The Sins of the Father Visited upon the Sons of Another: Infectious Unenforceability and Consolidated Aluminum Corp. v. Foseco International Ltd.

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THE SINS OF THE FATHER VISITED UPON THE SONS OF ANOTHER: INFECTIOUS UNENFORCEABILITY AND CONSOLIDATED ALUMINUM CORP. v. FOSECO INTERNATIONAL LTD.

INTRODUCTION

The defense of inequitable conduct is firmly ensconced in patent law,¹ and when successfully pled, results in the unenforceability of the patent-in-suit.² Furthermore, inequitable conduct has long been intertwined with the equitable doctrine of "unclean hands," with courts frequently using the terms interchangeably.³ Courts have used the doctrines of inequitable conduct and unclean hands to hold that when a single patent-in-suit is tainted by inequitable conduct, that conduct extends to related patents-in-suit, rendering them unenforceable.⁴ This doctrine, termed "infectious unenforceability," has been used by courts to invalidate groups of fraudulently obtained patents,⁵ or patents stemming from a fraudulently obtained parent application.⁶ However, before 1989, no cases of infectious

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3. See, e.g., Precision Instruments Mfg. Co. v. Automotive Maintenance Mach. Co., 324 U.S. 806 (1945). The Court noted here that the petitioners claimed "Automotive possessed such 'unclean hands' as to foreclose its right to enforce the patents and the contracts." Id.
5. See Kevin R. Casey, "Infectious Unenforceability": The Extent or Reach of Inequitable Conduct on Associated Patents, 17 AIPLA Q.J. 338, 344 (1989) (stating that courts have held that inequitable conduct tainting only one patent-in-suit also infects all associated patents-in-suit, rendering them unenforceable).
unenforceability had come before the Court of Appeals for the Federal Circuit.\(^7\)

In *Consolidated Aluminum Corp. v. Foseco International Ltd.*\(^8\) (*Consolidated III*), the Federal Circuit was presented with a case involving infectious unenforceability. *Consolidated III* required the Federal Circuit to consider for the first time the equitable maxim "he who comes into equity must come with clean hands" to determine whether inequitable conduct in procuring one patent-in-suit requires a holding that other patents-in-suit are unenforceable.\(^9\) The court's affirmative answer to this question represented former Chief Judge Markey's "last pronouncement" on inequitable conduct and made clear that the doctrine of unclean hands is alive and well as a basis for unenforceability.\(^10\)

Given the underlying facts of the case itself, and the sometimes competing policies forming the basis of the patent system, the court's decision in *Consolidated III* expanded the boundaries of previous lower court decisions and raised serious questions regarding the scope and potential impact of its holding. At the very least, *Consolidated* further obfuscates the law of inequitable conduct, an area that has long been notorious for swings and variances.\(^11\)

In Section I, this Note briefly traces the purposes behind the patent system and recounts the history and development of the doctrines of inequitable conduct and unclean hands. The Note, in Section II, then examines the facts and issues presented in the subject case, and how those facts and issues were viewed, first by the magistrate, then by the district court, and finally by the Federal Circuit. Section III analyzes the Federal Circuit's opinion in light of precedent and policy considerations. Section IV discusses the potential impact of the court's holding on patent owners, inventors, and patent practitioners. Finally, this Note concludes that the holding in *Consolidated III* is contrary to precedent, goes against public policy, and, unless limited in future decisions, will have a negative effect on the patent system.

\(^7\) 28 U.S.C. § 1295 (1992), enacted in 1981, gives the Court of Appeals for the Federal Circuit exclusive jurisdiction over all appeals from decisions in cases arising under the patent laws.

\(^8\) 910 F.2d 804 (Fed. Cir. 1990) (*Consolidated III*).

\(^9\) Id. at 809.


\(^11\) Id. at 230.
I. BACKGROUND

A. The Patent System

The historical roots of the United States patent system can be traced to the patent system originating in Great Britain. During the sixteenth century, the English Crown began to grant "letters patents," giving individuals the exclusive right to produce, import, or sell certain items within the kingdom. The Crown often granted such monopolies for commonplace items such as salt, vinegar, and calfskins. This practice led to widespread abuses, resulting in shortages and inflated prices for items that would otherwise be readily and cheaply available. After great public outcry, Parliament passed the Statute of Monopolies, prohibiting the Crown from creating monopolies in common items. However, the statute contained one exception; it permitted the Crown to grant patents, for a period of fourteen years, to creators of new inventions. The rationale for this exception was to encourage the creation of new inventions for the benefit of society. The monopolies created by the Crown restrained trade in articles that had previously been part of the public domain. By contrast, granting limited exclusive rights to an invention would not withdraw anything from the public; rather, it would introduce something that is by definition new, and by implication beneficial to societal progress. Coke characterized such grants as being "good in law" since "the inventor bringeth to and for the commonwealth a new manufacture by his invention, costs and charges, and therefore it is reason that he should have a privilege for his reward, (and the encouragement of others in the like) for a convenient time."

Eager to continue such progress in the New World, colonies and preconstitutional states continued to grant patents, some as early as

12. "Letters patents" comes from the Latin patentes, meaning "open" or "accessible." Thus, letters patents were documents open for public examination. 1 WALKER ON PATENTS § 1, at 1-2 (Anthony William Deller ed., 1937).
13. 1 id. § 2, at 7.
14. 1 id. § 2, at 6.
16. 21 Jac., ch. 3; see also 1 WALKER ON PATENTS, supra note 12, § 5, at 18-21.
17. 21 Jac., ch. 3; see also 3 Gr. Brit. Stat. at Large 91.
19. 1 id.
20. 1 id. § 1:5, at 34.
the mid-seventeenth century. 21 The same desire for progress eventually was expressed in the United States Constitution, which gave Congress the power “To promote the Progress of Science and the useful Arts, by securing for limited Times to Authors and Inventors, the exclusive Right to their respective Writings and Discoveries.” 22 This clause was adopted without debate. However, writing in The Federalist Papers, James Madison observed:

The utility of this power will scarcely be questioned. The copyright of authors has been solemnly adjudged, in Great Britain, to be a right of common law. The right to useful inventions seems with equal reason to belong to the inventors. The public good fully coincides in both cases with the claims of individuals. 23

Congress wasted no time in exercising this power following the organization of our government; the First Congress passed the Patent Act of 1790 during its second session. 24 Despite major revisions, 25 the basic idea behind the system has remained the same: to confer on the authors of useful inventions an exclusive right in their inventions for the time set forth by law, in exchange for which their inventions are disclosed to the public. 26 “It is the reward stipulated for the advantages derived by the public for the exertions of the individual, and is intended as a stimulus to those exertions.” 27

The ultimate goal of the patent system is to foster human progress by bringing new designs and technologies into the public domain through disclosure. 28 In the words of Chief Justice Marshall, it “is the interest and policy of every enlightened government” to en-

21. For a thorough discussion of the development of patent law, including early American patents, see George Ramsey, The Historical Background of Patents, 18 J. PAT. OFF. SOC’Y 6 (1936).
25. See Outline of the History of the United States Patent Office (no. 7, ch. 7), 18 J. PAT. OFF. SOC’Y 63 (1936) (stating that the first patent act was short and comparatively simple).
26. The Patent Code sets out several disclosure requirements for would-be inventors: Patent Code § 112 sets forth three distinct requirements for disclosure of inventions in patent applications: (1) DESCRIPTION REQUIREMENT — the invention that is claimed must be the invention that is described; (2) the ENABLEMENT requirement — the description must be in such full, clear, and concise terms as to enable any person skilled in the art to make use of it; and (3) the BEST MODE requirement — a description of the best embodiment of the invention known to the inventor at the time of the patent application.
28. Id. at 242.
courage such progress. The patent system, in effect, strikes a bargain between inventors and the government — disclosure of the invention in exchange for limited, court-enforced exclusivity. The attractiveness of such a bargain, and its effectiveness in inducing creative effort and disclosure of the results of that effort, depend almost entirely on the backdrop of free competition in the exploitation of inventions that are unpatented or of inventions with expired patents.

Writing in 1890, Professor William C. Robinson succinctly described the essence of the patent system, stating:

The granting of a patent privilege at once accomplishes three important objects; it rewards the inventor for his skill and labor in conceiving and perfecting his invention; it stimulates him, as well as others, to still further efforts in the same or different fields; it secures to the public an immediate knowledge of the character and scope of his invention, and an unrestricted right to use it after it has expired.

The societal benefit of granting exclusive rights to inventors in exchange for their disclosures has been recognized and lauded by numerous commentators, ranging from Coke to Justice O’Connor. A patent by its very nature is affected with a public interest; it is an exception to the rule against monopolies and to the right of access to a free and open market. The far-reaching social and economic consequences of a patent, therefore, give the public a paramount interest in seeing that a patent is free from fraud or other inequitable conduct. The nature of the bargain between the public and the inventor requires applicants before the patent office to be held to a relationship of confidence and trust. When an inventor acquires a patent through a breach of this confidence and trust, courts can use the principle of inequitable conduct to render his patent unenforceable.

29. Id. at 241.
31. 1 WILLIAM C. ROBINSON, ROBINSON ON PATENTS § 33 (Boston, Little, Brown, & Co. 1890).
32. See supra text accompanying note 20 (characterizing grants of exclusive rights as “good law”).
33. See supra note 30 and accompanying text.
35. Id.
37. Id.
B. Inequitable Conduct

From its inception, United States patent law has recognized that a fraudulently acquired patent should not be enforced. The Patent Act of 1790 provided for legal action to seek repeal of a patent "obtained surreptitiously, or upon false suggestion." Early interpretations of this passage, and cases that followed, used common law fraud as the standard for evaluating a patentee's conduct.

The ultimate question of whether inequitable conduct has occurred is not a question of law, but is equitable in nature. As an equitable issue, inequitable conduct is committed to the discretion of the trial court.

Courts have been careful to distinguish inequitable conduct from common law fraud. The Federal Circuit has characterized this distinction by noting that common law fraud requires: (1) misrepresentation of a material fact; (2) intent to deceive or a state of mind so reckless as to be the equivalent of intent; (3) justifiable reliance on the misrepresentation by the party deceived, inducing him to act thereon; and (4) injury to the party deceived, resulting from reliance on the misrepresentation.

The Federal Circuit has also stated that inequitable conduct is broader than "common law fraud" since inequitable conduct "encompasses affirmative acts of commission, e.g., submission of false information, as well as omission, e.g., failure to disclose material information."

Acts of commission are exemplified in *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.* There, the petitioner alleged that the patentee submitted a declaration falsely stating that he neither knew nor believed that his invention had been in public use in the United States for more than one year prior to filing...
its patent application. The petitioner asserted that the patented process had been in use more than one year before the filing date. Remanding to the lower court, the Supreme Court held that the patent-in-suit may have been illegal, and therefore unenforceable.

