likely meant the improvement from imperfection to perfection, which was a qualitative concept. Hamilton's letter in Federalist 22 offers another strong support: "The mistake has proceeded from not attending with due care to the mischiefs that may be occasioned by obstructing the progress of government at certain critical seasons."[66] The "certain critical seasons" phrase reflects that "progress" likely meant a course of critical advancement in government, which also favors a qualitative reading. However, I am not arguing that the qualitative interpretation is the *only* one the Framers intended. Instead, my argument is that, in the absence of clear indication to the contrary, the qualitative reading makes the most sense in most of the contextual usages of "progress" throughout the early Federalist records.[67] There are instances where a qualitative reading may not be applicable, but often there are clear indications suggesting a reasonable alternative interpretation. For example, Alexander Hamilton or James Madison wrote that "[f]ew of [the States] have made much progress in those branches of industry which give a variety and complexity to the affairs of a nation."[68] The "progress" here, by corresponding to both "variety" and "complexity," indicates that it meant both qualitative and quantitative progress. Another example is the phrase "progress of population,"[69] where a quantitative reading

64. *See* The Federalist No. 21, *supra* note 34, at 143 (Alexander Hamilton) ("in a country imperfectly settled and progressive in improvement"); The Federalist No. 22, *supra* note 34, at 148 (Alexander Hamilton) ("obstructing the progress of government"); The Federalist No. 26, *supra* note 34, at 169 (Alexander Hamilton) ("progress of the idea"); The Federalist No. 56, *supra* note 34, at 349 (James Madison) ("Few of them have made much progress in those branches of industry which give a variety and complexity to the affairs of a nation."); The Federalist No. 63, *supra* note 34, at 388 (James Madison) ("the progress of the experiment").

65. The Federalist No. 21, *supra* note 34, at 143 (Alexander Hamilton).

66. The Federalist No. 22, *supra* note 34, at 148 (Alexander Hamilton).

67. *See generally* The Federalist Nos. 1, 6–9, 11–13, 15–17, 21–36, 59–60 (Alexander Hamilton), Nos. 2–5 (John Jay), Nos. 10, 14, 18–20, 37–58 (James Madison).

68. The Federalist No. 56, *supra* note 34, at 349 (James Madison).

69. *Id.*

clearly applies because "population" is a strong indicator for a numerically quantifiable concept. Without these clear signals for another interpretation, the qualitative reading often makes more sense in the context of eighteenth-century writings.

3. Design Patents Fail to Promote the Progress of Science and Useful Arts

"Qualitative improvement" as defined earlier in this Note refers to an enhancement or advancement in quality rather than quantity.[70] It implies a refinement or enhancement in characteristics, features, or aspects that contribute to overall quality or value.[71] Consequently, in order to assess whether the design patent system promotes the "Progress" of "knowledge and technologies," design patents should at least demonstrate qualitative improvements that are specific and quantifiable.[72] In this Section, I will argue that qualitative improvements in design patents inherently lack quantifiability.

Under the current design patent regime, "ornamentality, novelty, nonobviousness, enablement, and definiteness" are essential prerequisites for obtaining a patent.[73] The constitutional requirement of "Progress" in the design patent system is typically reflected in the nonobviousness requirement.[74] According to Section 103 of the Patent Act, a design patent cannot be "obvious."[75]

Prior to *LKQ Corp. v. GM Glob. Tech Operations*, which was decided by the Federal Circuit in 2024, the Circuit used a two-part test to determine whether a design is obvious, as set out in *Durling v. Spectrum Furniture Co.*.[76] The *Durling* test asks the factfinder to first "determine whether there exists a 'primary reference,' i.e., a single reference that creates 'basically the same visual impression' as

70. *See supra* notes 56, 64–66 and accompanying text.

71. *See supra* Section II.B.2.

72. *See* O'Connor, *supra* note 33, at 738 ("'[P]rogress' to be achievable only in fields whose outputs could be quantitatively measured.").

73. *See* USPTO Manual, *supra* note 54, § 1504; *see also* 35 U.S.C. § 171.

74. *See* Mark P. McKenna & Katherine J. Strandburg, *Progress and Competition in Design*, 17 Stan. Tech. L. Rev. 1, 3 (2013) ("[A] cumulative notion of progress is deeply embedded in the patent system, especially in the requirement of nonobviousness or 'inventive step.'").

75. *See* 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."); 35 U.S.C. § 103 (requiring non-obviousness).

76. Durling v. Spectrum Furniture Co., 101 F.3d 100, 103 (Fed. Cir. 1996).

the claimed design."[77] The factfinder then[78] However, the Federal Circuit often concludes that no primary reference is found, even if there is one available that is arguably "basically the same" as the design in question.[79] The Federal Circuit's extreme reluctance to find primary references makes it near impossible to trace the qualitative development in design patents. As long as there is no prior art that is exactly the same as the design, courts have deemed it not obvious. Under this practice, designs are not gradually improved in an incremental sense; instead, they abruptly emerge from nothing and are not likely built upon by forthcoming designs.

