

JURY TRIALS IN PATENT LITIGATION

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I. INTRODUCTION

A jury trial in a patent infringement action is presently an unusual occurrence on the judicial scene in the United States.¹ Jury trials, however, were once commonplace during the first century or more of the patent system when a patentee elected to pursue an infringer at law rather than at equity. The disappearance of jury trials in patent cases is often explained in terms of the difficulty of presenting what are often complex and highly technical questions to lay jurymen. While this may be a valid factor, a review of the reported decisions in the last century pertaining to jury trials in patent infringement cases strongly suggests that the patent bar has substantially abandoned the jury system due to frustrating uncertainties as to what issues can actually be decided by the jury. However, far-reaching developments in the field of patent litigation during recent decades, and more particularly since the Supreme Court's most recent pronouncements on the matter of patent validity in 1966,² suggest that a resurrection of jury trials in patent cases may have some distinct advantages.

More specifically, jury trials may expedite the disposition of patent cases. The completion of the trial of a patent case to the court without a jury is normally followed by months of brief-writing, which is climaxed by oral arguments, after which the court takes the matter under advisement. A prevailing plaintiff who survives an appeal must then conduct another trial to a master or to the court to determine the damages. This determination is also subject to appeal. It is therefore apparent that if at least the factual issues in an infringement case could be decided by a jury, the litigation period would be substantially reduced.

The trend of courts to hold patents invalid has been increasing during the last two decades, and has continued in this pattern since the Supreme Court decisions in 1966.³ The Court of Appeals for the Eighth Circuit, in over sixteen cases since these decisions, has yet to find a single patent to be valid.⁴ In the face of such precedents, a trial judge has little recourse but to determine

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¹ The Administrative Office at the United States Courts reports eight jury trials for the fiscal year ending June 30, 1969. 2 FEDERAL JURY PRACTICE AND INSTRUCTIONS 365 (2d ed. 1970).

² *Graham v. John Deere Co.*, 383 U.S. 1 (1966); *United States v. Adams*, 383 U.S. 39 (1966).

³ Brief in Support of Proposed Amendment to Section 103, Title 35, Patents, U.S. Code, Patent Law Association of Los Angeles (1969), p. 9.

⁴ *Id.* Appendix B.

why the patent before him is invalid. As will be discussed hereafter, patent trials necessarily require some findings of fact, and at least some of these findings influence, if not dictate, the resulting conclusion of law. Juries, being presumably immune from the philosophical roadblocks that seem to hamper a patentee's way through the existing judicial system, might have a fresh and more sympathetic attitude towards the inventor and his invention. Since patent validity⁵ and sometimes even infringement⁶ are questions of law, the jury can not have an absolute influence in the determination of every patent case. However, as will be discussed hereafter, the recent Supreme Court decisions⁷ have added stature to certain factual determinations which affect patent validity, and this increased emphasis on the factual dimension of validity necessarily makes the jury's role more important in the determination of the validity issue.

In contemplation of a jury trial in patent litigation, as in any litigation, it is important to determine precisely which issues are questions of fact and which are questions of law. Furthermore, it is important to know whether the fact questions are to be determined from documents alone or from conflicting testimony of opposing witnesses, because a question of fact based upon the submission of opposing witnesses will not be reviewed or reversed on appeal unless "clearly erroneous."⁸ However, a finding of fact based solely upon documentary evidence and uncontradicted testimony is reviewable on appeal, the credibility of witnesses not being a factor.⁹ But even more important, an otherwise factual question based only on understandable documentary evidence is often treated as a question of law,¹⁰ or at least treated as failing to present a jury question. These variables, and the evaluation thereof in light of the circumstances of a given case, will determine whether or not it would be worthwhile to seek a jury determination in a patent infringement matter.

With few exceptions, each patent infringement action involves the broad issues of infringement and validity. The burden of establishing infringement falls to the plaintiff,¹¹ and the burden of establishing patent invalidity falls to the defendant.¹² As will be discussed hereafter, these broad issues include a plurality of factual inquiries which can be the subject of jury determination.

II. INFRINGEMENT

Each patent has one or more written claims which define the scope of the inventor's monopoly, much in the way that a deed to real estate might define

⁵ *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

⁶ *Singer Mfg. Co. v. Cramer*, 192 U.S. 265, 275 (1904).

⁷ *Graham v. John Deere Co.*, 383 U.S. 1 (1966); *United States v. Adams*, 383 U.S. 39 (1966).

⁸ *FED. R. CIV. P.* 52(a).

⁹ *Stewart-Warner Corp. v. Lone Star Gas Co.*, 195 F.2d 645, 647-48 (5th Cir. 1952).

¹⁰ *Singer Mfg. Co. v. Cramer*, 192 U.S. 265, 275 (1904).

¹¹ *Becker v. Webcor, Inc.*, 289 F.2d 357, 360 (7th Cir. 1961).

