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Nonobviousness in Patent Law: A Question of Law or Fact?

NONOBVIOUSNESS IN PATENT LAW: A QUESTION OF LAW OR FACT?

Section 103 of the Patent Act of 1952[1] provides that an object can be patented only if it represents an improvement in the prior art that would not have been obvious to a person having ordinary skill in that art at the time the invention was made, in short, that would not have been obvious to the ordinary artisan. Whether the issue of obviousness, as defined by section 103, is an issue of law,[2] an issue of fact,[3] or a mixed issue of law and fact[4] is a controversy, the resolution of which is significant to patent litigation because it affects the allocation of responsibilities between the court and jury[5] and determines the scope of judicial review.[6]

The Court of Appeals for the Fourth Circuit attempted to deal with this issue in *Tights, Inc. v. Acme-McCrary Corp.*[7] One of the questions decided by the court was whether it was proper to submit an interrogatory requesting the jury to make a general finding as to the obviousness of a patented type of pantyhose.[8] The appellants,

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1. 35 U.S.C. § 103 (1970). This section provides:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, 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. Patentability shall not be negatived by the manner in which the invention was made.

2. Issues of law are those concerning the existence, scope, meaning or constitutionality of a rule or standard prescribed by the state. Green, *Fact and Law in Judicial Review*, 56 HARV. L. REV. 899, 901 (1943).

3. Issues of fact are those considering what actually has happened or existed. These issues can be resolved without reference to a legal standard. *Id.*

4. Mixed issues of law and fact are those requiring application of a set of facts to a legal standard. For further discussion and varying definitions of these concepts, *see generally* Bohlen, *Mixed Questions of Law and Fact*, 72 U. PA. L. REV. 111 (1924); Brown, *Fact and Law in Judicial Review*, 56 HARV. L. REV. 899 (1943); Green, *Mixed Questions of Law and Fact*, 15 HARV. L. REV. 271 (1901); Morris, *Law and Fact*, 55 HARV. L. REV. 1303 (1942); Paul, *Dobson v. Commissioner: The Strange Ways of Law and Fact*, 57 HARV. L. REV. 753 (1944).

5. Traditionally, issues of law are decided by the court and issues of fact are decided by the jury. Issues involving a mixed question of law and fact normally are decided by the jury but the court plays an important and sometimes decisive role in this process when it defines the meaning of the statute or rule to which the facts must be applied. C. WRIGHT, LAW OF FEDERAL COURTS §§ 95-96 (2d ed. 1970).

6. Determinations of fact made by a jury will not be overturned if supported by substantial evidence. Fact determinations made by a court are set aside only if clearly erroneous. Questions of law are fully reviewable on appeal. Green, *supra* note 2, at 899.

7. 541 F. 2d 1047 (4th Cir.), *cert. denied sub nom.* Kayser-Roth Corp. v. Tights, Inc., 45 U.S.L.W. 3400 (U.S. Nov. 30, 1976) (No. 76-508).

8. The interrogatory was:

maintaining that obviousness was an ultimate question of law, argued that the jury should have been allowed to decide only the factual questions related to this issue[9] and should not have been allowed to draw the ultimate conclusion of obviousness. The court of appeals rejected this argument, noting that although obviousness is ultimately a question of law, important factual inquiries also must be made.[10] Because both legal and factual issues had to be resolved, the court treated obviousness as a mixed question of law and fact, thus indicating that the issue could be submitted to the jury if the jury were instructed properly as to the applicable legal standard.[11]

Tights represents one court's attempt to resolve widely divergent precedent on the nature of the obviousness issue. This Comment will examine the historical development of the nonobviousness standard and the invention standard, the judicially developed precursor of the nonobviousness standard, and analyze the critical differences between the two. It is submitted not only that the nonobviousness test supersedes the older standard of invention, but also that the determination of whether an invention is obvious is a question of fact to be decided by the finder of fact and, as such, is subject to limited appellate review.[12]

NONOBVIOUSNESS AND INVENTION: A COMPARISON OF THE STANDARDS

Invention

The three basic standards of patent validity are novelty, utility and nonobviousness.[13] Courts consistently have held that the issues of novelty and utility are issues of fact.[14] The issue of obviousness,

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> whether [the jury] "found the differences between the claim in the Rice Patent and the prior art [were] such that the subject matter of the claim 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 the subject matter of the claim pertained."

Id. at 1054.

9. *Id.* at 1051. The appellants maintained that interrogatories should have been submitted to the jury, forcing them to make specific determinations on the scope and content of the prior art, on the differences between the prior art and the claim at issue, and on the level of skill of the ordinary workmen in the hosiery field. *Id.*

10. *Id.* at 1060.

11. *Id.*

12. *See* note 6 *supra.*

13. 35 U.S.C. §§ 101-03 (1970).

14. Graver Tank & Mfg. Co. v. Linde Air Prod. Co., 339 U.S. 605, 609 (1950) (novelty); Bischoff v. Wethered, 76 U.S. (9 Wall.) 812, 814 (1869) (novelty); Turrill v. Michigan S. &

however, has been treated as an issue of law,[15] an issue of fact,[16] and as a mixed issue of law and fact.[17] The present confusion over the characterization of the question of obviousness results from a failure to differentiate between the standard of obviousness and the older standard of invention section 103 was designed to replace.