The Circuit then overturned the rigid *Durling* test in *LKQ Corp.*, where it adopted a more flexible approach to determine the scope of prior arts for design patents.[80] Under this approach, the "basically the same" requirement is replaced by the "analogous art" inquiry.[81] "Analogous art" of a design patent includes, but is not limited to, "art from the same field of endeavor as the article of manufacture of the claimed design."[82] While this doctrinal shift may broaden the scope of prior art by including more similar references for comparison with the design patent in question, it fails to clarify how the concept of "analogousness" connects to the constitutional requirement of promoting incremental "Progress." In other words, even if a wider range of prior art makes it easier to establish obviousness, the court does not explain what kind of progress is being evaluated under this new standard. Therefore, either the old or new test seems analytically awkward under the IP Clause's constitutional mandate of promoting the "Progress."

One of the reasons would be that both tests were developed in the utility-patent cases and transplanting them into design-patent

77. Campbell Soup Co. v. Gamon Plus, Inc., 10 F.4th 1268, 1275 (Fed. Cir. 2021) (citing quoting *Durling*, 101 F.3d at 103).

78. *Id.*

79. *See* Sarah Burstein, *Uncreative Designs*, 73 Duke L.J. 1437, 1473–74 (2024) ("In recent years, the Federal Circuit has required an extremely high degree of visual similarity for primary references, seeming to leave little room between what qualifies as 'the same' design (and, thus, anticipates) and 'basically the same' (and, thus, would constitute a proper primary reference). This overly rigid application of the primary reference requirement makes the *Durling* test difficult for challengers (and patent examiners) to satisfy." (footnote omitted)).

80. LKQ Corp. v. GM Glob. Tech. Operations LLC, 102 F.4th 1280, 1295 (Fed. Cir. 2024). *LKQ Corp.* overruled the two-part obviousness inquiry articulated in Durling v. Spectrum Furniture Co., 101 F.3d 100, 103 (Fed. Cir. 1996).

81. *Id.* at 1296.

82. *Id.* at 1297–98 ("The primary reference will typically be in the same field of endeavor as the claimed ornamental design's article of manufacture, but it need not be, so long as it is analogous art.").

context in doctrinally unsound. Even the Federal Circuit in deciding *LKQ Corp.* admitted that "[u]nlike a utility patent, a design patent itself does not clearly or reliably indicate 'the particular problem with which the *inventor* is involved.'"[83] This doctrinal awkwardness stems from the problem of design patents' *untraceability* of qualitative development.[84] As Clifford and Peltz-Steele argued, "unlike utility patents, design patents do not legally protect something that is engineered."[85] They give an illustrative example:

> If an inventor is crafting a novel plow, for example, it will be possible to compare the operation of the new plow against the old. The comparative worth of the two plows can be analyzed and, if the new plow is a better plow, an improvement patent can be obtained.[86]

In contrast, this iterative improvement is hardly identifiable in design patents. One could argue that the abrupt emergence from zero does constitute improvement; nonetheless, this kind of improvement cannot be analyzed qualitatively as what constitutes a "better" design is entirely subjective.[87] In other words, "better" designs can never be "learned about" or "observed."[88] Nor could qualitative improvement be further verified or identified in an objective context.

4. The "Fusion" Theory as a Justification

While evidence discussed earlier in this Note shows that the Framers did not intend "useful Arts" to include purely ornamental

83. *Id.* at 1297.
84. *See* Clifford & Peltz-Steele, *supra* note 4, at 573.
85. *Id.*
86. *Id.*
87. *Id.* Mueller and Brean give a detailed explanation of this theory:

> Any "problem" that a designer addresses via aesthetics is necessarily ill-defined, elusive, and subjective. For example, to say that a particular product is "ugly" or "looks cheap" does not identify a specific problem in any meaningful way, such that a hypothetical designer exercising ordinary skill could point to an "obvious solution" to make the product appear more attractive or expensive. Given the subjectivity of aesthetics, ten designers may form ten different yet valid opinions as to why the product looks ugly or cheap. Likewise, all ten designers may hold different yet valid opinions about how the product's design could be modified to make the product more appealing.

Janice M. Mueller & Daniel Harris Brean, *Overcoming the "Impossible Issue" of Nonobviousness in Design Patents*, 99 Ky. L.J. 419, 439 (2010–11).

88. Clifford & Peltz-Steele, *supra* note 4, at 573.

and non-mechanical designs under the patent regime,[89] Christopher Sprigman and Jeanne Fromer have argued for an integrative "fusion" theory of design and utility patents that could provide a constitutional reading of the design patent regime.[90] The "fusion" theory states that a design patent could be viewed as a "complementary" part of the utility patent that the design patent is claimed on or exclusively attached to.[91] That is, a design patent should not exist independently but could attach to a valid useful art, which can be a utility patent.[92] Thus, supporters of the "fusion" theory would argue that this inseparable attachment to a utility patent grants the design patent a utilitarian aspect, making it more than mere ornamental fine art; as a result, design patents can properly fit within the definition of "useful Arts."[93]

This "fusion" theory is unconvincing for several reasons,[94] the most significant being that even if design patents qualify as "useful Arts" under the IP Clause, the theory fails to demonstrate how the design patent system promotes the "Progress of Science and useful Arts." There are two ways to evaluate this issue: the ex ante approach,

89. *See supra* notes 35–50 and accompanying text.