¹² *Mott Corp. v. Sunflower Indus., Inc.*, 314 F.2d 872, 877 (10th Cir. 1963).

the metes and bounds of certain land. If the alleged infringer makes, uses or sells a device or product that comes within the invention of the patentee, as defined in one or more of such claims;¹³ or uses a process defined by such claims;¹⁴ or contributes¹⁵ to the infringement of such claims by another, he shall be liable as an infringer. The issue of infringement has been regarded as being either a question of fact¹⁶ or a question of law¹⁷ by various tribunals, depending on certain contingencies which are not always clearly defined.

In one of its earliest decisions¹⁸ on questions to be submitted to the jury in patent cases, the Supreme Court gave the questions of clarity of the disclosure (now a question under 35 U.S.C. § 112),¹⁹ novelty of the invention,²⁰ and infringement to the jury.²¹ In a subsequent decision,²² the Supreme Court was faced with the interpretation of patent documents from the prior art as affecting validity. The Court adhered to the time-honored rule that construction of documentary evidence was a province of the court, but that patent documents are so different from other documents²³ that they must almost invariably involve issues which cannot be resolved by a consideration of the writings alone, and therefore must be submitted to the jury under proper instructions: "It is not the *construction of the instrument*, but the *character of the thing invented*, which is sought in questions of identity and diversity of inventions."²⁴

However, in *Heald v. Rice*,²⁵ the Court adopted the view²⁶ that if it appears from the face of the instruments that "extrinsic" evidence is *not* needed to explain terms of art or to apply descriptions to the subject matter, and the court can determine from such mere comparisons that the inventions are not the same, the question of identity is one of pure *construction* and not of *evidence*, and consequently is a matter of law for the court. The crucial test outlined by the court in determining whether the question of identity should be submitted to the jury was whether "extrinsic"²⁷ evidence, beyond the patent document itself, was needed for its understanding. In subsequent decisions²⁸ dealing with the import of patent documents in matters of both prior

¹³ 35 U.S.C. § 271(a) (1964).

¹⁴ *Id.* § 271(b) (1964).

¹⁵ *Id.* § 271(c) (1964).

¹⁶ *Coupe v. Royer*, 155 U.S. 565, 575-77 (1895).

¹⁷ *Singer Mfg. Co. v. Cramer*, 192 U.S. 265, 275 (1904).

¹⁸ *Battin v. Taggart*, 58 U.S. (17 How.) 74 (1854).

¹⁹ *Id.* at 85.

²⁰ *Id.*

²¹ *Id.* The Court seemed to be addressing itself to the infringement question by stating: "There are other questions of fact which come within the province of a jury; such as the identity of the machine used by the defendant with that of plaintiff's, or whether they have been constructed and act on the same principle."

²² *Bischoff v. Wethered*, 76 U.S. (9 Wall.) 812 (1869).

²³ *Id.* at 815.

²⁴ *Id.* at 816 (emphasis the court's).

²⁵ 104 U.S. 737 (1881).

²⁶ *Id.* at 749.

²⁷ *Id.*

²⁸ *Coupe v. Royer*, 155 U.S. 565 (1895); *Royer v. Schultz Belting Co.*, 135 U.S. 319 (1890); *Keyes v. Grant*, 118 U.S. 25 (1886).

art and infringement, the Court continued to leave the matter for jury determination. However, shortly after following this rule again in *Coupe v. Royer*,²⁹ the Court, in *Market Street Cable Ry. Co. v. Rowley*,³⁰ reversed the lower court which had allowed the question of novelty (comparison of the patent in a suit with various prior patents) to go to the jury. While this decision did not involve the infringement question, it may be assumed that the extreme clarity of the patent documents themselves, under the rule of *Heald v. Rice*,³¹ would have induced the court to preserve the question for itself in any event. While not referring to its earlier decision in *Heald*, the Court in *Market Street Cable Ry. Co.* clearly used the rule in *Heald* by stating: "It is impossible to read these several patents without perceiving that the patent in suit has been clearly and repeatedly anticipated in its parts, function, and purpose."³²

The rule of the *Heald* and *Market Street Cable Ry. Co.* decisions firmly emerged and attached to the issue of infringement in *Singer Manufacturing Co. v. Cramer*,³³ wherein Justice White stated:

As in each of the patents in question it is apparent from the face of the instrument that extrinsic evidence is not needed to explain terms of art therein, or to apply the descriptions to the subject-matter, and as we are able, from mere comparison to comprehend what are the inventions described in each patent and from such comparison to determine whether or not the Diehl device is an infringement upon that of Cramer the question of infringement or no infringement is one of law and susceptible of determination on this writ of error.³⁴

In simple terms, this decision made the matter of infringement a question of law for the court when the court was able to understand the patents and the devices in question *without* the aid of "extrinsic evidence." Since that time, courts have submitted the issue of infringement to juries on the basis of the courts' ability to understand the patent documents and devices in question without the aid of additional evidence. The Supreme Court has relied on the rule in *Singer* in cases³⁵ where mere comparisons of patents or patents and devices revealed the essence of the question at hand. The Court of Appeals for the First Circuit was specifically faced with the issue of whether the question of infringement was one of law or fact.³⁶ After considering both the views of *Coupe* and *Singer*, the court adopted the *Singer* rule that infringement was a question of law apparently on the basis that the patent in suit and alleged infringing pencil sharpener were understandable without the aid

²⁹ 155 U.S. 565, 575 (1895).