Prior to the adoption of the Patent Act of 1952, novelty and utility were the only legislatively recognized standards of patentability. The courts, however, had developed a third standard for determining patentability: the standard of invention, requiring that patentable objects represent an inventive rather than a mere mechanical advancement over the prior art. The standard of invention originated in *Hotchkiss v. Greenwood*[18] in which the Supreme Court held that a patent could not be obtained for doorknobs that differed from the prior art only by being constructed of a different material. The Court held such a change to be "destitute of ingenuity or invention,"[19]and indicated that invention existed only in an advancement requiring "more ingenuity and skill . . . than [that] possessed by an ordinary mechanic acquainted with the business."[20]

Subsequent decisions affirmed that invention was a prerequisite of patentability.[21] The concept of invention proved difficult to define, however,and the Supreme Court ultimately admitted that the term could not be defined in a manner that would "afford any substantial aid in determining whether a particular device involves

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N. Ind. R.R. Co., 68 U.S. (1 Wall.) 491, 512 (1863) (novelty); Laitram Corp. v. Deepsouth Packing Co., 443 F.2d 928, 932-33 (5th Cir. 1971) (novelty); Swofford v. B & W, Inc., 395 F.2d 362, 364 (5th Cir.), *cert. denied*, 393 U.S. 935 (1968) (utility); Harley C. Loney Co. v. Ravenscroft, 162 F.2d 703, 704 (7th Cir. 1947) (utility); Gordon Form Lathe Co. v. Ford Motor Co., 133 F.2d 487, 496-97 (6th Cir.), *aff'd per curiam*, 320 U.S. 714 (1943) (utility).

15. *See, e.g.*, Koppers Co. v. S & S Corrugated Paper Mach. Co., 517 F.2d 1182, 1188 n.2 (2d Cir. 1975); Flour City Arch. Metals v. Alpana Aluminum Prod. Inc., 454 F.2d 98, 103-06 (8th Cir. 1972); Shaw v. E.B. & A.C. Whiting Co., 417 F.2d 1097, 1102 (2d Cir. 1969), *cert. denied*, 397 U.S. 1076 (1970).

16. *See, e.g.*, Moore v. Shultz, 491 F.2d 294, 300 (10th Cir.), *cert. denied*, 419 U.S. 930 (1974); Eimco Corp. v. Peterson Filters & Eng. Co., 406 F.2d 431, 436 (10th Cir. 1968), *cert. denied*, 395 U.S. 963 (1969).

17. Stieg v. Commissioner, 353 F.2d 899 (D.C. Cir. 1965).

18. 52 U.S. (11 How.) 248 (1850). One commentator, however, has argued that invention did not actually emerge as a separate standard of patentability until Collar Co. v. Van Dusen, 90 U.S. (23 Wall.) 530 (1875). *See* Kitch, *Graham v. John Deere Co.: New Standards for Patents*, 1966 SUP. CT. REV. 293, 303-27.

19. 52 U.S. (11 How.) at 265.

20. *Id.* at 266.

21. *See, e.g.*, Thompson v. Boisselier, 114 U.S. 1, 11 (1885); Smith v.Nichols, 88 U.S. (21 Wall.) 112, 119 (1875).

an exercise of the inventive faculty."[22] Nevertheless, courts continued to insist that the existence of invention was necessary to obtain a valid patent. Despite the vagueness of the invention standard, the Supreme Court, with one exception,[23] treated the standard as a question of fact.[24] The Court specifically stated in one case that "[t]he question whether an improvement requires mere mechanical skill or the exercise of the faculty of invention, is one of fact; and in an action at law for infringement is to be left to the determination of the jury."[25]

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22. McClain v. Ortmayer, 141 U.S. 419, 427 (1891). To facilitate a determination of invention, the courts developed a number of rules that could be applied to various facts. Although these rules helped to clarify the concept of invention, they did not solve the problem totally. Because the rules were intended only to provide guidance and direction, inquiry remained focused on finding invention itself and not on merely satisfying the applicable rules. The following list of rules is specified in 2 A. DELLER, DELLER'S WALKER ON PATENTS § 106, at 75 (2d ed. 1964):

> The affirmative rules, which generally indicate the presence of "invention" include the following:—[1] a long-felt want for the invention in question; [2] an outstanding unsolved problem; [3] successful efforts of the inventor over unsuccessful efforts of those skilled in the art; [4] recognition and public acquiescence in the matter of the validity of the patent; [5] economy, efficiency or other advantage, including new, improved, unexpected, or contra-indicated results; [6] prompt and general adoption of the invention; [7] new combination of elements; [8] turning a halt in the art into progress again; [9] turning failure into success; and [10] taking the last step as the last step wins.
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> Negative rules, which generally indicate the absence of "invention" include the following:—[1] mere exercise of skill expected of a person having ordinary skill in the art; [2] substitution of materials or elements; [3] change of location, size, degree and form; [4] reversal of parts; [5] unification or multiplication of parts; [6] making old devices adjustable, durable, portable, or movable; [7] change of proportion; [8] duplication of parts; [9] omission of parts with a corresponding omission of function; [10] substitution of equivalents; [11] new use for a new and analogous purpose; [12] conversion of manual to a mechanical operation; [13] superior or excellent workmanship; and [14] aggregation.

23. Mahn v. Harwood, 112 U.S. 354 (1884). The case was decided at a time when appellate courts in equity cases freely reviewed issues of fact as well as law. Moreover, the statement that invention is an issue of law appears as dictum. *Id.* at 358. *Mahn*, therefore, is not good authority for the proposition that invention is an issue of law. *See* Editorial Note, *Appellate Review of Finding of Invention*, 20 GEO. WASH. L. REV. 605, 608-09 (1952); Comment, *Appellate Review of Determinations of Patentable Inventions*, 29 U. CHI. L. REV. 185, 186 n. 16 (1961).

