

OVERCLAIMING IS CRIMINAL

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ABSTRACT

For some time patent law has been criticized for a flood of bad patents. Patents of questionable validity are being issued with overly broad, often-ambiguous boundaries. A majority of the blame for these bad patents has fallen on the shoulders of the Patent and Trademark Office (PTO). Bad patents exist, so the argument goes, because the PTO has improperly issued them. In response the PTO has launched a major initiative to improve patent quality. Our singular focus on the PTO though threatens to overlook the other major player responsible for patent quality—patent applicants. Currently patent applicants are not seen as having any particular duty to seek only good patents. Today applicants can seek excessively broad claims if they want to. It is the PTO’s job to police against such excessive claims. This article shows this practice of overclaiming is dangerously mistaken. Though not generally appreciated, the patent statute includes powerful features that put a significant duty on applicants and their patent attorneys to file only properly sized patent claims. As shown, applicants have a duty to file claims that do not exceed their invention. And though it likely comes as a surprise to much of the patent bar, that duty is enforced by criminal sanctions. Simply put, willful overclaiming is criminal; it is a felony.

INTRODUCTION

Today, many worry that the patent system stifles rather than promotes invention and innovation. It is all too easy to run afoul of someone else’s patents even when trying to chart an infringement-free course. The difficulty stems from the large number of patents with broad and malleable boundaries.¹

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1. See Mark A. Lemley & Mark P. McKenna, *Scope*, 57 WM. & MARY L. REV. 2197, 2285 (2016) (describing the problem of overclaiming in IP generally as “endemic”); Jason Rantanen, *The Malleability of Patent Rights*, 2015 MICH. ST. L. REV. 895, 898–900 (showing that patent claims can be expanded during litigation because of vague initial language).

This “notice failure” problem has been highlighted in patent law for some time.²

Many blame the Patent and Trademark Office (PTO) for this dysfunctional state of affairs. In particular, they blame the PTO for failing to weed out bad patents—patents with overly broad claims that should never have been issued.³ In response, the PTO has launched a major initiative to improve patent quality.⁴ Though improvements are welcome, the exclusive focus on the PTO limits the debate and unfortunately it reinforces a deeply problematic paradigm. As currently understood, the burden of achieving good patents rests solely on the shoulders of the PTO. Bad patents exist, so the argument goes, because the PTO improperly issued them.

This article argues that this one-sided view is incorrect. What about the other major player in all of this? What about patent applicants? What responsibility do they owe the patent system? This article argues that patent applicants owe a duty to craft correctly sized claims and that duty, surprising as it may be to the patent bar, is enforced by criminal sanctions.

As generally understood today, applicants (and their attorneys) have very little responsibility to file “good” patents.⁵ Patent applicants and their attorneys aggressively seek as much exclusive real estate as possible. To achieve that, applicants routinely claim not just as broadly as they think the PTO and courts will allow but just in case, they claim beyond (often far beyond) that.⁶ Zealous representation of patent applicants requires aggressive claiming. This idea is deeply embedded in the conventional practices of the patent prosecution bar. In fact, malpractice cases have been brought against patent attorneys who did not secure maximal protection for their clients.⁷ It was malpractice to claim *too little*.

2. JAMES BESSEN & MICHAEL MEURER, PATENT FAILURE 8–10 (2008).

3. See Transcript of Oral Argument at 14, *Cuozzo Speed Techs. v. Lee*, 136 S. Ct. 2131 (2016) (No. 15-446) (Breyer, J.) (“[T]he Patent Office has been issuing billions of patents that shouldn’t have been issued—I overstate—but only some.”).

4. See U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-16-490, PATENT OFFICE SHOULD DEFINE QUALITY, REASSESS INCENTIVES, AND IMPROVE CLARITY 4–14 (2016), <http://www.gao.gov/assets/680/678113.pdf>.

5. See Tun-Jen Chiang, *Forcing Patent Claims*, 113 MICH. L. REV. 513, 522 (2015) (puzzling over “why patentees would comply with their obligation to write claims that actually describe the real invention when doing so manifestly conflicts with their self-interest”).