By contrast, acts of omission include such conduct as withholding relevant information from the patent examiner during prosecution of the application. This type of conduct was analyzed in Beckman Instruments, Inc. v. Chemtronics, Inc. In this case, the Fifth Circuit invalidated a patent, holding that the patentee's failure to disclose the existence of relevant, published research in a related field constituted inequitable conduct.

However, merely showing that a patentee made false statements or withheld relevant information in connection with the patent application will not per se invalidate the patent. The party asserting inequitable conduct as a defense must also show, by clear and convincing evidence, a threshold degree of materiality and intent.

1. Materiality

Materiality can be established by any one of four tests: an objective "but for" test; a subjective "but for" test; a "but it may have been" test; and a "substantial likelihood" test that is based on a rule promulgated by the Patent and Trademark Office. The first of these, the objective "but for" test, is satisfied when the misrepresentation was so material that, but for the misrepresentation, the patent not only would not have been issued, but should not have been issued. Walker Process Equipment, Inc. v. Food Machinery &
Chemical Corp.53 illustrates the application of this test.

In Walker Process, the Supreme Court invalidated a patent-in-suit on the ground that the patentee concealed the fact that the patent subject matter had been in public use for over one year.54 Applying the objective “but for” test, the Court first noted that the Patent Act barred patentability of an invention that had been in public use for over one year.55 It then reasoned that had the patentee disclosed the previous public use of the subject matter in its application, the patent would never have been granted.56

The second test is a subjective “but for” test, in which the misrepresentation causes the patent examiner to approve the application when he or she would not otherwise have done so.57 The court in American Cyanamid Co. v. Federal Trade Commission58 used this test. The patent at issue in American Cyanamid was directed to a process for producing tetracycline, a common antibiotic.59 During an interview with the examiner, the patentee’s attorney stated that one aspect of the claimed process was unknown in the antibiotics field.60 Before issuance of the patent, the patentee discovered that the process was known, but he failed to disclose this discovery to the examiner.61

The Federal Trade Commission charged the patentee with arranging an illegal price-fixing scheme, alleging that the patentee had committed inequitable conduct in acquiring the patent that formed the basis of the scheme.62 The Commission found the patentee guilty of price-fixing, based in part upon its finding that the examiner allowed the patent on the basis of false statements made to him by the patentee’s attorney.63

The patentee appealed the Federal Trade Commission’s decision to the Court of Appeals for the Sixth Circuit. Although it reversed the Commission’s decision on other grounds, the court’s analysis fo-
cused not on the price-fixing issue, but on the question of whether the patent examiner was intentionally deceived by the patentee, and whether he issued the patent as a result of the deception.\textsuperscript{64}

The third test, the "but it may have been" test, invalidates a patent if misrepresentation in the course of the patent prosecution might have influenced the examiner.\textsuperscript{65} The court in \textit{Corning Glass Works v. Anchor Hocking Glass Corp.} applied this test to a patentee accused of submitting an affidavit containing false test results in order to obtain a patent.\textsuperscript{66} The court held that under the "might have been" test, the misrepresentation must be "relevant and significant," stating that "if a false answer is given to the patent Examiner when he asks 'How are you,' surely a false answer will not prevent the enforcement of the patent."\textsuperscript{67}

The court found that although the evidence at trial showed that the tests forming the basis of the affidavit could have been performed differently or more carefully, the defendant had failed to prove that this constituted a misrepresentation that might have influenced the examiner.\textsuperscript{68}

The fourth test was employed in \textit{American Hoist & Derrick Co. v. Sowa & Sons Inc.},\textsuperscript{69} where the court adopted Patent and Trademark Office (PTO) Rule 1.56(a).\textsuperscript{70} Rule 1.56(a) requires anyone who is "substantially involved" in preparing or prosecuting a patent application to disclose to the Patent Office any information that is "material to the examination of the application."\textsuperscript{71} The rule further states that information is material where there is "a substantial likelihood that a reasonable examiner would consider it important in

\textsuperscript{64} Id. at 778.
\textsuperscript{66} Id.
\textsuperscript{67} Id. at 471 n.27.
\textsuperscript{68} Id. at 471.
\textsuperscript{69} 725 F.2d 1350 (Fed. Cir.), cert. denied, 469 U.S. 821 (1984).
\textsuperscript{71} 37 C.F.R. § 1.56(a) (1991), superseded by 37 C.F.R. § 1.56 (1992); see Adamo, supra note 70, at 111.
deciding whether to allow the application to issue as a patent.” 72

According to the Federal Circuit, “the PTO standard is the appropriate starting point [in inequitable conduct analysis] because it is the broadest and because it most closely aligns with how one ought to conduct business before the PTO.” 73 Under this standard, a reference that would have been merely cumulative, teaching no more than those references already considered by the examiner, would not be material. 74 Rule 1.56 is, by far, the most common ground used for establishing materiality. 75

The Rule 1.56(a) “substantial likelihood” test was applied in J.P. Stevens & Co. v. Lex Tex, Ltd., 76 where the patentee had failed to disclose to the examiner a pair of references that were subsequently held to obviate certain claims of the patent in a re-issue proceeding. 77 In applying the Rule 1.56 standard, the Federal Circuit held that the references were material since they would have been important to a reasonable examiner in deciding whether to allow the claims. 78

Each of the four tests for materiality requires the court to look to the information that has been withheld in light of the claimed invention. The second prong of inequitable conduct, intent, focuses on the

74. See Kimberly-Clark Corp. v. Johnson & Johnson, 745 F.2d 1437, 1455-56 (Fed. Cir. 1984) (reversing the district court’s holding of invalidity, reasoning that it relied on a merely cumulative reference).

(1) it establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
(2) it refutes, or is inconsistent with, a position the applicant takes in:
   (i) opposing an argument of unpatentability relied on by the Office, or
   (ii) asserting an argument of patentability.
37 C.F.R. § 1.56(a) (1992).

As of this writing, no cases have been reported involving the new rule. It is therefore unknown whether or not the courts will change the current materiality standard in light of the amendments to PTO Rule 1.56. See Adamo, supra note 10 (presenting public commentary and debate on the current amendments to Rule 1.56 shortly after they were proposed).
76. 747 F.2d 1553 (Fed. Cir. 1984).
77. Id. at 1562.
78. Id. at 1562-66.
question of whether or not the patentee intended to act inequitably in withholding material information.\textsuperscript{79}

2. Intent

A finding of inequitable conduct requires proof of a threshold level of intent on the part of the patentee.\textsuperscript{80} The challenging party can meet this threshold level in a variety of ways.\textsuperscript{81} Intent may be proved by acts, the natural consequences of which were presumably intended by the actor.\textsuperscript{82} Proof of deliberate scheming is not necessary.\textsuperscript{83} However, the involved conduct, viewed in light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive.\textsuperscript{84}

The current standard for intent is illustrated in \textit{In re Harita},\textsuperscript{85} in which a Japanese patent attorney was responsible for filing a United States patent application corresponding to a Japanese application. The attorney, unaware of the standards for disclosure in the U.S. Patent and Trademark Office (USPTO), withheld from the USPTO the material references discovered during examination of the Japanese application. In reversing the USPTO's finding of inequitable conduct, the Federal Circuit stated:

"Inequitable conduct" is not, or should not be, a magic incantation to be asserted against every patentee. Nor is that allegation established upon a mere showing that art or information having some degree of materiality was not disclosed. To be guilty of inequitable conduct, one must have intended to have acted inequitably.\textsuperscript{86}

The Japanese attorney, upon becoming aware of the duty to disclose

\textsuperscript{79} FMC Corp. v. Manitowoc Co., 835 F.2d 1411, 1415 (Fed. Cir. 1987). \textit{But see} Adamo, \textit{supra} note 10 (commenting that courts will always find intent if materiality is present).

\textsuperscript{80} \textit{J.P. Stevens}, 747 F.2d at 1560.

\textsuperscript{81} \textit{Id.} (citing Hycor Corp. v. Schleuter Co., 740 F.2d 1529 (Fed. Cir. 1984)).

\textsuperscript{82} Kansas Jack, Inc. v. Kuhn, 719 F.2d 1144, 1151 (Fed. Cir. 1983); see also American Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1363 (Fed. Cir.) (finding that intent may be shown by any relevant degree of proof), \textit{cert denied}, 469 U.S. 821 (1984).

\textsuperscript{83} Hycor Corp. v. Schleuter Co., 740 F.2d 1529, 1540 (Fed. Cir. 1984) (holding that a showing of gross negligence may also meet the threshold level of intent). Gross negligence is present when the actor, judged as a reasonable person in his position, should have known of the materiality of the withheld reference. \textit{J.P. Stevens}, 747 F.2d at 1560 (citing Driscoll v. Cebalo, 731 F.2d 878, 885 (Fed. Cir. 1984)).


\textsuperscript{85} 847 F.2d 801 (Fed. Cir. 1988).

\textsuperscript{86} \textit{Id.} at 808 (citing FMC Corp. v. Manitowoc Co., 835 F.2d 1411, 1415 (Fed. Cir. 1987)).
the withheld references, took steps to correct his mistake.\textsuperscript{87} In light of this, the court found that the attorney's conduct did not rise to the level of intent to mislead.\textsuperscript{88}

Once materiality and intent are established, the court must balance them to determine whether inequitable conduct has occurred.\textsuperscript{89} Balancing is used to determine the presence or absence of inequitable conduct, in view of all the circumstances. No single factor or combination of factors can always be said to require an inference of intent to mislead. Still, a patentee confronted with a high level of materiality, along with clear proof that he knew or should have known of that materiality, will find it difficult to establish "subjective good faith" sufficient to prevent the court from drawing an inference of intent to mislead.\textsuperscript{90}

If, after balancing the evidence of materiality and intent, the court finds inequitable conduct, it must hold that the patent claims in issue are unenforceable.\textsuperscript{91} This requirement must be distinguished from situations not involving inequitable conduct; there, even if certain claims of a patent are held invalid, the remaining claims of the patent can still remain valid and enforceable.\textsuperscript{92} However, 35 U.S.C. § 288 expressly prohibits a patentee from filing an infringement action to enforce a patent in which any one of its claims is invalid by reason of fraud or deception.\textsuperscript{93} Thus, inequitable conduct with respect to a patent-in-suit invalidates the entire patent, even if the patent contains some valid claims.\textsuperscript{94}

The Federal Circuit has described the habit of charging inequita-
stable conduct in every major patent case as "a plague." 95 Nevertheless, a charge of inequitable conduct is a potent defensive weapon for an accused infringer and represents an equitable concept that will remain a part of U.S. patent law for the foreseeable future. 96

C. Unclean Hands

Another equitable principle frequently invoked in patent cases is the doctrine of unclean hands, which springs from the venerable adage that "[h]e who comes into equity must come with clean hands." 97 The doctrine is a self-imposed ordinance that closes the doors of a court of equity to one tainted with inequity or bad faith relative to the matter in which he seeks relief, however improper the behavior of the defendant may have been. 98 It is rooted in the historical concept of a court of equity as a vehicle for affirmatively enforcing the requirements of conscience and good faith. 99 The doctrine presupposes a refusal of the court to be "the abetter of iniquity." 100 Although equity does not demand that its suitors shall have led blameless lives as to other matters, 101 it does require that they shall have acted fairly and without fraud or deceit as to the controversy in issue. 102


Although Keystone Driller was decided in 1933, it is cited to this day in patent cases involving inequitable conduct. 106 The case in-

96. See generally Adamo, supra note 70, at 112-16 (discussing the scope of the inequitable conduct doctrine).
98. Id.
99. Id.
103. 290 U.S. 240 (1933).
104. 324 U.S. 806 (1945).
105. 718 F.2d 365 (Fed. Cir. 1983).
106. Recent cases citing Keystone Driller in the context of inequitable conduct analysis include Consolidated Aluminum Corp. v. Foseco Int'l, Ltd., 910 F.2d 804 (Fed. Cir. 1990); Texas Instruments, Inc. v. United States Int'l Trade Comm'n, 851 F.2d 342 (Fed. Cir. 1988); Builders Con-
volved five patents, four of which were improvements on the subject matter of the first patent. The patentee concealed a prior use that would have invalidated one of the improvement patents. After bringing suit to enforce all five of the patents, the patentee conspired to suppress evidence of the prior use from the trial court.