24. Thomson Spot Welder Co. v. Ford Motor Co., 265 U.S. 445, 446 (1924). *Cf.* Dow Chem. Co. v. Halliburton Oil Well Cementing Co., 324 U.S. 320, 322 (1945) (validity and infringement are issues of fact); Williams Mfg. Co. v. United Shoe Mach. Corp., 316 U.S. 364, 367 (1942) (by implication); United States v. Esnault-Pelterie, 299 U.S. 201, 204-05 (1936) (validity and infringement are issues of fact).

25. Thomson Spot Welder Co. v. Ford Motor Co., 265 U.S. 445, 446 (1924).

The Court continued to treat invention as an issue of fact until its 1950 decision, *Great Atlantic and Pacific Tea Co. v. Supermarket Equipment Corp. (A&P)*,[26] a case concerning a patent for a cashier's counter equipped with a three-sided frame to move groceries to the checkout clerk. The district court had found that all the elements of the device were known to the prior art, but held that their combination created a new and useful patentable device.[27] The court of appeals affirmed, holding that the finding of invention was one of fact, supported by substantial evidence.[28] In reversing, the Supreme Court stated: "The defect that we find in this judgment is that a standard of invention appears to have been used that is less exacting than that required where a combination is made up entirely of old components."[29] The Court specifically noted, however, that they were not overturning any finding of fact as to invention.[30]

It is doubtful that the majority intended its opinion in *A&P* to modify the treatment of the invention issue, for the Court based its decision solely upon the lower court's application of an improper *legal* standard.[31] Justice Douglas wrote a concurring opinion in *A&P* in which he expressed a quite different view of the majority opinion.[32] This concurring opinion had a profound influence on subsequent analysis of whether invention was an issue of law or fact.

Justice Douglas maintained that the majority opinion was, in effect, a substantive reversal of the two-court rule as applied to the question of invention.[33] Under this rule, a finding of invention made by two lower courts would not be disturbed by the Supreme Court in the absence of an obvious and exceptional showing of error.[34] He maintained that this rule was inapplicable to patent law because, as the question of invention was related to a constitutional standard of patentability, the Supreme Court spoke with final authority on the issue. Douglas summarized his views with the statement: "The standard of patentability is a constitutional standard; and the ques-

26. 340 U.S. 147 (1950).

27. Bradley v. Great Atl. & Pac. Tea Co., 78 F. Supp. 388 (E.D. Mich. 1948).

28. Great Atl. & Pac. Tea Co. v. Supermarket Equip. Co., 179 F.2d 636, 638 (6th Cir. 1950).

29. 340 U.S. at 154.

30. *Id.* at 153.

31. The district court appeared to focus its inquiry upon the production of a new and unique result. 78 F. Supp. 388, 390-92. The Supreme Court, on the other hand, focused on the fact that the device constituted a mere combination of old elements. 340 U.S. at 150-53.

32. 340 U.S. at 154.

33. *Id.* at 156.

34. Graver Tank & Mfg. Co. v. Linde Air Prod. Co., 336 U.S. 271, 275 (1950).

tion of validity of a patent is a question of law."[35]

Douglas's position is unpersuasive.[36] Even if one accepts the concept of a constitutional standard of patentability,[37] determining whether a given object meets that standard is not necessarily a legal question.[38] Douglas's opinion probably can best be explained as a response to his belief that too many patents were being granted by the patent office and upheld by the lower courts.[39] From this he inferred that the standard of invention applied by the lower courts was incorrect. Given the inherent vagueness of the concept of invention, however, Douglas apparently could not indicate clearly what the courts were doing wrong. Nonetheless, by treating the question of invention as a legal issue, the Court would be able to review fully lower court determinations and to establish by example the correct applicable standard.

Despite the apparent inconsistency between Justice Douglas's opinion and the opinion of the majority in *A&P*, the case caused a substantial number of courts to treat invention as an issue of law.[40] Yet, in an apparent failure to discern the real significance of Douglas's opinion in *A&P*, that is, that it treated the standard of invention as an issue of fact, commentators and courts only expressed concern that over the last few decades the courts had created a narrower standard of invention[41] as evinced in the restrictive test espoused in *Cuno Corp. v. Automatic Devices Corp.*:[42] invention results from a "flash of creative genuius."[43]

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35. 340 U.S. at 155.

36. *See* Editorial Note, *Appellate Review of Findings of Invention*, 20 GEO. WASH. L. REV. 605, 614 (1952).

37. Arguably, there is no such constitutional standard. *See* Lutz, *The Constitution v. the Supreme Court — re: Patents for Inventions*, 13 U. PITT. L. REV. 449 (1952).

38. Rather, it is a mixed question of law and fact. The jury would apply the facts to a given legal standard.

39. Douglas indicated that he believed the Patent Office had used "the opportunity which the exercise of discretion affords to expand its own jurisdiction." 340 U.S. at 156. Perhaps this concern reflected Douglas's apparent dislike, as manifested in his patent case opinions, for the creation of government sanctioned monopolies.

40. *See, e.g.*, Ekstrom-Carlson & Co. v. Onsrud Mach. Works, Inc., 298 F.2d 765, 770 (7th Cir.), *cert. denied*, 369 U.S. 886 (1962); Armour & Co. v. Wilson & Co., 274 F.2d 143, 156 (7th Cir. 1960) (en banc); Packwood v. Briggs & Stratton Corp., 195 F.2d 971, 973 (3d Cir.), *cert. denied*, 344 U.S. 844 (1952).