6. See *id.* at 515 (arguing that “self-serving patentees draft the claims in an *overbroad* manner”).

7. See *infra* note 64.

Of course any excessive initial claims shouldn't pose a problem in theory.⁸ The patentability requirements should filter out these claims. But remember the PTO has to do that culling. What if the PTO makes a mistake? When a claim that is too broad gets through the PTO, the patent applicant gets a windfall. The patentee now has a broad, malleable claim that is blessed with a presumption of validity.⁹ An applicant isn't going to get such a windfall unless they ask for one. Patent applicants have the incentive to include at least some overly broad claims, leaving it to the PTO (and later the courts) to sort the valid from the invalid. This article argues that this is where today's bad patents begin. Computer scientists have long understood that a system that accepts garbage as input will produce garbage as output.¹⁰ In the case of the patent system, the garbage results not from incompetence; rather it is carefully considered and strategic.

Though prevalent, this article reveals that there is a powerful yet overlooked reason to refrain from overclaiming. Simply put, it is a felony to willfully overclaim in a patent application. Like lying on your tax return, the patent statute makes it a felony for applicants to knowingly file claims covering subject matter that the applicant did not invent. Patent applicants are not free to claim as broadly as they want leaving it to the PTO to see which broad claims stick. Patent applicants (under penalty of criminal sanctions) have a duty to craft claims that do not exceed their invention. And, patent attorneys are not off the hook either.¹¹ Patent attorneys that encourage such overclaiming are aiding and abetting felonious activity.¹² Recognition of this criminal sanction should provide an important bulwark against overly broad initial claims.

Recognition of this duty should reduce overclaiming and should improve the functioning of the patent system. Imagine if the IRS were faced with tax returns that read: "For tax purposes, I earned \$50,000 last year. But if you don't believe that, let's say that I earned \$75,000 last year. And if you don't

8. See Chiang, *supra* note 5 **Error! Bookmark not defined.**, at 522 ("To be sure, patentees cannot get away with claiming everything in the universe because the PTO will scrutinize the claims. And yet it is fanciful to suppose that the PTO can police patentees perfectly and catch every subtle drafting trick.").

9. See 35 U.S.C. § 282 (2012).

10. See, e.g., *Garbage In, Garbage Out*, WIKIPEDIA, https://en.wikipedia.org/wiki/Garbage_in,_garbage_out (last visited Nov. 3, 2017) ("In computer science, garbage in, garbage out (GIGO) is where flawed, or nonsense input data produces nonsense output or 'garbage.'").

11. As a matter of practice, patent claims are almost always drafted by patent attorneys with almost no direct input from the inventors. The rest of specification is also generally drafted by patent attorneys but its content is heavily drawn from inventor disclosures or inventor interviews.

12. See 18 U.S.C. § 2 (2012).

believe that, let's say that I earned \$100,000." Such a system is absurd and it would vastly complicate the tax system by putting the burden entirely on the IRS to determine income. Such a system would pervert incentives so that those with the best information about their income (the taxpayers) would refrain from revealing it. We don't have such a tax system for good reason. Instead we put the duty of providing accurate information on the shoulders of taxpayers because they hold the relevant information and we enforce those duties with an array of civil and criminal penalties. Yet in essence, patent applicants today file claims that look a lot like this absurd tax example.¹³ To start improving patent quality we must institute reforms where problematic patent claims originate.

And that reform is rather simple and it need not start with mass incarceration of the patent bar. Simply highlighting the criminality should start curbing the excesses of overclaiming and it gives patent applicants and their attorneys an important counterweight to their zealous drive for maximal patent scope.

The criminality of overclaiming is quite straightforward and is drawn directly from the patent statute. Every patent applicant is required to file an oath swearing that the applicant is the "original inventor" of the claimed subject matter.¹⁴ And as part of that requirement every applicant must also acknowledge that a willfully false statement in this oath constitutes a crime punishable under 18 U.S.C. § 1001.¹⁵ This "making false statements to the government" provision, though little-known in patent law, has real impact in white-collar criminal law generally.¹⁶ It has imprisoned the likes of Rod Blagojevich, Scooter Libby, Bernie Madoff, Jeffrey Skilling, and even Martha Stewart.¹⁷ This article highlights that this criminal provision has import for the issue of patent claim scope. In short, willfully overclaiming involves willfully filing a false statement with the government and is a crime.

