Fraud in Patent Procurement:
Genuine and Sham Charges†

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I. Introduction—The Patentee’s Sword of Damocles†

An allegation of inequitable conduct or fraud in the procurement1 of...
a United States patent is always a serious matter. It may not be treated lightly when entering litigation even though trial counsel for the patentee knows through the fibers of his experience and established legal precedent that nothing like inequitable conduct or fraud occurred during the patent solicitation period.

The landmark case of Beckman Instruments, Inc. v. Chemtronics, Inc.\(^2\) demonstrates the danger of underestimating any claim based on the allegations of inequitable or fraudulent conduct. In Beckman, the rather light and offhand response of the plaintiff to the allegation of fraud made it clear that the patentee's attorneys believed there was no substance to the antitrust counterclaim based on the allegation of fraudulent procurement.\(^3\) At first, it seemed that they were correct. One of the charges upon which the fraud was based was that an alleged directly anticipatory reference\(^4\) known to the patentee during the prosecution period had not been cited to the Patent Office. The trial court not only rejected the allegation of fraud but found the reference non-anticipatory and the claims nonobvious over what had become a section 103 reference.\(^5\) The patentee appealed the finding that its valid patent had not been infringed while the defendant cross-appealed the holding of validity and the dismissal of its antitrust counterclaim which had been based upon fraud in the procurement of the patent. In reversing the trial court, the United States Court of Appeals for the Fifth Circuit not only held the patent invalid but did so on the ground that the withheld reference was directly anticipatory under section 102.\(^6\) It directed the trial court to ascertain what had been the patentee's intent in failing to cite the reference to the Patent Office so that the viability of the antitrust counterclaim could be decided. On remand, the trial court held the requisite intent for

an antitrust counterclaim to be lacking.\textsuperscript{7} The case apparently was settled, however, making it impossible to determine what the appellate court would have done had it had the opportunity to get this case back in its chamber. But the language of the earlier appellate opinion indicates a distinct possibility that the trial court may well have been reversed once again.\textsuperscript{8}

It is not difficult to imagine the state of shock experienced by the patentee and his attorneys at the end of the last installment of this litigation. For those outside the heat of that particular battle and who have been steeped in the thousands of patent cases decided by the federal judiciary during this century, it should not be surprising that confusion, conflict, ambiguity and downright lack of comprehension may enter into the decisions and opinions rendered in patent cases.\textsuperscript{9} It is notorious, for example, that the United States Courts of Appeals are divided with respect to the meaning of nonobviousness under section 103.\textsuperscript{10} Indeed, the Supreme Court has spoken ambigu-

\textsuperscript{8} "Appellant's only reply to these facts is that they did not consider Stow's work to be relevant prior art. This assertion, however, is rendered utterly incredible both by Beckman's conduct and by the obvious similarity of the Stow and Clark devices." 165 U.S.P.Q. at 364.
\textsuperscript{9} That this is the situation and that it is entirely understandable why this is so was cogently and knowledgeably expounded recently by the former Chief Judge of the Second Circuit, Henry J. Friendly. He said:

\begin{quote}
\textbf{The serious problem today is not the differing visceral sensations of district judges, but rather the contrasting attitudes of the various courts of appeals on the issues of invention and novelty—a difference which the Supreme Court's two decisions of 1966, not surprisingly, did not end. This accounts for the mad and undignified races that sometimes occur between a patentee who wishes to sue for infringement in one circuit believed to be benign toward patents, and a user who wants to obtain a declaration of invalidity or non-infringement in one believed to be hostile to them.}
\end{quote}

Another strong argument for removing patent litigation from the ordinary courts is the increased complexity of their subject-matter. It was not hard for ordinary judges to comprehend a patent like that in one of the leading cases of early years, which substituted porcelain or clay for wood or metal in doorknobs. Indeed, I did not find the subject for what for long was my only patent opinion—women's girdles—to be unduly technical. But the courts must also deal today with a great number of patents in the higher reaches of electronics, chemistry, biochemistry, pharmacology, optics, harmonics, and nuclear physics, which are quite beyond the ability of the usual judge to understand without the expenditure of an inordinate amount of educational effort by counsel and of attempted self-education by the judge, and in many instances, even with it. The judges who hear the case in a suit for infringement on appeal are no better off for the benefit they can derive from the district court's opinion. Indeed, save in this respect, they are rather worse off since the limited time available for argument prevents their getting as much assistance from counsel as did the district judge and, once the argument is over, it is cumbersome to have further recourse to counsel for help on technical matters that may assume new importance as a result of study.


For a detailed analysis demonstrating the substantive and statistical correctness of this statement, see Kayton, The Crisis of Law in Patents (Oct. 20, 1970). The Crisis of Law in Patents presents a rigid statistical analysis which demonstrates a statistically significant division among the circuits. It does not purport, however, to base its conclusion upon those statistics. The Crisis of Law in Patents is a 35 page substantive analysis of cases from the circuits; a scant page-and-a-half deals with an analysis of the statistical data and con-
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contains the following caveat, at page I-6, by way of introduction to the substantive analysis of the cases:

The preceding statistical data and analysis, when viewed in the overall role which statistics properly should play, should lead to no final conclusions about what the courts have done or said. They should, however, direct us to a substantive examination of the courts' actions and statements to see whether what these statistics urge as highly likely has in fact been the case. This we will now do. In so doing, however, it will be seen that the statistical data and analyses discussed above are an excellent description of what has been and is taking place in the federal appellate courts relative to the legal standards of non-obviousness.

The circuit by circuit analysis that follows the caveat demonstrates that, statistics aside, there is a significant division among the circuits with respect to the rules actually used in determining section 103 obviousness despite the almost universal lip-service given the Supreme Court's rules in Graham v. John Deere Co., 383 U.S. 1 (1966). Chief Judge, Henry J. Friendly, of the Second Circuit cited this work as partial support for his thesis concerning a special patent court. H. FRIENDLY, FEDERAL JURISDICTION: A GENERAL VIEW 155 (1973). See note 9 supra for a sense of Judge Friendly's views based upon his personal experience and observations in patent litigation.

* STERN: The "notorious" division of understanding to which Professor Kayton refers may well be more imagined than real. In Blonder-Tongue Labs., Inc. v. University of Ill. Foundation, 402 U.S. 313 (1971), distinguished counsel acting as amicus curiae told the Court of the same alleged great disparity among circuits in the treatment of obviousness under section 103. In doing so they relied on the same data and analysis ("The Crisis of Law in Patents," supra) to demonstrate this. The Court was unimpressed. See 402 U.S. at 332. Another distinguished academic authority, Professor Kauper, has observed that such analyses or compilations of data "are largely meaningless," because they are not based on comparable case samples in the different circuits. Statement of Thomas E. Kauper, Assistant Attorney General, Antitrust Division, Submitted in Connection with Hearings on Patent Appeals, Before the Comm. on Revision of the Fed. Court Appellate System, May 20, 1974, at 20 n.21. Certainly, the mix of patents litigated in the Eighth Circuit, for example, differs markedly from that in the Court of Claims or the Fourth Circuit as to subject matter, complexity, and any number of other pertinent factors. This difference in composition of the sample cannot be offset by the size of the samples or the differences noted in respective box scores.

Similarly, the ambiguity by the Supreme Court that is perceived in the text accompanying the note reflects more the perceiver's dissatisfaction with the substantive result in the Black Rock case (the Court's reaffirmation of the doctrine of the lack of invention in, and consequent unpatentability of, a mere aggregation or exhausted combination that masquerades as a new combination) than it reveals a problem that is material to the treatment of fraud on the Patent Office or inequitable conduct. It is the present author's view that most talk about "irreconcilable conflicts" among the circuits over "endless lists of patent law subjects" and cries of outrage that courts of appeals are being persuaded to strike down patents on the basis of "outlandish charges" of fraud is just so much rhetoric.


The present writer's belief is that there is no more, and possibly somewhat less, fraud on the Patent Office going on today than 20, 50, 100, or 150 years ago. Cf. S. Doc. No. 338, 24th Cong., 1st Sess. (1836), at 3. There is, how-
ously on this subject\textsuperscript{11} even though it had earlier set forth cogent and organized guidelines.\textsuperscript{12} Similarly, it is questionable what the law of public and experimental use under section 102 may be in a particular circuit. The qualification so analogous and nonanalogous art under the concept of nonobviousness under section 103 are a ludicrous mishmash. It is possible to point out irreconcilable conflict within and among court of appeals circuits over an almost endless list of subjects within the field of patent law.\textsuperscript{13} It should not be surprising, therefore, that an outlandish charge of inequitable conduct or fraud before the Patent Office sometimes receives a sympathetic ear at the court of appeals level or before a particular court of appeals panel.

As a consequence, the pressures upon the defendant in an infringement suit to charge inequitable conduct or even fraud—no matter how tenuous the case—are often irresistible. The defendant’s reasoning may well be as follows: He is already in litigation. Allegations of inequitable conduct or fraud or both as a defense or counterclaim in the pleadings are as inexpensive as are the mere cost of writing the words. Tacking this type of investigation onto otherwise necessary discovery is effortless and virtually costless. He can always drop the charge if it appears that it is going against the judge’s grain. Moreover, if he did not include it in his complaint originally, it is very easy to add it by amending the complaint.\textsuperscript{14} Most important, there may be a pot of gold at the end of the rainbow in the form of treble damages under the Clayton Act or simply attorneys’ fees under the patent statute.

What is not often recognized, however, is that very important indi-
rect benefits also accrue to the defendant. Once the defendant charges that a consciously made and willfully performed act by the patentee during prosecution was done inequitably or for fraudulent purposes, he has generated a cloud over the patentee and possibly an insidious doubt in the mind of the judge—at least until the patentee can demonstrate the validity of the patent or his good faith. Although the legal burden of proof has not shifted, it is the patentee who must come forward and affirmatively demonstrate his virtue, wholesomeness and good faith, and he must do so before a judge for whom the practice in patent law before the Patent Office is often considered akin to a witch doctor's ritual.  

Psychologically, therefore, the possibility exists that the patentee will be permanently, albeit unjustifiably, tarnished. Thus, although the antitrust counterclaim is dismissed and attorneys' fees denied, and the defense of unenforceability because of inequit-able conduct is rejected, the patentee will always be left to wonder what intangible effect the fraud allegation may have had on a substantive holding of invalidity or noninfringement. If this seems to press conjecture too hard and far, consider Judge Newcomer's words in holding a patent invalid not for fraud but for obviousness:

The fact that this Court has not found fraud chargeable to plaintiff, or awarded attorney's fees, should not be taken as placing this Court's imprimatur on all of plaintiff's actions. It results more from failure of proof in otherwise suggestive circumstances, or the possibly fortuitous absence of materiality. Hopefully, the plaintiff and its attorneys will be more careful in the future in insuring that the circumstances surrounding their actions are not at all even suggestive of impropriety.

Although the judge found the plaintiff not culpable of fraud, he did not miss the opportunity to disapprove of and threaten the patentee in a most unjustifiable manner. Guilty until proven innocent is a strange

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15. Patent Office procedure is a rational body of law in a highly specialized field. It is designed to provide common sense justice and procedural due process in an area of law where the property rights sought are, with respect to a res, uncommon to other areas of property, i.e., technological innovation. For these reasons, this body of law is foreign to the usual bodies of law in which judges are exposed, trained and comfortable. See Chief Judge Friendly's comments in FEDERAL JURISDICTION, note 9 supra. For a judge to throw up his hands because of lack of comprehension of these esoteric but common sense and rational rules is unfortunate. For trial counsel on either side to fail to clarify effectively this "strange" procedure for the judge is equally unfortunate. As will be seen in section IX, infra, the author urges a means at trial, through a patent expert witness, to help ameliorate this unsatisfactory state of affairs.

* STERN: Is the unstated premise that the judge errs in so regarding the practice? Perhaps, the premise should be questioned. See generally Fortas, The Patent System in Distress, 14 IDEA 571 (1971); Remarks of Congressman Owens, Cong. Rec., H 2865 (Apr. 17, 1973 daily ed.).

jurisprudence but apparently not unknown in the patent field where fraud has been alleged.

Guilty after having been proven innocent, although well-nigh unbelievably, was recently held to be the law in the celebrated but logically inconsistent and confused case of Honeywell, Inc. v. Sperry Rand Corp. In that case Judge Larson held the ENIAC patent (of Sperry Rand) unenforceable because of the inherent consequences of delay in the issuance of the patent despite findings establishing that there was no undue delay in obtaining the patent. Consider the following sequence of findings of fact:

11.14 On the record as a whole (but with reluctance) I find that there was no undue delay in the proceedings before the Patent Office or the District Court.
11.14.1 SR [Sperry Rand] did not exceed any time limits provided either by the court order, rule or statute.
11.14.2 There was no intentional delay in the prosecution of the case of Sperry Rand Corp. v. Bell Telephone Labs.
11.14.3 There was no intentional delay in the issuance of the ENIAC patent.
11.14.4 A party seeking a right under the patent statutes may avail himself of all their provisions and courts may not deny him the benefit of a single one.
11.14.5 Honeywell has not met its burden of establishing that there was undue delay in the issuance of the ENIAC patent or that there was any improper conduct on the part of SR or its counsel which caused undue delay.

12.3.2 Although not made a basis for a finding of undue delay such as to render the ENIAC patent invalid for deliberately extending the expiration of a monopoly, the inherent consequences of delay in issuance due to six years of inadequate preparation by SR and its counsel in the SR v. BTL case, and thereby the proceedings before the Patent Office as set out at Finding 11 above, render the ENIAC patent unenforceable.
12.3.2.1 Where many persons were at work in the same field and had made advances in the art, and where the applicant learns of such work and is aware that his original claims might not cover the real advance made by his competitors, an intentional delay in the prosecution of the patent to enable later changes in the specification and claims so that the work of the other inventors might be covered, renders the patent invalid.

Judge Larson's opinion highlights how the charge of inequitable procurement may cloud the real issues in a case. Injecting into judicial consideration that the prosecution of the patent application took a long time, although recognizing that the length of time was both legal

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18. Query: Why was the judge reluctant to so find? Would he not be obliged to find otherwise if the facts and law so required?
20. Id. at 711.
and proper, was not a rational legal process. This factor coupled with the implications of the judge's editorial comment that he found no undue delay only "with reluctance," suggests that he could not have properly understood the nature of the process of obtaining a patent in a complex and pioneering technology.\(^{21}\)

Patents are inequitably procured, however, in at least some instances. In Buzzelli v. Minnesota Mining & Mfg. Co.,\(^{22}\) the best prior art was known to the inventor and to the attorney prior to filing the application but was not called to the attention of the Patent Office until long after it could jurisdictionally be considered or acted upon by the examiner. Moreover, although the best art relied on in the examination by the examiner was not as good as that known to the attorney at the time, the attorney relied upon a feature of that uncited art, which was also recited in his claims, to argue patentability over the art upon which the examiner did rely.\(^{23}\) The trial court held the patent inequitably procured.

The cases and data now available in the patent fraud field are so extensive that we can begin placing things into perspective with a view to sheathing Damocles' sword, but withdrawing and using it when appropriate. In this respect, one of the express purposes of this article is to assure concentration on the real issues that can define effective prosecution and litigation guidelines. All too often, broad statements within reported judicial opinions do not give the whole or meaningful story, although they are essential to full comprehension. Thus, this article undertakes an investigation of certain aspects of this field by an in-depth examination of both the file histories and the records of two landmark fraud cases.\(^{24}\) Of equal importance is the dis-

\(^{21}\) Judge Larson relied on two cases as legal support for Finding 12.3.2.1. They are Woodbridge v. United States, 263 U.S. 50, 57 (1923), and Levinson v. Nordiskog Co., 301 F. Supp. 589, 163 U.S.P.Q. 52 (C.D. Cal. 1969). Those cases in fact and law are so inapposite to that of the Findings of Honeywell v. Sperry Rand set forth in the text above as to be compelling circumstantial evidence that Findings 12.3.2 and 12.3.2.1 were colored by the bias suggested in Finding 11.14. In fairness to Judge Larson, however, the Honeywell case was a monolithic chimera which would have tried the wisdom (and patience) of Solomon. For a terse but complete analysis of Woodbridge and Levinson on this point, see Pat. L. Persp. § A.319[A] (1969-70 A/R).


\(^{23}\) At the trial, one of the attorneys who prosecuted the Buzzelli application testified that at an oral interview with the examiner he either called the critical prior art to the examiner's attention and/or that the examiner indicated that he was aware of it. However, no written record of this appeared in the file history as required by 37 C.F.R. § 1.2 (1974). Moreover, the examiner testified on defendant's deposition that he had no recollection of being presented with that information.

cussion of every important recorded case dealing with fraudulent or inequitable procurement. The author believes that a workable outline of how to live under the growing mountain of allegations of fraud or inequitable conduct which have come upon us since the Supreme Court's holding in Walker Process Equipment Inc. v. Food Machinery & Chemical Corp., the first case to hold that an antitrust claim could be based upon the alleged enforcement of a fraudulently procured patent, will be perceived by the reader with enough patience to stay with us to the end.

One of the significant conclusions to be drawn from the studies the authors have undertaken is that trial counsel can respond to allegations of fraud in the procurement more effectively than in the past—hindsight being the perceptive analytical tool upon which we rely in large part. This writer concludes that procedures can be designed, and are outlined, and should be implemented by attorneys who engage in patent solicitation to ensure that future unfounded allegations of fraud in the procurement will be rejected promptly on a prima facie basis. These conclusions and recommendations are not merely theoretical—they are practical and may be put to use immediately. Finally, throughout the analysis and discussion the authors have interwoven the proper and effective manner to charge and establish fraudulent or inequitable procurement in a proper case.

II. Factual Environment Giving Rise to Charges of Inequitable or Fraudulent Conduct in Patent Procurement

Allegations of fraud have been addressed to activities which span the entire spectrum of contacts between a patent applicant and the Patent Office. Courts have been required to scrutinize all aspects of the patenting process to determine allegations of culpability in the patent applicant's behavior. Activities charged to be fraudulent or inequitable have ranged from what appear to be trivial and incidental errors, to grave misrepresentations. The typical chronological progression of the patenting process must be considered to place in context circumstances where fraudulent or inequitable conduct by patent applicants might be, or have been, alleged.

The factual environments which give rise to allegations of fraud or inequitable conduct extend from the time prior to filing the application until the time of issuing the patent. The quality of the act alleged to be fraudulent or inequitable varies from a deliberate misstatement, to a neglectful omission, to a failure to investigate facts. Combining these elements, the factual environment of charges of fraud can be summarized in the following outline.

A. Fraudulent or inequitable conduct in the genesis of the patent application due to the applicant's inability to make the

† This section was written by John F. Lynch.
required oath or declaration as the original inventor
1. because of anticipatory prior art
2. because of misrepresentation in naming the inventor
   a. misjoinder of inventors
   b. non-joinder of inventor
   c. derivation or appropriation by applicant of invention from another
3. because the applicant seeks to extend the claims to cover something he did not invent

B. Other misrepresentations in the declaration or oath
1. respecting a printed publication which preceded the invention or is a time bar
2. respecting the non-existence of a barring public use, sale or offer for sale
3. respecting the existence of prior applications or patents relating to the invention
4. respecting prior applications relied upon in a claim of priority

C. Misrepresentations to the Patent Office during prosecution of the patent application involving
1. arguments to the Patent Office
   a. misconstruing a reference which is before the examiner
2. affidavits under Rules 131 or 132
   a. false statements in affidavits
   b. selectively editing facts or data for presentation in affidavits
3. failure to correct an inadvertent error in a prior affidavit or argument
4. withholding identification of other related pending applications
5. failure to cite prior art to the Patent Office
   a. anticipatory prior art
   b. "relevant" prior art under 35 U.S.C. § 103
6. purposeful obfuscation of invention or the prior art in the patent specification
7. interferences
   a. suppression of evidence or collusion respecting the presentation of evidence
   b. settlements involving concessions of priority
8. misrepresentations in connection with Petitions to Make Special
9. purposeful delay of issuance of the patent

D. Inequitable conduct in failure to observe Patent Office Rules of Practice
1. patent solicitation by ineligible person (i.e., former examiner)
2. failure to provide a written record of subject matter discussed in interviews
3. failure to observe formalities respecting execution of oath or declaration
   a. execution of oath not appended to application
   b. interlineation following signature
4. failure to comply with other formal Patent Office procedures

The above outline represents the various factual circumstances which an alleged infringer might scrutinize to provide a defense to patent enforcement or the basis for antitrust relief. After surveying this overview of the factual circumstances where fraudulent or inequitable conduct might exist, however, an experienced practitioner would conclude that some misrepresentation may have much more serious consequences to the patent applicant than others.

Yet, despite the varying gravity attached to particular acts of the patent applicant, a standard of conduct has been defined in three Supreme Court cases,26 the most frequently quoted of which states that "[t]hose who have applications pending with the Patent Office or who are parties to Patent Office proceedings have an uncompromising duty to report to it all facts concerning possible fraud or inequitableness underlying the applications in issue."27 This trilogy of cases is most commonly cited as defining the posture of a patent application before the Patent Office.28 None of these cases, however, provides a nuts and bolts method of applying the standard of conduct to the various factual environments which arise in the patenting process.29

28. In earlier patent infringement cases, fraud in the procurement had been held to be a defense based upon a general unclean hands theory. See, e.g., Keystone Driller Co. v. General Excavator Co., 290 U.S. 240, 19 U.S.P.Q. 228 (1933). Patents had also been declared invalid for fraud. See, e.g., Marconi Wireless Tel. Co. v. United States, 320 U.S. 1, 57 U.S.P.Q. 471 (1943), which relied on the then present patent statute. The continuing applicability of this law of patent invalidity for fraud will be explored below.
29. See Cullen & Vickers, Fraud in the Procurement of a Patent, 29 Geo. Wash. L. Rev. 110 (1960), where the authors trace the history of fraudulent procurement. Indeed, in 1960, some 10 to 15 years following the decisions in the trilogy cases, the absence of any usable standards to measure conduct before the Patent Office was noted:

The most authoritative source for determining what conduct the Supreme Court intended to be included within the meaning of fraud should be the opinions in the Hazel-Atlas and Precision Instrument cases, but neither opinion discusses in detail what conduct before the Patent Office is fraudulent. In the Hazel-Atlas case the term "fraud" was used as if it were established, without a discussion of the facts which gave rise to the finding. . . . Although the opinion in the Precision Instrument case did indicate that knowledge is an element of fraud, there was still no definitive standard that could be used to evaluate the patentee's misconduct before the Patent Office.

Id. at 124-25.
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The interplay of several conditions results in the absence of specific standards for determining or measuring fraudulent or inequitable conduct. First, the "uncompromising duty" standard is virtually useless as a meaningful criterion, and doubtless serves more to breed rhetoric in the briefs of patent infringement defendants than to provide the court with a yardstick to be applied objectively in varying situations. Second, it is not certain whether misrepresentations to the Patent Office constitute merely culpable misconduct to be measured against a "clean hands" standard, or whether the classical elements of common law fraud, including the objective materiality of the misrepresentation, reliance and damage, must be proven. The cases have been less than rigorous in applying all of these elements to instances of alleged fraudulent procurement of patents. Third, the uncertainties of the substantive patent law can make it difficult for the trier of fact to determine how vital the misrepresentation was to the patenting process. Such a determination will be necessary regardless of the standard applied to evaluate the conduct.

For example, assume that a patent applicant files an affidavit under Rule 132 to establish unobviousness of a claimed invention and unexpected results in its use. All would agree that a conscious falsification of data in such an affidavit is highly reprehensible conduct which at least could seriously impact validity or enforceability of the patent. In contrast, consider the effect of a conscious falsification of the "expert" qualifications of the affiant. If indeed all data in the affidavit are accurate and all the opinions expressed are technically sound and supportable, it is doubtful that the falsification of the affiant's qualifications, even though consciously made, should adversely affect the validity or enforceability of the patent. Finally, consider an inventor who consciously misstates his citizenship in the oath of an application to avoid detection of his illegal entry into the United States. 31

In the above examples, the technical nature of the act is the same, that is, there is a conscious falsification in a sworn statement to the Patent Office. It is the substantive patent law which establishes the relative triviality or gravity of the misrepresentation, since the sub-

30. The classical elements of common law fraud include (1) a material representation (2) that is false (3) and known to be false by the maker, or made recklessly as a positive assertion without knowledge of its truth (4) and made with the intention that it be acted or relied upon (5) by another (6) to his damage or injury. Some jurisdictions further include the damaged party's ignorance of the truth and his right to rely on the representation. 37 C.J.S. Fraud § 3 at 215-18 (1943).

31. In Van Heusen Prod., Inc. v. Earl & Wilson, 300 F. 922, 935-36 (S.D.N.Y. 1924), Judge Learned Hand considered a misrepresentation in the oath as to citizenship and commented "it would be a blemish on the law" if such an irregularity affected the validity of a patent.
stantive patent law dictates the extent to which the misrepresentation impacts the patenting process.

But what of those instances where the substantive patent law itself is unsettled or perhaps is in conflict? In *Deep Welding, Inc. v. Sciakey Bros., Inc.*, the United States Court of Appeals for the Seventh Circuit, reversing the court below, held that a typewritten paper presented at an international science symposium was a "printed" publication. What then would be the position of an applicant who had been aware of such a paper, but who withheld it from the Patent Office? It is conceivable that such conduct might be considered at the least improper "self help" which could subject the applicant to sanctions.

Another perplexing problem results from the differing views of courts on the necessary content of affidavits under Rule 132 in establishing nonobviousness. Without exhaustively analyzing the law in this area, the *Henze* doctrine precludes patentability of chemical compounds if the claimed compound is prima facie obvious, and if the prior art compounds inherently possess the same "unexpected" newly discovered property of the claimed compound. This doctrine has been somewhat eroded, however, and in the case of *In re Stemniski*, the United States Court of Customs and Patent Appeals (CCPA) held that where there is no "significant" utility for the prior art compound, prima facie obviousness can be rebutted by showing an unobvious property found in the claimed compound. It was not necessary to demonstrate that the unobvious property relied upon was not in fact possessed by the prior art compound. A further complicating factor is that some courts view structural obviousness as the sole test and do not regard unanticipated properties or unexpected results to be factors that should be considered in determining unobviousness. Thus, it is not at all clear to the practitioner what must be included and what may properly be omitted from such affidavits.

A final example of the impact of the patent law on developing jurisprudence in the field of fraudulent or inequitable conduct in patent

33. Reference must be had to the district court opinion to determine the typewritten nature of the reference. 155 U.S.P.Q. 561 (N.D. Ill. 1967).
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procurement is an outgrowth of those cases which distinguish between the impropriety of withholding a section 102 reference and a reference which merely renders the claims obvious. Although such a distinction seems clear enough and perhaps reasonable on its face, the question of what is an anticipatory reference is not clear in view of recent decisions. If indeed the determination of the existence or nonexistence of fraud or inequitable conduct in procurement depends upon whether the alleged misrepresentation concerned a section 102 or 103 reference, the scales might tip depending upon the court's view in this area.

For example, in *Beckman Instruments, Inc. v. Chemtronics, Inc.*, the United States Court of Appeals for the Fifth Circuit held the Clark patent, which related to a "polaragraphic cell," to be anticipated by prior art which related to a "potentiometric cell," and further found the patent invalid for fraud because the prior art was withheld. During prosecution, the patentee had presented claims which were anticipated by the prior art, but the issued claims arguably presented a thin distinction. The court's view of anticipation might have affected the outcome, although a contrary conclusion permitting an applicant to avoid a charge of culpable misconduct by indulging in semantic variations in the claims, while keeping the Patent Office in the dark concerning such a reference, would hardly provide an acceptable solution.

The unsettled nature of the law on what is a prior public use or what constitutes a sale or a placing "on sale" could provide other ex-

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39. For an explanation of a section 102 reference see note 4 supra.
44. See *Philco Corp. v. Admiral Corp.*, 199 F. Supp. 797, 815 (D. Del. 1961), in which the court commented: "The cases dealing with § 102(b) . . . are in a state of confusion resulting in part from an attempt to establish hard and fast rules of law based on overly refined legal distinctions." The observation
amples of inconsistencies if analyzed on a case by case basis. In general, it is possible for the "materiality" of conduct in a number of the above situations to be judged by legal standards different from those the patent solicitor applies.

III. The Legal Environment—The Consequences of Fraudulent or Inequitable Conduct Outside Antitrust

Broadly stated, the civil penalties available to courts for fraud or inequitable conduct in procurement of a patent are three: loss of the patent right; award of attorneys' fees against the patentee under 35 U.S.C. § 285; and antitrust treble damages if a violation of sections 1 or 2 of the Sherman Act is found. Prior to analyzing the elements of fraudulent procurement, it is appropriate to review the legal foundation for the imposition of each of these penalties.

Loss of Patent Rights

A Patent Can Be Invalid for Fraudulent Procurement. A number of courts recently have held patents invalid for fraud in the procurement. In some of these instances the courts indicated, without analyzing the materiality of the misrepresentation, that the entire patent was invalid. While some criticism has been leveled at these holdings as judicial overreactions, Strong v. General Electric Co. points out the historical authority for the proposition that an entire patent can be invalid as a result of a single fraudulent claim.

To explore this requires some understanding of history. Originally, there was an implied rule at common law that, if a patent was invalid in part, it was invalid in the whole; that is, if any one claim of a patent was invalid, the entire patent was not enforceable against an infringer. In order to save patents from this fate, the first disclaimer statute was enacted in 1837 and provided in effect that if the invalid remains valid. See also In re Yarn Processing Patent Validity Litigation, 498 F.2d 271, 183 U.S.P.Q. 65 (5th Cir. 1974).

† This section was written by John F. Lynch.


47. As pointed out in the Strong case, 305 F. Supp. at 1088: "[The patentees'] failure to include that publication as part of the prior art to be considered by the patent office invalidates all claims in the patent even if some of those claims otherwise would have been patentable."

48. Id. at 1086.

part of the patent, that is, the claim, had been claimed through inadvertence, accident, or mistake and was dismissed without unreasonable neglect or delay, the validity of the remaining claims would be unaffected. Subsequent statutes included similar provisions. In *Marconi Wireless Telegraph Co. v. United States*, the Supreme Court affirmed the rule that, absent both inadvertence and a reasonably prompt disclaimer of the invalid portion of a patent, the entire patent would be invalid.

In the 1952 Patent Act this concept was incorporated in section 253. The 1952 statute eliminated the prior statute's provision which had required that the invalid portion of the patent be dismissed without "unreasonable" neglect or delay, thereby relieving courts of the determination of what was or was not "unreasonable." But the statutory exception to the common law rule exists only in those instances where a claim of a patent is invalid "without any deceptive intention." Accordingly, it may be concluded, under the present statute, that if a single claim of a patent is invalid because of fraud, which perforce includes deceptive intent, the entire patent is invalid without requiring the claim by claim application of sections 102 and 103 standards to the patent in view of prior art or statutory bars.

With respect to reissue patents, one court has held that where a reissue is "tainted with fraud" it is void *ab initio*, and all claims, even claims brought forward from the original patent, will be invalidated by the later fraudulent conduct.

52. The Supreme Court further commented:

> The purpose of the rule that a patent is invalid in its entirety if any part of it be invalid is the protection of the public from the threat of an invalid patent, and the purpose of the disclaimer statute is to enable the patentee to relieve himself from the consequences of making an invalid claim if he is able to show both that the invalid claim was inadvertent and that the disclaimer was made without unreasonable neglect or delay.

320 U.S. at 58, 57 U.S.P.Q. at 495.
53. "Whenever, without any deceptive intention, a claim of a patent is invalid the remaining claims shall not thereby be rendered invalid." 35 U.S.C. § 253 (1952).
55. Staude v. Bendix Prod. Corp., 26 F. Supp. 901 (N.D. Ind. 1939). See also Kearney & Trecker Corp. v. Giddings & Lewis, Inc., 452 F.2d 579, 596, 171 U.S.P.Q. 650 (7th Cir. 1971), where claims added in a reissue patent were found invalid for inequitable conduct. Then, applying the rule in *Marconi Wireless Tel. Co. v. United States*, 320 U.S. 1, 57 U.S.P.Q. 471 (1943), and relying upon 35 U.S.C. §§ 252-253 (1970), the court found the claims carried forward from the original patent also invalid. There is a mild amount of bootstrapping in this analysis since the court never found any claim invalid for
If this rationale of invalidity based upon fraud is accepted, and it does appear sound, there exists a statutory defense of invalidity for fraud in patent procurement. Accepting this premise, the concept of unenforceability has only a limited place in considerations descending from fraudulent procurement of patents. Unenforceability would be a remedy implemented in those limited instances involving inequitable conduct where the issued patent is valid according to statutory criteria, but the applicant's conduct is found wanting by the court. Alternatively, unenforceability might be found when inequitable conduct is proven, and the court does not desire to pursue a rigorous analysis of whether claims are valid or invalid under statutory criteria.

At this point, a definition of terms is useful. Since materiality is a classical element of fraud, perhaps the term "fraud" should be used only to characterize those instances of misconduct where an intentional misrepresentation resulted in a statutorily invalid claim. The term "inequitable conduct" then might be reserved as a characterization of conduct which is sufficiently culpable to result in patent unenforceability, but which does not result in the issuance of a statutorily invalid patent. Such a distinction is not practical, however, in view of the case law which has used the terms virtually interchangeably. Moreover, since the object of directing attention to the issue of misrepresentations in the procurement of patents is not to develop additional ways to defeat patents, but to assure the availability of complete and reliable information to the Patent Office, the significance of the distinction may be regarded as minimal.

The Evolution and Development of the Unenforceability Defense. Patent unenforceability is a statutorily recognized defense which has been available against patentees (1) for inequitable conduct or unclean hands in obtaining or enforcing a patent (2) for laches, and (3) for improperly attempting to exploit the patent grant resulting in lack of novelty, unobviousness, utility or lack of sufficient disclosure. This would appear to be a case where unenforceability of the original claims would have represented a more logical conclusion.

56. A review of the cases, including those cited in this article, reveals that there have been very few instances where courts have declined to enforce valid patents because of inequitable conduct or fraud. In most recent cases, a holding of unenforceability for inequitable conduct is accompanied by a holding of invalidity under statutory criteria. See, e.g., Monolith Portland Midwest Co. v. Kaiser Alum. & Chem. Corp., 267 F. Supp. 726, 152 U.S.P.Q. 380 (S.D. Cal. 1966), modified, 407 F.2d 288, 160 U.S.P.Q. 577 (9th Cir. 1969).

57. In Precision Instr. Mfg. Co. v. Automotive Maint. Mach. Co., 324 U.S. 806, 816, 65 U.S.P.Q. 133, 138 (1945), the Court expressed concern "that patent monopolies spring from backgrounds free from fraud or other inequitable conduct . . . ." Thus, the terms will largely be used interchangeably herein with the consequences of the particular misconduct under scrutiny being determined from an evaluation of the materiality of the misrepresentation and the intent with which it was undertaken rather than by virtue of the label by which it is called.


59. Keystone Driller Co. v. General Excavator Co., 290 U.S. 240, 19 U.S.P.Q. 228 (1933), involved inequitable conduct occurring after issuance. A false affidavit was obtained by the patentee in an effort to suppress evidence of a prior use which would have invalidated one of several patents in litigation. All were held unenforceable.
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conduct broadly characterized as "misuse." In all these instances, patent unenforceability has been invoked to deny enforcement of the patent right when it would not be equitable to do so.60 Where there is misuse or laches, however, the patentee is penalized for conduct which is unrelated to the patenting process itself. Inequitable conduct has produced holdings of unenforceability for misconduct which improperly influenced or even determined that the patent be issued,61 without a rigorous analysis of whether an otherwise invalid claim was procured by fraud to thereby statutorily invalidate the entire patent.62

If these various grounds for unenforceability of patents are different in their genesis, they are also different in the type of degree of "unenforceability" which they produce, for patent unenforceability is hardly a monolithic concept. Unenforceability for patent misuse is classically illustrated by Morton Salt Co. v. The G. S. Suppiger Co.,63 where the patentee had granted licenses under the condition that the patented invention be used only with the licensor's unpatented materials. The Court held that courts of equity may appropriately withhold their aid when plaintiff is using the right asserted contrary to the public interest.64 Evaluation of the practices constituting alleged misuse involves a weighing of the patent right against basic antitrust philosophy. Such improper practices are wholly unrelated to the patent grant itself, and, presumably, should the patentee be able to purge the misuse and dissipate its effects, he can reinitiate the in-

60. Of course there have also been instances where courts, using equitable discretion, have denied the patentee injunctive relief. See, e.g., City of Milwaukee v. Activated Sludge, Inc., 69 F.2d 577, 593 (7th Cir.), cert. denied, 293 U.S. 576 (1934).

61. For example, in Hazel-Atlas Glass Co. v. Hartford-Empire Co., 322 U.S. 239, 61 U.S.P.Q. 241 (1944), the patentee procured issuance of the patent by publishing a technical article, citing it to the Patent Office, and then using it in court as evidence of patentability, attributing the authorship of the article to a third party "expert" in the art. The Supreme Court found that the "total effect of all this fraud, practiced both on the Patent Office and the courts, calls for nothing less than a complete denial of relief to Hartford for the claimed infringement of the patent thereby procured and enforced." 322 U.S. at 250, 61 U.S.P.Q. at 247. The Court made this holding without a rigorous inquiry into either the truth of the statements in the article or whether patentability could have been supported absent the misconduct. 322 U.S. at 246-47, 61 U.S.P.Q. at 246.


64. Morton Salt was cited by the Supreme Court in Precision Instrument Mfg. Co. v. Automotive Maint. Mach. Co., 324 U.S. 806, 815, 65 U.S.P.Q. 133, 138 (1945), to support a dismissal of the patentees complaint "for want of equity" as a result of fraudulent conduct before the Patent Office. In Precision Instrument the plaintiff had acquired the application of another applicant after a patent interference settlement. The acquired application had been improperly filed and was based upon information derived from the patentee. When these facts came to light in the interference, the facts were withheld from the Patent Office and a settlement involving a concession of priority to the plaintiff and an assignment of the application from the applicant to the plaintiff was consummated.
fringement action and be awarded both damages and the injunction against infringement permitted by statute.65

Unenforceability of a patent based upon a determination of laches effectuates a somewhat different result. Whereas a defense of misuse can be asserted by any potential infringer regardless of whether the alleged misuse actually affected him in the past, laches must be proven as a personal defense by showing inexcusable delay in the initiation of the suit and the resulting prejudice to him.66 This latter element is essential, although one appellate court has stated that presumption of injury arises from a passage of time in excess of the six-year period provided by section 286 of Title 35.67 Absence of proof of injury resulting from the patentee's delay might result in a "semi-enforceability" of the patent under which recovery for all damages is denied but injunctive relief is permitted.68 Thus, the defense of laches can be seen as wholly personal to the defendant, and a prior adjudication of laches against a patentee will likely provide no solace to the potential infringer about to enter the market. In further contrast to the decisions on misuse, once laches has been held to exist with respect to a particular infringer, no amount of diligence by the patentee can "purge" his prior delay with respect to that particular defendant.

The defense of unenforceability for inequitable conduct has not always been available to the accused infringer. In Movry v. Whitney,69 an individual sued for cancellation of a patent on grounds that it had been obtained by fraudulent affidavit. The Supreme Court, stating that an earlier provision permitting private suits to "cancel" patents had been omitted from the Patent Act of 1836, concluded that the sole right to cancel lay with the sovereign. It should be noted that the sovereign's right is to cancel or annul the patent,70 not merely to abrogate its enforceability. This right to cancel exists specifically for fraud or misrepresentation. In United States v. Glaxo Group, Ltd.,71 the Supreme Court held that the United States may challenge patents
which have been used in furtherance of a program violative of the antitrust laws if a substantial need for this remedy is shown.

Judicial acceptance of fraud or inequitable conduct as a defense in an action for patent infringement was established in *Keystone Driller v. General Excavator Co.* Yet, while fraud was a defense, it could not provide the basis for declaratory relief against the patentee until *Precision Instrument* firmly established fraud as a defense in all patent infringement actions. Nevertheless, the question whether fraud or inequitable conduct alone can provide the basis of a declaratory judgment of unenforceability will probably not be confronted. Such assertions of inequitable conduct are usually joined with either a claim for declaration of patent invalidity on statutory grounds or with a treble damage antitrust claim. Nevertheless, the evolving judicial attitude regarding inequitable conduct would appear to permit its being raised as a basis for a defense or for a declaration of either unenforceability or invalidity where the facts warrant.

The attention which has been focused on the fraudulent procurement issue since *Walker* has resulted in the development, or at least the explication, of a different facet of the remedy of patent unenforceability as a penalty for fraudulent procurement. In *Corning Glass Works v. Anchor Hocking Glass Corp.*, the court expanded upon the idea of unenforceability resulting from improper or inequitable conduct in procuring a patent, holding that unenforceability would result from intentional misrepresentations despite the misrepresentations being immaterial to the patent's issuance.

73. See E.W. Bliss Co. v. Cold Metal Process Co., 102 F.2d 105, 41 U.S.P.Q. 342 (6th Cir. 1939), where the court struck allegations of fraudulent procurement in a declaratory judgment complaint, but clearly indicated that they could be added if the patentee counterclaimed for infringement.
74. See note 64 supra.
75. See Wooldridge Mfg. Co. v. R.G. LaTourneau, Inc., 79 F. Supp. 908, 76 U.S.P.Q. 565 (N.D. Cal. 1948), where the court permitted the fraud allegations to remain in a complaint for declaratory relief, suggesting that the development of the law was making it appropriate to raise the fraud issue at any state of the proceedings.
79. [The *Walker* case] necessarily assumed that the intentional misrepresentations were a material factor in obtaining the patent. If one were entitled to a patent under the legal tests of patentability, there is no illegal monopoly resulting from the statements on which to base an anti-trust action. Consequently, the counterclaim based on fraudulently obtaining the patent in contravention of § 2 of the Sherman Act fails. The common law fraud counterclaim fails for the same reason.
This decision sets the stage for the subsequent discussion in this article, since it raises the issue of the materiality of the fraud or misconduct to the fact of patent issuance. The Corning court purports to reserve the remedy of unenforceability for the situation where the patent would have issued in the same form regardless of the misconduct, and explicitly differentiates this equitable refusal to enforce a patent from "common law fraud" by holding that a common law fraud counterclaim will fail if the misrepresentations made to the Patent Office are immaterial. The cases, when viewed as a whole, however, do not define the field of fraudulent or inequitable conduct in procurement with such neat and discernible boundaries.

It is suggested that an appreciation of section 253 of the Patent Act could clarify these issues. The remedy of invalidity would result when at least one claim of the patent was rendered invalid because of a deliberate misrepresentation. Unenforceability would be found only in those instances where the misrepresentation is found not to have affected the validity of the patent, or perhaps also in those limited cases where the patentee's conduct is so egregious as to manifestly warrant a refusal to enforce the patent and thereby preclude the necessity of an inquiry into its validity. This analysis hardly represents, however, a complete resolution of the problems courts face in

being a court of equity, can and should refuse to enforce the patent if the Court finds the patentee made intentional misrepresentations to the patent examiner, i.e., if the patentee came into the court with unclean hands. . . .