³⁰ 155 U.S. 621, 625 (1895).

³¹ 104 U.S. 737 (1881).

³² *Market Street Ry. Co. v. Rowley*, 155 U.S. 621, 629 (1895).

³³ 192 U.S. 265.

³⁴ *Id.* at 275 (footnotes omitted).

³⁵ *Williams Mfg. Co. v. United Shoe Mach. Corp.*, 316 U.S. 364, 383 (1942); *United States v. Esnault-Pelterie*, 303 U.S. 26, 30 (1938); *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 36 (1929).

³⁶ *Automatic Pencil Sharpener Co. v. Boston Pencil Pointer Co.*, 279 F. 40, 41-42 (1st Cir. 1922).

of extrinsic evidence. This court subsequently reached a similar result³⁷ in justifying its review of a finding of invalidity, holding that review being proper and "unweighted" by the "clearly erroneous" stricture of Rule 52(a).³⁸

The Court of Appeals for the Second Circuit presented a thorough discussion and review of the leading decisions on the fact-law syndrome, including both *Singer* and *Coupe*, and concluded that the issues of both infringement and validity were properly sent to the jury.³⁹ However, it was clear that there were substantial factual issues involved which required extrinsic evidence for understanding, thus removing the case from the *Singer* rule. The court concluded:

In the case at bar there was conflicting testimony as to both invention and infringement. The experts disputed as to how prior patents worked and as to whether they were practical. They disputed vigorously as to the meaning of the phrase "dipping-frame," used in the claim, whether it would convey to one skilled in the art the idea both of a pin-bar and of a wire mesh basket. They disputed as to whether a machine made under the patent in suit would or would not work. We are satisfied that under the authorities cited the trial judge would have committed error, had he decided these questions of validity and infringement, instead of sending them to the jury.⁴⁰

Similarly, the Court of Appeals for the Third Circuit followed *Coupe*, and concluded that infringement is an issue of fact even though the construction of a patent presents an issue of law.⁴¹ Infringement is also regarded as a question of fact in the fifth circuit,⁴² but a matter of construction required the same Court to treat infringement as a question of law in a recent decision.⁴³

In an early decision the Court of Appeals for the Sixth Circuit discussed the rationale of both the *Singer* and *Coupe* cases, and concluded that the circumstances of infringement did not involve an issue of fact for the jury.⁴⁴ However, the court recognized⁴⁵ that the *construction* of a patent claim resting on extrinsic evidence may present an issue of fact for the jury. In two subsequent decisions, the court stated emphatically that interpretation⁴⁶ or *construction*⁴⁷ of a patent is a question of law. It should be noted that the *construction* or *interpretation* of a patent is to be distinguished from a determi-

³⁷ *Hanovia Chem. & Mfg. Co. v. David Buttrick Co.*, 127 F.2d 888 (1st Cir. 1942).

³⁸ FED. R. CIV. P. 52(a).

³⁹ *Heide v. Panoulis*, 188 F. 914, 916-17 (2d Cir. 1911).

⁴⁰ *Id.* at 917.

⁴¹ *New Wrinkle, Inc. v. John L. Armitage & Co.*, 277 F.2d 409, 412 (3d Cir. 1960).

⁴² *National Athletic Supply Corp. v. Tone-O-Matic Prod., Inc.*, 421 F.2d 407, 410 (5th Cir. 1970); *Hahn & Clay v. A.O. Smith Corp.*, 320 F.2d 166, 172 (5th Cir. 1963); *United States Indus. Inc. v. Otis Engr. Corp.*, 254 F.2d 198, 200 (5th Cir. 1958).

⁴³ *Sternier Lighting, Inc. v. Allied Electric Supply, Inc.*, 431 F.2d 539, 543, 166 U.S.P.Q. 454, 458 (5th Cir. 1970).

⁴⁴ *Hurin v. Elec. Vacuum Cleaner Co., Inc.*, 298 F. 76 (6th Cir. 1924).

⁴⁵ *Id.* at 78.

⁴⁶ *Motor Wheel Corp. v. Rubsam Corp.*, 92 F.2d 129, 131 (6th Cir. 1937).