13. This is not to suggest that dependent claims do not serve a legitimate purpose. An applicant's initial claim set should cover the applicant's invention in all its permutations. This is best done by independent and dependent claims that detail those permutations. The purpose of patent examination is to determine the subset of the applicant's invention that is a patentable invention.

14. 35 U.S.C. § 115(b)(2) (2012).

15. *See id.* § 115(i).

16. KATHLEEN BRICKEY, CORPORATE AND WHITE COLLAR CRIME 199 (5th ed. 2011).

17. *See Making False Statements*, WIKIPEDIA, https://en.wikipedia.org/wiki/Making_false_statements (last visited Nov. 3, 2017).

The criminality of a willfully false oath in patent procurement has been generally discussed before in the patent literature.¹⁸ Those earlier works focused on specific factual scenarios like false statements regarding *who* invented the subject matter of the patent. For example, if an applicant derived an invention from another and then filed an application claiming that stolen invention, the applicant would be filing a willfully false oath and would have committed a crime.¹⁹ Indeed the criminality and immorality of derivation is largely agreed upon in patent law. Yet in addition to falsity stemming from misstating *who* invented, patent law has not grappled with the fact that a patent oath can be false because of *how much* is claimed.

This issue is even more pressing today because claiming practices have evolved in the past forty years. Today applicants can all too easily claim well beyond their inventions. In particular patent law has significantly liberalized the use of functional claim language.²⁰ This technique enables applicants to claim quite broadly with a few short words. Functional claim language works *not* by claiming the particular way of solving some technological problem but rather by claiming the useful result itself without regard to the particular means. Unbridled functional language allows claims to cover every possible solution to a relevant technological problem. Rather than claiming a specific cure for a disease, functional claiming allows an applicant to claim every cure for that disease. Such claims are very broad and very desirable as they are especially useful for ensnaring all economic substitute technologies. Today functional claims are quite prevalent (but still notably controversial).²¹

18. See Charles L. Gholz, *Criminal and Disciplinary Liability for Fraud*, AM. PAT. L. ASS'N Q.J. 177, 177 (1975); Irving Kayton et al., *Fraud in Patent Procurement: Genuine and Sham Charges*, 43 GEO. WASH. L. REV. 1, 75–76 (1976); Jack R. Miller, *Fraud on the PTO*, 58 J. PAT. OFF. SOC'Y 271, 271 (1976).

19. See Kayton et al., *supra* note 18, at 78 (“An assertion that the defendant was the sole inventor, when in reality he purloined the invention from another, would be in this category.”).

20. See *infra* note 87 and accompanying text.

21. See Kevin Emerson Collins, *Patent Law's Functionality Malfunction and the Problem of Overbroad, Functional Software Patents*, 90 WASH. U. L. REV. 1399, 1401 (2013); Mark A. Lemley, *Software Patents and the Return of Functional Claiming*, 2013 WIS. L. REV. 905, 920–24; Dennis Crouch, *Means Plus Function Claiming*, PATENTLY-O (Jan. 14, 2013), <http://patentlyo.com/patent/2013/01/means-plus-function-claiming.html> (demonstrating the widespread use of functional claim language outside the strict confines of means plus function claiming). For a discussion of the troubles with functional claims in biotechnology, see Brief for Oskar Liivak as Amicus Curiae Supporting Defendant-Appellant at 20–22, *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336 (Fed. Cir. 2010) (en banc) (No. 2008-1248). For the importance of functional claiming in biotechnology, see *AbbVie Deutschland GmbH & Co. v. Janssen Biotech, Inc.*, 759 F.3d 1285, 1301 (Fed. Cir. 2014) (“Functionally defined genus claims can be inherently vulnerable to invalidity challenge for lack of written description support, especially in technology fields that are highly unpredictable, where it is difficult to establish a correlation

What has gone largely unnoticed in patent law is that these claiming practices conflict with the criminal prohibitions on filing a false oath.²² This article takes on this important issue. This article shows that willful overclaiming—willfully claiming more than the inventor actually invented—is a felony and the article shows that functional claiming is a particularly easy and prevalent way to overclaim.

