

his license to research in South Korea—his name no longer emblematic of innovation, but instead fraud and deceit.⁶

In the aftermath of Woo-suk's downfall, his patent application remained. The U.S. Patent and Trademark Office ("USPTO") granted the patent in 2012.⁷ Those who remembered Woo-suk's fraud were surprised, lamenting that the USPTO should not have granted the patent because Woo-suk's applied-for stem cell line and method for creating it was "the subject of his fraud."⁸ Regardless of this criticism, the patent has not been invalidated.⁹

Woo-suk's story is not unique,¹⁰ but his fraud is especially egregious. Each year, courts find that applicants have defrauded the USPTO in a variety of ways—though, such findings are uncommon.¹¹ Although it is unclear just how prevalent knowing and willful patent fraud is, as the number of patent applications each year increases in number,¹² finding ways to deter and curb such fraud increases in importance. Fraudulent procurement of patents negatively affects not only true innovation, but also the American economy.

The USPTO, as the agency tasked with examining patent applications, is the first line of defense against patent fraud. But some point to the USPTO's examination policies as potentially inviting fraud. By way of background, the USPTO's patent examiners (those who review applications) are evaluated on a

6. *See id.*

7. See Andrew Pollack, *Disgraced Scientist Granted U.S. Patent for Work Found to Be Fraudulent*, N.Y. TIMES (Feb. 14, 2014), <http://www.nytimes.com/2014/02/15/science/disgraced-scientist-granted-us-patent-for-work-found-to-be-fraudulent.html>.

8. Matt Levy, *USPTO Issues Patent to Fraud*, PATENT PROGRESS (Feb. 19, 2014), <http://www.patentprogress.org/2014/02/19/uspto-issues-patent-fraud>.

9. See U.S. Patent No. 8,647,872 (filed Dec. 9, 2011), <http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=8647872.PN.&OS=PN/8647872&RS=PN/8647872>.

10. See, e.g., Ann Steffora Mutschler, *Aptix Founder Sentenced to 17 Years for Perjury, Obstruction of Justice*, EDN NETWORK (Jan. 9, 2007), <https://www.edn.com/electronics-news/4315541/Aptix-founder-sentenced-to-17-years-for-perjury-obstruction-of-justice>.

11. See, e.g., *Regeneron Pharm., Inc. v. Merus N.V.*, 864 F.3d 1343, 1364 (Fed. Cir. 2017); *TransWeb, LLC v. 3M Innovative Prods. Co.*, 812 F.3d 1295, 1304–05 (Fed. Cir. 2016); *TransWeb, LLC v. 3M Innovative Prods. Co.*, 16 F. Supp. 3d 385, 398 (D. N.J. 2014).

12. See *U.S. Patent Statistics Chart Calendar Years 1963–2015*, USPTO, https://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm (last updated June 15, 2016).

quota system, which encourages them to examine as many applications as possible.¹³ Some commentators have questioned whether this policy has turned the USPTO into a rubber-stamp institution.¹⁴ In the meantime, the number of patent applications and grants since 2000 has almost tripled.¹⁵ This has led to an even greater need for the USPTO to quickly accept or reject patents so as not to fall behind.¹⁶ The cycle is further incentivized by the increasing economic and financial value of patents.¹⁷ And it is also enabled by the difficulty, high cost, and/or impossibility of investigating every representation made by patent applicants. The USPTO simply does not have the wherewithal to investigate every claim of inventorship, utility, novelty, and other issues related to patentability. Thus, along with the important interests at stake, the complexities of patent law, and the USPTO's current weaknesses combine to create a situation in which fraud is less likely to be identified and thwarted.

As demonstrated in this exposition, it is not surprising that patents are procured by fraud. But recognition of this problem does nothing to solve it because, increasingly, the value of a patent is not in its ingenuity, but instead its threat-value. Simply threatening patent infringement, regardless of the patent's validity, frequently leads to settlement due to the extremely high cost to litigate infringement suits.¹⁸ This has led to the onset of the often-criticized "patent trolls" and other entities, whose primary purpose is to monetize patents and so by enforcing existing

13. See Gene Quinn, *Suggestions for Fixing the US Patent System*, IPWATCHDOG (July 30, 2009), <http://www.ipwatchdog.com/2009/07/30/suggestions-for-fixing-the-us-patent-system/id=4725>.

14. See, e.g., Daniel Nazer, *Magical Drug Wins EFF's Stupid Patent of the Month*, ELEC. FRONTIER FOUND. (Aug. 28, 2014), <https://www.eff.org/deeplinks/2014/08/magical-drug-wins-effs-stupid-patent-month>.

15. See *U.S. Patent Statistics Chart*, *supra* note 12.

16. See generally Michael D. Frakes & Melissa F. Wasserman, *Does the U.S. Patent and Trademark Office Grant Too Many Bad Patents?: Evidence from a Quasi-Experiment*, 67 STAN. L. REV. 613, 676 (2015) ("Our results suggest that the inability of the PTO to finally rid itself of an application biases it toward granting patents.").

17. See K.N.C., *Valuing Patents: Doing the Maths*, ECONOMIST (Aug. 17, 2011), <http://www.economist.com/blogs/babbage/2011/08/valuing-patents>.

18. See Gene Quinn, *Extortion Patent Style: Small Business in the Troll Crosshairs*, IPWATCHDOG (May 24, 2011), <http://www.ipwatchdog.com/2011/05/24/extortion-patent-style-small-business-in-the-troll-crosshairs/id=17425>; see also EXEC. OFFICE OF THE PRESIDENT, PATENT ASSERTION AND U.S. INNOVATION 9 (2013), https://www.whitehouse.gov/sites/default/files/docs/patent_report.pdf (listing average infringement litigation costs).

patent rights through suits and threats to sue.¹⁹ Threat monetization is common and often costly to defendants.²⁰

Most patent law scholars argue that the patent system's problems can be addressed by reforms to USPTO rules, remedies and attorney's fees, and the entire patent system.²¹ But scholars have not considered whether criminal law can or should be used to address fraudulent application behavior. Since 2013, however, 27 states have made it a crime to assert patent infringement in bad faith, indicating that there is a general impression that patent abuses have increased in number and warrant criminal punishment.²²

This Essay asks whether applicants who commit fraud when applying for a patent—called “inequitable conduct”—can or should be prosecuted (in the criminal sense) under federal criminal law, in line with growing state-law trends toward criminalizing harmful patent-related behavior. Part I provides a background on patents, inequitable conduct, and the doctrines courts have employed to address such fraud. Part II analyzes whether a patent applicant who commits inequitable conduct could be held criminally responsible under existing federal criminal statutes. Finally, Part III concludes by asking whether inequitable should be prosecuted, even if existing federal crimes are applicable. Although extending federal criminal law to patent abuses may appear harsh, it would be justified in cases involving flagrant and willful fraud.

19. See generally Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117 (2013).

20. See EXEC. OFFICE OF THE PRESIDENT, *supra* note 18, at 9–10.

21. E.g., Tom Ewing, *Practical Considerations in the Indirect Deployment of Intellectual Property Rights by Corporations and Investors*, 4 HASTINGS SCI. & TECH. L.J. 109, 123 (2012).

22. Eileen Hyde, *State and Federal Attempts to Combat Bad Faith Assertion of Patents*, BAKER BOTTS (Apr., 2016), <http://www.bakerbotts.com/ideas/publications/2016/04/ip-report-e-hyde>.

I. BACKGROUND ON PATENTS, INEQUITABLE CONDUCT, AND FRAUD ON THE USPTO

A. PATENT BASICS

Patents may be granted for any “process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.”²³ However, in order to be patentable, the invention must also be novel, non-obvious, and useful.²⁴ Generally speaking, this requires that an invention be new and creative, involve more ingenuity and skill than held by an average person, and have a specific, realizable, and substantial benefit.²⁵ Every patent application must also accurately list the person(s) who invented the claimed concept.²⁶

In addition to patentability requirements, there are multiple bars to patentability. For example, the “on-sale bar” precludes a patent grant if there was a definite sale or offer to sell the invention more than one year before the effective filing date of an application, and the subject matter of the sale or offer to sell fully anticipates the claimed invention or would render the claimed invention obvious.²⁷ The same is true if the invention was in “public use” or publicly available more than one year prior to the effective filing date.²⁸ These bars, along with the other technical requirements for applying for patent, not only make it more difficult to obtain a patent, but also render patent applications more complex, leaving more room for error—as well as chicanery. Whether an idea is unpatentable because of these bars or failure to meet other requirements sometimes depends on the existence of non-public facts, to which patent examiners often do not have access unless the facts are disclosed by applicants.

A patent’s power is, quite simply, the right to exclude all others from “making, using, or selling in the United States the invention claimed by the patent for twenty years.”²⁹ Most scholars agree that this statutory grant of monopoly power benefits

23. 35 U.S.C. § 101 (2012).

24. *See id.* at § 101–103.

25. *See, e.g., Guidelines for Examination of Applications for Compliance with the Utility Requirement*, USPTO, <http://www.uspto.gov/web/offices/pac/mpep/s2107.html> (last visited Apr. 2, 2018).

26. *See* 35 U.S.C. §§ 115(a), 116(a).

27. *See* 35 U.S.C. § 102(a)(1).

28. *See id.*

29. FED. TRADE COMM’N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY 2 (2003).

society at large because it incentivizes and facilitates innovation.³⁰ The principal way in which the patent grant does this is by trading market-wide exclusivity for the public disclosure of new and useful ideas. Patents thus enable inventors to recoup costs and potentially make a profit, while enabling other inventors to learn from new discoveries. This, in turn, facilitates licensing and reduces duplicative research and development.³¹ First to file rights and the monopoly grant also encourage competition between inventors to innovate quickly.³² Scholars, economists, and legislators frequently credit these trade-offs as a reason for the United States' technological dominance.

Patent rights are primarily enforced through litigation,³³ and in the past decade, the number of patent infringement suits has increased dramatically.³⁴ There are a variety of reasons for this increase, one of which is product complexity. Advanced gadgets rely on thousands of patents at once.³⁵ It is therefore easy for a high-tech product to infringe on at least one patent, perhaps inadvertently. This is especially the case because a product need only practice one of the many "claims" in a patent for there to be actionable infringement.³⁶ Companies are also constantly deriving new inventions from past ideas, leading to sometimes-overlapping patent rights and increasing the likelihood of infringement. This likelihood also increases with the issuance of sometimes weak or invalid patents.³⁷

30. See, e.g., JEFFREY H. MATSUURA, *JEFFERSON VS. THE PATENT TROLLS: A POPULIST VISION OF INTELLECTUAL PROPERTY RIGHTS* 1–2 (2008).