253 F. Supp. at 470, 149 U.S.P.Q. at 106. Interestingly, the court went on to set forth some practical reasons for such a holding of unenforceability:

One practical reason for this requirement is that when any intentional misrepresentations are made to the Patent Office, it makes the findings of the examiner suspect and destroys any presumption of validity . . . . In effect, the Court is deprived of the benefit of Patent Office's expertise in making the initial findings concerning patentability. Enforcing a patent in behalf of one who has made intentional misrepresentations to the Patent Office, irrespective of the merits of his patent application, might encourage an applicant to be dishonest in dealing with the Patent Office.


80. See also Ablington Textile Mach. Works v. Carding Specialists Ltd., 249 F. Supp. 823, 839, 148 U.S.P.Q. 33, 46 (D.D.C. 1965) (a patent may be "invalid" because of an intentional misrepresentation "even though the patent might otherwise be valid in every respect.")


82. 35 U.S.C. § 253 (1970) provides:

Whenever, without any deceptive intention, a claim of a patent is invalid the remaining claims shall not thereby be rendered invalid. A patentee, whether of the whole or any sectional interest therein, may, on payment of the fee required by law, make disclaimer of any complete claim, stating therein the extent of his interest in such patent. Such disclaimer shall be in writing, and recorded in the Patent Office; and it shall thereafter be considered as part of the original patent to the extent of the interest possessed by the disclaimant and by those claiming under him.

In like manner any patentee or applicant may disclaim or dedicate to the public the entire term, or any terminal part of the term, of the patent granted or to be granted.
this area. The difficult issues of materiality and intent must be resolved in most cases, and this will be explored hereinafter.

The character of the remedy of patent unenforceability due to fraudulent or inequitable conduct differs from that invoked when there is a misuse or laches defense. Indeed, fraud or inequitable conduct might be viewed as “non-purgable” misuse, since it is not likely that conduct or actions of the patentee subsequent to a holding of unenforceability could restore the patent's enforceable status.\(^8\) It would further appear that a final determination of unenforceability would, in accordance with \textit{Blonder-Tongue},\(^8\) create a collateral estoppel against subsequent enforcement of the patent.

**Statutorily Authorized Award of Attorneys' Fees**

The award of attorneys' fees under section 285 of the Patent Act\(^8\) is permissive rather than mandatory and is entirely within the trial court's discretion.\(^8\) The award of attorneys' fees is available to either party so long as he is the prevailing party.\(^8\) The determination to award attorneys' fees is usually based upon considerations arising from the conduct of the trial\(^8\) or “some other equitable considera-

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83. Recognizing that a holding of unenforceability should only follow a finding of a deliberate and willful misrepresentation to the Patent Office, the patentee would be precluded by collateral estoppel from attempting to salvage a patent, once held unenforceable, by the reissue procedures under the Patent Act which provide that a reissue can be filed to cure defects which occur without deceptive intent. See 35 U.S.C. § 252 (1970). The Court of Customs and Patent Appeals currently has before it a reissue application based upon the Clark patent held invalid for fraud in Beckman, 428 F.2d 555, 165 U.S.P.Q. 355 (5th Cir. 1970), cert. denied, 400 U.S. 956 (1971). \textit{Ex parte Clark, Jr. Patent Appeal Docket No. 75-505.} See also \textit{Rival Mfg. Co. v. Dazey Prod. Co.,} 358 F. Supp. 91, 102, 177 U.S.P.Q. 432, 440 (W.D. Mo. 1973), where the court suggests that subsequent transferees of a patent take subject to infirmities resulting from inequitable and deceptive conduct. The alleged improper conduct related to an improper designation of inventors which resulted in the patent being declared invalid. It is logical to assume that a subsequent transferee will take a patent subject to an infirmity of invalidity; however, it is unclear whether inequitable conduct which would not invalidate but rather would cause a court to decline to enforce a patent on behalf of a transferee, will be imputed to a good faith transferee without knowledge of the misconduct.

84. \textit{Blonder-Tongue Labs., Inc. v. University of Illinois Found.,} 402 U.S. 313, 169 U.S.P.Q. 513 (1971). In that case, the Court held that a determination of patent invalidity does not foreclose an estoppel plea in a later suit, by one facing a charge of patent infringement of the patent declared invalid. \textit{But see State of N.C. v. Charles Pfizer & Co.,} 182 U.S.P.Q. 657, 664 n.16 (E.D.N.C.), where the court held that collateral estoppel could not be argued offensively by an antitrust plaintiff.

tion of equal force which makes it grossly unjust that the prevailing
party be left to bear the burden of his own counsel fees." For
example, awards have been made for failure to disclose at an early date
the pendency of related patent proceedings in a foreign country, for failure to reveal a violation of section 184 of Title 35 requiring a
license for foreign filing, and for concealment of the ownership of a
patent in suit. Other reasons which have been cited as bases for an
attorneys' fees award have included what might broadly, and perhaps
euphemistically, be called vexatious conduct such as using litigation
to apply economic pressure to the defendant, improper tactics and
prolongation of discovery, and bringing and maintaining an irresponsi-
ble claim for infringement.

The courts may not award attorneys' fees without specific findings
of some type of improper or inequitable conduct to support the con-
clusion that the case is exceptional. In making this determination,
the court may weigh the total conduct of the patentee against that of
the infringer. For example, in Minnesota Mining & Mfg. Co. v. Norton
Co., the court intimated that the patentee's conduct in withholding
certain information from the Patent Office was "less than the absolute
honest and good faith disclosure" required, but declined to award at-
torneys' fees on grounds that the defendant had also been "excessive"
in filing a patent application and in advocating patentability of its in-
fringing product.

The equitable considerations which give rise to an attorneys' fees
award may also dictate that attorneys' fees be computed only after a
specified time in the case after which continued prosecution would
somehow be rendered unconscionable. Allocation may be made

as well so that the award is based upon fees generated by the opposing parties' "exceptional" conduct,99 or, in contrast, it might specifically include attorneys' fees for services rendered in connection with a defense which was not sustained.100 In the context of the inequitable conduct cases, however, the attorneys' fees award will not compensate for counsels' services in proving an antitrust claim.101

On the whole, awards of attorneys' fees have been extremely subjective, although undoubtedly instances of inequitable conduct in patent procurement are presently providing a most fertile area for attorneys' fees consideration. One court virtually equated the burden for sustaining an attorneys' fees award for inequitable conduct to the burden of proving fraud and indicated that attorneys' fees could only be awarded "where fraud and wrongdoing are clearly proved" by sustaining a "heavy burden."102 Generally, however, the burden is clearly not that high, and once the trial court has made findings warranting an award of attorneys' fees, alteration of the result at the appellate level presents a "very formidable" burden.103

IV. Inequitable Conduct Applied to Facts and Law†

Despite the recent proliferation of cases concerning inequitable conduct in the patent area, the criteria for determining whether an applicant's conduct before the Patent Office is culpable are not clearly defined. In reviewing the cases, one encounters "intentional" fraud contrasted with "technical" fraud, "material" fraud contrasted with "non-material" fraud, "actual" fraud contrasted with "constructive" fraud. There are "uncompromising" duties imposed on applicants and there are "good faith" defenses to exculpate them.

Without clear guidelines to determine the quality of acts which

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† This section was written by John F. Lynch.
will constitute culpable fraud on the Patent Office, courts are grappling with the problem with uneven results. A graphic example is furnished by two district court decisions in 1970 which will be analyzed in detail in this section. One district court held that representations in an affidavit before the Patent Office constitute intentional misrepresentations and invalidate the patent as a consequence, while another held the same patent valid, viewing the same affidavit as the applicants “putting their best foot forward.”

If this uncertainty in the law makes the patent solicitor uneasy, it is completely bewildering to the litigating lawyer. In an area where there is some law for everyone, the accused infringer's trial counsel often feels compelled to invoke the defense of inequitable conduct or fraud, and possibly to attempt to recover treble damages, despite the tenuousness of the patentee’s alleged misrepresentation.

The Standard of Conduct Defined

The Supreme Court's decisions in *Hazel-Atlas Glass Co. v. Hartford-Empire Co.*, *Precision Instrument Mfg. Co. v. Automotive Maintenance Machinery Co.*, and *Kingsland v. Dorsey* represented the original attempt to define a standard for the patent applicant's conduct before the Patent Office. These cases emphasized the social and economic importance of assuring that the procurement and enforcement of a patent, being a form of monopoly, is free from the taint of inequitable conduct. This trilogy of cases differed from earlier judicial treatments of inequitable conduct in procurement of patents in that prior decisions had not approached the topic from the standpoint of the social and economic repercussions of illegally procured patents, nor from the point of view of defining the patent applicant's duty to the Patent Office.

For example, in *United States v. American Bell Telephone Co.*, the court focused upon the propriety of the United States being allowed to cancel or annul a patent for fraud. Although the court pointed out that by issuance of the patent the government “has taken from the public rights of immense value,” the opinion did not at-
tempt to outline a broad policy regarding the desirability of keeping patent procurement free from fraud. Neither did the court "attempt to define the character of the fraud or deceit" necessary to be established before a patent would be cancelled.\textsuperscript{112}

\textit{Keystone Driller Co. v. General Excavator Co.}\textsuperscript{113} held that inequitable conduct resulting in unclean hands could be a defense to patent infringement. The court, however, treated the issue as an ordinary "unclean hands" defense, and there was no special emphasis, as in later cases like \textit{Precision Instrument}, upon the "far-reaching social and economic consequences of a patent . . . [which] give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct."\textsuperscript{114}

Consequently, the "uncompromising duty" standard set forth in \textit{Precision Instrument}\textsuperscript{115} came into the law almost without warning, and was reinforced by the \textit{Kingsland} case which required attorneys before the Patent Office to act with "the highest degree of candor and good faith."\textsuperscript{116} There is virtually no jurisprudence antedating the trilogy of \textit{Precision Instrument}, \textit{Hazel-Atlas}, and \textit{Kingsland} which provides a background for interpreting this language.\textsuperscript{117}

The subject of inequitable conduct in the procurement of patents received some judicial attention in the years following \textit{Precision Instrument}, but it was only after the Supreme Court decision in \textit{Walker Process Equipment, Inc. v. Food Machinery and Chemical Corp.}\textsuperscript{118} that the issue assumed its present proportions. The \textit{Walker} case represented the first judicial holding that a fraudulently obtained patent could form the basis of a section 2 Sherman Act\textsuperscript{119} violation if the other elements necessary to prove the violation were present.\textsuperscript{120} The Supreme Court held that proof establishing that the patentee had "obtained the patent by knowingly and willfully misrepresenting facts to the Patent Office . . . would be sufficient to strip [the pat-
entee] of its exemption from the antitrust laws.” The Court then held that “good faith” or “honest mistake” would afford a defense to a fraudulent procurement charge. The Walker Court cited Precision Instrument, but did not specifically mention or adopt the “uncompromising duty” language of that case. Further, the Court removed any doubt that knowledge and willfulness were essential elements in determining the culpability of alleged misconduct before the Patent Office, but otherwise did not elucidate the troubling question as to what is, or should be, the standard of conduct before the Patent Office. Thus the “uncompromising duty” standard which sprang forth without a history remained the authoritative pronouncement on the patent applicant’s standard of conduct.

Some rethinking of the subject is clearly in order. Neither the “uncompromising duty” of Precision Instrument nor the “highest degree of candor” admonition of Kingsland are useful to the trier of fact in evaluating a patent applicant’s conduct. Indeed, how does one execute an uncompromising duty? How much error, poor judgment, or neglect is permissible? The potential for viewing a patent applicant’s conduct as improper in retrospect is only increased by the imposition of such standards. More significantly, the likelihood of an accused infringer’s seizing upon the least irregularity in the patenting process and distorting it into a “material” act is increased.

Recent proposed patent legislation suggests imposing both a duty of disclosure of certain facts and a “duty of candor and good faith.” Such a standard, without the embellishment of the superlatives extracted from Precision Instrument and Kingsland, is eminently more sensible. This legislation includes specifically, as part of the defined standard of conduct for patent applicants, a “duty to make reasonable inquiry as to information in their possession or control,” and raises the question whether such a duty is currently included in the standard of conduct. Although the existence of such a duty of reasonable inquiry has not been regarded as generally implicit in the standard of conduct, some courts have imposed such a duty under specific circumstances. Until such a duty is statutorily imposed, a mere failure


122. Misrepresentations made in good faith or as a result of honest mistake are characterized in the Walker decision as “technical fraud.” 382 U.S. at 177, 147 U.S.P.Q. at 407.

123. Furthermore, the Walker Court did not cite the Kingsland case.


125. Id.

126. In Akers v. American Subsidiary, Inc., 177 U.S.P.Q. 518, 523 (E.D. Wis. 1973), the court stated: “Under the circumstances the most we can determine is that the patentee should have investigated the [prior art] further, a determination which does not amount to a finding of fraud or bad faith.”

127. One court found an investigative duty existed when the patentee undertook to file a verified statement in the Patent Office to change inventorship.

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to investigate would not appear to constitute culpable conduct.

It may be consoling to find that our legal brethren in the securities field have experienced difficulty in defining the standard of conduct under Rule 10b-5. Consequently, the suggestion by one court that patent applicants' conduct should be measured using a standard similar to that imposed by Rule 10b-5 upon those who deal in securities does not furnish a simple solution. The 10b-5 cases are riddled with catch words for determining liability such as "fraud," "scienter," "lack of diligence," and "unreasonable or negligent conduct." The disclosure requirements of 10b-5 are not unlike those which have often been required of a patent applicant. With respect to the 10b-5 cases, one author has suggested that judicial attempts to apply standards which purport to be conveniently summarized with such catch words are fruitless. Rather, it has been suggested that courts must recognize that they are dealing with a continuum of conduct in the 10b-5 cases, and should apply a sliding scale within the

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Becton Dickinson & Co. v. Sherwood Medical Indus., Inc., 175 U.S.P.Q. 337, 345 (M.D. Fla. 1972). L.F. Strassheim Co. v. Gold Medal Folding Furniture Co., 477 F.2d 818, 821, 177 U.S.P.Q. 673, 675 (7th Cir. 1973), involved a prior barring offer for sale by the patentee. The court found that the "failure to make an appropriate investigation at the time [of filing the patent application], particularly since the critical importance of filing within one year of the first public offer was obvious to all concerned, reflects an extraordinary lack of diligence to which we consider it appropriate to attach legal significance." 477 F.2d at 820. The patentee also failed to produce documents evidencing this sale during discovery. Each failure was claimed to be inadvertent. The court awarded attorneys' fees only from the time in the litigation at which the critical documents should have been produced. When the patent has been the subject of a petition to make special in the Patent Office, either the accused infringer or the court may indicate that extra care on the part of the applicant is necessary. See Schandig Corp. v. Gaines Mfg. Co., Inc., 494 F.2d 383, 181 U.S.P.Q. 417 (6th Cir. 1974) (accused infringer's attempt to impose a strict liability standard was rejected); La Maur, Inc. v. DeMert & Dougherty, Inc., 265 F. Supp. 961, 148 U.S.P.Q. 59 (N.D. Ill. 1965) (patentee undertook a duty to disclose the closest prior art when petitioning to make special).

128. Rule 10b-5, 17 C.F.R. § 240.10b-5 (1974), provides:
   It shall be unlawful for any person, directly or indirectly, by use
   of any means or instrumentality of interstate commerce, or of the
   mails, or of any facility of any national securities exchange,
   (a) to employ any device, scheme, or artifice to defraud,
   (b) to make any untrue statement of a material fact or to omit
   to state a material fact necessary to make the statements made in light
   of the circumstances under which they were made, not misleading, or
   (c) to engage in any act, practice, or course of business which op-
   erates or would operate as a fraud or deceit on any person, in connec-
   tion with the purchase or sale of any security.

   grounds, 456 F.2d 592, 172 U.S.P.Q. 323 (3d Cir.), cert. denied, 407 U.S. 934,

130. Compare the requirements of Rule 10b-5 with the disclosure require-
   ments of section 115 (a) of S. 2504, a proposed patent law revision bill. See
   note 124 supra and accompanying text.

131. Mann, Rule 10b-5: Evolution of a Continuum of Conduct to Replace
context of the specific facts of the case to determine liability. A similar sliding scale might be employed in the fraudulent procurement cases. By simultaneously exploring the impact of a misrepresentation upon the patenting process, and evaluating the motive or intent which did or might have prompted the misrepresentation, some order might be made of the present lack of uniformity among the cases. With this potential for constructing such a sliding scale in mind, a review of the elements and burden of proof relating to the issue of fraudulent or inequitable conduct in the patent procurement will be undertaken.

The Elements and Burden of Proof

The Walker decision made clear that only intentional misconduct could support an antitrust claim. The necessary elements of proof, as gleaned from Walker, are that the patent was "obtained" by virtue of a misrepresentation to the Patent Office, and that the misrepresentation was "knowingly and willfully" made.

The common law elements of fraud require (1) a material representation (2) that is false and (3) known to be false by the maker, or made recklessly as a positive assertion without knowledge of its truth and (4) made with the intention that it be acted or relied upon coupled with (5) the fact of reliance by another (6) to his damage or injury. Further pursuing the principles of common law fraud, when there is a duty to speak or present information, silence will be the equivalent of a false representation.

Patent misconduct involving acts of commission or omission, examples including a false affidavit or withholding art respectively, can be fit into the common law framework of the law of fraud. The falsity of the representation is a fact which should be readily provable. With respect to the element of damage, it may be reasonably implied that damage accrues to both the accused infringer and to some extent to the country's entire economic system when an illegally procured patent is obtained and enforced. Since the Patent Office may properly be regarded as the guardian of the patent system, it does not require strained legal rhetoric to conclude that damage results when a patent is fraudulently or inequitably obtained and then enforced.

The remaining elements, in the case of fraudulent patent procurement, may be encompassed in one of two areas which merit additional attention. The first is the joint issue of materiality and reliance. These are inevitably intertwined in any fraud case since the question whether the misrepresentation was a determinative influence on the

132. White v. Abrams, 495 F.2d 724 (9th Cir. 1974).
134. 37 C.J.S. Fraud § 3 at 215-218 (1943).
135. 37 C.J.S. Fraud § 16 at 244 (1943). See also Becton Dickinson & Co. v. Sherwood Medical Indus., Inc., 175 U.S.P.Q. 337, 345 (N.D. Fla. 1972), where the court pointed out that failure to fulfill the duty of disclosure amounts to misrepresentation.
action taken, is intimately related to the issue whether the misrepresentation was or should have been relied upon.\textsuperscript{137} The second issue is whether the misrepresentation was made with knowledge of its falsity and with a motive of misleading the patent examiner. Most agree that culpable misconduct before the Patent Office must be knowing and willful. Yet, the significance of negligence or recklessness in evaluating intent must also be considered. There is no clear indication of what evidence is necessary to establish the required degree of knowledge and willfulness.\textsuperscript{138}

Courts have been less than rigorous in applying elements of common law fraud, even as a guide, to conduct in patent cases. Some courts have demonstrated a reluctance to find culpable fraud in business conduct\textsuperscript{139} thus explaining the observation that "where an antitrust violation has been alleged for fraudulent procurement, the courts have demanded a particularly high 'degree' of fraud."\textsuperscript{140} A recent decision has noticed, however, an "increased liberality" in determining fraudulent procurement of patents.\textsuperscript{141}

There is a factor which should temper the reaction of the reader to trial court opinions which deal with the inequitable conduct issue. It is not unusual in complex patent litigation for the trial court to adopt the findings of fact and conclusions of law submitted without substantial modification by the prevailing party. In those cases where the accused infringer prevails and the patent is held invalid on purely statutory grounds, the findings adopted by the court might be "loaded" on the additional issue of inequitable conduct. Evidence that this occurs can be detected from the treatment which trial courts have given the issue of attorneys’ fees awards. In two instances where courts have entered findings of fact adopted, at least in large part, from the submitted findings of the prevailing party, the entered findings contained rather stiff reproofs of improper conduct by the patentee, yet attorneys’ fees awards were not awarded against the patentee.\textsuperscript{142} In such cases, and the two cited are not likely isolated occur-

\textsuperscript{137} This relationship between materiality and reliance is briefly discussed in American Optical Corp. v. United States, 179 U.S.P.Q. 682, 684 (Ct. Cl. 1973).

\textsuperscript{138} It should be understood throughout that negligent or reckless disregard for the truth may be equivalent to knowledge and willfulness. See text accompanying note \textsuperscript{134} supra.

\textsuperscript{139} See, e.g., Armour & Co. v. Wilson & Co., 274 F.2d 143, 124 U.S.P.Q. 115 (7th Cir. 1960), where a finding of fraud was reversed and the court commented upon the imputation of misconduct to highly reputable people descending from the fraud holding. Although this feeling is not articulated by other courts, it is undoubtedly present in many instances.


\textsuperscript{142} In Air-Shields, Inc. v. Air Reduction Co., 331 F. Supp. 673, 169 U.S.P.Q. 450 (N.D. Ill. 1971), aff'd mem., 474 F.2d 1351, 177 U.S.P.Q. 247 (7th Cir. 1973), the court of appeals noted that the district court largely adopted the findings
rences, the language of the decision may not truly reflect the court's considered judgment as to the propriety or impropriety of the patentee's conduct.

**Materiality, Reliance and the "But For" Test.** Materiality of the misrepresentation in question has always played a prominent role in the general law of fraud. In general, a misrepresentation is regarded as material if it is one which had a determinative and inducing influence on the defrauded party's decision, and if the defrauded party was justified in taking action or making a decision on that basis. Certain misrepresentations such as the defendant's social and political affiliations or his motive or purpose in entering the bargain are typically, as a matter of law, so removed from the issue at hand that they will not provide a ground for actionable fraud. On the other hand, false statements as to the location of land boundaries, or of a corporation's income statement accompanying a stock sale will usually be found to be material. The defrauded party, according to common law, is permitted to offer testimony on the subject of what he would have done had he been aware of the truth. Accordingly, it can be appreciated that proof of materiality and reliance are closely interrelated.

In the context of fraudulent procurement, the case cited most often as the original authority that a fraud must be material to affect the validity or enforceability of a patent is *Corona Cord Tire Co. v. Dovan Chemical Corp.*, where the Supreme Court found a Patent Office affidavit "reckless" but not material to patentability. Thus, the *Walker* holding, that antitrust relief might be available if a patent were "obtained" by knowing and willful misrepresentation, has been construed as affirming classical materiality as an essential element of an antitrust case based upon fraud. This language of *Walker* has been relied upon by other courts in evolving a "but for" test re-

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of fact submitted by the defendant, deleting those in the defendant's proposal which would have labeled the case exceptional to support an attorneys' fees award under 35 U.S.C. § 285. In *Armour & Co. v. Swift & Co.*, 466 F.2d 767, 769 n.2 (7th Cir. 1972), the court of appeals indicated that it did "not approve entirely [the] verbatim entry of the findings proposed by the prevailing party." Despite some strong language in its opinion regarding the existence of inequitable conduct, the trial court did not award attorneys' fees and the appeals court affirmed the holding of patent invalidity with virtually no mention of inequitable conduct.


144. There are misstatements which are so trivial, or so far unrelated to anything of real importance in the transaction, that the plaintiff will not be heard to say that they substantially affected his decision. . . . The most cogent reason for materiality is . . . to provide some assurance that the representee is not merely using the misrepresentation as a pretext for escaping a bargain that he is dissatisfied with on other grounds.


145. Id. at 719.

146. 37 C.J.S. Fraud § 52 (1943).

147. 37 C.J.S. Fraud § 48(e) (1943).

148. 37 C.J.S. Fraud § 109 (1943). A plaintiff is usually permitted to so testify notwithstanding the conclusory nature of the testimony.

149. 276 U.S. 358 (1928).

150. 382 U.S. at 177.
quiring examination of whether the patent would have issued "but for" the fraud.\footnote{151}

A focus upon the "but for" test, however, reveals that this test can be viewed both subjectively and objectively. From an objective point of view, proof of "but for" materiality requires proof that Patent Office knowledge of the truth respecting the misrepresented fact, when added to other facts bearing upon the issue of patentability, would have precluded either issuance of the patent or at least allowance of one or more claims by application of Title 35.\footnote{152} The subjective "but for" approach would require proof that the patent examiner would not have granted the patent if he had known the truth respecting the misrepresented fact, regardless of whether that decision was correct or not.\footnote{153}

Consider the following possible alternative situations:

(1) The patentee intentionally withholds disclosure of a statutory bar or an anticipatory publication which invalidates the patent;

(2) During prosecution the Examiner propounds a theory to reject the claims which is wrong as a matter of law, but to overcome the rejection the applicant misrepresents facts in an affidavit to the Patent Office.

It would seem fairly clear after Walker that objectively measured misconduct as in situation (1) above is clearly culpable and would be actionable in virtually any court. The second postulated situation, which was the type of situation raised in the famed Tetracycline litigation,\footnote{154} is more perplexing. In American Cyanamid Co. v. FTC,\footnote{155} the United States Court of Appeals for the Sixth Circuit determined that the testimony of an examiner would settle conclusively certain issues relating to an alleged misrepresentation in the Patent Office.

\footnote{151. Corning Glass Works v. Anchor Hocking Glass Corp., 253 F. Supp. 461, 469, 149 U.S.P.Q. 99, 106 (D. Del. 1966), rev'd on other grounds, 374 F.2d 473, 153 U.S.P.Q. 1 (3rd Cir.), cert. denied, 389 U.S. 826, 155 U.S.P.Q. 767 (1967). Corning pronounced a "but for" test based upon this language of Walker and held: "[N]ot only must the defendant establish . . . an intentional misrepresentation . . . to the patent examiner, but also . . . that the misrepresentation was material, i.e., that the patent would not have issued but for the fraud." 253 F. Supp. at 469, 149 U.S.P.Q. at 106.}

\footnote{152. It should be recalled that the Corning case also indicated that unenforceability based upon unclean hands could result even if the misrepresentation were not material in the classical sense. See note 79 supra and accompanying text. In Diamond Int'l Corp. v. Walterhoefer, 239 F. Supp. 550, 573 n. 114 (D. Md. 1968), the court commented upon this construction of the "obtained" language in Walker: "Whether the [Walker] Court in using the word 'obtained' intended the sine qua non rule to be applied is not clear."}

\footnote{153. A subjective approach to fraud is set forth in Note, Fraud Upon the Patent Office As a Violation of the Sherman Antitrust Law, 14 I.D.E.A 507, 526 (1970).}

\footnote{154. See Charles Pfizer & Co. v. FTC, 401 F.2d 574 (6th Cir. 1968).}

\footnote{155. 363 F.2d 757, 150 U.S.P.Q. 185 (6th Cir. 1966).}
The Patent Office's long standing policy of resisting efforts to depose examiners was called to the attention of the court, but the court concluded that the examiner should testify as to the facts within his knowledge.\textsuperscript{156}

The examiner did in fact testify concerning facts that had occurred during prosecution over 10 years earlier. Despite that the examiner arguably had applied an incorrect legal test in rejecting the application, the Sixth Circuit was satisfied that this evidence went to determining a "but for" test.\textsuperscript{157}

Even if such "what would you have done" evidence would be considered probative,\textsuperscript{158} the Patent Office places an extremely effective obstacle in the path of those who seek it. When the examiner testified, in Cyanamid, the Patent Office took the position that he was not required to do so, but rather that the Office policy had been waived because of the exceptional nature of the case.\textsuperscript{159} After Cyanamid, the Patent Office continued to indicate it would oppose subpoenas to examiners with motions to quash,\textsuperscript{160} and in 1969 the issue was placed before the United States District Court for the Eastern District of Virginia, the court from which subpoenas to examiners are issued. In the case of In re Mayewsky,\textsuperscript{161} the court held that an examiner should testify by deposition "subject to the requirement that the subject matter of the deposition be restricted to relevant matters of fact, and that the deposition avoid any hypothetical or speculative questions or conclusions based thereupon."\textsuperscript{162} The Patent Office has thus been required to change its policy; however, it still seeks to protect the patent examiner from inquiries which seek to invade his mental processes.\textsuperscript{163}

\textsuperscript{156} 363 F.2d at 799, 150 U.S.P.Q. at 151.
\textsuperscript{157} In the recent case of North Carolina v. Charles Pfizer & Co., 182 U.S.P.Q. 667, 665 n.17 (ED.N.C. 1974), the court considered the testimony of four patent experts and several patent attorneys and concluded that the legal test which Examiner Licloff was applying to reject the application was incorrect. The court ultimately concluded that reasonable minds could differ as to whether the conduct was improper and hence the burden of proof to establish fraud or inequitable conduct was not met. See, e.g., SCM Corp. v. RCA, 318 F. Supp. 433, 446, 167 U.S.P.Q. 196, 207, where the district court dismissed a Walker counterclaim after a painstaking study of the difficult language of the examiner's actions which produced no convincing evidence of what the examiner would have done.

\textsuperscript{158} Though normally the defrauded party may testify as to what he would have done, see note 21 supra. In North Carolina v. Charles Pfizer & Co., 182 U.S.P.Q. 667, 666 (ED.N.C. 1974), the court commented: "Aside from the questionable admissibility of this testimony the court has found it lacking in that degree of probative force necessary to carry plaintiff's heavy burden of establishing fraud by 'clear unequivocal and convincing evidence ....'"

\textsuperscript{159} See letter from Patent Office Solicitor described in Note, Legal Basis for Precluding a Patent Examiner from Testifying, 42 IND. L.J. 255, 256 n.7, 49 J. PAT. OFF. Soc'y 841, 842 n.7 (1967).


\textsuperscript{162} Id. at 89.

Judge Lewis considered the propriety of questions put to Examiner Natalie Trusoff by Monsanto attorneys in the *Monsanto Co. v. Dawson Chemical Co.* litigation. The court noted that the same patent was ruled invalid and fraudulently obtained, by Judge Masterson of the Eastern District of Pennsylvania, and valid, by Judge Singleton of the Southern District of Texas, but commented that the examiner's testimony was "neither necessary nor proper in resolving that conflict." The court did rule, however, that Examiner Trusoff be compelled to answer factual questions as to what materials she had studied in response to requests by Department of Justice lawyers.

In *Shaffer Tool Works v. Joy Mfg. Co.*, depositions of an examiner were permitted with the restriction that the scope of examination be limited to "matters of fact [which] must not go into hypothetical or speculative areas or the bases, reasons, mental processes, analyses, or conclusions of the patent examiners in acting upon the patent application maturing into the patent challenged herein." The court also commented concerning the inappropriateness of the subjective testimony from patent examiners, indicating that the *Cyamid* case represented an "unusual case."

Courts are demonstrating a tendency, however, to be increasingly permissive as to the scope of examiner testimony. In *Standard Packaging Corp. v. Curwood, Inc.*, a former examiner was deposed, and an extremely fine line was drawn between permissible and impermissible testimony. The court permitted questions such as: [W]hen you allowed the . . . application, on what facts did you rely? Such testimony essentially probes the examiner's mental processes. If the holding in *Standard Packaging* is followed, careful phrasing of questions will enable a thorough probing of the examiner's basis for allow-

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165. Id.
166. The questions propounded to Miss Trusoff are set forth in the government's Brief on the Motion to Compel Miss Trusoff's responses. The Husted report contained all the data, some of which was omitted in the affidavit submitted to the Patent Office.
169. For the most part where fraud on the Patent Office has been an issue it has been proven by use of objective facts from the application file itself which when compared to other data in the possession of the applicant (correspondence, business documents and memos) or of the public generally prove to be misrepresentations, omissions, or under-statements of adverse matters.
172. 365 F. Supp. at 135. The court refused to require the examiner to answer questions couched in terms of his belief or knowledge.
ing a patent. In *W. R. Grace & Co. v. Park Mfg. Co.*,\(^{172}\) a former examiner testified at trial to the ultimate question that, had he known of a certain prior art, he would not have allowed the claim in issue. Despite this testimony the court held that equally pertinent art had been before the examiner and the patent was valid. The court also commented that "a Patent Examiner operating in a quasi-judicial capacity, cannot subsequently appear at a trial and have any decisive credence given to his testimony that his prior judgment was wrong."\(^{173}\)

There are courts that may desire evidence respecting the examiner's thought processes in allowing a patent. For example, in *Nashua Corp. v. RCA Corp.*,\(^{174}\) the court declined to find fraud, emphasizing the high burden of proof required and pointing out that "there is no evidence as to how this affidavit was interpreted and understood by the Patent Examiner and . . . to what extent, if any, the Patent Examiner relied on it."\(^{175}\) Though other cases may mention patent examiners or use language suggesting consideration of what the patent examiner would have done,\(^{176}\) for the most part this is likely to be parlance, and the court is in reality taking a more objective view of the "but for" test.

It is wholly proper for a court to assume that the Patent Office is constituted to perform its function in accordance with law,\(^ {177}\) and further to assume that the examiner does accept the applicant's representations as true and relies on the facts and evidence before him to make the decision on patentability. Thus, if there is a misrepresentation "but for" which the patent should not have issued applying the standards of Title 35, it should be presumed that the examiner, if properly informed, would not have issued the patent. Most courts have made no attempt to subjectively investigate the actual effect of alleged misrepresentations on the particular patent examiner involved in the case. In the great majority of circumstances the examiner would be incapable of accurately reconstructing his reaction to the misrepresentation. Hypothetical questions to the examiner as to the exercise of his quasi-judicial examining function should be considered improper and inadmissible even if the examiner were permitted to answer. In most instances, therefore, the evidence of misconduct and even materiality should be adduced from objective facts.\(^ {178}\) The ele-


\(^{176}\) See, e.g., Becton, Dickinson & Co. v. Sherwood Medical Indus., Inc., 175 U.S.P.Q. 337 (N.D. Fla. 1972) (reviews the background of the young examiner who examined the application); Tate Eng'r Inc. v. United States, 175 U.S.P.Q. 115, 122 (Ct. Cl. 1972) (indicates the withheld information was "not so material that one can conclude that the Patent Office would have refused to issue plaintiff's patent application.")


\(^{178}\) The dilemma of applying a subjective test is illustrated in *SCM Corp. v. RCA*, 318 F. Supp. 433, 448-49, 187 U.S.P.Q. 186, 207 (S.D.N.Y. 1970), where the court stated:

I have found no convincing evidence, one way or the other, as to what the Examiner would have done had he been informed in September.
ment of reliance involves many of the same issues. In *Norton v. Curtiss*, the CCPA pointed out that reliance only requires that claims be allowed "in substantial measure" as a result of the representations. The court also indicated that the examiner's reliance upon the applicant's representations is justified.

The more difficult question is whether a subjective approach to materiality itself is valid. Recognizing the pragmatic arguments that any subjective analysis immerses the court in a consideration of hypotheticals, the duty of candor and honesty owed the Patent Office could not survive effectively if applicants were permitted to deceive the examiner on matters which are placed squarely in issue. If the examiner requests affidavit evidence, it should not be the applicant's prerogative to color or edit that evidence in a manner to achieve allowance of the patent application, even if the examiner's position with respect to the requirement for evidence is in error. In such instances, it seems clear that both objective and subjective considerations will continue to receive attention from courts investigating inequitable conduct before the Patent Office. For example, in *Brand Plastics Co. v. Dow Chemical Co.*, the court applied the tests jointly and found that the Patent Office would not and should not have issued the patent. Even in applying the subjective standard, whether the examiner would have issued the patent must be determined from objective facts, for example the existence of a clearly delineated issue in the file wrapper in response to which the applicant made misrepresentations to the examiner to secure allowance. Some good sense can be made from such a twofold standard. If a deliberate misrepresentation on

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180. 433 F.2d at 796, 167 U.S.P.Q. at 545.
181. In the *Norton* case, the Court of Customs and Patent Appeals held:

> It is our view that a proper interpretation of the "materiality" element of fraud in this context must include therein consideration of factors apart from the objective patentability of the claims at issue, particularly (where possible) the subjective considerations of the examiner and the applicant. Indications in the record that the claims at issue would not have been allowed but for the challenged misrepresentations must not be overlooked due to any certainty on the part of the reviewing tribunal that the claimed invention, viewed objectively, should have been patented. If it can be determined that the claims would not have been allowed but for the misrepresentation, then the facts were material regardless of their effect on the objective question of patentability.

433 F.2d at 795, 167 U.S.P.Q. at 545.
the part of the applicant meets an objective "but for" test, that is, a single invalid claim was obtained by virtue of the fraud, the entire patent is invalid.\textsuperscript{183} In contrast, if the applicant knowingly deceives the examiner, but the deception does not produce a patent which is invalid by any statutory criteria, the patent should be held unenforceable.\textsuperscript{184}

But what is the difference between holding the patent invalid and holding it unenforceable, since either way the patentee leaves the litigation empty-handed, and perhaps a little poorer if there is an award of attorneys' fees? It seems reasonable to conclude that proof of objective materiality, whereby an invalid patent is obtained, should be the prerequisite for an antitrust treble damage claim under Walker.\textsuperscript{185} In such a case, there is an ill-gotten patent which if enforced is being used to suppress competition. If the market circumstances warrant, such action should be regarded as violative of the antitrust laws. In the case of unenforceability resulting from misconduct which does not meet the objective "but for" test, however, the unenforceability itself is sufficient punishment. Particularly after Blonder-Tongue,\textsuperscript{186} it would seem that a subsequently sued infringer could successfully plead estoppel if a patent were once held unenforceable for unclean hands. It would seem impossible to purge the misconduct by reissue.\textsuperscript{187} Hence, the applicant suffers forfeiture of his patent right. Nevertheless, an otherwise valid patent still clearly exists, and to base an antitrust claim purely upon an "unclean hands" type theory seems both harsh and unjustified.\textsuperscript{188} Of course, the anticompetitive purpose inherent in an attempt to enforce a patent that the owner knows is invalid or unenforceable can provide the basis for a Sherman Act section 2 claim for relief.

Any analysis such as the above must inevitably survive a charge that is a pigeonholing effort. It may be, but reference back to the law of

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\textsuperscript{183} See section III, A Patent Can Be Invalid For Fraudulent Procurement, at pages 16-18 supra.


\textsuperscript{185} Adelman & Brooks, The Integrity of the Administrative Process. Sherman Section 2 and Per Se Rules—Lessons of Fraud on the Patent Office, 19 WAYNE L. REV. 1 (1972). The authors conclude: [if] the administrative action is demonstrably and indubitably correct, no antitrust violation has occurred. This exception is typified by the issuance of a valid patent. Certainly the courts should not embark on a protracted and perilous inquiry as to the propriety of administrative action. Even if such an inquiry were practicable, however, no antitrust violation is possible where the action is correct on its face. \textit{Id.} at 21. The authors argue, however, that a patent which is invalidly procured by fraud is a per se antitrust violation.

\textsuperscript{186} See note 84 supra.

\textsuperscript{187} 35 U.S.C. § 251 (1970) makes reissue available to applicants who could not be said to have "deceptive intent." An accidental nonmaterial misrepresentation should subject the patentee to no sanction. \textit{But see} discussion of \textit{Ex parte} Clark, note 83 supra.

\textsuperscript{188} This is particularly true in view of the fact that some courts have held patents to be unenforceable when proof falls short of that necessary to establish fraud. See text accompanying notes 253-55 infra.
patent unenforceability for misuse or laches\textsuperscript{189} seems to support the conclusion that a holding of unenforceability is a penalty resulting from conduct purely collateral to the validity patent right as is a nonmaterial representation. It can be counter-argued, however, that while a patent misuse can be an antitrust violation, so can an enforcement of a patent procured by inequitable conduct which fits the subjective "but for" test. One could further argue that if an applicant makes an intentional misrepresentation to the Patent Office, the Commissioner would have the right to strike the application.\textsuperscript{190} Hence, if the misconduct had been discovered during the application's pendency, no patent would have issued. Thus, any enforcement effort can be violative of the antitrust laws.

Analogy to other areas of the law is difficult. Some guidance may be extracted from \textit{Eastern Railroad President's Conf. v. Noerr Motor Freight, Inc.},\textsuperscript{191} where the Supreme Court held that attempts to influence or promote legislation which have an anticompetitive purpose are immune from attack as an antitrust violation even if the techniques employed "fall far short of the ethical standards generally approved in this country."\textsuperscript{192} It seems that the Court recognizes that remedies for "unethical conduct" are dispensed in the equitable judgment of the court and that uneven standards might be applied. In \textit{Noerr}, the Court indicated that Sherman Act sanctions would be imposed where the accused conduct is a mere sham to cover up an attempt to interfere directly with the business relationship of a competitor. While the analogy is not compelling, it is clear from \textit{Noerr} that the mere existence of inequitable conduct alone does not compel the conclusion that the defendant's actions are a sham. Similarly, can an otherwise wholly valid patent be regarded as a mere sham by virtue of inequitable conduct in its procurement? The later case of \textit{California Motor Transport Co. v. Trucking Unlimited}\textsuperscript{193} related to a situation where the defendants were accused of instituting baseless state and federal proceedings in order to maintain a competitive advantage. The Supreme Court circumscribed the earlier \textit{Noerr} holding and held that, on its face, the unethical conduct alleged to have occurred before state and federal tribunals came within the "sham" exception of \textit{Noerr}.\textsuperscript{194} In this regard, the court cited \textit{Walker} as another instance of the sham exception to \textit{Noerr}, thereby undermining the author's position on this matter. But the concurring opinion, noting prior cases, stated that "when a monopoly or restraint of trade is the result of valid govern-

\textsuperscript{189} See notes 59-68 supra and accompanying text.  
\textsuperscript{191} 365 U.S. 127 (1961).  
\textsuperscript{192} Id. at 140.  
\textsuperscript{193} 404 U.S. 508 (1972).  
\textsuperscript{194} Id. at 516.
mental action, there cannot be an antitrust violation.\textsuperscript{195} Thus, it is questionable whether an antitrust violation can be predicated on attempts to enforce a valid but improperly procured, and hence unenforceable, patent, absent knowledge of the patent's unenforceability.