90. *See* Jeanne C. Fromer & Christopher Jon Sprigman, *An Integrative Theory of Design and Utility Patents* 13–14 (N.Y.U. L. & Econ. Rsch. Paper, Paper No. 17–37, 2017).

91. *See id.*

92. *See id.*

93. For example, assume that Nike applied for two patents for its invented sneaker sole—one design patent and one utility patent—the design patent would cover the pattern formed by the protrusions and recesses on the sole, while the utility patent would cover the shock-absorbing effect of the sole's planar structure. In this hypothetical, the functional aspect of the sneaker is inseparable from the pattern design so that the design patent bears an article that would fit the meaning of "useful Arts" in *supra* Section II.B.1.

94. For example, this theory faces the potential hurdle of the *Mazer v. Stein* decision. Mazer v. Stein, 347 U.S. 201 (1954). In *Mazer*, the Court ruled that a sculpture used as a lamp base for manufacture fell within the constitutional scope of copyright protection despite its utilitarian aspect as a part of the lamp. *Id.* at 217. The *Mazer* Court seemed to lean towards a separability theory of intellectual property's ornamental and functional aspects. Yet, Fromer and Sprigman seem to argue that design patents should be distinguished from *Mazer* where a physically separable combination of a copyrightable lamp base and a lamp is at issue because design patents are arguably inseparable "fusions" of utility and ornamentation. *See* Fromer & Sprigman, *supra* note 86, at 13 ("Our interviews suggest that design patents are used in conjunction with utility patents to capture specifically the *fusion* of design and function—precisely obverse to the conceptual framework that pervades the *dichotomy of design and function* in patent law."). Even if Fromer and Sprigman are correct about the distinction, they fail to address whether for *all* design patents, the ornamental features could not be separated from the utility patent if there is one.

which considers the law's structural purpose before its enactment, and the ex post approach, which examines its de facto effects in practice.

The ex post approach is not ideal. From a realistic point of view, it is difficult to predict a legislation's actual effect at the outset and courts may not be institutionally competent to make such speculative judgments during judicial review.[95] As in *Eldred v. Ashcroft*, the Court did not second guess a copyright act's intended effect by applying the ex post approach when it assessed constitutional issues in the intellectual property context.[96] Thus, when considering the effect of a law, the Court seems highly deferential to the stated structural purpose of the law, rather than looking to its ex post effect.[97]

Applying the ex ante approach to the "fusion" theory, the "fusion" of design patents and utility patents is not an institutional creation based on statute; instead, it emerges in practice through partial claiming. By permitting applicants to claim specific ornamental elements of a design, the regime inevitably broadens the scope to encompass the functional aspects of the design that are otherwise left unprotected.[98] But the inquiry here is never whether design patents end up being functional in practice. The question instead is whether the pure ornamental elements protected by the statutory regime of design patents are "useful Arts." They could have been "useful Arts" had the statute explicitly contemplated both ornamental elements and their associated utilitarian functions. However, the statute was not drafted with this intention; on the contrary, historical and linguistic scrutiny indicates that Congress envisioned a dichotomous patent system in which design patents and utility patents would have mutually exclusive jurisdictions, delineating between aesthetic ornamentation and utilitarian function.[99] Thus, it may be challenging to argue that design patents are "useful Arts" within their original statutory framework, and nor is it fair to conclude that design patents were intended to fuse with utility patents to promote the "Progress of Science and useful Arts."

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95. *See* Fromer, *supra* note 24, at 1375.

96. *See* Eldred v. Ashcroft, 537 U.S. 186, 211–14 (2003).

97. *See, e.g.*, *id.* at 199–200. In determining whether the copyright amendment was unconstitutional, the Court, rather than looking to the ex post effect of the amendment, turned to the structural purpose and reasoned that the legislative purpose of the statute cannot be invaded.

98. *See* Fromer & Sprigman, *supra* note 86, at 16 (citing Mark A. Lemley & Mark P. McKenna, *Scope*, 57 Wm. & Mary L. Rev. 2197, 2260 (2016)).

99. *See infra* Section II.C.1.

C. Are Design Patents Authors and Inventors' Writings and Discoveries?

The latter half of the IP Clause's text provides a specific means to promote the "Progress of Science and useful Arts." To interpret the conjunctive grammar structure of "Authors and Inventors' Writings and Discoveries," two completely opposite theories have been developed by Ralph Clifford & Richard Peltz-Steele and Dotan Oliar. Clifford & Peltz-Steele have asserted that the language in the IP Clause suggests a dichotomy between "Science" and "useful Arts": Author's Writings (copyright power) and Inventor's Discoveries (patent power).[100] Under this dichotomy, for a design patent to be constitutionally supported by the IP Clause, it must be an "Inventor's Discovery."[101] Oliar argued that there is no dichotomy between the two and "[t]hese two terms complement each other in describing a large swath of human knowledge."[102] Under a non-dichotomous reading, it is sufficient for design patents to be (1) either "Writings" or "Discoveries"; by (2) "Authors" or "Inventors."[103]

1. Under the Dichotomous Interpretation

A dichotomous reading would require design patents to be Inventors' Discoveries (or protected under the patent power).