31. *Id.*

32. E.g., William Wynne, *Patent Wars, Trolls, and Privateers: Killing Innovation, Death by 1,000 Lawsuits*, 47 *NEW ENG. L. REV.* 1009, 1014 (2013).

33. See 35 U.S.C. §§ 154(a)(1)–(2), 271 (2012).

34. See Amy G. O'Toole, *Recent Governmental Initiatives and Findings Addressing NPE Litigation—Are There Any Judicial Solutions?*, in *NON-PRACTICING ENTITY PATENT LITIGATION 2013: PLAINTIFF AND DEFENSE PERSPECTIVES* 67 (R. David Donoghue ed., 2013).

35. Wynne, *supra* note 33, at 1017–18. Commentators estimate that royalties paid by smartphone manufacturers may exceed \$120 for every device. See Thibault Schrepel, *Patent Privateering—Patents as Weapons*, *CTR. FOR POLY STUDIES* (Oct. 28, 2014), <http://www.cps.org.uk/blog/q/date/2014/10/28/patent-privateering-patents-as-weapons>.

36. E.g., *Bayer AG v. Elan Pharma. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000).

37. See generally Frakes & Wasserman, *supra* note 16; Douglas R. Nemeč & Scott M. Flanz, *After Period of High Invalidation Rates, New US Patent Challenge Procedures May Slow Down to Moderate Pace*, *SKADDEN* (Apr. 26, 2016), <https://www.skadden.com/insights/after-period-high-invalidation-rates-new-us-patent-challenge-procedures-may-slow-down-moder>.

Some competitors also use patent litigation as a competitive tactic.³⁸ This form of litigation is most common in industries built primarily on intellectual property (e.g., high-tech industries), where the innovation is incremental and patented ideas are more likely to be interchangeable.³⁹ Strategic patent litigation and threats thereof tend to generate substantial cash for patent holders, thereby increasing the demand for, and overall value of, patents.⁴⁰ Thus, when competitors use invalid patents against rivals, they “undermine both the patent system and the competitive marketplace. They raise entry costs and delay market entry, deter customers and business partners from contracting with new entrants, cause consumers to pay artificially inflated prices, and hurt innovation. This is true even when other firms know or suspect the patent of being invalid.”⁴¹

B. APPLYING FOR A PATENT

The patent application process entails, among other things, determining what kind of application to file, preparing an application, filing the application over the internet or through the mail, and examination by the USPTO.⁴²

Although there are several different kinds of patents and applications, the typical, “non-provisional” application generally includes an abstract, a specification, a description, patent claims, drawings, and an oath of inventorship.⁴³ The abstract

38. See Colleen V. Chien, *Of Trolls, Davids, Goliaths, and Kings: Narratives and Evidence in the Litigation of High-Tech Patents*, 87 N.C. L. REV. 1571, 1587–88 (2009); Michael J. Meurer, *Controlling Opportunistic and Anti-Competitive Intellectual Property Litigation*, 44 B.C. L. REV. 509, 512 (2003); Charles Duan, *Big Businesses Are Filing Frivolous Patent Lawsuits To Stifle Innovative Small Competitors*, FORBES (Feb. 24, 2014), <http://www.forbes.com/sites/realspin/2014/02/24/big-businesses-are-filing-frivolous-patent-lawsuits-to-stifle-innovative-small-competitors>.

39. See Chien, *supra* note 38, at 1589.

40. See, e.g., *Patent Litigation: Litigating Against a Non-Practicing Entity*, Practical Law Practice Note 5-553-7946 [hereinafter “Patent Litigation Practice Note”].

41. Christopher R. Leslie, *Antitrust, Inequitable Conduct, and the Intent to Deceive the Patent Office*, 1 UC IRVINE L. REV. 323, 325 (2011).

42. See *Patent Process Overview*, USPTO, <http://www.uspto.gov/patents-getting-started/patent-basics/types-patent-applications/utility-patent/patent-process-0> (last visited Apr. 2, 2018).

43. See *Nonprovisional (Utility) Patent Application Filing Guide*, USPTO, <https://www.uspto.gov/patents-getting-started/patent-basics/types-patent-applications/nonprovisional-utility-patent#heading-4> (last visited Apr. 2, 2018).

provides a brief description of the invention.⁴⁴ The specification (and description) provides information that is needed to enable individuals skilled in the art or science (to which the claimed invention pertains) to make and use the invention.⁴⁵ The description distinguishes the new invention from past developments.⁴⁶ The claims set forth the scope of a patent's protection using specific language and terms.⁴⁷ Drawings necessary to understand the subject matter being patented are required and must show every feature of the claimed invention.⁴⁸ Finally, the oath of inventorship is a formal statement made under oath that the claimed inventors are the sole or joint inventor(s).⁴⁹

If the USPTO denies an application, applicants may request reconsideration and conduct administrative appeals.⁵⁰ The process of practicing before the USPTO while applying for a patent is referred to as "prosecution."⁵¹ Once granted, the patent relates back to the effective filing date.⁵²

After the USPTO issues a patent, patent assignees (owners) have the exclusive right to prevent others from practicing the invention claimed in the patent. They may send demand letters and file lawsuits to enforce this right. In response, accused infringers may defend themselves in court or file a request for re-examination or *inter partes* review with the USPTO.⁵³ The USPTO's administrative procedures allow defendants to challenge the validity of a patent (based on patentability requirements). Either kind of challenge (whether through litigation or administrative proceedings) can be prohibitively expensive.⁵⁴

44. *Id.*

45. *Id.*

46. *Id.*

47. *Id.*

48. *Id.*

49. *Id.*

50. *Id.*

51. *Id.* The irony in relation to this Essay's topic is not lost on the author.

52. The effective filing date is, generally speaking, the filing date of the patent application claiming the invention or the filing date of an earlier priority application to which a patent or application is entitled to a right of priority. See 35 U.S.C. §§ 111, 119, 120; Amanda K. Murphy, *Effective Filing Date: What is That Again?*, LEXOLOGY (Dec. 4, 2015), <https://www.lexology.com/library/detail.aspx?g=3f811784-1fb2-48b2-a228-0c87c3e230ca>.

53. Gene Quinn, *What To Do If You Are Sued For Patent Infringement*, IP-WATCHDOG (June 11, 2011), <http://www.ipwatchdog.com/2011/06/02/what-to-do-sued-for-patent-infringement/id=17538/>.

54. In addition to the hundreds of thousands of dollars it may cost to defend a suit, see EXEC. OFFICE OF THE PRESIDENT, *supra* note 20, at 9, the mere fee to request review by the USPTO can exceed \$10,000. See *USPTO Fee Schedule*,

C. INEQUITABLE CONDUCT AND FRAUD ON THE PATENT OFFICE

Patent attorneys must be licensed by the patent bar in order to assist inventors with any work before the USPTO.⁵⁵ These attorneys are held to the USPTO's Rules of Professional Conduct, which largely mirror the ABA Model Rules of Professional Conduct.⁵⁶ In particular, ABA Rule 3.3 and USPTO Rule 11.303, regarding candor toward a tribunal, requires that the lawyer "not knowingly . . . make any false statements of fact or law or fail to correct a false statement of material fact or law previously made to the tribunal by the [lawyer]." The lawyer must also not "[o]ffer evidence that the [lawyer] knows to be false."⁵⁷

The above ethical provisions supplement the affirmative duty, within USPTO Rule 56, to disclose information that is *material* to patentability at the time an application is made and during examination.⁵⁸ Importantly, this duty applies not only to patent attorneys, but also inventors and any other "person who is substantively involved in the preparation or prosecution of the application."⁵⁹ It makes intuitive sense to impose this duty on patent applicants and the agents and attorneys who assist them because such individuals, not USPTO examiners, are most likely to know of any relevant prior art.

Material information may relate to any of the patentability requirements or bars. For example, material information frequently includes "prior art," which is any information showing the state of invention in a given field (potentially non-invalidating prior art) or showing that the invention is already available to the public, has been sold, or has already been patented, anywhere in the world (potentially invalidating prior art).⁶⁰ Invalidating prior art may show that the applied-for invention lacks novelty, one of the elements of patentability.⁶¹ It could also disclose the applicability of certain bars to patentability.

USPTO (Apr. 9, 2016), <http://www.uspto.gov/learning-and-resources/fees-and-payment/uspto-fee-schedule>.

55. See 37 C.F.R. § 11.5–9 (2008).

56. See USPTO, ABA MODEL RULES OF PROFESSIONAL CONDUCT VS. USPTO RULES OF PROFESSIONAL CONDUCT (2013), <http://www.uspto.gov/ip/boards/oed/AbavsUSPTO.pdf> (comparing both rules by incorporating changes within 78 Fed. Reg. 20179 (2013)).

57. See 37 C.F.R. § 11.303 (2013).

58. 37 C.F.R. § 1.56 (2012).

59. *Id.* § 1.56(c).

60. See generally Gene Quinn, *What is Prior Art?*, IPWATCHDOG (Oct. 2, 2010), <http://www.ipwatchdog.com/2010/10/02/what-is-prior-art/id=12677>.