As a federal crime, cases would be brought by the Department of Justice. Surely the prosecution of a few egregious cases would force all patent attorneys to reconsider their claim drafting strategies. Admittedly only a handful of applicants have ever been prosecuted for the more prosaic crime of willful misstatement of inventorship.²³ But even if prosecutions are rare (and I think normatively they should be very rare or even non-existent), the criminality of overclaiming can still impact claim drafting practices and drive significant patent reform.

Outside of criminal proceedings, there are other channels by which the criminality of overclaiming can influence patentees. Overclaiming could be the basis of disciplinary and disbarment proceedings by the PTO. And in civil cases, evidence of willful false statements could be used as the basis for antitrust violations.²⁴ Importantly, that route could be utilized by multiple entities such as the Civil Division of the Department of Justice, the Federal Trade Commission, and even by state attorneys general.²⁵ These latter two have already shown an appetite to take on patent reform.²⁶ And lastly, and perhaps most importantly, private patent litigants can use overclaiming as the

between structure and function for the whole genus or to predict what would be covered by the functionally claimed genus.”); *Centocor Ortho Biotech v. Abbott Labs.*, 636 F.3d 1341, 1351 (Fed. Cir. 2011).

22. Kayton et al. do consider the possibility for fraud when “the applicant seeks to extend the claims to cover something he did not invent.” Kayton et al., *supra* note 18, at 11. This is close to the scenarios considered in this article but that earlier focus considered amended claims during prosecution that are added specifically to ensnare competitors’ products or activities. As long as the patent’s original disclosure supported the amended claims, courts have not been troubled by this practice. *See id.* at 56–57.

23. *See infra* notes 106–111 and accompanying text.

24. As to unenforceability, the fraud on the PTO from an incorrect oath can be purged. Under the statute, inventors “may withdraw, replace, or otherwise correct the statement at any time.” 35 U.S.C. § 115(h)(1) (2012). If an applicant corrects a previously false oath the enforceability of the patent is saved. *See id.* § 115(h)(3) (“A patent shall not be invalid or unenforceable based upon the failure to comply with a requirement under this section if the failure is remedied as provided under paragraph (1).”). Nonetheless a corrected oath under § 115(h)(1) cannot expunge the crime of filing a false oath though the correction may tilt the equities toward leniency.

25. *See infra* notes 137–145 and accompanying text.

26. *See infra* note 137 and accompanying text.

basis for their own antitrust counterclaims, their claims of inequitable conduct, or for their claims to attorney's fees.

Ultimately few if any patent applicants or patent attorneys are ever likely to be put in jail. And that is how it should be. The patent bar surely zealously advocates for their clients but we generally do respect and abide by the standards of professional ethics.²⁷ Simply recognizing the criminal overhang should have a positive impact on claim drafting practice. The purpose here is to alert the patent bar to this risk and to jump-start the development of a needed ethics of claim breadth. The tax bar has long been forced to balance the demands of zealous advocacy against criminal penalties for tax fraud. Outright tax evasion is prohibited while clever tax planning is valued.²⁸ The patent bar must strike a similar balance. Maximum claim scope will and should still be valued but we need not risk criminal activity to get there. Contrary to the conventional wisdom, the burden of getting appropriately sized claims is not wholly on backs of PTO examiners. Patent applicants and their attorneys have a duty to craft claims limited to the disclosed invention.

But drawing this important line is not trivial. Today it is not a simple task to file claims that extend right up to what the inventor invented. And that failing does not lie just with the patent bar. Rather the PTO and courts have not clearly defined key terms. The patent bar still does not have clear guidance regarding the invention in patent law.²⁹ There is even fundamental disagreement on the basic representations being made by claims.³⁰ Nor do we have guidance on the proper use of functional claim language. It is here that the courts and the PTO must provide needed guidance. How can the patent system require applicants to swear (under penalty of criminal sanctions) that they have invented all that they claim when the basic concepts and tools for that job remain troublingly ambiguous? Other than for the most egregious cases, criminal sanctions for patent applicants and their attorneys should only be considered once Congress and the courts provide this much needed guidance.