100. Clifford & Peltz-Steele, *supra* note 4, at 558–59. Clifford and Peltz-Steele wrote: "As shown, there is no persuasive legal authority establishing the constitutionality of design patents under the Patent Power. Those courts that have enforced them have done so without a convincing argument being made for either their validity or invalidity under the Constitution. This section of the paper will develop that argument. The result of this articulation raises doubt concerning the Article I sufficiency of design patents. Initially, the Constitutional language—'To promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries'—must start the analysis. Three phrases from the clause must be understood: 'useful arts,' 'inventors,' and 'discoveries.'" *Id.* at 569 (footnotes omitted); *see* U.S. CONST. art. I, § 8, cl. 8.

101. The design patent system, as enacted under the patent regime, shares nearly identical requirements with the utility patent system. Therefore, to be constitutional under the IP dichotomy, it must align with the patent power. An argument could be made that the design patent system also falls under the copyright power. However, as *Eldred* governs here, legislative intent controls. *See supra* notes 90–93 and accompanying text. Given that Congress enacted the Patent Act of 1842 under the existing patent regime, this Note assumes that Congress intended the design patent system to be based on the patent power rather than the copyright power.

102. Dotan Oliar, *The (Constitutional) Convention on IP: A New Reading*, 57 UCLA L. REV. 421, 466 (2009).

103. In other words, to be constitutionally supported, design patents need to be "Authors' Writings," "Authors' Discoveries," "Inventors' Writings," or "Inventors' Discoveries."

The concept of "inventor" often implies conception and discovery, rather than mere creation.[104] This linguistic reading gives the term a narrower interpretation: "inventor" focuses more on creative conception.[105] At least some courts have construed the term narrowly; for example, one court stated that an "inventor in patent law is the person who conceived the patented invention. Conception, in turn, 'is the formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice.'"[106] As these definitions suggest, courts tend to inquire into the course of conception and the following practical experimentations that lead to the invention in order to determine whether a person engages in the process as an "inventor."

However, some contend that the Framers intended a more expansive interpretation, wherein "inventor" simply means one who created something new.[107] They have noted that the terms "inventor" and "author" are sometimes used interchangeably in the late eighteenth century.[108] This broad reading does not require any practical conception, so one can become an "inventor" by inventing anything that did not exist before: authoring a new book, painting, or even a new design. This interpretation is nonetheless problematic. If the Framers intended two overlapping terms, they would have used the disjunctive form, "to authors *or* inventors," or simply just used one of the two.[109] This argument, therefore, solidly supports the reading that "authors" and "inventors" have different meanings: the Framers deliberately chose to use "to authors *and* inventors" because they envisioned a dichotomous intellectual property regime comprising copyright and patent, with the term "inventor" intended to have a narrower rather than broader scope.

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104. The term "inventor" originates from the Latin word *inventor*, which means "one who finds out, a contriver, author, discoverer." The Latin noun *inventor* is derived from the verb *invenio*, which, in its strictest sense, means "'I come upon,' 'I find,' 'I discover.'" *See* Random House Unabridged Dictionary 1640 (2d ed. 1993). Correspondingly, "inventor" is more associated with "science" and "theoretical or general principles of practice" that require "useful inventions." *See* I. Bernard Cohen, Science and the Founding Fathers 308 (1995).

105. *See* Clifford & Peltz-Steele, *supra* note 4, at 571.

106. Univ. of Colo. Found., Inc. v. Am. Cyanamid Co., 105 F. Supp. 2d 1164, 1176 (D. Colo. 2000) (citation omitted) (quoting Burroughs Wellcome Co. v. Barr Lab'ys, Inc., 40 F.3d 1223, 1228 (Fed. Cir. 1994)).

107. *See* O'Connor, *supra* note 33, at 817.

108. *See* Oliar, *supra* note 98, at 469.

109. O'Connor, *supra* note 33, at 817.

The term "discovery" lends support to a narrow definition of "inventor," emphasizing practical conception as a necessary element. Since the Framers' era, records indicate that some courts and commentators have substituted the term "invention" for "discovery."[110] Giles Rich asserted that the fields we now consider as "science" were categorized under "natural philosophy" during the Founding period; therefore, the terms "invention" and "discovery" were used interchangeably.[111] This explanation does not help here because the French, British, and American systems did not allow patenting of a natural principle.[112] Sean M. O'Connor suggests that we refer to contemporary French sources to solve this impasse in interpretation.[113] The *Encyclopédie* defines "discovery" as "not only new, but also curious, useful, and difficult to find, and which, consequently has a certain degree of importance. The less important discoveries are simply called inventions."[114] This provides a coherent understanding of both "inventor" and "discovery"; an "inventor's discovery" has to be a new thing that is useful and practical and involves a curious conception that leads to a somewhat important result.

Applying this definition to design patents, the match between an industrial design and an "inventor's discovery" is "feeble."[115] A patentable industrial design would meet the criteria for being "new," but in no way can we reasonably assess whether it is an "important result" as the design patent system does not evaluate industrial designs in that manner. Even USPTO patent examiners do not evaluate design patents for "discoveries of inventors,"[116] despite this being a requirement for granting utility patents.[117] This failure keeps

110. *Id.* at 818.