61. See 35 U.S.C. § 102(a).

Intentional and knowing failure to comply with the duty of disclosure is referred to as “inequitable conduct” or “fraud on the patent office” because it results in the issuance of an invalid patent procured by false statements or material omissions.⁶² The doctrine of inequitable conduct is technically an affirmative *defense* to patent infringement. If a patent applicant committed inequitable conduct, either through an intentional misrepresentation or violation of the duty of disclosure, with respect to *any* of a patent’s claims, *all* of the claims are invalid.⁶³ This harsh penalty is rooted in equitable principles—such as the doctrine of unclean hands—and is justifiable in view of the important public interests at stake.⁶⁴ “The far reaching social and economic consequences of a patent . . . give the public a paramount interest in seeing that patent monopolies . . . are kept within their legitimate scope.”⁶⁵

Due to the strength and breadth of the inequitable conduct defense, defendants are required to prove by clear and convincing evidence that (1) the patent holder had specific intent to deceive through misrepresentations or omissions, and (2) the information that was the subject of the deception was material.⁶⁶ Prior to 2011, courts were divided as to whether intent could include negligent conduct and the exact definition of materiality, sometimes employing a sliding-scale test. But in *Therasense*, the Federal Circuit Court of Appeals clarified the law.⁶⁷

Prior to *Therasense*, there was a strong sense among the patent bar and federal courts that assertions of inequitable conduct were too widespread. As the Federal Circuit Court of Appeals itself put it, “the habit of charging inequitable conduct in almost

62. *E.g.*, 1 WILLIAM C. HOLMES, INTELLECTUAL PROPERTY AND ANTITRUST LAW § 15:2 (2016); Dennis Crouch, *Inequitable Conduct: Federal Circuit Places Another Nail in the Coffin*, PATENTLYO (Sept. 14, 2012), <http://patentlyo.com/patent/2012/09/inequitable-conduct-federal-circuit-places-another-nail-in-the-coffin.html>.

63. *See, e.g., Fraud, Inequitable Conduct, or Violation of Duty of Disclosure Affects All Claims*, USPTO, <http://www.uspto.gov/web/offices/pac/mpep/s2016.html> (last visited Apr. 2, 2018); *cf.* Allan Bullwinkel, *Specifically Fighting Inequitable Conduct*, 48 HOUS. L. REV. 349, 354 (2011).

64. *Id.* at 359.

65. *Unitherm Food Sys., Inc. v. Swift-Eckrich, Inc.*, 375 F.3d 1341, 1361 (Fed. Cir. 2004) (quoting *Norton v. Curtiss*, 433 F.2d 779, 796 (C.C.P.A. 1970) (citations omitted)).

66. *Therasense, Inc. v. Becton, Dickinson and Co.*, 649 F.3d 1276, 1287 (Fed. Cir. 2011).

67. *Id.* at 1290.

every major patent case has become an absolute plague.”⁶⁸ Noting that accusations of equitable conduct are only factual “in but a small percentage of the cases” and therefore “destroy” respect for the patent bar’s integrity, the Federal Circuit lamented that unsupported charges are “negative contribution[s] to the rightful administration of justice.”⁶⁹ The Federal Circuit in *Therasense* thus sought to curb the popular and “significant litigation strategy” of charging inequitable conduct when there was no known basis for doing so.⁷⁰ The Federal Circuit also sought to reduce the burden the doctrine imposes on courts and on the USPTO (i.e., due to frequent charges of inequitable conduct, patent prosecutors began to “bury PTO examiners with a deluge of prior art references,” making examination more difficult).⁷¹

With this understanding, the Federal Circuit held that a gross negligence “should have known” standard is insufficient to satisfy the intent element of inequitable conduct.⁷² Now, in all cases, there must be a deliberate decision to misrepresent or withhold information.⁷³ However, specific intent can still be inferred from indirect and circumstantial evidence, so long as intent to deceive is “the single most reasonable inference available to be drawn from the evidence.”⁷⁴

The *Therasense* court also elevated the materiality standard, requiring a but-for showing; information is material if the USPTO (through its examiners) would not have allowed the claim had it been aware of the information.⁷⁵ But in cases of affirmative, egregious misrepresentations, the conduct is always considered material; this exception strikes a “necessary balance between encouraging honesty before the [USPTO] and preventing unfounded accusations of inequitable conduct.”⁷⁶

68. *Burlington Industries, Inc. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988).

69. *Id.*

70. *Therasense*, 649 F.3d at 1288.

71. *Id.* at 1289.

72. *Id.* at 1290.

73. *Id.*

74. *Id.* at 1290–91.

75. *Id.* at 1291–92.

76. *Id.* Following *Therasense*, the USPTO issued a notice of proposed rule-making to adopt the but-for materiality standard for violations of Rule 56, so as to “harmonize the materiality standard for the duty of disclosure before the [USPTO] with the . . . standard . . . for establishing inequitable conduct before the courts.” Revision of the Duty to Disclose Information in Patent Applications and Reexamination Proceedings, 81 Fed. Reg. 74987, 74988 (Oct. 28, 2016) (to be codified in 37 C.F.R. Part 1).

With these holdings, the *Therasense* court heightened the standards for showing inequitable conduct but kept the doctrine's relatively broad concept of fraud. As compared with common law fraud, for example, the current inequitable conduct concept includes not only intentional misrepresentations, but also partial- and half-disclosures, as well as intentional omissions.⁷⁷ The conduct that may form the basis of an inequitable conduct defense includes that of perjury, manufacturing of false evidence, suppression of evidence, and deliberate non-disclosure of information.⁷⁸

Because the Federal Circuit establishes controlling precedent with regard to patent cases, *Therasense*'s holdings are applied nationwide. Commentators are critical of the new standard for a variety of reasons, such as its disconnect from prior precedent and USPTO guidance and rules.⁷⁹ But despite this, no *certiorari* petition involving inequitable conduct has been granted by the Supreme Court for over 70 years.⁸⁰

II. APPLICATION OF FEDERAL WHITE COLLAR CRIME TO INEQUITABLE CONDUCT

This Part reviews the basic elements of relevant federal crimes and explores whether inequitable conduct falls within each crime's scope. The Part discusses perjury, false statement, obstruction of justice, and mail and wire fraud—crimes that, by their nature, would seem to prohibit inequitable conduct.

A. PERJURY

At first glance, it is axiomatic that inequitable conduct, which involves either material misrepresentations or intentional omissions, can be the basis for a perjury charge. Despite this, there appear to be no modern reported cases in which such a

77. See HOLMES, *supra* note 62; see *Argus Chem. Corp. v. Fibre Glass-Evercoat Co.*, 759 F.2d 10, 14 (Fed. Cir. 1985) (“[C]onduct before the [USPTO] which may render a patent unenforceable is broader than the common law tort of fraud.”).

78. See *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806 (1945); *Hazel-Atlas Glass Co. v. Hartford-Empire Co.*, 322 U.S. 238 (1944); *Keystone Driller Co. v. Gen. Excavator Co.*, 290 U.S. 240 (1933).

79. See Gideon Mark & T. Leigh Anenson, *Inequitable Conduct and Walker Process Claims after Therasense and the America Invents Act*, 16 U. PENN. J. BUS. L. 361, 381–86 (2014).

80. *Id.* at 391.

charge has been prosecuted.⁸¹ But in a case from 1913, *Patterson*, the Ninth Circuit Court of Appeals affirmed a conviction for perjury when the defendant lied in his patent application that he was the original inventor.⁸² And the last time the Supreme Court considered the inequitable conduct doctrine, in *Precision Instrument*, during the 1945 term, the Court remarked that the case's patent history was "steeped in perjury and undisclosed knowledge of perjury."⁸³

In *Precision Instrument*, the plaintiff knew that another inventor, Larson, had intentionally misrepresented facts to the USPTO when applying for the patent-in-suit.⁸⁴ Instead of revealing this, which would have led to invalidation of the patent, the plaintiff contracted with Larson to keep the plaintiff's knowledge of Larson's "perjury" secret so long as Larson agreed to license other patents to the plaintiff, and vice versa.⁸⁵ When Larson breached the licensing agreements, the plaintiff brought suit, but because the plaintiff had contributed to Larson's perjury, his *own* patent infringement suit was barred on inequitable conduct grounds.⁸⁶

Although *Precision Instrument* is not a criminal case, it is revealing that the Supreme Court considered the false statements in the case tantamount to perjury. The Court noted that not all cases of inequitable conduct are punishable as perjury—implying that at least in some cases, the fraud could be so egregious and provident to justify prosecution.⁸⁷ Read in light of *Patterson*'s previous ruling, *Precision Instrument* did not disturb the possibility that patent applicants may be convicted for perjury if they make false statements to the USPTO.

Perjury requires (1) an oath, (2) before a competent tribunal, officer, or person, (3) a statement that the declarant does not believe to be true and intentionally makes, (4) which is material.⁸⁸

81. Individuals have been charged for providing false evidence and statements to a court in a civil case involving patent validity. *See, e.g.*, *United States v. Mohsen*, 587 F.3d 1028, 1030–31 (9th Cir. 2009) (affirming conviction and jury instructions).

82. *See Patterson v. United States*, 202 F. 208, 210 (9th Cir. 1913).

83. *Precision Instrument*, 324 U.S. at 816.

84. *Id.* at 809–13.

85. *Id.* at 813–14.

86. *Id.* at 816–20.

87. *See id.* at 815; *see also Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1297–98 (Fed. Cir. 2011) (O'Malley, J., concurring in part and dissenting in part) (explaining that inequitable conduct must be flexible, as a doctrine that arose under the court's equity powers).

88. *See* 18 U.S.C. § 1621(1) (2012); 60A AM. JUR. 2D PERJURY § 10 (2016).

Perjury also includes any declaration or statement under penalty of perjury (when the statement is signed and accompanied by language indicating it is made under penalty of perjury),⁸⁹ along with previous elements (3) and (4).⁹⁰

Elements one and two would appear to be easily met if an applicant makes a false statement in a patent application and makes an oath, before a competent person, that certain aspects of the application are true.⁹¹ This was the basis for the perjury conviction in *Patterson*—the defendant had made the oath before a notary public. Applicants no longer need to make oaths of inventorship before competent persons when submitting their applications, however, and may subscribe to the required application documents in a declaration.⁹² To wit, the USPTO's standard forms do not reference the perjury statute or the customary "under penalty of perjury" language, but rather the false statements statute (discussed herein).⁹³ Thus, perjury may not be viable in most circumstances.⁹⁴

But misrepresentations made before the USPTO's Patent Trial and Appeal Board (the "PTAB"), a tribunal established by statute and composed of administrative judges⁹⁵ who constitute officers or persons competent to give an oath under federal law,⁹⁶ could support a perjury charge. Proceedings before the PTAB, however, only occur in cases of reconsideration, reexaminations, interferences, or *inter partes* review.⁹⁷ These proceedings are much less frequent than examinations.⁹⁸ And, as already noted,

89. See 28 U.S.C. § 1746 (2012).

90. See 18 U.S.C. § 1621(2).

91. See *Patterson*, 202 F. at 210.

92. See 35 U.S.C. § 115; 37 C.F.R. §§ 1.63, 21.68 (2015).

93. See *Oaths and Declarations*, USPTO, <https://www.uspto.gov/web/offices/pac/mpep/s602.html> (last visited Apr. 2, 2018).