41. *See* Lyon v. Bausch & Lomb Optical Co., 224 F.2d 530, 535 (2d Cir. 1955); Comment, *The Statutory Standard of Patentability: The Necessity for a Relative Standard Dependent Upon Factual Inquiries*, 12 B.C. INDUS. & COM. L. REV. 917, 920 (1971).

42. 314 U.S. 84 (1941).

43. *Id.* at 91.

The Patent Act of 1952: The Nonobviousness Standard

Against this background, the Patent Act of 1952 was adopted. As noted earlier, section 103 of this Act provided a statutory substitute for the judicially imposed invention standard. The stated purpose of this section was to interject a degree of stability into an unclear area of the law.[44] Unfortunately, the courts regarded the section 103 standard of nonobviousness to the ordinary artisan as similar to the abstract standard of invention.[45] Assuming the two standards differed only in degree, the courts simply considered whether the adoption of section 103 liberalized the standard of invention.[46] They did not recognize that these might be different types of standards. Many courts, therefore, continued to apply the same type of analysis to the obviousness issue as they had applied previously to the invention issue.[47] Like invention, nonobviousness to the ordinary artisan was regarded merely as an abstract standard against which the facts of a given case were measured to determine the validity of a patent.[48]

Not until 1966, in the case of *Graham v. John Deere Co.*,[49] did the Supreme Court review the meaning of section 103. The question was whether a clamp for a vibrating shank plow was obvious under section 103 and therefore unpatentable. The Court agreed with Douglas's opinion in *A&P* that the Constitution restricted the Con-

44. The Reviser's Note following section 103 states in part: "This paragraph is added with the view that an explicit statement in the statute may have some stabilizing effect, and also to serve as a basis for the addition at a later time of some criteria which may be worked out." 35 U.S.C. § 103 (1970) (Reviser's Note).

45. "On its face Section 103 is merely a codification of decisional patent law." Stanley Works v. Rockwell Mfg. Co., 203 F.2d 846, 849 (3d Cir.), *cert. denied*, 346 U.S. 818 (1953). *See also* Interstate Rubber Prod. Corp. v. Radiator Specialty Co., 214 F.2d 546, 549 (4th Cir. 1954); General Motors Corp. v. Estate Stove Co., 203 F.2d 912, 914-16 (6th Cir.), *cert. denied*, 346 U.S. 822 (1953).

46. *See* Lyon v. Bausch & Lomb Optical Co., 224 F.2d 530, 535-36 (2d Cir.), *cert. denied*, 350 U.S. 911 (1955); Wasserman v. Burgess & Blancher Co., 217 F.2d 402, 404 (1st Cir. 1954).

47. *See* Rich, *The Vague Concept of "Invention" as Replaced by Sec. 103 of the 1952 Patent Act*, 46 J. PAT. OFF. SOC'Y 855, 869 (1964).

It is submitted that the invention standard and the nonobviousness standard do not differ merely in degree, but differ in kind. At least since *A&P*, courts apparently have treated the *Hotchkiss* invention standard as if invention were an intuitive concept to be applied by reason. In contrast, the nonobviousness test is empirical; it is grounded in what an ordinary artisan could or could not be expected to do. Courts, however, have mistakenly treated obviousness as an intuitive concept. Arguably, the intuitive invention standard reflects the natural law jurisprudence predominant when *Hotchkiss* was decided in 1850, and the nonobviousness to an ordinary artisan standard reflects the legal realism of the Twentieth Century.

48. *See* Vincent v. Suni-Citrus Prod. Co., 215 F.2d 305, 315-16 (5th Cir. 1954), *cert. denied*, 348 U.S. 952 (1955).

49. 383 U.S. 1 (1966).

gress' power to authorize the issuance of patents; the Court however apparently did not concur with Douglas's declaration in *A&P* that the "question of invention goes back to the constitutional standard in every case."[50] Rather, the Court concluded that it is within the power of Congress to select "the policy which in its judgment best effectuates the constitutional aim."[51] Once this policy is selected, it is the duty of the Commissioner of Patents and of the courts administering the patent system to fulfill the constitutional standard by properly applying Congress' statutory scheme.[52] *Graham*, then, implies that the Supreme Court may have authority to overturn a patent statute if the statute describes a standard of patentability that is more lax than the Constitution permits, but once the Court determines that the statute expresses a patent policy permitted by the Constitution, the courts have a duty to apply only the statutory standard enacted by Congress. The Court in *Graham* concluded that section 103 did not violate the constitutional standard, noting that the section did not change the level of patentable invention, but rather merely shifted the focus of inquiry back to that established in *Hotchkiss*.[53] Relying again on Douglas's concurring opinion in *A&P*, the Court stated that "the ultimate question of patent validity is one of law . . ."[54] yet proceeded to assert that the section 103 condition (obviousness) "lends itself to several basic factual inquiries."[55] It is unclear from this language whether the Court meant to indicate that obviousness is a factual conclusion drawn from evidentiary findings or a legal conclusion based on factual inquiries. As either interpretation could be justified by the Court's language, *Graham* provides no real guidance in determining whether obviousness is a question of law or fact.

Although *Graham* did not establish clearly whether obviousness should be treated as an issue of law or fact, most courts of appeal

50. 340 U.S. 147, 156 (1950) (Douglas, J., concurring).

51. 383 U.S. 1, 6 (1966).

52. *Id.*

53. *Id.* at 17. *See* text accompanying notes 18-20 *supra*.