111. *See* Giles S. Rich, *Principles of Patentability*, 28 Geo. Wash. L. Rev. 393, 396–97 (1960).

112. O'Connor, *supra* note 33, at 818.

113. *See id.* at 809.

114. *See* Jean-Baptiste le Rond d'Alembert, *Discovery* (*Découverte*), *translated in* The Encyclopedia of Diderot & d'Alembert: Collaborative Translation Project (Dena Goodman trans., Mich. Publ'g 2012) (1754).

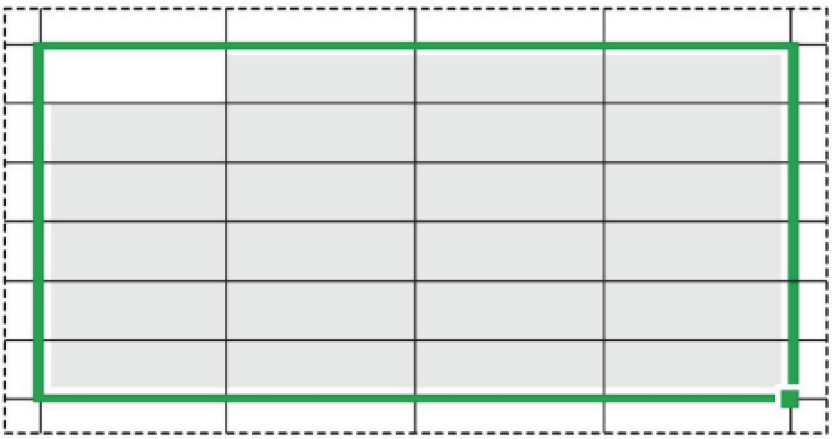
115. Clifford & Peltz-Steele, *supra* note 4, at 572 ("As with the other two constitutional terms, the match between an industrial design and a 'discovery' is feeble. Here, far more than with 'inventor' and even more than with 'useful arts,' design patents grind against the definition.").

116. *See id.* at 573 & n.119. *See also* USPTO Manual, *supra* note 54, § 1504.

117. 35 U.S.C. § 101 ("Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor . . . ."); *see also* USPTO Manual, *supra* note 54, § 2104.

generating frustrating results, with one example being a design patent issued to Microsoft in 2013 for a design of a "Display Screen With Graphical User Interface."[118] Microsoft claimed the highlight square marker that appears around the range of selected cells chosen by the user.[119] This design is too trivial to be considered "important," and as Sarah Burstein comments: "[B]asically, the design boils down to: 'Highlight some cells in the brand color.'"[120] Thus, the fact that this design passes all of the design patent requirements demonstrates the failure of this system.

FIGURE 1



One of the underlying reasons why the design patent regime often generates frustrating results, like in the Microsoft spreadsheet example, is that the inherent nature of designs, which often involves subjective aesthetics, cannot be measured by a largely objective standard of importance. For instance, minimalist designers may highly praise the design of Google Sheets for its clarity and functionality, whereas decorative designers may criticize it for lacking detailed visuals. Additionally, hindsight also influences our aesthetic judgment: what if Google's UI/UX designers conducted a year-long study on user experience and concluded that a green

118. U.S. Patent No. D691,154 fig.2 (filed June 13, 2012) (issued Oct. 8, 2013).
119. *Id.*
120. Burstein, *supra* note 79, at 1470.

highlight with a gray fill would be the most comfortable for users? As a result, in the absence of clear criteria, it is extremely difficult to distinguish between designs that rise to the level of significant inventions and those that appear trivial, at least partially, due to observers' hindsight bias.

Furthermore, the term "inventor's discovery" focuses on practical application rather than aesthetic ornamentation. While significant changes in these key terms over time have imposed huge interpretational problems, none of them include aesthetic fine arts.[121] Thus, the design patent system is largely at odds with the Framers' intended understanding of "inventor's discovery" due to design patents' aesthetic nature.

2. Under the Non-Dichotomous Interpretation

Unlike Clifford and Peltz-Steele, Oliar believes that the way the IP Clause was written implies a non-dichotomous IP regime. He argued that the original meaning of "Authors" was very close to the word "Inventors."[122] Charles Pinckney, the cousin of the fellow South Carolina delegate to the Constitutional Convention, rephrased the IP Clause as "to secure to Authors the exclusive right to their Performances and Discoveries."[123] In this apparent restatement, "Authors" encompassed both what we would today call authors and inventors. In addition, "Authors" also seemed to mean "inventors" to the Supreme Court as late as 1832, when the Court stated that "the settled purpose of the United States" was "to confer on the authors of useful inventions an exclusive right in their inventions for the time mentioned in their patent."[124]

The meaning of "Writings" may be less disputed; however, it is still somewhat questionable if designs protected by design patents can ever be "Writings." "Writings" signify works conveying substance rather than "merely expressing style."[125] Meanwhile, since they are "Writings," "they must be fixed expressions," as opposed

121. *See* O'Connor, *supra* note 33, at 739.

