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The Hotchkiss Unobviousness Standard: Early Judicial Activism in the Patent Law

Edward C. Walterscheid

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**THE *HOTCHKISS* UNOBVIOUSNESS STANDARD:
EARLY JUDICIAL ACTIVISM IN THE PATENT
LAW**

*Edward C. Walterscheid**

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* Mr. Walterscheid is a legal historian specializing in the history of intellectual property law in the United States. He may be reached at ecwalterscheid@earthlink.net.

I. INTRODUCTION

In 1850 in *Hotchkiss v. Greenwood*¹ the Supreme Court set forth a new condition for patentability when it declared that “unless more ingenuity and skill . . . were required . . . than were possessed by an ordinary mechanic acquainted with the business, there was an absence of that degree of skill and ingenuity which constitute essential elements of every invention.”² But the portent of this new unobviousness standard was not immediately apparent, and nineteen years would pass before the Court invalidated a patent for obviousness.³ Soon thereafter the Court reiterated the unobviousness standard⁴ and began to use this standard on a regular basis to invalidate patents.⁵

In the modern era, the Court in *Graham v. John Deere Co.*⁶ has indicated that: “In practice, *Hotchkiss* has required a comparison between the subject matter of the patent, or patent application, and the background skill of the calling. It has been from this comparison that patentability was in each case determined.”⁷ Although the Supreme Court continued to apply the *Hotchkiss* unobviousness standard as a criterion for patentability in the twentieth century, it was not until 1952 that Congress first set forth the present statutory requirement that to be patentable the subject matter of an invention must be unobvious, saying:

A patent may not be obtained . . . if the 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 to a person having ordinary skill in the art to which said subject matter pertains.⁸

The *Graham* Court concluded that this language “was intended merely as a codification of judicial precedents embracing the *Hotchkiss* condition, with congressional directions that inquiries into the obviousness of the subject matter sought to be patented are a prerequisite to patentability.”⁹

¹ 52 U.S. (11 How.) 248 (1850).

² *Id.* at 267.

³ *Stimpson v. Woodman*, 77 U.S. (10 Wall.) 117, 121 (1869).

⁴ *See Reckendorfer v. Faber*, 92 U.S. 347, 356 (1875); *Union Paper Collar Co. v. Van Dusen*, 90 U.S. (23 Wall.) 530, 562 (1874).

⁵ *See, e.g., Atl. Works v. Brady*, 107 U.S. 192 (1882); *Slawson v. Grand St. R.R. Co.*, 107 U.S. 649 (1882); *Pearce v. Mulford*, 102 U.S. 112, 118 (1880); *Dunbar v. Myers*, 94 U.S. 187, 197 (1876).

⁶ 383 U.S. 1, 148 U.S.P.Q. (BNA) 459 (1966).

⁷ *Id.* at 12.

⁸ 35 U.S.C. § 103(a) (2000).

⁹ 383 U.S. at 17. The Court also quoted relevant language from the Senate and House Reports

But what was the basis for the *Hotchkiss* standard as originally set forth in 1850? The *Hotchkiss* Court cited no authority, judicial or statutory, for the test it set forth, nor did it make any reference to any constitutional language supporting it.¹⁰ This did not per se mean that no such authority existed,¹¹ but it would seem to be sufficient to at least raise questions as to whether such authority actually existed if the *Hotchkiss* unobviousness standard was to be treated as precedent, as indeed it came to be. Yet for more than a hundred years the Supreme Court would offer no authority for the *Hotchkiss* standard, and when it finally came to do so in 1966 in *Graham*, the authority it cited was neither statutory, precedential, nor constitutional, but instead was predicated on a justification for judicial activism in the apparent absence of statutory or constitutional authority.¹²

Clearly the Patent Act of 1952 incorporates an unobviousness standard.¹³ But in enacting that standard into statute, Congress was careful to point out that it was codifying a requirement that had existed for a hundred years, “but only by reason of decisions of the courts.”¹⁴ The import of this was that Congress was reacting to a standard created by judicial precedent. Moreover, there was no indication whatever that this judicial precedent was the result of either statutory or constitutional interpretation.

Could this standard have been predicated on either constitutional interpretation or statutory construction of the Patent Act of 1836, which was in effect when the *Hotchkiss* opinion was rendered? The purpose of this Article is

accompanying the Patent Act of 1952: “Section 103, for the first time in our statute, provides a condition which exists in the law and has existed for more than 100 years, *but only by reason of decisions of the courts.*” 383 U.S. at 14 (quoting S. REP. NO. 82-1979 at 6 (1952) and H.R. REP. NO. 82-193 at 7 (1952)) (emphasis added).

¹⁰ Justice Nelson, writing for the majority, informally and anecdotally referred to a circuit court case he had tried in Connecticut some years earlier, but only to suggest that a change of materials would not result in patentability. *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 266 (1850). The majority opinion acknowledged that the substitution of clay for metal or wood in doorknobs in the claimed invention resulted in a cheaper and better product, but declared that

this, of itself, can never be the subject of a patent. No one will pretend that a machine, made, in whole or in part, of materials better adapted to the purpose for which it is used than the materials of which the old one is constructed, and for that reason better and cheaper, can be distinguished from the old one; or, in the sense of the patent law, can entitle the manufacturer to a patent.

Id.

¹¹ Although Justice Woodbury, dissenting, stated that he believed “that the test adopted below for the purpose to which it was applied, and which has just been sanctioned here, has not the countenance of precedent, either English or American.” *Id.* at 270.

¹² See *infra* text accompanying notes 140-48.

¹³ See *supra* text accompanying note 8.

¹⁴ See *Graham*, 383 U.S. at 14 (quoting S. REP. NO. 82-1979 at 6 (1952) and H.R. REP. NO. 82-1923 at 7 (1952)).

to explore this question as well as to critique the logic used by the *Graham* Court to justify the *Hotchkiss* standard. We begin with a review of the requirement for novelty in the early patent statutes and of the judicial interpretations afforded to that requirement. We then turn to an analysis of the relevant constitutional language and the extent to which it had been construed prior to *Hotchkiss*. Finally, we address the interpretation of the constitutional language by the *Graham* Court as well as the justification set forth by that Court for the *Hotchkiss* standard. We conclude that the unobviousness standard created in *Hotchkiss* was in fact an example of early judicial activism by the Supreme Court in creating patent law, a point candidly acknowledged and sought to be justified in the *Graham* opinion 116 years later.

II. THE EARLY STATUTORY REQUIREMENT FOR NOVELTY

Novelty is a *sine qua non* for patentability. Indeed, it lies at the heart of any patent system.¹⁵ But, as Burchfiel points out, the statutory novelty requirement under the early patent acts “was of much greater importance” than it is today.¹⁶ The reason for this is that today a prior art reference that does not identically describe all elements of the claimed invention is not considered an anticipatory reference that precludes novelty, but rather is used as a reference for purposes of determining unobviousness.¹⁷ Moreover, early on there were very few actual prior art references, i.e., printed publications, used to determine patent validity, and evidence that the invention was not new but instead was earlier known and used was almost always presented through testimony by witnesses or through reliance on documents or models in the Patent Office.¹⁸

A. THE PATENT ACT OF 1790

Several provisions of the first patent statute, the Act of 1790,¹⁹ could be interpreted in the context of novelty. Thus it required the petition for patent to state that the invention was “not before known or used.”²⁰ It also required the specification to “distinguish the invention or discovery from other things before

¹⁵ 1 DONALD S. CHISUM, CHISUM ON PATENTS § 3.01 (2005).

¹⁶ Kenneth J. Burchfiel, *Revising the “Original” Patent Clause: Pseudohistory in Constitutional Construction*, 2 HARV. J.L. & TECH. 155, 191 (1989).

¹⁷ See 35 U.S.C. §§ 102, 103 (2000). Section 103 declares that it governs patentability when “the invention is not identically disclosed or described as set forth in section 102 . . .” *Id.*

¹⁸ In the fifty-eight patent cases that are reported or referenced prior to 1836, I am unable to find any that invalidated a patent on the basis of a printed publication.

¹⁹ Act of Apr. 10, 1790, ch. 7, 1 Stat. 109.

²⁰ *Id.* at 110.

known and used.”²¹ Finally, it authorized the issuance of a patent if a majority of the three-member patent board created by the Act deemed the invention “sufficiently useful and important” to warrant a patent.²² The first two provisions clearly required the invention to be new, although exactly what that meant was not indicated.²³ The Act of 1790 had no language directed at what would now be called unobviousness. But there were portents of things to come, both in the first patent bills and in the interpretations of the patent board under the Act of 1790.

Thus, the very first patent and copyright bill, House Bill 10, introduced June 23, 1789, provided for a caveat process as well as a mechanism for determining priority of invention. It contained the statement: “And if upon such specifications the inventions or discoveries aforesaid, claimed by two or more parties, *shall appear to be substantially the same, both in principle and execution*, then the said _____ shall enquire into the priority of the said inventions or discoveries”²⁴ The first independent patent bill, House Bill 41, introduced February 16, 1790, contained similar language.²⁵ While this language did not survive into the Patent Act of 1790, it is nonetheless apparent that if it had done so, then what was used to determine whether specifications were interfering, i.e., whether the inventions appeared “to be substantially the same, both in principle and execution,” could also have been used to determine what was prior art which anticipated the invention and rendered it unpatentable.²⁶

As Secretary of State, Thomas Jefferson was both a member of the patent board established under the 1790 Act and responsible for issuing patents.²⁷ Because it had neither case law nor statutory definitions to guide it, the patent board had to attempt to establish a general framework for what it would consider patentable. As Jefferson would point out many years later, in this it was never entirely successful,²⁸ but it did attempt in some measure to determine whether

²¹ *Id.*

²² *Id.*

²³ Novelty as understood in the English patent custom had changed considerably over time. See Edward C. Walterscheid, *Novelty in Historical Perspective*, 75 J. PAT. & TRADEMARK OFF. SOC’Y 689, 692-706 (1993).

²⁴ H.R. 10 § 5, 1st Cong. (1789) (emphasis added), in EDWARD C. WALTERSCHEID, *TO PROMOTE THE PROGRESS OF USEFUL ARTS: AMERICAN PATENT LAW AND ADMINISTRATION, 1787-1836 app. I* (F.B. Rothman 1998).

²⁵ See H.R. 41 § 3, 1st Cong. (1790). This bill is reprinted in WALTERSCHEID, *supra* note 24, at app. III.

²⁶ See *supra* text accompanying note 24.

²⁷ For the actions of Jefferson and the patent board under 1790 Act, see WALTERSCHEID, *supra* note 24, at 166-93.