⁴⁷ *Baldwin Rubber Co. v. Paine & Williams Co.*, 99 F.2d 1, 3 (6th Cir. 1938).

nation of infringement.⁴⁸ Thus, the same court found⁴⁹ that the trial court's decision pertaining to the scope of the patent claim in question, and the infringement thereof, having been based upon an examination of the operation of the devices in question, was a question of fact and "not very appropriate for review." In removing the case from the *Singer* rule, the Court stated:

Whether the rounded chambers were the equivalent to the flat topped ones, involved and largely depended upon whether the former produced, in this respect, the characteristic performance of the latter. This was a question of fact. The trial judge's decision of it depended upon the testimony of the experts and upon his observation of experiments conducted before him in chambers with transparent walls. We must doubt whether such a question as this can ever be considered as one so wholly of law, or as one not so involving any fact dispute, as to come within the *Singer* Case [citation omitted].⁵⁰

In following the *Singer* rule, the Court of Appeals for the Seventh Circuit made this succinct evaluation of the law-fact controversy:⁵¹

Infringement is sometimes a question of fact, of law, or mixed law and fact, depending entirely upon the condition of the proofs. In most cases the question is one of fact, and if the case is tried by jury it is error for the court to direct a peremptory verdict. [citation omitted] But where no evidence of prior art, or extrinsic evidence to explain the respective structures, is necessary the question is one of law, and the trial judge is authorized to direct a verdict. [citation omitted]⁵²

This view was echoed in a later decision⁵³ by the same court, which held:

Plaintiff in error questions the right of the District Court to pass upon the proposition of infringement as a matter of law, maintaining this should have been submitted to the jury. The construction of the claims was primarily for the court. If the construction is dependent on the prior art, a doubtful or disputed question of fact respecting the prior art would be for the jury; but where there is no dispute or doubt respecting the prior art the court may, and indeed should, as a matter of law, construe the claims in view of the uncontroverted and plain prior art.⁵⁴

The Court of Appeals for the Eighth Circuit has heartily embraced the *Singer* rule that infringement is a question of law where extrinsic evidence is not needed to explain the terms of art involved, and the court is able from mere comparison to comprehend what the patent is and how the accused device differs from the patented device.⁵⁵ On the question of interpretation of the claims (an issue related to but distinct from the issue of infringement), this

⁴⁸ *New Wrinkle, Inc. v. John L. Armitage & Co.*, 277 F.2d 409, 412 (3d Cir. 1960).

⁴⁹ *General Motors Co. v. Swan Carburetor Co.*, 44 F.2d 24, 26 (6th Cir. 1930).

⁵⁰ *Id.* at 26.

⁵¹ *Chicago & A. Ry. Co. v. Pressed Steel Car Co.*, 243 F. 883 (7th Cir. 1917).

⁵² *Id.* at 887.

⁵³ *Vurroughs Adding Mach. Co. v. Rockford Milling Mach. Co.*, 292 F. 550 (7th Cir. 1923).

⁵⁴ *Id.* at 554 (footnotes omitted).

⁵⁵ *Young v. Ralston-Purina Co.*, 88 F.2d 97, 101 (8th Cir. 1937).

court also applied *Singer* and made it clear that expert testimony on interpretation is merely advisory to the court and may be disregarded.⁵⁶ Similarly, the Court of Appeals for the Ninth Circuit follows the general rule of *Coupe*, that infringement is a question of fact to be left to the jury, and qualifies this pronouncement by the *Singer* concept.⁵⁷ In likening a patent to a contract, this court also adheres to the general rule that matters of construction are questions of law for the court.⁵⁸

From the foregoing, it is concluded that the construction and interpretation of a patent involve questions of law to be determined by the court. The issue of infringement presents a question of fact only when extrinsic evidence is needed to explain terms of art therein or to apply the descriptions to the subject matter; and if not needed, the infringement matter becomes a question of law.

It must be recognized that there are significant weaknesses in the *Singer* rule as it applies to matters of construction and infringement being questions of law. It is well settled that a patentee is his own lexicographer,⁵⁹ and the terms by which he chooses to use to describe his invention, while being understandable to one skilled in the art under 35 U.S.C. § 112, may not carry the same meaning of the same term used in its ordinary lay sense.⁶⁰ The *Singer* rule states that the construction or interpretation of this term is a law question for the court, but the meaning thereof is obviously a question of fact which may require expert testimony to determine. The *Singer* rule does *not* make the need for extrinsic evidence an exception to the rule that construction is a question of law only for the court, for this exception applies only to the matter of infringement. Thus, the inflexible rule that construction is a matter only for the court to decide should be subject to the same exception that applies to the issue of infringement, i.e., if extrinsic evidence is required on the matter of construction, a fact question is created which may go to the jury.⁶¹

A similar weakness exists in the *Singer* rule in regard to infringement, since a trial judge, who is a layman in the field contemplated by the patent, may earnestly but erroneously believe that the patent documents and devices before him are understandable without extrinsic evidence, when subtleties of a technical nature or otherwise, which are developed through expert testimony or the like, might substantially change the import thereof. As Judge Learned Hand wrote:

Specifications are written to those skilled in the art, among whom judges are not. It therefore becomes necessary, when the terminology of the art is not comprehensible to a lay person, that so much of it as is used in the specifications should be translated into col-

⁵⁶ *Solomon v. Renstrom*, 150 F.2d 805, 808 (8th Cir. 1945).

⁵⁷ *McRoskey v. Braun Mattress Co.*, 107 F.2d 143, 147 (9th Cir. 1939).

⁵⁸ *Del Francia v. Stanthony Corp.*, 278 F.2d 745, 747 (9th Cir. 1960).