94. The crime of false statement, which is related, may be, though. See *infra* Part II.B.

95. *Id.*

96. A competent tribunal, officer, or person is someone authorized to administer oaths. See *United States v. Curtis*, 107 U.S. 671, 673 (1883). Administrative law judges generally have such authority. See 21 Fed. Proc., L. Ed. § 50:239 (2016); see also, e.g., 35 U.S.C. § 23; 37 C.F.R. § 351.9(b)(1) (2006); 29 C.F.R. § 1614.109(f)(2) (2012).

97. See *About PTAB*, USPTO, <http://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/resources/about-ptab> (last visited Apr. 2, 2018).

98. By way of example, in the Woo-suk case, affidavits were submitted in support of the patent after it was initially rejected. Pollack, *supra* note 7. The affidavits then convinced the USPTO to change its mind. *Id.*

application materials are usually submitted for examination without an accompanying oath before a competent tribunal.⁹⁹

The ability to prove element three (the statement-intent element) in a case of inequitable conduct will, of course, depend upon the facts of the case. An outright material misrepresentation is certainly sufficient.¹⁰⁰ But there are complications in other situations. Culpable statements must pertain to facts, not opinions or beliefs.¹⁰¹ Therefore, only statements concerning factual matters can be perjurious, such as statements relating to the non-existence of prior art, whether persons of ordinary skill in the art actually believe the invention to require sufficient skill and ingenuity, the utility of the proffered invention, or the named inventors—to name a few. This would probably not include an inventor or attorney’s legal arguments as to patentability. Further, literally true, but vague or misleading, statements are insufficient grounds for perjury.¹⁰² This is a significant barrier to prosecuting inequitable conduct as perjury because most patents involve highly-technical statements, which are likely to enable literal truth defenses.

Most importantly, an intentional *omission* cannot qualify as perjury because, by definition, an omission is an absence of a statement, which the statute requires.¹⁰³ Thus, failure to disclose prior art, for example, would not be punishable under the perjury statute unless the applicant falsely stated under oath that no prior art exists.¹⁰⁴ Perjury may result if a person intentionally makes a statement about a fact without knowing whether the statement is true or false.¹⁰⁵ But the USPTO does

99. See 35 U.S.C. § 25 (2012); *Oaths and Declarations*, USPTO, <http://www.uspto.gov/web/offices/pac/mpep/s602.html> (last visited Apr. 2, 2018).

100. This was the situation in *Precision Instrument*. See *supra* note 83 and accompanying text.

101. See 60A AM. JUR. 2D PERJURY § 18 (2016).

102. See, e.g., *Bronston v. United States*, 409 U.S. 352, 361–62 (1973).

103. See *id.* at 362 (“[A]ny special problems arising from the literally true but unresponsive answer are to be remedied through the ‘questioner’s acuity’ and not by a federal perjury prosecution.”); see also *United States v. Martinez-Mercado*, 888 F.2d 1484, 1492 (5th Cir. 1989) (“The omission of certain facts from the reports and written statements of the prosecution’s witnesses, alone, is certainly not adequate to put the prosecution on notice of perjury on their part, much less to establish that such perjury in fact occurred.”).

104. Cf. *THK Am., Inc. v. NSK, Ltd.*, 917 F. Supp. 563, 570 (N.D. Ill. 1996) (considering, in the context of Fed. R. Evid. 609(b), whether a prior conviction for filing false corporate income tax statements is sufficiently probative of whether an applicant committed the “crime” of withholding information from the USPTO).

105. See 60A AM. JUR. 2D PERJURY § 23 (2016).

not, as a matter of course, specifically ask whether there is prior art concerning an invention (let alone any other aspect of patentability); instead, applicants and attorneys are obligated to reveal prior art and other information material to patentability under Rule 56.¹⁰⁶ It is worth noting that before the Patent Act of 1952, however, applicants used to be required to attest that they “do[] not know and do[] not believe that the same [invention] was ever before known or used.”¹⁰⁷

The last element, materiality, is tested according to “whether the false statement was *capable of* influencing or misleading a tribunal on any proper matter of inquiry [e]ven if the false statement failed to influence the tribunal.”¹⁰⁸ In the patent context, this would include anything related to novelty, non-obviousness, utility, inventorship, etc. For example, Woo-suk submitted an affidavit to the PTAB attesting to the utility of his stem cell cloning method patent, which led the USPTO to reverse an earlier decision denying the patent application.¹⁰⁹ Surprisingly, the inequitable conduct doctrine under *Therasense* applies a stricter materiality standard than perjury—by requiring but-for causality. The perjury materiality standard is more encompassing because it renders illegal that conduct which *could*, but might not, have led the USPTO to grant a patent. Therefore, the crime of perjury might apply more often than the defense of inequitable misconduct. Given the beyond-a-reasonable-doubt evidentiary burden in criminal cases, though, perjury—along with all other crimes discussed in this Part—is still harder to prove. But perhaps not by much; inequitable conduct must be shown by clear and convincing evidence, a burden of proof between preponderance and beyond a reasonable doubt.¹¹⁰

B. FALSE STATEMENTS

The crime of making false statements is similar to that of perjury, but creates culpability for false statements made to an

106. The USPTO may ask for “yes or no” responses to other questions, however, such as whether an applicant for a patent is the original and first inventor of the invention. *See Patterson v. United States*, 181 F. 970 (9th Cir. 1910).

107. Compare Patent Act of 1952 § 115, Pl. 593, 66 Stat. 792 (July 19, 1952) and 35 U.S.C. § 115(b), with Revised Statutes § 4892, 32 Stat. 1226, c. 1019 (U.S. Comp. St. Supp. 1911, p. 1454) (quoted) (as reported in *Patterson v. United States*, 202 F. 208, 210 (9th Cir. 1913)).

108. *United States v. Roberts*, 308 F.3d 1147, 1155 (11th Cir. 2002) (emphasis added).

109. Pollack, *supra* note 7.

110. *See infra* Part III.

agency of the United States, such as the USPTO.¹¹¹ Congress specifically provided that written, willful false statements made in a patent applications may be prosecuted as false statements in some situations.¹¹² In addition to the to-an-agency jurisdictional hook, the elements are: (1) knowingly and willfully, (2) falsifying, concealing, or covering up by any trick, scheme, or device a fact; or making any false, fictitious, or fraudulent statement or representation; or making or using any false writing or document containing any false fictitious or fraudulent statement or entry, (3) which is material.¹¹³

There are at least two criminal cases on record that involve prosecution for a false statement made in a patent application. First, in *Markham*, the defendant made multiple false statements, in an application and affidavits, to the USPTO about the identity of the original inventors of an invention.¹¹⁴ The defendant made the statements in an effort to prevent the true inventor from seeking a similar patent. The Fifth Circuit Court of Appeals affirmed the conviction. In the same vein, in *Camick*, the defendant, in emails to the USPTO and a patent application, represented that his brother was the original inventor.¹¹⁵ However, the defendant's brother died as a child, and the defendant had assumed the brother's identity in an effort to evade several obligations. The Tenth Circuit Court of Appeals reversed the conviction for lack of materiality (discussed below). These two cases demonstrate that a false statement charge for inequitable conduct is not unprecedented. Both cases (in addition to the *Patterson* perjury case), however, concern only false statements relating to the identity of inventors, not other patentability requirements or bars.

Just as in cases of perjury, literally true statements, opinions, and beliefs are not actionable false statements.¹¹⁶ But unlike perjury, omissions can constitute the making of a false statement, so long as the omission involves affirmative

111. See 18 U.S.C. § 1001(a) (2012).

112. See 35 U.S.C. § 25(b). Given the dearth of prosecutions, though, this congressional suggestion appears to have been largely overlooked.

113. *Id.* at (a)(1)–(3).

114. See *United States v. Markham*, 537 F.2d 187 (5th Cir. 1976).

115. See *United States v. Camick*, 796 F.3d 1206 (10th Cir. 2015).

116. See, e.g., *United States v. Hixon*, 987 F.2d 1261, 1267 (6th Cir. 1993).

concealment.¹¹⁷ This can be shown when there is a duty to disclose material facts.¹¹⁸ In patent cases, USPTO Rule 56 clearly evinces a duty to disclose information material to patentability. Thus, a willful failure to disclose prior art, for example, would constitute a prosecutable false statement.¹¹⁹

The false statement statute also requires materiality generally, similar to the perjury standard and less than the *Therasense* standard. Materiality is shown when a statement has “a natural tendency to influence, or be capable of influencing, the decision of the decision making body to which it was addressed.”¹²⁰ In inequitable conduct cases, then, any statement regarding patentability—as well as, for example, the true identity of the inventor(s)—is material.¹²¹ Both *Markham* and *Camick* confirm this understanding, even though the conviction in *Camick* was reversed for lack of materiality. The situation in *Camick* was somewhat unique; the defendant had chosen to file a provisional patent application,¹²² which does not require an oath of inventorship and is not examined, instead of a *nonprovisional* application (the full application).¹²³ The provisional application was not capable of influencing a USPTO action because the USPTO does not make any decision with respect to provisional applications.¹²⁴

117. See *United States v. London*, 550 F.2d 206, 213–14 (5th Cir. 1977) (“[T]he mere omission of failing truthfully to disclose a material fact . . . does not make out an offense under the conceal or cover up clause. . . . Rather, the . . . clause . . . requires the government to prove . . . that the material fact was affirmatively concealed . . .”).

118. See, e.g., *United States v. Nersesian*, 824 F.2d 1294, 1312 (2d Cir. 1987).

119. One judge has also criticized a knowing failure to correct the USPTO’s misunderstanding about prior art as “sleazy.” Dorothy Atkins, *Attys Who Don’t Correct Patent Examiners “Sleazy”*; Judge, LAW360 (Sept. 28, 2017), <https://www.law360.com/ip/articles/969132/attys-who-don-t-correct-patent-examiners-sleazy-judge>.