²⁸ According to Jefferson,

the patent board, while it existed, had proposed to reduce their decisions to a system of rules as fast as the cases presented should furnish materials. They had

inventions sought to be patented were “sufficiently useful and important”²⁹ to warrant a patent. According to Jefferson, among the rules established were that things specifically not patentable were (1) a new use for an old machine, (2) a change in material, and (3) a change in form or shape.³⁰ These simple rules were intended to restrict from patentability that which might literally be new but which added nothing to the progress of the useful arts. As such, they could ostensibly be viewed as precursors to the view that an invention had to be unobvious to be patentable, but in reality they seem to have been fallback positions when it became apparent that Congress would not accept unobviousness as a standard for patentability.

While Secretary of State, Jefferson had drafted a new patent bill and arranged to have it introduced in Congress in February 1791, but Congress failed to act on it.³¹ A defense to infringement set forth in Jefferson’s bill was a showing that the invention “is so unimportant and obvious that it ought not to be the subject of an exclusive right.”³² Had this provision been enacted into law, it would have established some form of unobviousness standard fifty-nine years before *Hotchkiss* was decided and would certainly have established a statutory predicate for the *Hotchkiss* unobviousness standard.

What Jefferson’s bill did *not* contain was any reference to the patentability rules that many years later he claimed the patent board had developed. This rather clearly suggests that at least as of early 1791 the board had not in fact developed or implemented those rules. It is likely that they were only developed after Jefferson failed to succeed with his effort to have obviousness included as a defense against infringement.

B. THE PATENT ACT OF 1793

Two of the novelty provisions of the 1793 Act³³ were the same as those in the 1790 Act. Thus, the petition for patent had to state that the invention was “not

done but little when the business was turned over to the courts of justice, on whom the same duty has now devolved.

Letter from Thomas Jefferson to Thomas Cooper (Aug. 25, 1814), in 14 THE WRITINGS OF THOMAS JEFFERSON at 174 (A.A. Lipscomb ed., 1903). Jefferson was referring to the Patent Act of 1793, which created a registration system and left the determination of patent validity to the courts.

²⁹ Act of Apr. 10, 1790, ch. 7, § 1, 1 Stat. 110.

³⁰ Letter from Thomas Jefferson to Isaac McPherson (Aug. 13, 1813), in 13 THE WRITINGS OF THOMAS JEFFERSON at 335 (A.A. Lipscomb ed., 1903).

³¹ For a discussion of this bill and its contents, see WALTERSCHEID, *supra* note 24, at 196-205, 469-71.

³² WALTERSCHEID, *supra* note 24, at 470.

³³ Act of Feb. 21, 1793, ch. 11, 1 Stat. 318.

known or used before the application” and the description set forth in the specification had to be such as to distinguish the invention “from all other things before known.”³⁴ But the 1793 Act removed the requirement in the 1790 Act that there be a determination that the invention “was sufficiently useful and important” to warrant a patent.³⁵ It did, however, make statutory an enlarged version of one of the rules apparently developed by the patent board under the 1790 Act. Thus, it provided “that simply changing the form or the proportions of any machine, or composition of matter, in any degree, shall not be deemed a discovery.”³⁶ Although the term “obvious” was not used, implicit in this language was the view that a mere colorable change in form or proportion would not be considered novel, but instead would be viewed as an obvious variation on the previously existing machine or composition of matter.³⁷

Why it incorporated this particular rule but not the other two is simply not clear from the limited legislative history of the 1793 Act.³⁸ However, it is quite possible and even probable that Congress was totally unaware of the patent board rules that were only disclosed by Jefferson twenty years later, and instead incorporated this language as a direct result of a proposal published by Joseph Barnes in Philadelphia in 1792.³⁹

³⁴ *Id.* at 319.

³⁵ Act of Apr. 10, 1790, ch. 7, § 1, 1 Stat. 109, 110.

³⁶ Act of Feb. 21, 1793, ch. 11, § 2, 1 Stat. 318, 321.

³⁷ But the courts would on occasion thereafter hold that a change in form or proportion that produced a new and useful effect could be considered novel and hence patentable. Thus, e.g., in *Davis v. Palmer*, 7 F. Cas. 154 (C.C.D. Va. 1827) (No. 3,645), the issue was whether an improved plow mould board having a particular concave surface was in essence only a change in form and proportion over earlier plows and hence unpatentable under this provision. In construing the provision and holding the improved plow to be patentable, Justice Marshall stated

the word “simply,” has, we think, great influence. It is not every change of form and proportion which is declared to be no discovery, but [only] that which is simply a change of form or proportion, and nothing more. If, by changing the form and proportion, a new effect is produced, there is not simply a change of form and proportion, but a change of principle also.

Id. at 159. In so stating, he chose to ignore the import of the phrase “in any degree” in the statutory provision.

³⁸ For a discussion of the background and limited legislative history of the Act of 1793, see WALTERSCHEID, *supra* note 24, at 195-222.

³⁹ JOSEPH BARNES, TREATISE ON THE JUSTICE, POLICY, AND UTILITY OF ESTABLISHING AN EFFECTUAL SYSTEM FOR PROMOTING THE PROGRESS OF USEFUL ARTS, BY ASSURING PROPERTY IN THE PRODUCTS OF GENIUS (1792). Among the changes in the law that Barnes proposed was “Nor, shall *changing the form, or proportions* of any machine, in any degree, be construed to be a discovery.” *Id.* at 31. This is much closer to the actual language in the 1793 Act than that of the “rule” which Jefferson stated the patent board had developed, namely, “a mere change of form should give no right to a patent.” See *supra* note 30 and accompanying text.

Be that as it may, this language added a condition for patentability above and beyond simple novelty. Thereafter, courts would on occasion use this language to determine whether infringement had occurred or whether the patent was valid.⁴⁰ But the courts in fact went further than simply applying this statutory language and to some extent anticipated what would come to be embodied in the *Hotchkiss* standard and the modern statutory requirement of “unobviousness.” Pragmatically, the modern requirement that an invention must be unobvious in order to be patentable can be viewed as merely a further restriction on novelty over and above that actually developed by the courts prior to *Hotchkiss*.⁴¹

It is of interest here to note that courts interpreting the 1793 Act, with but one exception,⁴² did not literally speak in terms of unobviousness, but instead began to develop what Burchfiel terms a “substantial novelty standard,”⁴³ although this was not a phrase used in any of the early judicial opinions. They did so by placing further restrictions on novelty through the development of the doctrine of equivalents. For example, in 1814 in *Odiorne v. Winkley*, Justice Story instructed the jury that “the material question . . . is . . . whether the given effect is produced substantially by the same mode of operation, and the same combination of powers, in both machines.”⁴⁴ The issue was literally whether a patent to one Reed under which the plaintiff claimed was void because the machine covered by that patent was substantially equivalent to a machine covered by an earlier patent to one Perkins. As Justice Story phrased it,

[T]he question for the jury is, whether, taking Reed’s machine, and Perkin’s machine together, and considering them with their various combinations, they are machines constructed substantially upon the same principles, and upon the same mode of operation.⁴⁵ If they

⁴⁰ See, e.g., *Langdon v. De Groot*, 14 F. Cas. 1099, 1021 (C.C.S.D.N.Y. 1822) (No. 8,059) (stating that “changing the form or proportions of a machine would [not] be regarded [as] a discovery”); *Lowell v. Lewis*, 15 F. Cas. 1018, 1021 (C.C.D. Mass. 1817) (No. 8,568) (stating that “a mere change of the form or proportions of any machine cannot, per se, be deemed a new invention”); *Park v. Little*, 18 F. Cas. 1107, 1108 (C.C.D. Pa. 1813) (No. 10,715) (stating that a machine infringes if it is merely an improvement in form of the patented machine).

⁴¹ The requirement for unobviousness set forth in 35 U.S.C. § 103 is a limitation on novelty as set forth in § 102. As stated by Federico: “In form this section is a limitation on section 102 . . . but it was made a separate section to prevent 102 from becoming too long and involved and because of its importance.” See P.J. Federico, *Commentary on the New Patent Act*, 35 U.S.C.A. §§ 1, 17 (West Supp. 1954), reprinted in 75 J. PAT. & TRADEMARK OFF. SOC’Y 161, 180 (1993).

⁴² See *infra* notes 61-68 and accompanying text.

⁴³ Burchfiel, *supra* note 16, at 191-95.

⁴⁴ *Odiorne v. Winkley*, 18 F. Cas. 581, 582 (C.C.D. Mass. 1814) (No. 10,432).

⁴⁵ Although there is nothing to indicate that Justice Story was aware of the language that had appeared in both House Bill 10 and House Bill 41, he used remarkably similar language. See *supra*

are, then Reed's patent is void, and the plaintiff is not entitled to recover⁴⁶

The jury found for the defendant, and thereafter "judgment was entered upon the records of a vacatur of the patent."⁴⁷

In 1817 in *Gray v. James*,⁴⁸ Justice Washington gave jury instructions similar to those of *Odiorne*, saying "it may safely be laid down as a general rule, that where the machines are substantially the same, and operate in the same manner, to produce the same result, they must be in principle the same."⁴⁹ The same two patents were at issue in both *Gray* and *Odiorne*. Only this time, the plaintiffs were ultimate assignees under the Perkins patent and the defendants under the Reed (spelled Read in *Gray*) patent.

The next year, in *Evans v. Eaton*,⁵⁰ Justice Washington expanded a bit on the proposition, saying in jury instructions:

We take the rule to be, and so it has been settled in this and in other courts, that, if the two machines be substantially the same, and operate in the same manner, to produce the same result—though they may differ in form, proportions, and utility, they are the same in principle⁵¹

He went on to state that in such circumstance no valid patent could be granted for the last one discovered.⁵² He gave no citation of authority but presumably was referring to *Odiorne* and *Gray*. He seems not to have contemplated the possibility that a sufficient difference in utility might well imply a difference in result and thus a different invention.

Although *Winans v. Denmead*,⁵³ decided in 1853, is frequently cited as the origin of the doctrine of equivalents,⁵⁴ the Supreme Court had actually given its imprimatur to the doctrine some thirty years earlier in *Evans v. Eaton*,⁵⁵ albeit in

notes 23-24 and accompanying text.

⁴⁶ 18 F. Cas. at 582.

⁴⁷ *Id.* at 583.

⁴⁸ 10 F. Cas. 1015 (C.C.D. Pa. 1817) (No. 5,718).

⁴⁹ *Id.* at 1016.

⁵⁰ 8 F. Cas. 856 (C.C.D. Pa. 1818) (No. 4,560).

⁵¹ *Id.* at 858.

⁵² *Id.*

⁵³ 56 U.S. (15 How.) 330 (1853).