122. Oliar, *supra* note 98, at 469. Oliar's assertion for the non-dichotomous regime, however, is weakened by the contradiction in his arguments. His argument that "Author" and "Inventor" had almost identical meanings during the Founding era cannot explain why redundant words were used if they basically meant the same thing in a non-dichotomous regime.

123. *See* Charles Pinckney, *Observations on the Plan of Government Submitted to the Federal Convention in Philadelphia* (May 28, 1787), *reprinted in* 3 The Records of The Federal Convention of 1787, at 106, 122 (Max Farrand ed., 1911).

124. Grant v. Raymond, 31 U.S. (6 Pet.) 218, 241 (1832).

125. O'Connor, *supra* note 33, at 817.

to mere ideas.[126] Patentable designs seem more expressive of mere styles than substance because of their ornamental nature. Despite this, "Writings" would arguably include industrial designs from the copyright lens. Copyright's writings have an expansive constitutional scope. As the Court in *Mazer v. Stein* noted, Congress intended copyright to be more inclusive and was active in amending the statute to add subject matters.[127]

Therefore, designs protected by design patents might be considered "Writings" in the Framers' era. Because previous analysis shows that design patents deviate from what the Framers might perceive as "Discoveries," the grounds left to support their constitutionality under the IP Clause are "Inventor's Writings" and "Author's Writings." Given that the latter is largely recognized as what establishes the constitutionality of copyright, "Inventor's Writings" could be a possible ground to constitutionalize design patents under the IP Clause. As a result, the design patent system would probably be consistent with the specific means language dictated in the IP Clause.

In conclusion, Section II.A argues that a historical-contextual interpretation of the IP Clause suggests a limiting relationship between the "To" language and the "secure" language, meaning that design patents must promote the "Progress of Science and useful Arts" and qualify as "Authors and Inventors . . . respective Writings and Discoveries" to be constitutionally supported.[128] Section II.B concludes that design patents do not fit within the scope of "Science and useful Arts" and fail to promote their "Progress" due to the inherently subjective and ornamental nature of design patents, which lack clear qualitative traceability and measurability.[129] While the "fusion" theory—treating design patents as an inseparable blend of ornamentation and utility—might provide a justification, this explanation is difficult to reconcile with courts' traditionally deferential approach to Congress's structural legislative purposes in constitutional analysis.[130] Section II.C examines the constitutionality of design patents under the IP Clause's specific means language, applying the opposing interpretations of Clifford & Peltz-Steele and Oliar. Under Clifford & Peltz-Steele's dichotomous IP framework,

126. *Id.*
127. *See* Mazer v. Stein, 347 U.S. 201, 206–14 (1954).
128. *See supra* Section II.A.
129. *See supra* Section II.B.3.
130. *See supra* Section II.B.4.

design patents may be unconstitutional since the designs they protect do not qualify as "Inventors' Discoveries," which require functionally significant inventions rather than purely aesthetic creations.[131] However, under Oliar's non-dichotomous IP regime, design patents have a stronger case for constitutional support as "Inventors' Writings."[132]

III.
WHY DOES THIS CONSTITUTIONAL QUESTION MATTER?

Based on the foregoing discussions, it is fair to argue that design patents may be unconstitutional.[133] But this should not be the end of the discussion. Beyond all the criticism, design patents probably do more good than harm. A design patent ensures exclusive protection for an industrial design from day one, a level of protection that would otherwise be unavailable under copyright law where fair use could excuse infringement or under trademark law where the design may lack secondary meaning.[134] This protection is thus equally accessible to everyone despite their marketing and R&D ability. As a result, small manufacturers and "little guys" benefit greatly from the system, despite the fact that big corporations still remain the primary beneficiaries. It also encourages manufacturers to invest

131. *See supra* Section II.C.1.

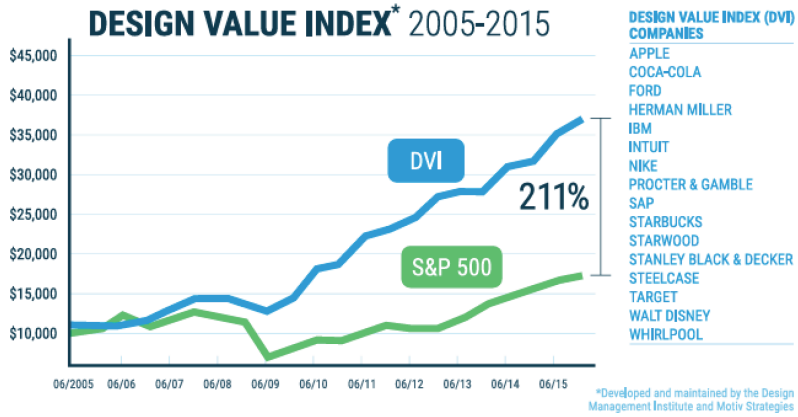
132. *See supra* Section II.C.2.