The Supreme Court upheld the Sixth Circuit ruling that all five patents-in-suit were unenforceable due to unclean hands. However, the Court based its holding not on the patentee’s concealment of prior use from the Patent Office, but on the suppression of evidence from the trial court. It stated that unclean hands applies “only where some unconscionable act of one coming for relief has immediate and necessary relation to the equity that he seeks in respect of the matter in litigation.”

In Precision Instruments, the inventor submitted a false affidavit in order to prevail in an interference proceeding, thereby obtaining a patent. The assignee of the patent subsequently sued for infringement on the perjured patent and two others, notwithstanding its discovery of the inventor’s perjured affidavit. The Supreme Court stated that the history of the patents in issue was “steeped in perjury and undisclosed knowledge of perjury,” and citing Keystone Driller as persuasive support, dismissed the entire suit under the unclean hands doctrine.

**SSIH Equipment** involved a complaint filed before the International Trade Commission (ITC) alleging infringement of three U.S. patents directed to stadium scoreboards. Initially, the ITC deter-
mined that all three of the patents were valid and barred importation of the infringing scoreboards. Subsequently, two of the patents were asserted in a separate infringement action in the Eastern District of Michigan and were held invalid due to inequitable conduct. The remaining patent issued before the filing of the patents involved in the infringement action and was not at issue in the infringement action.116

When ITC became aware of the district court decision, it modified its exclusion order to suspend the portion of its order referring to the unenforceable patents, while maintaining the order on the basis of the third patent. The importer appealed to the Federal Circuit.117 Invoking Keystone Driller, the importer asked the court to refuse to enforce the third patent, arguing that all of the patents were so interrelated that the patentee's unclean hands with respect to the first two patents rendered the third patent unenforceable.118

The Federal Circuit upheld the ITC modification, noting that the inequitable conduct had occurred after the patent-in-suit had issued and almost three years before the other patents were applied for. The court also cited the absence of a sufficient relationship between the patent-in-suit and the inequitable conduct in the related patents. The court rejected the importer's reliance on Keystone Driller, stating that Keystone Driller and its progeny would deny enforcement of the third patent only if the patentee were to have committed a fraud on the Commission itself.119

Keystone Driller, Precision Instruments, and SSIH Equipment illustrate how courts have applied the concepts of equity, specifically the doctrine of unclean hands, to patent cases. These cases demonstrate that courts have the power to render several patents unenforceable. The following section details the efforts of courts to strike a balance between this power and the constitutional policies underlying the patent system — policies which favor patents as a mechanism for encouraging scientific progress by rewarding inventors with

116. Id. at 368.
117. Id. at 369. Note that SSIH Equipment did not present the Federal Circuit with a clear-cut case of infectious unenforceability since the alleged inequitable conduct occurred in the prosecution of patents not in suit.
118. Id. at 378.
119. Id. at 379 (citing as an example Armour & Co. v. Wilson & Co., 168 F. Supp. 353 (N.D. Ill. 1958), aff'd in part, rev'd in part, 747 F.2d 143 (7th Cir. 1983)).
exclusive patent rights.\textsuperscript{120}

\section*{D. Infectious Unenforceability — Balancing Equitable Power and Patent Policy}

The term “infectious unenforceability” has been coined to define the holding reached by some courts in applying the doctrines of inequitable conduct and unclean hands to render multiple patents-in-suit unenforceable due to an inequitable act committed with respect to at least one, but less than all, of the patents.\textsuperscript{121} In applying the precepts of infectious unenforceability, courts have held that if a single patent-in-suit were tainted by inequitable conduct, then that conduct “infected” associated patents-in-suit and rendered them unenforceable also.\textsuperscript{122}

The potential impact of infectious unenforceability on the patent system has been considered in the patent literature.\textsuperscript{123} However, \textit{Procter & Gamble Co. v. Nabisco Brands, Inc.}\textsuperscript{124} is among the few cases that expressly address the balance struck between the policy purposes of the patent system and the doctrines of inequitable conduct and unclean hands. \textit{Procter & Gamble} involved three patents

\begin{itemize}
\item[120.] See supra text accompanying notes 22-23 (discussing the Framers' intent with respect to patent law).
\item[121.] See generally Casey, supra note 5, at 344-45 (discussing the evolution of the “infectious unenforceability” doctrine).
\item[122.] Id. (explaining the concept of infectious unenforceability).
\item[123.] See id. at 359. Casey gives the following exemplary scenarios, which bear striking resemblance to the situation presented in Consolidated Aluminum Corp. v. Foseco Int'l Ltd., 910 F.2d 804 (Fed. Cir. 1990) (Consolidated III):
\begin{itemize}
\item For example, consider the plaintiff who has obtained two patents by assignment, with one patent tainted by inequitable conduct and the other patent free of taint, and who sues for infringement of both patents. The tainted patent issued through abuse of PTO procedures and must be refused enforcement to protect those procedures. To hold the untainted patent unenforceable, however, would punish the assignee unduly. Moreover, such a holding would not protect the PTO procedures because the untainted patent issued without abusing those procedures. Therefore, the procedures need no protection.
\item Moreover, consider the situation where a patentee has obtained two patents, one of them (only) through inequitable conduct before the PTO. It might be argued, of course, that PTO procedures would be more fully protected if both the Patentee's patents were held unenforceable under a theory of infectious unenforceability. In view of the high duty-low misconduct standard, however, the severe penalty already imposed (forfeiture of rights under a patent) should be punishment enough to protect the PTO's procedures. The additional penalty of forfeiting additional patent rights is unnecessary.
\end{itemize}
\item[124.] 697 F. Supp. 1360 (D. Del. 1988).
\end{itemize}
directed to the manufacture of dual-textured cookies. The accused infringers asserted that inequitable conduct in obtaining two of the patents rendered the third patent unenforceable since the patents were "connected." 125

Despite the fact that the patents were directed to the same subject matter, 126 the court found that the patents were mutually independent, stating that "whether [one of the first patents] is unenforceable or not has little bearing on the validity of what it teaches. The independent source of an additional method of production [in the third patent] makes any 'connection' extremely attenuated." 127

With respect to the concept referred to here as "infectious unenforceability," the court stated:

The Court has serious reservations about whether one patent could ever incorporate, along with the teachings of another patent, the inequitable conduct associated with another patent. Even if the incorporated patent is ultimately unenforceable, the teachings of that patent are still available as information within the public domain. Subsequent inventors should be able to rely on those teachings without having to worry about incorporating the misdeeds underlying the incorporated patent's unenforceability. 128

A factually similar case, Boots Laboratories, Inc. v. Burroughs Wellcome Co., 129 was an action for declaratory judgment involving two patents directed to compounds and methods for treating conditions that lead to gout. Upon finding that someone other than the named inventor had actually discovered the patented compound, the patent owner dedicated the compound patent to the public, while maintaining the method patent in force. 130

The plaintiff asserted that the patentee knew of the previous discovery of the compound at the time the method application was filed but failed to disclose this knowledge to the Patent Office. 131 The plaintiff argued that this failure constituted inequitable conduct in

125. Id. at 1362.
126. The third patent incorporated by reference one of the allegedly "tainted" patents, and the claims of the patents overlapped to such an extent that they were later the subject of a terminal disclaimer which restricted the term of the later patents so that all three patents would expire at the same time. Id. at 1364-65.
127. Id. at 1363.
128. Id. at 1363 n.7.
130. Id. at 846. A method or process claim is a claim of a patent that covers a method by defining a series of steps to be followed in performing a process. A process claim is to be contrasted with a product claim or apparatus claim, which covers a structure, apparatus, or composition. McCARTHY'S DESK ENCYCLOPEDIA OF INTELLECTUAL PROPERTY 263-64 (1991).
procuring the compound patent, rendering both the compound patent and the method patent invalid.\(^{132}\)

The district court upheld the validity of the patent-in-suit, stating that it did not need to reach the issue of whether or not fraud occurred in the procurement of the compound patent. It stated:

Even assuming that the [compound] Patent was, as plaintiff alleges, obtained through fraud, the [method] Patent is not thereby invalidated. Courts will not invalidate a patent because a prior patent has been fraudulently obtained unless there is some causal connection between the validity of the two patents. . . . The validity of the [method] Patent is not dependent upon the validity of the [compound] Patent. Whether or not the compound . . . is itself a patentable invention, the use of [the compound] in the treatment of gout is valuable and patentable in its own right. The alleged fraud . . . extends only to the issue of inventorship of the compound, not to its various uses. The validity of the [compound] Patent would not have been considered relevant by a reasonable patent officer in deciding whether or not to grant the [method] Patent.\(^{133}\)

*Procter & Gamble* and *Boots Laboratories* present examples of district courts weighing the beneficial effects of the patent system against the need for ensuring candor before the United States Patent and Trademark Office. In these cases, the courts found two conditions that must be present in order to use inequitable conduct in procuring one patent as the basis for invalidating a related patent. First, there must be a significant relationship between the first patent and the second patent.\(^{134}\) Second, there must be a significant relationship between the inequitable conduct in the first patent and the validity of the second patent.\(^{135}\)

Another case balancing these competing interests is *Hemstreet v. Burroughs Corp.*,\(^{136}\) in which the court found that such significant relationships existed. In *Hemstreet*, the examiner had required restriction between two inventions in a single patent application. The applicant elected to prosecute one of the inventions in the original application and filed a divisional application to prosecute a second invention. As a result, two patents were issued from the original application.\(^{137}\) However, the applicant had failed to disclose relevant

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132. *Id.* at 849.
133. *Id.* at 849-50.
134. *See supra* notes 124-28 and accompanying text (discussing the *Procter & Gamble* case).
135. *See supra* notes 129-33 and accompanying text (discussing the *Boots Laboratories* case).
137. *Id.* at 1107.
prior art in prosecuting the original application.\textsuperscript{138} The district court found that the undisclosed prior art was highly material to the claims of both patents-in-suit, that the patentee knew of the materiality of the prior art, and that he failed to call it to the attention of the Patent Office. This failure to disclose constituted inequitable conduct rendering both of the patents unenforceable.\textsuperscript{140}

Unlike the patents in Procter & Gamble and Boots Laboratories, the patents in Hemstreet were closely related; both patents stemmed from the same original application. In further contrast to the patents in Procter & Gamble and Boots Laboratories, the genealogical relationship between the patents-in-suit in Hemstreet rendered the misrepresentation highly material to the claims of both patents. Thus, despite countervailing policy considerations, the Hemstreet court had no choice but to invalidate both patents-in-suit.