⁵⁴ See, e.g., Clarence J. Fleming, *The Doctrine of Equivalents—Should it be Available in the Absence of Copying?*, 76 J. PAT. & TRADEMARK OFF. SOC'Y 233, 234 (1994).

⁵⁵ 20 U.S. (7 Wheat.) 356 (1822).

less than clear and direct language. Specifically, Justice Story, speaking for a majority of the Court, cited with approval a paraphrased version of the jury instruction by Justice Washington quoted above,⁵⁶ to wit: "If they were the same in principle, and only differed in form and proportion, then it was declared, that the plaintiff was not entitled to recover" for he was not the inventor.⁵⁷

Despite the fact that Justice Story termed it a "general rule," neither he nor Justice Washington gave any precedent or basis for the doctrine of equivalents set forth in *Odiorne*, *Gray*, and *Eaton*. It is quite possible, however, that Justice Story viewed mechanical equivalents to be similar to changes in form or substance denied patentability under the Act of 1793. In this regard, it is useful to note that he began his opinion in *Odiorne* by saying that "mere colorable alterations of a machine are not sufficient to protect the defendant."⁵⁸

This view is lent added credence by the fact that it was precisely the position taken by the Supreme Court in *Winans v. Denmead* at the middle of the century, and on which it relied in setting forth the doctrine of equivalents. As stated therein:

Under our law a patent cannot be granted merely for a change of form. The Act of . . . 1793, sec. 2, so declared in express terms; and though this declaratory law was not reenacted in the Patent Act of 1836, it is a principle which necessarily makes part of every system of law granting patents for new inventions.⁵⁹

Moreover:

Where form and substance are inseparable, it is enough to look at the form only. Where they are separable; where the whole substance of the invention may be copied in a different form, it is the duty of courts and juries to look through the form for the substance of the invention—for that which entitled the inventor to his patent, and which the patent was designed to secure.⁶⁰

Viewed in this light, the doctrine of equivalents is merely an interpretation of the language of Section 2 of the Patent Act of 1793. It arose out of the view of

⁵⁶ Although the language of Justice Washington was quoted verbatim earlier at, 20 U.S. at 361-62.

⁵⁷ *Id.* at 431.

⁵⁸ *Odiorne v. Winkley*, 18 F. Cas. 581, 582 (C.C.D. Mass. 1814) (No. 10,432).

⁵⁹ *Winans v. Denmead*, 56 U.S. (15 How.) 330, 341 (1854).

⁶⁰ *Id.* at 343.

Justice Story that “mere colorable alterations” in a known machine are not patentable. It was a further restriction on novelty as interpreted under the Act of 1793 and a significant step toward the development of the modern requirement that an invention must be unobvious to one of ordinary skill in the art to be patentable. But it said nothing about the critical importance of the level of skill in the relevant art.

Justice Story complicated the matter considerably by his opinion in *Earle v. Sawyer*⁶¹ in 1825. The issue was whether substitution of a circular saw for a reciprocal saw in a shingle-making machine constituted patentable improvement. An argument was presented that more is required for an invention to be patentable than that it merely be new and useful. Instead, there must be “mental labor and intellectual creation.”⁶² The result must be something more than would “occur to all persons skilled in the art, who wished to produce the same result.”⁶³ Rather, “there must be some addition to the common stock of knowledge.”⁶⁴ In essence, the argument was that a combination of two old things, “although never done before, is no invention,” unless it would not be obvious to those skilled in the art.⁶⁵

Justice Story would have none of it. He informed the jury that if a combination “is new, if it is useful, if it has not been known or used before, it constitutes an invention within the very terms of the act, and, in my judgment, within the very sense and intendment of the legislature.”⁶⁶ With this language, not only did Story reject unobviousness as a condition for patentability, but he also seemed to be saying that simple novelty and utility were all that were required for patentability.

Burchfiel argues that “[w]ith this pronouncement, nonobviousness lapsed into obscurity [under the Act of 1793].”⁶⁷ According to Burchfiel,

the substitution of a known circular saw for the reciprocating saw in [*Earle v. Sawyer*] might well have been an obvious step to a mechanic of ordinary skill in the shingle-making art, but the resulting combination was nonetheless substantially novel, presumably because the substitution of a circular saw did not achieve the object in ‘substantially the same manner.’⁶⁸

⁶¹ 8 F. Cas. 254 (C.C.D. Mass. 1825) (No. 4,247).

⁶² *Id.* at 255.

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.* at 256.

⁶⁷ Burchfiel, *supra* note 16, at 189.

⁶⁸ *Id.* at 195.

But Story made no reference whatever to the doctrine of equivalents (or to any other aspect of “substantial novelty”) in *Earle v. Sawyer*, and there is no reference to any analysis of the type that Burchfiel presumes to have occurred. Rather, it is possible—and perhaps even probable—that Story was having second thoughts about his earlier pronouncements in this regard and simply was now choosing to once again broadly expand the interpretation of patentable novelty.

It is also of interest to note the views expressed by Justice Baldwin in *Whitney v. Emmett*⁶⁹ in 1831. He pointed out that the 1790 and 1793 Acts “are the execution by congress of their constitutional powers”⁷⁰ and stated:

It is the exclusive province of the legislature to discriminate between what acts are to be done to authorize a patent to issue, and those which will make it void if done or omitted. When this has been done in clear explicit terms, a court cannot superadd requisites to the grant of the patent, or include other acts than those specified, which authorize them to declare it void. . . . [I]f a court, by construction, add[s] an object not so declared . . . it is judicial legislation of the most odious kind, necessarily retrospective, and substantially and practically *ex post facto*.⁷¹

According to Burchfiel, this language evidences that “[j]udicial deference to the plenary congressional power to fix the prerequisites for patentability also was considered to be required by the Constitution.”⁷²

Burchfiel nonetheless has made a strong case that the “substantial novelty standard” under the Patent Act of 1793 did in fact encompass the three patentability rules that Jefferson argued were developed by the patent board under the 1790 Act, and hence something more than simple novelty. That is to say, courts treated, in varying degree, changes of form or proportions, new uses for old machines or compositions of matter, and changes in material as merely different aspects of the “substantial novelty standard.”⁷³ He also makes the compelling point that the “analysis employed by the courts did not permit

⁶⁹ 29 F. Cas. 1074 (C.C.D.E. Pa. 1831) (No. 17,585).

⁷⁰ *Id.* at 1082.

⁷¹ *Id.* at 1080 (emphasis added).

⁷² Burchfiel, *supra* note 16, at 175. But Justice Baldwin did not actually declare that the patent power of Congress is plenary. What Justice Baldwin seemed most clearly to be saying is that the patent power is granted to Congress and not to the judiciary, and that courts may not substitute their judgment for that of Congress through “judicial legislation.”

⁷³ *Id.* at 195-206.

consideration of the degree of inventive skill required to make the change from the prior art, which was regarded as immaterial.”⁷⁴

In summary, the Patent Act of 1793 added a statutory provision beyond simple novelty as a condition of patentability. The courts, in turn, in construing this provision, developed the doctrine of equivalents as a “substantial novelty standard.” That is, whether an invention was deemed to be novel depended on whether it performed substantially the same function, in substantially the same manner, to obtain substantially the same result as the prior art. If it did, then it was not considered novel, regardless of the fact that it might be literally new. But the level of skill in the particular art was not addressed, and hence a critical component of the modern unobviousness standard was missing.

C. THE PATENT ACT OF 1836

The Act of 1836⁷⁵ changed the patent system from one of registration to what would become the basis for the modern patent examination system. Instead of a patent automatically issuing when the fee was paid and the ministerial requirements were met, the patent application would now be examined to determine, among other things, whether the applicant was the “original and first inventor, or discoverer” of the invention and whether “any part of that which is claimed as new had before been invented or discovered, or patented, or described in any printed publication in this or any foreign country.”⁷⁶ If it was determined that the invention was indeed new and that the applicant appeared to be the “original and first inventor,” the Commissioner of Patents established by the Act was authorized to issue the patent if he deemed the invention “sufficiently useful and important.”⁷⁷

This latter phrase was identical to that which had appeared in the 1790 Act,⁷⁸ and it potentially vested a great deal of discretion in the Patent Office, although there is nothing to indicate that the Office thereafter made any concerted effort to reject applications on the ground that the subject matter of the invention was not sufficiently useful and important to warrant a patent. Nor is there any indication that the Office ever promulgated rules for determining when the invention met this criterion. Further, no court has ever made any attempt to rely on this language as supporting an unobviousness standard for patentability. It

⁷⁴ *Id.* at 202.

⁷⁵ Act of July 4, 1836, ch. 357, 5 Stat. 117.

⁷⁶ *Id.* at 120.

⁷⁷ *Id.*

⁷⁸ See *supra* note 19 and accompanying text.

seems to have played little or no role in the determination of patentability under the 1836 Act.

Of potentially greater import was the deletion from the 1836 Act of the declaration in the 1793 Act that “simply changing the form or the proportions of any machine, or composition of matter, in any degree, shall not be deemed a discovery.”⁷⁹ It could certainly be argued that the failure to incorporate this language in the 1836 Act was indicative of a congressional intent that all that was required for patentability in addition to utility was simple novelty, but the Supreme Court did not see it that way. Thus in 1853 in *Winans v. Denmead*, the Court opined that regardless of whether it appeared in the statute, this language stands for “a principle which necessarily makes part of every system of law granting patents for new inventions.”⁸⁰

The net effect of this holding was to indicate that the “substantial novelty standard” as interpreted through the doctrine of equivalents was alive and well under the Act of 1836, although as the *Winans* Court candidly acknowledged that statutory language serving as a predicate for the underlying “principle” no longer existed in the 1836 Act.⁸¹ But this holding occurred after the *Hotchkiss* decision and thus was not authority for that decision or the standard set forth therein. Nor was there any case decided prior to 1850 or indeed some years thereafter under the Act of 1836 which applied an unobviousness standard in interpreting the statutory language.⁸²

⁷⁹ See *supra* note 36 and accompanying text.

⁸⁰ 56 U.S. (15 How.) 330, 341 (1854). The Court cited no authority for this remarkable holding. It suggested that there were certain principles of patentability that existed independent of either constitutional or statutory language. It also seemed to be directly contrary to the *Hotchkiss* unobviousness standard the Court had recently promulgated in that it indicated that no change in the form or proportions of a machine or composition of matter could be patentable, no matter how unobvious it might be to one skilled in the art to which the invention pertained.