120. See *United States v. Schulte*, 741 F.3d 1141, 1154 (10th Cir. 2014) (internal quotation marks omitted).

121. A false oath of inventorship would always be material under both the false statement standard and *Therasense* standard, despite their differences, because “the filing of an unmistakably false affidavit” is always material under *Therasense*. 649 F.3d 1276, 1292 (Fed. Cir. 2011).

122. See *Provisional Application for Patent*, USPTO, <http://www.uspto.gov/patents-getting-started/patent-basics/types-patent-applications/provisional-application-patent> (last visited Mar. 5, 2018).

123. See *United States v. Camick*, 796 F.3d 1206, 1218–19 (10th Cir. 2015).

124. *Id.*

Finally, the intent element (knowingly and willfully) may on its face impose a limitation on the ability to successfully prosecute a false statement when an applicant omits information. For example, it may be difficult to prove knowing and willful concealment in the case of willful blindness. If the defendant is not knowledgeable of prior art, then failure to disclose any prior art would not be a knowing nondisclosure. But intent might be shown where the applicant exhibited a reckless disregard for the truth, combined with a conscious purpose to avoid learning the truth.¹²⁵ The inequitable conduct defense captures similar willful blindness.¹²⁶ Such an allowance ensures that the willfully ignorant cannot evade the consequences of their deliberate inactions.

C. OBSTRUCTION OF JUSTICE

Inequitable conduct may constitute obstruction of justice, which has a broad reach and is set forth in several statutes. Indeed, the Supreme Court has noted that the fraudulent procurement of a patent constitutes “tampering with the administration of justice . . . [that] involves more than an injury to a single litigant. It is a wrong against the institutions set up to protect and safeguard the public.”¹²⁷ The crime of obstruction of justice is purposed on addressing harm to broader public interests and institutions, such as the harm risked and caused by inequitable conduct.

The most applicable statutory variant lies in 18 U.S.C. §1505, which makes it a crime to (1) corruptly endeavor to influence, obstruct, or impede the due and proper administration of the law, (2) under which any pending proceeding is being had before any federal agency.¹²⁸ The first element is met by conduct that involves intentionally (and with an improper purpose) altering, destroying, or concealing evidence or making a false or

125. See, e.g., *United States v. Gonsalves*, 435 F.3d 64, 70–72 (1st Cir. 2006).

126. See, e.g., *Novo Nordisk Pharm., Inc. v. Bio-Tech. Gen. Corp.*, 424 F.3d 1347, 1361–62 (Fed. Cir. 2005); *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 267 F.3d 1370, 1380–86 (Fed. Cir. 2001); *Synthon IP, Inc. v. Pfizer Inc.*, 472 F. Supp. 2d 760, 779–80 (E.D. Va. 2007), *aff’d in part*, 281 F. App’x 995 (Fed. Cir. 2008) (unpublished opinion) (“[T]he duty of candor cannot be avoided by willful ignorance or compartmentalization of knowledge within a company in an effort to insulate the patent applicants and their attorneys from information unfavorable to patentability. So, too, patent applicants cannot avoid the duty of candor by failing to disclose material information to their lawyer or the prosecuting attorney.”).

127. *Hazel-Atlas Glass Co. v. Hartford-Empire Co.*, 322 U.S. 238, 246 (1944).

128. 18 U.S.C. § 1505 (2004).

misleading statement.¹²⁹ Similar standards relating to perjury and false statements apply, but materiality is not required.¹³⁰ This makes obstruction of justice easier to prosecute.¹³¹

The second element presents difficulties in the inequitable conduct context. It requires obstruction of a pending *proceeding* conducted by any federal agency, such as the USPTO. “Proceedings” is a broad term which includes agency investigations, adjudications, and essentially any judicial or administrative business before the agency.¹³² PTAB reexaminations, appeals, interferences, and reviews would likely count as proceedings under this definition because they are formal, quasi-judicial processes. But what of examinations, or reconsiderations, where most inequitable conduct (by definition) occurs? These processes are not seemingly *judicial* in nature, but they technically involve “adjudications” (or decisions) under the Administrative Procedure Act.¹³³ Thus, any qualifying obstruction relating to the proper application of patent law to a patent application may be considered obstruction of justice.

For example, intentionally failing to disclose prior art, or intentionally misleading the USPTO to believe that a claimed invention has actual and realizable utility, would certainly impede the due and proper administration of the law if a patent is issued as a result of such concealment—as would intentionally failing to give credit to the true inventor(s), as in *Patterson* and *Markham*. Given that materiality is not required, the barrier in *Camick* would not exist in prosecutions for obstruction of justice. Despite this, there do not appear to be any reported cases prosecuting inequitable conduct as obstruction of justice.

D. MAIL AND WIRE FRAUD

The mail and wire fraud statutes are extremely broad, granting prosecutors the ability to employ the offense to address

129. See William E. Aiken, Jr., Annotation, *Construction and Application of 18 U.S.C. § 1505 Making it a Federal Offense to Obstruct Proceedings Before Federal Departments or Agencies or Congressional Committees*, 8 A.L.R. Fed. 893, §§ 1–7 (2016).

130. See *id.*; see also *United States v. Price*, 951 F.2d 1028, 1030–31 (9th Cir. 1991) (listing the elements of the crime and not including any element of materiality). Note also that the obstruction need not be successful in any way. See *United States v. Vixie*, 532 F.2d 1277, 1278 (9th Cir. 1976) (per curiam).

131. In fact, it is not even necessary that the conduct involved be illegal on its own. See Aiken, Jr., *supra* note 129, at § 4.5.

132. See, e.g., *Rice vs. United States*, 356 F.2d 709, 712 (8th Cir. 1966).

133. See, e.g., *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

fraud in many of its forms.¹³⁴ The Supreme Court has remarked that both statutes perform a “stopgap” function, enabling the federal government to address “new phenomenon, until particularized legislation can be developed and passed to deal directly with the evil.”¹³⁵ With this in mind, it would seem apt to turn to the mail and wire fraud statutes to prosecute inequitable conduct. Yet, there only appears to be one case on record that does: *Camick*.

Generally speaking, mail or wire fraud require proof of the following: (1) the defendant devised or intended to devise a scheme or artifice to defraud or obtain property by means of materially false or fraudulent pretenses, representations, or promises, (2) with an intent to defraud, and (3) used or caused to be used the mail or interstate wire communications to carry out the scheme.¹³⁶ The materiality aspect of the first element tracks the same standard used in both perjury and false statements and is more lenient than the standard required to commit inequitable conduct under *Therasense*.¹³⁷ Recall that in *Camick* the false statement was the identity of the inventor listed in a provisional patent application, so the false statement was not material and could not have a tendency to influence the USPTO.¹³⁸

It might appear at first glance that mail or wire fraud is readily chargeable in cases of inequitable conduct, but the first element presents an unexpected barrier. Both the mail and wire fraud statutes require a “scheme or artifice to defraud, or for obtaining money or *property* by means of false or fraudulent pretenses, representations, or promises.”¹³⁹ The utility of this passage depends on how “defraud” is defined and the effect of the second “or,” which separates the “scheme to defraud” language from “obtaining money or property through false statements.”

134. JEROLD H. ISRAEL ET AL., *WHITE COLLAR CRIME: LAW AND PRACTICE* 145 (3d ed. 2009).

135. *Id.* (citing *United States v. Maze*, 414 U.S. 395 (1974)).

136. See 18 U.S.C. §§ 1341, 1343 (2012); see also *United States v. Camick*, 796 F.3d 1206, 1214, 1217 (10th Cir. 2015).

137. See *Camick*, 796 F.3d at 1218. Note that the materiality requirement is not listed in the statute, but that the Supreme Court ruled that Congress intended to include it by codifying the common law. *Neder v. United States*, 527 U.S. 1, 20–25 (1999). Also note that the dissent in *Therasense* pointed out the higher standard of materiality required in equitable conduct cases, as opposed to under the mail and wire fraud statutes. *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1315 (Fed. Cir. 2011) (Bryson, Gajarsa, Dyk, & Prost, JJ., dissenting).

138. *Camick*, 796 F.3d at 1218–19.

139. 18 U.S.C §§ 1341, 1343 (emphasis added).

The interpretation of these two words in the statute has great limiting effect, as evidenced by the Federal Circuit's *Semiconductor Energy* opinion.¹⁴⁰

In *Semiconductor Energy*, the defendant asserted civil RICO counterclaims in response to the plaintiff's claim of patent infringement.¹⁴¹ The RICO suit was based on predicate acts of mail and wire fraud, in that the plaintiff had defrauded the USPTO by failing to disclose prior art when the plaintiff applied for three of the patents-in-suit.¹⁴² In evaluating the mail and wire fraud acts, the Federal Circuit held that inequitable conduct does not qualify as an act of mail or wire fraud because the statutes narrowly define fraud as depriving another person of property.¹⁴³ The Federal Circuit then stated that although a patent is property, the USPTO itself was not deprived of the patent-in-suit because the USPTO did not have property rights in the patent *before* it granted the patent.¹⁴⁴

In making these determinations, the Federal Circuit relied primarily on the Supreme Court's *McNally* decision, which limited both the mail and wire fraud statutes' breadth to exclude intangible property rights, such as the right to honest services, on legislative intent grounds.¹⁴⁵ The dissent in *McNally* argued, however, that the majority was ignoring Congress's use of the word "or" between the "scheme to defraud" and "property rights" language.¹⁴⁶ In the dissenters' view, "[a]s the language makes clear . . . one could violate the first clause by devising a scheme or artifice to defraud, even though one did not violate the second clause by seeking to obtain money or property."¹⁴⁷

Several circuit courts agreed. For example, the Third Circuit Court of Appeals affirmed a mail fraud conviction for the fraudulent acquisition of a medical license, stating "[t]he statute . . .

140. See *Semiconductor Energy Lab. Co. v. Samsung Elec. Co.*, 204 F.3d 1368 (Fed. Cir. 2000).

141. *Id.* at 1372.

142. *Id.* at 1379.

143. *Id.* at 1380.

144. See *id.*

145. *McNally v. United States*, 483 U.S. 350, 360 (1987), *superseded by statute*, 18 U.S.C.A. § 1346 (1988), *as recognized in* *Skilling v. United States*, 561 U.S. 358 (2010).