133. *Id.*

134. Once an applicant obtains a design patent, it grants them exclusive rights over the use of the design. *Managing a Patent*, U.S. Pat. & Trademark Off., https://www.uspto.gov/patents/basics/manage [https://perma.cc/H6PW-J9W6] (May 3, 2024, 10:33 AM) ("The patent grant confers 'the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States.'"). Typically, designs protected under trademark or copyright law are subject to more restrictions than those under a design patent. Under copyright law, fair use serves as a complete defense against an infringement claim, which makes the designer's proprietary rights to the copyrighted design less exclusive. *See generally U.S. Copyright Office Fair Use Index*, U.S. Copyright Off., https://www.copyright.gov/fair-use/ [https://perma.cc/3FX5-8S7Z] (Feb. 2025). Under trademark law, a design that potentially qualifies for trade dress protection must pass the functionality test—which invalidates a design if it is functional—and establish secondary meaning over time among consumers before it can be protected. *See* Wal-Mart Stores, Inc. v. Samara Bros., Inc., 529 U.S. 205, 216 (2000) (secondary meaning); TrafFix Devices, Inc. v. Mktg. Displays, Inc., 532 U.S. 23, 29–30 (2001) (functionality).

without worrying about potential knockoffs: the Design Value Index (DVI), which measures how corporate investment in design pays off, has been steadily increasing since the Great Depression and outperformed the S&P 500 by 211% in 2015.[135]

FIGURE 2



The design patent system also maintains a reasonable balance between ornamentation and utility,[136] which is not permissible under copyright law (due to the useful articles doctrine) or trademark law (due to the functionality doctrine).[137] It offers a specific approach for manufacturers to protect their designs, particularly when they possess both utilitarian and ornamental features that are inherently inseparable.[138]

Given all the benefits that the design patent system provides, I do not oppose protecting industrial designs; rather, I question whether the design patent regime, which is arguably an unconstitutional application of the IP Clause, is the appropriate approach to protecting industrial designs. The debate should be framed around design patents' identity crisis, not their existence. The design patent system is "a-square-peg-in-a-round-hole" adaptation of the utility patent system. By attempting to force design patents into the

135. MICHAEL T. HAGES, PRICE HENEVELD LLP, A DESIGN-CENTRIC APPROACH TO PATENTS 17–18 (2019), https://www.priceheneveld.com/wp-content/uploads/2019/04/A-Design-Centric-Approach-to-Patents.pdf [https://perma.cc/MJ8Z-T7QJ].

136. *See* Fromer & Sprigman, *supra* note 86, 13–14.

137. *Cf. supra* note 130 and accompanying text.

138. *See supra* notes 85–89 and accompanying text.

framework of utility patents, it ultimately fails to accommodate the unique nature of design patents. For example, the "nonobviousness" of a design patent cannot be traced in the same way as that of a utility patent.[139] The use of "obvious" and "nonobvious" in this context implies that these concepts are relative and require a comparative judgment to a reference object: a reasonable person would have to ask whether and how one thing is "obvious" or "nonobvious" from another. Design patents, for which a primary prior reference could hardly be identified, lack a traceable change or improvement to access the degree of "obvious" or "nonobvious" in that change or improvement.[140]

This distorted design patent system[141] has become a bootstrap that opens a backdoor to design protection for concepts not otherwise protected under the IP regime. Law firms are using this loophole as a strategy to help their clients secure long-term trade dress protection.[142] First, design patents buy them time to establish secondary meaning, as the patent provides a temporary exclusive right and no competitors could advertise or actually use the designs the patents protect.[143] After the design patent expires, or even during its term, companies then transition to trade dress protection, claiming that the design has acquired secondary meaning so consumers now associate the design with a particular source. As trade dress protection is not time barred, this transition allows companies to secure indefinite protection for the design (so long as it remains distinctive and non-functional), extending the life of the protection beyond

139. *See supra* notes 72–84 and accompanying text.

140. *Id.*

141. *See* William T. Fryer, III, *Industrial Design Protection in the United States of America—Present Situation and Plans for Revision*, 19 Balt. L. Rev. 198, 203–05 (1989) (discussing the uncertainties arising from the inconsistencies between design patents and utility patents); *supra* Section II.B.4 (articulating the inherent differences between utility patents and design patents, such as quantifiability of progress, partial claiming, and bootstrapping).

142. *See, e.g.*, *That Looks. . . Unique and Confusing: An Overview on Design Patents and Trade Dress*, McGrath North (Jan. 9, 2023), https://www.mcgrathnorth.com/that-looks-unique-and-confusing-an-overview-on-design-patents-and-trade-dress [https://perma.cc/FBM4-ATZU] ("It may make sense to obtain design patent rights early then work to build trade dress rights without outside interference from competitors for the 15-year period of design patent rights. In fact, after five years continual use as a source identifier, it is much easier to obtain a trade dress registration. However, this dual protection may not be feasible if product has functional features.").

143. *See id.*

the limited term of the design patent.[144] Under this practice, design patent as a regime has been losing its independence and integrity, and arguably has become the mere vassal of trade dress. Not only does this massive exploitation reinforce the design patent system's identity crisis but it also weakens its legitimacy.[145] To restore the integrity of the design patent system, this Note encourages a reconceptualization process that calls for the development of a more coherent theory of a unitary IP regime. The reconceptualization would not only address constitutional concerns but also recognize the significant benefits that design patents provide to creators within the industry. While constitutional analysis serves to identify and rectify any legal shortcomings, it should also acknowledge and navigate the complexities of real-world applications, ensuring that any reforms or interpretations strike a balance between constitutional principles and the practical needs of innovators and industries.