⁸¹ *Id.*

⁸² One of the more remarkable aspects of the early treatment of the *Hotchkiss* standard was that its author, Justice Nelson, one year later refused to follow it in a circuit court opinion. In response to an argument in *McCormick v. Seymour*, 15 F. Cas. 1322 (C.C.N.D.N.Y. 1851) (No. 8,726), *rev'd on other grounds*, 57 U.S. (16 How.) 480 (1853) that improvements in a reaping machine were “so simple and obvious, that the claim, even admitting it to have been new and not before in use, is not the subject of a patent,” *id.* at 1323, he absolutely denied the existence of any such standard, saying:

Novelty and utility in the improvement seem to be all that the statute requires as a condition to the granting of a patent. If these are made out to the satisfaction of a jury, then the subject is patentable, and the inventor is entitled to the protection and benefit of the statute. Otherwise, he is not. That is, perhaps, the only general definition that can be given of the subject of a patent, and it is the only one that the law has given for our guide. The two questions, then, on this branch of the case, are—was this contrivance, as constructed by the patentee, new and not before known?—and, if so, is it useful? Both these questions being

Rather, there was a Supreme Court opinion issued in 1843, which, on its face, appeared to suggest that the Court had no authority whatever to set forth a standard for patentability such as that declared in *Hotchkiss*. Thus, in *McClurg v. Kingsland*⁸³ the Court declared that

the powers of Congress to legislate upon the subject of patents is plenary by the terms of the Constitution, and as there are no restraints on its exercise, there can be no limitation of their right to modify [the patent laws] at their pleasure, so that they do not take away the rights of property in existing patents.⁸⁴

While the statement that congressional patent power is “plenary” under the Constitution is much too broad,⁸⁵ it is apparent from the constitutional language that it is Congress that is given authority regarding patents,⁸⁶ and that Congress has wide discretion to set the terms and conditions of patentability subject only to any restraints imposed by the constitutional language. Nothing in that language appeared to give the courts authority to set patentability standards beyond those inherent in the Constitution itself or those enacted into law by Congress.

Since Congress had clearly enacted no statutory language requiring unobviousness for a patent to issue,⁸⁷ and in the 1836 Act had removed the only language in the 1793 Act that could reasonably be used to justify the “substantial novelty standard” that had been applied by the courts, there appears to have been no statutory basis whatever for the *Hotchkiss* unobviousness standard. Moreover, as Burchfiel rightly concludes, “Rather than constituting an extension of the patentability standard applied by the judiciary in the previous sixty years, *Hotchkiss* represented an abrupt departure from the earlier substantial novelty criterion.”⁸⁸ Was there nonetheless a constitutional predicate for it? It is to that issue we now turn.

answered in the affirmative, the case comes directly within the definition of the statute [i.e., the 1836 Act].

Id.

⁸³ 42 U.S. (1 How.) 202 (1843).

⁸⁴ *Id.* at 206. This also seemed clearly to suggest that the Court had no authority whatever to declare, as it did in *Winans*, that an express limitation on patentability set forth in the 1793 Act, which had been removed by Congress in the 1836 Act, was nonetheless a fundamental principle of patentability which Congress could not ignore. See *Winans v. Denmead*, 56 U.S. (15 How.) 330 (1854); *supra* text accompanying note 59.

⁸⁵ See *infra* text accompanying notes 89-95.

⁸⁶ U.S. CONST. art. I, § 8, cl. 8.

⁸⁷ Even though such a standard had been proposed by Thomas Jefferson in 1791, it had not been accepted by the Congress. See *supra* text accompanying notes 31-32.

⁸⁸ Burchfiel, *supra* note 16, at 202.

III. A CONSTITUTIONAL STANDARD OF PATENTABLE INVENTION

The patent power of Congress derives from a constitutional grant of authority "To promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their respective . . . Discoveries."⁸⁹ Let us dispose immediately of the declaration by the *McClurg* Court that this language renders the patent power "plenary," i.e., without limitation or restriction.⁹⁰ On its face, it does not and indeed cannot. And the Court quickly acknowledged as much, when only three years after *McClurg*, it stated that "[n]o authority is conferred [by the Constitution] to bestow exclusive rights on others than 'authors and inventors' themselves."⁹¹

If the patent power were indeed plenary, then Congress could define its own powers under the Patent Clause as it sees fit. In such circumstance, no longer would the Constitution be the "superior paramount power, unchangeable by ordinary means."⁹² Rather, the patent power would be "on a level with ordinary legislative acts, and like other acts, . . . alterable when the legislature shall please to alter it."⁹³ Under such an approach, "it is difficult to conceive of a principle that would limit congressional [patent] power."⁹⁴ But the Patent Clause does indeed constrain and limit the patent power of Congress, and as the *Graham* Court stated, it is only within "*the scope established by the Constitution*" that "Congress may set out conditions and tests for patentability."⁹⁵

To those accustomed to modern constitutional interpretation, it is remarkable how little effort was actually made in the first half of the nineteenth century to ascertain to what extent, if any, the language of the Patent Clause restrained or limited the patent power of Congress.⁹⁶ Accordingly, one may reasonably ask whether, prior to *Hotchkiss*, the Supreme Court had given any indication that the language of the Patent Clause could serve to limit the patent power of Congress? The answer is yes. As I have just pointed out, the Court in 1846 declared that the

⁸⁹ *Graham v. John Deere Co.*, 383 U.S. 1, 5, 148 U.S.P.Q. (BNA) 459, 462 (1966) (citing U.S. CONST. art. I, § 8, cl. 8).

⁹⁰ See *supra* text accompanying note 54.

⁹¹ *Wilson v. Rousseau*, 45 U.S. (4 How.) 646, 702 (1846).

⁹² *Marbury v. Madison*, 5 U.S. (1 Cranch) 137, 177 (1803).

⁹³ *Id.*

⁹⁴ *City of Boerne v. Flores*, 521 U.S. 507, 529 (1997).

⁹⁵ *Graham v. John Deere Co.*, 383 U.S. 1, 6, 148 U.S.P.Q. (BNA) 459, 462 (1966) (emphasis added).

⁹⁶ This failure to address the actual language of the Clause in any detail may account for views such as those expressed by Justice Baldwin in *Whitney v. Emmett* that it is "the exclusive province of the legislature" to determine patentability requirements. 29 F. Cas. 1074 (C.C.E.D. Pa. 1831) (No. 17,585). See *supra* text accompanying note 71.

Patent Clause precluded the authority of Congress to confer patents on other than the “inventors” of the patented subject matter.⁹⁷

Implicit in the use of the terms “Inventors” and “Discoveries” in the Patent Clause is the premise that before an exclusive right can be granted, the discovery to be patented must be novel.⁹⁸ The idea that novelty is a constitutional requirement is also implicit in the statement of purpose, i.e., “To promote the Progress of . . . useful Arts.”⁹⁹ But does the Clause require something more than simple novelty as a condition of patentability?

As early as 1824 in *Gibbons v. Ogden*¹⁰⁰ Chief Justice Marshall declared:

If, from the imperfection of human language, there should be serious doubts respecting the extent of any given power, it is a well settled rule, that the objects for which it was given, especially when those objects are expressed in the instrument itself, should have great influence in the construction.¹⁰¹

He went on to state: “We know of no rule for construing the extent of [congressional] powers, other than is given in the language of the instrument [i.e., the Constitution] which confers them, taken in [connection] with the purposes for which they were conferred.”¹⁰² Although Marshall was not speaking per se in the context of the language of the Patent Clause, the general views he expressed were clearly applicable to the interpretation of that Clause.

From the beginning of the nineteenth century, it was generally assumed that the purpose of the patent power given to Congress was “To promote the

⁹⁷ See *Graham*, 383 U.S. at 5; *supra* text accompanying note 89.

⁹⁸ This follows from the definitions of “inventor” and “discovery” that were in common use at the time the Constitution was drafted. Seidel points out that the most authoritative English Dictionary of its day was Samuel Johnson’s *A Dictionary of the English Language* and that the fourth edition of this dictionary, published in 1818, “carried] the word meanings of the late 1700’s.” Arthur H. Seidel, *The Constitution and a Standard of Patentability*, 48 J. PAT. OFF. SOC’Y 5, 10 (1966). According to Seidel, Johnson defined “inventor” as “one who produces something new; a deviser of something not known before,” and “discovery” as “the act of finding anything hidden, the act of revealing or disclosing a secret.” *Id.*

⁹⁹ Somewhat surprisingly, it was not until 1966 that the *Graham* Court so held, albeit in an indirect sense, when it stated: “Congress may not authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already [publicly] available.” 383 U.S. at 6. The requirement in the Patent Act of 1790 that to be patentable a discovery be “not before known or used” is simply an incorporation of the constitutional requirement of novelty.

¹⁰⁰ 22 U.S. (9 Wheat) 1 (1824).

¹⁰¹ *Id.* at 188-89.

¹⁰² *Id.* at 189.

Progress of Science and useful Arts” as expressly set forth in the Patent Clause.¹⁰³ In 1829 the Supreme Court in *Pennock v. Dialogue*¹⁰⁴ suggested that this phrase does more than merely set forth the purpose of the patent power when it held that a patent issued a number of years after the inventor had allowed the invention to go into public use was invalid because to permit this would “materially retard the progress of science and the useful arts.”¹⁰⁵ The import of this was that the phrase “To promote the Progress of Science and useful Arts” acts as a limitation on the patent power of Congress. That is to say, any exercise of the patent power in a manner that materially retards the progress of useful arts is constitutionally invalid. But the Court would have nothing more to say about this language for the rest of the century.¹⁰⁶

The first time the Court looked at the meaning of the phrase in any detail was in the so-called patent non-use cases. The issue first came before the Court in 1908 in *Continental Paper Bag Co. v. Eastern Paper Bag Co.*¹⁰⁷ wherein it was argued that an injunction against patent infringement could not lay because non-use of the patent by its owner violated the constitutional purpose of promoting the progress of useful arts.¹⁰⁸ Instead of specifically addressing this issue, the Court held only that Congress had selected another policy and held it in effect for a number of years.¹⁰⁹ It simply assumed that such a policy was beneficial and appropriate.

Implicit in this holding was an assumption that the “To promote” language did not obligate Congress to actually ensure that the subject matter of a patent would be put into use during the term of the patent grant. Forty-eight years later a divided Court would make the point clear in *Special Equipment Co. v. Coe* by reversing a lower court ruling invalidating a patent on the ground that non-use was contrary to the constitutional purpose.¹¹⁰ The majority noted congressional awareness of non-use and indicated that Congress could predicate validity upon use of the patented subject matter if it so chose.¹¹¹ But, they emphasized, “it by

¹⁰³ See, e.g., ST. GEORGE TUCKER, 1 BLACKSTONE’S COMMENTARIES: WITH NOTES OF REFERENCE TO THE CONSTITUTION AND LAWS OF THE UNITED STATES; AND OF THE COMMONWEALTH OF VIRGINIA app. n.D (Philadelphia, W.Y. Birch & A. Small 1803).