In deciding the three cases discussed in this section, the district courts used varying terminology in describing the relationships between patents-in-suit that would necessitate application of the infectious unenforceability doctrine. However, the standards for such application are consistent: In order to render related patents unenforceable, the patents must either have a genealogical relation-

\textsuperscript{138} The term "prior art" refers generally to "that fund of information which is available or accessible to the public." I Peter D. Rosenberg, Patent Law Fundamentals § 7.01 (2d ed. 1992).

\textsuperscript{139} Hemstreet, 666 F. Supp. at 1106.

\textsuperscript{140} Id. at 1107.

\textsuperscript{141} Kevin Casey provides a concise definition of "genealogically related":

When an applicant files a subsequent patent application (the "child") before the patenting, abandonment, or termination of proceedings on an earlier-filed application (the "parent") by the same inventor, co-pending applications exist. There are three types of co-pending, genealogically related applications. First, the child application may disclose and claim only the invention disclosed and claimed in the parent application. Such a child is a continuation application. Second, a continuation-in-part child application includes at least part of the parent application's disclosure and includes subject matter which was not part of [the parent's] disclosure. Finally, the child application may claim only a portion of the subject matter disclosed in the parent application. This third type of co-pending application is a divisional application. Under 35 U.S.C. § 120 (1982), a child application may receive the benefit of the parent application's disclosure and includes subject matter which was not part of [the parent's] disclosure. Finally, the child application may claim only a portion of the subject matter disclosed in the parent application. Under 35 U.S.C. § 120 (1982), a child application may receive the benefit of the parent's earlier filing date [for subject matter common to the parent and child].


For examples of cases in which courts have used the parent-child terminology, see Indiana Gen. Corp. v. Lockheed Aircraft Corp., 408 F.2d 294 (9th Cir. 1968); Chemithon Corp. v. Procter & Gamble Co., 287 F. Supp. 291, 299 (D. Md. 1968), aff'd per curiam, 427 F.2d 893 (4th Cir.), cert. denied, 400 U.S. 925 (1970).
ship or there must be a causal connection between the validity of the patents. With these district court cases as a backdrop, *Consolidated Aluminum Corp. v. Foseco International Ltd.*\(^{142}\) presented the Federal Circuit with an issue of first impression — whether the equitable maxim "he who comes into equity must come with clean hands" required it to hold related patents-in-suit unenforceable when one patent-in-suit was procured by inequitable conduct.\(^{143}\) However, before reaching the Court of Appeals for the Federal Circuit, the facts and issues presented in *Consolidated III* were scrutinized at trial before a federal magistrate, as well as by Senior Judge Hubert L. Will of the district court.

II. *Consolidated Aluminum Corp. v. Foseco International Ltd.*

A. The Magistrate's Findings\(^{144}\)

By agreement of the parties, the initial trial in *Consolidated* was held before United States Magistrate Elaine Bucklo.\(^{145}\) *Consolidated* was an enormous case, even by patent litigation standards. The initial trial took six weeks, involved more than two thousand physical exhibits and documents, and elicited testimony from twenty-seven in-court witnesses and seventy witnesses by deposition.\(^{146}\) The magistrate's "Report and Recommendations" was ninety-four pages long.\(^{147}\) Consequently, a complete understanding of the *Consolidated* case requires some preliminary exposition of the technology involved in the patents-in-suit and of the business dealings of the parties.

1. The Technology

The patents-in-suit at issue in *Consolidated* concerned the use of a ceramic foam filter to remove impurities, in the form of entrained solids, from a fluid pour of molten metal. The patents were directed to the filters themselves, to methods of using the filters, and to methods of manufacturing the filters.\(^{148}\)

142. 910 F.2d 804 (Fed. Cir. 1990).
143. *Id.* at 809.
144. 10 U.S.P.Q.2d (BNA) 1143 (N.D. Ill. 1988) (*Consolidated I*).
145. *Id.* at 1144-45.
146. *Id.* at 1145-46.
147. *Id.*
148. *Id.* at 1145.
Molten metal, particularly molten aluminum, generally contains impurities which may be deleterious to the final cast product. The impurities appear as inclusions in the final cast product after the molten aluminum solidifies and may cause the product to be less ductile, or to have poor bright finishing and anodizing characteristics. Consequently, manufacturers want to remove as many impurities from the molten aluminum as practicable before casting their final products.\textsuperscript{149}

Prior to the development of the ceramic foam filter, the conventional techniques for filtering impurities from molten aluminum included passing the molten aluminum through open weave glass cloth screens, through bed filters of tabular alumina, or through flux-coated alumina balls.\textsuperscript{150} By the 1970s, the ball filter was considered the commercial frontrunner in the industry.\textsuperscript{151} However, a need existed for a different kind of filter which could provide the desired molten metal quality by a cheaper and easier method.\textsuperscript{152}

In the early 1970s, the Olin Corporation (Olin) had an extensive aluminum producing operation, using the ball filter in its production methods.\textsuperscript{153} At that time, Dr. Michael J. Pryor was Director of the Metal Research Laboratories (MRL) division of Olin, and was aware of reports of the shortcomings of conventional filters.\textsuperscript{154} In the summer of 1972, Dr. Pryor visited Dr. Thomas J. Gray, a faculty member at Alfred University in New York, and investigated a small piece of ceramic material that Dr. Gray had brought with him.\textsuperscript{155} During this meeting, it occurred to Dr. Pryor that an open cell ceramic foam material might be made and used as a disposable filter for molten aluminum or copper, and he discussed this possibility with Dr. Gray.\textsuperscript{156}

Upon his return to MRL, Dr. Pryor prepared a Memorandum Of Invention (memorandum) setting down the concepts that he had discussed with Dr. Gray.\textsuperscript{157} At the time, Dr. Gray believed that ce-

\textsuperscript{149} Id. at 1146 (describing the impurities appearing in molten metal, the effect of these impurities on the product, and the methods of removing the impurities to ensure a higher quality product).
\textsuperscript{150} Id.
\textsuperscript{151} Id.
\textsuperscript{152} Id.
\textsuperscript{153} Id. at 1148.
\textsuperscript{154} Id.
\textsuperscript{155} Id.
\textsuperscript{156} Id.
\textsuperscript{157} Id.
Ceramic foam could act as a metal filter if it were made out of ceramic materials that did not use binders, since he believed that binders would be attacked by molten aluminum or copper, thus disintegrating the filter. Therefore, Dr. Pryor contacted Dr. Gray and asked him to try to make a ceramic foam body that did not contain binders.

Having heard nothing from Dr. Gray by the spring of 1973, Dr. Pryor asked James E. Dore, the head of the Process Metallurgy Section at MRL, to take over the project. Dore assigned various researchers to the task and in June of 1973, formulated a slurry that contained the binder Bentonite, known as the “CS1-B” slurry. In November of 1973, Olin conducted pilot tests that showed the feasibility of using the ceramic foam filter, made from the CS1-B slurry, in producing cast aluminum.

2. Parties to the Consolidated Litigation

a. The plaintiffs

Plaintiff Swiss Aluminum Ltd. (Alusuisse) purchased the aluminum operation of Olin for assignment to its subsidiary, plaintiff Consolidated Aluminum Corporation (Consolidated). The purchase was effective January 4, 1974 and provided for grantback licenses to Olin for any patent or patent application relating to the aluminum field filed prior to that date. Dr. Pryor wanted the ceramic foam filter to be one of the developments Olin would be free to use following the buy-out, should the filter become commercially viable. He instructed Olin’s patent attorney to immediately prepare and file a patent application based on his memorandum. The application was filed on January 2, 1974, two days before the “grant-back” deadline. The application disclosed the binderless slurry formula en-
visioned by Dr. Pryor and Dr. Gray in the memorandum, but included the November 1973 test results, performed with the CS1-B slurry, which contained binders. Believing that future patents would be directed to specific slurry formulas, Dr. Pryor instructed his patent attorney to include the sentence: “Additives may be employed in the slurry such as binders.” This application issued on July 8, 1975 as U.S. Patent No. 3,893,917 (the 917 patent), entitled “Molten Metal Filter.”

After purchasing Olin’s aluminum operation, Consolidated continued, over the ensuing four years, to develop various aspects of the use and manufacture of the ceramic foam filter. Consolidated directed its efforts to developing manufacturing techniques for producing ceramic bodies with consistent structure, to identifying and enhancing advantageous structural properties of ceramic filters, and to developing mounting arrangements for ceramic filters. This work was done for Consolidated under the direction of James Dore at MRL.