54. *Id.* (citation omitted). The Court never expressly stated in *Graham* that obviousness was a question of law. The Court's statement refers only to patentability as a legal question. As patentability depends only upon the existence of novelty, utility and nonobviousness, however, once an object has satisfied these requirements no ultimate legal conclusion need be drawn.

55. *Id.* The Court held that the following factual determinations should be made to ascertain whether the section 103 requirements had been met: the scope and content of the prior art, the differences between the prior art and the claims at issue, and the ordinary level of skill in the pertinent art. *Id.*

have concluded that the Supreme Court's statement that patent validity is a question of law refers to the obviousness requirement. As a result, the majority of jurisdictions now hold that obviousness is ultimately a legal issue involving factual inquiries.[56] Specifically, these courts hold that although the determinations relating to the scope and content of the prior art, the differences between prior art and the patented object, and the level of skill in the relevant art are factual in nature, the ultimate conclusion of obviousness is one of law. In effect, they regard obviousness as a legal standard similar to the standard of invention. A number of courts use the terms invention and obviousness interchangeably.[57]

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56. The following is a partial listing, by circuit, of cases considering the issue of whether obviousness is a question of fact or law:

First Circuit (fact): Norton Co. v. Carborundum Co., 530 F.2d 435, 443 (1st Cir. 1976); Nashua Corp. v. RCA Corp., 431 F.2d 220, 222 (1st Cir. 1970).

Second Circuit (law): Vanity Fair Mills, Inc. v. Olga Co., 510 F.2d 336, 338 (2d Cir. 1975); Julie Research Lab's, Inc. v. Guidline Instruments Inc., 501 F.2d 1131, 1136 (2d Cir. 1974); Shaw v. E.B. & A.C. Whiting Co., 417 F.2d 1097, 1102 (2d Cir. 1969), *cert. denied*, 397 U.S. 1076 (1970).

Third Circuit (law): Packwood v. Briggs & Stratton Corp., 195 F.2d 971 (3rd Cir.), *cert. denied*, 344 U.S. 844 (1952).

Fifth Circuit (law): Parker v. Motorola, Inc., 524 F.2d 518, 531 (5th Cir. 1975), *cert. denied*, 96 S. Ct. 2175 (1976); White v. Mar-Bel, Inc., 509 F.2d 287, 290 (5th Cir. 1975); Gaddis v. Calgon Corp., 506 F.2d 880, 884 (5th Cir. 1975); Garrett Corp. v. American Safety Flight Sys., Inc., 502 F.2d 9, 14 (5th Cir. 1974); Swofford v. B & W, Inc., 395 F.2d 362, 368 (5th Cir.), *cert. denied*, 393 U.S. 935 (1968).

Sixth Circuit (law): Minnesota Mining & Mfg. Co. v. Norton Co., 426 F.2d 1117, 1121 (6th Cir. 1970), *cert. denied*, 401 U.S. 925 (1971).

Seventh Circuit (law): Gettelman Mfg., Inc. v. Lawn 'N' Sport Power Mower Sales & Serv., Inc., 517 F.2d 1194, 1197 (7th Cir. 1975).

Eighth Circuit (law): Airlite Plastics Co. v. Plastilite Corp., 526 F.2d 1078, 1080 (8th Cir. 1975), *cert. denied*, 96 S. Ct. 1671 (1976); Hadfield v. Ryan Equip. Co., 456 F.2d 1218, 1219 (8th Cir. 1972); Flour City Arch. Metals v. Alpana Aluminum Prod., Inc., 454 F.2d 98, 106 (8th Cir. 1972).

Ninth Circuit (law): Stevenson v Diebold, Inc., 422 F.2d 1228, 1229 (9th Cir.), *cert. denied*, 400 U.S. 832 (1970); Spring Crest Co. v. American Beauti Pleat, Inc., 420 F.2d 950, 951 (9th Cir. 1970); Hensley Equip. Co. v. Esco Corp., 375 F.2d 432, 436 (9th Cir. 1967).

Tenth Circuit (fact): Halliburton Co. v. Dow Chem. Co., 514 F.2d 377, 379 (10th Cir. 1975); Moore v. Shultz, 491 F.2d 294, 300 (10th Cir.), *cert. denied*, 419 U.S. 930 (1974)(Douglas dissenting); Eimco Corp. v. Peterson Filters & Eng. Co., 406 F.2d 431, 436 (10th Cir. 1968), *cert. denied*, 395 U.S. 963 (1969). *But cf.*, CMI Corp. v. Metroplitan Enterprises, Inc., 534 F.2d 874, 880 (10th Cir. 1976)(impliedly an issue of law).

District of Columbia (law): International Salt Co. v. Commissioner, 436 F.2d 126, 129 (D.C. Cir. 1970).

C.C.P.A. (law): Application of Herrick, 397 F.2d 332, 336 (C.C.P.A. 1968).

57. Pederson v. Stewart-Warner Corp., 536 F.2d 1179, 1180 (7th Cir. 1976); Illinois Tool Works, Inc. v. Sweetheart Plastics, Inc., 436 F.2d 1180, 1183 (7th Cir.), *cert. dismissed*, 403 U.S. 942 (1971); American Infra-Red Radiant Co. v. Lambert Indus., Inc., 360 F.2d 977, 984 (8th Cir. 1966).