The following parts further detail these arguments. Part I explores the doctrinal landscape that shapes the ultimate contours of allowable patent

27. John M. Conley & Lynn Mather, *Scientists at the Bar*, in *LAWYERS IN PRACTICE* 245, 257 (Leslie C. Levin & Lynn Mather eds., 2012) ("Patent lawyers enjoy a stellar reputation for ethical conduct, ranking second among 42 legal specialties . . .").

28. See *infra* notes 160–167 and accompanying text.

29. See Christopher Cotropia, *What is the Invention?*, 53 *WM. & MARY L. REV.* 1855, 1855 (2012); Oskar Liivak, *Rescuing the Invention from the Cult of the Claim*, 42 *SETON HALL L. REV.* 1, 1–5 (2012) (describing the confused status of the concept of the invention in modern patent law).

30. See Oskar Liivak, *Finding Invention*, 40 *FLA. ST. U. L. REV.* 57, 59–60 (2012) (describing the difficulties in determining what was invented).

scope. It then describes how patent applicants and their attorneys have the incentive to initially overclaim. Part II shows that willful overclaiming is criminal. Part III discusses the policy behind why overclaiming is stealing. Part IV describes the various mechanisms (both criminal and civil) by which the criminal liability can be leveraged to impact claim drafting practice. Part V outlines the path forward as the patent bar begins to develop an ethics of claim drafting in recognition of the criminality of overclaiming. The part concludes by pointing out various ambiguities in patent law that must be clarified so that the patent bar stands a chance of complying with its duty to avoid overclaiming.

I. CLAIMING ANYTHING THAT THE PTO WILL ALLOW

This part outlines the basic process of getting a patent and it details the doctrinal features that limit claim scope for *issued* patents. It then describes the conventional wisdom regarding initial claim strategy for patent *applicants*. As shown, the general aim is to get as much real estate as possible. Broad claims are not offered; they must be asked for. Unless checked, there is an incentive to overclaim.

A. *The Process of Patent Procurement*

The life of a patent begins when an inventor conceives the solution to some technical problem. For lack of a less alliterative sentence, it all starts when an inventor invents an invention. That act of invention though does not provide any protection. To get exclusive rights, the inventor must apply for a patent by submitting a patent application to the Patent Office.

To prepare the patent application, the inventor often hires a patent attorney. As laid out in the patent statute, the bulk of the patent application is the specification.³¹ It is here that the inventor (often guided by the patent attorney) details both the invention itself as well as how to “make and use” the invention.³² After providing that detailed description of the invention, applicants are instructed to conclude by “particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.”³³ These are the patent claims. It is hard to overstate their importance. Most critically, claims in issued patents determine the scope

31. See 35 U.S.C. § 111(a) (2012).

32. *Id.* § 112(a).

33. *Id.* § 112(b).

of that patent's exclusive rights.³⁴ And of course patent applicants hope to achieve as broad claims as possible. Broad valid claims in the issued patent are the ultimate aim of a patent applicant.

B. Examination at the PTO and Doctrinal Limits on Claim Scope

To get such broad issued claims, the applicant's initial claims must survive examination by the PTO (and they must survive invalidity claims later in litigation). Once a patent application arrives at the Patent Office, examiners are assigned to study the application. Their main duty is determining which, if any, of the submitted claims constitute a patentable invention. If they do, then the PTO will allow those claims and an issued patent can ultimately emerge.³⁵ Patentability is determined by comparing the claimed subject matter against six main statutory requirements.³⁶ The claimed subject matter needs to be patentable subject matter,³⁷ useful,³⁸ new,³⁹ non-obvious,⁴⁰ and properly disclosed⁴¹ and properly claimed.⁴²