In order to protect some of their developments in these areas, Consolidated obtained several United States patents, all of which named James Dore, John Yarwood, and Robert Preuss of MRL as coinventors. U.S. Patent No. 3,962,081, entitled “Ceramic Foam Filter” (the 081 patent), which issued on June 8, 1976, was directed to a ceramic foam filter having pore blockages, structures which cause molten metal poured through the filter to travel a tortuous path. U.S. Patent No. 4,024,056, entitled “Filtering of Molten Metal” (the 056 patent), which issued on May 17, 1977, and U.S. Patent No. 4,081,371, entitled “Filtering of Molten Metal” (the 371 patent), which issued on March 28, 1978, concerned the use of a removable filter plate. U.S. Patent No. 4,024,212, entitled “Ceramic Foam and Method of Preparation” (the 212 patent), which issued on May 17, 1977, was a continuation of the 081 patent and

165. Id. at 1153.
166. Id. at 1149.
167. Id. at 1153.
168. Id. at 1145.
169. Id. at 1150.
170. Id.
171. Id.
172. Id. at 1145.
173. Id.
174. Id.
claimed a method for making filters with pore blockages.\textsuperscript{175} U.S. Patent No. 4,075,303, entitled “Method of Preparation of Ceramic Foam” (the 303 patent), which issued on February 21, 1978, was also a continuation of the 081 patent and was directed to the use of rollers in preparing ceramic foam filters.\textsuperscript{176} These patents, along with the 917 patent, were the patents-in-suit in the \textit{Consolidated} case.

b. The defendants

The Refractories Division of defendant Foseco International Ltd. (Foseco)\textsuperscript{177} began developing ceramic foam filters in 1969.\textsuperscript{178} After several years of research and experimentation, Foseco Refractories (Refractories) had not yet developed a commercially viable filter.\textsuperscript{179} From 1975 through 1977, officials from Refractories held several meetings with officials from British Aluminum Company (British Aluminum), during which time the parties discussed the Consolidated ceramic foam filter patents.\textsuperscript{180} British Aluminum asked Refractories to provide a similar ceramic foam filter system to that manufactured by Consolidated. As a result, in 1977, Refractories began manufacturing ceramic foam filters for sale to Rolls Royce.\textsuperscript{181}

Foseco disbanded Refractories in 1978.\textsuperscript{182} However, the Product Manager for Foseco Foundry Division (Foundry) had heard of Refractories’ ceramic foam filter projects, and he assigned technicians to begin work on a similar ceramic filter system.\textsuperscript{183} Despite intense experimentation, their efforts were unsuccessful until an October 1978 meeting took place between Foundry technicians and former Refractories employees who had been involved in Refractories’ ceramic foam project. Once again, the parties discussed the Consolidated ceramic foam filter patents. Shortly after this meeting, the Foundry technicians, using Consolidated’s patented technology,
developed a slurry formula and manufacturing technique for producing ceramic foam filters, which Foseco sold under the tradename "SIVEX."\textsuperscript{184} Consolidated accused Foseco of infringing on Consolidated's patents through its manufacture of these ceramic foam filters.\textsuperscript{185} Additionally, Consolidated accused several of Foseco's customers of infringing activity.\textsuperscript{186} Defendant Alumax Mill Products Inc. (Alumax) was a Consolidated customer until 1981, after which it began buying SIVEX filters from Foseco.\textsuperscript{187} Defendant Trialco Inc. (Trialco) bought filters from both Consolidated and Foseco.\textsuperscript{188}

3. The Complaint and Answer

Foseco was charged with direct, joint, and/or contributory infringement, or with inducing infringement, of the 917, the 081, the 056, the 371, the 212, and the 303 patents by its activities in producing and selling its SIVEX filter.\textsuperscript{189} Foseco also was charged with willful infringement of all of the patents-in-suit.\textsuperscript{190}

Defendants Alumax and Trialco were charged with direct infringement of the 081 patent by using the SIVEX filter to filter molten aluminum.\textsuperscript{191} Alumax and Trialco were also charged with direct infringement of the 056 and the 371 patents by using the SIVEX filter to practice the method and molten metal filter system claimed in those patents.\textsuperscript{192}

Alumax and Trialco denied all allegations of infringement and further counterclaimed that the patents-in-suit were invalid and unenforceable.\textsuperscript{193} Foseco alleged that: (1) Consolidated and Alusuisse had conspired and acted in bad faith by commencing the lawsuit and circulating warnings of patent infringement to Foseco's customers; (2) the patents were procured by Consolidated as a result of fraud upon the Patent Office; and (3) Consolidated had violated antitrust laws by illegally tying the sale of its filters to its filter bowls

\textsuperscript{184} Id.
\textsuperscript{185} Id. at 1160-61.
\textsuperscript{186} Id.
\textsuperscript{187} Id.
\textsuperscript{188} Id.
\textsuperscript{189} Id. at 1145.
\textsuperscript{190} Id.
\textsuperscript{191} Id.; see supra text accompanying note 173 (discussing the content of the 081 patent).
\textsuperscript{192} Consolidated I, 10 U.S.P.Q.2d (BNA) at 1145; see supra text accompanying note 174 (discussing the contents of the 056 and the 371 patents).
\textsuperscript{193} Consolidated I, 10 U.S.P.Q.2d (BNA) at 1145.
and by using their buying power over Foseco products to coerce Foseco to abandon the ceramic foam filter market.\textsuperscript{194}

Consolidated and Alusuisse denied all of the allegations in the counterclaims brought by Foseco, Alumax, and Trialco.\textsuperscript{196}

4. The Trial

The district court ordered the trial bifurcated, with the liability and willfulness issues to be tried first, and a trial on damages to follow if liability was found. On agreement of the parties, the liability portion of the trial was held before Special Master Elaine E. Bucklo, the federal magistrate who had overseen most of the discovery in the case.\textsuperscript{196}

After six weeks of trial involving more than two thousand physical exhibits and documents, and testimony from twenty-seven in-court witnesses and seventy deposition witnesses, Magistrate Bucklo arrived at the following findings. First, various claims of Consolidated's 917, 081, 056, 371, 212, and 303 patents were obvious from or anticipated from the prior art, and were therefore invalid.\textsuperscript{197}

Second, all of the 917 claims were invalid for failure to disclose the best mode\textsuperscript{198} contemplated by the inventors.\textsuperscript{199} Magistrate Bucklo held that the evidence showed that the best mode known at the time Consolidated filed the 917 application was the CS1-B slurry. This best mode was later disclosed and claimed in Consolidated's 363 patent, which was not in suit.\textsuperscript{200} Instead of disclosing the actual slurry used to make the filters, Magistrate Bucklo found that the 917 patent disclosed a "fictitious, inoperable" slurry (the slurry set forth in Dr. Pryor's memorandum) that omitted key ingre-

\textsuperscript{194} Id.
\textsuperscript{195} Id.
\textsuperscript{196} Id.
\textsuperscript{197} Id. at 1152-58. This prior art involving ceramic foam filters was the subject of U.S. Patent No. 3,090,094 ("094"), issued in 1963 to Dr. Karl Schwartwalder. Dr. Pryor, who assisted in developing the subject matter of the Consolidated patents, knew of the 094 patent as far back as 1972. Id.; see supra text accompanying notes 163-76 (discussing the evolution of the Consolidated patents).
\textsuperscript{198} See DeGeorge v. Bernier, 768 F.2d 1318, 1324 (Fed. Cir. 1985). There, the court held that 35 U.S.C. § 112 (1988) requires a patent specification to "set forth the best mode contemplated by the inventor of carrying out the invention." The DeGeorge court further explained that the purpose of the best mode requirement is to "restrain inventors from applying for patents while at the same time concealing from the public preferred embodiments of their invention which they have in fact conceived." Id.
\textsuperscript{199} Consolidated I, 10 U.S.P.Q.2d (BNA) at 1167.
\textsuperscript{200} Id. at 1153.
dients necessary to hold the ceramic together.\textsuperscript{201}

The evidence further showed that both inventors of the 917 patent knew that the example disclosed in the 917 patent was inoperative and not the best mode and knew that the CS1-B slurry of the 363 patent was the best mode used to make the filters that were actually tested as reported in the 917 patent. Dr. Pryor's testimony reflected his knowledge that the CSB-1 slurry was not going to be disclosed because he instructed his patent attorney to add the sentence to the 917 specification stating: "Additives may be employed in the slurry such as binders." Inclusion of this sentence would have been unnecessary if the CS1-B slurry had been disclosed.\textsuperscript{202}

Based on Consolidated's failure to disclose the best mode as required by 35 U.S.C. \textsection 288, Magistrate Bucklo concluded that the 917 patent was invalid and unenforceable:

\begin{quote}
The evidence supports the inference that the withholding of the best mode and inclusion of a fictitious slurry was intentional. Had the Examiner known that the best mode had been withheld, the 917 patent application would not have been allowed to issue under 35 U.S.C. \textsection 112. Thus, the intentional withholding of the best mode represents inequitable conduct in connection with the prosecution of the 917 patent.\textsuperscript{203}
\end{quote}

Foseco also alleged that claim 1 of the 081 patent would have been invalid if the CS1-B slurry, as disclosed in the 363 patent, would have been available as prior art (i.e., disclosed in the 917 patent).\textsuperscript{204} Magistrate Bucklo dismissed this argument, stating, "Assuming that these patents are indeed prior art as to the 081 patent, I conclude that they do not affect the validity of Claim 1."\textsuperscript{205}

The magistrate also found that: claims 1, 4, 5, and 9 of the 081 patent were valid and willfully infringed by Foseco; claims 1, 2, and 18 of the 212 patent were valid and willfully infringed by Foseco; claim 1 of the 303 patent was valid and willfully infringed by Foseco; Alumax and Trialco were liable as infringers of the 081 patent; and all defendants had failed to prove their antitrust counterclaims.\textsuperscript{206}

\begin{itemize}
\item \textsuperscript{201} Id. at 1167; see supra text accompanying note 157 (discussing the contents of the Pryor memorandum).
\item \textsuperscript{202} Consolidated I, 10 U.S.P.Q.2d (BNA) at 1167.
\item \textsuperscript{203} Id. at 1153.
\item \textsuperscript{204} See supra text accompanying note 173 (discussing the content of the 081 patent).
\item \textsuperscript{205} Consolidated I, 10 U.S.P.Q.2d at 1154.
\item \textsuperscript{206} Id. at 1154-59.
\end{itemize}
B. The District Court's Memorandum Opinion

Following the magistrate's ruling, the parties submitted objections to her findings and conclusions and presented oral arguments before Judge Hubert L. Will of the Northern District of Illinois. Judge Will reviewed the magistrate's findings and came to a vastly different conclusion. He concluded that Consolidated's failure to disclose the best mode in the 917 patent not only rendered that patent invalid, but also constituted inequitable conduct.

Judge Will cited a line of cases in which inequitable conduct and fraud in one patent formed the basis for invalidating related patents. He cited Precision Instruments Manufacturing v. Automotive Maintenance Machinery Corp., in which the Supreme Court invalidated two patents for failure to disclose perjury related to procuring each of the patents. Judge Will also cited Hemstreet v. Burroughs Corp., where a district court invalidated two patents that were continuations of the same inequitably prosecuted parent


208. The case was transferred to Judge Will after all of the briefs had been submitted. Attorneys for the parties were not informed of this transfer until they appeared for oral arguments before Judge Williams. Judge Will's only contact with the case occurred after the extensive discovery and trial before Magistrate Bucklo and Judge Williams. Appellants Brief at 4, Consolidated II, 716 F. Supp. 316 (Nos. 89-1637 to 89-1643).