146. *Id.* at 364–65 (Stevens & O'Connor, JJ., dissenting).

147. *Id.* at 365 ("I am at a loss to understand the source or justification for this holding. Certainly no canon of statutory construction requires us to ignore the plain language of the provision.").

is broad enough to cover a scheme to defraud a victim of something that takes on value only in the hands of the acquirer.”¹⁴⁸ Relying on *McNally*, though, the Supreme Court in *Cleveland* reversed the Third and other Circuits, stating that property acquired through fraud must first be property in the regulator’s hands.¹⁴⁹ The Supreme Court repeated its ultimatum from *McNally* that “if Congress desires to go further, it must speak more clearly than it has.”¹⁵⁰ This holding did not rely on an interpretation of the statute’s disjunctive language. Ten years after *Semiconductor Energy*, the Supreme Court recognized in *Skilling* that Congress overruled *McNally*.¹⁵¹ However, *Skilling* only narrowly expanded property rights to include deprivation of honest services resulting from bribes and kickbacks, in line with *Cleveland*.¹⁵²

In light of the Supreme Court’s narrow interpretation of the mail and wire fraud statutes, it is unlikely that inequitable conduct falls within their ambit. However, it is worth noting that some courts have taken notice of the disjunctive “or” and defined schemes to defraud as including departures from standards of fair play and candid dealings.¹⁵³ Such schemes would include concealment of facts through intentional omissions or failures to disclose in violation of *either* a legal or ethical duty.¹⁵⁴ Thus, the first element would be met even in cases where an applicant intentionally fails to disclose prior art under USPTO Rule 56.

The other two elements would likely be met in most cases of inequitable conduct. Intent can be shown by the circumstances,¹⁵⁵ and all interactions with the USPTO—with the exception of in-person hearings in front of the PTAB—are conducted via mail or interstate wires.¹⁵⁶ Absent congressional

148. *United States v. Martinez*, 905 F.2d 709, 713 (3d Cir. 1990), *abrogated* by *Cleveland v. United States*, 531 U.S. 12 (2000).

149. *See Cleveland*, 531 U.S. at 20.

150. *Id.*

151. *See Skilling v. United States*, 561 U.S. 358, 408–10 (2010).

152. *Id.* at 409.

153. *See Marissa Pezo*, *Mail and Wire Fraud*, 44 AM. CRIM. L. REV. 745, 749 (2007).

154. *See id.* at 752 & n.54 (citing *United States v. Richman*, 944 F.2d 323, 333 (7th Cir. 1991)).

155. *See Pezo*, *supra* note 153, at 752.

156. The use of the mail or wires would also be in furtherance of the scheme—or at the very least incidental to an essential part of it—as a direct misrepresentation or omission affecting the issuance of a patent. *See id.* at 756–57.

expansion of the mail and wire fraud statutes, however, fraudulent procurement of a patent is not a violation under the *Cleveland* and *Semiconductor Energy* precedents despite prior circuit enthusiasm to hold otherwise. This is one specific area in which the mail and wire fraud statutes are not quite as broad as popularly believed.¹⁵⁷

III. WHETHER PROSECUTING INEQUITABLE CONDUCT IS WARRANTED

Cases such as *Patterson*, *Markham*, and *Camick* demonstrate that prosecuting inequitable conduct is possible under the perjury and false statement statutes, and it is very likely that obstruction of justice is also viable. But such prosecutions are rare. This Part asks whether, even if prosecution is possible, the federal government should bring charges in certain circumstances.

A. PHILOSOPHICAL CONSIDERATIONS

There are two main schools of thought with respect to criminal punishment: utilitarianism and retributivism.¹⁵⁸ Utilitarianism aims primarily to deter and prevent crimes and considers the myriad of factors that motivate human behavior.¹⁵⁹ On the retributivism side, punishment is seen as correcting an imbalance of justice or blameworthiness perceived by a collective conscience.¹⁶⁰ This view takes into account the costs and harms imposed by certain conduct and the unfair power disadvantage that perpetrators have over their victims.¹⁶¹ It seeks to right wrongs against others, sometimes no matter the externalities.

157. There are several good reasons to think that the mail and wire fraud statutes should encompass inequitable conduct. See *Petition for a Writ of Certiorari, Semiconductor Energy Lab. Co. v. Samsung Elec. Co.*, 204 F.3d 1368 (Fed. Cir. 2000) (No. 00-138), 2000 WL 33999400.

158. See, e.g., Ellen S. Podgor, *The Challenge of White Collar Sentencing*, 97 J. CRIM. L. & CRIMINOLOGY 731, 757–58 (2007). A third, newer school of thought, “over-criminalization,” challenges, among other things, the use of criminal law to regulate conduct that traditionally only engendered civil consequences. See, e.g., Michael P. Kelly & Ruth E. Mandelbaum, *Are the Yates Memorandum and the Federal Judiciary’s Concerns About Over-Criminalization Destined to Collide?*, 53 AM. CRIM. L. REV. 899 (2016); Stephen F. Smith, *Overcoming Overcriminalization*, 102 J. CRIM. L. & CRIMINOLOGY 537 (2012).

159. See, e.g., Erik Luna, *Punishment Theory, Holism, and the Procedural Conception of Restorative Justice*, 2003 UTAH. L. REV. 205, 208–16 (2003).

160. See *id.* at 216–24.

161. See *id.*

Both utilitarianism and retributivism support criminal prosecution of inequitable conduct in cases where such conduct can be shown beyond-a-reasonable-doubt and would not raise the concerns that informed *Therasense's* heightened standards. Starting with retributivism, punishing those who intentionally procure patents via inequitable conduct and later abuse the patent monopoly comports with the goals of correcting wrongs: not only those committed in fraudulently procuring a patent, but also in fraudulently litigating it. This is especially the case when there is a large power differential between a patent holder and an accused infringer—a not uncommon occurrence.¹⁶² Thus, there is a need for the government to actively protect downstream victims of inequitable conduct (especially small ones), as well as to send a clear message that inequitable conduct is illegal.¹⁶³ In addition, inequitable conduct “is a wrong against the institutions set up to protect and safeguard the public, institutions in which fraud cannot be complacently tolerated.”¹⁶⁴ Prosecuting inequitable conduct would not only vindicate private wrongs, but also public wrongs as well.

As to utilitarianism, just like criminal fraud generally, inequitable conduct (and conduct incidental to it) involves deceit, which society generally has an interest in deterring and preventing. Society also has a utilitarian interest in deterring and preventing patent fraud in particular, due to its resulting effects. Not only does the assertion of fraudulently-procured patents against businesses and consumers impose unwarranted and enormous costs on the American economy, but also actually proving inequitable conduct in a court of law may require upwards of \$10 million in attorneys’ fees, depending on the circumstances.¹⁶⁵ Moreover, the power of a patent’s monopoly grant, especially when wielded in a way that leads to increased costs to the public and possible anticompetitive effects, is substantial.¹⁶⁶ Prosecution may serve as a way of deterring inequitable conduct

162. See Chien, *supra* note 38, at 1592.

163. See *Retributive Justice*, STANFORD ENCYCLOPEDIA OF PHILOSOPHY (June 18, 2014), <https://plato.stanford.edu/entries/justice-retributive/#Pun>.

164. *Hazel-Atlas Glass Co. v. Hartford-Empire Co.*, 322 U.S. 238, 246 (1944).

165. See *TransWeb, LLC v. 3M Innovative Prods. Co.*, 812 F.3d 1295, 1309 (Fed. Cir. 2016) (affirming an award of over \$10 million in attorneys’ fees for defending against a sham infringement suit and bringing an antitrust action); *TransWeb, LLC v. 3M Innovative Prods. Co.*, 16 F. Supp. 3d 385, 398 (D. N.J. 2014).

166. See, e.g., Kyle R. Kroll, *Anticompetitive Until Proven Innocent: An Antitrust Proposal to Embargo Covert Patent Privateering*, 100 MINN. L. REV. 2167, 2189–95 (2016).

and preventing its attendant harms and, therefore, would be justified under utilitarianism.

Most judges and scholars tend to evaluate white-collar punishment from the lens of utilitarianism and focus especially on deterrence.¹⁶⁷ Because most white-collar criminals typically have short or non-existent criminal records (or are not even persons, such as when corporations themselves are defendants), the goal is to punish with an eye toward what will most likely influence defendants' future behavior, other similarly-situated professionals, and the industry's culture.¹⁶⁸ With this in mind, there is an instinctual tendency to punish crimes harshly as a warning that the law will come down hard. However, research suggests that the *certainty* of punishment deters much more than the *severity* of punishment.¹⁶⁹ This is especially the case for low-risk (of violent harm) offenders such as white-collar criminals.¹⁷⁰ Thus, courts are faced with the difficult task of both conveying the message that punishment for certain conduct is very likely, while at the same time imposing adequate—but not too lenient—punishments to deter would-be offenders from committing the crimes sought to be deterred.¹⁷¹ This invariably requires taking into account the possible rewards derived from the criminal conduct, as well as the risk of social stigma and peers' moral condemnation.¹⁷²

167. See Kenneth Mann et al., *Sentencing the White-Collar Offender*, 17 AM. CRIM. L. REV. 479, 482–83 (1980), http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=5129&context=fss_papers.

168. See *id.* at 483.

169. See, e.g., Valerie Wright, *Deterrence in Criminal Justice: Evaluating Certainty vs. Severity of Punishment*, THE SENTENCING PROJECT, 3 (2010), <http://www.sentencingproject.org/wp-content/uploads/2016/01/Deterrence-in-Criminal-Justice.pdf>.

170. See *id.* at 7; see also *Five Things About Deterrence*, NAT. INST. OF JUSTICE, <https://www.nij.gov/five-things/Pages/deterrence.aspx> (last visited Mar. 5, 2018) (“Sending an individual convicted of a crime to prison isn’t a very effective way to deter crime.”).

171. See Katie A. Fredericks et al., *White Collar Crime: Recidivism, Deterrence, and Social Impact*, 2 FORENSIC RES. & CRIMINOLOGY INT’L J. 39, 39 (2016), <http://medcraveonline.com/FRCIJ/FRCIJ-02-00039.pdf>.