⁵⁹ *Hughes Tool Co. v. Varel Mfg. Co.*, 336 F.2d 61, 65 (5th Cir. 1964).

⁶⁰ *The Bridge Proprietors v. The Hoboken Co.*, 68 U.S. (1 Wall.) 116 (1863).

⁶¹ *Hurin v. Electric Vacuum Cleaner Co. Inc.*, 298 F. 76 (6th Cir. 1924).

loquial language; in short, that the judge should understand what the specifications say.⁶²

In a later decision,⁶³ Judge Hand continued:

Courts, made up of laymen as they must be, are likely either to under-rate, or to overrate, the difficulties in making new and profitable discoveries in fields with which they cannot be familiar. . . .⁶⁴

In this connection, the Supreme Court has said:

It does not follow, that when a newly invented or discovered thing is called by some familiar word, which comes nearest to expressing the new idea, that the thing so styled is really the thing formerly meant by the familiar word.⁶⁵

This decision concluded that the word "bridge" as used in an old bridge law passed in 1790, did not mean the same thing when applied to the modern structure of a railroad bridge.

It would seem, therefore, that even concerning matters of construction of patents, the courts could submit certain factual questions to a jury. Moreover, the trial court should not take the infringement question away from the jury when extrinsic evidence concerning the patent and the accused device, product or method have been submitted unless the court detects an unbridgeable gap between the patent claims and the alleged infringing activity, which either cannot be spanned by such evidence, or which inherently rejects such evidence.

III. VALIDITY

The defense of validity assumes many postures, but is usually bottomed on indefiniteness or ambiguity of the specification and claims under 35 U.S.C. § 112, lack of utility under 35 U.S.C. § 101, lack of novelty under 35 U.S.C. § 102, or lack of nonobviousness under 35 U.S.C. § 103. Under 35 U.S.C. § 112, the inventor is required to describe his invention in the patent in such terms that one skilled in the art can make use of the invention. Defenses under this statute are customarily regarded as questions of fact⁶⁶ which should therefore be appropriate for submission to a jury. The question of novelty raises a host of fact questions, such as abandonment,⁶⁷ under various provisions of 35 U.S.C. § 102. However, the most common test of novelty is whether the patent claim was anticipated or shown in a prior patent, publication, or prior art device. Some of the foregoing decisions⁶⁸ cited in regard to the infringement issue under the *Singer* and *Coupe* rules actually related

⁶² *Kohn v. Eimer*, 265 F. 900, 902 (2d Cir. 1920).

⁶³ *Safety Car Heating & Lighting Co. v. General Electric Co.*, 155 F.2d 937 (2d Cir. 1946).

⁶⁴ *Id.* at 939.

⁶⁵ *The Bridge Proprietors v. The Hoboken Co.*, 68 U.S. (1 Wall.) 116, 147 (1863).

⁶⁶ *Arnold Pipe Rentals Co. v. Engineering Enterprises, Inc.*, 350 F.2d 885, 892 (5th Cir. 1965).

⁶⁷ 35 U.S.C. § 102(c) (1964). Abandonment is a question of fact. *Batten v. Taggart*, 58 U.S. (17 How.) 74, 85 (1854).

⁶⁸ See pp. 6-10 *infra*.

to the court's ability to evaluate *prior art* with or without the aid of extrinsic evidence. Thus, if a given plaintiff's patent or defendant's device are sufficiently comprehensible by the court in such a manner that no extrinsic evidence is required for understanding thereof, and if the court can therefore invoke the *Singer* rule and take the infringement question away from the jury, it would seem that the court would have a similar prerogative in treating prior art patents or devices used to thwart novelty. By the same token, prior art patents or devices which require extrinsic evidence for their understanding should create fact questions wherein the issue of novelty becomes a question of fact⁶⁹ for the jury if one has been impaneled.

Prior to the 1966 Supreme Court cases,⁷⁰ the issue of validity was broadly deemed by the Court to be an ultimate fact triable to a jury.⁷¹ However, in *Graham*,⁷² the Court regarded the ultimate question of patent validity to be "one of law."⁷³ This statement,⁷⁴ which ignored the earlier clear pronouncement⁷⁵ that validity was a question of fact, was based on the Court's commentary in *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*⁷⁶ However, a review of the language from the *A. & P.*⁷⁷ case does not suggest that the court had revised its view that validity was a question of fact and not of law. In *A. & P.*, the court specifically stated that it did not reverse the finding of fact of invention, but set it aside⁷⁸ because, as a matter of law the wrong standard of invention had been used. In any event, whatever the Supreme Court took away from the juries of the future in *Graham* by referring to the question of patent validity as one of law rather than one of fact,⁷⁹ it quickly returned by specifying several *factual* inquiries which must be made to satisfy the nonobviousness requirements of 35 U.S.C. § 103:

While the ultimate question of patent validity is one of law, [citation omitted], the § 103 condition, which is but one of three conditions, each of which must be satisfied, lends itself to several basic factual inquiries. Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the

⁶⁹ *Heide v. Panoulis*, 188 F. 914, 916-17 (2d Cir. 1911). *Hanovia Chemical & Mfg. Co. v. David Buttrick Co.*, 127 F.2d 888, 889-90 (1st Cir. 1942).