Despite the controversy among courts of appeal over treatment of the obviousness issue, the Supreme Court has refused to grant certiorari to cases expressly dealing with this issue.[58] Since *Graham* the Court's analysis of section 103 has been unclear,[59] but the post-*Graham* cases do demonstrate that the Court regards the factual determinations as important.[60] Yet in these decisions the Court has stressed the relationship between the standard of invention and the standard of obviousness,[61] and has reiterated its assertion that patent validity is a question of law.[62] As a result, these decisions provide no real guidance on the nature of the obviousness issue.

Thus, the position emerging in the courts of appeal does not reflect a mandate from the Supreme Court. Rather, it seems to be a result of the Court's view that obviousness is similar to the old standard of invention and, like invention, should be treated as an issue of law. A comparison of the language of section 103 with *Hotchkiss*, however, indicates that invention and obviousness are not the same.[63] *Hotchkiss* established that invention was a prerequisite to patentability, and further, espoused a test for determining whether invention existed. Therefore, *Hotchkiss* established two distinct things: an invention requirement and an invention test. Under section 103 there is no longer an invention requirement for patentability; rather, section 103 only establishes a nonobviousness test for patentability based on the *Hotchkiss* invention test. The only necessary finding under section 103 is that the patented object would not have been obvious to a man of ordinary skill in the art at the time it was discovered; a finding of invention, however, is not required.[64]

58. Kolene Corp. v. Motor City Metal Treating, Inc., 440 F.2d 77 (6th Cir.), *cert. denied*, 404 U.S. 886 (1971) (treated as a mixed question); Stamicarbon, N.V. v. Escambia Chem. Corp., 430 F.2d 920 (5th Cir.), *cert. denied*, 400 U.S. 944 (1970) (treated as a question of law); Moore v. Schultz, 491 F.2d 294 (10th Cir.), *cert. denied*, 419 U.S. 930 (1974) (Douglas dissenting)(treated as a question of fact).

59. Sakraida v. Ag Pro, Inc., 96 S. Ct. 1532 (1976); Dann v. Johnston, 96 S. Ct. 1393 (1976); Anderson's-Black Rock, Inc. v. Pavement Salvage Co., 396 U.S. 57 (1969).

60. Sakraida v. Ag Pro, Inc., 96 S. Ct. 1532, 1536 (1976); Dann v. Johnston, 96 S. Ct. 1393, 1397 (1976); Anderson's-Black Rock, Inc. v. Pavement Salvage Co., 396 U.S. 57, 62 (1969).

61. Sakraida v. Ag Pro, Inc., 96 S. Ct. 1532, 1536 (1976); Dann v. Johnston, 96 S. Ct. 1393, 1397 (1976); Anderson's-Black Rock, Inc. v. Pavement Salvage Co., 396 U.S. 57, 61 (1969).

62. Sakraida v. Ag Pro, Inc., 96 S. Ct. 1532, 1536 (1976).

63. Rich, *supra* note 47, at 864-65.

64. For a discussion of *Hotchkiss*, see text accompanying notes 18-20 *supra*. For a discussion of the difference between the *Hotchkiss* invention standard and the section 103 nonobviousness standard, see note 47 *supra*.

To determine whether obviousness is properly a question of law or fact the distinction between the nonobviousness test and the old invention requirement must be maintained. This difference establishes that although the question of invention was legal in nature,[65] the question of obviousness is purely factual.[66] Under the views advanced by Justice Douglas in *A&P*, whether a given device represents a sufficient advancement over the prior art to be considered an invention requires the interpretation of a legal standard.[67] The nonobviousness standard of section 103, on the other hand, merely requires determining whether a patented object would have been obvious to a man of ordinary ability in a given art, that is, to the ordinary artisan. Thus, it entails no legal interpretation; for the courts need not determine whether a device fulfills a legal standard of nonobviousness but simply must establish whether a device would have been obvious to a given group of people at a given time.[68] A finding of obviousness under section 103 therefore constitutes a finding that a group of individuals were capable of making the same improvement in the prior art as was made by the patentee. Although this determination may require an analysis of other underlying factual issues, such as the state of the art and the skill of ordi-

65. Invention was deemed a legal question because determining whether invention existed involved the interpretation of a legal standard. It does not follow, however, that invention was itself a legal question. In negligence cases, for example, although it is also necessary to interpret and apply a vague legal standard to a given set of facts, the courts hold that the determination of negligence is a mixed question and therefore should be decided by the jury. Several commentators have suggested that the question of invention should be treated in the same manner. Sherman, *Obviousness: A Question of Law or Fact?*, 51 J. PAT. OFF. SOC'Y 547, 557-58 (1969); Lutz, *Questions of Fact and Questions of Law in Patent Litigation*, 38 J. PAT. OFF. SOC'Y 600, 612-13 (1956). Yet this analysis ignores the reason the issue of negligence is submitted to the jury; that is, so the determination will reflect community values. In patent cases, however, the courts are better able to balance the competing interests of patentee and society. Therefore, as long as invention was the applicable standard and patentability depended on the application of facts to that standard the determination was best left to the courts.

66. Rich, *supra* note 47, at 872 n.36.

67. *See* notes 33-35 *supra* & accompanying text.

68. There is a sharp distinction between an inquiry to determine what a "reasonable man" would have done and an inquiry to determine what an "ordinary man" would have been capable of doing. The determination of what a reasonable man would have done constitutes a determination of what conduct is socially permissible. The reasonable man's conduct is not subject to empirical verification as he is a mere personification of the jury's or court's social judgment. The determination of what an ordinary man in a given art could do, however, involves no issue related to social standards. The skill of the ordinary artisan at a given time can be determined only by examining the facts existing at that time.

nary artisans,[69] the conclusion drawn from these facts does not entail interpretation of a legal standard. Rather, obviousness requires determining merely the capability of men of ordinary skill in a given field, not the includibility of a given advance within a specific legal standard. As such, obviousness is a question of fact.