One way to reconceptualize the design patent system is to ground it in the Commerce Clause with a limiting principle that restricts its subject matter to ornamental designs that are inherently linked to a utility patent.[146] Anchoring design patents in the Commerce Clause framework would align the system more closely with its economic justifications, recognizing design patent's role in promoting competition and consumer choice. By offering a more concrete constitutional foundation, the Commerce Clause reconceptualization theory would eliminate the contentious justification for the design patent system under the IP Clause. Additionally, the limiting principle of a reformed system would incorporate clearer

144. *See id.*; *see also* 15 U.S.C. §§ 1058–59 (stating that a trademark can be renewed every ten years if it is still used in commerce); *supra* note 130 (detailing the secondary meaning/distinctivity and functionality requirements for trade dress protections).

145. *See* Jason J. Du Mont & Mark D. Janis, *The Origins of American Design Patent Protection*, 88 IND. L.J. 837, 841–43 (2013) (discussing the design patent system's "identity crisis" and observing, "[a]s [other] forms of intellectual property protection developed, the domain of design patents became increasingly more difficult to discern"); *id.* at 874 ("The American design patent system . . . has never developed a clear identity."); Menell & Corren, *supra* note 4, at 8 ("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.").

146. Under the Commerce Clause in Article I, Section 8, "[t]he Congress shall have Power . . . [t]o regulate Commerce with foreign Nations, and among the several States." U.S. CONST. art. I, § 8, cl. 3. Similar to trademarks, which are closely associated with foreign and interstate commerce, industrial designs would have a sound foundation under the Commerce Clause.

tests for inseparability and functionality.[147] These requirements would help close the loophole of bootstrapping, because a design patent's functionality would preclude any potential trade dress protection for the same design.[148] Therefore, this reconceptualization not only strengthens the constitutional justification by better reflecting economic realities but also solves design patents' identity crisis by eliminating the bootstrapping practice.

Another possible reconceptualization is to ground design patents in the Necessary and Proper Clause of Article I, Section 8 of the Constitution.[149] Under this theory, granting design patents can be viewed as one of the "ample means" to facilitate Congress's exercise of its IP Clause and Commerce Clause powers.[150] This theory could also serve as a counterargument against the identity crisis and a justification for bootstrapping: the design patent regime is "necessary and proper" for Congress to more effectively promote trade and commerce by making the process easier for businesses to acquire the "secondary meaning" required for trademark protection. Thus, grounding design patents in the Necessary and Proper Clause could justify their function as a bridge to trade dress protection, effectively validating the bootstrapping practice by framing design patents as a necessary tool for facilitating commerce.

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147. Although the possible constructions of these tests are beyond the scope of this Note, I would like to give an example: the functionality prong would require a design to attach to a utility patent—which is functional—in order to get design patent protection; and the inseparability prong would require a design to be an integrated part of the utility patent. The Supreme Court in *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 580 U.S. 405 (2017), contemplated the question of separability in the copyright context. The test proposed in this footnote intends a balance between the majority (separability is present "if the feature . . . can be perceived as a two- or three-dimensional work of art separate from the useful article") and dissent (arguing there is no separability if the design features are so integrated into the useful article that separation would merely produce a "replica"). *Id.* at 409; *id.* at 439, 443 (Breyer, J., dissenting).

148. *See* TrafFix Devices, Inc. v. Mktg. Displays, Inc., 532 U.S. 23, 29–30 (2001).

149. U.S. CONST. art. I, § 8, cl. 18 ("To make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department or Officer thereof.").

150. M'Culloch v. Maryland, 17 U.S. (4 Wheat.) 316, 408 (1819) ("[A] government, intrusted with such ample powers, on the due execution of which the happiness and prosperity of the nation so vitally depends, must also be intrusted with ample means for their execution."). In *M'Culloch*, Chief Justice Marshall interpreted the Necessary and Proper Clause broadly: he did not constrain Congress's power under the Clause to being strictly "necessary." Instead, so long as the execution of power under the Clause would make it *convenient* to exercise other enumerated powers, the execution is deemed "Necessary and Proper." *See id.* at 413–15.

In summary, the constitutional debate surrounding design patents is not just a theoretical exercise but a crucial inquiry into the balance between the design patent system's legal legacy and economic utility. Given the constitutional tensions among various interpretations of the IP Clause, reconceptualization under the Commerce Clause or the Necessary and Proper Clause may offer potential solutions to preserve the benefits of design patents while addressing their weaknesses. A Commerce Clause-based approach would tighten the connection between design patents and economic interests, ensuring that protection remains aligned with market realities. Regardless of the chosen framework, reform to the design patent system should aim to eliminate ambiguities, prevent exploitation, and establish a clear, independent identity for design patents. By doing so, the system can maintain its legitimacy while continuing to serve as a valuable tool for innovators, manufacturers, and businesses in fostering creativity and competition.