209. Consolidated challenged the magistrate's finding equating (without citation) a failure to disclose best mode with inequitable conduct. Consolidated II, 716 F. Supp. at 323. In response, Judge Will could produce just two cases in which failure to disclose the best mode arguably was equated with inequitable conduct. Id. The first case was Steierman v. Connelly & Hares, 192 U.S.P.Q. (BNA) 433 (Bd. Pat. Int. 1975), modified on other grounds, 192 U.S.P.Q. (BNA) 466 (Bd. Pat. Int. 1976), at that time a fourteen-year-old board of appeals case with no precedential effect on the court. The Steierman court invalidated a single patent on the basis that the patentee had concealed the best mode from the patent examiner. Id. at 437-38. The second case was Flick-Reedy Corp. v. Hydro-Line Mfg. Co., 241 F. Supp. 127 (N.D. Ill. 1964), rev'd in part on other grounds, 351 F.2d 546 (7th Cir. 1965), cert. denied, 383 U.S. 958 (1966), in which the court invalidated one of the patents-in-suit for failure to disclose the best mode and for withholding prior art from the Patent Office. Neither Steierman nor Flick-Reedy involved infectious unenforceability.

210. Consolidated II, 716 F. Supp. at 324-25 (citing Steierman, 716 F. Supp. at 437-38, and Flick-Reedy, 241 F. Supp. at 140-41). In Flick-Reedy, the patentee had intentionally failed to disclose a special tool for operating a seal for hydraulic and pneumatic cylinders. The district court held that the failure to disclose the best mode, the special tool, constituted inequitable conduct. Flick-Reedy, 241 F. Supp. at 140-41.

211. 324 U.S. 806 (1945).

212. Consolidated II, 716 F. Supp. at 326 (citing Precision Instruments, 324 U.S. at 818-19); see supra text accompanying notes 110-14 (discussing the Precision Instruments decision).

application.214 In Hemstreet, the court found that the undisclosed prior art was highly material to the claims of both of the patents-in-suit, that the patentee knew of the materiality of the prior art, and that he failed to call it to the attention of the Patent Office.216 This failure to disclose constituted inequitable conduct rendering both of the patents unenforceable.218

Judge Will also distinguished the facts in Consolidated II from those in SSIH Equipment S.A. v. United States International Trade Commission.217 In SSIH Equipment, the accused infringer sought to have the court refuse to enforce one patent-in-suit, arguing that it was so interrelated to two commonly owned, inequitably-acquired patents that the patentee's unclean hands rendered the third patent unenforceable.218

Judge Will noted that the SSIH Equipment court refused to strike down the patent-in-suit, noting that the acts forming the basis for inequitable conduct had occurred after the patent-in-suit had issued, almost three years before the other patents were applied for.219 The judge also cited the absence of a sufficient relationship between the patent-in-suit and the inequitable conduct in the related patents.220 He reasoned that Keystone Driller and its progeny would deny enforcement of the third patent only if the patentee were to have committed a fraud on the Commission itself.221 Judge Will stated that, unlike the facts in the present case, the SSIH Equipment court "had only to decide whether or not the inequitable conduct with respect to the two subsequently obtained patents affected the earlier patent. A significant relationship did not exist between [the patents], and the inequitable conduct was isolated."222

Judge Will also attempted to distinguish Saxton Products, Inc. v. United States Telephone Co.,223 in which the court flatly stated:

214. Consolidated II, 716 F. Supp. at 327 (citing Hemstreet, 666 F. Supp. at 1125-26); see supra text accompanying notes 136-40 (discussing the Hemstreet decision).
216. Id.
220. Id.
221. Id. (citing SSIH Equip., 718 F.2d at 378-79).
222. Id.
Fraud in obtaining one patent will not invalidate or render unenforceable another patent in common ownership even where the two patents cover related subject matter, for example one being generic and covering an improvement within the scope of the first. 224

Judge Will attacked Saxton Products, stating that if interpreted broadly, the court’s conclusion therein is “clearly contrary to the Supreme Court’s holdings in Keystone Driller and Precision Instruments.” 225 He also questioned the Saxton Product court’s reliance on Noll v. O.M. Scott & Sons Co., 226 which was, in his view, directed to patent misuse, not inequitable conduct. 227

The judge next distinguished the facts in Consolidated II from those in Procter & Gamble Co. v. Nabisco Brands, Inc., 228 a case used by Consolidated to support its argument that the patents in Consolidated II were not sufficiently related to cause blanket unenforceability. 229 Although the patents were directed to the same subject matter, 230 the Procter & Gamble court found that the patents were mutually independent, stating that “whether [one of the first patents] is unenforceable or not has little bearing on what it teaches. The independent source of an additional method of production [in the third patent] makes any ‘connection’ extremely attenuated.” 231

Judge Will construed this case as recognizing that the issue is whether or not the patents have a significant relationship and how that relationship is affected by inequitable conduct. He noted that the Procter & Gamble court merely held that “the relationship was insignificant.” 232

The court then reiterated the magistrate’s findings with respect to the 917 patent, 233 holding that when Consolidated applied for the improvements to the 917 patent, as represented by the 212, 081, and 303 patents, it should have disclosed to the Patent Office that the

224. Id. at 609 (citing Noll v. O.M. Scott & Sons Co., 467 F.2d 295 (6th Cir. 1972), cert. denied, 411 U.S. 965 (1973)).
231. Id. at 1363.
233. Id. at 330-31.
917 best mode had been concealed. Judge Will reasoned:

Such an admission would not have negated Consolidated's previous inequitable conduct, but might have reduced the effect of such conduct on Consolidated's subsequent patent applications. It would have given the patent examiner a sufficient opportunity to compare Consolidated's patent applications with the prior art and would have evidenced an intent to deal with the Patent Office in good faith. It certainly is information which we believe the patent examiner would have deemed material. Thus, the failure to disclose prior inequitable conduct during later patent applications was itself inequitable conduct.

The district court viewed Consolidated's failure to disclose the concealment of the 917 best mode in the subsequent patents as a link between the inequitable conduct in the 917 patent and the 081, 212, and 303 patents. In the court's opinion, this link established a sufficient relationship between the 917 patent and the subsequent patents to render the 081, 212, and 303 patents unenforceable due to Consolidated's inequitable conduct in procuring the 917 patent.

The district court affirmed the magistrate's finding that the remaining two patents were invalid because of the prior art. In addition, the court reversed the magistrate's finding that certain claims of the patents were valid and infringed. Finally, the court affirmed the magistrate's denial of Foseco's antitrust counterclaims.

C. The Federal Circuit Decision

In the words of the Federal Circuit, Consolidated's appeal "represented the first instance in which [the Federal Circuit] was required to consider the equitable maxim that 'he who comes into equity must come with clean hands' in determining whether

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234. Id. at 331.
235. Id. This finding is in stark contrast to the magistrate's finding on the materiality of the disclosures in the 917 patent. The magistrate found that even if the information contained in the 363 patent, the "undisclosed best mode" of the 917 patent, were available as prior art against the 081 patent, it "would not affect the validity" of the 081 claims. Consolidated Aluminum Corp. v. Foseco Int'l Ltd., 10 U.S.P.Q.2d (BNA) 1143, 1154 (N.D. Ill. 1988). Since the subject matter of the 081 patent was most closely related to that of the 917 patent, this finding would logically apply equally to the 212 and 303 patents. See infra notes 270-83 and accompanying text (analyzing this issue in detail).
237. Id. at 333-36.
238. Id. at 335.
239. Id.
inequitable conduct in procuring one patent-in-suit requires a holding that other patents-in-suit are unenforceable.\textsuperscript{241} In analyzing this issue, the Federal Circuit, like the district court, used as persuasive support the decisions in \textit{Keystone Driller Co. v. General Excavator Co.},\textsuperscript{242} where the Supreme Court upheld a Sixth Circuit ruling that all five patents-in-suit were unenforceable due to unclean hands, and in \textit{Precision Instruments Manufacturing Co. v. Automotive Maintenance Machinery Co.},\textsuperscript{243} in which the Supreme Court dismissed an infringement suit on the grounds that the patentee obtained the patents through perjury.

The Federal Circuit rejected Consolidated's argument that the facts of the subject case were distinguishable from those in \textit{Keystone Driller}. Consolidated argued that the only relationship between the patents-in-suit was one of subject matter, and that "mere relatedness of subject matter" was not a proper basis for applying the unclean hands doctrine.\textsuperscript{244}

However, the Federal Circuit viewed the prosecution histories of the patents-in-suit as establishing an "immediate and necessary relation" between Consolidated's inequitable conduct in prosecuting the 917 patent and the equity that Consolidated sought, namely the enforcement of the 081, 212, and 303 patents.\textsuperscript{245} Writing for the court, Chief Judge Howard Markey cited two paragraphs from the 081 prosecution history discussing the CS1-B slurry.\textsuperscript{246} Extrapolat-

\begin{itemize}
\item \textsuperscript{241} \textit{Id.} at 809.
\item \textsuperscript{242} 290 U.S. 240 (1933).
\item \textsuperscript{243} 324 U.S. 806 (1945).
\item \textsuperscript{244} \textit{Consolidated III}, 910 F.2d at 810.
\item \textsuperscript{245} \textit{Id.} at 810-11.
\item \textsuperscript{246} \textit{Id.} at 811-12. The quoted paragraphs are as follows:
\begin{quote}
It is also urged that the obtainment of key characteristics defined in the instant specification is dependent upon the manner of preparing the filter. This is discussed in some detail in the instant specification, see pages 9 through 14 thereof [discussing the CS1-B slurry], which is clearly not inherently contemplated by the 917 patent . . .