The objective and subjective "but for" tests do not exhaust the standards by which to judge the materiality of misrepresentations. For purposes of organization, there can be three additional categories for considering misrepresentations to the Patent Office:

1. "Relevant" misrepresentations, that is, misrepresentations of facts that are normally considered in evaluating patentability,\textsuperscript{196} but which neither renders the patent invalid in an objective "but for" sense nor mislead the examiner in a subjective "but for" sense;

2. "Remote" misrepresentations, that is, misrepresentations which do not involve any issue of patentability, but which only affect the conduct of the proceedings before the Patent Office;\textsuperscript{197}

3. "Irrelevant" misrepresentations, that is, misrepresentations which do not affect considerations of patentability or the conduct of proceedings.\textsuperscript{198}

Viewing these descending degrees of materiality, there are clearly some instances where the "misrepresentation" in prosecution should be overlooked.\textsuperscript{199} This can only be determined on a case by case basis. However, any judicially healthy attitude toward patents must recognize the benefits of the patent system and should not seek excuses to invalidate patents on the basis of truly insignificant misrepresentations. Such an attitude would only further contribute to having accused infringers attempting to uncover a real or imagined instance of "fraud." Before one concludes, however, that only the subjective and objective "but for" categories would produce unenforceability, con-

\textsuperscript{195} Id. at 516 n.3. \textit{But see} Kobe, Inc. v. Dempsey Pump Co., 198 F.2d 416 (10th Cir.), cert. denied, 344 U.S. 837 (1952), in which Kobe, Inc. argued that some of its patents were valid, and the court held one to be valid, but Kobe was held liable on Dempsey's antitrust claim because Kobe's purpose was to eliminate Dempsey as a competitor and because of Kobe's recklessness in enforcing valid and invalid, and impinged and not impinged patents against Dempsey.

\textsuperscript{196} Examples of this type of fact include novelty, nonobviousness and utility. In CPC Int'l, Inc. v. Standard Brands, Inc., 385 F. Supp. 1057, 184 U.S.P.Q. 332 (D. Del. 1974), the court held that unenforceability did not require a showing of "but for" materiality. It was sufficient to show relevance of the misrepresentation to a "statutory criterion of patentability." \textit{Cf.} note 209 infra.

\textsuperscript{197} An illustration of this type of misrepresentation would be a false allegation contained in a petition to make special. \textsuperscript{198} An illustration of this type of misrepresentation would be a false statement of the inventor's nationality.

\textsuperscript{199} \textit{See}, e.g., Henkels & McCoy, Inc. v. Elkin, 316 F. Supp. 303, 167 U.S.P.Q. 97 (W.D. Pa. 1970), where the court considered alleged misrepresentations, in an affidavit submitted in a Petition to Make Special, irrelevant misrepresentation by the above analysis. Although no misrepresentation was found, the court commented that even if false the affidavit would not produce unenforceability. It further indicated that to support unenforceability the defendant had to prove the patent would not have issued but for the fraud.
sider Kearney & Trecker Corp. v. Giddings & Lewis, Inc., which, while arguably involving a remote misrepresentation, resulted in a holding of invalidity. Applying a sliding scale test, however, it might be argued that the wanton deliberateness of the improper conduct as well as its long continuance warranted the imposition of the penalty.

A final subject for consideration concerns whether there is or should be a valid differentiation between withholding anticipatory art and withholding art relevant to considerations of obviousness under section 103. The patentee in Union Carbide Corp. v. Filtrol Corp. called former Commissioner David Ladd, presumably as some type of patent expert, to establish that during the pendency of the patent application, neither applicants nor their attorneys had an obligation to cite relevant prior art which did not anticipate their inventions, while indicating that proposals had been made to broaden the duty of disclosure to include "the citation of non-anticipatory art." Mr. Ladd further testified that when the Patent Office in 1964 formally encouraged the submission of relevant prior art, fewer than 10 percent of the applicants complied.

Although the competency of such testimony is dubious, the suggestion that culpable misconduct could be predicated only on withholding of anticipatory art is found in several cases prior to Walker. Other authority suggests a standard, however, which would require a determination of whether the art withheld was "more pertinent."

203. Id. at 515.
204. Id.
205. Under 35 U.S.C. § 6 (1970), Mr. Ladd, as Commissioner of Patents, had authority to establish regulations for the conduct of Patent Office proceedings, but only subject to the approval of the Secretary of Commerce. Unless Mr. Ladd had the Secretary's approval to institute a rule or mode of procedure which exempted all applicants from citing nonanticipatory art, his testimony was incompetent. If his testimony was only to establish that as Commissioner he did not propound a positive rule requiring such disclosure of non-anticipatory art, the testimony was not material, since there is no basis, particularly considering Precision Instrument and like cases, for assuming that absent a Patent Office requirement, there exists any obligation to cite non-anticipatory art. The nonexistence of any such positive order, moreover, could be established much more simply than by Mr. Ladd's testimony.
than that cited by the Patent Office. Further, in *Union Carbide Corp. v. Filtral Corp.*, the court defined the applicant's duty as clearly exceeding the narrow obligation to cite only anticipatory art, holding that the duty of disclosure extended to prior art "which, but for the nondisclosure, would have prevented the patent from issuing or would have restricted the scope of the claims."

It will clearly be easier for an applicant to establish his good faith in cases of failure to cite art that is non-anticipatory, and courts will excuse applicants from failing to cite prior art which they truly believe to be irrelevant. Although the applicant's duty should be regarded as including a duty to disclose references clearly relevant to the question of obviousness, a disclosure of a multiplicity of references generated in prior searches can also be dangerous.

The Knowing and Willful Nature of the Misrepresentation. The second element of proof necessary to sustain relief under a charge of fraudulent procurement is intent. The *Walker* case clearly indicates that the applicant's misrepresentation must have been indulged in "knowingly and willfully." These preconditions are emphasized in Justice Harlan's concurring opinion and are distinguished from "technical fraud," which is in fact no fraud at all.

Both knowledge and willfulness are human conditions and are rarely susceptible of direct proof, but, rather, must ordinarily be inferred from circumstantial evidence or from statements in the nature of admissions, although the element of knowledge of the fact misrepresented can usually be established without difficulty. The element of willfulness is more difficult to establish, however, since the quality of...


208. 170 U.S.P.Q. 482 (C.D. Cal. 1971). If the claims would have to be restricted, the withheld art would necessarily meet the objective "but for" test.

209. 170 U.S.P.Q. at 521, citing cases. See also Trio Process Corp. v. L. Goldstein's Sons, Inc., 461 F.2d 66, 174 U.S.P.Q. 129 (3d Cir.), cert. denied, 409 U.S. 997 (1973), where the court held that material misrepresentations must relate to the statutory conditions of patentability, specifically novelty, obviousness and utility. Compare Bolt Assoc., Inc. v. Rix Indus., 178 U.S.P.Q. 171, 174 (N.D. Cal. 1973), where the court indicated that false statements must be essentially material to patent issuance and concluded that an affidavit to establish utility would not be material; only misrepresentations on issues of novelty and non-obviousness could be material.

210. See, e.g., Alburger v. Magnaflux Corp., 444 F.2d 1406, 171 U.S.P.Q. 16 (9th Cir. 1971), where the court accepted the explanation that the withheld art was irrelevant, noting that similar art was before the Patent Office. In Gentex Corp. v. Transaero, Inc., 171 U.S.P.Q. 79, 89 (E.D.N.Y. 1971), the court apparently accepted the patentee's explanation that he thought the art immaterial, noting he had not informed his attorneys.

211. In Penn Yan Boats, Inc. v. Sea Lark Boats, Inc., 359 F. Supp. 948, 175 U.S.P.Q. 260 (S.D. Fla. 1972), affirmed, 479 F.2d 1328, 178 U.S.P.Q. 577 (5th Cir. 1973), cert. denied, 414 U.S. 874 (1974), an applicant disclosed a number of references, most of which were irrelevant, and included one relevant piece of prior art in the submission. The court noted: "Obviously, the purpose of this misrepresentation was to bury the Wollard patent in a long list of allegedly old prior art patents in the hope that the Patent Examiner . . . would ignore the list . . . ." 359 F. Supp. at 966, 175 U.S.P.Q. at 272.

212. 382 U.S. at 176-77. Willfulness or deliberateness is the negative of inadvertence or accident. J. Wigmore, Evidence § 242, at 39 (3d ed. 1940).

213. 382 U.S. at 179.
the willfulness must be determined.214

In *Xerox Corp. v. Dennison Mfg. Co.*,215 Judge Mansfield held that, absent evidence of intent to deceive or recklessness, the existence of material misstatements was insufficient to establish culpable misconduct.216 This holding, however, cannot be read as requiring that the patentee's bad faith or malice be positively proven as must criminal charges. If "bad faith" by the patentee must be affirmatively proven, the possibility of obtaining any relief from a fraudulently procured patent is indeed remote because of the great unlikelihood that "bad faith" could be affirmatively proven.217

In short, "knowingly and willfully" does not mean "knowingly and maliciously" or "knowingly and feloniously." Legal constructions of the word "willfully" abound in the cases. A close analogy is available in the cases brought under 18 U.S.C. § 1001 which provides sanc-

214. All would agree that the quality of intent necessary to support a charge of fraudulent procurement is greater than the "intent" necessary to sustain the intentional tort of trespass to land. In the latter case, liability will accrue if the actor voluntarily enters land unlawfully regardless of the absence of an intent to violate the boundary of another's property. In *North Carolina v. Charles Pfizer & Co.*, 182 U.S.P.Q. 657, 669 (E.D.N.C. 1974), the court rejected plaintiff's argument that no mens rea is required to establish fraud in a civil action.


> Although it is difficult to formulate a standard that will encompass all types of misconduct that would amount to inequity on the part of an applicant, the basic underlying theme is that there must be some element of wrongdoing, willfulness or bad faith that transgresses the basic concept of doing equity. It must be remembered that the purpose of the unclean hands doctrine in patent cases is to discourage an applicant from taking advantage of the fact that the prosecution of a patent application is essentially an ex parte rather than an adversary proceeding and that the Patent Examiner accordingly must rely heavily upon the information furnished to him by the applicant. However, to deny enforcement as a matter of law merely because of an innocent or good faith non-disclosure would go beyond what is necessary to protect the public against the improvident granting of a monopoly.

217. Former Commissioner of Patents David Ladd commented on a "bad faith" test to determine liability of a patentee who attempts to exclude competition by harassing patent litigation:

> But to make bad faith the criterion is of little help. Barring some incredibly improbable admission against interest or an unlikely disclosure during discovery, a patent owner will seldom be convicted of bad faith from his own mouth. As in any other proof of intent, the courts must nearly always look to circumstantial evidence . . .

> From these cases it is difficult to escape the conclusion that so long as bad faith is an essential element of proof, business aggression [by patentees] can be controlled through private remedies only in a very limited number of cases.

tions against those who “knowingly and willfully” make misrepresentations in matters within the jurisdiction of federal departments or agencies.\textsuperscript{218} In those cases analogous to the patent fraud circumstance, the courts do not construe “willfully” as requiring malice or evil intent, but, rather, as requiring only conscious deliberateness.\textsuperscript{219} Particularly when dealing with offenses which do not involve moral turpitude, the requirement of willfulness is satisfied if it can be shown that the person realized what he was doing.\textsuperscript{220}

It is only when the element of willfulness is stripped of its malicious overtones that the “good faith” defense, which \textit{Walker} has indicated is available to the patentee,\textsuperscript{221} makes sense. Otherwise the party alleging the fraud is burdened with disproving the defense. Unless the virtually impossible proof requirement of bad faith is demanded, there will be a point at which a prima facie case of fraudulent procurement will be deemed proven,\textsuperscript{222} the point at which an unavoidable inference of fraud can be drawn from the circumstantial evidence at hand. It is at this point that it will be the patentee’s burden to present his evidence of good faith, inadvertence, or mistake.\textsuperscript{223}

The point at which such an inference is created will have to be determined largely on a case by case basis. In many instances, knowledge of the alleged misrepresentation to the Patent Office, coupled with an awareness or consciousness of the adverse impact of that fact on the issue of patentability, will probably be deemed sufficient. For example, if a patentee was clearly aware of the existence and significance of anticipatory prior art in relation to the patentability of a patent which he procured, what further inquiry into willfulness should be required before it becomes incumbent on the patentee to come forward to prove his good faith, or remain silent at his peril? Once the patentee’s knowledge of a material fact is established, and is coupled with proof that the patentee appreciated the materiality of that fact, no more evidence other than the manifest fact of the misrepresentation or nondisclosure must be elicited to prove “willfulness.”\textsuperscript{224} In circumstances where the parties stand in a relationship of trust and confidence, such as an applicant before the Patent Office, a conscious awareness of the fact misrepresented or withheld should be sufficient.\textsuperscript{225}

\textsuperscript{220} United States \textit{v.} Illinois Central R.R., 303 U.S. 239 (1938).
\textsuperscript{221} 382 U.S. at 177.
\textsuperscript{222} In American Optical Corp. \textit{v.} United States, 179 U.S.P.Q. 682 (Ct. Cl. 1973), a heavy burden, including proof of subjective materiality, was required to establish a prima facie case of fraudulent procurement sufficient to pierce the attorney-client privilege.
\textsuperscript{223} “Although no one is bound to disprove fraud until it is proved by either direct or circumstantial evidence, where the proof creates an unavoidable inference of fraud the burden of going forward with evidence is on the party so charged.” 37 C.J.S. \textit{Fraud} § 94, at 401 (1943).
\textsuperscript{224} Norton \textit{v.} Curtiss held that “the fact of the misrepresentation coupled with proof that the party making it had knowledge of its falsity is enough to warrant drawing the inference that there was a fraudulent intent.” 433 F.2d at 795-96.
\textsuperscript{225} No general rule can be formulated which will fix under all circum-
The quality of acts which may constitute knowing and willful conduct might range from deliberate misstatements calculated to deceive the Patent Office to inexcusable negligence. Rather than attempt to define a degree of intent which determines culpability, or to establish a prima facie case of fraud or inequitable conduct, a relative standard would be more useful. The evidence of intent should be weighed in light of the materiality of the misrepresentation, together with the motive the applicant had or might have had in misleading the Patent Office. Most likely, as the materiality of the misrepresentation diminishes, so will the motive for making a misstatement.\(^{226}\)

The patentee ought not feel compelled to disrupt his case with a good faith defense in response to minor or inconsequential misstatements which might have occurred during prosecution of the patent. The court should weigh materiality with the evidence of intent to determine whether the total continuum of the patentee's conduct appears to evidence a culpable motive to either unfairly or fraudulently obtain a patent, or, perhaps, to obtain an advantage which would not normally accrue to the patentee. For example, improper inventorship can provide a basis for invalidating a patent, yet errors of misjoinder and non-joinder may be readily corrected.\(^{227}\) Hence, a prima facie case of improper inventorship should include some proof that, for example, the applicant wished to render prior publications of an inventor unavailable as prior art by misjoinder of an inventor,\(^{228}\) or that the applicant might avoid partial assignment of the application to a third person by non-joinder of a non-employee inventor.\(^{229}\) Of

stances the existence of a relation of trust and confidence because of which one party to a transaction has a right to a full disclosure of all material facts from the other. However, where such a relation may be regarded as existing between the parties, there is a duty to disclose all material facts, and failure to do so constitutes fraud.\(^{37}\) C.J.S. Fraud \(^*\) 16, at 247 (1943). Compare this to the standard applied to alleged overvaluation of corporate stock:

Any overvaluation—even if it is a gross miscalculation—will not be disturbed by the courts if it was made in good faith. . . . Any intentional overvaluation will be deemed fraudulent as a matter of law. Proof of actual fraudulent intent is unnecessary in such cases: only a showing of conscious overvaluation.

4 Z. CAWITCH, BUSINESS ORGANIZATIONS \(^*\) 90.02, at 1006-07 (rev. ed. 1972).

\(^{226}\) In Kaiser Indus. Corp. v. Jones & Laughlin Steel Corp., 181 U.S.P.Q. 193, 222 (W.D. Pa. 1974), a charge of fraud was predicated on the fact that the applicant had identified an earlier Austrian counterpart application as first filed, whereas a Swiss counterpart had been filed several days earlier. Since the Swiss application was filed less than 12 months before, and it issued long after the filing date of the patent in suit, the patent in suit could not be invalid under section 102(d). The court noted this and had no difficulty rejecting the fraud charge. It is suggested that such a charge is made in hopes of triggering a judicial overreaction to the minor misstatements.


\(^{228}\) Under 35 U.S.C. \(^*\) 102 (1970), prior art which is not a statutory bar must be the work of the invention of another.

\(^{229}\) A number of cases have indicated that invalidity of a patent for misjoinder or non-joinder is a technical defense. See, e.g., Iron Ore of Canada v. Dow Chemical Co., 177 U.S.P.Q. 34, 70 (D. Utah 1972).
course, if there is compelling proof of deliberate and calculated dishonesty, without significant evidence of motive, a prima facie case should be established. In most instances, however, the prima facie determination as well as the ultimate determination of culpability should follow a weighted consideration of the evidence regarding materiality, intent and motive.

Proof of bad faith or evil intent should not be required as an affirmative burden on the accused infringer or even the antitrust plaintiff in patent misconduct cases. On the other hand, the least error should not send the patentee scurrying for a good faith defense. Thus, when a prima facie case of a knowing and willful misrepresentation has been established after viewing the entirety of the patentee's conduct in view of its impact on the patenting process, he should be required to suffer the disruption and dilution which the presentation of a good faith defense imposes on his patent suit.

An approach to the interaction between proof of intent and the good faith defense is suggested in Becton, Dickinson & Co. v. Sherwood Industries, Inc., 230 where the court analyzed the pertinency of a prior art device known to the patentee and withheld from the Patent Office. After citing the duty of disclosure and noting it was not fulfilled, the court concluded that “[t]here is no evidence that these omissions were caused by oversight.” 231 Other alleged acts of misconduct were similarly treated. This approach creates a logical shifting of the burden of producing evidence from the accused infringer to the patentee once an inescapable inference of misconduct is established.

The willingness of courts to infer the knowing and willful nature of the acts charged to be misconduct diminishes considerably in those cases where an antitrust counterclaim is directly involved. 232 In some instances where courts have found a patent invalid on purely statutory grounds and no antitrust claim was involved, there appears to be a willingness to buttress this conclusion with a finding of patent unenforceability based on “unclean hands.” 233 An exception is the case of Monsanto Co. v. Rohm & Haas, Co., 234 which considered the al-

231. Id. at 345.
232. In Beckman Instr., Inc. v. Chemtronics, Inc., 439 F.2d 1369, 1381 n.27 (5th Cir. 1970), cert. denied, 400 U.S. 956 (1970), the court found that the patentee had breached his duty of frank disclosure to the Patent Office, and held the plaintiff's patent invalid for fraud, but remanded to the trial court to determine if the plaintiff had engaged in “willful and knowing misrepresentation of material facts” to support a Walker treble damage claim.
233. See, e.g., Minnesota Mining & Mfg. Co. v. Projection Optics Co., 256 F. Supp. 354, 366, 150 U.S.P.Q. 33, 42 (W.D.N.Y. 1966), where a finding of inequitable conduct was largely inferred without finding specific intent. In Monolith Portland Midwest Co. v. Kaiser Alum. & Chem. Corp., 267 F. Supp. 726, 160 U.S.P.Q. 380 (S.D. Cal. 1968), modified on another issue, 407 F.2d 288, 160 U.S.P.Q. 577 (9th Cir. 1969), the court found inequitable conduct on a number of grounds and commented, “An acceptable explanation may be plausible when each small point is isolated from the others, but when the picture is viewed in its entirety, the fact that the Patent Office was not told the then known truth is inescapable.” 267 F. Supp. at 786, 152 U.S.P.Q. at 428. Although the facts seemed to support this inference, the specific issue of intent was not treated.
leged misrepresentations in an affidavit and held “the affidavit contains no affirmative misrepresentations [but] it is misleading and was intended to be misleading.” It appears that the court came to this conclusion primarily on the basis of the affidavit itself, since no other evidence of intent was discussed.

The judicial determination of the human conditions of knowledge and willfulness are too complex to be susceptible of precise legal definition. Yet, even if left for determination on an ad hoc basis, there should be a scale against which the conduct can be measured. In short, all breaches of the “uncompromising duty” are not equal, nor should all produce the same result.

The Degree of Proof to Establish Actionable Fraud. Fraud is a question of fact which must be proven by the party asserting it. To sustain a charge of fraudulent procurement, the charging party must sustain this burden by clear and convincing proof and not by a mere preponderance of the evidence.

United States v. American Bell Telephone Co. is often cited as original authority establishing the clear and convincing burden to prove fraud in patent cases. In that case the Supreme Court found that the charge of fraud being made “not only rejects the testimony which is given, both oral and written, as false, but asks that it be held to prove just the reverse.” Other courts have emphasized the clear and convincing burden and have simultaneously found that the alleged fraud did not exist at all, or that fraud had not even been

235. 312 F. Supp. at 791, 164 U.S.P.Q. at 567. In footnote 11, the court made a distinction between a positive misrepresentation and a misrepresentation by omission:

We have concluded that there is insufficient evidence to prove that Monsanto intentionally made false statements of fact to the patent office. However, there is sufficient evidence to prove that Monsanto intentionally omitted material facts and that it thereby intended to mislead the patent office.


237. Courts have phrased this burden of proof differently as “clear and convincing,” “clear and definite,” “clear to a reasonable degree of certainty,” and the like. See Corning Glass Works v. Anchor Hocking Glass Corp., 253 F. Supp. at 471, 149 U.S.P.Q. at 107, for a holding that fraudulent procurement must be proven “to a reasonable degree of certainty.” Norton v. Curtiss, 433 F.2d at 797, confirms that proof of fraud must be “clear and convincing.”

238. 167 U.S. 224 (1897).

239. Id. at 233.

proven by the preponderance of the evidence.\textsuperscript{241}

As is perhaps predictable, the most rigorous standard of proof is propounded by the cases that find no fraud. In \textit{Cataphote Corp. v. DeSoto Chemical Coatings, Inc.},\textsuperscript{242} the court emphatically stated that there must be "clear, convincing proof of intentional fraud involving affirmative dishonesty," and that \textit{Walker} requires no less "a rigorous standard of deceit" than was required in cases prior to \textit{Walker}.\textsuperscript{243} If the court intends its statement to reflect some increased burden of proof required to establish a basis for a \textit{Walker} antitrust claim, this statement might be said to represent the view of many courts. Yet, the difference between a "rigorous standard of deceit" and an "uncompromising duty," or a simple duty of candor, is simply too broad to support a conclusion that \textit{Cataphote} states the law with respect to the burden of proving fraudulent procurement to sustain a defense to a patent infringement charge.

It must be recognized that standards of behavior are apt to change in time, and modern standards, not those of earlier generations, will be applied by courts. For example, in \textit{Corona Cord Tire Co. v. Dovan Chemical Corp.},\textsuperscript{244} the applicant signed an affidavit that he had vulcanized certain rubber samples with an accelerator and that the accelerator had been highly efficient "in the actual vulcanization." The applicant had not, in fact, vulcanized the samples. The court held this representation not material but merely "reckless" and concluded that not even the presumption of validity of the patent was destroyed. Many present-day courts would view the conduct differently.\textsuperscript{245}

What, then, does clear and convincing mean? Examples provided in prior cases are the best guidance, since the cases as a whole do not indicate that a uniformly discernible standard is being applied.\textsuperscript{246} Thus, the burden of proof of fraudulent procurement cannot

\begin{itemize}
  \item \textsuperscript{242} 450 F.2d 769, 171 U.S.P.Q. 796 (9th Cir. 1971).
  \item \textsuperscript{243} 450 F.2d at 772.
  \item \textsuperscript{244} 276 U.S. 358 (1928).
  \item \textsuperscript{246} For example, in both \textit{Armour & Co. v. Wilson & Co.}, 274 F.2d 143, 124 U.S.P.Q. 115 (7th Cir. 1960), and \textit{Barr Rubber Products Co. v. Sun Rubber Co.}, 425 F.2d 1114, 165 U.S.P.Q. 432 (2d Cir.), \textit{cert. denied}, 400 U.S. 878 (1970), courts of appeal overturned district court findings of fraud, emphasizing the "clear and convincing" burden of proof to support the findings of the lower court. \textit{Cf. Monsanto Co. v. Rohm & Haas Co.}, 312 F. Supp. 778, 164 U.S.P.Q. 556 (E.D. Pa. 1970), where the court does not refer to the burden of proof anywhere in its decision, and the dissenting opinion in the court of appeals charges
be sustained merely from inferences from the file wrapper of the patent in issue without more, or from scientifically debatable conclusions or "innuendo" in an affidavit. In fact, one court admitted to not understanding the Patent Office allowing a patent after a formidable rejection, but nonetheless refused to make any inference of fraud based upon conjecture. Furthermore, inconclusive testimony as to the occurrence of prior uses and sales will not sustain the burden. There have been a number of indications that, if an applicant petitions for "special" status with respect to his application, courts may hold him more closely to a duty of disclosure.

The burden of proof standard required for success in an "unclean hands" defense may be less than that necessary to establish "material fraud." In SCM Corp. v. Radio Corp. of America, the court disallowed the claim of the patent's invalidity due to fraudulent procurement as a result of the failure to meet the burden of proving that the patent would not have issued but for the nondisclosure. As a result of the patentee's "unclean hands" in securing the patent, however, the court concluded the patent was unenforceable. Somewhat similarly, in Monolith Portland Midwest Co. v. Kaiser Aluminum & Chemical Co., the patentee was found to have indulged in questionable

that the district court committed error in applying a "mere preponderance" test.


254. 318 F. Supp. at 449-50, 167 U.S.P.Q. at 208. The court distinguished the "but for" consideration from the "unclean hands" doctrine:

SCM has failed to carry the burden of proving that RCA's nondisclosure was material in a "but for" sense, i.e., that the patent would not have issued if RCA had revealed all the relevant information. I must conclude therefore that SCM has not proved that RCA procured the patent by fraud and has not shown the patent to be invalid on that ground.

This conclusion, however, does not dispose of the matter. We still have to deal with the doctrine of "unclean hands". The line between fraud which will invalidate a patent and "unclean hands" which will bar its enforcement is a shadowy one. The decisions generally are not clear on it. Some courts phrase the results in terms of invalidity, others speak of unenforceability. This is a case in which the problem must be faced.


conduct in numerous instances. Although not constituting fraud, the conduct was sufficient to render the patent unenforceable and to support an attorneys' fee award.

Therefore, it seems that courts will continue to apply a diminished proof standard to support a holding of unenforceability. Since courts may apply varying proof standards to hold patents unenforceable because of an unethical, though not fraudulent, act or course of conduct, the appropriateness of permitting a Walker treble damage action to be maintained based upon a valid but unenforceable patent is highly questionable.258

The Law Applied—The Effect of Different Facts

The discussion above sets forth the basic elements which must be confronted in considering any assertion of inequitable conduct or fraudulent procurement. Several patterns emerge and are distinguished by the type of alleged misconduct or the particular remedy sought—particularly the presence or absence of an antitrust claim.

Misconduct Involving Withheld Prior Art. In instances where the alleged misconduct has involved withholding prior art information from the Patent Office, an inference of fraud will usually not be created unless there is some extrinsic evidence which establishes a conscious withholding of information. One example of such conduct was found in Beckman Instruments, Inc. v. Chemtronics, Inc.257 A letter was discovered acknowledging that the prior art was within the scope of pending claims and suggesting that the prior art author might be the original inventor of the broad concept sought to be covered by patent. This letter was combined with the patent holder's attempt to acquire rights in the prior device to infer fraud. Similarly, in Acme Precision Products v. American Alloys Corp.258 correspondence was found showing the patentee knew he was maintaining two separate patent applications on the same subject, thus affording "two opportunities of obtaining rather broad coverage." A patentability search report in Penn Yan Boats, Inc. v. Sea Lark Boats, Inc.259 acknowledged "the most pertinent patent . . . is the Titcomb patent . . . . Fauber and Owens do not appear particularly pertinent." Yet the applicant cited the Fauber and Owens references to the Patent Office and withheld Titcomb. Prior printed articles and correspondence indicating patentability was slight were found in Halliburton Co. v. Dow Chemical Co.,260 yet the art was not cited.

the amount of the attorneys' fee award, but confirmed the fact of the award, commenting that "conduct short of fraud and in excess of simple negligence is also an adequate foundation for deciding a patent action is exceptional [under 35 U.S.C. § 285 (1964)]." 407 F.2d at 294, 160 U.S.P.Q. at 581.

256 See text accompanying notes 185-95 supra.
257. 439 F.2d 1369 (5th Cir. 1970).
258. 422 F.2d 1395, 165 U.S.P.Q. 164 (8th Cir. 1970). Although the issue in Acme involved a copending application, one was clearly prior art in the other application. Other areas of misconduct were also involved in the case.
Air Shields, Inc. v. Air Reduction Co., a patent infringement suit, provides another example where prior art was withheld. The extrinsic evidence in that case established that the applicants were aware of prior art which at least strongly suggested the invention, and were in fact inspired to make the invention by the prior art. During prosecution, however, arguments were made which were squarely inconsistent with applicant's knowledge of the art, but the patent was nevertheless held invalid due to prior art.

On the other hand, the courts do not infer bad faith from the mere fact that the patent applicant knew of the art. The examiner was "beguiled and cajoled" into issuing an invalid patent in Wilson v. Midwest Folding Products Mfg. Corp. The invalidity claim was based largely on the prior art uncovered in a patentability search; however, since the examiner searched the same subclasses where the relevant art existed, the court declined to find a misrepresentation.

The clear and convincing burden of proof has been invoked as necessary to establish that the patent applicant was aware of the art. The inference of misconduct will apparently be refuted if the examiner uncovered at least equivalent or equally pertinent prior art or if the applicant cited more pertinent prior art than that withheld. If the art is before the patent examiner, courts generally will not find inequitable conduct because of the art's treatment by the attorney or applicants. For example, when the examiner has the reference before him, arguments by the applicant which misconstrue its teachings will not constitute fraud. Neither is it fraudulent to fail to utilize certain prescribed Patent Office methods to cite art to the Patent Office. Thus, the court in Azoplate Corp. v. Silverlith,

266. General Tire & Rubber Co. v. Jefferson Chem. Co., 180 U.S.P.Q. 33 (S.D.N.Y. 1973). But see Kahn v. Dynamics Corp., 367 F. Supp. 63, 180 U.S.P.Q. 247 (S.D.N.Y. 1973), where a mischaracterization of a reference occurred. In the fact findings the court appears to indicate that the mischaracterization destroys the presumption of validity. In the court's findings, however, the patent is held invalid partially on this basis. See also Schlegel Mfg. Co. v. King Alum. Corp., 184 U.S.P.Q. 22, 25 (S.D. Ohio 1974). In W.L. Gore & Assoc. v. Carlisle Corp., 183 U.S.P.Q. 459 (D. Del. 1974), a charge of inequitable conduct was predicated upon the patent applicant's failure to bring a reference known to the examiner to the attention of the Board of Appeals. The court rejected the assertion that this was inequitable, but appeared to worry over its decision. 183 U.S.P.Q. at 466. The courts' serious consideration of such charges is responsible for patent solicitors' apprehension.
267. Lundy Electronics & Systems, Inc. v. Optical Recognition Systems,
Inc.\textsuperscript{268} dismissed a charge of fraud based upon the allegation that the applicant failed to inform the Patent Office of the method by which the prior art reference could be modified so as to make it operative. Therefore, it appears that courts are willing to attribute to the Patent Office an obligation to read and interpret references it has involving misrepresentation or the withholding of prior art.

Additionally, it seems that when the patentee attempts to show good faith he will prevail even though his reported acts seem at least highly questionable. The United States Court of Appeals for the Seventh Circuit declined to find deliberate misrepresentation despite the patentee's failure to disclose invalidating prior art to the Patent Office. The court based its conclusion on the patentee's good faith belief that the art was not material "[s]ince there is sufficient evidence in the record that [the patentee] in good faith disagreed with [defendant] and the court as to the pertinence of [the references]."\textsuperscript{269} Another court of appeals decision demonstrated the extreme reluctance of courts to second guess the patentee, and excused a patentee's acts despite findings that the applicant was "less than candid" and "a suspicion that, if all the facts had been disclosed in the beginning the patent would have been summarily denied."\textsuperscript{270} The court held that the fraud charge was somewhat tenuous as to the withheld prior art, and that the patentee made showings sufficient to support a "bona fide belief in the patent's validity."\textsuperscript{271} Both decisions indicate that there was affirmative evidence of good faith presented.

The mere assertion, however, that the nondisclosed prior art is "irrelevant" may not suffice. In Beckman Instruments, Inc. v. Chemtronics, Inc.,\textsuperscript{272} the Fifth Circuit dismissed the patentee's assertions the patent would have been summarily denied.\textsuperscript{270} The court held that the fraud charge was somewhat tenuous as to the withheld prior art, and that the patentee made showings sufficient to support a "bona fide belief in the patent's validity."\textsuperscript{271} Both decisions indicate that there was affirmative evidence of good faith presented.

How late in the prosecution does this duty to bring art to the Patent Office's attention continue? Apparently, the duty extends to refiling or petitioning the Commissioner. In Elmwood Liquid Products, Inc. v. Singleton Corp.,\textsuperscript{274} the court found the patent unenforceable for failure to bring to the Office's attention an anticipatory reference cited in foreign prosecution. Soon after receipt of the reference, the

\textsuperscript{270} Scott Paper Co. v. Fort Howard Paper Co., 432 F.2d 1198, 1204, 167 U.S.P.Q. 4, 9 (7th Cir. 1970).
\textsuperscript{272} 421 F.2d at 1034.
\textsuperscript{274} 439 F.2d at 1380, 165 U.S.P.Q. at 364.
Notice of Allowance of the United States patent had been received and the final fee promptly paid. Thereafter, the attorney had written an extensive letter on the patent to his foreign associate. Thus, extrinsic evidence establishing a consciousness respecting the reference was present.

**Misconduct Involving Affirmative Misstatements in Affidavits or Argument.** The minimally experienced patent solicitor is typically aware of the potential hazards involved in misstatements in affidavits. For this reason, affidavits submitted to the Patent Office to assist in obtaining allowance of a patent application are carefully prepared. Hence, it is not surprising that there are relatively few instances of alleged inequitable conduct in connection with statements submitted in affidavits. Yet the instances which do come to mind are indeed some of the most well known in the area of fraudulent procurement.

The troubling aspect of inequitable conduct in connection with statements in affidavits arises not from false or perjured statements, but, rather, from omissions in the affidavits which mislead or tend to mislead the patent examiner. A lawyer experienced in litigation can quickly analyze an affidavit submitted in an inter-parties proceeding and determine how the affiant might be cross-examined respecting the conclusions reached in the affidavit. Indeed, one wonders why patent examiners fail to analyze affidavits received in an *ex parte* prosecution, since very often the most fundamental inquiry would reveal the existence or extent of any "selective editing" in the preparation of the affidavit.²⁷⁵

Contrasted with the recent emphasis on the care which must be exercised in submitting *ex parte* evidence to the Patent Office is the earlier view of courts toward error in affidavits. Misstatements were noted in numerous cases prior to *Walker*, but they were repeatedly excused since there was no proof of actual fraud or bad faith.²⁷⁶ In *Edward Valves, Inc. v. Cameron Iron Works, Inc.*,²⁷⁷ there was apparently a false affidavit to antedate a prior art patent which the patent examiner contended anticipated the claims. The application remained before the Patent Office for four years thereafter. When the

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²⁷⁵. In *Mueller Brass Co. v. Reading Indus., Inc.*, 352 F. Supp. 1387, 1371, 176 U.S.P.Q. 361, 371 (E.D. Pa. 1972), the court suggested that fraud should not be found if the Patent Office should have caught the untruth. The court comments that the exhibits of a submitted affidavit were for the independent scrutiny of the expert examiner, and "puffing" by the attorney would not be regarded as fraud. 352 F. Supp. at 1380, 176 U.S.P.Q. at 378.


²⁷⁷. 286 F.2d at 947.
application issued, however, the claims had apparently been amended extensively and, hence, the court held that the presumption of the patent's validity is not destroyed by a false statement unless it is a material misstatement. In Baldwin-Lima-Hamilton Corp. v. Tatnall Measuring Systems Co., the court, by employing strained logic, concluded that the applicant did not make misstatements in an affidavit. Both of these cases seem to concern misstatements under oath and not merely "editing" of an affidavit, thus giving the impression that some courts were refusing to probe into possible unethical conduct.

The solicitor would be ill-advised to rely on these pre-Walker cases regarding the selective editing or coloring of facts in affidavits. The Tetracycline litigation brought forward misleading affidavits. In that litigation, the examiner was maintaining that tetracycline was co-produced under a process taken from a prior art patent. Although one test of the patent produced a broth wherein 5 percent of the total antibiotic activity was in the form of tetracycline, this result was never disclosed; the applicants chose to run tests using the method of another example which produced neither tetracycline nor the antibiotic which had been the subject of the prior art patent. The examiner testified that had he been aware of the facts, the patent would not have issued. The court found that the applicants breached their duty to the Patent Office.

The current rule respecting affidavits may be embodied in Norton v. Curtiss which held that "in submitting evidence . . . applicant must be held to be representing that his showing [is] a fair and accurate demonstration." The literal accuracy of the affidavit will not save the applicant if the affidavit's arguments and characterizations are misleading. Once the affidavit is submitted, the applicant has a continuing duty to advise the examiner regarding any newly discovered facts which might result in the affidavit being inaccurate. The reliance which both the Patent Office and the CCPA are apt to place on affidavits was suggested in Judge Baldwin's concurring opinion in

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278. Id.
281. The facts involved are delineated sufficiently in Charles Pfizer & Co. v. FTC, 401 F.2d 574 (6th Cir. 1968).
282. It is probable that the examiner was applying the wrong legal standard to determine patentability. If so, this case represents the classical subjective "but for" situation.
In re Fisher,\textsuperscript{286} where he indicated that the applicant had "gone out on a limb" by filing the affidavit and noted the intense scrutiny to which courts have been subjecting such ex parte evidence. It appears that the decision contained a built-in caveat to the applicant not to enforce the patent if the affidavit was not a true or fair representation.

In SCM Corp. v. Radio Corp. of America,\textsuperscript{287} the court considered in detail the evidence surrounding an alleged misleading affidavit. The alleged misconduct involved the failure of the patent applicants to correct data which had been submitted to the Patent Office in a first affidavit when the error was later found during subsequent tests. The court weighed various evidence including testimony that the later results were within the limits of error of the first test. The court indicated that it would be unduly harsh to characterize this conduct as fraud but found it to be an intentional nondisclosure which might have affected the outcome of the patent application, and hence found the patent unenforceable.

In the context of these cases, Monsanto Co. v. Rohm & Haas Co.\textsuperscript{288} must be considered a maverick. As mentioned above, in this case there is no discussion concerning intent since it is inferred. Furthermore, there is no mention of the burden of proof. The case stands as an example of possible judicial reaction to inequitable conduct in view of the inflammatory language that can be found in cases cited herein dating from the time of Precision Instrument. The result in Monsanto may well be correct; a holding of unenforceability under a reduced standard of proof as suggested in SCM Corp. v. Radio Corp. of America\textsuperscript{289} would be in accordance with other cases on fraudulent procurement and inequitable conduct. Based on the court's opinion, however, the evidence in Monsanto appears simply insufficient to produce the result reached.

The conclusion which may be drawn is that the extrinsic evidence of nondisclosure of art to buttress a finding of intent is not as essential to a finding of misrepresentation by affidavit. Perhaps the courts realize that affidavits are usually prepared with care. Hence, without a positive presentation of a good faith defense, it may be easier for courts to find willfulness in affidavit-misrepresentation cases.\textsuperscript{290}

\textsuperscript{286} 441 F.2d 664, 169 U.S.P.Q. 602 (C.C.P.A. 1971).
\textsuperscript{290} A unique fact situation is found in Aerodyne Mach. Corp. v. Slick Indus. Co., 169 U.S.P.Q. 150 (D. Minn. 1971), where Judge Neville in the Eighth
Misconduct in Other Areas. A reference to the outline of the specific factual environments of inequitable conduct set out earlier indicates that there are a great many other areas where fraud has been or could be alleged. By far, the majority of cases involve either alleged misrepresentation in withholding art or misleading the examiner in argument or by affidavit.

A charge of inequitable conduct or fraud solely on the basis of misjoinder or nonjoinder of inventors is not likely to succeed. One court has commented that improper joinder “raises at best a highly technical defense.” Unless some ulterior purpose can be established for the improper joinder, it is likely that an error in naming the inventors will be regarded as “technical fraud” within the meaning of Walker. In Becton, Dickinson & Co. v. Sherwood Indus., Inc., the court found that there was an improper joinder of inventors and held the patent invalid and unenforceable on grounds of the false oaths, but there were several other improprieties in the patentees' conduct.

Improper inventorship, when it amounts to derivation, will provide a basis for sanctions against the patentee. A good faith belief on the part of the named inventor that the claimed subject matter was his origination will be sufficient to refute an allegation of fraud or misconduct.

Circuit felt constrained to withhold a finding of knowing and willful fraud. The alleged misconduct involved the patentee's "biased and one sided" presentation in an appeal, under 35 U.S.C. § 145 (1970), of the Patent Office rejection to the District Court for the District of Columbia. Judge Neville appeared to predicate his decision heavily upon the fact that the appellate proceedings were nominally adversary in nature although the Commissioner of Patents did not, and commonly does not, call witnesses, stating: "Accordingly by the standards of conventional adversary litigation [the patentee's] presentation in the District of Columbia trial did not amount to malicious or intentional fraud in the common law sense." 169 U.S.P.Q. at 159.

The decision conveys the impression that the determinative factor was the court's unwillingness to condemn advocacy in the nominally adversary proceeding rather than a requirement that malice be shown. It is suggested that the validity of the court's distinction between the inter-parties section 145 proceeding and the ex parte proceeding before the Patent Office is not valid. The Patent Office does not change its responsibility or mode of operation depending upon the route of appeal selected. The decision should not be regarded as a carte blanche to hold all "ammunition" until a section 145 appeal.

293. 175 U.S.P.Q. 337 (M.D. Fla. 1972). The patentee in this case filed an original application in the name of one inventor and then added a second individual as an inventor. In fact, the second named inventor was the sole inventor. Following the inventorship change, a continuation application had been filed. The court indicated that plaintiff's motive was "to preserve the earlier filing date of the [original sole] application." The court indicated no apparent motive for the error in the first place. 175 U.S.P.Q. at 342-44. But see Fruehauf Corp. v. International Term. Co., 183 U.S.P.Q. 526, 546 (D.N.J. 1973), where inequitable conduct rather than mere improper inventorship was relied upon to hold a patent void.
A related issue was raised in *Crown Machine & Tool Co. v. KVP-Sutherland Paper Co.*\(^{295}\) The court considered a fraud claim based upon the applicant's attempt to broaden the claim coverage of a pending patent application to cover a competitive device which was discovered during the pendency of the application. The theory of the assertion was that by adding claims which the applicant did not invent in an effort to appropriate the improvement of the accused infringer, the applicant practiced fraud on the Patent Office. The court concluded that it did not regard such conduct "as coming within the type of fraud contemplated by the *Walker* case, to wit: 'knowingly and willfully misrepresenting facts to the Patent Office'"\(^{296}\) Nevertheless, the court predicated an attorneys' fees award substantially on the ground that patentee's conduct in broadening its claims rendered the case "exceptional."