Tights, Inc. v. Acme - McCrary Corp.[70] illustrates the problems that confront a court in attempting to heed the precedent of *Graham*. The court in *Tights* admits that the question of obviousness is ultimately one of law.[71] The court's analysis, however, seemingly indicates that it actually considers obviousness to be a mixed question of law and fact, resolved by applying the facts to a legal standard. By upholding the trial judge's rather broad interrogatory[72] and by rejecting the appellee's contention that the jury should have been instructed to make specific findings on the three determinations enunciated in *Graham*,[73] the court in fact is submitting the entire obviousness issue to the jury. Yet the court's adherence to *Graham* in holding that the issue is ultimately one of law still may allow appellate courts to overturn a jury's or a judge's findings of fact by holding that an improper legal standard was applied.[74] As noted, however, the obviousness standard differs from the invention standard, and is, as are novelty and utility, a purely factual issue.

The Issue of Obviousness as it Affects the Right to Trial by Jury

As has been established since the Supreme Court's decision in *Graham*, resolution of the question of obviousness involves several factual inquiries. Even those courts holding obviousness to be ultimately a question of law maintained that the findings of fact related to this issue are subject only to limited review.[75] When the issue of obviousness is submitted to the jury, however, it is often difficult or impossible to determine the precise nature of the jury's factual

69. The fact-finder must examine the scope and content of the prior art, the differences between the prior art and the invention at issue, and the skill of ordinary men in the pertinent art. Graham v. John Deere Co., 383 U.S. 1, 17 (1966).

70. 541 F.2d 1047 (4th Cir.), *cert. denied sub nom.* Kayser-Roth Corp. v. Tights, Inc., 45 U.S.L.W. 3400 (U.S. Nov. 30, 1976) (No. 76-508).

71. *Id.* at 1060.

72. *See* note 8 *supra.*

73. *See* note 55 *supra.*

74. *See* notes 94-96 *infra* & accompanying text.

75. Flour City Arch. Metals v. Alpana Aluminium Prod. Inc., 454 F.2d 98, 106 (8th Cir. 1972); Kolene Corp. v. Motor City Metal Treating, Inc., 440 F.2d 77, 81 (6th Cir.), *cert. denied,* 404 U.S. 886 (1971).

findings.[76] Therefore, when the judge draws the "legal" conclusion of obviousness he is forced to do so based on his own understanding of the facts. This, in effect, denies the litigants the right to trial by jury on those factual determinations which underlie the conclusion of obviousness. To insure that the right to a jury trial is preserved the question of obviousness should be left totally to the jury.

Although no court has dealt directly with this issue, courts have considered the related question of how to determine effectively what factual findings a jury has made in reaching its conclusion as to the obviousness of an invention. *Pederson v. Stewart - Warner Corp.*[77] illustrates the difficulties inherent in this process. In *Pederson* the trial court stated that the jury's verdict had to be overturned because of the insufficiency of the evidence to support the jury's finding of nonobviousness, thus, superficially at least, applying the traditional rules for entering judgment n.o.v. On appeal, the Court of Appeals for the Seventh Circuit affirmed. The circuit court, however, based its decision on the view that allowing a jury to determine the ultimate issue of obviousness is improper. The court noted that although it was proper for the jury to determine certain underlying factual questions, the court should draw the final conclusion of obviousness:

> When, as here, the case is tried to a jury and a general verdict is rendered on the question of validity, disputed factual questions are presumed to have been resolved favorably to the party in whose favor the verdict was returned. On the basis of the facts so determined, the court must then decide the issue of obviousness.[79]

In essence, the court maintained that it could ascertain the jury's factual determinations by examining the jury's ultimate conclusion as to the obviousness or nonobviousness of the invention.[80]

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76. *See* text accompanying notes 81-85 *infra*.

77. 536 F.2d 1179 (7th Cir. 1976).

78. 400 F.Supp. 1262, 1263 (N.D. Ill. 1975).

79. 536 F.2d at 1180 (citation omitted).

80. This approach does not allow for effective review of the jury's obviousness determination if the jury returns a general verdict of invalidity. In such a case the court will not be able to determine if the conclusion was reached on the basis of the jury's findings on novelty, utility, or nonobviousness (*see* notes 13-14 *supra* & accompanying text). Thus, even if the court knew which facts the jury would have had to find to hold the invention obvious, the court would not be able to tell if these facts were actually found as it would not know if the jury held the invention to be obvious.

Although this approach has been approved in other cases,[81] it does not appear to provide an adequate safeguard to the right to trial by jury, for it fails to consider the complexity of the factual determinations required under section 103. For example, determining the scope and content of the prior art may involve the examination of a number of patents.[82] That a judge could determine which of these patents the jury deemed part of the prior art by merely examining the final verdict is doubtful. Similar difficulty would exist in determining how the jury resolved the other factual inquiries required in a conclusion of obviousness.[83] A judge ultimately is forced either to guess at the jury's factual findings[84] or to substitute his own views.[85]