The data set forth in the Examples which form a part of the instant specification are believed to be particularly surprising. See, for example, Table I [results using the CS1-B slurry] which shows a remarkable improvement obtained in accordance with the present invention of both unfiltered metal and metal filtered through a tabular alumina bed. The other Examples are to the same effect. It is vigorously argued that one skilled in the art would not anticipate such significantly improved results from the 917 patent. The key interrelationship of operating variables is believed to be suggested in the instant specification and not in the art.
\end{quote}
\end{itemize}

\textit{Id.}

The 081 specification fully disclosed the use of a slurry containing Bentonite, but made it clear that "one could use a chemical equivalent or approximate the composition of this material." U.S. Patent No. 3,962,081, col. 5, ll. 64-66.
ing from these two paragraphs, he then concluded that the CS1-B slurry was "critical" to the 081 invention.\textsuperscript{247} The opinion relegated Magistrate Bucklo's express finding to the contrary to a cryptic footnote, stating:

The special master was of the view that the 081, 212, and 303 patents would have been valid even if the CS1-B slurry were in the prior art. However that may be, we need not pause to consider the accuracy of that view, for the issue is enforceability, not validity.\textsuperscript{248}

The Federal Circuit admitted that the 212 and 303 applications did not contain such arguments but held that since these applications were continuations-in-part of the 081 application, they too were tainted.\textsuperscript{249} The court's position was that the cited paragraphs were evidence that Consolidated "made arguments [in the 081 application] that it could not have made had it not concealed" the slurry, and therefore its conduct "permeated the prosecution of the other patents-in-suit," rendering them unenforceable.\textsuperscript{250}

Consolidated argued that in \textit{SSIH Equipment S.A. v. United States International Trade Commission},\textsuperscript{251} the Federal Circuit had required "fraud before the court" for the unclean hands doctrine to apply.\textsuperscript{252} Judge Markey dismissed this argument as taking a statement from \textit{SSIH Equipment} "out of context."\textsuperscript{253} Quoting \textit{Keystone Driller}, Judge Markey stated that "[u]nclean hands is not bound by formula or restrained by any limitation that tends to trammel the free and just exercise of discretion."\textsuperscript{254} The Federal Circuit thus affirmed the decision of the district court.\textsuperscript{255}

\textbf{III. Analysis}

The Federal Circuit's opinion in \textit{Consolidated III} ignores the lack

\footnotesize
\begin{itemize}
\item \textsuperscript{247} \textit{Consolidated III}, 910 F.2d at 812.
\item \textsuperscript{248} \textit{Id.} at 812 n.8 (citations omitted).
\item \textsuperscript{249} \textit{Id.} at 812.
\item \textsuperscript{250} \textit{Id.}
\item \textsuperscript{251} 718 F.2d 365 (Fed. Cir. 1983).
\item \textsuperscript{252} \textit{Consolidated III}, 910 F.2d at 812.
\item \textsuperscript{253} \textit{Id.} The Federal Circuit noted that, unlike Consolidated's patents, the alleged inequitable conduct in \textit{SSIH Equipment} occurred in the prosecution of patents not in suit, which had issued three years before the conduct occurred. The Federal Circuit further stated that "Consolidated's reading of \textit{SSIH} would be at odds with \textit{Precision Instruments}, which held that withholding information from the PTO so soiled the patentee's hands as to render all patents-in-suit unenforceable." \textit{Id.}
\item \textsuperscript{254} \textit{Id.}
\item \textsuperscript{255} \textit{Id.} at 815.
\end{itemize}
of any basis for Judge Will's rejection of the magistrate's report. The court did not explain or adopt Judge Will's reasoning, which was based on a "broad pattern of inequitable conduct," as well as on Consolidated's failure to tell the Patent Office that the best mode was missing from the 917 patent. Rather, the Federal Circuit attempted to craft its own rationale for applying infectious unenforceability to the patents-in-suit by linking the subsequent patents to the CS1-B slurry. Analysis of the court's opinion must begin with an examination of the specific acts that were held to constitute inequitable conduct.

It is beyond question that the inventors failed to disclose the CS1-B slurry in the 917 patent. Since the magistrate found that the CS1-B slurry constituted the best mode of practicing the 917 invention, it follows that the 917 patent was invalid for failure to disclose the best mode as required by patent law. In addition, accepting arguendo that intentional concealment of the best mode constitutes inequitable conduct, the claims of the 917 patent would also be unenforceable.

It is also beyond question that Consolidated disclosed the CS1-B slurry in the 081, 212, and 303 patents. However, during prosecution of these later patents, Consolidated did not inform the Patent Office of its failure to disclose the best mode during prosecution of the 917 patent.

Within this factual context, it is clear that the relationship between the 917 patent and the later patents was insufficient to render the later patents unenforceable. Furthermore, under the then existing (and current) case law, the withholding of the best mode in the 917 patent could not serve as an independent basis for finding inequitable conduct with respect to the later patents.

256. Judge Will's opinion stated, without citation, that Consolidated had a duty to inform the patent office, during prosecution of subsequent patents with different inventors, that the best mode had not been disclosed in the 917 patent. Consolidated Aluminum Corp. v. Foseco Int'l Ltd., 716 F. Supp. 316, 331 (N.D. Ill. 1989) (Consolidated II); see also supra text accompanying notes 234-36 (discussing Judge Will's reasoning on the duty to inform). This raises the rather Byzantine question of whether nondisclosure of a failure to disclose the best mode of a previous application constitutes inequitable conduct in a subsequent application. The Federal Circuit, perhaps wisely avoiding a discussion of "how many angels can dance on the head of a pin," did not address this point. This Note will similarly avoid this point.


258. See Consolidated II, 716 F. Supp. at 331 (discussing Consolidated's failure to disclose the best mode).
A. The Relationship between the Patents

In all of the previous cases using inequitable conduct to render related patents unenforceable, the patents had a genealogical relationship, or there existed a "causal connection between the validity of the patents." In the former cases, such as Hemstreet v. Burroughs Corp., the patents were mutually dependent by virtue of having common inventors or common disclosures. For example, in Hemstreet the patents-in-suit issued from a common parent application. The reference withheld from the Patent Office was highly material to the subject matter of the parent application, and thus equally material to both of the divisional patents.

In such cases, it is virtually impossible to separate the soup from the poison. Since the claims of each of the genealogically related patents are based upon common disclosures, inequitable conduct that would taint the very basis of one of the patents would be likely to taint each of the related patents. In such instances, all of the related patents stand or fall together.

In contrast to Hemstreet, where the court invalidated patents on the basis of genealogical relationship, the Supreme Court used the "causal connection" theory to invalidate patents in Keystone Driller Co. v. General Excavator Co. and Precision Instruments Manufacturing Co. v. Automotive Maintenance Machinery Co. In Keystone Driller, the Supreme Court defined the scope of the unclean hands doctrine, holding that it would apply "only where some unconscionable act of one coming for relief has immediate and necessary relation to the equity that he seeks in respect of the matter in litigation." Applying the doctrine to the facts in Keystone Driller, the Court invalidated several related patents, reasoning that four of the five patents-in-suit were improvements on the patented subject matter of the first patent. The patentee concealed a prior use that would have invalidated one of the improvement patents and, after bringing suit to enforce all five of the patents, conspired to suppress...

259. See supra note 141 (discussing the concept of a genealogical relationship among patents).
262. Id. at 1107.
263. 290 U.S. 240 (1933).
264. 324 U.S. 806 (1945).
evidence of the prior use from the trial court.\textsuperscript{266} It was the patentee's conduct before the court in enforcing all of the patents, rather than the concealed prior art in prosecuting one of the patents, that formed the basis for unenforceability.\textsuperscript{267}

In Precision Instruments, the inventor submitted a false affidavit to prevail in an interference proceeding, thereby obtaining a patent.\textsuperscript{268} The assignee of the patent subsequently brought suit on the perjured patent and two others, notwithstanding the fact that it had discovered the inventor's perjured affidavit. Stating that the history of the patents in issue was "steeped in perjury and the undisclosed knowledge of perjury,"\textsuperscript{269} the Supreme Court followed the precedent of Keystone Driller and dismissed the entire patent infringement suit under the unclean hands doctrine.\textsuperscript{270}

In both Keystone Driller and Precision Instruments, the conduct of the patentees before the court had an immediate impact on all of the patents-in-suit. In both, the patentees' misrepresentations before the court were so egregious that even when viewed independently, each of the patents in these cases would have fallen on its own merits.

In contrast to the patents in Hemstreet, none of the "tainted" patents procured by Consolidated had a genealogical relationship with the 917 patent. There were no common inventors, no commonly claimed subject matter, no co-pendency, and no claims of priority for filing dates.\textsuperscript{271}

Furthermore, there was no "causal relationship" between the failure to disclose the best mode in the 917 patent and the issuance of the later patents. The missing best mode in the 917 patent, the CS1-B slurry, was fully disclosed in each of the later patents. In the 917 patent, Dr. Pryor was concerned with the broad concept of using a slurry to produce a ceramic foam filter. In the subsequent patents, Dore and his associates were concerned with methods and apparatus for producing ceramic foam filters independent of the slurry used. The 081 patent is directed to ceramic filters having pore blockages that make molten metal travel a tortuous path through the filter. These pore blockages are obtained through the rolling process and

\begin{flushright}
\textsuperscript{266} Id.  \\
\textsuperscript{267} Id.  \\
\textsuperscript{268} Precision Instruments, 324 U.S. at 816.  \\
\textsuperscript{269} Id.  \\
\textsuperscript{270} Id. at 819.  \\
\textsuperscript{271} See supra notes 148-62 (detailing the evolution of Consolidated's patents).
\end{flushright}
are not related to the slurry used to make the filter. The 081 specification fully discloses the use of a slurry containing Bentonite, but makes it clear that "one could use a chemical equivalent or approximate the composition of this material." 272

In his opinion, Judge Markey quoted from the prosecution history of the 081 patent to establish the relationship between the 917 patent and the 081, 212, and 303 patents. 273 The bracketing in the quoted passages makes it appear as though the arguments were directed to the CS1-B slurry formula. However, the first cited passage refers to portions of the 081 patent specification that describe the overall process by which the filter is made. 274 The second cited passage refers to a table comparing the performance of known filters to a ceramic foam filter made with this process. 275 This process was later claimed in the 212 and 303 patents but was not known at the time of the filing of the 917 patent.

Contrary to the Federal Circuit's assertion, the cited arguments could certainly have been made if the CS1-B slurry had been disclosed, since the arguments in no way rely upon the constitution of the slurry itself. This conclusion is supported by the magistrate's finding that even if the slurry formula was disclosed in the 363 patent, and the "undisclosed best mode" of the 917 patent was available as prior art against the 081 patent, it "would not affect the validity" of the 081 claims. 276

The 212 patent added improvements to the processes disclosed in the 081 patent and was therefore a continuation-in-part of the 081 patent. The 303 patent added additional improvements and was a continuation-in-part of the 212 patent. The improvements added by the 212 and 303 patents represented further refinements and conceptual developments of the 081 pore blockage concept, taking the ceramic foam filter concept even further away from the broad disclosure of the 917 patent than did the improvement of the 081 patent.

274. U.S. Patent No. 3,962,081, col. 5, l. 7 through col. 8, l. 42; see supra note 246 (quoting passages from the 081 patent application).
Thus, since the 212 and 303 patents were even less related to the 917 patent than was the 081 patent, it follows that the magistrate's finding with respect to the 081 patent would logically apply to the 212 and 303 patents as well. As with the 081 patent, the validity of these patents would not be affected if the CS1-B slurry was available as prior art.

Furthermore, since the validity of Consolidated's patents would not be affected if the CS1-B slurry had been available as prior art, these patents, like the patents at issue in Procter & Gamble Co. v. Nabisco Brands,277 were "mutually independent."278 There was no "causal connection" between the validity of the Consolidated's patents-in-suit.