¹⁰⁴ 27 U.S. (2 Pet.) 1 (1829).

¹⁰⁵ *Id.* at 19.

¹⁰⁶ There was, however, both circuit court and Supreme Court language suggesting that the phrase “To promote the Progress of Science” limited the copyright power of Congress. See, e.g., *Higgins v. Keuffel*, 140 U.S. 428, 430 (1891); *Baker v. Selden*, 101 U.S. (11 Otto.) 99, 105 (1879); *Clayton v. Stone*, 5 F. Cas. 999 (C.C.S.D.N.Y. 1829) (No. 2,872).

¹⁰⁷ 210 U.S. 405 (1908).

¹⁰⁸ *Id.* at 422-23.

¹⁰⁹ *Id.* at 429-30.

¹¹⁰ 324 U.S. 370, 377, 64 U.S.P.Q. (BNA) 525, 529 (1945).

¹¹¹ *Id.* at 378. The majority pointed out that Congress had in fact chosen to do so in the Patent

no means follows” that a patent grant not so conditioned “is an inconsistent or inappropriate exercise of the constitutional authority of Congress ‘to promote the Progress of Science and useful Arts’ by securing to inventors ‘the exclusive Right to their . . . Discoveries.’”¹¹² Rather, Congress “could have concluded that the useful arts would be best promoted” by the statutory requirement of a full disclosure of the invention and the manner of making and using it.¹¹³ In other words, it was not use but full disclosure in a published patent that could be viewed as conforming to the constitutional purpose. Implicit in this holding is a determination that the statutory requirement for an enabling disclosure¹¹⁴ is constitutionally mandated by the phrase “To promote the Progress of Science and useful Arts.”

A dissent by Justice Douglas argued that: “The purpose ‘to promote the progress of science and useful arts’ . . . provides the standards for the exercise of the power and sets the limits beyond which it may not go.”¹¹⁵ In his view non-use was irreconcilable with these standards.¹¹⁶ Five years later in *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*¹¹⁷ he would expand on his views as to what those standards are. Before addressing those views, it is necessary to set more background by going back almost a decade to 1941.

Accepting that novelty is a constitutional requirement for patentability, we now return to the question of whether the constitutional language requires something more than simple novelty with regard to what may be declared to be a patentable invention. In the middle third of the twentieth century, two justices of the Supreme Court began, for the first time, to argue that there was.¹¹⁸ The first intimation of this view occurred in 1941 in *Cuno Engineering Corp. v. Automatic Devices Corp.*¹¹⁹ where Justice Douglas for the Court declared the invention in question not to be patentable because the inventor’s “skill in making this contribution” failed to reach “the level of inventive genius which the Constitution . . . authorizes Congress to reward.”¹²⁰ But he pointed to no particular language of the Patent Clause obligating a specific “level of inventive

Act of 1832 when it conditioned patents to aliens upon the use of the patented invention. *Id.*

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ See 35 U.S.C. § 112 (2000).

¹¹⁵ *Special Equip. Co.*, 324 U.S. at 381.

¹¹⁶ *Id.*

¹¹⁷ 340 U.S. 147, 87 U.S.P.Q. (BNA) 303 (1950).

¹¹⁸ This despite the fact that in 1891 the Court had declared that the term “invention” “cannot be defined in such manner as to afford any substantial aid in determining whether a particular device involves an exercise of the inventive faculty or not.” *McClain v. Ortmayer*, 141 U.S. 419, 427 (1891).

¹¹⁹ 314 U.S. 84, 51 U.S.P.Q. (BNA) 272 (1941).

¹²⁰ *Id.* at 91.

genius” before a patent could constitutionally issue. A year later, Justice Black, joined by Justice Douglas, dissenting in *Exhibit Supply Co. v. Ace Patents Corp.*,¹²¹ seemed to suggest that the constitutional meanings of “Inventors” and “Discoveries” were somehow dependent on how individual justices viewed the intrinsic value of the particular invention.¹²²

Fast forward now to 1950 when Justice Douglas (with Justice Black agreeing), concurring in *Great Atlantic & Pacific Tea Co.*, stated:

[E]very patent case involving validity presents a question which requires reference to a standard written into the Constitution. Article I, [Section] 8, contains a grant to the Congress of the power to permit patents to be issued. But, unlike most of the specific powers which Congress is given, that grant is qualified. The Congress does not have free rein, for example, to decide that patents should be easily or freely given. The Congress acts under the restraint imposed by the statement of purpose in Art. I, § 8. The purpose is “To promote the Progress of Science and useful Arts.” The means for achievement of that end is the grant for a limited time to inventors of the exclusive right to their inventions.

Every patent is the grant of a privilege of exacting tolls from the public. The Framers plainly did not want those monopolies freely granted. The invention, to justify a patent, had to serve the ends of science—to push back the frontiers of chemistry, physics, and the like; to make a distinctive contribution to scientific knowledge. That is why through the years the opinions of the Court commonly have taken “inventive genius” as the test.¹²³ It is not enough that an article is new and useful. The Constitution never sanctioned the patenting of gadgets. Patents serve a higher end—the advancement

¹²¹ 315 U.S. 126, 52 U.S.P.Q. (BNA) 275 (1942).

¹²² Justice Black stated that: “The Constitution authorizes the granting of patent privileges only to inventors who make ‘discoveries.’ . . . To call the device here an invention or discovery such as was contemplated by the Constitution . . . is, in my judgment, to degrade the meaning of those terms.” *Id.* at 138. But he did not attempt any definition of the meaning to be given to “Inventors” and “Discoveries” as used in the Patent Clause.

¹²³ This claim was more than a bit misleading. Cited in support of it were references to the phrases “inventive genius,” “genius or invention,” and “intuitive genius” in certain earlier opinions of the Court. See *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 155 & n.1, 87 U.S.P.Q. (BNA) 303, 307 & n.1 (1950) (Douglas, J., concurring). But none of these cases stated that “genius” of whatever sort constituted a constitutional requirement for patentability. The first reference by the Court to “inventive genius” as a constitutional test for patentability had occurred nine years earlier in *Cuno*. Indeed, *Cuno* was the first indication by the Court that it perceived *any* constitutional standard for patentability to exist. But see *supra* text accompanying notes 103-05.

of science. An invention need not be as startling as an atomic bomb to be patentable. But it has to be of such quality and distinction that members of the scientific field in which it falls will recognize it as an advance.¹²⁴

No one had ever before seriously contended that “a distinctive contribution to scientific knowledge” was the constitutional test for patentability. Besides reading the phrase “useful Arts” out of the Patent Clause, this test relied on a totally anachronistic interpretation of “Science” as used in the Patent Clause.¹²⁵

Not surprisingly, the views expressed by Justices Douglas and Black have been strongly criticized by most commentators.¹²⁶ Undismayed and undeterred by the torrent of criticism, Justice Douglas would stand by his position for the remainder of his stay on the Court.¹²⁷ Douglas was unable, however, to convince a majority of his peers, and the Court has declined to read into the Patent Clause any requirement that scientific advancement is a constitutional predicate for patentability.

The Court has, however, accepted the premise put forth by Justices Douglas and Black that the “to promote” language of the Patent Clause sets forth a constitutional standard of patentability. Thus in 1966 in *Graham*, the Court relied heavily on its interpretation of the phrase “To promote the Progress of . . . useful Arts” to support its view that there is a constitutional standard of invention that

¹²⁴ 340 U.S. at 154-55.

¹²⁵ Burchfiel calls it “[p]erhaps the most egregious recent example of judicial ‘[f]ailure to recognize the difference between modern and circa-1800 usage.’” See Burchfiel, *supra* note 16, at 214 (citing H. Jefferson Powell, *The Original Understanding of Original Intent*, 98 HARV. L. REV. 885, 896 n.56 (1985)).

¹²⁶ See, e.g., Burchfiel, *supra* note 16, at 214-15; Robert I. Coulter, *The Field of the Statutory Useful Arts*, 34 J. PAT. OFF. SOC’Y 487, 493 (1952); Albert B. Kimball, Jr., *An Analysis of Recent Supreme Court Assertions Regarding a Constitutional Standard of Invention*, 1 APLA Q. J. 204, 206 (1973); Karl B. Lutz, *Are the Courts Carrying Out Constitutional Public Policy on Patents?*, 34 J. PAT. OFF. SOC’Y 766, 789 (1952); Frank D. Prager, *Historic Background and Foundation of American Patent Law*, 5 AM. J. LEGAL HIST. 309 (1961); and Seidel, *supra* note 98, at 7-8. Cf. Edward S. Irons & Mary Helen Sears, *The Constitutional Standard of Invention—The Touchstone for Patent Reform*, 1973 UTAH L. REV. 653, 657 n.16 (1973) (calling the views expressed by Justice Douglas “much maligned, but obviously correct”).

¹²⁷ See, for example, his dissenting opinion in the memorandum case of *Schultz v. Moore*, 419 U.S. 930, 183 U.S.P.Q. (BNA) 383 (1974), in which he wrote:

Writing against the backdrop of abuses by the Crown in granting monopolies, the Framers did not intend these ‘exclusive rights’ to be granted freely. To justify the toll exacted by exclusivity, the invention had to make a distinctive contribution to the advancement of scientific knowledge. Besides novelty and utility, a distinctive contribution expanding the frontiers of scientific and industrial knowledge was demanded.

419 U.S. at 931.

must be met for there to be patentability. The Court began by noting that the qualified authority given to Congress with regard to the issuance of patents “is limited to the promotion of advances in the ‘useful arts,’ ”¹²⁸ and went on to state:

The Congress in the exercise of the patent power may not overreach the restraints imposed by the stated constitutional purpose. Nor may it enlarge the patent monopoly without regard to the innovation, advancement or social benefit gained thereby. Moreover, Congress may not authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available. Innovation, advancement, and things which add to the sum of useful knowledge are inherent requisites in a patent system which by constitutional command must “promote the Progress of . . . useful Arts.” This is the *standard* expressed in the Constitution and it may not be ignored. And it is in this light that patent validity “requires reference to a standard written into the Constitution.”¹²⁹

In so stating, the Court accepted the earlier view of Justices Douglas and Black that the Patent Clause sets forth a constitutional standard for patentable invention, but “clearly rejected any reading of the . . . clause that would require that an invention advance the frontiers of natural science”¹³⁰ in order to be patentable.