⁷⁰ *Graham v. John Deere Co.*, 383 U.S. 1 (1966); *United States v. Adams*, 383 U.S. 39 (1966).

⁷¹ *Inglett & Co. v. Everglades Fertilizer Co.*, 255 F.2d 342, 345 (5th Cir. 1958).

⁷² *Graham v. John Deere Co.*, 383 U.S. 1 (1966).

⁷³ *Id.* at 17.

⁷⁴ *Id.*

⁷⁵ *United States v. Esnault-Pelterie*, 299 U.S. 201, 205 (1936).

⁷⁶ 340 U.S. 147, 155 (1950).

⁷⁷ *Id.* at 155.

⁷⁸ *Id.* The lack of clarity of the relevant language in *A. & P.* upon which the Supreme Court based its change of position in *Graham* was noted by the Court of Appeals for the Fifth Circuit in *Swofford v. B. & W., Inc.*, 395 F.2d 362, 365 (5th Cir. 1968).

⁷⁹ The Supreme Court's view in *Graham*, that the "ultimate question of patent validity is one of law," influenced the authors of *Federal Jury Practice And Instructions*, to delete in their second volume the section on instructions in patent cases which appeared in an earlier edition. *Federal Jury Practice And Instructions*, 365 (2nd ed. 1970).

obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.

The very language of the statute pertaining to obviousness⁸⁰ cries out that it is the persons having ordinary skill in the art who must make the judgment about the obviousness or nonobviousness of the differences between the invention and the prior art. Having heard from such experts through trial testimony, it would seem that the trial court would be estopped to prevent the evaluations of such experts from reaching the jury. The level of the ordinary skill of such persons is one of the *factual* inquiries required to be made by the court on the obviousness question.⁸¹ In reading the decisions, one must bear in mind the difference between patent experts, usually disinterested patent lawyers, whose testimony may be advisory at best,⁸² and the "experts" who have skill in the art. It is the latter group which is contemplated by the statute,⁸³ and it is to this group that attention must be given. Certain of the secondary considerations, such as commercial success, have always been regarded as factual inquiries.⁸⁴

Despite the inadvertence of the Supreme Court's having changed validity from a question of fact⁸⁵ to a question of law,⁸⁶ the factual inquiries outlined in *Graham*⁸⁷ pertaining to the issue of validity under 35 U.S.C. § 103 still leave the determination of obviousness welded to questions of fact which a jury could consider. The Court of Appeals for the Fifth Circuit recognized these factual inquiries and regarded them to be subject to the clearly erroneous rule,⁸⁸ but indicated that this rule does not apply to an "ultimate factual conclusion."⁸⁹ The full meaning of this statement emerged in a subsequent decision, *Swofford v. B. & W., Inc.*,⁹⁰ where the court sustained the directed verdict of the trial court⁹¹ for patent invalidity after a jury had held the patent to be valid. The trial court ignored three interrogatories⁹² to the jury since they went to the ultimate question of validity itself, which the court regarded as a question of law. A review of these three interrogatories⁹³ suggests that

⁸⁰ 35 U.S.C. § 103 (1964).

⁸¹ *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

⁸² *Solomon v. Renstrom*, 150 F.2d 805, 808 (8th Cir. 1945).

⁸³ 35 U.S.C. § 103 (1964).

⁸⁴ *Ray-O-Vac Co. v. Goodyear Tire & Rubber Co., Inc.*, 136 F.2d 159 (7th Cir. 1943).

⁸⁵ *United States v. Esnault-Pelterie*, 299 U.S. 201, 205 (1936).

⁸⁶ *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

⁸⁷ *Id.* at 17.

⁸⁸ *Metal Arts Co. v. Fuller Co.*, 389 F.2d 319, 321 (5th Cir. 1968).

⁸⁹ *Id.* at 321.

⁹⁰ 395 F.2d 362 (5th Cir. 1968).

⁹¹ *Swofford v. B. & W., Inc.*, 251 F. Supp. 811 (S.D. Tex. 1966).

⁹² *Id.* at 817.

⁹³ *Id.* at 813, 814-15.

the court did go substantially to the ultimate question of obviousness, and in this sense, were improvidently drafted. But in a later decision,⁹⁴ it is clear that the fifth circuit still recognizes the *factual* inquiries that must be made for obviousness. In *American Seating Co.*, the court sustained the trial court's finding that the patent was invalid under 35 U.S.C. § 102 and § 103. The critical factor in the validity question was the trial court's definition of the term "integral" as used in the patent, and this decision was made from its evaluation of conflicting scientific testimony. The court held: "When there is a marked conflict among expert witnesses, the case is clearly one which calls for the application of Rule 52(a) of the Fed. R. Civ. P."⁹⁵ It follows that if the court or a jury had reached an opposite conclusion on this factual matter which favored the patentee, the appellate court would similarly have honored the immunities of Rule 52(a) and left the matter undisturbed unless clearly erroneous. In *Swofford*, the fifth circuit noted⁹⁶ that the second, third, fourth, fifth, sixth, seventh, ninth, and tenth circuits shared its view that nonobviousness is a question of law. However, all of the cases cited from the various circuits in support of this conclusion were *prior* to *Graham*. At least two of these circuits, the fourth⁹⁷ and the tenth,⁹⁸ have since had an opportunity to direct themselves to this precise question, and have each held that obviousness is a question of fact which is bound by Rule 52(a).