This award has given rise to similar assertions in other litigation, which assertions have been typically unsuccessful. In *Hughes Co., Inc. v. Chisholm-Ryder Co.*\(^{297}\) the court commented that broadening a claim might invalidate the patent claims and that "there can be no infringement by a device which the claims were so amended to cover."\(^{298}\) The court withheld these remedies pointing out they were equitable in nature, indicating that the copying of the patentee's device by the accused infringer was basis for denial of this equitable remedy. The court concluded that the case was not exceptional within the meaning of 35 U.S.C. § 285 and made no attorneys' fees award.

A similar assertion of impropriety regarding the patentee's broadening an application during pendency to cover a marketed device of an accused infringer was dismissed by the court in *Penn-Yan Boats, Inc. v. Sea Lark Boats, Inc.*\(^{299}\) as constituting no impropriety at all.\(^{300}\) There is little doubt, however, that hopeful infringers will continue to advance this theory against the patentee, and consideration should

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\(^{300}\) In *Penn Yan Boats* the court stated:

> There is nothing inherently wrong or dishonest in amending claims in a pending application... to insure that the claims [will cover]... commercial activity of third parties whose potentially infringing activities are discovered subsequent to the filing of a patent application so long as the claims are supported by the original patent application disclosure.

be given to disclosing the potentially infringing activity in the appropriate circumstance.301

Despite the fact that Walker involved the alleged concealment of a prior public use, on the whole, undisclosed prior use or sale has not provided as fertile a ground for charges of fraudulent procurement as might be expected. Initially, it should be observed that instances of prior use or sale are likely to be judged by a wholly objective standard. That is, if an alleged prior use was considered experimental by the patent applicant, and the court confirms this judgment in litigation, there would appear little likelihood that a charge of inequitable conduct for this "non-material concealment" could be sustained. This is simply because there would be no misrepresentation. The possibility of error in judgment, however, particularly in view of the confusion in this area of the law,302 dictates that the prudent course be taken. The Patent Office is poorly equipped to evaluate a questionable instance of prior use or sale, and in most instances will likely allow the patent following disclosure of the facts. Such action clears the applicant of the possibility of any charge of misconduct and furnishes at least a marginal presumption that the Patent Office's action was correct.

Nevertheless, for the more venturesome, the confusion in the law will tend to support a good faith defense to a charge of alleged concealment of a prior use or sale.303 For example, a lawyer's opinion advising the patentee to file an application is an indication of reasonableness and good faith, although such an opinion alone does not establish good faith.304 In Monolith Portland Midwest Co. v. Kaiser Aluminum & Chemical Corp.,305 the court found there had been concealment of statutory bars, specifically prior uses and sales. A reading of the case indicates, however, that this concealment alone would probably not have supported the court's conclusion that fraud was practiced on the Patent Office.

Sale more than a year before filing was also a basis of the action by the United States in cancelling the patent in United States v. Saff-T-Boom Corp.306 The emphasis in that case, however, was on the applicant's false oath. An attempted defense that the applicant signed

301. See Honeywell, Inc. v. Sperry Rand Corp., 180 U.S.P.Q. 673, 711 (D. Minn. 1973), where a delay in prosecution which enabled changes in a patent specification and its claims to cover the work of others rendered the patent invalid.

302. See Philco Corp. v. Admiral Corp., 131 U.S.P.Q. 413, 428 (D. Del. 1961), where the court stated: "The cases dealing with § 102(b) are in a state of confusion resulting in part from an attempt to establish hard and fast rules of law based upon overly refined legal distinctions." This observation remains valid.


the oath in ignorance of what he was signing was rejected by the court which pointed out that the fraud was either actual or constructive.

Misrepresentations in patent oaths have produced what appear to be widely differing reactions from courts. In *Chromalloy American Corp. v. Alloy Surfaces Co.*, the patentee failed to disclose the existence of foreign counterpart applications corresponding to a patent application when filing a continuation-in-part (CIP) patent application. The court did not accept the explanation of inadvertence and immateriality in neglecting to disclose the existence of the foreign counterparts in the CIP oath since the record did not bear this out. Joseph Schimmel, former Solicitor of the Patent Office, testified for the accused infringer that "if the Patent Office had discovered the 1962 publication of the British counterfeit, that knowledge would have formed the basis for rejecting all the CIP claims." It may have been more damaging that the patentee did not correct the oversight when it was brought to his attention. The court held the patent unenforceable under 35 U.S.C. § 288.

Other cases have treated patentees much more leniently for serious errors in a patent application oath. In *Arctic Enterprises, Inc. v. Huber Paint & Glass, Inc.*, the usual oath was signed stating that the patent application's subject matter was not on sale or in public use for more than one year prior to the filing date, despite the existence of barring sales and uses. The court found that there was not "an understanding of the significance of signing such an oath ... as to amount to willful fraud." The CCPA decision in *Langer v. Kauf-*

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308. The court in *Chromalloy* stated:
   The oath on its face appears clear. ... [Both persons executing the oath] are sophisticated and intelligent businessmen with some familiarity with patent law who read the oath before it was signed. ...
   It stretches credulity too far to believe that both inventors and their patent counsel could have overlooked disclosing the foreign patent applications in the CIP oath.
310. 35 U.S.C. § 288 (1970), provides:
   Whenever, without deceptive intention, a claim of a patent is invalid, an action may be maintained for the infringement of a claim of the patent which may be valid. The patentee shall recover no costs unless a disclaimer of the invalid claim has been entered at the Patent Office before the commencement of the suit.
man considered the applicant's filing of a continuation oath for a continuing application containing a new matter, that is, a CIP application. The court cited Norton v. Curtiss and pointed out that the burden of proving fraud had not been met and that there was no evidence of "but for" materiality. It further stated that representing a CIP application to be a continuation application need not always be material to the examiner's opinion as to whether to allow the claim; the oath being false does not ipso facto mean that there is misconduct. The indication is that the CCPA is demonstrating one of the better approaches to the problem of misconduct before the Patent Office and is refusing to be stampeded by inflammatory arguments respecting such things as uncompromising duty.

Delaying a patent's issuance, presumably to unlawfully or improperly extend the exclusory right, was considered in several old cases. In Packard Co. v. Overland Co., a 15-year pendency was excused by pointing out that the applicant had always responded within the statutory period and that the patent was issued in accordance with law. A 13-year pendency of the Berliner microphone patent was considered in United States v. American Bell Telephone. Although one might suspect that an attempt was being made to extend the patentee's exclusive position by withholding the patent while sufficiently dominant prior patents remained enforceable, the court held that delay in itself should not affect validity. Under the more rapid prosecution schedules of today, inequitable conduct might be inferred from the filing of a series of continuing applications.

The interference arena represents an area where the additional factor of connivance between parties may result. Perjured testimony, falsified documents or exhibits will, of course, subject a party to penalties. The temptation for the parties to combine by agreement to assure the issuance of a patent in interferences respecting important patents was precisely what led to the misconduct found in the early Keystone Driller and Precision Instrument cases. Subsection (c) of 35 U.S.C. § 135 was added in 1962 to provide that settlement agreements in interferences respecting important patents must be filed with the Patent Office. The purpose of the enactment of the statute evidences clear recognition of the possibility of collusion in interference settlements. In Old Dominion

and concluded the affiant may not have realized all that was contained in the document.

316. 274 U.S. 417 (1927).
317. 167 U.S. 224 (1897).
321. The Senate report states: "Interference proceedings may be terminated in a manner hostile to the public interest by using patent interference settlement agreements as a means of restricting competition. To make such a prac-
Box Co. v. Continental Can Co., section 135(c) was employed by the court to hold a patent unenforceable for failure to record an agreement which did not specifically provide for termination of the interference but made it "improbable that the interference proceedings continue." Any agreement relating to the settlement of an interference should be filed at the risk of rendering the patent unenforceable.

The warning against collusive settlements of interferences in United States v. Singer Mfg. Co. is stronger than the admonitions against misconduct in Walker, since Justice White's concurring opinion strongly indicated that such collusion would provide the basis of a Sherman Act section 1 violation requiring no relevant market inquiry, although he did not indicate whether such collusion is "bad per se" or merely "presumptively bad."

A final area of inquiry involves charges of fraud for violation of Patent Office rules or procedures in connection with a patent application. For example, changes in application papers subsequent to execution may result in the patent application being stricken under Rule 56. An oath acknowledged by persons unauthorized to administer oaths has been held to be a technical matter.

Failure to record the subject matter of an interview in the file wrapper may subject the attorney's files to discovery. It would be difficult to imagine


Justice White stated:

Whatever may be the duty of a single party to draw the prior art to the Office's attention, see 35 U.S.C. § 115; 37 CFR § 1.65(a); [United States v. Bell Tel. Co., 128 U.S. 315, 356 (1888)], clearly collusion among applicants to prevent prior art from coming to or being drawn to the Office's attention is an inequitable imposition on the Office and on the public. In my view, such collusion to secure a monopoly grant runs afoul of the Sherman Act's prohibitions against conspiracies in restraint of trade—if not bad, per se, then such agreements are at least presumptively bad.

Significant alterations, when the rules forbidding such alterations are known, have been regarded as inequitable conduct supporting an attorneys' fee award. Halliburton Co. v. Dow Chem. Co., 182 U.S.P.Q. 178 (N.D. Okla. 1974).

Significant alterations, when the rules forbidding such alterations are known, have been regarded as inequitable conduct supporting an attorneys' fee award. Halliburton Co. v. Dow Chem. Co., 182 U.S.P.Q. 178 (N.D. Okla. 1974).

significant sanctions being imposed for such conduct.

The Seventh Circuit's decision in *Kearney & Trecker Corp. v. Giddings & Lewis, Inc.*\(^3\)\(^2\)\(^8\) gives pause before any rule transgression can be minimized. The conduct in that case was more serious than a mere interlineation, but the severity of the result hardly seemed to fit the alleged misconduct. In that case, the court of appeals reversed the district court's holding that a reissue patent was valid and infringed and held the patent invalid. The misconduct involved the patentee's hiring of a former examiner who was involved with the application prior to his departure from the Patent Office to assist in preparation and prosecution of the reissue patent in violation of 18 U.S.C. § 207 and Patent Office Rule 341(g). The court held the patent invalid on this ground alone and indicated that such conduct was fraudulent, as proscribed under *Walker*, which could subject the patentee to antitrust sanctions.

*Attorneys' Fees Awards Under Section 285 of the Patent Act*

As discussed above, the effect of inequitable conduct varies from removing the presumption of validity to imposition of antitrust sanctions.\(^3\)\(^2\)\(^9\) In the patent context, the remedies include loss of the presumption of validity,\(^3\)\(^3\)\(^0\) unenforceability, invalidity and attorneys' fee awards. Thus, there exist a full range of remedies which can be fitted to the nature of the misconduct extending to antitrust\(^3\)\(^3\)\(^1\) and criminal\(^3\)\(^3\)\(^2\) remedies.

With respect to holdings of unenforceability or invalidity, an examination of the cases, however, indicates that since *Walker* only in extremely rare instances has a patent been held unenforceable without a simultaneous holding of invalidity on purely statutory grounds.\(^3\)\(^3\)\(^3\) Thus, although the law on unenforceability for unclean hands and invalidity for fraud has produced reams of jurisprudence since *Walker*, in effect, very few of the patents considered by the courts would have survived anyway.

The most prominent exception to this pattern is *Kearney & Trecker Corp. v. Giddings & Lewis, Inc.*,\(^3\)\(^3\)\(^4\) in which the patent was held invalid for fraud. In *Kearney*, however, the conduct was completely unrelated to statutory considerations of patentability. This insist-

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\(328\). 452 F.2d 579, 171 U.S.P.Q. 650 (7th Cir. 1971).

\(329\). See section V infra.


\(331\). See section V infra.

\(332\). See section VI infra.

\(333\). See note 56 supra and accompanying text.

\(334\). 452 F.2d 579, 171 U.S.P.Q. 650 (7th Cir. 1971).
ience of courts to regard invalidity and unenforceability as purely equitable determinations, rather than focusing upon invalidity for an objectively material misrepresentation as a statutory penalty is the root of the confusion. A "shadowy line" between unenforceability and invalidity results in production of almost random decisions of some courts which "phrase the result in terms of invalidity, [while] others speak of unenforceability."  

Attorneys' Fees Awards. There appears to be more order in the cases in the area of attorneys' fees awards. Consider three categories of cases relating to fraud or inequitable conduct where attorneys' fees awards might be appropriate:

(1) The patentee obtained the patent by knowingly and willfully misrepresenting a material fact to the Patent Office which, when discovered, renders the patent invalid on statutory grounds;

(2) The patentee misrepresented a fact to the Patent Office which, when discovered, renders the patent invalid on statutory grounds, but there is not sufficient proof to establish knowledge and willfullness; and

(3) The patentee knowingly and willfully misrepresents a fact to the Patent Office, but the fact, when discovered, does not affect the validity of the patent.

It would appear to be completely justifiable to make an award of attorneys' fees under situation (1) virtually automatic. In that situation, clear and convincing evidence establishes that the patentee acceded to the role of patent enforcer purely through his own fraudulent conduct. The minimal penalty should be an attorneys' fees award to the accused infringer forced to defend the action. Even where the patentee is a declaratory judgment defendant, such a practice would seem appropriate. The second and third situations above must be regarded as discretionary. The total impact of the trial on the court, the cooperation demonstrated by both counsel, the demeanor of witnesses, and the quantum by which the accused infringer fails to prove either materiality, willfulness, or both, must be weighed.

Attorneys' fees awards represent a remedy which is used sparingly in patent litigation as pointed out in Gentex Corp. v. Transaero, Inc. In that case, the court noted that the patentee had changed his position in the lawsuit and commented that this "may illustrate the extent to which the course of litigation brings new information to all parties, but it does not justify criticizing the plaintiff for having ob-

336. Id.
tained the patent or having sought to enforce it in the first place."338

In that statement is the germ of an effective test. If the patentee's position in the litigation results too proximately from fraud or inequitable conduct, attorneys' fees should be awarded. Indeed, the award may be made from that time during the suit after which continued prosecution of the suit was rendered unconscionable.339 Efforts to establish a more hard and fast rule respecting attorneys' fees formed the substance of petitions for certiorari in the Indiana General340 and Scott Paper341 cases, but certiorari was not granted.

An analysis of some prominent attorneys' fees cases provides an indication of when this penalty will be imposed in a fraud or inequitable conduct case. In Monolith Portland Midwest Co. v. Kaiser Aluminum Co.,342 a significant attorneys' fees award was made. The court noted the basis of the award to be both the misconduct of plaintiff before the Patent Office in obtaining the patent, although no specific fraudulent intent was found, and the undue prolongation of the trial resulting from plaintiff's trial tactics.

In Brand Plastics Co. v. Dow Chemical Co.,343 an award of attorneys' fees in excess of one million dollars was made by the district court because Dow was "either guilty of lack of candor or unexcusable neglect" for withholding from the Patent Office art and facts which no "reasonable person could conclude" were irrelevant.344 The award was reversed on appeal, the appeals court indicating that it did not perceive conduct justifying the award.345 Awards were also made in Shelco, Inc. v. Dow Chemical Co.346 and in Penn Yan Boats, Inc. v. Sea Lark Boats, Inc.,347 both of which involved material misrepresentations of facts which rendered the patents invalid. In Becton, Dickinson & Co. v. Sherwood Industries, Inc.,348 the award of attorneys' fees was based upon withholding art and false oaths which the patentee

343. 407 F.2d 288, 160 U.S.P.Q. 577 (9th Cir. 1969). Note, however, that the $280,000 award of attorneys' fees by the trial court was cut to $70,000 by the Ninth Circuit. This reduction was due in part to the Court of Appeals indication that Monolith's conduct "if not properly characterized as actually fraudulent, reveals a calculated recklessness." 407 F.2d at 297, 160 U.S.P.Q. at 583. Some element of willfulness is usually needed to support an attorneys' fees award, and one had the feeling that when compared to other cases Monolith showed less than the required quantum of intent.
345. Id. at 139.
apparently did not attempt to counter with any evidence of good faith. However, when a defendant in a companion case to *Monsanto Co. v. Rohm & Haas Co.* attempted to rely on the findings of inequitable conduct in that case to support an attorneys' fees award in the companion case, the claim was rejected, since it was necessary that the award be based upon findings by the court making the award.

Cases such as *Beckman, Acme Precision,* and *Kearney & Trecker,* where the courts reacted strongly to the misconduct of the patentee, would seem to justify attorneys' fees awards. These cases apparently involved active pursuit of an antitrust claim. Furthermore, in such circumstances, the attorneys' fees for defense of the patent action may be trebled.

In the *Indiana General* and *Scott Paper* cases, evidence of good faith was apparently received. Hence, although the conduct in these cases was explicitly proscribed by the courts, in their exercise of judgment, attorneys' fees were withheld. After weighing the facts and concluding that the patentee's action justified holding the patent unenforceable but did not amount to fraud, the court did not award attorneys' fees in *SCM Corp. v. Radio Corp. of America.* In *Alburger v. Magnaflux Corp.,* the United States Court of Appeals for the Ninth Circuit reversed an attorneys' fees award despite plaintiff's "obstinacy" since the court found plaintiff had a good faith belief that he was entitled to the patent.

It is submitted that no hard and fast rule can obviate such possible inconsistencies with respect to the discretionary matter of awarding attorneys' fees. An attorneys' fees award cannot be regarded as automatic even in instances where inequitable conduct or unenforceability is found. The courts require some quantum of proof tending to support a firm inference of lack of good faith or willfullness in the misconduct beyond that required to establish the unenforceability defense. Although in cases where material and actionable Walker-type fraud is proven, attorneys' fees will typically be awarded, anything short of such proof leaves the issue at the court's discretion, in which case the remedy of attorneys' fees is used sparingly.

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354. 444 F.2d 1406, 171 U.S.P.Q. 16 (9th Cir. 1971).
355. See *Technograph Printed Circuits Ltd. v. Methode, Inc.,* 179 U.S.P.Q. 206 (7th Cir. 1973), which indicated that attorneys' fees are only awarded to prevent gross injustice, and when fraud and wrongdoing are clearly proved.
V. Patent Fraud as an Antitrust Violation

In a patent fraud case, the primary antitrust prohibitions are monopolization, attempt to monopolize, and conspiracy to monopolize, under section 2 of the Sherman Act, and conspiracy to restrain trade, under section 1 of the Sherman Act. Generally, the elements of an antitrust violation resulting from patent fraud will include those elements resulting in a criminal violation under sections 1001 or 371, plus several additional elements. Since the gravamen of an antitrust violation is actual or potential impact on competition, mere fraudulent procurement in violation of sections 1001 or 371 is insufficient to establish an antitrust violation. The patent must be enforced or asserted before the Sherman Act will apply. A threatened or actual suit is the usual form of enforcement, although the levying of royalties or refusal of a license may well be deemed equivalent to a threatened suit.

† This section was written by Richard H. Stern.

Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a misdemeanor.

357. Section 1 of the Sherman Act, 15 U.S.C. § 1 (1970), provides:
Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is hereby declared to be illegal.

358. See note 407 infra.

359. See note 464 infra.

360. In Struthers Scientific & Int'l Corp. v. General Foods Corp., 334 F. Supp. 1329, 1332 (D. Del. 1971), the court stated: "It is not the mere obtaining of a fraudulent patent which brings antitrust liability to its owner; it is the assertion or enforcement of the issued patent acquired by fraud which creates antitrust liability." Cf. Walker Process Equip., Inc. v. Food Mach. & Chem. Corp., 382 U.S. 172, 174 (1965), where the Court stated: "the enforcement of a patent procured by fraud on the Patent Office may be violative of § 2 of the Sherman Act . . . ." The gravamen of a section 2 violation is acquisition of power over price or the power to exclude competition at will.

361. There is very little case law in this area. It would appear that the levying of royalties gives the patentee a degree of power over price, which is one indicium of monopoly power. Similarly, the denial of a license is an implied threat of suit if the applicant for the license persists in attempting to make the patented items. The general test of what constitutes a threat of suit, for the purpose of creating standing under the Declaratory Judgment Act, 28 U.S.C. § 2201 (1970), is whether the plaintiff has a "reasonable apprehension" that the patent owner will bring an infringement action against him or his customers. Medtronic, Inc. v. American Optical Corp., 327 F. Supp. 1327 (D. Minn. 1971); 6A J. Moore, Federal Practice § 57.20, at 3119-20 (2d ed. 1948). The threat need not be either express or direct. See Caterpillar Tractor Co. v. International Harv. Co., 106 F.2d 769 (9th Cir. 1939). Under this test, it has been held that an offer of a license is an implied threat to sue if the license is not accepted. Medtronic, Inc. v. American Optical Corp., supra; Components, Inc. v. Western Elec. Co., 318 F. Supp. 959 (D. Me. 1970). By parity of reasoning, a refusal to grant a license should also be deemed a threat to sue.
The remedies available in antitrust cases are civil and criminal. The Department of Justice has exclusive power to prosecute criminal offenses; the maximum penalty is a $50,000 fine or imprisonment for one year, or both. The government may also secure injunctive relief, and recover damages for overcharges or other pecuniary injuries it has sustained by reason of an antitrust violation. Private parties may also secure civil antitrust relief. They may seek injunctions against antitrust violations that have injured them. Moreover, to encourage private parties to act as “private attorneys general” in enforcing the antitrust laws, the statute allows recovery of treble damages plus attorneys’ fees.

**Conspiracy Violations**

When there is a conspiracy between the patentee and others to restrain trade or to monopolize trade by enforcement of a fraudulently procured patent, the mere agreement to enforce the known invalid patent appears to warrant criminal or injunctive relief for the government. The writer’s view is that under the existing case law no market impact, no specific adverse effect on the public or competitors, and no relevant market analysis are required. The question is largely academic, however, because the government is not likely to bring suit unless the subject matter of the patent procured by fraud produces an anti-competitive impact sufficient to warrant allocation of limited prosecutorial resources in that direction.

**Monopolization**

When monopolization is charged, it must be shown that enforcement of the fraudulently procured patent is an element in an overall program to dominate a market or “submarket.” The Supreme Court has defined monopoly as the power of an individual business concern to set the market price or to exclude competitors at will from the market. Monopoly by itself, however, is not generally considered illegal. When a monopoly has been acquired by a statutory

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362. See 15 U.S.C. §§ 1, 2 (1970). The statute may soon be amended raising the offense from a misdemeanor to a felony, with a maximum prison sentence of three years, a maximum fine for individuals of $100,000, and a maximum fine for corporations of $1,000,000.
367. United States v. Consolidated Laundries Corp., 291 F.2d 563 (2d Cir. 1961); Lessig v. Tidewater Oil Co., 327 F.2d 459 (9th Cir. 1964).
grant, such as a patent, through superior business efficiency, or even by chance, then something beyond mere possession of monopoly power must be shown to justify civil relief or criminal sanctions against the possessor of that power.\textsuperscript{369} Deliberateness or willfulness must also be established by a history of predatory behavior,\textsuperscript{370} the absorption of competitors by mergers or other acquisition,\textsuperscript{371} or a showing that the accused monopolist has otherwise taken steps to gain or preserve his power or prevent the entry of new competition.\textsuperscript{372} When these additional elements of conduct are compounded with the status of monopoly, then the offense or violation of monopolization, proscribed by section 2 of the Sherman Act, is established.\textsuperscript{373}

To determine whether the defendant indeed has monopoly power, the courts look primarily to the defendant's share of the market.\textsuperscript{374} This type of measurement, of course, presupposes a definition of the "market" in which the accused firm operates. Such a market will


\textsuperscript{372} See id. at 576; United States v. Aluminum Co. of America, 148 F.2d 416, 430-31 (2d Cir. 1945).


The exact percentage necessary to establish a violation is uncertain since it may depend on the nature of the technology and the characteristic economies of scale in the industry. See United States v. Aluminum Co. of America, 148 F.2d 416, 424 (2d Cir. 1945). See also Times-Picayune Publ. Co. v. United States, 345 U.S. 594, 611 (1953); United States v. Columbia Steel Co., 334 U.S. 495, 527-28 (1948). Most observers seem to think that the figure is approximately 60 percent. Thus, Kaysen and Turner define a "dominant firm" or "partial monopoly" as a single large firm supplying 60 percent or more of the market, with no other single seller supplying a significant proportion of the demand. C. KAYSEN & D. TURNER, ANTITRUST POLICY: AN ECONOMIC AND LEGAL ANALYSIS 72 (1959). They suggest a statute which would conclusively presume the existence of monopoly power if one firm has accounted for 50 percent or more of the annual sales in the relevant market for at least five years. Id. at 98. In United States v. Grinnell Corp., 384 U.S. 563 (1966), a firm with an 87 percent market share was held to have monopolized the market.

It may also be that monopoly power can be shared by several firms whose aggregate market share amounts to a similar figure. See generally American Tobacco Co. v. United States, 328 U.S. 781 (1946) (three firms which accounted for 80 percent of the burley blend cigarette market and about two-thirds of the entire domestic cigarette market were held to have monopolized); FTC Complaint in Kellogg Co., [1970-1973 Transfer Binder] TRADE REG. REP. ¶ 19,888 at 21,915 (FTC 1972) (shared monopoly, cereal industry); C. KAYSEN & D. TURNER, ANTITRUST POLICY: AN ECONOMIC AND LEGAL ANALYSIS 98 (1959).
have geographic limitations and will also be defined in terms of a product or service, or cluster of products or services. The outer boundaries of a product market are determined primarily by the reasonable interchangeability of use among the products. A factor closely related to interchangeability of use is relative interdependency of customer demand for the product and its substitutes. Another factor is the relative interchangeability of production facilities for making the product and similar products. Consequently, the boundaries of a market, or "submarket," are determined by examining a wide variety of practical indicia, such as industry or public recognition of the alleged market as a separate economic entity, the product's peculiar characteristics and uses, its possibly unique production facilities, distinct customers, distinct price levels, sensitivity to price changes in other products, and the existence of specialized vendors or channels of distribution.

Whether the subject matter of a patent is a monopoly under the Sherman Act, therefore, is ultimately a question of fact. When there are several interchangeable products or processes at more or less the same price, it is unlikely that the patent confers upon its owner the power to set the price of either the subject matter of the patent or the products embodying it as a component or element. Moreover, although the patentee has the power to exclude competitors from making, using, and selling the specific patented product, ownership of such a patent will not confer any power to keep competitors from making, using, and selling the substitutes for the patented product. On the other hand, a truly valuable or pioneer patent may confer monopoly power upon its owner as a result of the unique characteristics and uses of the product or the substantial cost savings that it alone will permit.


The product market may broadly include a wide range of substitutes, such as cellophane, wax paper, Saran-wrap, and burlap bags. See United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 394-400 (1956). The product market may constitute the single product, such as virgin aluminum, made by the accused firm. See United States v. Aluminum Co. of America, 148 F.2d 416, 425 (2d Cir. 1945).


The factual analysis of whether the subject matter of a patent constitutes a market may be aided by the use of presumptions. The Supreme Court has several times suggested that the subject matter of a patent is prima facie a relevant market, thereby shifting the burden of proof on this issue, presumably on the theory that the degree of uniqueness necessary to satisfy the requirements of Title 35 is a strong indication of the special qualities which define a product as a relevant market. On the other hand, one recent Supreme Court decision may be viewed as authority for the contrary position, for it indicates that the relevant market must be established by proof.

**Attempted Monopolization**

Conduct from which a monopolization violation can arise may result in unsuccessful monopolization and yet be proscribed, since attempts to monopolize are also illegal under section 2 of the Sherman Act. Like monopolization, attempted monopolization need not involve more than one person. Specific intent to secure monopoly power, coupled with conduct directed toward realizing that end, is enough to establish the violation. It is thus incorrect to speak of attempted monopolization as a lesser included offense within the offense of monopolization, because specific intent is a necessary element of attempted monopolization, but it is not a constituent element of monopolization. For that reason monopolization and attempted monopolization are overlapping offenses, rather than concentric offenses: Attempted monopolization is not simply "attempt" plus "to" plus "monopolize." On the other hand, it has been held that upon a conviction for monopolization and attempted monopolization the two offenses merge, so that only a single punishment is proper.

A recurrent question in attempted monopolization cases has been whether the plaintiff must show that the defendant could have gained monopoly power or whether there was a "dangerous probability of success" of such monopolization. In the patent-fraud context, the


Obviously, this distinction is more important in a civil case than in a criminal case, regardless of which provision of law is alleged to have been violated, because mens rea must be established in criminal cases.

384. See American Tobacco Co. v. United States, 328 U.S. 781 (1946) (the Court stated that the district court deemed the two offenses to have merged after conviction, but did not comment as to whether deeming this merger to have occurred was correct).
question is whether the fraudulently procured patent, by itself or together with the other instruments of economic power in the possession of the patentee, would confer monopoly power upon its owner. The patentee will argue that no attempted monopolization can be found because his conduct never came so close to actual monopolization that there was a "dangerous probability of success," while the antitrust claimant will argue, first, that the patent, if upheld, would have dominated the relevant market, and, second, that in any event the patentee's conduct is so antisocial that it should be treated like a one-man conspiracy to monopolize.

One view of the law is reflected in Lessig v. Tidewater Oil Co.,\textsuperscript{385} where the United States Court of Appeals for the Ninth Circuit rejected "the premise that probability of actual monopolization is an essential element of proof of attempt to monopolize.\textsuperscript{386} The court held that specific intent to gain monopoly power is proof of the dangerous probability of success, for the specific intent itself creates a dangerous probability. The court said that one who attempts to gain monopoly power should be taken at his word, on the theory that "the actor is better able than others to judge the practical possibility of achieving his illegal objective."\textsuperscript{387}

Supreme Court dicta support the Lessig view,\textsuperscript{388} but a number of courts of appeals follow a contrary rule. The other view is exemplified by the Eighth Circuit's decision in Acme Precision Products, Inc. v. American Alloys Corp.,\textsuperscript{389} where the court reversed a judgment in favor of the alleged infringer who had proven fraudulent procurement, because the subject matter of the patent did not appear to be a relevant market. The author's view is that the latter decision is

\textsuperscript{385} 327 F.2d 459 (9th Cir.), cert. denied, 377 U.S. 993 (1964).
\textsuperscript{386} 327 F.2d at 474.
\textsuperscript{387} Id. The same notion, that the government is entitled to take the defendant at his word when he articulates a purpose to limit competition because he should be assumed to know his business, is found in a recent Supreme Court merger decision, Brown Shoe Co. v. United States, 370 U.S. 294 (1962). There the Court said that it is unnecessary for the government to prove "what is in the 'back of the minds' of those who promote a merger," but it is proper to consider evidence of anti-competitive intent, when it exists, because it "is an aid in predicting the probable future conduct of the parties and thus the probable effects of the merger." Id. at 329 n.48.
\* Kayton: It is significant that Walker Process is the only Supreme Court case in which a fraudulently procured patent was considered as a possible basis of an antitrust violation. The Court expressly stated that a showing of control or potential control of a relevant market is necessary. Consequently, the dictum of the pre-Walker Process cases, in note 388, that claimed the subject matter of a patent is prima facie a relevant market is in direct conflict with Walker Process.
\textsuperscript{389} 494 F.2d 1237, 1244 (8th Cir. 1973). See also Cliff Food Stores, Inc. v. Kroger Inc., 417 F.2d 203 (5th Cir. 1969); McElhenney Co. v. Western Auto
wrong although it appears to reflect the majority view among the courts of appeals. An effort to eliminate a competitor from the field, whether the field is a market or simply a business, by enforcing a known spurious patent is a practice so inherently pernicious or competitively destructive in tendency, and so without legitimate justification or redeeming value, that a comprehensive analysis of economic impact would be pointless. Courts should, therefore, allow a party damaged by such conduct to recover treble damages for lost sales, litigation costs, and other losses, under a monopolization theory, if the patentee achieved a "true monopoly," and on an attempted monopolization theory, if he did not. At the very least, the court should shift to the patentee the expense and burden of establishing that the subject matter of the patent is not a relevant market. They may readily do so by examining the actions of the patentee who deliberately enforces a fraudulently procured patent. If the patentee is willing to take the effort of attempting to exclude competitors from some portion of the market, that is, from the business in question, then it may properly be presumed, as the Lessig court thought, that the patentee is acting rationally and that what he intends to accomplish would be economically significant. The assumption in this discussion is that there has been deliberate or at least wanton misconduct; thus, there is no policy reason to encourage the patentee's antisocial practices or to shield them from the risk-shifting operation of the private antitrust damages law. By the same token, a legitimate attempt to enforce a

Supply Co., 269 F.2d 332 (4th Cir. 1959); Mackey v. Sears, Roebuck & Co., 237 F.2d 869 (7th Cir. 1956).

390. The author's view, contrary to the view presently prevailing in many circuits, is that the attempted monopolization provisions of section 2 substantially parallel, for unilateral conduct, the kinds of exclusionary practices deemed illegal per se under section 1 when carried out pursuant to a conspiracy. The nature of the conduct and its inherent tendency, as a class of conduct in general rather than in the specific factual context of the particular case, is determinative in such offenses. Thus, the elaborate market analysis used in some section 2 monopolization cases has no place here. See generally Turner, Antitrust Policy and the Cellophane Case, 71 Harv. L. Rev. 281, 305 (1958). This approach is consistent with the intent of Congress, as the Supreme Court viewed it in the period shortly following the enactment of the Sherman Act. See Standard Oil Co. v. United States, 221 U.S. 1, 60-62 (1911) (complementary, all-embracing relation of sections 1 and 2).

* KAYTON: The fact is that outside the patent fraud field, the clear majority view is that there must be a dangerous probability of success of controlling a relevant market in order to have an attempt to monopolize violation. Lessig is the only contrary case, and it is not a patent case. In the patent fraud field, there is only one Court of Appeals decision on the subject; that is Acme Precision in which the Eighth Circuit expressly held that the patent must control a relevant market. Moreover, the Supreme Court held that this is the law in Walker Process. Consequently it is safe to say that the need for a dangerous probability of success is the law in attempt to monopolize cases involving a fraudulently procured patent.


392. A true monopoly is one in which there is the power to control prices or exclude competition. See United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377 (1956).


** KAYTON: The view urged in the text that proof of relevant market can be dispensed with in an attempt to monopolize case where a "spurious patent" is asserted is socially and jurisprudentially defective. Essentially, it is analogous to stating that even though you have committed the elements only of a

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patent right believed in good faith to be valid would be a completely
different matter—this is privileged conduct to which no antitrust li-
ability should attach.

Unfair Acts, Practices and Methods of Competition

The Federal Trade Commission also has antitrust jurisdiction. The
FTC, however, does not proceed directly in the federal courts; in-
stead, it enforces the law in an administrative proceeding, and issues
a civil injunctive order, that is, a cease and desist order, which is
subject to federal judicial review.

The FTC's principle statute is section 5 of the Federal Trade Com-
m ission Act, \(^{394}\) which forbids unfair methods of competition and un-

lesser included offense, nonetheless you will be convicted of the more serious
charge.

For example, assume that someone fraudulently procures a patent, i.e., will-
fully and deceitfully misrepresents to the Patent Office an issue that bears ma-
terially on the subject of allowability, and the patent issues. Assume further,
however, that anyone knowledgeable in the business of the art to which the
patent pertains could recognize that there is no conceivable way for the claims
of that patent to come anywhere close to controlling a relevant market in that
field even if the patent is vigorously and comprehensively enforced. For the
fraudulent patentee to attempt to enforce that patent is antisocial, anticompeti-
tive and something for which the judicial system should, and does, have reme-
dies, but they do not flow from attempted monopoly under section 2 of the
Sherman Act because everyone knows that a monopoly cannot be acquired
with that patent.

The fact of the matter is that there are remedies for this antisocial conduct.
Thus, the patent can be held unenforceable or invalid in its entirety, even if
only one of the several claims are otherwise valid. Moreover, attorneys' fees
may be awarded to the defendant in the infringement suit who was burdened
with the litigation. Criminal penalties may be levied against the patentee or
his attorney for willful misrepresentation either under section 1001 or section
371 of Title 18 of the United States Code. If these remedies are not enough
then it is for Congress, not the courts or the Executive Branch, to pass addi-
tional legislation.

It would be a mistake, however, to assume that just because the claims of
a fraudulently procured patent do not themselves cover or control a relevant
market that such a patent could never be part of the basis for a charge of at-
tempted monopoly under section 2. As in every antitrust investigation, the
overall constellation of facts is important; focusing merely on the patent's
scope for determining relevant market may not always disclose the entire pic-
ture. For example, assume that a corporation controls a significant part of a
market, 40 percent, less than enough to be considered actual control of a rele-
vant market. Further assume that 60 percent control of that particular
relevant market would be sufficient to be considered a monopoly position for
purposes of section 2 of the Sherman Act. If that corporation were to then
fraudulently prosecute a patent application which when it issues is capable of
controlling an additional 20 percent of the relevant market, then it would seem
reasonable to consider an attempt to enforce that fraudulently procured patent
actionable as an attempt to monopolize under section 2. It should be recog-
nized, however, that this is a situation where the fraudulent patentee knows
that he can control the relevant market through the patent, despite its limited
scope because of his large pre-patent market position.

provides in part:

(a) (1) "Unfair methods of competition in commerce, and unfair or
fair acts or practices. Congress deliberately refrained from defining the exact scope of the FTC's mandate under section 5, on the theory that business ingenuity would find and use loopholes in a too-specific law and that the economy requires an expert body to develop new rules as restrictive practices evolved. The limits of section 5, therefore, are delineated only by the limits of the concept of "unfairness." Minimally, section 5 encompasses actual violations of the antitrust laws, such as full-blown cases of violation of section 1 or section 2 of the Sherman Act. Section 5 also covers incipient antitrust violations, that is, those practices which, unless nipped in the bud, will mature into full-blown antitrust violations, and practices that violate the spirit, but not the letter, of the Sherman or Clayton Acts.

Finally, section 5 covers conduct that neither violates the spirit of the antitrust laws nor constitutes an incipient violation of them, but which is inherently unfair. The criteria here are not yet fully delineated acts or practices in commerce, are hereby declared unlawful.

(b) Whenever the Commission shall have reason to believe that any such person, partnership, or corporation has been or is using any unfair method of competition or unfair or deceptive act or practice in commerce, and if it shall appear to the Commission that a proceeding by it in respect thereof would be to the interest of the public, it shall issue and serve upon such person, partnership, or corporation a complaint stating its charges in that respect and containing a notice of a hearing. If upon such hearing the Commission shall be of the opinion that the method of competition or the act or practice in question is prohibited by this Act, it shall make a report in writing in which it shall state its findings as to the facts and shall issue and cause to be served on such person, partnership, or corporation an order requiring such person, partnership, or corporation to cease and desist from using such method of competition or such act or practice.

(i) Any person, partnership, or corporation who violates an order of the Commission to cease and desist after it has become final, and while such order is in effect, shall forfeit and pay to the United States a civil penalty of not more than $5,000 for each violation, which shall accrue to the United States and may be recovered in a civil action brought by the United States. Each separate violation of such an order shall be a separate offense, except that in the case of a violation of such an order the penalty of $5,000 for each violation, which shall accrue to the United States and may be recovered in a civil action brought by the United States. Each separate violation of such an order shall be a separate offense, except that in the case of a violation through continuing failure or neglect to obey a final order of the Commission each day of continuance of such failure or neglect shall be deemed a separate offense.


fined. Any fraudulent or oppressive behavior, however, appears clearly to be covered. The FTC has also ruled that section 5 reaches conduct which has a substantial adverse impact on competitors, consumers, or the public, and which is not justifiable in terms of the legitimate business needs of the party responsible for the conduct.

The only FTC decision involving patent fraud is the Tetracycline case, decided in the early 1960's. The case does not indicate much about the amount of competitive impact necessary to warrant a finding of unfair competition, since the facts involved a product with multi-billion dollar sales. It would seem, however, that the cases in other areas indicate the potential utilization of section 5 far beyond the confines of the antitrust laws should the FTC decide to re-enter the enforcement field.

VI. Patent Fraud Under the Criminal Code

Despite only occasional use of the provisions of federal criminal law against patent fraud, the increasing stream of fraud decisions in civil patent litigation has focused attention on the application of various provisions of the criminal code to such conduct. This section summarizes the decisions in the general field of fraud on the government, with a view to predicting its application to patent fraud.

False Statement Statute

Section 1001 of the criminal code, the false statement statute, provides:

18 U.S.C. § 1001 (1970) provides:

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, con-
contains three clauses defining three offenses, each relating to misleading or deceptive practices in matters within the jurisdiction of the departments or agencies of the United States. The first clause punishes anyone who falsifies, conceals, or covers up a material fact by any trick, scheme, or device. The second clause punishes any person who makes a false, fictitious, or fraudulent statement or representation. The third clause deals with the making or use of a writing or document known to contain a false, fictitious, or fraudulent statement. Violation of section 1001 is a felony, punishable by imprisonment of up to five years and/or a fine of up to $10,000.

All offenses defined by section 1001 involve several elements. The first is that the offense be committed in connection with a matter “within the jurisdiction of any department or agency of the United States.” This element actually consists of two parts, since questions have been raised both as to what constitutes an “agency” and as to what constitutes a matter within an agency’s “jurisdiction.”

The Department of Commerce is clearly included within section 1001. One conviction for making a false statement to the Patent Office has been upheld, although the issue of what constitutes an agency was not discussed in the opinion. More generally, the term “agency” has been held to cover virtually any administrative or regulatory agency of the United States Government. The term does not cover grand juries, however, or the “judicial machinery” of the

408. The offense defined by the first clause may be committed by action or omission, and by use of oral or documentary communication. The second clause would appear to be in the same category. See United States v. Mahler, 363 F.2d 673, 678 (2d Cir. 1966); United States v. McCue, 301 F.2d 453, 456 (2d Cir.), cert. denied, 370 U.S. 939 (1962); Neely v. United States, 300 F.2d 67 (9th Cir.), cert. denied, 369 U.S. 864 (1962); United States v. Zavala, 139 F.2d 830 (2d Cir. 1944). It also has been held that nonverbal conduct may violate the first clause of the false statement statute. See United States v. White, 69 F. Supp. 562, 565 (S.D. Cal. 1946) (concealing aliens in van to smuggle them into United States and conceal their whereabouts). The third clause, however, defines an offense that can be committed only by use of writings and cannot be committed by means of oral misrepresentations.

409. 18 U.S.C. § 6 (1970). The statute provides:

As used in this title:

The term “department” means one of the executive departments enumerated in section 1 of Title 5, unless the context shows that such term was intended to describe the executive, legislative, or judicial branches of the government.

The term “agency” includes any department, independent establishment, commission, administration, authority, board or bureau of the United States or any corporation in which the United States has a proprietary interest, unless the context shows that such term was intended to be used in a more limited sense.