172. See RAY PATERNOSTER & STEPHEN G. TIBBETTS, THE OXFORD HANDBOOK OF WHITE-COLLAR CRIME: WHITE-COLLAR CRIME AND PERCEPTUAL DETERRANCE (2016), <http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199925513.001.0001/oxfordhb-9780199925513-e-30>; J. Scott Dutcher, Comment, *From the Boardroom to the Cellblock: The Justifications for Harsher Punishment of White-Collar and Corporate Crime*, 37 ARIZ. ST. L.J. 1295, 1319 (2006).

In the patent fraud context, courts also have to consider how to deter both individuals and organizations because either can commit inequitable conduct. All the crimes discussed in this article provide for, in addition to individual liability, corporate liability for the acts of agents under theories of respondeat superior.¹⁷³ Inventors within a corporation, as well as the corporation itself, can be prosecuted for inequitable conduct.¹⁷⁴ For this reason, employers should have programs and policies to ensure that their employee-applicants comply with Rule 56.

Principal liability statutes also capture any persons who “counsel” the commission of an offense, such as attorneys.¹⁷⁵ In addition to bringing a charge against an inventor and/or a corporate-employer, a charge against an attorney is possible.¹⁷⁶ Because attorneys are in a position to prevent inequitable conduct by advising clients on patentability requirements, bars, and the duty of candor,¹⁷⁷ the possibility of prosecution for assisting fraud may serve as an additional deterrent overall.¹⁷⁸ But

173. See 18 U.S.C. § 2 (2012); 15 U.S.C. § 24 (2012) (for antitrust violations).

174. Successful prosecution against a corporation may be possible because patents are for the benefit of the employer; the corporate-employer almost always holds all patent rights as “assignee.” See *Ownership/Assignability of Patents and Applications*, USPTO, <http://www.uspto.gov/web/offices/pac/mpep/s301.html> (last visited Apr. 2, 2018). In addition, being listed as the assignee requires a record of assignment in the application. See 37 C.F.R. § 1.46 (2012). This could exhibit the principal’s approval of the inventor-employee’s conduct. Though, whether specific instances of nondisclosure or misrepresentation were approved of by the employer would remain a question of fact.

175. See 18 U.S.C. § 2(a); see also *United States v. Knoll*, 16 F.3d 1313 (2d Cir. 1994); *United States v. Vaughn*, 797 F.2d 1485 (9th Cir. 1986) (involving § 1001). In most cases, attorneys assist inventors (whether persons or corporations) in applying for a patent.

176. This implicates issues relating to confidentiality and attorney-client privilege. For example, would an attorney be allowed to share information about any fraud in applying for the patent because the ethics rules might allow for disclosure? See MODEL RULES OF PROF’L CONDUCT r. 1.6(b)(2) (AM. BAR ASS’N 2012). Would the crime-fraud exception to attorney-client privilege apply? See *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1358 (Fed. Cir. 2011) (holding that the exception applies to fraud on the patent office). Attorneys operating in the intellectual property space face a host of challenging ethical issues that may implicate inequitable conduct. See generally Leonard Raykinsteen, *Ethical Considerations in Intellectual Property Law*, 99 J. PAT. & TRADEMARK OFF. SOC’Y 47, 59 (2017).

177. See Patent Litigation Practice Note, *supra* note 40 (stating that patent trolls, for example, often regularly use the same counsel).

178. But see *Van Asdale v. Int’l Game, Tech.*, 498 F.Supp.2d 1321 (D. Nev. 2007), *rev’d and vacated*, 577 F.3d 989 (9th Cir. 2009) (holding that attorneys did not receive whistleblower protection for disclosing fraud on the USPTO under the Sarbanes-Oxley Act).

whether the possible punishments under the most applicable statutes would be great enough to deter inequitable conduct by offsetting its advantages and rewards depends on the facts, circumstances, and motivations behind each patent.

A conviction for inequitable conduct via perjury, false statement, or obstruction of justice could entail fines and/or prison sentences of up to five years.¹⁷⁹ These consequences—as opposed, or in addition, to professional discipline or the invalidation of a patent—might be enough to deter unscrupulous applicants from defrauding the USPTO, offsetting the ill-gotten gains to be realized through litigating the patents and obtaining settlement awards. When it comes to corporations and other entities, however, small fines might not deter.¹⁸⁰ Liability of corporate officers and suspension from asserting patent infringement or even applying for new patents would likely be sufficient. This punishment was handed down in a civil case brought by the Department of Justice for inequitable conduct in *Union Camp*.¹⁸¹ Combined with the professional and business stigma that would likely result from being branded a patent fraudster, these punishments could offset the potential benefits derived from inequitable conduct. Criminal punishment would likely have a stronger effect than usual in deterring behavior here because patent applicants are typically knowledgeable about the state of the law and can easily understand the consequences of violating it—two important factors to effective deterrence.¹⁸²

That inequitable conduct continues to occur suggests that current consequences, like that of the defense of inequitable con-

179. See 18 U.S.C. §§ 1621, 1001(a), 1505 (2012).

180. Some litigants can fetch average settlements of around \$300,000. See *Patent Assertion Entity Activity*, FTC, 3, 10, 43 (2016), https://www.ftc.gov/system/files/documents/reports/patent-assertion-entity-activity-ftc-study/p131203_patent_assertion_entity_activity_an_ftc_study_0.pdf; Mario H. Lopez, *Patent Trolls Profit at Your Expense*, WASH. EXAMINER (Jan. 11, 2014), <http://www.washingtonexaminer.com/patent-trolls-profit-at-your-expense/article/2541977>; Ira Blumberg, *Why Patent Trolls Won't Give Up*, TECH CRUNCH (June 5, 2016), <https://techcrunch.com/2016/06/05/why-patent-trolls-wont-give-up>.

181. See *United States v. Union Camp Corp.*, No. 5005-A, 1969 WL 192827 (E.D. Va. 1969).

182. See Paul H. Robinson & John M. Darley, *Does Criminal Law Deter? A Behavioural Science Investigation*, 24 OXFORD J. LEGAL STUDIES 173, 173, 175 (2004).

duct and professional discipline, fail to fully deter fraud from occurring.¹⁸³ Indeed, one commentator has reasoned that the inequitable conduct defense and punishment of invalidation create “upside-down incentives to engage in dishonest conduct,” resulting in little to no deterrence at all.¹⁸⁴ Some might argue that inequitable conduct is not so widespread as to justify deterrence using the criminal law.¹⁸⁵ But given application trends, the opportunities to procure patents through fraud, the USPTO’s lack of resources, the difficulty in investigating and stopping inequitable conduct during the application process, the harmful effects that can result from inequitable conduct down the line, that many patent cases never proceed past early stages and are settled due to the high cost to defend, and that courts continue to find inequitable conduct, the problem is at least serious enough to warrant such consequences in the worst cases. Even if inequitable conduct is not widespread, prosecuting the most egregious cases of inequitable conduct is worthwhile and desirable because doing so fulfills the goals of criminal punishment and would work to deter more egregious cases in the future. Focusing on the worst cases would also comport with *Therasense*.

B. PRACTICAL CONSIDERATIONS

In order to realize the benefits of prosecution, the Department of Justice would need to actually charge applicants for committing inequitable conduct. Traditionally, the Department considers three factors when charging: (1) whether there is a substantial federal interest, (2) whether the proposed defendant is subject to effective prosecution in another jurisdiction, and (3) whether there is an adequate non-criminal alternative to prosecution.¹⁸⁶ Due to the increased interest in and scrutiny of patents, the overwhelming public interests at stake,¹⁸⁷ and the significant interests in maintaining the health of a system that is

183. *E.g.*, *Regeneron Pharm., Inc. v. Merus N.V.*, 864 F.3d 1343, 1364 (Fed. Cir. 2017).

184. Tun-Jen Chiang, *The Upside-Down Inequitable Conduct Defense*, 107 NW. U. L. REV. 1243, 1245 (2013); *see also* *Dow Chem. Co. v. Exxon Corp.*, 139 F.3d 1470, 1475 (Fed. Cir. 1998) (“[I]t seems most improbable that an inventor would choose to forfeit the benefits of patent protection because of fear of the risk of being found tortiously liable based upon attempting to enforce a patent obtained by inequitable conduct.”).

185. *Burlington Industries, Inc. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988) (“[T]he habit of charging inequitable conduct in almost every major patent case has become an absolute plague.”).

186. *See* U.S. DEP’T OF JUSTICE, U.S. ATTORNEY’S MANUAL § 9-27.220 (2015).

187. *See, e.g.*, Leslie, *supra* note 41, at 325.

responsible for the United States' continued technological might, inequitable conduct is a matter of substantial federal interest.¹⁸⁸ Indeed, one of the Department's top priorities is fighting fraud in the business world and related misconduct.¹⁸⁹

Applicants who commit inequitable conduct are not subject to effective prosecution in other jurisdictions. Most states have recently enacted statutes criminalizing the assertion of patent infringement in bad faith.¹⁹⁰ These state criminal statutes target activities that sometimes are derivative of and incidental to fraud during the application process. But these laws do not address the root cause (for some cases) of bad faith litigation: namely, that a patent is granted when it should not have been and through fraud. This result is exacerbated by the statutory presumption that a patent is valid,¹⁹¹ which can deter rivals from competing in an industry and enable fraudulent patent holders to extort large settlements and achieve anticompetitive ends.¹⁹²

In addition, current non-criminal alternatives do not appear sufficient to deter inequitable conduct. Despite the existence of the defense of inequitable conduct, affirmative defenses of patent invalidity, and professional discipline,¹⁹³ inequitable conduct persists and may even be increasing in frequency.¹⁹⁴ Therefore, there may be reason to believe that non-criminal alternatives are inadequate, which may also justify finding a substantial federal interest in deterring inequitable conduct.¹⁹⁵ This would come

188. This might be especially the case in certain districts where patent litigation consumes the docket. See Saurabh Vishnubhakat, *Reconceiving the Patent Rocket Docket: An Empirical Study of Infringement Litigation 1985–2010*, 11 JOHN MARSHALL REV. INTELL. PROP. L. 28 (2011). Note, however, that the Supreme Court's recent decision in *TC Heartland LLC v. Kraft Foods Group Brands LLC*, 137 S. Ct. 1514 (2017), may change which districts the effects of patent fraud will be felt the most in the future.