It would appear that the plaintiff's problems in *Swofford* stemmed from the phraseology of the interrogatories to the jury. For example, *Graham* states that one of the *factual* inquiries of nonobviousness under § 103 relates to the differences between the prior art and the patent claims at issue.⁹⁹ The statute (35 U.S.C. § 103) focuses on the question of whether "the differences between the subject matter sought to be patented and the prior 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 the subject matter pertains." The plaintiff in *Swofford* asked the jury this far-reaching question in Interrogatory 21: "Do you find that the combination defined in the claims of the plaintiff's patent in suit is a combination the structure of which was not obvious as of June 4, 1954 to a man of ordinary skill in the art who had knowledge of all of the prior devices and references?"¹⁰⁰ It would seem that if the plaintiff had submitted evidence of the prior art and the patent claim by patent experts or persons with skill in the art, the following typical interrogatories might have been appropriate:

⁹⁴ *American Seating Co. v. Southeastern Metals Co.*, 412 F.2d 756 (5th Cir. 1969).

⁹⁵ *Id.* at 758.

⁹⁶ *Swofford v. B. & W., Inc.*, 395 F.2d 362 (5th Cir. 1968).

⁹⁷ *Porter-Cable Machine Co. v. Black and Decker Mfg. Co.*, 402 F.2d 517, 519 (4th Cir. 1968); *Mahaffy and Harder Engineering Company v. Standard Packaging Corp.*, 389 F.2d 525, 530 (4th Cir. 1968). See also *Willis v. Town*, 182 F.2d 892, 894 (8th Cir. 1950).

⁹⁸ *Eimco Corp. v. Peterson Filters and Engineering Co.*, 406 F.2d 431 (10th Cir. 1968).

⁹⁹ *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

¹⁰⁰ *Swofford v. B. & W., Inc.*, 251 F. Supp. 811, 815 (S.D. Tex. 1966).

A. Did differences exist at the time of the invention of patent claim 1 between the subject matter of the claim and the prior art patents X and Y?

B. For each different element of structure contemplated by an affirmative answer to the preceding interrogatory, was it obvious at the time of the invention to a person having ordinary skill in the art to use that element or elements of the prior art devices to perform the same purpose and function of that same element or elements as assembled in patent claim 1?

Thus, if a resilient spring was the element that constituted the difference between the patented combination and the combination of the prior art, and if the jury, on the basis of extrinsic evidence, concluded that one having ordinary skill in the art would have found it obvious to apply a spring to the combination of the prior art, then this would be a proper disposition of a factual question based upon extrinsic evidence which should invoke the immunity of Rule 52(a). The court would therefore be required to make the legal determination that the combination of patent claim 1 was obvious, and hence, invalid. However, if the jury had been required to make a factual determination of the term "integral" as did the trial court in *American Seating Co.*,¹⁰¹ (a finding of fact sanctioned by the fifth circuit), and if the jury had found that the *integral* construction of two elements constituted the difference between the claimed combination and the prior art, and if the jury then concluded on the basis of conflicting and believable evidence that one having skill in the art would *not* have found it obvious to make these components of integral construction, it is difficult to see how the trial court could either remove this question from the jury or grant a directed verdict in opposition thereto. This is merely a determination in the face of extrinsic evidence of the factual question that the statute¹⁰² contemplates.

IV. CONCLUSION

The struggle with the jury question of obviousness may well be won or lost on the specific interrogatories propounded to the jury. In any event, the law-fact argument continues to ferment on the question of validity and the uncertainty of the jury influence on patent validity continues to waiver¹⁰³ and to prevail¹⁰⁴ on different fronts as the trial courts struggle with *Graham*.

In conclusion, infringement is normally a question of fact¹⁰⁵ which can be submitted to the jury unless the trial court believes under the *Singer* rule that the patents and devices in question are completely understandable without

¹⁰¹ *American Seating Co. v. Southeastern Metals Co.*, 412 F.2d 756, 758 (5th Cir. 1969).

¹⁰² 35 U.S.C. § 103 (1964).

¹⁰³ *Allen Industries Inc. v. National Sponge Cushion, Inc.*, 292 F. Supp. 504 (D.C. N.J. 1967), *aff'd* 403 F.2d 717 (3d Cir. 1968).

¹⁰⁴ *Holmes v. Thew Shovel Co.*, 305 F. Supp. 139 (N.D. Ohio 1969).