410. Mas v. United States, 151 F.2d 32 (D.C. Cir.), cert. denied, 326 U.S. 776 (1945); see Mas v. Coca-Cola Co., 163 F.2d 505 (4th Cir. 1947) (explaining facts of first Mas case). Mas is the only reported decision under section 1001 involving fraud on the Patent Office. The other decisions, cited in note 405 supra, involve perjury or other fraud statutes.

courts.\textsuperscript{412} False statements before grand juries or in the course of a trial may be punished only under the perjury statute\textsuperscript{413} or the new false declaration statute.\textsuperscript{414}

To be punishable under section 1001, the defendant need not file the false statement directly with the agency. He may instead give the statement to a nongovernmental body which he knows will pass the document along to a government agency. Thus, many section 1001 cases involve statements made to banks, which are subject to federal regulation and which therefore submit such information to government agencies for regulatory purposes.\textsuperscript{415} Similarly, the defendant need not himself submit the false statement to the agency to be liable, but may instead cause another person to submit it.\textsuperscript{416}

The cases reveal different notions of the concept of "jurisdiction." Some courts consider jurisdiction to embrace only those matters which the agency in question was authorized by statute to adjudicate, regulate, or otherwise determine.\textsuperscript{417} Most courts have considered jurisdiction more broadly to mean the power to administer or enforce a particular law, irrespective of adjudicative power.\textsuperscript{418} Although the

\begin{itemize}
  \item \textsuperscript{412} United States v. Erhardt, 381 F.2d 173 (6th Cir. 1967) (trial tactics);
  \item 18 U.S.C. § 1623 (1970). The false declaration section is similar to the perjury section but it applies only to court or grand jury proceedings, and it dispenses with a number of the strict limitations applicable to perjury cases.
  \item 18 U.S.C. § 2 (1970) provides:
    \begin{enumerate}
      \item Whoever commits an offense against the United States or aids, abets, counsels, commands, induces or procures its commission, is punishable as a principal.
      \item Whoever willfully causes an act to be done which if directly performed by him or another would be an offense against the United States, is punishable as a principal.
    \end{enumerate}
  \item See Friedman v. United States, 374 F.2d 363 (8th Cir. 1967); United States v. Levin, 133 F. Supp. 88, 90-91 (D. Colo. 1955).
  \item Moreover, in some cases agencies have required information under regulatory statutes which were later held invalid. The invalidity of the regulatory program did not, however, furnish any defense to making false statements to the agency. Bryson v. United States, 396 U.S. 64 (1969); Dennis v. United States, 384 U.S. 855 (1966); United States v. Kapp, 302 U.S. 214, 217-18 (1937). These cases hold that the proper way to resist an agency's demands for information to which it is not entitled is to refuse to furnish it, rather than resort to self-help by making a false statement. One court, however, has held that when an agency lacks jurisdiction over the defendant (because, for example, he is not engaged in interstate commerce), the defendant's false statements to
latter concept of jurisdiction is obviously broader than the former, the distinction does not appear to be important in the Patent Office context, because it would appear that any false statement of any importance made to the Office will fall within even the narrower of the two concepts.

In several cases the defendant has argued that his false statement to a federal agency did not involve a matter within the agency's jurisdiction because there was no statute or regulation which specifically required the defendant to furnish such a statement. There appears to be no regulatory agency case in which this defense was successful. In any event, under any definition, matters relating to the grant or denial of patents are clearly within the jurisdiction of the Patent Office.

Each of the offenses under section 1001 involve falsity or deception. Usually the falsity is found in a statement which contains affirmative or positive misrepresentations of fact—for example, that the defendant had no criminal record, when in fact he did; that the defendant paid no commission on a sale, when in fact he did; that someone tried to bribe the defendant, when in fact this did not happen; and that the defendant was a member of the bar, when in fact he was not. An assertion that the defendant was the sole inventor, when in reality he purloined the invention from another, would be in this category. The creation of a misleading impression through failure to disclose material information may also constitute a false statement. This may occur when the statement as a whole conveys a meaning contrary to the actual facts, even though the individual statements in isolation are literally true. For example, a statement that drug A was not coproduced together with drug B when microorganism C was employed to make B could be a false statement if in fact microorganism C produced nothing at all (neither A nor B). The

the agency, while it is investigating him to determine whether he is subject to its regulatory jurisdiction, are not punishable under section 1001. United States v. Moore, 185 F.2d 92 (5th Cir. 1950). This isolated decision would seem to run counter to the thrust of the Dennis line of authority, and to lack a rational basis.


420. In the case of statements to agencies without regulatory responsibility, however, the result has been different. Compare Friedman v. United States, 374 F.2d 363 (8th Cir. 1967), with United States v. Adler, 380 F.2d 917 (2d Cir.), cert. denied, 389 U.S. 1006 (1967).

421. Blake v. United States, 323 F.2d 245 (8th Cir. 1963).


425. See, e.g., Patterson v. United States, 202 F. 208 (9th Cir. 1913).


427. See Charles Pfizer & Co. v. FTC, 401 F.2d 574 (6th Cir. 1968). The falsity or "half truth" aspect of the statement results from the implication of lack of coproduction, and the materiality, if any, of the statement would result
same kind of conduct may also constitute a scheme to falsify or cover up material facts.428

Falsity need not be proved by any special form of evidence. The “two-witness” rule applied in perjury cases429 has not been applied to section 1001 cases, whether to establish falsity itself or to establish that the defendant made the allegedly false statement.430

Another element common to each of the offenses defined by section 1001 is the requirement that the statement be made “knowingly and willfully.” This, too, is a two-part element: First, the submittal of the statement must be deliberate or intentional rather than inadvertent; second, the defendant must know the falsity of the statement or be otherwise culpable in making it. The courts have held that the culpable “willfulness” requirement of section 1001 includes reckless disregard of whether the statement is true or a conscious purpose to avoid learning that it is not true.431 Knowledge of falsity is imputed to a corporation when it is shown that its responsible agents have such knowledge.432

The question of knowledge may also be raised in connection with another element of these offenses which is discussed below—the materiality of the statement. The prosecution is not obliged to prove that the defendant knew that his affirmatively false statement was material to the agency’s action, so long as the defendant deliberately submitted a statement to the agency that he knew was false.433 On the other hand, the offense of covering up a material fact by trick, scheme, or device would seem to import some knowledge of materiality, be-

428. Harrison v. United States, 279 F.2d 19 (5th Cir. 1960). See United States v. Luttwak, 344 U.S. 604, 612 (1953). The material facts could be that coproduction occurs when other microorganisms are used.

429. See notes 458–59 infra and accompanying text.


cause it would not be rational for the defendant to cover up a fact that he thought immaterial; that is, failure to disclose a fact that the defendant considered, with due care and in good faith, wholly immaterial would seem more an act of inadvertence than the kind of conduct that the first clause of section 1001 would punish. Accordingly, although there is no pertinent case law, some degree of knowledge of materiality would seem requisite in a covering up case.

Whether materiality is an element of each of the three offenses under section 1001 is unsettled. It is clear that materiality is an element of the first offense, covering up, for the statute expressly requires it. Although there is no corresponding express requirement of materiality under the second offense listed in the statute, most circuits require proof that the misstatement be material. The Court of Appeals for the Second Circuit, however, has consistently adhered to the contrary view.

Materiality is a question of fact, dependent on the circumstances of the case. The question is one for the court, however, rather than for the jury. The general standard of materiality with respect to false statements is that the subject matter of the statement be sufficiently related to the subject matter of the agency proceeding so that the statement "could affect or influence the exercise of a governmental function." In other words, there must be a tendency that the agency will take the false statement into account. A somewhat narrower standard of materiality is that the false statement or omission of information have "a natural tendency to influence or capab[ility] of influencing . . . a determination required to be made" by the agency.

434. See note 407 supra.
435. See Blake v. United States, 323 F.2d 245 (8th Cir. 1963); Gonzales v. United States, 286 F.2d 118 (10th Cir. 1960); Weinstock v. United States, 231 F.2d 699 (D.C. Cir. 1956); Rolland v. United States, 200 F.2d 678 (5th Cir. 1953).
436. United States v. Rinaldi, 393 F.2d 97, 99-100 (2d Cir. 1968); United States v. Mahler, 363 F.2d 673 (2d Cir. 1966); United States v. McCue, 301 F.2d 452 (2d Cir. 1962); United States v. Silver, 235 F.2d 375 (2d Cir. 1956).
438. United States v. Bernard, 384 F.2d 915 (2d Cir. 1967); Gonzales v. United States, 286 F.2d 118, 123 (10th Cir. 1960). See also Carroll v. United States, 16 F.2d 951, 954 (2d Cir. 1927) (perjury case).
440. Blake v. United States, 323 F.2d 245, 246 (8th Cir. 1963); Gonzales v. United States, 286 F.2d 118, 122 (10th Cir. 1960); Weinstock v. United States, 231 F.2d 699, 701-02 (D.C. Cir. 1956).

This would suggest the possible defense that the agency matter to which the statement related was not one in which the agency was obliged to act, even though it had the power to act if it chose to do so. It would appear, however, that the courts will find a statement material so long as the matter has any reasonable relation to the scope of the agency's legal functions. See United States v. East, 416 F.2d 351, 353 (9th Cir. 1969); United States v. Quirk, 167 F. Supp. 462, 464 (E.D. Pa. 1958), aff'd, 266 F.2d 26, 27 (3d Cir. 1959). In East the Ninth Circuit blended the Freidus and Weinstock formulations of materiality, apparently regarding them as equivalent. In Quirk, the court also equated the two tests and came up with its own materiality formula—"calculated to induce agency reliance or action" whether or not the agency actually acted in reliance.
The courts have uniformly held that actual agency reliance on the false statement is not necessary. Indeed, in many cases the defendant has been convicted for submitting the false statement even though it was shown that the agency did not in fact rely, or even could not possibly have relied, upon the false statement. Thus, the “but for” test of patent fraud is clearly inapposite in a prosecution for making a false statement to the Patent Office, because the government only needs to show that the agency might have acted in a different way if the misrepresentation had not been made, or if full disclosure had been made. When the government actually relies on misrepresentations, the defendant in a section 1001 action will probably be punished even though the government would not have been deceived if its agents had been more careful and diligent. Such lack of care or diligence could occur in ascertaining the truth or falsity of the stated facts, on the basis, for example, of documents in the government’s possession. Therefore, it is no defense that the patent examiner would not have been misled had he properly checked the Patent Office’s files instead of accepting the patent applicant’s false representation at face value.

The courts have uniformly held that pecuniary risk or loss to the government is not an element of the offenses listed under section 1001. Prior to 1934, such an element was included in the law, but Congress amended the statute to protect the various New Deal regulatory agencies from having their functions perverted, obstructed, or interfered with by false statements. In United States v. Gilliland, the Supreme Court construed the amended statute on the basis of its legislative history as broadly intending “to protect the authorized functions of governmental departments and agencies from the perversion which might result from the deceptive practices described.” The Court reversed the decision of the district court limiting the statute to pecuniary or property losses. It seems clear

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442. See notes 143–211 supra and accompanying text.
443. See note 441 supra.
444. Falter v. United States, 23 F.2d 420 (2d Cir. 1928). Although this case involved convictions for conspiracy to defraud the United States, see notes 464–73 infra and accompanying text, the facts show a false statement violation, as well. There is no basis for believing that the outcome in Falter would have turned on whether section 1001 or section 371 was invoked, although section 371 does appear more sweeping in its general application than section 1001.
448. 312 U.S. 86 (1941).
449. Id. at 93.
450. Id. at 96.
that filing a false statement with the Patent Office is punishable under section 1001 even though there is no monetary loss or risk of loss to the government.

Many statements can be viewed either as positive misstatements of what they assert or as failures to disclose (i.e., as a cover up of) what they do not assert. For example, a false assertion of inventorship could be a positive false statement or else an element of a scheme to cover up the identity of the true inventor. From a prosecutorial viewpoint, the second approach may have the advantage of sweeping up an entire course of dealing with the agency, despite the lower culpability of the individual components. One court has referred to the covering-up-by-scheme clause as punishing a one-man conspiracy.\textsuperscript{451} At the same time, the continuing or ongoing character of the scheme would carry the statute of limitations beyond the date of the last overt act of making a positive false statement.\textsuperscript{452}

On the other hand, a series of positive misstatements or false filings may give rise to many offenses and many counts in the indictment.\textsuperscript{453} It has been suggested, however, that a continuing scheme to cover up, under the first clause of section 1001, will give rise only to a single cover-up count, even though the scheme is carried out by means of filing many false statements.\textsuperscript{454}

\textit{Perjury Statute}

The perjury statute,\textsuperscript{455} to some extent overlaps the coverage of section 1001, since both punish false statements. The elements of the two offenses are not identical, however, since perjury is composed of several elements not required for a section 1001 violation, and at least one element of a section 1001 violation is not required to prove perjury. In perjury cases an oath must be taken before a competent tribunal or officer. The administration of the oath must be specifically authorized or required by a law of the United States. Finally, the de-

\textsuperscript{451} United States v. Bramblett, 231 F.2d at 497.
\textsuperscript{452} See id. In \textit{Bramblett}, the court deemed that leaving a false statement or representation on file was a continuing act. Other positive acts in furtherance of the scheme may constitute overt acts, for example, paying the issue fee to the Patent Office.
\textsuperscript{453} See, e.g., \textit{Nye & Nissen v. United States}, 336 U.S. 613 (1949), where defendants were charged with six counts of violation under section 1001 and one count of conspiracy to defraud.
\textsuperscript{454} United States v. Bramblett, 231 F.2d at 491; cf. \textit{Braverman v. United States}, 317 U.S. 49, 53-54 (1942) (agreement with diverse objects is single conspiracy).
\textsuperscript{455} 18 U.S.C. § 1621 (1970) provides:

\textit{Whoever, having taken an oath before a competent tribunal, officer, or person, in any case in which a law of the United States authorizes an oath to be administered, that he will testify, declare, depose, or certify truly, or that any written testimony, declaration, deposition, or certificate by him subscribed, is true, willfully and contrary to such oath states or subscribes any material matter which he does not believe to be true, is guilty of perjury, and shall, except as otherwise expressly provided by law, be fined not more than $2,000 or imprisoned not more than five years, or both. This section is applicable whether the statement or subscription is made within or without the United States.
FRAUD IN PATENT PROCUREMENT

Fraudulent statement must positively state as true a material fact which he believes to be untrue. An incomplete answer or one that is misleading but literally true is not perjury. The crime of making a false statement, under section 1001, is not complete until the statement has been submitted to the agency. The crime of perjury is complete once there is a falsehood under oath. Thus, for liability to attach under the perjury statute, there is no need that the defendant submit the false information to the government or otherwise use it. Thus, theoretically, the government could prosecute and convict an individual both for perjury and for making a false statement as a result of submitting a false affidavit to an agency.

The special evidentiary rules that apply to perjury cases but not to false statement cases are more important in discouraging use of the perjury statute than are the added elements of the offense. The most important of these rules is the so-called "two-witness" rule. This rule requires the prosecution to prove falsity by the testimony of at least two independent witnesses, or, if only one witness is available, the witness' testimony must be corroborated by independent evidence. Usually, corroborative evidence may be supplied by the books and records of the defendant.

Since it is somewhat more difficult for the prosecution to prevail in a perjury case than in a false statement case, the false statement statute is far more widely used. There is usually no reason for the prosecution to utilize the perjury statute instead of the false statement statute, except when the false statement statute is inapplicable because the statement was made before a court, grand jury, or other body not considered an agency within the scope of section 1001. The courts have recognized this and have said that the government is entitled to seek a conviction under whichever statute it chooses.

The use of the perjury statute is therefore unlikely in the patent

456. See Bronston v. United States, 409 U.S. 352 (1973); United States v. Jacobsen, No. 72-74 (D.D.C., May 3, 1974). In Bronston, the Court noted that this rule does not apply to criminal fraudulent statements. 409 U.S. at 358 n.4.

457. See United States v. Noveck, 273 U.S. 202 (1927); Steinberg v. United States, 14 F.2d 564 (2d Cir. 1926). The general rule is that when conduct may fall within two different federal statutes, and the essential elements of the two offenses so differ that there is at least one element essential to each offense which is not essential to the other, then the defendant may be convicted and punished separately for the two offenses. See, e.g., American Tobacco Co. v. United States, 328 U.S. 781, 787-89 (1946) (convictions for conspiracy to restrain trade, conspiracy to monopolize, and monopolization).


460. See notes 409-16 supra.

Conspiracy to Defraud the United States

Section 371 of the criminal code prohibits both conspiracies to commit an offense against the United States and conspiracies to defraud the United States. Section 371 is of interest in the patent fraud area primarily because it provides for punishment for conspiracies to commit an offense under section 1001. The law applicable to such substantive offenses has already been discussed, and the following discussion concerns only conspiracies to defraud the government.

The prohibition in section 371 against agreements to defraud the United States creates an offense separate and distinct from that defined in section 1001. First, section 371, by its terms, applies only when there is an agreement involving at least two persons. There is no general federal criminal statute which punishes a single person for defrauding the government, although recommendations for the enactment of such a law have frequently been made. Some commentators have observed that it is anomalous that there should be felony sanctions for a conspiracy to commit a fraud which is not itself punishable as a crime. In this respect section 371 parallels section 1 of the Sherman Act, which prohibits conspiracies to restrain trade, even though a unilateral restraint is not illegal as long as the conduct does not fall within section 2 of the Sherman Act. With respect to restraints of trade, however, there appear to be some policy reasons for permitting unilateral refusals to deal and unilateral price de-
terminations, while at the same time prohibiting multi-party agreements to do the same thing. No such policy is discernible with respect to defrauding the United States.

Although section 1 of the Sherman Act and section 371 each require a plurality of actors, the courts have construed this requirement somewhat differently for the two statutes. With respect to the Sherman Act, the majority view is that a corporation cannot be held to have conspired with its officers or employees, and the corporate officers and employees cannot be held to have conspired with one another.471 Under section 371, however, conspiracies of this type appear to be punishable.472 This appears to be the general criminal law rule as well. Thus, it would appear that an applicant and his or its patent attorney or agent comprise enough actors for a conspiracy.

**Fraudulent Intent**

A further significant distinction between section 371 and section 1001 lies in what constitutes the gravamen of the offense under each section. The purpose of deceiving the government agency into taking or refraining from taking some action is the gravamen of the offense under section 371,473 while the mere willful submittal of a false statement is the gravamen of the offense under section 1001.474 Although the defendants need not actually succeed in defrauding the government to violate section 371,475 they must at least have the intent to influence agency action by their dishonest tactics, that is, they must have intent to defraud the government in addition to having the intent to furnish false information to the agency or otherwise engage in the improper or dishonest conduct used in the scheme.476

471. See Nelson Radio & Supply Co. v. Motorola, Inc., 200 F.2d 911 (5th Cir. 1952). The law appears to be to the contrary with respect to agents who are not employees. See Tamaron Distrib. Corp. v. Weiner, 418 F.2d 137 (7th Cir. 1969).

472. See Nye & Nissen v. United States, 336 U.S. 613 (1949); United States v. Steiner Plastics Mfg. Co., 231 F.2d 149 (2d Cir. 1956); C.I.T. Corp. v. United States, 150 F.2d 85 (9th Cir. 1945); Egan v. United States, 137 F.2d 369 (8th Cir. 1943); Mininson v. United States, 101 F.2d 477 (3d Cir. 1939).


475. Harney v. United States, 306 F.2d 523, 531 (1st Cir. 1962) (conspiracy to divert federal aid for highways; unnecessary to show that funds were paid over); Horwitz v. United States, 5 F.2d 129, 130 (1st Cir. 1925) (unsuccessful conspiracy to avoid customs laws and regulations). See United States v. Socony-Vacuum Oil Co., 310 U.S. 150, 224 n.59 (1940) (antitrust conspiracy may be unsuccessful and will still be punishable). See also United States ex rel. Marcus v. Hess, 41 F. Supp. 197, 213 (W.D. Pa. 1941), rev'd, 127 F.2d 233 (3d Cir. 1942), rev'd, 317 U.S. 537 (1942) (civil penalty for fraud allowable even though government discovered fraud and did not pay funds).

476. See Dennis v. United States, 384 U.S. 855, 861 (1966); Hammerschmidt v. United States, 265 U.S. 182 (1924) (not a violation to conspire to obstruct selective service by openly urging defiance of law, since no fraud involved).
Section 371 involves substantially the same elements as section 1001 with the exceptions noted above. As with section 1001, it is not necessary under section 371 that the government suffer property or pecuniary loss from the fraud, but only that the defendants intend that the government’s functions be subjected to interference or obstruction “by misrepresentation, chicane, or the overreaching of those charged with carrying out the governmental intention,” or by “deceit, craft or trickery, or at least by means that are dishonest.” The use of fraudulent means to gain a patent grant thus readily fits within section 371.

The Self-Help Problem

The defense that the defendant’s conduct was legitimate self-help rather than fraud has been urged in civil patent fraud suits. The same argument might be made in a criminal case. It may happen that the examiner has a completely erroneous view of the law, or one which the applicant considers completely erroneous. The examiner might, for example, believe that prior production of an insubstantial or un-recoverable amount of a compound in the course of production of another compound constituted anticipation of the subject matter, that is, public use or sale, or prior knowledge or use. He might also believe that a product with a chemical structure similar to that of a known product is obvious, if the two compounds have the same newly-discovered useful property, even though it was previously unknown that the old product had this utility. In these circumstances, the applicant or his patent agent might prefer to avoid a lengthy proceeding before the Patent Office Board of Appeals and perhaps the Court of Customs and Patent Appeals as well, merely to secure correction of the erroneous views of a misguided examiner. Instead, the applicant might elect self-help by supplying the examiner with incorrect information or by failing to disclose all the information.

In a self-help prosecution, the applicant or patent agent might urge as a defense that the misstated information was immaterial because it had no bearing on the ultimate result of the case. Another possible defense would be to claim a lack of intent to deceive or defraud because the applicant knew the misstatement would have no effect on the ultimate outcome of the proceeding. The cases indicate that this type of defense will not succeed under section 1001 or section 371. They suggest that overt means of resolving the disagreement must be utilized to avoid commission of fraud.

477. See notes 466-76 supra and accompanying text.
481. See United States v. Polin, 323 F.2d 549 (3d Cir. 1963).
483. See Beckman Instr., Inc. v. Chemtronics, Inc., 439 F.2d 1369 (5th Cir. 1970).

* Kayton: In this chapter dealing with criminal violations for false state-
VII. Facts Versus Judicial Generalities in Reported Fraud in the Procurement Court of Appeals Opinions—Two Actual Case Histories: Beckman Instruments v. Chemtronics$^{484}$ and Monsanto v. Rohm & Haas$^{485}$†

The purpose of this analysis is to determine whether the language and views expressed in two landmark appellate opinions involving inequitable conduct and fraudulent procurement provide practical guides for future conduct. After studying many patent fraud cases, there has remained with the author a gnawing visceral sense that the judiciary may have resorted to broad legal doctrine for a convenient resolution of litigation when the facts required a much closer analysis and less sweeping adjudication. This happens easily enough when the facts are burdened with complex technology and a highly specialized and sophisticated type of legal procedure, such as prosecution before the Patent Office, which is completely foreign to the usual background and general understanding of the judiciary which sits in judgment.

To take appellate cases as reported at face value may on occasion actually misdirect us and at best be of only limited practical benefit if it turns out that the rules promulgated within the confines of those appellate opinions were generated from or applied to fact situations which were actually inapposite to or directly in conflict with the kinds of facts which could properly be the basis for such rules. For example, it is the general rule, as enunciated recently in Beckman Instruments by the United States Court of Appeals for the Fifth Circuit, that an applicant's failure to cite a section 102 reference known to him during prosecution constitutes inequitable conduct. Presumably, our future conduct during patent prosecution will be guided thereby. How much guidance do we have, however, if in the case in which this rule was promulgated the prior art reference in question had not been a section 102 reference, albeit mistakenly considered to be one by the court, but rather a section 103 reference, and the attorney in the case had drafted the claims expressly to distinguish from

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† This section was written by Irving Kayton.
that reference? Circumstances of this type, resulting in a general rule of law relative to required disclosure of a section 102 reference do very little to guide the future patent solicitor when he is in a similar situation. What we must learn from such a case is what to do about references distinguished by careful claim drafting into section 103 references by competent patent counsel now that we know there is a real possibility that in subsequent litigation the section 103 reference may be viewed mistakenly as a section 102 reference because of the court's inability to understand the significance of the distinguishing claim limitations.* Empirically, the correct rule from such a case appears to be that, if you ever include a claim limitation for the express purpose of distinguishing from a reference known to you, you must disclose that reference to the Patent Office or you have behaved inequitably. This heretofore unarticulated rule is the practical law of the land today.

Consider a second possible factual constellation. Suppose it were alleged that an applicant deceitfully failed to disclose critical information dealing with the obviousness of the claimed invention although the critical information was within the possession of the applicant. That is a damning indictment and was made in Monsanto v. Rohm & Haas. A holding of fraudulent procurement would certainly be appropriate. Suppose, however, that the critical information was actually disclosed by the applicant but in a form which the appellate court was simply unable to appreciate as having been a literal disclosure. The general rule of that appellate court would provide very little help for the future patent solicitor prosecuting an application when according to his own light he has in good conscience and in good faith affirmatively set forth the critical information in his possession on the subject of nonobviousness. Perhaps it does teach him to ignore accepted practice in the patent solicitation craft and try to follow the more primitive and vulgar requirements of a court untutored in this field.

It is appropriate, even for no better purpose than to put our minds at ease or to confirm our suspicions, therefore, to look at two major instances of appellate treatment of the subject of inequitable or fraudulent patent procurement to see if the real life patent prosecution situations which were involved in those cases square with the appel-

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* Stare: The section 103/section 102 distinction made here is vastly overblown. It is pretended that a very significant difference in kind exists between the two types of "references," or between rejections based on the one or other section. Rather, as Judge Rich has perceptively told us, there is merely a difference in degree by which one imperceptibly shades into the other. See Application of Bass, 474 F.2d 1276, 1285, 1289 (C.C.P.A. 1973). To be sure, one can attempt to overcome a section 103 rejection by affidavits as to novel, startling, unexpected results. Some may even try to overcome such rejections by invocation of marginally relevant secondary considerations such as commercial success. Otherwise, the distinction is of little significance. See generally Application of Foster, 343 F.2d 980 (C.C.P.A. 1965), cert. denied, 383 U.S. 966 (1966). Certainly, any litigant who believes that "distinguishing claim limitations" (which gerrymander around the best prior art) are in some way equivalent to the sanctifying ritual of crossing one's fingers before uttering a misstatement, so that any duty of candor is eliminated, may be "shocked" to find out that the courts pay equal attention to both rituals.
late courts' unequivocal holdings of invalidity because of fraudulent procurement. Our real purpose in so doing, however, is to glean from those cases the true practical messages for trial and soliciting patent lawyers on fraud in the procurement. The two cases which we will treat in depth, exclusively on the fraud issue, are *Beckman Instruments v. Chemtronics* in the Fifth Circuit and *Monsanto Co. v. Rohm & Haas* in the Third Circuit. In proceeding with this workshop analysis of the cases it is important to keep the actual written opinions of the appellate courts in the back rather than in the forefront of our minds. The facts set forth below are material solely to the fraud question as actually derived from the file histories and the records of the cases. Thus, we are cast back into the position and posture of the patent solicitors as they were prosecuting the applications which were subsequently issued as patents later to be held invalid. At the very least, a significant analytic procedure will have been undertaken with, this author believes, valuable insights for future conduct.

*Beckman Instruments v. Chemtronics—Fraud or Fancy?*

Dr. Stow published a paper in 1954 on an electrochemical device for measuring the amount of carbon dioxide in blood and other fluids. It was a significant contribution to the art. The device featured two electrodes enclosed within a chamber defined by a selectively permeable membrane. Within the membrane chamber, distilled water was disposed as a thin film between the spaced electrodes. External to the selectively permeable membrane was the blood on which the measurement for carbon dioxide was to be made. The membrane was permeable to carbon dioxide but not to the rest of the constituents of the blood. The mechanism for measuring the carbon dioxide level was to take a voltage measurement, that is, to measure the difference of potential between the two electrodes after the carbon dioxide diffused through the membrane into the distilled water. The voltage reading gave an indirect measurement of the amount of carbon dioxide. This was a potentiometric device and functioned ideally and most effectively when current flow between the electrodes was zero.

Dr. Clark was familiar with Dr. Stow's work. Dr. Clark, Dr. Stow and many others sought to develop a device to measure the oxygen level of the blood and actively pursued the search during the two year period after Stow's publication. Dr. Clark finally invented an electrochemical device which was capable of measuring the oxygen level in blood. He filed his application on March 21, 1956, some two years after the Stow publication. Dr. Clark's device, like Dr. Stow's device, featured two electrodes separated from the fluid under investigation by a selectively permeable membrane, but it differed from
Stow in that the liquid between the electrodes within the membrane chamber was an electrolyte and formed an electrolytic path between the electrodes. The oxygen which diffused through the membrane into the electrolyte directly affected the conductivity of the electrolyte. Significantly, then, the device was a polarographic or current-measuring instrument. Although what the definition of polarographic was at the time the application was filed was vigorously contested between the parties during litigation, one established meaning brought out at the trial was that it is a current-measuring device rather than a voltage-measuring device. In any event, the specification and the drawings clearly and unmistakenly show the device as a current-measuring device. Indeed, this feature was central to Clark's device and to its capability in carrying out its intended function of directly measuring the oxygen level in blood.

At one point during the prosecution of the Clark application, Beckman Instruments purchased the application from Clark and prosecution of the application was transferred to another attorney located geographically closer to Beckman's offices. During this prosecution a patent engineer with Beckman wrote an in-house memorandum calling attention to a "ticklish situation" in that the claims in the application appeared to read on the physical structure of the Stow carbon dioxide-measuring device as disclosed in the Stow publication. Thereafter, prosecution of the Clark oxygen-measuring device included amendments to all of the claims in the case. The amendments were allegedly designed to distinguish from Stow. Actually, the claims were cancelled and other claims inserted which were in turn amended prior to allowance. During this prosecution period, from 1956 through issuance in November of 1959, the Stow publication was neither cited by the examiner nor cited to him by the attorney prosecuting the Clark application.

During litigation in which Beckman Instruments brought suit against Chemtronics on a Chemtronics oxygen-measuring device, the Stow publication was introduced as prior art. District Court Judge Guinn held that the Clark patent was valid over the Stow reference and that there was no fraud in the procurement of the patent. He also held that the Chemtronics device did not infringe the claims of the Clark patent. Thus, Judge Guinn concluded that not only were the claims as amended not anticipated by the Stow publication but that those claims represented an invention not obvious over the Stow publication. Moreover, it seems pretty clear that even Chemtronics was prepared to agree that Dr. Clark had a patentable invention, but would not agree that the claims in the Clark patent except possibly for one, were patentably distinct over the Stow reference.

The United States Court of Appeals for the Fifth Circuit reversed the district court on validity, but not on lack of infringement, and held the Clark patent invalid over Stow, not as being obvious, but as being directly anticipated by Stow under section 102. Moreover, the court held that the failure to bring the Stow reference to the attention of the examiner during prosecution represented fraud in...
the procurement of the patent sufficient in itself to render the patent invalid and vacated the lower court’s dismissal of Chemtronics’ antitrust counterclaim based upon the fraudulent procurement of the Clark patent. The Fifth Circuit directed the court below to ascertain whether the other requisite elements required by Walker Process were found in the case at bar.486

On remand, Beckman moved to take additional testimony on the subject of the intent involved in not disclosing the Stow reference to the Patent Office. In the Fifth Circuit, Beckman posited that it did not disclose Stow simply because it was not obliged to set up “strawmen it knew it could knock down.” Chemtronics, however, successfully opposed the motion for the introduction of additional evidence on the subject of intent behind the “misrepresentation,” arguing that the intent could be determined from the evidence previously adduced. Judge Guinn then held on the record which had already been established that the required deceit simply did not exist. He so held even though the Fifth Circuit had previously stated that Beckman’s assertion that it did not consider Stow’s work to be relevant prior art was not believable.487 After the district court held that there was no willful or knowing misrepresentation, the case was settled. Thus, we will have no opportunity to learn what the Fifth Circuit’s view is of Judge Guinn’s evaluation with respect to this apparently necessary element for an antitrust claim.

It is essential for our correct understanding of the law of this case, therefore, to examine the claims and to determine for ourselves whether Stow is a section 102 reference against Clark, as the Fifth Circuit suggests, or at best a section 103 reference which Beckman could equitably fail to cite to the Patent Office, as the trial court held originally. For the purpose of convenience, only two of the claims of the patent488 are set forth in the footnotes for examination.489 These claims,

486. 165 U.S.P.Q. at 365. The trial court should look first to the evidence to determine whether appellants indulged in knowing, willful misrepresentation of material facts. If it finds that they did, it should then look to see whether the other elements of Sherman Act violations are present—whether, for example, as regards monopolization, appellants have market power in some relevant market, whether they used this power unlawfully, and whether they have directly caused appellees to suffer damage.

487. Id. at 364. This assertion, however, is rendered utterly incredible . . . by the obvious similarity of the Stow and Clark devices. Furthermore, the determination that the prior art did not render the patent invalid should have been left to the Patent Office rather than being decided privately by Beckman and Clark.


489. Claim No. 5 states:

In an electrode assembly for exposure to a constituent to be measured, the combination of: an electrically insulating support body; a first electrode embedded in said support body and having an exposed sur-
numbered 5 and 12, represent in the author's view those claims which are as close to the Stow reference as any of the claims in the patent. Nowhere in these claims are the terms polarographic or polarography included (all the other claims do include those terms), nor for that matter is the use of the measuring device for oxygen analysis in a fluid set forth. However, reference to the words and phrases in the two claims which have been italicized demonstrate that those claims are directed to a structure in which current flow is expressly included as a limitation. Thus, for example, in Claim 5 there are the recitations of "means . . . defining an ionic passage between said membrane and said body face" and "reservoir means for enclosing a body of electrolyte-forming substance" as well as the defining of "an electrical circuit between said first electrode, said electrolyte-forming substance and said second electrode." Claim 12 specifies "a body of electrolyte . . . for forming a current path from said second electrode through said electrolyte to said first electrode."

It would seem, therefore, that these two claims specify a mechanical configuration like that of Stow but arranged in a conductive rather than potentiometric electric circuit. Moreover, the specification goes into great detail to point out that the oxygen analysis is done as a direct current measurement directly proportional to the diffusion of oxygen through the membrane into the electrolyte.

This analysis, or something much like it, presumably convinced Judge Guinn. Following this, the reasoning of the Fifth Circuit in

face at a face of said body and substantially flush therewith; membrane means selectively permeable to said constituent; means for supporting said membrane with one face thereof closely adjacent to said electrode surface and said body face defining a liquid film space between said membrane and said electrode surface and defining an ionic passage between said membrane and said body face, the other face of said membrane being exposable to an environment containing said constituent; reservoir means for enclosing a body of electrolyte-forming substance of relatively large volume compared with the volume of said film space, said reservoir means adjoining and communicating with said passage to maintain a film of said electrolyte forming substance in said film space; and a second electrode positioned on the same side of said membrane as said first electrode for contact with said electrolyte forming substance for forming an electrical circuit between said first electrode, said electrolyte forming substance and said second electrode.

Claim No. 12 states:

In a measuring instrument for exposure to a constituent to be measured, the combination of: a first electrode having a sensitive electrode surface; a second electrode electrically isolated from said first electrode; a membrane selectively permeable to said constituent; means for supporting said membrane for separating said electrodes from said constituent with one face of said membrane closely adjacent to said electrode surface to define a liquid film space between, the other face of said membrane being exposable to an environment containing said constituent to be measured; and a body of electrolyte with at least a portion thereof positioned in said liquid film space in contact with said sensitive electrode surface and said membrane for forming a current path from said second electrode through said electrolyte to said first electrode.

(Emphasis added).

490. Beckman actually litigated only two claims during the trial and in the briefs, and those two clearly are much more readily distinguishable from the Stow reference than the two presented in note 489 supra.
dispensing with the very specific limitations requiring a conductive circuit in the measuring device should be examined. Very simply, the Fifth Circuit pointed out that although Stow expressly calls for distilled water as the medium between his electrodes, and although the court expressly recognized distilled water as a "non-electrolyte," nonetheless when carbon dioxide diffuses through the membrane, it combines with the water to form "carbonic acid."\textsuperscript{491} Although the entire purpose of putting distilled water into the Stow device is to make sure there is no electrolytic path and despite that the objective of and the ideal operating condition for Stow is to have zero current flow and therefore the most effective measurement of voltage, the Fifth Circuit viewed this minute contamination of the distilled water in the Stow device as something that anticipated a claimed invention whose electrical structure and objectives were antithetical to the Stow device.\textsuperscript{492} Perhaps, most importantly, the amount of electrolytic action that would take place under the circumstances of the carbon dioxide diffusing into the distilled water, that is to say, the amount of actual current flow that would take place, would be miniscule compared to Clark's operation\textsuperscript{493} and could hardly be viewed as any part of the operation of the device.\textsuperscript{494} We therefore have the extraordinary situation whereby a contaminant in the Stow device, that would be counterindicated by the teaching of the Stow publication had it been recognized at the time of the publication, is considered the basis for using Stow as an anticipatory reference against Clark. The entire theory of operation and the electrical structure of Clark as taught in his patent is opposite to that of Stow since for the purposes of the Clark invention voltage and current measurement were not only not equivalents, they were antithetical.\textsuperscript{495}

The question facing us after this exposition is whether a patent solicitor of reasonable skill in this technology, which presumably includes some understanding of the way electric circuits function, would have considered the italicized limitations in Claims 5 and 12 sufficient to render those claims novel over the Stow reference. In other words, would the average patent solicitor prosecuting the Clark reference have felt that he had in Stow a section 102 reference which must be cited to the examiner or a section 103 reference which need not be set up as a straw man?

Quite clearly, this question can only be reasonably and rationally answered if we view it in the context of the time that the application

\textsuperscript{491}. 428 F.2d at 563 n.15.
\textsuperscript{492}. Id.
\textsuperscript{493}. Quantitatively there would be a one-hundredfold difference in magnitude.
\textsuperscript{494}. 428 F.2d at 563 n.15.
\textsuperscript{495}. It may be recalled that Stow at the same time had been unsuccessfully trying to develop an oxygen-measuring device.
was prosecuted. Thus, the thinking between 1956 and 1959 on this subject must be examined. It is also highly relevant and indeed material to this discussion to have the view of a patent attorney of ordinary skill in the electrically related arts on this question. The author can say without reservation that during the period between 1956 and 1959, a period during which he was actively engaged in the prosecution of patent applications and at a time when the electrical art was his special area of practice, he would have considered the limitations of Claims 5 and 12, especially if reference were made to the Clark specification for interpretation, as rendering the claims free of Stow as a section 102 reference. Whether the claim limitations were sufficient to patentably distinguish over the Stow reference for nonobviousness is an entirely separate issue and cannot be answered without going into the many factors which are involved in a determination of nonobviousness as set forth by the Supreme Court in the Trilogy, i.e. *Graham v. John Deere.*

If in fact the Stow reference was not anticipatory, the question then comes down to whether there was any obligation to disclose it to the Patent Office during prosecution. Even in the cases dealing with fraud in the procurement decided many years after 1959 there was no obligation on the part of a patent applicant to call to the examiner's attention references which only come under section 103. Thus, under the then operative law, because the claims were drafted to distinguish from the Stow reference, that reference need not have been cited to the Patent Office and in typical practice would not have been cited, that is, there was no need to set up a straw man for the purpose of knocking him down. This practice was commonplace in the profession, if not universal and consonant with all the reported cases on the subject to that time.* For reasons that are more practical than academic, it would be valuable to see whether the attorneys who represented Chemtronics, and charged Beckman with fraud, prosecuted their own applications in that way between 1956 and 1959.

*Monsanto Co. v. Rohm & Haas—Fact or Fancy?*

Dr. Huffman, assignor of Monsanto, filed a patent application in 1957 in which he disclosed a large class of 3',4'-dihalogenated anilides including 3',4'-dichloropropionanilide (3,4-DCPA) and 3',4'-dichloroace-

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497. There is some authority, all long after 1959, suggesting that a section 103 reference should be called to the attention of the Patent Office if it is closer to the claimed invention than any of the other references on which the examiner had relied. See notes 201-11 *supra* and accompanying text; Sarkes Tarzian, Inc. v. Philco Corp., 351 F.2d 557, 147 U.S.P.Q. 172 (7th Cir. 1965); Union Carbide Corp. v. Filtral, 170 U.S.P.Q. 482 (C.D. Cal. 1971). See also Trio Process Corp. v. L. Goldstein's Sons, Inc., 461 F.2d 66, 174 U.S.P.Q. 129 (3d Cir. 1972), where the court held that material misrepresentations must relate to those statutory conditions of patentability dealing with novelty, obviousness and utility. 461 F.2d at 134.

* Stern:* Surely, the art which the draftsman consciously and purposefully drafts around is likely to be closer than any other art, and thus within the rule that if the applicant knows of art closer or better than that cited by the Patent Office then he should cite it to the Office.
tanilide (3,4-DCAA). 3,4-DCPA and 3,4-DCAA are next adjacent homologs. This disclosed class was stated in the specification to possess surprising herbicidal efficiency as compared with a large class of listed related compounds which possess "little or no herbicidal efficacy." The members of the group of "related compounds" were all anilides and included homologs and isomers of 3,4-DCPA. That group of related compounds having little or no herbicidal efficacy did not, of course, include 3,4-DCPA or 3,4-DCAA which were included as compounds which did have herbicidal activity. The claims of the 1957 application were directed to the use of that class of compounds as an herbicide, but did not include any claims to compounds themselves. Significantly, the class of herbicidal compounds referred to in the specification was listed in tabular form for the purpose of showing their herbicidal capabilities quantitatively. More specifically, 3,4-DCPA was listed at the top of the table as a highly effective herbicide in which five of the six classes of tested plants were completely destroyed with a particular dosage and in which 3,4-DCAA, listed two lines below 3,4-DCPA, was disclosed as being effective as an herbicide on only two of the six, bindweed and pigweed; but for those two it was listed as completely effective at that same dosage (two pounds per acre).

On May 8, 1961, Monsanto filed a continuation-in-part (CIP) of Huffman's 1957 application and abandoned the 1957 application at the same time. The 1961 application narrowed the range of compounds disclosed as herbicides but retained both 3,4-DCPA and 3,4-DCAA in the application. Precisely the same table listing the relative activity of those two compounds as well as several others as herbicides was retained in the specification. The claims in the CIP were again directed to the herbicidal use of the now narrowed class of compounds rather than being directed to the compounds themselves. The narrowed class of compounds was similarly stated in the specification to have the surprising herbicidal properties originally mentioned in the 1957 application for the broader class and similarly indicated that its herbicidal activity was unexpected as compared to the same group of "related compounds" first mentioned in the 1957 application.