In 1969 the Court reiterated the views it had expressed in *Graham* but did nothing to amplify them or to explain them.¹³¹ Nor has it done so since then. In the Court’s view, something more than simple novelty is constitutionally required, but what that something is—aside from encompassing “innovation, advancement, and things which add to the sum of useful knowledge”¹³²—is unclear. Needless to say, these terms are not particularly helpful in defining a constitutional standard of patentable invention.¹³³

¹²⁸ *Graham v. John Deere Co.*, 383 U.S. 1, 5, 148 U.S.P.Q. (BNA) 459, 462 (1966).

¹²⁹ *Id.* at 6 (emphasis added) (citing *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 154, 87 U.S.P.Q. (BNA) 303, 306 (1950) (Douglas, J., Black, J., concurring)).

¹³⁰ Burchfiel, *supra* note 16, at 164.

¹³¹ *Anderson’s-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 61, 163 U.S.P.Q. (BNA) 673, 674 (1969).

¹³² See *supra* text accompanying note 128.

¹³³ While it is possible that this language can be interpreted as indicating that the unobviousness standard is the constitutional standard of invention, the failure of the Court to expressly so state when it had a strong incentive to do so mitigates against such an interpretation. See *infra* text accompanying notes 140-49.

The *Graham* Court did seek to lay to rest one issue, namely, whether the so-called “flash of genius” test for patentability was embodied in the Constitution. In the 1952 Patent Act, Congress declared that “[p]atentability shall not be negated by the manner in which the invention was made.”¹³⁴ According to the *Graham* Court, it “seems apparent that Congress intended” by this language “to abolish the test it believed this Court announced in the controversial phrase ‘flash of creative genius’ ” in *Cuno*.¹³⁵ If there was a certain “level of creative genius” required by the Constitution, as Justice Douglas’s opinion in *Cuno* certainly seemed to suggest, then Congress clearly did not have authority to negate such a requirement by statutory enactment, and any statutory language seeking to do so would be unconstitutional.

To avoid this problem, the *Graham* Court now sought to “explain” *Cuno* as nothing more than a “rhetorical embellishment” which “merely rhetorically restated the requirement that the subject matter sought to be patented must be beyond the skill of the calling.”¹³⁶ According to the *Graham* Court, in *Cuno* “[i]t was the device, not the invention, that had to reveal the ‘flash of creative genius.’ ”¹³⁷ Never mind that in *Cuno* the device *was* the invention.¹³⁸ Be that as it may, the *Graham* Court sought to indicate that the *Cuno* standard and the one set forth in the 1952 Patent Act were basically the same. In essence, patentable invention did not depend on the state of mind of the inventor, i.e., an invention, regardless of how made, was patentable as long as it was unobvious to one of ordinary skill in the art.

Despite the *Graham* Court’s failure to give any express indication of exactly what conditions for patentability are required by its interpretation of the phrase “To promote the Progress of . . . useful Arts,” various commentators¹³⁹ have inferred that unobviousness is one of them. Although the Court’s explanation of *Cuno* can be viewed as at least indirectly supporting such a view, the Court’s rather elaborate effort to justify the *Hotchkiss* unobviousness standard on other than

¹³⁴ 35 U.S.C. § 103 (2000). The Revisor’s Note to this section indicates that this sentence is intended to demonstrate that “it is immaterial whether [the invention] resulted from long toil and experimentation or from a flash of genius.” *Graham v. John Deere Co.*, 383 U.S. 1, 17 n.8, 148 U.S.P.Q. (BNA) 459, 466 n.8 (1966).

¹³⁵ 383 U.S. at 16.

¹³⁶ 383 U.S. at 15 n.7.

¹³⁷ *Id.*

¹³⁸ Instead of engaging in such semantics, the Court would have better served all concerned by never having mentioned this supposed distinction between “the device” and “the invention.”

¹³⁹ See, e.g., Burchfiel, *supra* note 16, at 191; Irons & Sears, *supra* note 126, at 657; Albert B. Kimball, Jr., *An Analysis of Recent Supreme Court Assertions Regarding a Constitutional Standard of Invention*, 1 AM. PAT. L. ASS’N Q. J. 204 (1973); Joel Rosenblatt, *The Constitutional Standard for “Ordinary Skill in the Art,”* 54 J. PAT. OFF. SOC’Y 435 (1972).

constitutional grounds provides strong evidence to the contrary. It is to that justification we now turn.

IV. JUSTIFYING THE *HOTCHKISS* UNOBVIOUSNESS STANDARD

If the *Graham* Court believed that the *Hotchkiss* unobviousness standard was constitutionally mandated, it could easily and straightforwardly have said so, particularly after it had declared that “To promote the Progress of . . . useful Arts” creates a constitutional standard for patentable invention which Congress may not ignore.¹⁴⁰ The fact that it chose not to do so, but instead relied entirely on its interpretation of Jefferson’s supposed views and an argument by negative implication concerning the lack of congressional action in setting more conditions for patentability than simple novelty and utility as justifying the *Hotchkiss* standard, is convincing evidence that it did not perceive that standard to be required by the constitutional language. Moreover, the Court made not even a pretense of justifying the *Hotchkiss* unobviousness standard on the basis of statutory interpretation in the first half of the nineteenth century.

Because the *Hotchkiss* Court had set forth no authority whatever for the unobviousness standard it had judicially declared, the *Graham* Court found itself in a quandary in attempting to establish a historical basis both for that unobviousness standard and for its interpretation of the Patent Clause as establishing a constitutional standard for invention¹⁴¹ beyond simply novelty. The Court did not particularly help matters by its declaration that the *Hotchkiss* standard “merely distinguished between new and useful innovations that were capable of sustaining a patent and those that were not.”¹⁴² The constitutional standard of invention it had just set forth was predicated on “[i]nnovation, advancement, and things which add to the sum of useful knowledge” as a constitutional requisite for patentability.¹⁴³ Clearly, any invention that is new, useful, and innovative produces an advance in the useful arts and adds to the sum of useful knowledge. What then is the predicate for the *Hotchkiss* unobviousness standard which according to the *Graham* Court merely distinguishes “between new and useful innovations” that are “capable of sustaining a patent” and those that do not?

¹⁴⁰ See *supra* text accompanying note 128.

¹⁴¹ The *Graham* Court pointed out that the language in *Hotchkiss* and the cases that followed “gave birth to ‘invention’ as a word of legal art signifying patentable inventions,” even though, as it observed, the term “cannot be defined in such a manner as to afford any substantial aid in determining whether a particular device involves an exercise of the inventive faculty or not.” 383 U.S. at 11-12.

¹⁴² *Id.* at 11.

¹⁴³ See *supra* text accompanying note 128.

The *Graham* Court noted that the ultimate determination in *Hotchkiss*, namely, that substitution of porcelain or clay for wood or metal in doorknobs did not constitute a patentable invention, “flows directly” from one of the rules followed by the patent board under the Act of 1790.¹⁴⁴ What the Court failed to point out was that this particular “rule” never was publicly disclosed while it supposedly was in effect, had never been incorporated into any subsequent statutory enactment, and apparently had never been followed in any judicial opinion at the time that *Hotchkiss* was decided.¹⁴⁵ Indeed, it is highly unlikely that the *Hotchkiss* Court was even aware that any such rule had ever existed during the brief period that the Patent Act of 1790 was in effect.

At best, however, this “rule” in its absolute form did not and could not render apparent the unobviousness standard because it precluded even unobvious changes in material from being patentable. The *Graham* Court thus had to look elsewhere to justify the *Hotchkiss* standard. But it had no contemporaneous documentation by any of the Framers to set forth their interpretation of the Patent Clause, nor did it have any other contemporaneous documentation, judicial or otherwise, interpreting the Patent Clause. Consequently, it turned to an imaginative—and in many ways incorrect—reconstruction of the views of Jefferson based on letters written over a period of twenty-six years as being indicative of the proper mode of interpretation of the Patent Clause.

The gist of its argument was that Jefferson (and presumably his contemporaries on the American scene) favored a high standard of patentability,¹⁴⁶ that Jefferson and the patent board which authorized patents under the 1790 Act believed that “the courts should develop additional conditions for patentability,” and that Congress apparently agreed with such an approach.¹⁴⁷ In the Court’s view, “[t]he *Hotchkiss* test laid the cornerstone of the judicial evolution suggested by Jefferson and left to the courts by Congress.”¹⁴⁸ In other words, contrary to the express language of the Constitution,¹⁴⁹ it is not Congress

¹⁴⁴ See 383 U.S. at 11 n.4.

¹⁴⁵ Burchfiel is somewhat more circumspect in stating that “the principle that mere substitution of one material for another was not patentable subject matter was not well-established in the American courts prior to *Hotchkiss*.” See Burchfiel, *supra* note 16, at 200-01. But in apparently the only American case to consider the issue, Justice Washington left it to the jury to decide whether a substitution of one material for another constituted patentable invention. See *Kneass v. Schuylkill Bank*, 14 F. Cas. 746, 747 (C.C.D. Pa. 1820) (No. 7,875).

¹⁴⁶ As the Court put it: “Jefferson did not believe in granting patents for small details, obvious improvements, or frivolous devices. His writings evidence his insistence upon a high level of patentability.” 383 U.S. at 9.

¹⁴⁷ *Id.* at 10.

¹⁴⁸ *Id.* at 11.

¹⁴⁹ “Congress shall have Power . . . To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings

but the courts that are empowered through judicial activism and legislative acquiescence to determine the conditions for patentability. The *Hotchkiss* unobviousness standard merely “laid the cornerstone” for the continuing development of this judicial activism in patent law.

The *Graham* Court’s reliance on the supposed role and views of Thomas Jefferson has been sharply challenged.¹⁵⁰ The challenge has been on a number of levels. The first is that, with the exception of his exchange of correspondence with James Madison in 1788 and 1789,¹⁵¹ none of his letters pertaining to patent matters ever mention the Patent Clause, much less seek to interpret it. Second, the assertion by the *Graham* Court that Jefferson “clearly recognized the social and economic rationale of the patent system”¹⁵² is belied by Jefferson’s own documentation. Rather, while he believed that the nation had an absolute right to have a patent system,¹⁵³ both early and late in his life he expressed a great deal of skepticism about its value to the republic.¹⁵⁴

Third, there is nothing whatever to indicate that the views held by Jefferson were those of the Framers themselves or those of either the first federal Congresses or the early federal judiciary,¹⁵⁵ or for that matter the general populace.¹⁵⁶ In this regard, the *Graham* Court completely ignored the rejection by the second federal Congress of Jefferson’s proposal that a good defense to

and Discoveries” (emphasis added). U.S. CONST. art. I, § 8, cl. 8.

¹⁵⁰ See Burchfiel, *supra* note 16, at 165-67, 209, 212; Edward C. Walterscheid, *The Use and Abuse of History: The Supreme Court’s Interpretation of Thomas Jefferson’s Influence on the Patent Law*, 39 IDEA 195 (1999).