¹⁰⁵ *Coupe v. Royer*, 155 U.S. 565, 575, 577 (1895); *Hahn & Clay v. A. O. Smith Corp.*, 320 F.2d 166, 172 (5th Cir. 1963).

the need of extrinsic evidence. However, trial judges are under the admonition of Judge Learned Hand¹⁰⁶ not to assume too much expertise in interpreting, construing, or comparing patents or devices. Patent validity is now a question of law,¹⁰⁷ and questions of definiteness,¹⁰⁸ abandonment¹⁰⁹ and novelty¹¹⁰ either are, or necessarily involve, strong questions of fact. Invalidity by reason of obviousness under 35 U.S.C. § 103 requires definite factual inquiries,¹¹¹ which if not couched in terms of ultimate factual conclusions, can be a subject for determination by the jury. In view of the foregoing, it seems clear that under proper circumstances, where extrinsic evidence is submitted which is not inconsistent with any absolute to which the court could adhere, the jury's findings on both the issues of infringement and the factual aspects of validity, would necessarily control the trial court's conclusions as to these issues, and the jury's findings in these areas would similarly acquire the clearly erroneous immunity of Rule 52(a). At least the factual inquiries pertaining to obviousness, as enunciated in *Graham*, do come within the strictures of this rule.¹¹²

¹⁰⁶ *Kohn v. Eimer*, 265 F. 900, 902 (2d Cir. 1920); *Safety Car Heating & Lighting Co. v. General Electric Co.*, 155 F.2d 937 (2d Cir. 1946).

¹⁰⁷ *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

¹⁰⁸ *Battin v. Taggart*, 58 U.S. (17 How.) 74, 85 (1854).

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

¹¹² *Stamcarbon N.V. v. Escambia Chem. Corp.*, 430 F.2d 920, 926 (5th Cir. 1970).

THE LAW OF WATER DISTRIBUTION IN IOWA AND SOUTH DAKOTA: A COMPARISON OF THE RIPARIAN AND APPROPRIATIVE SYSTEMS

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Water is necessary to sustain human and other animal and plant life, as we know it, on this planet.¹ Water is also necessary to manufacturing, mining, recreation, transportation and a variety of other activities in which human beings are notorious for engaging.²

The supply of water is static.³ The supply of men is not.⁴ Moreover, a great deal of the supply of water is unusable for many of mankind's purposes because of its saline condition. Another significant portion of the world's water supply has been, is, or soon will be, polluted to the point of impairing its usefulness, exhausted by extravagant use,⁵ or wasted by mismanagement.⁶ Therefore, as the demand created by increasing population⁷ and myriad new forms of consumption is rising⁸ the supply is diminishing. An alarming water shortage is developing,⁹ necessitating rules for sharing water.¹⁰ In an ordered society the rules will be written and referred to as laws.¹¹

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¹ "Water is absolutely necessary for human existence. This is a widely recognized but little appreciated fact." Timmons, *Problems in Water Use and Control*, 41 IOWA L. REV. 160 (1956) [hereinafter cited as Timmons].

² *Id.* Water is important economically, physically, and esthetically "to a great range of human activities." N. HINES, A DECADE OF EXPERIENCE UNDER THE IOWA PERMIT SYSTEM I (Agricultural Law Center, College of Law, The University of Iowa, Monograph No. 9, 1966) [hereinafter cited as HINES].

³ See Timmons, *supra* note 1, at 178.

⁴ See generally P. EHRLICH, THE POPULATION BOMB (1968).

⁵ "[E]xtravagant uses of this precious resource [water] are straining the available supplies, even in areas once considered water rich." HINES, *supra* note 2, at 1.

⁶ "[T]he majority of today's water problems . . . stem from . . . a continuing lack of accommodation between nature's distribution patterns and man's need patterns . . . [M]ost would agree the fault lies chiefly with man and not with nature." *Id.*

⁷ "Concern over handling the nation's resources in order to meet the demands of its exploding population is deep and widespread." Hutchins, *Background and Modern Developments in State Water-Rights Law* in 1 WATERS AND WATER RIGHTS 150 (R. Clark ed. 1967) [hereinafter cited as Hutchins].

⁸ "An increasing population coupled with greater per capita consumption is much the story, but industrial, agricultural and recreational demands for water are also expanding rapidly." HINES, *supra* note 2, at 1. "The fundamental character of water problems lies in the increasing demands . . ." Timmons, *supra* note 1, at 161.

⁹ See Timmons, *supra* note 1, at 178. "That the pressure of increasing population upon the nation's water supplies is posing and will continue to pose, serious problems in engineering and other natural sciences, economics, finance, and law is widely recognized and studied . . ." Hutchins, *supra* note 7, at 150-51. Iowa, however, is one of the few remaining states with a water surplus. See HINES, *supra* note 2, at 1, where the author concludes that in Iowa "scarcity is as yet chiefly a potential threat."

¹⁰ See Timmons, *supra* note 1, at 171, 178.

¹¹ Not that all rules will always be written—custom and traditions sometimes