Then, on February 3, 1967, a divisional application carved from the

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498. For those not skilled in the chemical art, an explanatory excerpt from the findings of fact in Monsanto v. Rohm & Haas Co., 312 F. Supp. 778, 781-83, 164 U.S.P.Q. 556, 559 (E.D. Pa. 1970), entitled "Chemical Facts and Definitions" appears as Appendix II infra. This is a useful tutorial on the subject of the terms "homolog," "analog," and "isomer" in particular relation to the compounds in that case. An understanding of those terms is useful in following some of the discussion below.

499. 312 F. Supp. at 783.

500. The portion of the 1957 application in which all of the foregoing facts and relationships in the text were set forth appears as Appendix III infra.

501. See Appendix IV infra.

502. See Appendix IV infra.
1961 parent was filed which became the celebrated patent in litigation both in *Monsanto Co. v. Rohm & Haas* and *Monsanto Co. v. Dawson Chemical Co.* in the Third and Fifth Circuits respectively. The 1967 divisional application narrowed the class of herbicidal compounds listed in its specification, the use of which had been claimed in the 1961 application, down to a single compound, 3,4-DCPA. Moreover, the only claim in the division was a compound claim to 3,4-DCPA, all the use claims remained in the parent which was not abandoned. The division also stated that 3,4-DCPA, replacing the narrowed class in the specification of the parent, has surprising herbicidal properties compared to the same group of "related compounds" for which comparison had previously been made in the 1961 and 1957 applications. In those two applications, however, the broader and narrower herbicidal classes of compounds, both of which contained 3,4-DCPA and 3,4-DCAA, were the bases for the comparisons, while in the division it was only 3,4-DCPA which was being compared to the "related compounds." Each of the 1961 and 1967 applications properly referenced its senior applications such that the 1961 application derived the benefit of the 1957 filing date and the 1967 application derived the benefit of the 1961 and 1957 filing dates under the provisions of section 120 of the statute.

During the prosecution of the 1967 divisional application claiming the compound 3,4-DCPA, a section 103 reference was cited in which 3,4-DCAA was the basis for an examiner's holding of prima facie obviousness. The reference, however, did not teach any herbicidal activity for 3,4-DCAA. In an attempt to overcome the 3,4-DCAA reference, Monsanto had a series of tests conducted in which 3,4-DCPA was tested for its herbicidal properties on about 20 plant species. Moreover, nine other compounds including the reference 3,4-DCAA were tested on the same plant species. When a Rule 132 affidavit was submitted as a basis for overcoming the nonobviousness rejection, the affidavit listed the results of the tests of the 10 compounds as applied to 11 plants, with no reference to the results on the other nine plants, one of which was pigweed. Thus, the Rule 132 affidavit did not contain the data which shows that 3,4-DCAA is as effective as 3,4-DCPA in destroying pigweed; but these data, it will be recalled, were explicitly set forth immediately adjacent to each other in tabular and verbal form in both of the earlier applications from which the division admittedly properly derived its earlier filing date in the view of the trial and Third Circuit courts.

With these operative facts, District Judge Masterson of the Eastern District of Pennsylvania held the Huffman patent invalid as obvious over the 3,4-DCAA prior art under the *Henze* doctrine. He further

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503. 443 F.2d 1035 (5th Cir. 1971), cert. denied, 405 U.S. 974 (1972).
504. This affidavit appears in its entirety in Appendix V, and the patent solicitor's amendment and remarks including those commenting on that affidavit appear in Appendix VI infra.
held the patent invalid as inequitably procured on the ground that ma-
terial facts were withheld in order to mislead the Patent Office during
the prosecution of the patent suit (no antitrust counterclaim was
pleaded or litigated at that trial). Judge Singleton of the Southern
District of Texas, however, utilizing the same operative facts and with
full knowledge of Judge Masterson’s opinion, held the Huffman pat-
ent unobvious over the 3,4-DCAA reference. He also used the Henze
doctrine as the controlling law, but held that the patent was obtained
equitably. The Court of Appeals for the Third Circuit affirmed
Judge Masterson in his holding of invalidity but based its holding
solely on fraudulent procurement; the court reached no other issue,
thereby avoiding the difficult problem of whether Henze was the law
and whether it was good law.

The Third Circuit, with a vigorous dissent by Judge Kalodner,
held that the failure to set forth in the affidavit of the division the
effective herbicidal activity on pigweed of 3,4-DCAA was a material
omission under Henze, although this herbicidal activity on pigweed
for 3,4-DCAA was expressly set forth in the specifications of both the
1961 and 1957 parent applications. That fact, however, was of little
consequence in the Third Circuit’s view because the examiner of the
divisional application was a person different from the examiner of the
two earlier parent applications. Perhaps even more basic to the
court’s decision was the assertion in the division that 3,4-DCPA has
unique and unexpected herbicidal properties compared to the activity
of the group of “related compounds.” The court held that this state-
ment, which was clearly carried forward from the two parent applica-
tions, was designed to mislead the examiner by drawing his attention
away from 3,4-DCAA and its herbicidal properties. Since the Third
Circuit’s posture in holding the patent invalid is nowhere based on sec-
tion 103 obviousness over the 3,4-DCAA reference, it is critical to
evaluate, if this case is to guide patent solicitors’ future activities,
whether the behavior of the Monsanto patent attorney through the
history of the filing and processing of the three continuing patent ap-
plications constituted inequitable conduct or fraud.

In order to do that, however, it is first necessary to understand how
Masterson and Singleton differed in their application of the Henze
doctrine to the 3,4-DCPA invention and the 3,4-DCAA prior art. To
begin with, Henze, now reversed by the CCPA but reaffirmed by the

506. 312 F. Supp. at 794.
1970).
508. Id. at 463.
509. 456 F.2d 592, 600 (1972).
510. See id. at 599-600.
511. See id. at 600.
512. Id. at 599.
Court of Appeals for the District of Columbia,\textsuperscript{513} was operative and controlling law in the view, at least, of the Patent Office at the time of the prosecution of all three applications, although trial counsel for Monsanto argued that \textit{In re Papesch}\textsuperscript{514} of the CCPA and \textit{Deutsche-Gold}\textsuperscript{515} of the District Court of the District of Columbia modified \textit{Henze} significantly prior to filing of the fateful Rule 132 affidavit. \textit{Henze} stood for the proposition that when an application claims a chemical compound which is prima facie obvious over another prior art compound,\textsuperscript{516} and nonobviousness is asserted for the claimed compound because of an advantageous and unexpected property not disclosed in the prior art for the section 103 compound, then there is a presumption\textsuperscript{517} that the prior art compound also possesses the same property as the claimed compound.\textsuperscript{518} Therefore, under \textit{Henze}, it was necessary for the applicant to come forth with some showing that the prior art compound did not inherently possess the unexpected property.

In the Eastern District of Pennsylvania, Judge Masterson held that 3,4-DCPA was necessarily obvious over 3,4-DCAA simply because it was established by the tests which led to the Rule 132 affidavit that 3,4-DCAA has effective herbicidal capability with respect to pigweed.\textsuperscript{519} Judge Singleton of the Southern District of Texas, on the other hand, viewed this limited herbicidal effect of 3,4-DCAA as so insignificant compared to the outstanding herbicidal capability of 3,4-DCPA with respect to many categories of weeds that the difference was a difference in kind rather than merely one of degree and that \textit{Henze} was consequently satisfied. In short, his view was that the herbicidal activity of 3,4-DCAA was \textit{de minimis}.\textsuperscript{520}

The important question remains, however, as to whether the Huffman patent was fraudulently procured, since this was expressly held to be the sole basis of invalidity by the Third Circuit. Several factors must be considered. First, since the Third Circuit's opinion was rendered after the Southern District of Texas decision was promulgated, it would seem that the Third Circuit should have taken into account the fact that two district court judges held oppositely on the issue of whether the herbicidal activity of the prior art compound was of any significance on the subject of nonobviousness. Since both trial courts used \textit{Henze} as authority and since the facts were the same, only one of them can be right. Surely this is an indication that reasonable men (federal judges, no less) can and did differ on whether

\begin{itemize}
  \item \textsuperscript{514} 315 F.2d 381, 137 U.S.P.Q. 43 (C.C.P.A. 1963).
  \item \textsuperscript{516} \textit{Henze} involved the next adjacent homolog to the claimed compound.
  \item \textsuperscript{517} In \textit{In re Mills}, 281 F.2d 216, 128 U.S.P.Q. 513 (C.C.P.A. 1960), the court decreased this presumption to an inference of fact.
  \item \textsuperscript{518} 181 F.2d at 201.
  \item \textsuperscript{519} 312 F. Supp. at 790-91.
  \item \textsuperscript{520} 312 F. Supp. at 462.
\end{itemize}
the herbicidal activity of 3,4-DCAA came within the scope of the Henze doctrine. This being so, is it not an inescapable conclusion, without direct evidence to the contrary, that the Monsanto patent solicitor's evaluation that the 3,4-DCAA herbicidal activity was not material to the issue of nonobviousness was at worst a nonculpable mistake of judgment?* The issue is not whether the Third Circuit could reasonably consider Judge Singleton incorrect on the substantive issue, but whether it had a rational basis for a holding of fraud in view of Judge Singleton's disagreement with the Third Circuit. If the judges disagree whether certain behavior meets a proper standard of candor after the fact, especially in view of the Third Circuit's suggestion that intent is irrelevant, then the patent solicitor was caught in a hopeless ex post facto vise. Somehow, this logic escaped the Third Circuit.

Second, of even greater importance is the Third Circuit's ignorance of the accepted manner and practice, defined by statute and rule, in which patent prosecution takes place. The Third Circuit was much impressed with the fact that the examiner of the divisional application, Natalie Trousof, was not the examiner who handled the earlier applications. But practicing patent lawyers know that under the requirements of the Manual of Patent Examining Procedure, an examiner of a continuing or divisional application is charged with the responsibility of examining the parent applications for the twofold purposes of analyzing the claims of the continuing application with respect to the prior art cited in the parent applications and, even more significantly for the purposes of this discussion, of examining the parent specifications under certain circumstances to ensure their support for the claims of the continuing application under the requirements of sections 112 and 120 without which the division is not entitled to the earlier filing dates of its parents.

Those circumstances had occurred and a detailed examination of both the 1961 and 1957 disclosures must have taken place as a matter of law for the following reason. During the prosecution of the division, the examiner cited the Gorman patent having an effective date of April 4, 1957 disclosing 3',4'-dichloroisobutyranilide which is an adjacent homolog of the claimed 3,4-DCPA. In his amendment and remarks

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* STERN: No. The Third Circuit, on the contrary, appears to have thought that Judge Singleton's views were plainly erroneous, and that his acceptance of the patentee's theory that "it is all right to put your best foot forward with the Patent Office" was contrary to the legal standard as to candor required in ex parte proceedings of this type. Given so thoroughly erroneous a concept of the standard of candor, it is neither surprising that in the circumstances of this case the judge using that legal standard found no fraud nor surprising that the judges rejecting it found fraud.

521. Manual of Patent Examining Procedure § 707.05 (3d ed. 1961) states: "In all continuing applications, the parent applications should be reviewed for pertinent prior art." (These words in effect at least since July 1970).
the patent solicitor did not traverse the rejection based on the Gorman reference but instead argued that it was not a statutory time bar under section 102(b) since the division was entitled to the benefit of the filing date of the 1957 grandparent. Thus, he argued that he was entitled to file and he did file a Rule 131 affidavit showing actual reduction to practice of the claimed invention prior to the Gorman reference. The affidavit served to remove the reference. It is critical to note, however, that the affidavit would have been worthless and the examiner would have been forced by law to refuse its entry if the reference had been a time bar against the division. Thus, before even looking at the affidavit, Title 35 of the United States Code required the examiner to be satisfied that the divisional claim was supported by the specification of the 1957 application. The Monsanto patent solicitor was thus completely justified in attributing actual, but at the least, constructive knowledge to the examiner of the contents of the disclosures of both the 1961 and 1957 applications.* Under such rules and in these circumstances, as a matter of law, the examiner of the division had to be familiar with the contents of the earlier filed applications. Thus, there is a legal presumption, ignored by the Third Circuit, that the examiner of the divisional application was aware of the herbicidal capabilities of 3,4-DCAA at least to the extent it was disclosed in the parent application. The extent to which it was disclosed in the parent application was precisely the extent to which Judge Masterson and Judge Aldisert said it was improperly withheld in the Rule 132 affidavit and therefore sufficient to cause a holding of fraud in the procurement. If lawyers may not rely upon what government agencies are charged with knowing by law, what does it mean to have a government of law and not men? Interestingly, it was asserted by counsel for Monsanto in its petition for certiorari to the Supreme Court that in a parallel litigation, the examiner, Natalie Trousof, testified on oral deposition that in fact she actually had examined the file histories of the two earlier applications.

The third factor is the Third Circuit's heavily emphasized concern with the two-step narrowing of the class of 3',4'-dihalogenated anilides of the 1957 specification down to 3,4-DCPA in the division but

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522. See Appendix VI infra.

* Stern: The proposed reliance on constructive knowledge, and the indulgence in legal fictions and presumptions that follows, has far more flavor of a determination not to learn damaging facts than it has of the candor required in such cases. Those who make the spirit of such conduct a guide for action should hardly be surprised if the court follows the rule in Falter v. United States, 23 F.2d 420 (2d Cir. 1928), and accompanying text, or United States v. Sarantos, 455 F.2d 877 (2d Cir. 1972).

523. In determining whether the parent application did support the divisional application's claim to 3,4-DCPA, the examiner was legally obliged to ascertain whether that compound and how to use it were disclosed in the parent as required by 35 U.S.C. § 112 (1970). Conceivably, she could have done so without looking at the tabular listing showing 3,4-DCAA and its herbicidal effect on pigweed immediately adjacent to that of 3,4-DCPA. To suggest that she in fact did so and failed to see the 3,4-DCAA listing not only defies credibility but would require her to function professionally at so immature a level as to be incompatible with the intelligence and educational levels required for employment as an examiner.

the unchanged comparison of those classes having unexpected herbicidal properties with the anilide group of "related compounds." This concern is misplaced and can be attributed to nothing more than the court’s profound misunderstanding of the relationship between divisional and parent applications and the meaning and role of “use” and “compound” claims. To begin with, the 1961 application, which nowhere claimed a compound as such, but merely the herbicidal use of a whole class of compounds including 3,4-DCPA and 3,4-DCAA, was still being prosecuted at the time that Monsanto petitioned for certiorari to the Supreme Court of the United States. Although 3,4-DCAA was prior art, there was nothing in the prior art to suggest it as an effective herbicide. Therefore, the parent application of 1961 was still being prosecuted for method of use claims for a class of compounds including 3,4-DCPA and 3,4-DCAA. For a divisional application carved out of that parent, directed to and claiming 3,4-DCPA, whose nonobviousness is predicated upon its unexpected herbicidal properties, it was quite appropriate to leave the specification of the division in the form in which the narrowed class of herbicidally active compounds (now solely 3,4-DCPA) is stated to have unexpected properties compared to the same earlier described related group of isomers, analogs and homologs. That is exactly what the term “carving” the divisional specification from the parent has meant for decades, that is, the pertinent sections of the parent specification are retained and the unrelated portions are cancelled. Since the parent was still being prosecuted based in part on the novelty of 3,4-DCAA’s herbicidal activity, it is little short of a Kafkaesque nightmare to suggest that failure to disclose that activity in the division was a misrepresentation, deceitful or otherwise.

It would appear that if the Monsanto-Huffman patent is invalid, it is invalid because Judge Singleton is wrong with respect to nonobviousness and Judge Masterson is right with respect to obviousness, but not on any other basis discussed in this presentation or on any basis treated by the Third Circuit.

VIII. Litigation of Fraudulent or Inequitable Procurement†

Fraudulent procurement or inequitable conduct poses a difficult prob—

525. 456 F.2d 592 (3d Cir. 1972).
526. Manual of Patent Examining Procedure § 201.06 (3d ed. 1961) states: A later application for a distinct or independent invention, carved out of a pending application and disclosing and claiming only subject matter disclosed in the earlier or parent application, is known as a divisional application or “division” . . . . The divisional application should set forth only that portion of the earlier disclosure which is germane to the invention as claimed in the divisional application. (These words in effect at least since July 1971).
† This section was written by John F. Lynch.
lem of proof. The burden of proof is high, and the issues of knowledge and willfulness are often shrouded in attorney-client relations which may be immune from discovery because of privilege. As demonstrated by the *Monsanto*\(^{527}\) cases and by the *Beckman*\(^{528}\) case, the issue of fraud is a fickle one, proof of which largely depends upon the subjective impact of the facts and the witnesses on the court. Attorneys would be well advised to carefully scrutinize the merits of their assertions of fraud in light of an honest appraisal of the law.\(^{529}\) The assertion of an insubstantial defense may of itself provoke a negative judicial reaction.\(^{530}\)

Procedurally, some observations can be made respecting procedures involved in litigation of a fraudulent procurement or inequitable conduct issue. It is most convenient to consider these litigation aspects in the chronological order in which the events typically occur.

### The Pleadings

The issue of fraudulent procurement or inequitable conduct in patent cases may arise as a defense in patent infringement actions, or as an affirmative ground for declaratory relief when incorporated in a declaratory judgment complaint. There are a number of procedural restrictions which impose pleading requirements upon the proponent of the fraudulent procurement and inequitable conduct issue.

Section 282 of the Patent Act\(^{531}\) outlines generally the defenses which may be raised in an action involving "the validity or infringement of a patent," and requires that they be pleaded.\(^{532}\) A defense


528. In *Beckman Instr., Inc. v. Chemtronics, Inc.* 428 F.2d 555, 154 U.S.P.Q. 355 (5th Cir. 1970), the Fifth Circuit thoroughly repudiated the patentee's conduct as failing to measure up to the required standard, yet upon remand, the district court virtually ignored the court of appeal's decision in entering findings which exculpated the patentee of knowing and willful misrepresentation. 328 F. Supp. 1132, 170 U.S.P.Q. 466 (W.D. Tex. 1971).

529. It is difficult to criticize advocates for raising issues in litigation on behalf of their clients. In reviewing the cases on fraudulent procurement, it may be concluded that the assertions of fraud against businessmen and attorneys are made too casually. Some self-restraint appears to be in order.

530. Commissioner James Davis of the Court of Claims gives some insight into the reaction of a judge to an insubstantial defense in specific reference to charges of fraudulent procurement: "[Q]uestionable or spurious defenses tend to weaken a defendant's case, and in my view, raising them is not good trial tactics. My own reaction to strained defenses and arguments is that defendant must have a pretty poor case, otherwise he would not rely on them." Davis, *Fraud on the Patent Office from the Judiciary's Viewpoint*, Patent Trial Advocacy A-37.


532. The second paragraph of 35 U.S.C. § 282 (1970) specifically provides: The following shall be defenses in any action involving the validity or infringement of a patent and shall be pleaded:

1. Noninfringement, absence of liability for infringement, or unenforceability.

2. Invalidity of the patent or any claim in suit on any ground
of unenforceability or invalidity based upon inequitable conduct must be pleaded specifically.533 The detail with which the defense must be pleaded is the subject of other requirements imposed by the Federal Rules of Civil Procedure.

Rule 8(c) of the Federal Rules of Civil Procedure duplicates the requirements of section 282 since it requires that a party must set forth affirmatively "fraud, illegality, . . . and any other matter constituting an avoidance or an affirmative defense."534 But more importantly, Rule 9(b)535 provides that allegations of fraud must be specific.536

PPG Industries, Inc. v. Cleanese Coatings, Co.537 considered a motion to strike portions of a declaratory judgment complaint against the patentee alleging that fraudulent representations and material misrepresentations were knowingly made and false oaths were filed in the Patent Office to obtain issuance of the patent in suit. The court, in granting the motion to strike with leave to amend, commented that Rule 9(b) requires that the time, place, and content of the fraudulent misrepresentation be described in the pleadings.538

More recently, however, the court in Essex International, Inc. v. Industra Products, Inc.539 refused to grant a motion to strike a defense which generally asserted fraud and inequitable conduct as a defense in a patent infringement action. The court indicated that, in the context of complicated litigation, Rule 9(b) should be read in conjunction with the Federal Rules' requirements for short plain statements of claims and further that discovery was available to one patentee on the issue. The decision unfortunately encourages insertion of a boiler plate fraud or inequitable conduct defense into pleadings by accused infringers—an occurrence which Rule 9(b) was apparently intended to avoid.

The concern respecting a non-inclusion of a general assertion of fraud or inequitable conduct in the accused infringer's pleadings stems from the fear that without such an allegation the scope of discovery will be restricted, and the accused infringer will be precluded

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specified in part II of this title as a condition for patentability,

(3) Invalidity of the patent or any claim in suit for failure to comply with any requirement of sections 112 or 251 of this title,

(4) Any other fact or act made a defense by this title.

533. Id. When there is sufficient indication that at least one claim is invalid as a result of fraud or inequitable conduct, the defendant should consider a plea of invalidity under 35 U.S.C. § 253 (1970). See section III supra.

534. FED. R. CIV. P. 8(c).

535. FED. R. CIV. P. 9(b).

536. Rule 9(b) provides: "In all averments of fraud or mistake, the circumstances constituting fraud or mistake shall be stated with particularity. Malice, intent, knowledge, and other condition of mind of a person may be averred generally."


538. Id. at 236.

from investigating the propriety of the patentee's conduct before the Patent Office. Most courts should and do favor a standard of relevance which is measured by the subject matter of the actions, not by the specific averments in the pleadings.\textsuperscript{540} It would be difficult to imagine a court refusing to permit discovery of non-privileged documents relating to the patentee's consideration of prior art or experimental work designed for use in an affidavit before the Patent Office, or concerning the dates of the patentee's first use or sale of a device simply because of inadequate pleadings. Hence, the accused infringer is not precluded from developing evidence of facts that may provide an inference of withheld information.

Nevertheless, it is not advisable to raise fraud or inequitable conduct unless there is some specific factual background to the allegation. If a motion to strike a general fraud or inequitable conduct averment in a pleading is successful, the accused infringer's discovery efforts in these areas undoubtedly will be met by vigorous resistance and argument based upon the fact that the claim was stricken from the pleading. The accused infringer or declaratory judgment plaintiff should, rather, rely upon the liberal policy of permitting amendments to the pleadings in the Federal Rules which provide that leave to amend "shall be freely given when justice requires."\textsuperscript{541}

Another pleading problem arises in those instances where the party attacking the patent wishes to add a \textit{Walker} antitrust counterclaim\textsuperscript{542} based upon fraudulent procurement. Such a claim for damages is predicated upon section 4 of the Clayton Act\textsuperscript{543} and requires as an element of standing that the antitrust claimant be "injured in his business or property by reason of anything forbidden in the antitrust laws."\textsuperscript{544}

The initial consideration is whether such a counterclaim is compulsory within the meaning of Rule 13(a) of the Federal Rules of Civil Procedure.\textsuperscript{545} There is authority suggesting that the antitrust claim based upon fraudulent procurement is compulsory,\textsuperscript{546} but the point

\begin{itemize}
\item \textsuperscript{540} 4 J. \textsc{Moore}, \textit{Federal Practice} \S 26.56[1] (2d ed. 1948).
\item \textsuperscript{541} \textsc{Fed. R. Civ. P.} 15(a). Note the extreme liberality demonstrated by the court in \textit{Schnadig Corp. v. Gaines Mfg. Co.}, 494 F.2d 383, 181 U.S.P.Q. 417 (6th Cir. 1974), where the fraud issue first arose in a post-trial brief. The charge was apparently unsupported by evidence. Such baseless raising of a fraud issue should be affirmatively discouraged, perhaps by a partial attorneys' fees award.
\item \textsuperscript{542} See note 25 supra and accompanying text.
\item \textsuperscript{543} 15 U.S.C. \S 15 (1970).
\item \textsuperscript{544} \textit{Id.}
\item \textsuperscript{545} Rule 13(a) provides:
A pleading shall state as a counterclaim any claim which at the time of serving the pleading, the pleader has against any opposing party if it arises out of the transaction or occurrence that is the subject matter of the opposing party's claim and does not require for its adjudication the presence of third parties of whom the court cannot acquire jurisdiction.
\item \textsuperscript{546} \textsc{Hancock Oil Co. v. Universal Oil Prod. Co.}, 115 F.2d 45, 47 U.S.P.Q. 300 (9th Cir. 1940), supplemented, 120 F.2d 959, 50 U.S.P.Q. 175 (9th Cir.), \textit{cert. denied}, 314 U.S. 666, 51 U.S.P.Q. 546 (1941). 
\textit{See also 1A J. Barron \& A. Holtzoff, Federal Practice and Procedure} \S 394 at 576 (Rules Ed. 1960).
\end{itemize}
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has not been squarely confronted since \textit{Walker} and it is suggested that any such inference of the compulsory nature of the counterclaim be overcome.\textsuperscript{547}

Should a party wish to set forth a \textit{Walker} antitrust counterclaim in the patent infringement suit, however, he should provide in the pleadings some substantial averments establishing his standing to sue and setting forth the nature of the antitrust violation. Without such averments the counterclaim may be subject to a motion to strike, a motion for more definite statement, or an early dismissal. In \textit{Ekco Product}, Inc. \textit{v. Dare Plastics}, Inc.,\textsuperscript{548} the Court held that an antitrust counterclaim based upon alleged fraudulent procurement "which contain[ed] vague and conclusory allegations of a violation of section 2 of the Sherman Act,"\textsuperscript{549} fails to state a claim upon which relief can be granted."\textsuperscript{550} The court pointed out\textsuperscript{551} the requirements for specificity in pleading fraud set out by Rule 9(b) of the Federal Rules. The court also found the defendants' pleading on the counterclaim which alleged an attempt to monopolize to be insufficient.\textsuperscript{552} In at least the Ninth Circuit, relevant market proof is not essential in attempt to monopolize cases.\textsuperscript{553} In any event, it would not seem that detailed pleading of the elements of the antitrust offense other than the allegation of fraud would be required to be pleaded with the particularity required by \textit{Ekco}.

\begin{enumerate}
\item[(21) (1944),] the Supreme Court indicated that in view of public policy, an antitrust claim not asserted as a counterclaim would not be treated as a compulsory counterclaim.
\item[(547)] In \textit{Chromalloy Am. Corp. v. Alloy Surfaces Co.}, 351 F. Supp. 449, 176 U.S.P.Q. 99 (D. Del. 1972), the accused infringer attempted to amend his pleadings almost four years after suit was filed to assert an antitrust counterclaim. The patent had already been held unenforceable for inequitable conduct. \textit{Chromalloy Am. Corp. v. Alloy Surfaces Co.}, 339 F. Supp. 859, 173 U.S.P.Q. 295 (D. Del. 1972). The court denied the motion to add the antitrust claim, commenting that if the defendants were "serious in pressing their antitrust claims, they may do so in new litigation." 351 F. Supp. at 452, 176 U.S.P.Q. at 101. There was no discussion of the impact of Rule 13(a), however.
\item[(550)] 173 U.S.P.Q. at 666.
\item[(551)] Id.
\item[(552)] The court stated: "This vague assertion that plaintiffs' sales constitute a substantial portion of the entire market . . . fails short of alleging that the plaintiffs have obtained economic domination or the power to fix prices in or exclude competitors from the relevant market." \textit{Ekco Prod., Inc. v. Dare Plastics}, Inc., 173 U.S.P.Q. 664, 666 (S.D. Ohio 1972). \textit{See also} Essex Int'l, Inc. \textit{v. Industra Prod., Inc.}, 182 U.S.P.Q. 56, 58 (N.D. Ind. 1974), where the court discussed an antitrust claim under section 2 of the Sherman Act, holding that the pleadings "do not state in realistically definitive terms the existence of monopoly power (through market share or otherwise) or the existence of a dangerous proximity to achievement of monopoly. . . . Repetition of the statutory terms is inadequate to the task." \textsuperscript{553} \textit{Lessig v. Tidewater Oil Co.}, 327 F.2d 459 (9th Cir.), cert. denied, 377 U.S. 983 (1964); \textit{Industrial Bldg. Materials, Inc. v. Interchemical Corp.}, 437 F.2d 1336 (9th Cir. 1971). The split of authority is noted in \textit{Woods Exploration \& Producing Co. v. Aluminum Co. of America}, 438 F.2d 1286 (5th Cir. 1971), cert. denied, 404 U.S. 1047 (1972). \textit{See} notes 383-93 supra and accompanying text.
\end{enumerate}
To obtain standing to sue under the Clayton Act, allegations of injury to business or property must be sustainable. The expenses of defending the infringement suit against the fraudulently procured patent may be insufficient injury. In *Western Dairy Products, Inc. v. Griffith Laboratories, Inc.*, the court considered a motion for summary judgment to dismiss a Walker-type antitrust claim. The alleged antitrust damage included the attorneys' fees and expenses connected with the litigation and with pre-litigation negotiation, as well as lost business. The court held that there was no evidence of any lost business opportunities. With respect to the other elements of alleged damage, the court stated that "... sufficient sanctions exist in declaring the patent invalid, barring its enforcement and awarding defendant his litigation expenses under 35 U.S.C. § 285."

Several pre-Walker cases have held that attorneys' fees incurred in defending a patent suit brought in furtherance of anticompetitive conduct in violation of the antitrust laws are subject to trebling. It seems clear that if the procurement and enforcement of a patent were indeed found to be in violation of the Sherman Act, the legal expenses in connection with the patent defenses should be part of the antitrust damage and should be subject to trebling.

The *Ekco* case considered an assertion by the patentee that, according to the law in the Sixth Circuit, legal expenses connected with defense of the patent claim were not an element of treble damages. The court reviewed the Sixth Circuit authority, compared it to the contrary authority, and then declined to rule pending amendment of the antitrust counterclaim by defendant. These cases indicate that if the only alleged injury is the expense of the litigation, it may be difficult for an accused infringer to bootstrap himself into a position as an injured party having standing to sue.

Should the antitrust plaintiff weather the difficulties presented in the pleadings, it would be advisable in most instances to move for an early severance of the antitrust claim, leaving only the issue of fraudulent procurement. If this is not done, all the complex antitrust issues must be asserted and proven in the patent suit. Severance would avoid this expense and would avoid the necessity of presenting relevant market proof, which very often inherently involves proof of facts similar to the patentee's case on long-felt want and commercial success. The accused infringer must be ever mindful that the successful defense of the patent suit is his primary goal. Injecting a complex and expensive antitrust claim into his case can dilute the issues, divert his attention and possibly adversely affect his preparation of the patent defense.

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555. Id. at 681.
558. Id. at 667.
559. Id.
Discovery

The scope of permissible discovery under the Federal Rules of Civil Procedure is set forth in Rule 26(b), and is generally restricted only by a necessity to demonstrate relevance. Since in most instances the inquiries made to the patentee to establish a possible breach in the patentee's duty of candor to the Patent Office will also generally go to the proof of a statutory defense to the patent, such discovery should not be restricted by the absence of a fraudulent procurement charge in the pleadings.

It has been held proper to request that the patentee provide by interrogatory, identification of all prior art discovered in patentability searches as well as an indication of the date upon which each item of prior art became known to the patentee. Similar inquiries could be directed to the patentee in order to uncover any art considered relevant by adverse parties in licensing negotiations or the like, or art cited in prosecution of foreign counterparts. A most interesting interrogatory was propounded to the patentee in Chromalloy American Corp. v. Alloy Surfaces Co. Rather than beating around the bush, the defendant squarely inquired whether there was any "misstatement present in the Patent Office file of the patent in suit." The plaintiff initially did not answer, but ultimately was required by the court to respond to the interrogatory.

Interviews held during prosecution of a patent are another possible fertile ground for discovery. Despite the Patent Office rule that all business with the Patent Office must be conducted in writing, the subject matter of interviews with examiners is usually cryptically treated in subsequent amendments, which often result in allowance of the application. Accordingly, it would be appropriate to re-

560. The Rule provides in part, "Parties may obtain discovery regarding any matter, not privileged, which is relevant to the subject matter involved in the pending action, whether it relates to the claim or defense of the party seeking discovery of the claim or defense of any other party . . . ." FED. R. CIV. P. 26(b).

561. See note 540 supra and accompanying text.


565. Id.


567. Judge John F. Dooling of the Eastern District of New York gave a trial judge's reaction to a fictional but not atypical patent file history: ["T]hen there is that terrible gap at the end [of the patent prosecution history] where the patent examiner said 'All claims are disallowed'. And then the next document turns up: 'I'm very grateful for the courteous interview'; all claims are allowed including a few that nobody had talked about before.

quest production of all documents which contain any reference to the contents of the interview. Such documents will often be alleged to be privileged, since they will likely comprise attorney-client communications. But insofar as they relate to the conversations with the examiner, such communications are not confidential and furthermore represent the sole record of facts which should have been properly recorded in detail in the file history of the application.\(^{568}\)

The matter of attorney-client privilege in connection with the preparation and prosecution of patent applications has been a matter of dispute among various courts.\(^{569}\) An interesting perspective is afforded by *Jack Winter, Inc. v. Koratron Co.*,\(^ {570}\) where the court observed that the attorney has no discretion to withhold relevant information from the Patent Office and hence the communications between attorney and client relating to such matters lacked "a basic required element for the assertion of an attorney-client privilege... that is, a communication not for relay but for the attorney's ears alone."\(^ {571}\) Therefore, courts commonly consider documents individually rather than by broad characterizations, often undertaking to review the documents in camera.\(^ {572}\)

Arguments seeking to overcome a claim of privilege on grounds that full disclosure of all relevant documents related to obtaining a patent is a paramount requirement of federal patent policy have been unsuccessful.\(^ {573}\) In *Natta v. Zletz*,\(^ {574}\) it was held that some prima facie showing in support of an allegation of fraud on the Patent Office was necessary to defeat the privilege. Establishing a prima facie case of fraudulent procurement in order to pierce attorney-client privilege is a formidable task under *American Optical Corp. v. United States*.\(^ {575}\) The court required that in order to pierce the privilege, a case of fraud complete with evidence that the patent examiner would have rejected the claims if he had known of a withheld prior art reference must be established.\(^ {576}\) The defendant in *American Optical* had already provided a memorandum establishing that the patentee's attorneys regarded the withheld reference as "troublesome in obtaining acceptable claims."\(^ {577}\)

\(^{568}\) In McLaren v. B-I-W Group, Inc., 180 U.S.P.Q. 387 (E.D. Va. 1973), the court reviewed privileged documents in camera for indications of what transpired at interviews between the attorney and the patent examiner. Since the attorney was also involved in the litigation the court required that an attempt be made to ascertain what occurred at interviews by deposing the patent examiner first.

\(^{569}\) See discussions of the cases on the subject in R. White, Patent Litigation: Procedure & Tactics, \$ 5.01 [4] at 5-16 (1974).


\(^{571}\) 50 F.R.D. at 228, 166 U.S.P.Q. at 298.


\(^{574}\) Natta v. Zletz, 418 F.2d at 636, 163 U.S.P.Q. at 676.

\(^{575}\) 179 U.S.P.Q. 682 (Ct. Cl. 1973).

\(^{576}\) Id. at 684.

\(^{577}\) Id.
Clearly, "communications from a client to an attorney about a crime or fraud to be committed are not privileged." A narrow view of privilege in fraudulent procurement cases based on this rationale is demonstrated in *W. R. Grace & Co. v. P. Ballantine & Sons,* where the court refused to allow discovery of allegedly fraudulent documents dated after the issuance of the patent on grounds that it did not involve "pursuit of a criminal or fraudulent act yet to be performed." Although it is impossible to comment whether a sufficient showing had been made to defeat the privilege, the proof of fraudulent procurement by evidence after the fact should be equally probative as evidence of a planned fraud, particularly since enforcement of a known invalid patent can itself provide a defense against infringement.

**Development of Proofs and the Trial**

The fraudulent procurement case presents issues not usually dealt with in patent litigation. For example, the proof of the fraudulent procurement itself involves proof of knowledge and willfulness which are not normally part of patent lawsuits. Also, an antitrust claim may involve proof with respect to the relevant market.

In fraudulent procurement cases, there is need for proof that the misconduct involved can be imputed to the corporate patentee in order to sustain an antitrust claim against it based upon fraudulent procurement. The proof or establishment of a conclusive presumption of knowledge by a corporation is rather well-defined.

In *Acme Precision Products, Inc. v. American Alloys Corp.*, the United State Court of Appeals for the Eighth Circuit considered a district court finding that neither the officers nor directors of the patent holder had knowledge of the fraud. In reversing this holding, the court set forth the general proposition "that knowledge of officers and key employees of a corporation, obtained while acting in the course of their employment and within the scope of their authority, is imputed to the corporation itself." Other cases have not found difficulty in similarly imputing the inequitable conduct to the corporation. For example, in *Kearney & Trecker Corp. v. Giddings & Lewis, Inc.,* the court found that the ineligible examiner had been hired by the president of the company and had worked closely with "the

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578. United States v. Bob, 106 F.2d 37, 40 (2nd Cir. 1939).
580. Id.
582. 422 F.2d 1395, 165 U.S.P.Q. 164 (8th Cir. 1970).
head of the company’s patent department and had cautioned him about the desirability of avoiding reference to the [ex-examiner’s] participation on the matter.\textsuperscript{585} The court accordingly found the patentee corporation chargeable with the inequitable conduct.\textsuperscript{586} In \textit{Armour & Co. v. Swift & Co.},\textsuperscript{587} the court considered the knowledge of the prior art possessed by a manager in \textit{Armour} and rejected the argument that this knowledge was not imputable to the inventor of the company.\textsuperscript{588} Proof of corporate responsibility is difficult. Proof that the knowledge existed at some managerial level of the patentee company requires much more effort.

Areas which merit additional detailed analysis with respect to tactics in a fraudulent procurement or an inequitable conduct case are the desirability of deposing patent examiners, the role of “patent” experts on behalf of either the patentee or the accused infringer, and the role of experts or other evidence in establishing a good faith defense.

The patent file wrapper, which provides the prosecution history of an application before the Patent Office, is an immediate object of study by any accused infringer, whether or not involved in litigation. It seems reasonable to seek to supplement the insight which may be acquired from the file history with testimony adduced from the patent examiner who was in charge of the application while it was before the Patent Office.\textsuperscript{589} As discussed above, neither the Patent Office nor the courts will permit either litigant’s attempt to obtain testimony from the examiner on hypothetical questions directed to what his action would have been had the truth with respect to the misrepresented fact been known.\textsuperscript{590} Because the patent examiner may testify as to facts which occurred during prosecution, however, his testimony may nevertheless have a place in the development of the case of the patentee or the defending infringer in a fraudulent procurement litigation. For example, the actual positions taken during an interview and the specific nature of representations made orally to the examiner may be examined, if the examiner’s memory is adequate. It may be important to establish that the examiner does not recall the factual background surrounding prosecution of the application. If so, testimony by the patentee’s witnesses to the effect that they endeavored to make full disclosure to the Patent Office has increased probative value.

As indicated, the Patent Office might deviate from its position of precluding testimony from examiners on questions of reliance and state of mind in instances where the Department of Justice files a suit for cancellation of a patent based upon fraud.\textsuperscript{591}

\textsuperscript{585} 452 F.2d at 597, 171 U.S.P.Q. at 664.
\textsuperscript{586} 452 F.2d at 596-97, 171 U.S.P.Q. at 664.
\textsuperscript{587} 466 F.2d 767, 175 U.S.P.Q. 70 (7th Cir. 1972).
\textsuperscript{588} 466 F.2d at 777, 175 U.S.P.Q. at 77-78.
\textsuperscript{589} For a discussion of the case law concerning examiner testimony, see notes 151-76 supra and accompanying text.
\textsuperscript{590} See text accompanying notes 151-76 supra.
Other areas for investigation might include identification of actual art subclasses searched by the examiner as well as the contents of the searched subclass. It is apparent that an examiner's testimony that he searched a particular subclass in which an alleged withheld prior art reference existed works in favor of the patentee. The examination might go one step further and seek to establish that the examiner was "familiar" with the withheld reference. For example, if the examiner cited the withheld reference in other applications which he examined contemporaneously with the patent in question, the court may infer that the examiner was familiar with the reference and that failure to cite it did not amount to a material misrepresentation.

A unique feature of this latter line of testimony is that the patentee may be able to ascertain the answers to his questions before deposing the examiner. The Manual of Patent Examining Procedure and other published material on the topic of examiner's testimony preclude interviews with the examiner prior to taking his deposition. The examiner's searching file, however, is open to the public, and a review of related patents examined and issued by the same examiner during the pendency of the patent in question may provide evidence that the examiner was indeed familiar with the alleged wrongfully withheld art by virtue of citation of it in analogous cases.

Since neither party can be certain as to the outcome of an examiner's deposition testimony, there will be extreme reluctance to take the deposition. In most instances, the patentee will not be able to prove his good faith by the examiner's testimony. More likely, the patentee will utilize the examiner's deposition only when he is seeking to prove such facts as whether certain prior art was called to the examiner's attention in an oral interview or whether specific ground rules for affidavit evidence were set forth by the examiner orally and were complied with by the patent applicant. Other areas of potential inquiry are the examiner's habits or procedures. This would en-

Some deviations from a steadfast position by the Office are indicated. It has been suggested to the Department of Justice that, should it appear that evidence submitted to the Patent Office establishes a prima facie case of fraud or other inequitable conduct, and that Department, in evaluating that evidence files or indicates its intention to file a suit for cancellation of the patent, the examiner who examined the application would be permitted to testify in the cancellation proceeding. Another deviation might be in the situation where the allegation of fraud involves activities by Patent Office personnel.

593. The Solicitor's Office would likely object to such testimony, but the testimony seems as factual and admissible as that required to create an inference that the art was before the examiner. Cf. Standard Packaging Corp. v. Curwood, Inc., 365 F. Supp. 135, 180 U.S.P.Q. 235 (N.D. Ill. 1973).
595. See notes 159, 160 & 163 supra.
able a party to establish the time devoted to searching each case, how much time an examiner spent on studying art cited by the applicant, if at all, or similar habits of the examiner which may reflect the thoroughness with which the examination was conducted.\textsuperscript{596}

Thus, although examiner testimony may be extremely valuable in particular instances, on the whole, the deposition of the patent examiner, subject to the restrictions imposed by the Patent Office, does not provide a ready route to prove the vexing issues of materiality and reliance. Its use will likely be limited to specific situations or to instances where the patentee feels that the case of fraudulent procurement against him is so strong he has nothing to lose.

The danger in hiring a "patent expert" to give testimony with respect to state of the art issues, scope of the patent, infringement, and the like, is reflected in the case law.\textsuperscript{597} Attempts have been made to elicit the testimony of former Commissioner of Patents David Ladd,\textsuperscript{598} the ex-Solicitor of the Patent Office, Mr. Joseph Schimmel,\textsuperscript{599} and Mr. Harold Whitmore, retired superintendent of the Patent Examining Corps,\textsuperscript{600} concerning aspects of the misconduct issue. These experts perform a novel and unique function in patent litigation.