¹⁵¹ The letters exchanged between Madison and Jefferson are available in 1 THE REPUBLIC OF LETTERS at 512, 545, 566, and 630 (James Martin Smith ed., 1995).

¹⁵² 383 U.S. at 9.

¹⁵³ See *id.* at 8-9 n.2.

¹⁵⁴ While the Court clearly recognized that in 1788 and 1789 Jefferson had opposed the Patent Clause, *id.* at 7-8, it failed completely to note that more than two decades later, in 1813 and 1814, he was still not convinced of either the usefulness or the desirability of the patent system. Thus, in his letter to McPherson in 1813, he expressed skepticism about the value of the patent system in the following terms: “[G]enerally speaking, other nations have thought that these monopolies produce more embarrassment than advantage to society; and it may be observed that the nations which refuse monopolies of invention, are as fruitful as England in new and useful devices.” 13 THE WRITINGS OF THOMAS JEFFERSON, *supra* note 30, at 334. In 1814, he reiterated his concern that, on balance, the abuses of the patent system through the issuance of what he called “frivolous” patents outweighed its benefit. Letter from Thomas Jefferson to Thomas Cooper (Jan. 16, 1814), in 14 THE WRITINGS OF THOMAS JEFFERSON at 62 (A.A. Lipscomb ed. 1903).

¹⁵⁵ Burchfiel, *supra* note 16, at 166-67.

¹⁵⁶ As Burchfiel put it: “By basing its analysis on the privately expressed personal views of a single historical figure and by extending those views to the historical American populace in general, the Court acted as if it were in possession of an eighteenth-century opinion poll without margin for error.” *Id.* at 212.

infringement should be that the invention “is so unimportant and obvious that it ought not to be the basis of an exclusive right.”¹⁵⁷

Fourth, the Court either misstated or overstated Jefferson’s role “and influence in the early development of the patent system.”¹⁵⁸ Thus it incorrectly asserted that Jefferson drafted the Patent Act of 1793.¹⁵⁹ The 1793 Act was materially different than the bill Jefferson had proposed, although it did contain a number of the new provisions he had sought.¹⁶⁰ But there is nothing whatever to suggest that Jefferson in any way influenced the conditions for patentability contained in the 1793 Act.¹⁶¹ Moreover, the fact that Jefferson may have influenced the content of the 1793 Act in other ways than with regard to conditions for patentability had no particular relevance to the issues addressed in *Graham*.

Finally, and most critically, the Court took certain of his statements out of context and drew quite inapposite and incorrect conclusions therefrom. Thus it quoted one sentence from an 1813 letter by Jefferson and totally ignored the sentences immediately following. What Jefferson actually wrote was:

[Patent] investigations occupying more time of the members of the board than they could spare from higher duties, the whole was turned over to the judiciary, to be matured into a system, under which every one might know when his actions were safe and lawful. Instead of refusing a patent in the first instance, as the board was

¹⁵⁷ WALTERSCHEID, *supra* note 24, at 200-06. According to Burchfiel, “[t]he legal evidence is uncontradicted that in rejecting Jefferson’s proposals, including a statutory nonobviousness standard, the second Congress disavowed the proposition that a high standard of patentability was required by the plain meaning of the patent clause or by the original intent of the constitutional framers.” Burchfiel, *supra* note 16, at 209.

¹⁵⁸ 383 U.S. at 7.

¹⁵⁹ *Id.* As I have shown elsewhere, while Jefferson influenced the content of the 1793 Act, he did not draft it. See Walterscheid, *supra* note 150, at 202-16.

¹⁶⁰ Thus, it contained the Jeffersonian proposals that: (1) patents issue on payment of a set fee into the Treasury; (2) the petition be for an exclusive property in the invention; (3) compositions of matter be patentable; (4) the petitioner provide the description to be incorporated into the patent; (5) state patents obtained prior to the particular state’s ratification of the Constitution be invalidated upon receipt of a federal patent for the same invention; and (6) the patent to issue when the petitioner paid the fee and conformed to the ministerial requirements. *Id.* at 211-12.

¹⁶¹ The requirement that the invention be “new and useful” was present in the 1790 Act. The declaration in the 1793 Act that “simply changing the form or the proportions of any machine, or composition of matter, in any degree, shall not be deemed a [patentable] discovery” was not in Jefferson’s bill, and there is nothing to suggest that Jefferson actually proposed it for inclusion in the 1793 Act. As I have indicated earlier in this Article, it is quite possible and even probable that this declaration came from a proposal published by Joseph Barnes in Philadelphia in 1792. See *supra* note 39 and accompanying text.

authorized to do, the patent now issues of course, subject to be declared void on such principles as should be established by the courts of law. This business, however, is but little analogous to their course of reading, since we might in vain turn over all the lubberly volumes of the law to find a single ray which would lighten the path of the mechanic or the mathematician. It is more within the information of a board of academical professors, and a previous refusal of patent would better guard our citizens against harassment by lawsuits. But England had given it to her judges, and the usual predominancy of her examples carried it to ours.¹⁶²

Here Jefferson is discussing the registration system under the 1793 Act and his concerns about it. He is suggesting that it would be better to return to an examination system, albeit one different than that under the 1790 Act. The last sentence is both an example of Jefferson's continued anglophobia and an effort to avoid any responsibility for the registration system under the 1793 Act, even though he had been a major advocate of that system and the person primarily responsible for its adoption by Congress.¹⁶³ In this same letter, he candidly acknowledges that he is taking this opportunity to set forth his views on the patent law as a means of both justifying himself and distancing himself from the Act of 1793, "my name and approbation being ascribed to [that] act."¹⁶⁴

Contrary to the conclusion reached by the *Graham* Court, neither Jefferson nor the patent board thought it was "desirable that the courts should develop additional conditions for patentability."¹⁶⁵ No one on the patent board other than Jefferson ever wrote or said a word on the subject, and the *Graham* Court relied only on the first sentence of the long passage quoted above.¹⁶⁶ By taking this sentence out of context, the Court ascribed a meaning to Jefferson's words that was diametrically opposite to that demonstrated by the passage taken as a whole. Rather than believing that courts should develop rules of patentability, Jefferson clearly thought that judges were ill-equipped for this responsibility. Moreover, in later correspondence, Jefferson sought to emphasize this point, arguing that "when so new a branch of science has been recently engrafted on our jurisprudence, one with which its professors have till now had no call to make

¹⁶² 13 THE WRITINGS OF THOMAS JEFFERSON, *supra* note 30, at 337-38.

¹⁶³ A basic tenet of Jefferson's 1791 patent bill had been a switch from examination to registration. He had in April 1792 also begged Congress to be relieved from his duties as a member of the patent board. See Letter from Thomas Jefferson to Hugh Williamson (Apr. 1, 1792), in 23 THE PAPERS OF THOMAS JEFFERSON at 363 (Julian P. Boyd et al. eds., 1992).

¹⁶⁴ 13 THE WRITINGS OF THOMAS JEFFERSON, *supra* note 30, at 338.

¹⁶⁵ *Graham v. John Deere Co.*, 383 U.S. 1, 10, 148 U.S.P.Q. (BNA) 459, 464 (1966).

¹⁶⁶ *Id.*

themselves acquainted, one bearing little analogy to their professional educations or pursuits,"¹⁶⁷ one or two decisions before inferior and local tribunals should not act as precedent to "forever foreclose the whole of a new subject."¹⁶⁸

Thus the first of the two basic premises underlying the *Graham* Court's justification for the *Hotchkiss* unobviousness standard, namely that Jefferson and the patent board favored judicial development of additional standards for patentability over and above those set by statute,¹⁶⁹ is based on incorrect and misleading interpretations of Jefferson's actual views. The second basic premise, namely that Congress apparently agreed that the courts should develop such additional standards, is also fundamentally flawed. It was developed by the Court by negative implication, namely, that despite the fact that "the Patent Act was amended, revised or codified some 50 times between 1790 and 1950, Congress steered clear of a statutory set of requirements other than the bare novelty and utility tests reformulated in Jefferson's draft of the 1793 Patent Act," and consequently "apparently" agreed with Jefferson and the patent board "that the courts should develop additional conditions for patentability."¹⁷⁰

Why the failure of Congress to set a higher standard of patentability over a long period of time than simple novelty and utility is deemed to be proof that Congress had chosen to defer to judicial activism to set additional standards for patentability is not apparent or obvious. The *Graham* Court cited no authority for this remarkable conclusion, as indeed it could not, for there is none.¹⁷¹ Moreover,

¹⁶⁷ Although using a scholarly analogy, Jefferson was referring to judges.

¹⁶⁸ Letter from Thomas Jefferson to Oliver Evans (Jan. 16, 1814), in 14 THE WRITINGS OF THOMAS JEFFERSON, *supra* note 154, at 67.

¹⁶⁹ 383 U.S. at 10.

¹⁷⁰ *Id.* The Court failed to indicate the relevance of codifications, revisions, or amendments to the patent law made after 1850 as somehow supporting its view that Congress "agreed" that courts should set conditions for patentability above and beyond those which Congress had set in 1790. It can more plausibly be argued that the failure of Congress to incorporate the *Hotchkiss* unobviousness standard into the patent statutes until 100 years later indicated a congressional disagreement with this judicially created standard. In this regard:

There are vast differences between legislating by doing nothing and legislating by positive enactment, both in the processes by which the will of Congress is derived and stated and in the clarity and certainty of the expression of its will. And there are many reasons, other than to indicate approval of what the courts have done, why Congress may fail to take affirmative action to repudiate their misconstruction of its duly adopted laws. Among them may be the sheer pressure of other and more important business. . . . [T]here may be a strong and proper tendency to trust to the courts to correct their own errors

Cleveland v. United States, 329 U.S. 14, 22-23 (1946) (Rutledge, J., concurring) (footnotes and internal citations omitted).

¹⁷¹ It is difficult to perceive on what ground Congress, being inherently protective of its legislative prerogatives, would ever agree that the courts should act in its place to develop standards for

as Pollack points out, “[a]t best, congressional nonaction is ambiguous evidence; more commonly, it has no probative value whatever.”¹⁷² Instead, the Court has repeatedly stated “to give weight to the nonaction of Congress [is] to venture into speculative unrealities.”¹⁷³ Rather, “[a]s a general matter, [the Court is] reluctant to draw inferences from Congress’[s] failure to act.”¹⁷⁴

What made all the more ironic the *Graham* Court’s conclusion that Congress chose to defer to the courts to set additional conditions for patentability over and above simple novelty and utility is that the Court, earlier in its opinion, had declared: “Within the scope established by the Constitution, Congress may set out conditions and tests for patentability.”¹⁷⁵ Bear in mind that the Court carefully refrained from declaring that the constitutional standard of invention it determined to be required by the phrase “To promote the Progress of . . . useful Arts” sets forth a constitutional requirement for the *Hotchkiss* unobviousness standard. Thus Congress had clearly acted within its constitutional authority in declining to adopt an unobviousness standard in 1791 and for the next 160 years.