189. U.S. DEP'T OF JUSTICE, OFFICE OF THE DEPUTY ATTORNEY GENERAL: INDIVIDUAL ACCOUNTABILITY FOR CORPORATE WRONGDOING (2015), <https://www.justice.gov/archives/dag/file/769036/download> [hereinafter Yates Memo].

190. See Hyde, *supra* note 22.

191. 35 U.S.C. § 282(a) (2012).

192. See, e.g., *Economists' Roundtable on Hot Patent-Related Antitrust Issues*, ANTITRUST, Summer 2013, at 10.

193. See 35 U.S.C. § 32; e.g., *Jaskiewicz v. Mossinghoff*, 822 F.2d 1053 (Fed. Cir. 1987).

194. This is shown by the fact that the patentee win percentage in inequitable conduct cases has been trending down for the past 30 years. See Lee Petherbridge et al., *The Federal Circuit and Inequitable Conduct: An Empirical Assessment*, 84 S. CAL. L. REV. 1293, 1310 (2010).

195. Cf. *Candor, Disclosure & OED*, USPTO, 3 (2016), <https://www.uspto>

into play most when the inequitable conduct is highly deceptive and brazen.

Ultimately, though, bringing a charge is always a matter of discretion. The fact that the Department of Justice has already prosecuted fraud on the USPTO in *Patterson* and *Markham* and brought charges in *Camick* shows that at least some U.S. Attorneys believe bringing false statement charges is warranted in appropriate cases. But whether the Department of Justice would charge a corporation in addition to its employees would depend on many factors, such as the pervasiveness of the conduct.¹⁹⁶ Where appropriate, charging a corporation may assist in securing its cooperation in investigating a pattern or practice of inequitable conduct.¹⁹⁷

Even if U.S. Attorneys do decide to prosecute inequitable conduct, there may be a concern that proving a violation of any of the criminal statutes discussed herein would be too difficult. In many cases, there is not enough evidence to prove inequitable conduct even under the clear and convincing evidence standard, and courts often reject assertions of inequitable conduct.¹⁹⁸ Proving intent beyond a reasonable doubt may be very difficult because the circumstantial evidence in many cases of inequitable conduct, even though proven by clear and convincing evidence, may only show that an applicant *did not* do something. Circumstantial evidence showing willful or knowing behavior is not im-

.gov/sites/default/files/documents/AIPLA_2016_Slides.pdf (showing that only twenty-two persons registered to practice before the USPTO were disciplined in 2016).

196. See U.S. DEPT OF JUSTICE, *supra* note 186, at § 9-28.300; see also *id.* at § 9-28.1000 (noting that whether a corporation has taken meaningful remedial measures, implemented meaningful corporate compliance programs, established awareness among employees that criminal conduct will not be tolerated, and exhibits “the highest standards of legal and ethical behavior” are factors to consider when determining whether or not to prosecute a corporation).

197. For example, the Yates Memo outlines how cooperation can serve as a mitigating factor. See Yates Memo, *supra* note 189.

198. See *Ferring B.V. v. Barr Labs., Inc.*, 437 F.3d 1181, 1196–97 (Fed. Cir. 2006) (Newman, J., dissenting) (referring to the assertion of inequitable conduct as often “specious” and widespread assertion as a “plague”); Petherbridge et al., *supra* note 194, at 1315–16. But see Ryan Davis, *Inequitable Conduct a Dying Defense 2 Years Post-Therasense*, LAW360 (May 23, 2013), <https://www.law360.com/articles/444480/inequitable-conduct-a-dying-defense-2-years-post-therasense> (reporting that practitioners have seen a marked decline in the assertion of inequitable conduct after *Therasense*).

possible to come by, however. And systematic inequitable conduct might be enough to prove a deliberate scheme or practice to defraud the USPTO in some cases.¹⁹⁹

One recent inequitable conduct ruling illustrates that sufficient evidence of inequitable conduct may exist in some cases. In *TransWeb v. 3M*, the Federal Circuit affirmed a finding of inequitable conduct when 3M declared to the USPTO that 3M received samples of its applied-for invention after signing a confidentiality agreement.²⁰⁰ Based on this, 3M claimed the samples were not prior art. But in fact, 3M received the samples at an industry expo. The district court, after reviewing the extensive evidence in the case, concluded that “in-house attorney[s] at 3M . . . acted with specific intent to deceive the patent office as to the [samples].”²⁰¹ The evidence supporting this conclusion included expo documents, emails, letters, testimony, meeting notes, and the actual samples.²⁰² 3M was also found liable for a *Walker Process* violation.²⁰³

Although *TransWeb* may be abnormal in its wealth of evidence, similar cases also exist.²⁰⁴ The Department of Justice would be aided by discovery in civil cases and could pick and choose the most prosecutable cases of inequitable conduct based on civil rulings. A finding of inequitable conduct in a civil case could also constitute admissible evidence of a prior bad act.²⁰⁵ Although concerns over the burden of proof are valid, they do not completely undercut the worthy goal of deterring inequitable conduct in the patent system.

199. See *Intellect Wireless, Inc. v. HTC Corp.*, 732 F.3d 1339, 1344–45 (Fed. Cir. 2013).

200. See *TransWeb, LLC v. 3M Innovative Props. Co.*, 812 F.3d 1295, 1304–05 (Fed. Cir. 2016); *TransWeb, LLC v. 3M Innovative Props. Co.*, 16 F. Supp. 3d 385, 398 (D. N.J. 2014).

201. *Transweb*, 812 F.3d at 1304.

202. See *id.* at 1305–06.

203. See *id.* at 1309–10 (“3M’s unlawful act was the bringing of suit based on a patent known to be fraudulently obtained.”). The author makes no judgment as to whether 3M committed inequitable conduct and merely cites *Transweb* as a recent ruling applicable to the subject of this Essay.

204. See, e.g., *Intellect Wireless*, 732 F.4d at 1344–45; *Regeneron Pharma., Inc. v. Mercus B.V.*, 144 F.Supp.3d 530, 582–85, 595–96 (S.D.N.Y. 2015); *Worldwide Home Prods., Inc. v. Bed, Bath and Beyond, Inc.*, 74 F.Supp.3d 626, 636–38 (S.D.N.Y. 2015).

205. See FED. R. EVID. 404(b)(2); *Semiconductor Energy Lab. Co. v. Samsung Elec. Co.*, 4 F.Supp.2d 477, 487 (E.D. Vir. 1998). But see *McNeil-PPC, Inc. v. Perrigo Co.*, 516 F.Supp.2d 238, 258 n.9 (S.D.N.Y. 2007); *Procter & Gamble Co. v. Nabisco Brands, Inc.*, 697 F.Supp. 1360, 1366–67 (D. Del. 1988).

C. LEGISLATIVE CHANGES

As noted above in Part II, the statutory schemes for the most applicable federal crimes can present non-intuitive obstacles to prosecuting inequitable conduct. If there is legislative support, some minor statutory modifications would alleviate those obstacles. One such change would be to revive the statutory requirement that an applicant's oath (made upon submitting the application and currently only relating to inventorship) include not only an affirmative declaration that there is no prior art, but also that the applicant has actual knowledge of the invention's utility and level of required ingenuity and skill to make.²⁰⁶ Making this change would require applicants to make more affirmative statements. The change would impose additional duties on applicants, but those additional duties could assist the USPTO in its examination process.

Another change would be to fix the disjunctive language in the mail and wire fraud statutes to allow prosecution merely for schemes to defraud. In the alternative, the language could be changed to enable prosecution for the obtaining of property that does not exist until issued by a government office and in the hands of the applicant (e.g., a medical license or a patent). Such a change would override *Semiconductor Energy* and *Cleveland's* current obstacle for prosecuting inequitable conduct under the mail and wire fraud statutes.²⁰⁷ Fixing the disjunctive language or better defining property for mail and wire fraud would clarify the statutes and open the door to prosecuting patterned and large-scale schemes to defraud the USPTO.

The above reforms would increase the possibility of prosecuting inequitable conduct. By increasing this possibility, deterrence would be heightened. The reforms would also enable courts to impose broader penalties, when needed, to effectuate the proper balance between the risks and rewards of committing inequitable conduct as part of a scheme. Finally, reforms could also provide better notice to applicants that certain conduct is criminal, reducing Rule of Lenity concerns.²⁰⁸ For example, a broader

206. See *supra* note 104 and accompanying text.

207. See *supra* notes 134–60 and accompanying text.

208. To this end, the possibility that the Rule of Lenity, see 73 AM. JUR. 2D *Statutes* § 188 (2018), might be applied to a prosecution for inequitable conduct would be reduced, even though the possibility is low already. To wit, lenity was not brought up in *Patterson, Markham*, or *Camick*.

applicant oath would put applicants on greater notice that material omissions could be prosecuted as perjury, false statements, or obstruction of justice.²⁰⁹

CONCLUSION

Inequitable conduct is the act of intentionally making a materially false statement or omission to the USPTO when applying for a patent. This form of fraud is brought on by competitive or deceptive interests, enabled by imperfections in the U.S. patent system, and motivated by the ever-increasing value of patents. Once the fraud is successful and a patent is granted, unscrupulous applicants often turn into unscrupulous litigants and use their patents to extort settlements through threats and litigation. Overall, inequitable conduct imposes costs on consumers, competition, and the economy.

At least three criminal prosecutions have been brought against applicants for committing inequitable conduct. Two modern cases were for the crime of false statements, but inequitable conduct may also constitute the crimes of perjury and obstruction of justice against an agency. Mail and wire fraud are not applicable under current precedent. Although successful criminal prosecution of inequitable conduct is possible under the federal perjury, false statements, and obstruction of justice statutes, it is up to the Department of Justice to pursue such charges when appropriate, in view of the goals of punishment and prosecutorial guidelines. Given the federal interests at stake, prosecution is desirable in egregious cases. And the deterrent effect of such prosecutions would likely promote greater applicant accountability and patent integrity.

209. See Stephen Yelderman, *The Value of Accuracy in the Patent System*, 84 U. CHI. L. REV. 1217, 1284 n.145 (2017) (“[The inventor] statement under penalty of criminal sanctions evinces a clear intent to dissuade inventors from knowingly filing for undeserved rights.”).