Although such testimony smacks strongly of "ultimate issue" evidence, testimony from the experts of this nature cannot be precluded solely on this ground. Rule 704 of the Federal Rules of Evidence provides that "[t]estimony in the form of an opinion or inference otherwise admissible, is not objectionable because it embraces an ultimate issue to be decided by the trier of fact."\textsuperscript{601} The commentary accompanying the rule clearly does not give a carte blanche to all types of opinions on ultimate issues.\textsuperscript{602}

\textsuperscript{596} See, e.g., \textit{Fed. R. Evid.} 406 entitled "Habit; Routine Practice": Evidence of the habit of a person or of the routine practice of an organization, whether corroborated or not and regardless of the presence of eyewitnesses, is relevant to prove that the conduct of the person or organization on a particular occasion was in conformity with the habit or routine practice.


\textsuperscript{598} In \textit{Grey Processes Corp. v. Danciger Oil & Refineries, Inc.}, 42 U.S.P.Q. 315, 328 (N.D. Cal. 1965), the court commented upon the testimony of a patent agent named Stokes: It was obvious from Mr. Stokes' testimony that he had intensely done a prodigious lot of work in preparing himself to testify as a witness in the case. The only difference I can see between Mr. Stokes and the attorneys is the absence of a license, and that he does his work on the witness stand. Considering this fact and his entire background, including his lack of any substantial experience touching the scientific questions dealt with, his testimony is not calculated to inspire any more confidence than if one of the attorneys in the case had so prepared himself and taken the witness stand to testify as an expert.

\textsuperscript{599} \textit{Union Carbide Corp. v. Filtrol Corp.}, 170 U.S.P.Q. 482 (C.D. Cal. 1971).


\textsuperscript{602} The commentary states: The basic approach to opinions, lay and expert, in these rules is to admit them when helpful to the trier of fact. In order to render this
In addition to the requirements that opinion evidence must assist the trier of fact and not waste time, Wigmore offers the additional requirement that rulings on admissibility of opinion evidence on the ultimate issue must protect against "the tendency for the jury now and then to decide simply according to the preponderance of numbers and of influential names."\(^{603}\) In patent litigation, where many judges are not in their area of expertise, the influential names which might be called to testify as experts can have an effect on the court as well.

Wigmore has advocated that "the opinion of an observer who proposed to state whether a party has used due care, or acted reasonably, or managed skillfully be freely admitted."\(^{604}\) This does not, however, foreclose any argument concerning the admissibility of testimony from the expert on the subject of fraud or inequitable conduct. The difference, according to Wigmore, is that the level of care or reasonableness or skill about which the expert may testify is measured factually and is within the scope of permissible opinion testimony from a qualified expert.\(^{605}\) On the other hand, the standard of conduct and duty of disclosure imposed upon a patent applicant at least arguably involves a legal standard.

In the cases set forth above wherein Messrs. Ladd and Schimmel testified,\(^{606}\) the parties apparently were attempting to bring some direct evidence to bear on the standard of conduct and on important questions of intent and materiality of the fraud or misconduct. In \textit{Jack Winter, Inc. v. Koratron Co., Inc.},\(^{607}\) Mr. Whitmore was testifying on the issue of whether the existence and nature of a prior art approach fully effective and to allay any doubt on the subject, the so called "ultimate issue" rule is specifically abolished by the instant rule.

\textit{...}

The abolition of the ultimate issue rule does not lower the bars, so as to admit all opinions. Under Rules 701 and 702, opinions must be helpful to the trier of fact, and Rule 403 provides for exclusion of evidence which wastes time. These provisions afford ample assurances against the admission of opinions which would merely tell the jury what result to reach, somewhat in the manner of the oath helpers of an earlier day. They also stand ready to exclude opinions phrased in terms of inadequately explored legal criteria. Thus the question, "Did T have capacity to make a will?" would be excluded, while the question, "Did T have sufficient mental capacity to know the nature and extent of his property and the natural objects of his bounty and to formulate a rational scheme of distribution?" would be allowed.


\(^{603}\) T. J. Wigmore, \textit{Evidence} § 1918 (3rd ed. 1940).

\(^{604}\) Id. § 1929.

\(^{605}\) Most jurisdictions do not permit testimony on ultimate issues such as negligence where material facts can be placed before the trier of fact. 32 C.J.S. \textit{Evidence} § 448 (1984). Proper conduct or due care can be the subject of testimony by experts familiar with a particular business. \textit{Id.} § 546(79).

\(^{606}\) See notes 588–600 supra.

process was before the examiner,\textsuperscript{608} and, hence, his testimony could be characterized as directed to the existence of a misrepresentation. These issues should be examined to determine what assistance the testimony of experts could provide to the trier of fact in reaching his final decision.

Since the patent expert can contribute to the court's understanding of the patent prosecution history, he may be invaluable in helping the court to reconstruct the controverted issues which were posed by the examiner and overcome by the patent applicant. Since the determination of subjective materiality must be made from evidence such as the file wrapper,\textsuperscript{609} an expert familiar with the workings of the Patent Office and the jargon of Patent Office communications can assist the court's interpretation of the file wrapper, and assist in evaluating the difficult issue of subjective materiality. On the ultimate question of subjective materiality, or what the examiner would have done, no witness would be competent to give subjective testimony, at least without an extensive foundation establishing that the witness was thoroughly acquainted with the individual examiner in question.

A similar problem arises with respect to intent or willfulness on the part of the patentee or his representatives. No expert is competent to testify as to the actual subjective motive or intention of another person. If, as suggested in \textit{Norton v. Curtiss},\textsuperscript{610} knowledge of the misrepresentation and its falsity creates an inference of fraud as a matter of law, it is hard to conjure up testimony that the "patent" expert might give on the specific issue of willfulness.

A suitably qualified expert might be able to testify as to the custom or practice of those prosecuting applications before the Patent Office to create an inference that the practice undertaken by a particular party was or was not in conformity with that custom. Presumably, then, if those persons accused of misconduct were to testify, or other evidence were to indicate that they undertook their actions in good faith, observing the customs of patent practice, the expert testimony could serve to buttress or repudiate this evidence. In support of the patentee's position, a suitably qualified expert might also testify as to what mistakes or errors might be most likely to occur in prosecuting a patent application in the Patent Office. Such testimony is evidentiary only.* The duty of candor to the Patent Office is not determined

\textsuperscript{608} Id. at 381.

* Stern: The unstated assumption in the textual discussion on expert testimony appears to be that lack of actual malevolent purpose or specific felonious intent is the issue. But see text accompanying notes 217-19 supra. See \textit{generally} Aikens v. Wisconsin, 195 U.S. 194, 203-06 (1904). The concept of good faith and, by the same token, lack of culpable willfulness implicit in the preceding paragraph of text is merely that of absence of specific intent to commit a larceny that the actor recognizes and conceives to be such. In the case of white-collar conduct of this type, the actor almost never commits an act that he would recognize and concede to be larcenous or otherwise unlawful. His social status and conditioning is such that he simply would not, barring extra-
by a consensus of patent attorneys. No case has suggested an approach to defining the duty of candor in such terms.

It is tempting to have the expert testify directly as to the patentee's duty of disclosure and candor to the Patent Office. The standard of conduct is difficult to apply. If the standard of conduct is a matter of law, the expert will probably not be able to testify as to the standard itself. Instead, the testimony will have to be elicited in terms of custom or practice, which goes to the good faith issue more than to a definition of the standard.

Without being critical of those who attempt to adduce evidence from experts on elements of the fraud issue, it is submitted that the idea of using a patent expert in the fraudulent procurement case stems from a fear that by hindsight the court will hold the patentee to a standard of conduct of which no practitioner was aware. Prior to the Walker case,\(^{611}\) the question of misrepresentations to the Patent Office was not focused upon by most practitioners. Walker represented, however, an implementation of prior law in the antitrust area wherein the standard of conduct has long been defined.

The use of patent experts in the fraudulent procurement case is an attempt to deal with the issue without disrupting the patentee's case with a presentation of a good faith defense or proof of mistake. The good faith defense dilutes the patentee's case and will typically appear to give too much credence to the materiality of the alleged misconduct. If an accused patentee undertakes to adduce proof of good faith, and is successful in establishing it, the possibility of fraudulent procurement within the meaning of Walker is foreclosed. Some of the cases which infer intent or which dwell on literality of the patent oath or declaration accompanying an application are troublesome. Courts must recognize that mistakes will occur and that probative evidence of mistake or good faith completely rebuts any inference of fraud. Offer of such proof requires hard decision-making by the patentee since the characterization of an act or omission as an honest mistake is the implicit admission that the conduct was not defensible in itself.

A final area for consideration is the possibility of severing the fraudulent procurement or inequitable conduct issue for separate trial.\(^ {612}\) In general, a separate trial on these issues would typically ordinary circumstances or pressures, intentionally commit an act that he and his peers recognize and concede to be a violation of a legal duty. This factor is legally irrelevant in a civil patent fraud case. Accordingly, the value to the court of expert testimony of the type suggested in the text seems negligible, or even negative, because it is misleading in respect to "willfullness" as that concept should be defined in this context.

\(^{611}\) 382 U.S. 172 (1965).

\(^{612}\) Fed. R. Civ. P. 42(b). In the event of severance, it is likely that trial on the fraudulent procurement issue would precede trial on the issues of infringement and liability.
favor the accused infringer, since none of the patentee's equities, such as the worth of the invention or copying by the infringer, are before the court when the alleged misconduct is being considered. Severance, however, gives the patentee an opportunity to assert a good faith defense without disrupting the major issues of validity and infringement, and may therefore be preferable. If the fraud issue is sufficiently important so as to justify a separate trial, however, the patentee should honestly appraise his position in the lawsuit. The loss of a patent by a holding of invalidity may be painful, but a holding of inequitable conduct is painfully personal.

IX. Sham-Charge Prophylactic Procedures—
Retrospective and Prospective†

Retrospective—How to Cope in Litigation

Offensive and Defensive Strategies. There are two basic ways to respond in litigation to a sham charge of fraudulent or inequitable patent procurement. The first, when the facts permit, is to demonstrate affirmatively as part of the patentee's direct case that the patent is valid because all the requisite information had been presented to the examiner. This direct presentation finesses the fraud attack and focuses upon strengthening of the statutory presumption of validity and, therefore, the establishment of the actual validity of the patent. The second is to defend against the charge by demonstrating good faith. Thus, in cases such as Monsanto v. Rohm & Haas,613 the threshold strategic decision would be whether to assert affirmatively that all the information required under the Henze doctrine614 had been presented to the examiner who issued the patent with that information, or to argue defensively that the possible failure to disclose the Henze type information was done in good faith. The defensive approach does little toward obtaining a judgment of validity although it may help in vitiating an antitrust counterclaim. Since patentees bring infringement litigation to derive some benefit from their patent property rather than to escape with their scalps intact, to elect the defensive approach often means to elect to lose the law suit before beginning it. Unless patentees break out of the defensive psychological mold into which a fraud charge so often encases them, the statistics on holdings of patent invalidity will mount even higher than their current level.

It may often be the manner in which the positive case for validity is presented which is determinative. Innocent men charged with crime often act guiltily while hardened criminals frequently carry off their deceit with aplomb. What is needed is for innocent patentees to establish their rights rather than to justify their entirely proper, yet attacked, behavior. For example, in

† This section was written by Irving Kayton.
613. For a discussion of this case, see section VII at pages 94-101 supra.
614. See notes 516-18 supra and accompanying text.
Saf-Gard Products, Inc. v. Service Parts, Inc.,615 the defendant questioned whether the best prior art had been called to the attention of the examiner by the plaintiff. Before prosecution on the merits had been closed, and two months before applicant responded to the first Patent Office action, the defendant called several items of prior art to the applicant's attention. The applicant brought the references to the attention of the examiner. To ensure that the record showed that the references had been considered, applicant's attorney hand-carried a letter to the examiner for his signature which stated that the examiner considered the references and found the claims patentable over them. The examiner freely signed that letter, entered it and it became part of the file history. Defendant charged fraud in the procurement because of this extraordinary procedure. The defendant interpreted the applicant's action as something underhanded. Plaintiff's patent expert witness, however, testified as part of the patentee's direct case that the presumption of validity was inordinately strengthened: The very best prior art in the view of the defendant had been expressly considered by the examiner, and for the examiner to have signed that document was such an extraordinary procedure that it was impossible for him to have done so without full cognizance of its significance and correctness.

The defensive approach, however, is needed when the facts require. For example, in Beckman Instruments v. Chemtronics,616 the claims had been drawn to distinguish over the best prior art, but, unlike the Saf-Gard situation, that art had not been called to the examiner's attention. The patentee vigorously argued nonobviousness over that reference, but entered very little by way of a defense of good faith. The trial court held the patent valid but the Fifth Circuit held it fraudulently procured. 'Clearly, where information is not presented which a court believes, or is likely to believe, should have been presented, it is necessary to defend on a good faith basis.

The question in functioning defensively, however, is how to present a justified "good faith defense" most effectively. Three approaches practiced in the past should be examined before considering a possible new approach.

The most obvious approach thus far has been to argue that the conduct was not inequitable. This has succeeded on occasion when the charge of fraud was patently absurd or the patentee's attorney was effective and more persuasive in presenting his justified cause than his opponent in arguing what is equitable and inequitable conduct. Typically, this approach involves nothing more than having the attorney

616. For a discussion of this case, see section VII at pages 89-94 supra.
who prosecuted the application testify with respect to what he had done and why he thought it was reasonable to do so at the time; then trial counsel attempts to persuade for the reasonableness of that mode of behavior in his briefs before the trial court and, too often, before the appellate court.

A largely and justifiably hopeless approach has been to try to depose or otherwise require the testimony of the examiner who originally allowed the application. After the debacle in the Third Circuit, Monsanto attempted to follow this approach in the Fifth Circuit relative to discovery taken after trial in Monsanto v. Dawson. Counsel for Monsanto attempted to depose the examiner, Natalie Trousof, to determine whether information concerning the herbicidal activity of 3, 4-DCAA on pigweed which had been withheld from the Rule 132 affidavit would have affected her decision to allow the application had it been included. This attempt was opposed successfully by the United States and the Patent Office in a proceeding in the Eastern District of Virginia. Judge Lewis sustained the government’s objection to questions which had anything to do with the examiner’s reasoning or opinions concerning the materiality of that data or the allowability of the application. He restricted the deposition questions exclusively to simple matters of fact, a course for which he had ample precedent.

There is much to be said in support of Judge Lewis’ view. The subjective opinion of an examiner, one way or the other, is really not relevant to inequitable conduct. Some examiners are more effective than others.

A third approach was taken in Union Carbide Corp. v. Filtrol Corp. On behalf of plaintiff patentee, former Commissioner Ladd testified that no statute, rule or internal Patent Office order required an applicant to disclose prior art to the Patent Office other than that directly anticipatory under section 102. The district court judge appeared impressed with this testimony. In addition, the patent attorney who prosecuted the application testified that he had carefully drafted his claims to distinguish from what may have previously been considered a section 102 reference. Thus, the basis was laid for the judge’s dismissal of the fraud defense. It is difficult to argue with success! Nevertheless, if Mr. Ladd’s testimony was to establish that he had not promulgated a rule requiring disclosure of non-anticipatory art, it leaves a huge logical gap. Although there may be no express rule requiring it, there is no reason to assume that there is no equitable obligation to cite close section 103 art if a case law standard of “utmost candor” prevails. It has been further suggested that the absence of any such positive rule could have been established at

617. See notes 151-76 and 586-96 supra and accompanying text for a full discussion of the cases.
618. For a discussion of the Third and Fifth Circuits’ opinions, see section VII at pages 94-101 supra.
620. See notes 589-96 supra and accompanying text.
622. See notes 201-11 supra and accompanying text.
trial much more simply than by Mr. Ladd's testimony. More importantly, perhaps, the circumstances where the testimony of a former Commissioner of Patents as such will even be relevant, let alone material, are very narrow and rare. For example, this testimony simply would not have adequately served the needs of Beckman Instruments in *Beckman Instruments v. Chemtronics*. The issue there was whether or not the amendments to the claims, *in a technological sense*, succeeded in converting the publication from an anticipatory to a non-anticipatory reference. The Patent Office simply does not speak officially on many of the varieties of subjects within which a charge of fraud may be raised.

The following analysis suggests a new defensive approach derived by analogy from other areas of law. It is best understood by considering the following question: Is an intentional and willful representation, or omission, which turns out to be wrong, an intentional and willful misrepresentation which is culpable? Intentional incursion on another's land even though thinking it is not another's is a trespass and actionable. In malpractice cases (medical, legal or any other) the intentional doing or counseling of something which has harmful consequences is not actionable if the mode of behavior is consistent with the practice of the average practitioner in that community at that time. Allegations of fraud sound more in malpractice than in trespass.* Fraud requires inequitable conduct. What standard can there be to determine whether a lawyer has behaved equitably in the practice of law? To hold him only to the lax and unsophisticated standard of what laymen may do under the circumstances would be a betrayal of society's trust. To hold him to an absolute obligation for correct behavior, an insurer's liability, would be absurd on its face.

Surely, if a patent solicitor has erroneously represented or failed to represent, but in a manner consistent with a "reasonable attorney" standard in the community at the time, then he has established a prima facie case of nonculpable erroneous representation. It may, of course, be rebutted by direct evidence of deceit or misrepresentation. Thus, if a letter written by an attorney appears in evidence indicating that in his highly specialized opinion a publication renders his claims invalid but he will not disclose it to the examiner, then the case is rebutted. Similarly, reckless and wanton disregard of something he should have carefully considered will be adequate rebuttal. For example, if it is established that a reputable scientist co-worker of the inventor told the attorney that he was aware of a publication antici-

*STERN: This is like asking whether fraud on the Patent Office "sounds" more in assault and battery or in public nuisance. No support is lent to the analysis by any misplaced analogy to "sounding" in trespass or in malpractice. Moreover, the reliance on specious analogy carries the results of the analysis to the unreasonable extreme of defining the duty of candor in terms of a consensus of patent attorneys. *But cf. text accompanying notes 610-11 supra.*
patory of the claimed invention which he then handed to the attorney who did not even bother to examine it, the case may be rebutted without more.

The author suggests, then, that a willful erroneous representation is not, without deceit, actual or circumstantial, a willful misrepresentation, and thus is not inequitable or fraudulent. It is what Justice Harlan, in his concurring opinion in *Walker Process*, labeled with the misnomer "technical fraud," that is, no fraud at all, but an honest mistake of judgment. In another portion of this article a coauthor has used another nomenclature to suggest the same, or similar, thing. He suggests that willful misrepresentation, from an evidentiary point of view, is established by defendant's prima facie showing of a willful erroneous representation based upon circumstantial evidence. This is so even though no direct evidence of deceit has been introduced. The burden of going forward, to demonstrate lack of deceit, is then shifted to the plaintiff. Should the plaintiff introduce evidence of lack of deceit, the burden of going forward then shifts back to defendant to rebut as best he can.*

The author believes strongly that it is a mistake to equate the phrase "willful erroneous representation" which need not be deceitful with "willful misrepresentation" which has been held deceitful in all the reported cases since *Walker Process* with the possible exception of the ambiguous opinion of the Third Circuit in *Monsanto v. Rohm & Haas*. Nevertheless, the author agrees that as a practical matter his coauthor is correct in his analysis of the shift in the burden of going forward after the defendant has established a prima facie case of willful erroneous representation. This is de facto, not de jure, since it is not yet established as a matter of law that plaintiff must go forward to show lack of deceit after a defendant has merely established a prima facie case of willful erroneous representation. As so many cases discussed in this article have shown, however, it surely would be wise for plaintiff to function as if a circumstantial case of deceit had been made by defendant. For plaintiff to go forward to demonstrate his honesty and virtue in the light of the preceding discussion means nothing less, but should mean nothing more, than demonstrating that the "reasonable attorney" would have functioned as he did at the critical point during the prosecution.**

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623. 382 U.S. 172, 179 (1965).
624. *See* notes 212-35 *supra* and accompanying text.
* Stern: The clarity of this analysis can be furthered by appreciation that willfulness is being used to denote the actor's state of mind in regard to several different things. In "willful erroneous representation," it goes only to the not-inadvertent making of the representation (i.e., that it is not made by typographical error, or when the maker lacks full mental capacity). In the case of "willful misrepresentation," the willfulness goes, not only to the foregoing, but to the fact that the maker of the statement knows that the representation is incorrect, or acts in reckless disregard of its accuracy, or perhaps acts with an indifference short of recklessness but at least as far as negligence. Moreover, the kind of willfulness involved in misrepresentation may entail a degree of appreciation of the probable or potential impact of the representation on the proceeding before the Patent Office, but the first kind, "willful erroneous representation," need not do so.
625. 456 F.2d 592 (3d Cir. 1972).
** Stern: The analysis in the text pervasively equates "reasonable" be-
Implementing the Strategy—The Patent Expert Witness. The trial judge is the ultimate de jure expert on patent law. He typically welcomes, however, and should be given, the help of a patent expert witness who has special knowledge of the detailed ritual of Patent Office practice, procedure and the multitude of terms of art and jargon in the Rules of Practice, the Manual of Patent Examining Procedure and the Examiner’s Office Actions during prosecution. After all, these are the domains which define patent prosecution and thus constitute the framework within which fraudulent or inequitable conduct is to be recognized if it has occurred. The patent expert witness can be invaluable in presenting to the trial judge or jury the common sense underlying the labyrinthine procedural rules in patent solicitation. Moreover, he can do so specifically with respect to the history of prosecution of the patent in suit.

Nothing can be more effective in strengthening the statutory presumption of validity than explaining to the court what procedures, and why these procedures, contribute to the presumption and by showing how those procedures were followed in spirit and letter in the file history under examination. Such testimony compels a finding of patent validity and a by-product evaporation of both the charge and ambient aura of fraudulent or inequitable conduct. By the same token, the defendant with a valid charge of fraudulent or inequitable procurement may have his patent expert follow the same line of testimony except to show that those reasonable procedures were violated in letter or spirit, or both.

Proper appreciation of the patent expert’s role provides recognition that it is not the expert’s conclusory opinion which is of major value
to the party for whom he is testifying; rather, it is his explanation of the rationality of the prosecution process that is of paramount importance and provides the major premise in his syllogism. When this is followed by a minor premise demonstrating that certain acts by the applicant during prosecution conform to or do violence to the major premise, his contribution is complete. The logical conclusion of that syllogism becomes both apparent and compelling without the expert stating it himself.

If this trial procedure is followed by both sides, a war of conflicting expert opinions will rarely happen, since the facts and the process speak for themselves. Where one side has a sham posture on inequitable procurement, however, this optimum use of the patent expert will not be adhered to by that side. The side of the angels will follow that approach, however, and the hot air from Hades launched in opposition will, by its contrast to rationality, contribute to its own defeat.

It is essential that the role of patent expert be clearly separated in fact and preferably in person from that of the technological expert. The technical expert's testimony lays the substantive foundation for the patent expert's exposition of prosecution procedure and its rationality. The combination of credible technical substance and patent procedure compels a successful case, assuming, of course, that the fact witnesses are believed.

The patent expert witness can play a significant role whether for plaintiff or defendant. Because of the specifically defined role which the author urges the patent expert undertake, there are certain characteristics which the patent expert should have for his testimony to carry the most weight. The following list is suggestive only:

1. He should be of unquestioned and virtually unquestionable professional integrity. It must be clear from his background and his mode of professional practice that he will not alter or bend any principle, practice or procedure about which he testifies for the purpose of satisfying intellectual dogma or paying client's needs or interests.*

2. He should be a recognized authority in patent law, preferably by way of having published treatises or learned articles in patent law or by having years of renowned and admired practice, or both.

3. He should have had considerable personal experience in prosecuting patent applications before the Patent Office, particularly during or about the time of solicitation of the patent in the litigation.

* Stern: The writer of the present note would add, to the first paragraph, a further qualification which the expert should have: known objectivity, detachment, perspective, and a readily apparent lack of institutional or other parochial bias in regard to the patent system and its proper role or place in the general context (i.e., in the pluralistic framework of other American social, economic, and political institutions).
(4) He should be or should have been a teacher of patent law either at a law school or in continuing legal education programs, and preferably one who has taught the law dealing with prosecution of patent applications in the Patent Office.

(5) He should be in a position beyond the reach of the give-and-take of adversary legal practice.

If there is no patent lawyer who can satisfy all the above criteria, there are many who can satisfy most.

Counterattack Against Sham Accusations of Fraud. In addition to the prophylaxes thus described, one generic form of treatment can effectively alleviate the patent system from sham fraud claims. Although not yet tried nor even publicly described, its use in the future would be highly desirable for both society and the plaintiff patentee in any specific case. A sham fraud in the procurement defense, when shown in the infringement litigation to be a defense “without probable cause” against a patent that is held valid and infringed, may itself be the basis for a section 4 Clayton Act suit for treble damages against the infringer.

Suppose the infringing defendant who raised the sham charge of fraud in the procurement is a corporation with a substantial market position in the relevant market of the technology to which the patent in the original suit pertained, and a competitor of the plaintiff patent assignee in that relevant market. Under these circumstances, it would seem that the defendant’s sham charge of fraud is an attempt to block his competitor’s effective competition through enforcement of the patent, and would provide a basis for direct private litigation under the Clayton Act. If anyone succeeds in persuading a court to treat such a claim fully on the merits, whether or not ultimately successful, it would be brought home for the first time to the myopic critics of patent property that patents are the most effective anti-monopoly, pro-competition mechanisms at our industrial society’s disposal, rather than the reverse.

In the above situation, the bringing

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627. But see note 628 infra.

628. A supplemental complaint was submitted to the United States District Court for the Western District of Wisconsin in Acme Eng’r & Mfg. Corp. v. Berg Equip. Corp., Civ. No. 73-C-59 (filed 11/73), in which the patentee had asserted this type of antitrust claim against the defendant. Thus far, the court has not ruled on the motion to admit the supplemental complaint.

629. Antitrust laws, at best, prevent the erosion of competition in our industrial society. When operating at their best they permit the marketplace to foster whatever competition self-interested businessmen are inclined to engender. We do not have anything like a free market in our society and thus the holding action of the antitrust laws does not and cannot result in a brilliant surge of free market competition. Much like a stopper in a wash basin which prevents water from draining out, the antitrust laws, when functioning optimally, prevent competition, to the extent it already exists, from dissipating. What is the faucet which introduces water into the basin? Certainly not the

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of the sham charge of fraud was designed to prevent the patentee-
competitor from competing within the relevant market through the
use of his patented invention; that is, the valid use of the patent
would have been a significant competitive threat against the now
fraudulent defendant.*

In California Transport v. Trucking Unlimited,630 the Supreme
Court provided solid legal support for this theory of counterattack
against sham patent fraud charges. Justice Douglas wrote the opin-

| antitrust laws which are a passive mechanism. The product competition in-
| troduced by technological innovation is the most evident means in our type
| of product- and service-oriented society for active enrichment of competition.
| There is little doubt that even without an effective patent system large corpo-
| nations will allocate at least some resources to research and development only
| if for the lead time advantage (through secrecy) which they gain when
| marketing a new product. However, for the middle-sized and small corpora-
| tion and individual inventor, from whom fully half the major inventions of
| this century have come, see J. Jewkes, D. Sauers & R. Stillerman, THE
| SOURCES OF INVENTION 82-85 (1958), patent protection is the major incentive
| which induces them to allocate their resources to invention. Without the prop-
| erty right, albeit for only seventeen years, in an invention that an enforceable
| patent provides the small company, it could not compete in product or price
| with the established large corporations which together may control the rele-
| vant market pertaining to the new invention. With that property right intact,
| however, the small company can, and has on occasion, entered into direct com-
| petition with already established giant corporations; Polaroid Corporation rela-
| tive to Eastman Kodak is a classic example. In large measure, the antitrust
| laws are a passive measure which permits giants to compete with each other.
| The patent system, when functioning effectively, induces David to compete
| with Goliath. Although this note merely skims the antitrust-patent coopera-
| tive activity in maintaining and fostering competition in our partial free-
| market system, the author firmly believes, after many years of careful
| study and reflection, that it captures its essence.

* STERN: It is unquestionably true that the patent system can function
procompetitively, in a Schumpeterian sense, by permitting an innovator to ex-
plot a localized or limited monopoly position sufficiently to recoup his re-
search and development costs on a new product that challenges the market
position of the established monopolist's or oligopolist's old product. But it is
excessively enthusiastic to leap from this premise to the conclusion that, when
such an innovator is subjected to a sham charge of patent fraud, there is neces-
sarily a valid, resulting attempted or actual monopolization claim for relief.

The argument in the text ignores the basic tenet of patent law that the pat-
ent grant does not give the patentee a right to sell his product; it gives him
a right to exclude others from selling the patented subject matter. In Profes-
sor Kayton's hypothetical, the infringer violated that right by competing with
the patentee in the sale of the new product, contrary to the patentee's right
to exclude such competition. In addition, the infringer sought to eliminate
the patentee's exclusive right by fraudulent or inequitable means. Is an effort
to impair a new entrant's countervailing monopoly position, when the effort is
undertaken by unfair, foul, or sham means, an unlawful attempted monopol-
ization? There is the necessary intent to preserve and retain a monopoly
position (a monopoly in the genus-product market in which the old and new
products are species). But will the courts regard the instrumental step of
destroying the new species-monopoly as itself a form of genus-monopolistic
conduct? Or will they say that the patentee is always free to sell his new
product as best he can, whether or not he has a species monopoly over it?

A species monopoly may be a significant advantage to the newcomer in
overcoming competition by sellers of the older species. Thus, in the long run
it may aid the newcomer to inject new vigor into the genus market (although,
of course, the latter may end up consisting only of the new species). But is
an attempt to eliminate that advantage itself a monopolistic act? Is an at-
tempt unfairly to turn the new entrant's monopolistic competition into the per-
haps less effective form of free competition actionable under section 2? Or
is what Professor Kayton has elsewhere picturesquely termed the sledge ham-
mer or nuclear weaponry of antitrust to be reserved for more clear offenses
against the public's interest in free competition, and the present claimant to
be relegated to unfair competition law or other state law remedies?

ion with Justices Stewart and Brennan concurring in the result but with a most significant variant view. Trucking Unlimited filed a civil action under section 4 of the Clayton Act against a group of trucking companies which included California Transport, charging that the group conspired to monopolize the trucking industry in California by instituting state and federal proceedings to resist and defeat plaintiff's applications to acquire and use truck operating rights. The alleged purpose of the conspiracy was to weaken their competitors, put them out of business and monopolize the industry. Reasoning that the defendants had done no more than use valid legal processes, although the practical result may have been harassment of the plaintiff and an anticompetitive effect, the district court dismissed for failure to state a claim. The Ninth Circuit reversed and the Supreme Court affirmed, holding that if the group had combined to harass and deter the plaintiff from having "free and unlimited access" to agencies and courts, a violation of the antitrust laws has been demonstrated; it is immaterial that the means used in violation may have been lawful. In his concurring opinion Justice Stewart pointed out that the majority opinion lacked a vital element without which defendant was denied first amendment rights. He urged remanding to the District Court for trial to ascertain whether the bases for the conspirators' otherwise proper acts were sham or "without probable cause." If so, then "the real intent of the conspirators was not to invoke the processes of the administrative agencies and courts" but "to interfere directly with the business relationships of a competitor" and thus "the application of the Sherman Act would be justified." Thus, Justice Stewart considered it vital that there be no "probable cause" for the otherwise legal harassment.

With respect to the constellation of facts enunciated earlier, it is submitted that even without a conspiracy a valid antitrust claim may be brought against the competitive infringer who uses a sham charge of fraudulent procurement in an infringement suit (perhaps especially so if the accuser had brought a declaratory judgment action) since its purpose would be "to interfere directly with the business relationships of a competitor" and an attempt to control a relevant market.

Prospective—How to Cope in Prosecution

Plebeian Common Denominator v. Patrician Common Denominator. After scores of cases dealing with fraud in the procurement and thousands of pages of text analyzing the law, including this article, the question remains: How does the patent attorney live with this situation in everyday life? Needless to say, if patent solicitation has been conducted deceitfully, only luck can, and certainly nothing should,
save the patent or its attorney. We are concerned, however, with preserving the freedom and right to make conscientious and honest judgments, even though ultimately they turn out to be wrong in the view of a federal court.

There is one absolute, although only theoretical, method of avoiding a sustainable charge of inequitable conduct: Run as completely scared as possible following the plebeian common denominator, that is, make sure you follow the dictates of all the courts that have imposed, rightly or wrongly, the heaviest burdens on the attorney in all conflicting substantive areas among the circuits.

In practice, this approach is possible to implement only in occasional and isolated instances. Implementation on a regular basis requires omniscience on the part of the patent solicitor. Consider what is required. First, the practitioner must have studied and continued to study all patent fraud and inequitable procurement cases and understood their rules of law, not only as stated within the opinion but also the practical rules such as those developed with respect to Beckman and Monsanto—a task which requires much time and examination of materials in the cases not available except through much effort and correspondence with the attorneys in those cases.

Such a burden, however, is only the tip of the iceberg. Virtually innumerable areas of patent law pose potential booby traps with respect to possible fraud allegations, and not even a small minority of those potential booby traps have thus far been litigated in a fraud in the procurement context. For example, suppose the question arises whether to disclose to the Patent Office the inherent but unknown-in-the-art herbicidal activity of a next adjacent lower homolog to the claimed compound wherein the herbicidal activity of the claimed compound is that property which the patent attorney argues establishes nonobviousness. This, of course, was the Monsanto v. Rohm & Haas and the Monsanto v. Dawson Chemical Co. situation. One would think that this issue is settled today, but it is not. For example, in those jurisdictions where the Henze doctrine is still alive, that disclosure is essential. But Henze has since been reversed by the CCPA in In re Stemniski, although reaffirmed in the D.C. Circuit in Brown v. Gottschalk. In those circuits, then, where Stemniski is the law, it would be meaningless to disclose the prior art homolog's inherent activity. Indeed, it would be wasteful, because of its irrelevance to the issue of nonobviousness, to include that information. But how will

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631. See notes 521-26 supra and accompanying text.
632. See notes 498-525 supra and accompanying text.
633. See notes 516-18 supra and accompanying text.
636. For the benefit of those living in ivory towers it should be told that the costs of patent procurement are often prohibitive to the non-corporate inventor and small corporation. Yet fully one-third of the patents issued in the United States are to people in that group. Moreover, as Professor Jewkes has demonstrated, fully half the major inventions of this century have been made by people in that group. J. Jewkes, D. Sawers & R. Stiller, The Sources of Invention 82-85 (1958). For the large corporation these costs are
the D.C. Circuit treat the withholding of that information? Will it treat it merely as an understandable adherence to an accepted legal doctrine which is in conflict with the substantive law in its own circuit? Or will it view this withholding as something inequitable? Such questions are not as easily answered as it would seem. Presumably, one would think that a United States Court of Appeals, simply on the basis of comity, would treat a conflicting substantive rule of patent law in another circuit as a reasonable precept for lawyers to follow in administrative proceedings. Yet, the Third Circuit, in *Monsanto v. Rohm & Haas*, almost arbitrarily rejected the holding of a district court judge in Texas which was directly in conflict with that of the Eastern District of Pennsylvania. This was not merely a legal rejection of Judge Singleton's view of the application of the facts to *Henze*, but was a judicial pronouncement that a lawyer who earlier held the same views as Judge Singleton had behaved inequitably. In a *Stemmiski* Circuit, the patent would be valid. In a *Henze* Circuit, the patent would be held invalid independent of any issue of proper or improper conduct. Keeping in mind that jurisdiction and venue considerations introduce probability considerations as to where the patent may be litigated, is the added prospect of a *Henze* Circuit holding of fraud worth the burden of obtaining or disclosing what a *Stemmiski* Circuit considers irrelevant? Since the Third Circuit in *Monsanto* refused even to consider whether *Henze* is the law in its Circuit or whether the facts were afool of *Henze*, but found fraud for mere failure to disclose *Henze*-type information, there is only one safe answer: If *Henze*-type information is already known, and if the inventor or his assignee would control a relevant market and thus be in danger of antitrust prosecution, it should be disclosed.

Using the plebeian common denominator, however, is actually not an option that is available in a practical sense, unlike the exception described above. Every substantive area of patent law in which there is a conflict within or between circuits must be understood and the view most onerous to the patent applicant must be followed during patent prosecution. Since it is simply not possible to know and be conversant with all the current known and potential substantive areas of conflict, the plebeian common denominator is simply not a realistically possible guide.

Using the patrician common denominator as the basis for patent solicitation is practical, possible and connected to real life. Its guiding principle is that if there is a genuine split of authority in any sub-

passed on, necessarily as are all expenses of doing business, to the consumer. In any event, society pays the price for any unreasonable and unrealistic pricing of patent procurement either by creating disincentives to invent on the part of the small inventor or by increasing the public's price for the patented product, or both.
stantive area of patent law or if any known fraud or inequitable procurement cases are susceptible of more than one reasonable interpretation, the authority and the interpretation to be relied upon is always that which minimizes prosecution costs for the client. For the patrician common denominator to be used effectively, however, requires the institution of procedures during patent solicitation which will be virtually irrefutable demonstrations that the course of action taken was accepted custom and practice of patent attorneys of ordinary skill.

The patrician, therefore, will guide his patent solicitation activities by Stemniski rather than Henze, except in the peculiar constellation of facts presented above. He must establish, however, in a form which is literally demonstrable before a court of law, that there had been an evaluation of whether Stemniski or Henze was to be followed and on what authority Stemniski was chosen (presumably in this case upon the authority of the CCPA and its patent expertise). A procedure for organizing a legal patent solicitation organization so as to enjoy the fruits of the patrician approach with reasonable safety is described below.

The Structure and Functioning of the Anti-Fraud Compliance Committee. An anti-fraud compliance committee has a twofold function. First, it should set up detailed guidelines for the patent solicitor which will enable him to determine that which is conduct of the "utmost candor" in all the specific patent solicitation situations which may arise. These guidelines must be drawn up by the committee to cover, ultimately, virtually every aspect of validity-invalidity under Title 35 of the United States Code, and more. It must at least cover all aspects of solicitation practice under sections 102, 103, 112, 119 and 120 of the statute. In due course, the result may be a checklist with a hundred or more factors for the soliciting attorney to consider at least for the purpose of verifying in his own mind that he has forgotten nothing.

The work of the anti-fraud compliance committee in carrying out this first function is a costly additional expense to the patent prosecution budget even though in-house personnel may be used. The guidelines need not spring full-grown from the head of Zeus, however, and the cost may be amortized over many years. In short, the guidelines may be permitted to "grow like Topsy"; each application prosecuted to issue could be the basis for listing one or more guidelines which grow peculiarly from the particular application in consideration. The role of the committee in this piecemeal guideline preparation procedure would be to review each application prior to issue to determine whether one or more patrician anti-fraud rules may be developed from the facts of the prosecution of that application. After many years and a spectrum of application prosecution situations, a rather full set of guidelines will have been developed.

Whatever standard the committee sets for a given aspect of prosecution it must be made clear in this guideline, or in committee meet-
ing minutes or commentary, precisely why and on what authority it is relying for the equitableness of the specified behavior. Under certain circumstances a guideline may be developed which follows the plebian rather than patrician rule simply because there is no real burden in doing so. As applied to non-analogous art, for example, this could take the form of disclosing any reference which is reasonably pertinent through hindsight no matter in what useful art it may be.

The work of the compliance committee in its inception, therefore, is a thoroughgoing and comprehensive analysis of patent law as applied to its mode of practice in that corporation or law firm. Even though the development of the guidelines may be done piecemeal over a period of years, it is a sophisticated task of no small dimension. The committee members necessarily must be highly experienced and legally mature practitioners who have been steeped in prosecution over a good part of their lives. Representation from the litigating and the various technological segments of the profession should also be had.637

The committee's second function, already mentioned indirectly, is the actual monitoring of applications prior to their issue. Thus, after claims have been allowed, but before expiration of the period allowed to file a Rule 312 amendment, the committee should examine the application with the practitioner who prepared it to review any item under the guidelines about which the attorney had any difficulty or conflict. At that point, the committee should decide whether to sustain or overrule his view. If the opinion is to overrule, then an appropriate amendment may be submitted under Rule 312 or, if necessary, other action such as the filing of a continuation application may be taken. If the practitioner's view is sustained, however, a memorandum explaining the decision and its basis should be made part of the permanent minutes of the anti-fraud committee. The author believes that the establishment of this standardized, orderly, and consistent method of prosecution should itself be the basis for a strong defense to any charge of inequitable conduct during prosecution independent of the specific issues in any case.*

637. A comprehensive aid to the committee's work may be found in the seven-volume looseleaf service: Dunner, Gambrell, Kayton & White, Patent Law Perspectives (Matthew Bender & Co.). The service has chronicled every significant or new development in substantive and procedural patent law that has taken place during the past seven years. Because of its subject organization, Patent Law Perspectives sets out conflicts in all areas reported on. Most importantly, it is a monthly service so that the compliance committee is in a position to monitor any developments which may require a change or alteration in the basic guidelines which the attorneys in the department or law firm should be following.

* Stern: Others may uncharitably believe, however, that the committee's activities constitute a deliberate scheme and ongoing plan to defraud the Patent Office whenever there is an opportunity to do so. They might also regard its memoranda as self-serving camouflage in aid of such a scheme. Whether
In organizations where the volume of applications prosecuted each year is large, routine final committee review of all applications may prove too burdensome or costly. If so, only those applications may be selected for review whose importance, whether of commercial value or extraordinary novelty and potential, justify the time and expense. Monthly or other periodic quotas for review which are not to be exceeded may be drawn up. When the committee’s guidelines are not yet fleshed out, however, and thus the committee’s final reviews are the very means of getting grist for its guideline drafting mill, every effort should be undertaken to review every application. The quota system for review may not be safely instituted until this phase is over—otherwise the evidentiary value of the committee’s function will be lost.

The question may reasonably be asked whether relying on the anti-fraud committee’s procedures as part of a “good faith” defense in litigation will destroy the quasi-privilege of the attorney’s or agent’s work product or the privileged communication of the anti-fraud minutes. To begin with, the issue cannot even arise in a circuit where the substantive law is consonant with the course followed during patent prosecution. In a contrary circuit, the patent is invalid anyway and the issue can arise only when a prima facie showing of fraud as a basis for an antitrust claim has been established. It would then be necessary to develop fully the good faith defense, and even privileged communications would be open to inspection. Finally, although it is a regrettable truth, workproduct rules and attorney-client privilege in patent cases are in a state of complete disarray. Thus, each reader must decide whether the institution of an anti-fraud committee and utilization of the patrician common denominator are appropriate for a particular client in the specific, or socially desirable in general, or both.

Even so, the most rational shop-book rule of procedure and the most genuine attempt at compliance with the law cannot prevent an adversary’s attack drawn from Cardinal Richelieu’s seventeenth century philosophy: “Give me six lines written by the most honorable of men and I will find an excuse in them to hang him.”

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a program of resolving all doubts against candor and disclosure (except when being candid minimizes patent prosecution costs to the client), and that comes complete with minutes recording the conduct, will ultimately more greatly benefit the plaintiff or defendant in the infringement suit is a question best left to the reader’s imagination.