An apparent solution to this problem is to submit the issue of obviousness to the jury under instructions that a special verdict be returned as provided for under rule 49(a) of the Federal Rules of Civil Procedure. Rule 49 permits the submission to the jury of written questions that may be answered categorically or briefly. Conceivably, a judge could request that the jury make findings on all of the factual issues relating to the question of obviousness and then base his determination on these findings. This procedure would protect a litigant's right to jury trial and still allow a court to treat obviousness as a legal question. Rule 49, however, was not designed to permit submission of each issue of evidentiary fact to the jury.[86] Because such an approach would result in confusing the jury,[87] rule 49 is used only in submitting ultimate fact questions to the jury. This procedure, therefore, would not provide the requisite information to allow the judge to draw the conclusion of obviousness.[88]

Even if the issues of evidentiary fact could be submitted to the jury in a manner that would not cause confusion, it is doubtful whether the answers provided by the jury would be sufficient for the

81. *See, e.g.*, White v. Mar-Bel, Inc., 509 F.2d 287 (5th Cir. 1975); Panther Pumps & Equip. Co. v. Hydrocraft, Inc., 468 F.2d 225 (7th Cir. 1972).

82. Determining the scope of the prior art also can involve an examination of non-patented devices that are related to the invention in question.

83. It would be especially difficult to determine what a jury had decided to be the skill of an ordinary mechanic in the art.

84. Swofford v. B & W Inc., 251 F. Supp. 811, 818 (1966).

85. Allen Indus. Inc. v. National Sponge Cushion, Inc., 292 F. Supp. 504, 510 (D.N.J. 1967).

86. *See* Note, *Special Verdicts: Rule 49 of the Federal Rules of Civil Procedure*, 74 YALE L.J. 483, 503 (1965).

87. *See* Panther Pumps & Equip. Co. v. Hydrocraft, Inc., 468 F.2d 225, 228 n.7.

88. The jury could only be requested to indicate whether it thought the invention at issue was obvious, not to report its findings on the underlying evidentiary facts.

judge's purposes. As indicated in *Graham*, obviousness depends on the degree of difference between the prior art and the patented device and on the degree of skill possessed by an ordinary artisan in that field. Because of this emphasis on degrees of change and degrees of skill, the jury must describe its findings in great detail. Although the jury is capable of making such detailed findings, articulating those findings so as to assist a judge in deciding the obviousness question is difficult.[89] Perhaps the only workable solution to this problem is to give the jury total responsibility in resolving the obviousness issue.[90] The jury's finding would be subject to review but only on the basis of whether the evidence was sufficient to support the jury's conclusion.[91]

It is unclear whether the approach adopted by the court in *Tights*[92] would be adequate to preserve the right to trial by jury. This approach does result in the submission of the entire question of obviousness to the jury. It thus insures that the initial determination of obviousness is based on the facts found by the jury. The critical question is whether appellate courts would restrict their review of the jury's determination. If the courts held that their review was limited to whether the jury had been instructed properly as to the applicable legal standard,[93] no problem would arise. It is possible, however, that the courts might extend their review to a consideration of whether the jury's understanding of the legal standard was correct.[94] This would result in the judge's both refinding the facts and applying them to the legal standard, because the only way the judge would be able to check the jury's determination would be through an independent analysis of the issue, as the judge would have no knowledge of the facts found by the jury. If his conclusion conflicted with the jury's, he could hold that the jury had not under-

89. *See* Swofford v. B & W, Inc., 251 F. Supp. 811 (S.D. Tex. 1966).

90. Arguably, this solution is constitutionally mandated. Dairy Queen Inc. v. Wood, 369 U.S. 469 (1962), held that a litigant cannot be denied the right to trial by jury when he has a claim for monetary damages. This right cannot be abridged merely because the facts ultimately will have to be judged by a legal standard. Tights, Inc. v. Stanley, 441 F.2d 336 (4th Cir.), *cert. denied*, 404 U.S. 852 (1971).

91. *See* note 6 *supra*.

92. *See* text accompanying notes 7-11 *supra*.

93. There is an applicable legal standard because the question is treated as mixed. *See* text accompanying notes 72-73 *supra*.

94. Several courts, for example, have held that the application of the legal standard of negligence to a given set of facts is fully reviewable. *See, e.g.*, Hendry v. United States, 418 F.2d 774 (2d Cir. 1969); Hicks v. United States, 368 F.2d 626 (4th Cir. 1966).

stood the legal concepts involved[95] and, therefore, overturn their decision. Thus under this approach both trial and appellate level judges would displace juries as finders of fact. Moreover, the general attitude of the courts that judicial guidance is required in determining what is patentable increases the likelihood that they will adopt this approach.

CONCLUSION

To insure a patentee's right to trial by jury, and more importantly to guarantee that appellate courts apply the correct standard of review in patent validity cases, the issue of obviousness must be characterized as an issue of fact. The confusion apparent in many courts' views of the obviousness issue can be traced to the ambiguous language of *Graham*, and to courts' reliance on the concurring opinion of Justice Douglas in *A&P*.[96]

With the enactment of the Patent Act of 1952, the old standard of invention, created in *Hotchkiss* as an issue of fact, and generally treated as such until *A&P*, was replaced by the standard of nonobviousness in section 103. The new terminology evidenced Congress' intent to replace the *A&P* legal standard of invention with a factual standard, nonobviousness, couched in language similar to that used in *Hotchkiss*. As demonstrated by their role in negligence cases, juries and trial-level judges are capable of determining complex questions of fact. Until that capability is recognized and determination of the obviousness of a patent is properly delegated to the finder of fact, section 103 remains basically meaningless.

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95. The discrepancy between the judge's and jury's determination, however, could also be due to differences in their factual findings.

96. *See* notes 32-35 *supra* & accompanying text.