V. CONCLUSIONS

On its face, the unobviousness standard set forth almost in passing in *Hotchkiss* appears to be a classic example of “judicial legislation” in the patent law that was so roundly condemned by Justice Baldwin in 1831.¹⁷⁶ The *Hotchkiss* Court provided no citation of authority for its unobviousness standard because there was none. The Patent Acts of 1790, 1793, and 1836 said not a word about such a standard. Moreover, in enacting the 1793 Act, Congress declined to include a proposal put forth by Jefferson in 1791 that could have been interpreted to provide statutory authority for such a standard.¹⁷⁷ While there was language in

patentability. And indeed it never has. As the legislative history of the 1952 Act made clear, the unobviousness standard was incorporated merely to codify a condition that had existed for more than 100 years, but “only by reason of court decisions” and not by congressional desire or intent.

See *supra* note 9.

¹⁷² Malla Pollack, *Originalism, J.E.M., and the Food Supply, or Will the Real Decision Maker Please Stand Up*, 19 J. ENVTL. L. & LITIG. 495, 513 (2004).

¹⁷³ See *FTC v. Dean Foods Co.*, 384 U.S. 597, 610 n.11 (1966) (quoting *Helvering v. Hallock*, 309 U.S. 106, 120 (1940)) (internal quotation marks omitted); see also *Helvering v. Hallock*, 309 U.S. 106, 113-21 (1940) (discussing list of cases supporting nonprobative value of congressional inaction). Cf. *Dep’t of the Navy v. Egan*, 484 U.S. 518 (1988) (majority reliance on congressional nonaction).

¹⁷⁴ *Brecht v. Abrahamson*, 507 U.S. 619, 632 (1993) (internal quotation marks and string of supporting citations omitted).

¹⁷⁵ 383 U.S. at 6.

¹⁷⁶ See *Whitney v. Emmett*, 29 F. Cas. 1074 (C.C.E.D. Pa. 1831) (No. 17,585); *supra* text accompanying note 71.

¹⁷⁷ See *supra* text accompanying notes 31-32.

the 1793 Act that might be construed to provide a basis for the substantial novelty approach given sanction by several Justices in their capacity as circuit court judges,¹⁷⁸ this language was not carried over into the 1836 Act.¹⁷⁹

The substantial novelty approach, which is predicated on the doctrine of equivalents,¹⁸⁰ can be viewed as a significant step toward the development of the unobviousness standard,¹⁸¹ but it was still a long way from that standard. The critical difference is that whether unobviousness exists is dependent on the level of skill in relevant art, whereas that level of skill has no relevance to the substantial novelty approach. As Justice Story put it in 1825, in response to an argument that to be patentable an invention had to be unobvious “to all persons skilled in the art,” all that was literally required under the 1793 Act was that the invention be new and useful and not before known or used.¹⁸²

There was thus nothing in the patent acts prior to 1850 or in their judicial interpretation that supported the *Hotchkiss* unobviousness standard. Nor was there anything in the judicial interpretations that had been afforded to the constitutional language prior to 1850 that in any way supported such an interpretation. The arguments presented to the *Hotchkiss* Court by the parties did not make any mention of the constitutional language,¹⁸³ and the Court did not mention it in its opinion. But seven years earlier the *McClurg* Court had declared that the patent power of Congress was “plenary by the terms of the Constitution.”¹⁸⁴ If this was indeed the case, then the Constitution provided no authority whatever for an unobviousness standard to be required by the judiciary.

While there were in fact constitutional limitations on the patent power as the Court had at least implicitly indicated in 1829¹⁸⁵ and again in 1846,¹⁸⁶ nothing the Court had said about the Patent Clause prior to 1850 in any way suggested that the *Hotchkiss* unobviousness standard was constitutionally required. Although the Court had indicated in 1829 that the phrase “To promote the Progress of Science and useful Arts” precluded Congress from authorizing patents that served to

¹⁷⁸ See generally *supra* text accompanying notes 33-60.

¹⁷⁹ But while candidly admitting this to be the case, the Supreme Court in 1853 declared that the principle that a patent cannot be granted merely for a change of form is necessarily a “part of every system of law granting patents for new inventions.” See *supra* text accompanying note 59. The Court did not, however, provide any explanation of why this is necessarily the case.

¹⁸⁰ See *supra* text accompanying notes 43-58.

¹⁸¹ See *supra* text following note 60.

¹⁸² See *supra* text accompanying notes 61-66.

¹⁸³ For the arguments of counsel, see *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 250-62 (1851).

¹⁸⁴ See *supra* text accompanying notes 83-84.

¹⁸⁵ See *supra* text accompanying notes 103-06.

¹⁸⁶ See *Wilson v. Rousseau*, 45 U.S. (4 How.) 646, 702 (1846); *supra* text accompanying note 91.

“materially retard the progress of science and the useful arts,”¹⁸⁷ it had done nothing to affirmatively declare that this phrase might somehow serve to require more than utility and simple novelty as required conditions for patentability.¹⁸⁸

It was not until 1966 that the Supreme Court in *Graham* declared that this phrase sets forth a constitutional standard of invention which Congress may not ignore.¹⁸⁹ While this constitutional standard can be interpreted as requiring something more than simple novelty, as, for example, something akin to the substantial novelty approach under the 1793 Act, the *Graham* Court carefully refrained from stating that it obligates Congress to treat unobviousness as a constitutional requirement for patentability. Had it done so, the *Graham* Court could readily and easily have justified the *Hotchkiss* unobviousness standard as being required by the phrase “To promote the Progress of . . . useful Arts.” Instead it sought to rely on a strained and incorrect interpretation of the views of Thomas Jefferson and the patent board under the 1790 Patent Act as indicating that the courts should develop additional conditions for patentability.¹⁹⁰ The Court coupled this with a contention, developed by negative implication, that Congress agreed that this should be the case.¹⁹¹ Yet both before and after its *Graham* opinion, the Court has “cautioned that courts ‘should not read into the patent laws limitations and conditions which the legislature has not expressed.’ ”¹⁹²

The mere fact that the *Graham* Court felt obligated to rely on such a strained argument as justifying the *Hotchkiss* unobviousness standard is strong and convincing evidence that the Court did not perceive that standard to be required by the constitutional language.¹⁹³

In adopting the inaccurate twin premises that Jefferson and the Congress both desired that the courts should create additional standards for patentability, the *Graham* Court appears to have been casting about for anything that could be perceived to justify the judicial activism engaged in by the *Hotchkiss* Court. Although both premises are rather demonstrably incorrect, does anything change

¹⁸⁷ See *supra* text accompanying note 105.

¹⁸⁸ Although the requirement for an enabling disclosure can be viewed as arising out of this language. See *supra* text accompanying notes 110-14.

¹⁸⁹ See *supra* text accompanying note 129.

¹⁹⁰ See *supra* text accompanying note 146.

¹⁹¹ See *supra* text accompanying note 171.

¹⁹² *Diamond v. Chakrabarty*, 447 U.S. 303, 308, 206 U.S.P.Q. (BNA) 193, 196 (1980) (quoting from *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 199 (1933)).

¹⁹³ Cf. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151, 9 U.S.P.Q.2d (BNA) 1847, 1852 (1989) (“The novelty and nonobviousness requirements of patentability embody a congressional understanding, implicit in the Patent Clause itself, that free exploitation of ideas will be the rule, to which the protection of a federal patent is the exception.”).

if they are in fact correct? The answer is no. Jefferson's views, while interesting, are not—and have never been held to be—determinative that judicial authority to legislate in the patent arena exists.¹⁹⁴ Likewise the separation of powers doctrine precludes Congress, even if it desired to do so, from transferring its legislative authority to the courts. While the courts have authority to interpret both statutes and constitutional provisions, they have no authority under the Constitution to create legal standards that are exclusively within the domain of Congress. Yet that is exactly what the Supreme Court did in *Hotchkiss*.

Is there reason to expect additional judicial activism in the patent law of the type engaged in by the *Hotchkiss* Court and sanctioned by the *Graham* Court? Hopefully not. Six years after *Graham*, the Court in *Deepsouth Packing Co. v. Laitram Corp.*¹⁹⁵ declared that: "The direction of Art. I [§ 8, cl. 8] is that Congress shall have the power to promote the progress of science and the useful arts. When, as here, the Constitution is permissive, the sign of how far Congress has chosen to go can come only from Congress."¹⁹⁶ This, coupled with the statement in *Graham* itself that "[w]ithin the scope established by the Constitution, Congress may set out conditions and tests for patentability,"¹⁹⁷ is suggestive that the Court may not be as comfortable with the idea that the judiciary is somehow authorized to set out additional conditions for patentability over and above those established by Congress as its *Graham* opinion appears to indicate.

Indeed, if recent case law out of the Court is any indication, then the judicial pendulum has swung from the judicial activism sanctioned in *Graham* to a position of extreme judicial deference to Congress insofar as its patent and copyright authority is concerned. Thus, in *Eldred v. Ashcroft*¹⁹⁸ the Court has now declared that Congress is empowered "to determine the intellectual property regimes that, overall, in that body's judgment, will serve the ends of the [Patent and Copyright] Clause,"¹⁹⁹ and "to define the scope of the substantive right" authorized by the Clause.²⁰⁰ According to the *Eldred* Court, "[j]udicial deference to such congressional definition is 'but a corollary to the grant of any Article I power.'"²⁰¹ Had the Court held such views in 1966 when the *Graham* opinion issued, it is difficult to perceive on what basis it could have supported the judicial activism of the *Hotchkiss* Court.

¹⁹⁴ The *Graham* Court carefully refrained from any holding that Jefferson's views are determinative of judicial authority to set conditions for patentability.

¹⁹⁵ 406 U.S. 518, 173 U.S.P.Q. (BNA) 769 (1972).

¹⁹⁶ *Id.* at 530 (emphasis in original).

¹⁹⁷ *Graham v. John Deere Co.*, 383 U.S. 1, 6, 148 U.S.P.Q. (BNA) 459, 462 (1966).

¹⁹⁸ 537 U.S. 186, 65 U.S.P.Q.2d (BNA) 1225 (2003).

¹⁹⁹ *Id.* at 222.

²⁰⁰ *Id.* at 218 (emphasis in original).

²⁰¹ *Id.* (citing to *Graham*, 383 U.S. at 6).