638. See note 106 supra.
APPENDIX I

A Note on the Concept of the Liability Space in Legal Analysis of Patent Fraud†

This appendix develops the concept of “liability space” and its partitioning as a tool of legal analysis. Application of this tool to patent fraud cases suggests a basis for generalizing or extrapolating from the relatively limited body of case law in the field.

The premise of this discussion is that it is possible to rationalize the case law in a field, and to predict the outcome of future cases on the basis of a factor analysis. That is, a function \( L \) can be developed to determine liability; its value is dependent on the values of a number of legal factors, which vary individually from one fact situation to another. Thus, one may derive that function to be \( L (x,y,z) \), when \( x, y \) and \( z \) are the factors, or variables, that the case law suggests are pertinent to determining liability. Algebraic formulation of the concept (e.g., \( L = 2.3x + 1.4y + 5 \), or \( L = e^{2.3y^2z} \)) may be misleading, however, because it may be impossible to quantify \( x, y \) and \( z \) numerically. Depending on the branch of law involved, each factor may be a continuous variable (as in the case of the number of months preceding an allegedly unspeedy trial), may be present in various discrete degrees (as in the case of the degrees of a bailee’s duty), or may be simply present or absent (binary quantification). Regardless of which of these is the case, a “liability space” may be defined, in which function \( L \) is placed, and a partition between liability and nonliability delineated. The values of the different variables will determine on which side of the partition particular conduct falls.

As an example of this type of analysis for a two-dimensional liability space, i.e., liability plane, the case law might hypothetically be illustrated concerning the liability of a landowner to a person injured on the land as follows:

<table>
<thead>
<tr>
<th></th>
<th>Trespasser</th>
<th>Licensee</th>
<th>Invitee</th>
</tr>
</thead>
<tbody>
<tr>
<td>No negligence</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Negligence</td>
<td>0</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Recklessness</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Intentional</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

In this illustration, the four vertical categories refer to the landowner’s conduct and the three horizontal categories refer to the injured party’s relationship to the landowner. Within the space, an x

† This appendix was written by Richard H. Stern.
indicates that the owner is liable to the injured party for damages, and an 0 indicates that the owner is not so liable. The heavy line marks the partition of the liability space between liability and nonliability. Examination of the diagram readily indicates that the distinction between reckless and intentional conduct is not legally significant, nor is the distinction between a licensee and invitee. If the negligence-licensee position were changed from x to o, then the distinction between negligence and recklessness would become immaterial, and trespassers would be equivalent to licensees for the purpose of determining whether the hypothetical type of tort liability existed.

In the patent fraud context, two dimensions, or factors, are not sufficient to define the liability space properly. To recognize all possible significant factors, at least four dimensions are necessary: Whether the conduct was a withholding or a misstatement of information; the degree of materiality of the withheld or misstated information; the party’s knowledge of whether such information was material; and the party’s deliberateness in withholding or misstating the information. Within this four-dimensional liability space, the case law indicates different partitions of the space for the different kinds of civil or criminal liability. For example, the location of the partition for patent unenforceability is different from that for criminal, false-statement liability under section 1001 of the criminal code, because a wider range of conduct gives rise to unenforceability than to criminal liability.

The first dimension, withholding information versus affirmatively misstating it, is concerned with only two possible types of conduct. The difference in consequence is slight, but in some circumstances the law shows greater disfavor to misstatements than to omissions.1

The second dimension, materiality, has only five significant possibilities. The most material kind of information is that meeting the "objective but-for" test, i.e., prior art or other data that invalidates the patent. The second most material data is that meeting the "subjective but-for" test, i.e., data that would cause the patent examiner not to allow the patent grant, even though the court may disagree with the examiner’s view of the substantive law. Third is data that is relevant to patentability, but which nonetheless fails to meet either of the “but-for” tests.2 Fourth and fifth are two different kinds of less material data. One is data that is irrelevant or at least remote so far as patentability is concerned, but which does have a bearing on and may affect the Patent Office conduct of the proceeding (REMOTE) — such as a statement on why processing of the

1. Another category occurs when a patent applicant makes a statement that he believed to be true when it was made, but which he later discovers to be false. When the patent applicant fails to correct the misstatement despite his subsequently-gained knowledge, his conduct seems to be treated as the equivalent of an affirmative misstatement. See Charles Pfizer Co. v. FTC, 401 F.2d 574 (6th Cir. 1968); SCM Corp. v. RCA, 318 F. Supp. 433 (S.D.N.Y. 1970). For the purposes of this analysis, therefore, such conduct will be subsumed within the misstatement category.

2. See, e.g., W.L. Gore & Assoc., Inc. v. Carlisle Corp., 183 U.S.P.Q. 459, 465 (D. Del. 1974), where the court stated that the Richards patent “was a significant, albeit not dispositive [invalidating] element of the prior art.”
case should be "made special," i.e., expedited. The other is data that has no significant bearing on patentability or the Patent Office conduct of the proceeding (IRREL) — such as the statement of the inventor’s nationality which is required by the patent law, or art that is not even close to the claimed subject matter.

The third dimension, knowledge of materiality, permits four possibilities: The patentee’s purpose ("specific intent") was to influence the Patent Office by means of his action; the patentee knew or believed that his action would affect the prosecution of the patent, or tend to do so, although there is no other evidence that the patentee intended to affect the prosecution by his action; the patentee should have known that his action would affect the prosecution, or tend to do so, although there is no other evidence that the patentee intended to affect the prosecution by his action, or knew it would; the patentee neither intended nor knew nor should have known that his action would affect the prosecution or tend to do so.

The fourth dimension, deliberateness in acting, also permits four possibilities: Conduct that is intentional, reckless, negligent, or unintentional and non-negligent.

The four-dimensional liability space described here is a matrix that is 2 x 5 x 4 x 4, a tesseract (more precisely, hyperparallelepipedon) with 160 compartments corresponding to the 160 possible fact patterns reflecting the various possible combinations of the values of the four factors. This model has certain shortcomings as a conceptual or pedagogic tool—it is mindboggling and it does not accommodate itself to the printed page. Fortunately, the case law suggests a possible reduction of the liability hyper-solid to a liability plane.

First, the cases apparently never treat a withholding of data more severely than a misstatement, when all other things are equal. Thus, this dimension can be eliminated from the liability space by subdividing each compartment into a lower "withholding" section and an upper "misstatement" section, since liability will be made the upper and nonliability the lower part of the overall space. Moreover, in the two extreme cases of specific intent to deceive the Patent Office and unintended, non-negligent misstatement or withholding, the withholding-misstatement distinction is legally irrelevant.

Second, the third and fourth dimensions (knowledge and deliberateness) can be combined and ordered into a sequence of progressively

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5. The type of data involved (e.g., prior art patents or literature, prior public use or sale, test data) might constitute a fifth dimension. The cases do not appear to single this out, however, and, to the extent that it is relevant at all, this factor becomes subsumed within the analysis of knowledge of materiality and deliberateness in withholding or misstating the information.
increasing culpability. Each of these factors has four possibilities, but some of the 16 possible combinations cannot or probably will not occur in practice. For example, unintentionally misstating or withholding data while having the specific intent to deceive the Patent Office will not likely occur. Moreover, in point of fact, the cases do not appear to distinguish reckless from intentional conduct.

This reduction process permits the first, third, and fourth dimensions to be reduced to a single dimension, or axis, along which conduct can be described in increasing (or possibly equal but not lesser) degrees of culpability. The following list, in which the A and B subcategories reflect the misstatement-withholding distinction, sets out the various states of mind that are possible:

1. The patentee intentionally misstated or withheld information for the purpose of influencing the prosecution of the patent—specific intent to deceive the Patent Office.

2A. The patentee intentionally or recklessly misstated information. He knew or believed that this would affect the prosecution, or tend to do so, but it is not shown that he intended to affect the prosecution of the patent by so doing.

2B. The same as 2A except that the patentee withheld information instead of misstating it.

3A. The patentee intentionally or recklessly misstated information. He should have known that this conduct would influence the patent prosecution, or tend to do so, but it is not shown (and the fact finder does not infer) that he intended to affect the prosecution by so doing.

3B. The same as 3A except that the patentee withheld information instead of misstating it.

4A. The patentee intentionally or recklessly misstated information. It is not shown that he intended, believed, knew or should have known that the misstatement would affect the prosecution, or tend to do so.

4B. The same as 4A except that the patentee withheld information instead of misstating it.

5A. The patentee negligently misstated information. He knew or should have known that this conduct would to some degree affect the prosecution, or tend to do so.

5B. The same as 5A except that the patentee withheld information instead of misstating it.

6A. The patentee negligently misstated information. But he neither believed, nor knew, nor should have known that his conduct would affect the prosecution or tend to do so.

6. The assumption is that the withholding does not occur in the context of an affirmative statement. This, if it occurred, could turn the affirmative statement into a half-truth, and thus a misstatement, so that the courts would consider the conduct a misstatement, instead of a withholding or failure to disclose.
6B. The same as 6A except that the patentee withheld information instead of misstating it.

7. The patentee did not intend to withhold or misstate information, he was not negligent in doing so, and he neither knew nor should have known that the misstated or undisclosed information would tend to influence the prosecution.

The following figure illustrates the liability plane defined by the seven or twelve categories of the misstatement-withholding distinction and the five categories of materiality. 7

**Liability Space**

<table>
<thead>
<tr>
<th>States of mind</th>
<th>OBJ. B.F.</th>
<th>SUB. B.F.</th>
<th>RELEV.</th>
<th>REMOTE</th>
<th>IRREL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sp. intent to deceive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2A. Inten. or reck. m/s &amp; knew wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2B. Inten. or reck. w/h &amp; knew wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3A. Inten. or reck. m/s &amp; shd. know wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3B. Inten. or reck. w/h &amp; shd. know wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4A. Inten. or reck. m/s &amp; no knowl. wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4B. Inten. or reck. w/h &amp; no knowl. wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5A. Negl. m/s &amp; kn. or shd. kn. wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5B. Negl. w/h &amp; kn. or shd. kn. wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6A. Negl. m/s &amp; no knowl. wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6B. Negl. w/h &amp; no knowl. wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. No intent to m/s or w/h</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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7. The abbreviations “w/h” and “m/s” stand for “withholding” and “misstatement,” respectively. The headings of the five columns refer to the categories specified in text following note 1 *supra*. Some of the compartments reflect fact patterns that, as a practical matter, will not occur.
At this point, a major caveat is required. The 35 or 60 compartments represent a possible way to analyze or rationalize the case law. This does not mean that courts usually recognize all of these distinctions, or that the reported cases always contain a sufficient discussion of the facts to permit the reader to place each case on this chart. Frequently, they do not because courts have not reached their results by recourse to an analysis based on these categories. The chart is thus more a map of the ideal than the basis for an accurate map of the decided cases. Large parts of it may have to be a blank with a notation like the “Heere there be tygers” warning on the legendary old map. One coauthor, John Lynch, has suggested to the present author that the lines separating compartments have to become dim and then fade away completely as they go from the edges to the center. The chart, therefore, must be offered as an aid to sharpen one's thinking, rather than a navigation map of decided cases.

Considering this caveat, it nonetheless appears that the upper left hand corner of the chart will be occupied by an x, regardless of what type of liability is concerned, while the lower right hand corner will be occupied by an o, regardless of the type of liability. For each remaining type of liability, the liability-no liability partition will be located closer to the upper left hand corner as the consequences to the patentee of a finding of that type of liability increase. The particular maps for each of the particular kinds of legal liability are beyond the scope of this appendix. The author is willing to hazard a guess only as to sections 1001 and 371, and to slot a few of the cases. The next three charts illustrate tentative liability spaces for sections 1001 and 371 (conspiracy to defraud), and for some of the decided cases.

### Liability Space—§1001

<table>
<thead>
<tr>
<th>States of mind</th>
<th>OBJ. B.F.</th>
<th>SUB. B.F.</th>
<th>RELEV.</th>
<th>REMOTE</th>
<th>IRREL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sp. intent to deceive</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>2A. Inten. or reck. m/s &amp; knew wd. infl.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>2B. Inten. or reck. w/h &amp; knew wd. infl.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>3A. Inten. or reck. m/s &amp; shd. know wd. infl.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>3B. Inten. or reck. w/h &amp; shd. know wd. infl.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>4A. Inten. or reck. m/s &amp; no knowl. wd. infl.</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>O</td>
</tr>
</tbody>
</table>

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8. In the Second Circuit, some of the O's would be X's, because an intentional misstatement violates section 1001 under that circuit's case law. See text accompanying note 436 supra.
<table>
<thead>
<tr>
<th>States of mind</th>
<th>OBJ. B.F.</th>
<th>SUB. B.F.</th>
<th>RELEV.</th>
<th>REMOTE</th>
<th>IRREL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sp. intent to deceive</td>
<td>X X X X X ?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2A. Inten. or reck. m/s &amp; knew wd. infl.</td>
<td>X X X X X O</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2B. Inten. or reck. w/h &amp; knew wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3A. Inten. or reck. m/s &amp; shd. know wd. infl.</td>
<td>O O O O O O</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3B. Inten. or reck. w/h &amp; shd. know wd. infl.</td>
<td>O O O O O O</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4A. Inten. or reck. m/s &amp; no knowl. wd. infl.</td>
<td>O O O O O O</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4B. Inten. or reck. w/h &amp; no knowl. wd. infl.</td>
<td>O O O O O O</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5A. Negl. m/s &amp; kn. or shd. kn. wd. infl.</td>
<td>O O O O O O</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5B. Negl. w/h &amp; kn. or shd. kn. wd. infl.</td>
<td>O O O O O O</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6A. Negl. m/s &amp; no knowl. wd. infl.</td>
<td>O O O O O O</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6B. Negl. w/h &amp; no knowl. wd. infl.</td>
<td>O O O O O O</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. No intent to m/s or w/h</td>
<td>O O O O O O</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Partial Scatter Diagram for Decided Cases (Including Dicta)

#### Materiality of w/h or m/s information

<table>
<thead>
<tr>
<th>OBJ. B.F.</th>
<th>SUB. B.F.</th>
<th>RELEV.</th>
<th>REMOTE</th>
<th>IRREL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sp. intent to deceive</td>
<td>Henkels &amp; McCoy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2A. Inten. or reck. m/s &amp; knew wd. infl.</td>
<td>Shelco (art); Norton v. Beckman Curtiss SCM (10^-9); Blonder-Tongue Corona (CA7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2B. Inten. or reck. w/h &amp; knew wd. infl.</td>
<td>Shelco (safety) Tetracycline (Pfizer tests)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3A. Inten. or reck. m/s &amp; shd. know wd. infl.</td>
<td>Xerox v. Dennison Abington Tetracycline (Cyana-mid)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3B. Inten. or reck. w/h &amp; shd. know wd. infl.</td>
<td>B-D v. Sherwood; Saf-T- Boom; Chromalloy; Acme Monsanto v. B&amp;H; Sarkes-Tarzian; Air Field</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4A. Inten. or reck. m/s &amp; no knowl. wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4B. Inten. or reck. w/h &amp; no knowl. wd. infl.</td>
<td>Scott v. Ft. Howard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5A. Negl. m/s &amp; kn. or shd. kn. wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5B. Negl. w/h &amp; kn. or shd. kn. wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6A. Negl. m/s &amp; no knowl. wd. infl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6B. Negl. w/h &amp; no knowl. wd. infl.</td>
<td>SCM (chopped light)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. No intent to m/s or w/h</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
B. Chemical Facts and Definitions

6. 3,4-DCPA is a chemical compound which has the structural formula

\[
\begin{array}{c}
\text{Cl} \quad 4 \\
\text{Cl} \quad 3 \\
\end{array}
\]

\[
\begin{array}{c}
\text{H} \quad 6 \\
\text{O} \quad 5 \\
\text{N} \quad 1 \\
\text{C} \quad - \\
\text{CH}_2 \quad - \\
\text{CH}_3 \\
\end{array}
\]

(PTO, Uncontested Fact No. 14, in part)

This chemical is a member of a class of compounds known as "anilides". It is a "dichloro" compound since the 3,4-DCPA molecule includes two chlorine atoms; hence it is a "dichloroanilide". The numbers 3 and 4 refer to the particular corners of the hexagonal ring of carbon atoms (benzene ring) to which the chlorine atoms are attached. By an accepted chemical numbering system, the corners of this ring may be numbered as indicated in the formula. (PTO, Uncontested Fact No. 15).

7. 3,4-DCPA is marketed extensively by both parties as a selective post-emergence herbicide. (PTO, Uncontested Facts Nos., 41 and 43).

A "selective post-emergence herbicide" is one which, when applied after emergence to a crop and weeds normally associated therewith, substantially destroys the weeds without adversely affecting the crop. (McRae, Notes of Trial Testimony 304).

8. A "homolog" of 3,4-DCPA is a chemical compound of the same series as 3,4-DCPA, whose structure differs from 3,4-DCPA in that it contains a different number of \(-\text{CH}_2\)-groups. A "higher" homolog of 3,4-DCPA has more \(-\text{CH}_2\)-groups, and a "lower" homolog has fewer \(-\text{CH}_2\)-groups. When a homolog of 3,4-DCPA differs in structure from 3,4-DCPA by only one more or one less \(-\text{CH}_2\)-group, it is an "adjacent" or "next" homolog of 3,4-DCPA. (PTO, Uncontested Fact No. 29).

9. 3'4'-dichloroacetanilide\(^1\) has the structural formula

\[
\begin{array}{c}
\text{Cl} \quad 4 \\
\text{Cl} \quad 3 \\
\end{array}
\]

\[
\begin{array}{c}
\text{H} \quad 6 \\
\text{O} \quad 5 \\
\text{N} \quad 1 \\
\text{C} \quad - \\
\text{CH}_2 \quad - \\
\text{CH}_3 \\
\end{array}
\]

\(^1\) Hereafter, reference to this chemical compound will be made in the shortened form of "3,4-DCAA". (Some footnotes omitted; this footnote renumbered).
It is adjacent or next lower homolog of 3,4-DCPA since it differs in structure solely by having one less \(-\text{CH}_2\)-group. (PTO, Uncontested Fact No. 30).

10. An "isomer" of 3,4-DCPA is a chemical compound having the same composition as 3,4-DCPA, i.e., the same kinds and numbers of atoms, but with those atoms differently arranged in the molecule. A "ring position" isomer of 3,4-DCPA is a chemical compound having the same basic propionanilide structure and number of chlorine atoms attached to the benzene ring, but having at least one of the chlorine atoms affixed to a different corner of the benzene ring. (PTO, Uncontested Fact No. 31).

11. 2',4'-dichloroproprionanilide and 2',5'-dichloropropionanilide are ring position isomers of 3,4-DCPA and have the following formulae, respectively

\[
\begin{align*}
\text{Cl} & \quad 4 \quad 6 \\
\text{Cl} & \quad 3 \\
\end{align*}
\]

(PTO, Uncontested Fact No. 32)

12. An "analog" of 3,4-DCPA is a compound which is not a homolog or isomer of 3,4-DCPA although its structure is closely related to, but different from, the structure of 3,4-DCPA. (PTO, Uncontested Fact No. 33).

13. 4'-chloropropionanilide has the structural formula

\[
\begin{align*}
\text{Cl} & \quad 4 \quad 6 \\
\end{align*}
\]

It is an analog of 3, 4-DCPA. Accepted technical names for 4'-chloropropionanilide are p-chloropropionanilide and parachloropropionanilide. (PTO, Uncontested Fact No. 34).

14. 3'-chloropropionanilide has the structural formula
Fraud in Patent Procurement
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It is the adjacent or next lower homolog of 3,4-DCPA since it differs in propionanilide are m-chloropropionanilide and metachloropropionanilide. (PTO, Uncontested Fact No. 35).

15. 2'-chloropropionanilide has the structural formula

\[
\begin{array}{c}
\text{H} \\
\text{O} \\
\text{N} \\
\text{C} \\
\text{C} \\
\text{CH}_2 \\
\text{CH}_3 \\
\text{Cl}
\end{array}
\]

It is an analog of 3,4-DCPA. Accepted technical names for 2'-chloropropionanilide are o-chloropropionanilide and orthochloropropionanilide. (PTO, Uncontested Fact No. 36).

16. Ortho-, meta- and para- compounds are substituted products derived from benzene in which two of the substituting radicals or groups are structurally placed in certain defined positions on the benzene nucleus. When two substituting groups (A and B) are in such position that they are attached to adjoining carbon atoms of the benzene nucleus, they are said to be in ortho- or o- position to each other. If A and B are so attached that they have a third carbon atom of the nucleus between them, a meta- or m- compound results. If A and B are attached to opposite atoms in the nucleus (two other carbon atoms between them), a para- or p- compound results. The following formulae are illustrative:

\[
\begin{array}{c}
\text{ortho} \\
\text{meta} \\
\text{para}
\end{array}
\]

APPENDIX III (REFER TO SECTION VII)

Example 2.

To a stirred benzene solution containing 202 parts by weight of N-allyl-3',4'-dichloroaniline and 111 parts by weight of triethylamine, there is added dropwise, through a condenser, 97 parts by weight of propionyl chloride. The mixture is refluxed two hours. Water is then added to dissolve the precipitated triethylamine hydrochloride. The benzene layer is concentrated under vacuum to furnish 252 parts by weight (97% yield) of crude N-allyl-3',4'-dichloropropionanilide.
Fractionation under vacuum and recrystallization from petroleum ether gave white crystals of the purified product melting at 71-72°C.

Analysis—calculated for C₁₂H₁₈Cl₂NO (258.14): Cl, 27.5; N, 5.42. Found: (distilled) Cl, 28.0; (crystalline) N, 5.46.

Example 3.

Post-Emergence or Foliage Test:

Seeds of corn, cotton, ryegrass, beans, morning-glory, and pigweed are planted in soil in boxes having an exposed area of two square feet. After 23 days, the crops are sprayed with an aqueous emulsion of the particular anilide at a rate of 8 pounds per acre. The emulsion is prepared by dissolving 350 m.g. of the anilide in 4 ml. of methyl isobutyl ketone, adding 12 drops of Agrimul C (an emulsifying agent sold by Napco Chemical Company which comprises a mixture of a polyoxyethylene glycol ester and an alky-lauryl sulfonate), and diluting to 40 ml. with distilled water. Application of 10.0 ml. of this emulsion per square foot of soil is equivalent to 8.4 pounds of active ingredient per acre; however, since some drift loss is inevitable when spraying small areas, this rate is assumed to be 8 pounds per acre. Neither the solvent, dimethyl formamide, nor the emulsifying agent, Agrimul C, or a mixture of the two, is toxic to the crops tested.

At the time of spraying, the crops are in approximately the following stages of growth:

- **Corn** — 10-12 inches tall
- **Cotton** — 2-4 inches tall, 3-leaf stage (including primary leaves)
- **Ryegrass** — 3-4 inches tall
- **Bindweed** — 2-4 inches tall, 3-5 leaves
- **Beans** — 6-10 inches tall, primary leaves mature, second trifoliate leaf about 1 inch in diameter
- **Pigweed** — 3-6 inches tall, in bloom due to photoperiod effect.

Throughout the course of the tests, the boxes are watered whenever necessary. Good growth conditions are maintained during the test period (60-75° at night, with daytime temperatures in 75-95° range), and the tests are terminated 21 days after spraying.

When the tests are terminated, the control crops are in approximately the following stages of growth:

- **Corn** — 24-36 inches tall
- **Cotton** — 8-10 inches tall, 7 leaves
- **Ryegrass** — 6-10 inches tall
- **Bindweed** — 6 inches tall
- **Beans** — 12-18 inches tall, active blooming many small pods developed
- **Pigweed** — 12-16 inches tall, nearly mature

The results of such tests are given in Table I, below. Percent stand
(%S) is a measure of the number of growing plants in the crops sprayed with the active ingredient as compared to the number of growing plants in the untreated control crops. Percent yield (%Y) is a measure of the weight of plant growth produced with the spray treatment as compared to the weight of crops produced without the spray treatment.

**TABLE I**

<table>
<thead>
<tr>
<th>Corn %S</th>
<th>Cotton %S</th>
<th>Ryegrass %S</th>
<th>Bindweed %S</th>
<th>Beans %S</th>
<th>Pigweed %S</th>
</tr>
</thead>
<tbody>
<tr>
<td>3',4'-dichloro-propanilide</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>3',4'-dichloro-isobutrylanilide</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3',4'-dichloro-acetanilide</td>
<td>60</td>
<td>30</td>
<td>100</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>3',4'-dichloro-n-butyranilide</td>
<td>75</td>
<td>35</td>
<td>100</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>3',4'-dichloro-isovaleranilide</td>
<td>75</td>
<td>35</td>
<td>100</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>3',4'-dichloro-valeranilide</td>
<td>60</td>
<td>30</td>
<td>100</td>
<td>75</td>
<td>100</td>
</tr>
</tbody>
</table>

The herbicidal efficiency of the present compounds is surprising, for related compounds possess little or no herbicidal efficiency. When tested as described above, aqueous emulsions of a random group of such compounds are found to possess little or no herbicidal activity. Some of the compounds tested are set forth below:

- 3'-chloroisobutyranilide
- 3'-chloroacetanilide
- 4'-bromo-2'-phenylacetanilide
- 2',4'-dichloropropionilide
- 2',4'-dichloroisobutyranilide
- 2',4',5'-trichloroisobutyranilide
- 3',4'-dichlorolauranilide
- 2',4'-dimethylpropionilide
- N-methylacetanilide
- N-n-butylacetanilide
- p-chloroacetylanilide
- 2',4'-dimethylpropionilide
- 2-chloro-2',4'-dimethylpropionilide

**Example 4.**

**Pre-Emergence Tests:**

The relative value of several of the anilides as pre-emergence herbicides is determined by planting in greenhouse flats, seeds of eleven different plants, each representing a principal botanical type. The flats were treated with various herbicides at the rate equivalent to 10
pounds per acre. In the following table of herbicidal evaluation data, these plants are represented by letters as follows:

* * * *

APPENDIX IV (REFER TO SECTION VII)

The following examples illustrate methods of preparing the anilides of this invention:

Example A.

To a benzene solution containing 161 parts by weight of 3',4'-dichloroaniline and 116 parts by weight of triethylamine, there is added dropwise, through a condenser, 92 parts by weight of propionyl chloride. The reaction mixture is agitated and cooling employed when necessary to moderate the reaction. The mixture is refluxed until the acyl chloride odor disappears or becomes very faint. Water is then added to dissolve the precipitated triethylamine hydrochloride and the product is collected by filtration. On recrystallization from cyclohexane, there is obtained 172 parts by weight of 3',4'-dichloropropionanilide, m.p. 90.6-91.6. Analysis—calculated for C₉H₉Cl₂NO: C, 49.6; H, 4.13; Cl, 32.5; N, 6.42. Found: C, 49.6; H, 3.90; Cl, 32.4; N, 6.34.

Example B.

The procedure of Example A is repeated except that an equivalent amount of isobutyric acid chloride is substituted for the propionyl chloride of said example. A good yield of 3',4'-dichloroisobutyranilide is obtained.

The present invention is illustrated, but not limited, by the following examples:

Example 1. Post Emergence of Foliage Tests

Seeds of corn, cotton, ryegrass, beans, morning-glory, and pigweed are planted in soil in boxes having an exposed area of two square feet. After 23 days, the crops are sprayed with an aqueous emulsion of the particular anilide at a rate of 8 pounds per acre. The emulsion is prepared by dissolving 350 m.g. of the anilide in 4 ml. of methyl isobutyl ketone, adding 12 drops of Agrimul C (an emulsifying agent sold by Napco Chemical Company which comprises a mixture of a polyoxyethylene glycol ester and an alkylaryl sulfonate), and diluting to 40 ml. with distilled water. Application of 10.0 ml. of this emulsion per square foot of soil is equivalent to 8.4 pounds of active ingredient per acre; however, since some drift loss is inevitable when spraying small areas, this rate is assumed to be 8 pounds per acre. Neither the solvent, dimethyl formamide, nor the emulsifying agent, Agrimul C, or a mixture of the two, is toxic to the crops tested.
At the time of spraying, the crops are in approximately the following stages of growth:

- **Corn** — 10-12 inches tall
- **Cotton** — 2-4 inches tall, 3-leaf stage (including primary leaves)
- **Ryegrass** — 3-4 inches tall
- **Bindweed** — 2-4 inches tall, 3-5 leaves
- **Beans** — 6-10 inches tall, primary leaves mature, second trifoliate leaf about 1 inch in diameter
- **Pigweed** — 3-6 inches tall, in bloom due to photoperiod effect.

Throughout the course of the tests, the boxes are watered whenever necessary. Good growth conditions are maintained during the test period (60-75° at night, with daytime temperatures in 75-95° range), and the tests are terminated 21 days after spraying.

When the tests are terminated, the control crops are in approximately the following stages of growth:

- **Corn** — 24-36 inches tall
- **Cotton** — 8-10 inches tall, 7 leaves
- **Ryegrass** — 6-10 inches tall
- **Bindweed** — 6 inches tall
- **Beans** — 12-18 inches tall, active blooming, many small pods developed
- **Pigweed** — 12-16 inches tall, nearly mature

The results of such tests are given in Table I, below. Percent stand (%S) is a measure of the number of growing plants in the crops sprayed with the active ingredient as compared to the number of growing plants in the untreated control crops. Percent yield (%Y) is a measure of the weight of plant growth produced with the spray treatment as compared to the weight of crops produced without the spray treatment.

### TABLE I

<table>
<thead>
<tr>
<th></th>
<th>Corn</th>
<th>Cotton</th>
<th>Ryegrass</th>
<th>Bindweed</th>
<th>Beans</th>
<th>Pigweed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%S</td>
<td>%Y</td>
<td>%S</td>
<td>%Y</td>
<td>%S</td>
<td>%Y</td>
</tr>
<tr>
<td>3',4'-dichloro-propanilide</td>
<td>0 0 0 0 10 5 0 0 0 0 0 0</td>
<td>3',4'-dichloro-isobutyranilide</td>
<td>0 0 0 0 0 0 0 0 0 0 0 0</td>
<td>3',4'-dichloro-acetanilide</td>
<td>60 35 100 75 100 75 0 0 50 5 0 0</td>
<td>3',4'-dichloro-n-butylanilide</td>
</tr>
</tbody>
</table>
The herbicidal efficiency of the present compounds is surprising, for related compounds possess little or no herbicidal efficiency. When tested as described above, aqueous emulsions of a random group of such compounds are found to possess little or no herbicidal activity. Some of the compounds tested are set forth below:

- 3'-chloroisobutyranilide
- 3'-chloroacetanilide
- 4'-bromo-2'-phenylacetanilide
- 2',4'-dichloropropionanilide
- 2',4'-dichloroisobutyranilide
- 2',4',5'-trichloroisobutyranilide
- 3',4'-dichlorolauranilide
- 2',4'-dimethylpropionanilide
- N-methylacetanilide
- N-n-butylacetanilide
- p-chloroacetylacetanilide
- 2',4'-dimethylpropionanilide
- 2-chloro-2',4'-dimethylpropionanilide

In the following examples, tables of herbicidal evaluation data are presented in which the plants are represented by letters as follows:

<table>
<thead>
<tr>
<th>Code</th>
<th>Plant Name</th>
<th>Plant Family</th>
<th>Genus</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Wild Oat</td>
<td>Graminae</td>
<td>Avena</td>
<td>fatua</td>
</tr>
<tr>
<td>B</td>
<td>Brome Grass</td>
<td>&quot;</td>
<td>Brumus</td>
<td>tectorum</td>
</tr>
<tr>
<td>C</td>
<td>Barnyard Grass</td>
<td>&quot;</td>
<td>Echinochloa</td>
<td>crusgalli</td>
</tr>
<tr>
<td>D</td>
<td>Rye Grass</td>
<td>&quot;</td>
<td>Lolium</td>
<td>perenne</td>
</tr>
<tr>
<td>E</td>
<td>Crabgrass</td>
<td>&quot;</td>
<td>Digitaria</td>
<td>sanguinalis</td>
</tr>
<tr>
<td>F</td>
<td>Mustard (Radish)</td>
<td>Cruciterae</td>
<td>Raphanus</td>
<td>sativus</td>
</tr>
</tbody>
</table>

APPENDIX V (REFER TO SECTION VII)

Affidavit under Rule 132

ROBERT F. HUSTED, being first duly sworn, does hereby depose and say as follows:

That he received a Bachelor of Science Degree in Agronomy from Colorado State University in 1949; and that he received the degree of Doctor of Philosophy in Soil Chemistry from Purdue University in 1953;

That he has been employed by Monsanto Company of St. Louis, Missouri, since 1952; that from 1952 through 1957 he was engaged in a research program in the field of soil chemistry; and that from 1958 to the present time he has been, and still is, engaged in a research program in the field of herbicidal activity;

That he conducted and supervised a series of concurrent tests in order to determine, evaluate and compare the phytotoxic herbicidal activity of the following compounds:

I. 3,4-dichloropropionanilide
II. 3,4-dichloroacetanilide
III. 2,4-dichloropropionanilide
IV. 2,5-dichloropropionanilide
V. 2,6-dichloropropionanilide
VI. 2,3-dichloropropionanilide
VII. 2,4,6-trichloropropionanilide
VIII. 2,4,5-trichloropropionanilide
IX. 3-chloropropionanilide
X. 4-chloropropionanilide

That the post-emergent or foliage activity of these compounds I through X was determined by the following procedures:

A good grade of top soil was placed in aluminum pans and compacted to a depth of 3/8 to 1/2 inch from the top of!he pan. A predetermined number of seeds of various plant species (hereinafter specifically enumerated) were randomly distributed on the top of the soil. These seeds were then covered with a 3/8-inch layer of soil and placed in a greenhouse for a period of approximately 2 weeks under ordinary conditions of temperature, sunlight and watering.

At the end of this period, the plants in the pans were sprayed with solutions of the test compounds I through X. The sprayed solution of each compound was prepared by dissolving 0.5 gram of the compound in 20 cc of acetone, adding 0.2 cc of a 3:1 mixture of cyclohexanone and a 65% tall oil-ethylene oxide condensate—35%butylamine dodecylbenzene sulfonate to 1.5 cc of the acetone solution and diluting the resulting mixture with water. The amount of water employed was such that the sprayed solution contained 0.1% by weight of the compound, and the application to the foliage was equivalent to a rate of just under 2 lbs. per acre.

Deponent further states that the following plant species were grown in the pans and their foliage sprayed during the tests:

1. Cotton
2. Cocklebur
3. Crabgrass
4. Barnyard Grass
5. Sugar Beet
6. Wheat
7. Velvet Leaf
8. Rice
9. Wild Buckwheat
10. Fox Tail
11. Radish

Deponent further states that the tests were terminated 14 days after the sprays were applied to the foliage, at which time the results were observed and recorded; and that the relative value of each compound with respect to its herbicidal effect on each plant species was indicated by a number as follows:

0—No phytotoxicity
1—Slight phytotoxicity
2—Moderate phytotoxicity
3—Severe phytotoxicity
4—Dead

Deponent further states that the results of said tests were as hereinafter presented in Table A:

<table>
<thead>
<tr>
<th>Compound No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>II</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>III</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>IV</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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</tr>
<tr>
<td>V</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
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<td>0</td>
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</tr>
<tr>
<td>VII</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>VIII</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>X</td>
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<td>0</td>
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<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Deponent further states that the test data presented in Table A clearly demonstrates the following facts:

1. that compound II (3,4-dichloroacetanilide) displays slight phytotoxicity to 6 plant species, one of which is rice;
2. that compound X (4-chloropropionanilide) displays slight phytotoxicity to 4 plant species;
3. that each of compounds III through IX displays no phytotoxicity whatsoever to any of the plant species;
4. that compound I (3,4-dichloropropionanilide) displays severe phytotoxicity to 2 of the plant species and kills 7 of the plant species; and
5. that said compound I (3,4-dichloropropionanilide) displays no phytotoxicity to the 2 remaining plant species, namely rice and wheat which are well-known cereal crops.

Deponent further states that tests were also conducted by spraying the foliage of the 11 plant species with a “blank formulation”; that such a “blank formulation” consisted of a spray solution prepared exactly as described above, except that no test compound was employed; that the “blank formulation” was found to display no phytotoxicity whatsoever to any of the plant species; and that the use of this “blank formulation” serves to provide “control” data for the earlier-described tests.

Further deponent sayeth not.

* * * *
APPENDIX VI (REFER TO SECTION VII)

Amendment

The Honorable Commissioner of Patents
Washington, D.C. 20231

Sir:

In response to the Office Action dated October 9, 1967, please amend
the above-identified application as follows: In the specification:

Page 1, line 6, cancel “continuation in the nature of”.

REMARKS

Reconsideration of this application as amended above is hereby re-
quested. Page 1 of the specification has been amended in order to
clarify the terminology originally submitted. Said page now states
that the instant application is “a division” of the earlier filed copend-
ing application. In further accordance with the Examiner’s require-
ment, a substitute oath executed by the inventor is also submitted
herewith.

Before discussing the references cited by the Examiner and applied
against the single claim presented, Applicant wishes to make of record
the following information relating to pertinent prior art.

(1) Gorman Patent No. 1,005,784 discloses the compound 3',4'-di-
chloroisobutyranilide, which is an adjacent homologue of Applicant’s
claimed compound. Said Gorman patent carries an effective publica-
tion date of April 4, 1957.

(2) Boilstein, Volume 12, has been cited in the Office Action under
response as pertinent in pages 622 and 626. It should also be noted
that page 629 of Boilstein discloses 2',4',6'-trichloropropionanilide. This
compound is a trichloro analogue of Applicant’s claimed compound.

(3) Gortler et al., Chemical Abstracts, Volume 50, columns 17297-
98, disclose 2',5'-dichloropropionanilide which is a ring-position isomer
of Applicant’s claimed compound.

(4) “Plant Regulators”, CBCC Positive Data Series, No. 2 (June
1955) Publication 384, page 39, discloses 3'-chloropropionanilide which
is a monochloro analogue of Applicant’s claimed compound.

(5) Surrey et al., JACS, Volume 68, pages 514-17 (1946) also dis-
CLOSES 3'-CHLOROPROPIONANILIDE.

(6) Buu-Hoi, Recueil, Volume 73, pages 197-202 (1954) discloses
3',4'-dichloroacetanilide, an adjacent homologue of Applicant’s claimed
compound.

In view of the particularly relevant nature of each of the above-
noted references, Applicant respectfully requests that they be made

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of record in the instant application. Such references, and also those cited by the Examiner in the Office Action under response, will herein-after be distinguished.

Taking first the Gorman patent, it will be recognized that the effective publication date thereof is less than one year earlier than Applicant's effective filing date, whereby said Gorman patent does not constitute a statutory bar. Applicant is submitting herewith an Affidavit under Rule 131 which is believed to fully demonstrate that the invention claimed herein was conceived and reduced to practice in the United States prior to the effective date of said Gorman patent.

Specifically, said affidavit shows in Exhibits A and B that Mr. Edwin Swaffor, working under the supervision and at the direction of Applicant, prepared 3',4'-dichloropropionanilide, the compound of Applicant's sole claim. Said preparation involved the use of a well-known reaction. The simple reactants employed were 3',4'-dichloroaniline, propionic anhydride and triethylamine. Exhibit C of said affidavit shows that the 3',4'-dichloropropionanilide product of said reaction was submitted by Applicant to an independent testing laboratory for the purpose of conducting herbicidal tests thereon. Exhibit D of the affidavit consists of portions of the report of such tests by said laboratory. The results particularly tabulated on pages 12-14 of said Exhibit D demonstrate both the pre-emergent and post-emergent herbicidal effectiveness of 3',4'-dichloropropionanilide.

In summary, it is believed that the aforesaid Affidavit under Rule 131 and accompanying Exhibits A, B, C and D conclusively demonstrate that Applicant's claimed invention was conceived and reduced to practice in the United States prior to April 4, 1957, the effective publication date of Gorman Patent No. 1,005,784. Accordingly, said Gorman patent cannot constitute a valid reference against the instant application.

Turning to the remainder of the prior art cited herein, and to the two references cited by the Examiner, it will be immediately recognized that a number of compounds are disclosed which are closely related to Applicant's claimed invention. Said invention consists of a single compound, 3',4'-dichloropropionanilide. The prior art teaches the correspondingly halogenated adjacent homologue, 3',4'-dichloroacetanilide. It further teaches one of the analogous monochloropropionanilides and one of the similarly analogous trichloropropionilides. Finally, said prior art teaches two of the ring-position isomers of Applicant's claimed compound.

In order to demonstrate the new and unobvious nature of Applicant's claimed compound, there is submitted herewith an Affidavit under Rule 132 by Dr. Robert F. Husted. Said affidavit describes comparative tests conducted by Dr. Husted on specific compounds of the prior art (and others) and presents a tabulation of the results of such tests. From the list of ten compounds employed in said testing program, it is believed apparent that Dr. Husted compared the herbicidal properties of Applicant's claimed compound (I) with the adjacent
homologue of the prior art (II), the two ring-position isomers of the prior art (III and IV) and also the other two possible ring-position isomers (V and VI), the trichloro analogue of the prior art (VII) and another isomeric trichloro analogue (VIII), the monochloro analogue of the prior art (IX) and an isomeric monochloro analogue (X).

The comparative tests were conducted in accordance with a standard testing procedure described in Dr. Husted's affidavit, and the individual plant species against which the compounds were tested are fully enumerated. From the test results presented in Table A, it is obvious that compounds III through IX are completely ineffective against any one of the eleven plant species tested. Compounds II and X display only slight phytotoxicity toward a few of the eleven plant species tested. As opposed to these data, Applicant's claimed compound (I) killed seven of the plant species tested and displayed severe phytotoxicity toward two of the remaining species.

From the results obtained in tests of these nine species alone, it is believed quite obvious that Applicant's claimed compound displays novel and unexpected herbicidal properties when compared to each and every one of the most closely related compounds of the prior art. To further buttress this clear showing of unobviousness, it will be noted that Applicant's claimed compound displayed no phytotoxicity to two plant species, namely wheat and rice. Each of these species represents a well-known cereal crop which indicates that in addition to herbicidal activity per se, Applicant's claimed compound also demonstrates valuable and unexpected selective herbicidal activity.

It has repeatedly been held that the most proper test for the determination of the patentability of a compound per se requires careful consideration of all of the properties of such a compound, since these properties constitute a part of "the invention as a whole." The accompanying affidavit by Dr. Husted, and the remarks presented above, are believed to conclusively show that Applicant's claimed compound demonstrates unexpected and unobvious superiority over any one of the related compounds disclosed by the prior art and also over other closely related compounds which might be deemed to be in some way suggested by the prior art.

In view of all of the foregoing, it is Applicant's contention that Claim 1, the only claim presented herein, defines an invention which is neither taught nor suggested by the prior art. This claim is accordingly allowable, and an early indication thereof is most earnestly requested.