The patents here were related only by virtue of common ownership, incorporation by reference, and related subject matter. The same relationships existed among the patents in Procter & Gamble Co. v. Nabisco Brands,279 Boots Laboratories, Inc. v. Burroughs Wellcome Co.,280 and SSIH Equipment S.A. v. United States International Trade Commission.281 Despite common ownership and incorporation by reference, in each of these cases the courts refused to apply the unclean hands doctrine to extend unenforceability to the patents-in-suit.282 The relationship between the patents in Consolidated is similar to that of the patents in Procter & Gamble, where the court found that such a relationship established "at best, a tenuous connection."283

The only other basis for rendering the later patents unenforceable was the relationship of their subject matter to the 917 patent. However, this basis was specifically rejected by the Federal Circuit in SSIH Equipment.284 In sum, there was no genealogical relationship

278. See id. at 1363 (discussing the basis for holding that the patents were mutually independent); see also supra notes 124-28 and accompanying text (discussing the Procter & Gamble case).
281. 718 F.2d 365 (Fed. Cir. 1983).
282. See supra text accompanying notes 122-35 (discussing the facts in Procter & Gamble and Boots Laboratories).
284. SSIH Equip., 718 F.2d at 378. The court held that:

"inequitable conduct" is said to arise from a failure on the part of [the patentee] to inform the patent examiner of certain acts alleged to constitute a possible on-sale bar under 35 U.S.C. § 102(b) to all but the 762 patent. This inequitable conduct is not said to have occurred in connection with the procurement of the 762 patent. Rather,
between the 917 patent and the subsequent Consolidated patents, and there was no causal relationship between the inequitable conduct in the 917 patent and the conduct surrounding subsequent patents. Accordingly, there was not a sufficient connection between the 917 patent and the later patents to render the later patents unenforceable.

B. Independent Basis for Finding Inequitable Conduct

Absent either a genealogical relationship or causal connection between the patents, the only remaining basis for the court to invalidate all of the patents-in-suit is that the failure to disclose the best mode of the 917 patent must have formed an independent basis for inequitable conduct with respect to the 081, 212, and 303 patents. In order for this basis to apply, the tests for materiality and intent set forth in *J.P. Stevens & Co. v. Lex Tex, Ltd.* must be met.

In *Consolidated I*, the magistrate found that both the withholding of the best mode and the inclusion of a fictitious slurry in the 917 patent were intentional. However, the CS1-B slurry was disclosed in the 081, 212, and 303 patents.

It is remarkable that the Federal Circuit relegated the magistrate's finding on the effect of the CS1-B slurry, had it been available as prior art against the later Consolidated patents, to a mere footnote. The court's observation that "the issue is enforceability, not validity" was true. However, the issue of enforceability hinges on the issue of inequitable conduct, which must be based upon a finding of materiality. The question at the core of materiality is what effect, if any, the withheld information would have had on the examiner in determining patentability of the claims. The magis-

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287. Consolidated Aluminum Corp. v. Foseco Int'l Ltd., 910 F.2d 804, 812 n.8 (Fed. Cir. 1990) (*Consolidated III*).

288. *J.P. Stevens*, 747 F.2d at 1559.

289. Id.
trate found that the CS1-B slurry (had it been in the prior art) would have had no effect on the claims of the later patents. If a prior art reference would have no effect on the claims, it would have no effect on whether or not an examiner would allow those claims. Thus, the magistrate’s finding not only bears upon the question of materiality, it answers it. Unlike the Federal Circuit, which stated that it “need not pause to consider” this finding, this Note will proceed to consider its effect in detail.

Examination of the magistrate’s finding reveals that none of the four tests for materiality applies to Consolidated’s patents-in-suit. The first test, the objective “but for” test, is satisfied when the misrepresentation was so material that, but for the misrepresentation, the patent not only would not have been issued, but should not have been issued. Since the CS1-B slurry would have had no effect on the validity of the 081 patent or, by implication, the validity of the 212 and 303 patents, the issuance of the later patents would not have been affected by disclosure of the CS1-B slurry. The magistrate’s findings therefore preclude the application of this test.

The magistrate’s findings similarly preclude application of the second test, the subjective “but for” test, which asks whether the misrepresentation caused the examiner to approve the application when he would not otherwise have done so. The examiner could not have been induced to allow an application by an applicant’s failure to disclose information art that would not affect the validity of the claims.

The same result holds for the third test, the “but it may have been” test, which requires that the misrepresentation in the course of the patent prosecution might have influenced the examiner. It is impossible that information having no effect on the claims would

290. Consolidated I, 10 U.S.P.Q.2d (BNA) at 1154.
291. Consolidated III, 910 F.2d at 812 n.8.
292. See supra notes 51-79 and accompanying text (explaining the underpinnings of all four tests for materiality).
295. Corning Glass Works, 253 F. Supp. at 469; see supra notes 65-68 and accompanying text (discussing the “but it might have been” test).
have any influence on the examiner, whether it had been disclosed or not.

The fourth test, the PTO Rule 1.56(a) test,\(^{296}\) requires anyone who is "substantially involved" in preparing or prosecuting a patent application to disclose to the Patent Office any information that is "material to the examination of the application."\(^{297}\) Such information is material where there is "a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent."\(^{298}\) Under this standard, a reference that would have been merely cumulative, teaching no more than those references already considered by the examiner, would not be material.\(^{299}\)

The magistrate in *Consolidated I* found that the validity of the 081 patent (and, by implication, the 212 and 303 patents) would not have been affected if the CS1-B slurry had been available as prior art.\(^{300}\) The claims of these patents in no way relied upon the particular slurry formulation. Since the CS1-B slurry would have no effect on the validity of the claims, there is no likelihood that a reasonable patent examiner would have considered the CS1-B slurry to be important in deciding whether to allow the subsequent patents. The magistrate's findings further indicate that the CS1-B slurry was not material to the 081, 212, or 303 patents, and thus negate all four of the *J.P. Stevens* tests as applied to the 081, 212, and 303 patents.

Absent a finding of materiality, the question of intent is moot.\(^{301}\) However, Consolidated did in fact disclose the CS1-B slurry in the later patents. This disclosure indicates that there was no deception, thus precluding a finding that there was any intent to deceive.

The inequitable conduct with respect to the 917 patent was not material to either obtaining or enforcing the 081, 212, and 303 patents. The Federal Circuit in *Consolidated III* struck down subse-

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\(^{296}\) 37 C.F.R. § 1.56(a) (1991), superseded by C.F.R. § 156 (1992); see Adamo, *supra* note 70, at 110 (discussing the evolution of tests for materiality); *see also* supra notes 69-78 and accompanying text (discussing the substantial likelihood test embodied in PTO Rule 1.56).

\(^{297}\) *See* Adamo, *supra* note 70, at 110.

\(^{298}\) *Id.*

\(^{299}\) *Id.*

\(^{300}\) Consolidated Aluminum Corp. v. Foseco Int'l Ltd., 10 U.S.P.Q.2d (BNA) 1143, 1154 (N.D. Ill. 1988) (*Consolidated I*).

quent patents whose only connection with the 917 patents was relatedness of subject matter, an action that was without precedent. It contravened *Procter & Gamble Co. v. Nabisco Brands, Inc.*, where the district court stated that it had serious reservations about whether one patent could ever incorporate, along with the teachings of another patent, the inequitable conduct associated with another patent. Even if the incorporated patent is ultimately unenforceable, the teachings of that patent are still available as information within the public domain. Subsequent inventors should be able to rely on those teachings without having to worry about incorporating the misdeeds underlying the incorporated patent’s unenforceability.

Faced with a similar situation, the Federal Circuit had no such reservations.

**IV. IMPACT**

The incentives and benefits of the U.S. patent system are so well-established as to be axiomatic. Regarding the constitutional establishment of the patent system, James Madison stated that “[t]he utility of this clause will scarcely be questioned.”

By penalizing subsequent inventors for the sins of their predecessors, the Federal Circuit’s holding in *Consolidated III* strikes a serious blow to each of these venerable benefits. The decision discourages inventors from working in technologies related to an unenforceable patent by removing the incentive of obtaining related “improvement” patents. A patent grant is “the reward stipulated for the advantages derived by the public for the exertions of the individual, and is intended as a stimulus to those exertions.” Why should an inventor invest his time and effort in furthering a specific invention if the reward is a “tainted” patent?

Furthermore, the decision discourages companies from filing applications in fields related to an invalidated patent since it calls into question the validity of any patent issued in a similar technology. When taken to its logical conclusion, the court’s reasoning effectively prevents a company from ever again obtaining a valid patent in any technology relating to an original, tainted patent.

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303. *Id.* at 1363.
304. U.S. CONST. art. I, § 8, cl. 8 (stating that the purpose of the patent system is “[t]o promote the progress of science and the useful arts”).
The ultimate goal of the patent system is to bring new designs and technologies into the public domain through disclosure.\textsuperscript{307} The attractiveness of such a bargain, and its effectiveness in inducing creative effort and disclosure of the results of that effort, depend almost entirely on the backdrop of free competition in the exploitation of inventions that are unpatented, or in the public domain after expiration of a patent.\textsuperscript{308}

Writing in 1890, Professor Robinson succinctly described the essence of the patent system, stating:

\begin{quote}
[T]he granting of a patent privilege at once accomplishes three important objects; it rewards the inventor for his skill and labor in conceiving and perfecting his invention; it stimulates him, as well as others, to still further efforts in the same or different fields; it secures to the public an immediate knowledge of the character and scope of his invention, and an unrestricted right to use it after it has expired.\textsuperscript{309}
\end{quote}

The message of \textit{Consolidated III} is that companies and inventors would be better served by keeping their developments as trade secrets rather than risk losing an entire patent portfolio. Without public disclosure, an invention cannot "stimulate others to still further efforts in the same or different fields," nor can a secret invention "secure to the public an immediate knowledge of the character and scope" of the invention, or "an unrestricted right to use it after it has expired."\textsuperscript{310}

Furthermore, since patent practitioners risk the loss of their registration to practice before the Patent Office for engaging in inequitable conduct, the decision puts patent counsel into a strange, almost adversarial position, in which they must constantly probe their clients as to whether they have disclosed the best mode, not only in a proposed or pending application, but also in any preceding related patent. This applies not only to the immediate inventors, but also to their forerunners in the field as well. It is difficult to imagine a situation in which inventors would even have access to such information. Under the rationale of \textit{Consolidated III}, they use the patent system at their peril.

\begin{footnotes}
\item[307] Id.
\item[309] 1 ROBINSON, supra note 31, § 33.
\item[310] 1 id.
\end{footnotes}
Conclusion

The Federal Circuit's decision in Consolidated III runs contrary to its own precedent, which requires a clear relationship between patents-in-suit as a prerequisite for infectious unenforceability. The decision is without basis in that it fails to establish, in any credible way, a connection between the "tainted" patent-in-suit and the subsequent patents. Moreover, the decision is against public policy because it chills the incentive for others in the same company, perhaps even in the same industry, to expand on ideas contained in a potentially tainted patent.

The principles of this case have the potential for removing, or severely limiting, incentives that form the very basis of the patent system, thereby depriving the public of the benefits of disclosure. Unless limited by future decisions, or wisely ignored, Consolidated III will have a decidedly negative effect on the patent system.

Patrick N. Burkhart