The requirements of patentable subject matter and utility can be seen as broad gatekeeping requirements. Utility simply asks whether the disclosed subject matter is useful.⁴³ The claimed invention needs to have an identified use. And patentable subject matter allows patents for "anything made by man under the sun" while prohibiting patents that cover "laws of nature, physical phenomena, and abstract ideas."⁴⁴ This latter requirement has grown in importance in the past few years.⁴⁵

The remaining patentability requirements can be classed into two distinct groups, one forward-looking and the other backward. As to the latter, a valid

34. See Oskar Liivak, *The Unresolved Ambiguity of Patent Claims*, 49 U.C. DAVIS L. REV. 1851, 1851 (2016).

35. And even if the initial claims do not meet the standard of a patentable invention, the applicant is given an opportunity to amend the claims to address whatever failing the patent examiner has raised. See 35 U.S.C. § 132(a) (2012).

36. See *id.* §§ 101–103, 112.

37. See *id.* § 101.

38. See *id.*

39. See *id.* § 102.

40. See *id.* § 103.

41. See *id.* § 112(a).

42. See *id.* § 112(b).

43. See *Brenner v. Manson*, 383 U.S. 519, 536 (1966) ("[A] patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion.").

44. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).

45. See *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014); *Mayo v. Prometheus*, 566 U.S. 66 (2012).

patent claim cannot cover anything that already exists. This is patent law's novelty requirement—a patentable invention is something new, something the public does not yet have. But novelty is not the only backward-looking hurdle. A patentable invention cannot be obvious in light of the prior art. Obviousness goes beyond novelty. If some claimed subject matter had not been known before in an absolute sense, but is only slightly different than what was already known then it is obvious and not patentable.⁴⁶

In contrast, the disclosure requirements limit how far into the future a claim can reach.⁴⁷ Assume a patent applicant discloses a specific embodiment of some machine that is both new and nonobvious. A claim surely can cover that specific embodiment. But can it cover more? Could it cover variants on that basic design? If so, how much more? These questions are the domain of the future-looking boundaries policed by patent law's disclosure requirements of written description and enablement. Both requirements compare the applicant's technological disclosure against the applicant's claims.⁴⁸ In general, with disclosure, an inventor can claim more.

The enablement requirement asks whether the patent disclosure “enable[s] a person of skill in the art to make and use” the claimed invention “without undue experimentation.”⁴⁹ Subject matter will be enabled (and therefore properly available to be claimed) if the patent's disclosure enables a person of skill to make and use that subject matter *if asked to make and use it*.⁵⁰ This last emphasis is important. Consider a patent that describes in detail apple pies and details how to make and use them. Assume that the patent's detailed description says nothing about related peach and cherry pies.⁵¹ Though those pies are not mentioned explicitly, the patent may well enable them. They are enabled as long as, if asked to make a peach or cherry pie, the patent teaches a person of skill to do so without undue experimentation.⁵² Based on a recipe

46. See *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 427 (2007) (outlining the Supreme Court's latest views on the bounds of the obviousness requirement).

47. See *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 113 (1853) (invalidating O'Reilly's broad claim for failure to comply with the disclosure requirements and commenting that “[i]f this claim can be maintained, it matters not by what process or machinery the result is accomplished. For aught that we now know, some future inventor, in the onward march of science, may discover a mode of writing or printing at a distance by means of the electric or galvanic current, without using any part of the process or combination set forth in the plaintiff's specification.”).

48. *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1241 (Fed. Cir. 2003) (citing *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993)).

49. *In re Wands*, 858 F.2d 731, 735 (Fed. Cir. 1988).

50. See Liivak, *supra* note 29, at 29–30.

51. A patent's detailed description is its specification minus its original claims.

52. Though not in the statutory language for § 112(a), the Federal Circuit has engrafted that language onto the enablement requirement. See *Wands*, 858 F.2d at 736–37.

for apple pie, bakers are generally enabled to make a whole set of related fruit pies (just replace the new fruit wherever apple was used previously).⁵³ Thus based on what was explicitly disclosed in the patent, the applicant can validly claim the subject matter that was enabled by the disclosure. This can often extend beyond the specific embodiment disclosed.

The written description requirement is distinct from enablement and is generally a stricter limit on claim scope.⁵⁴ Written description involves “an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art” and “[b]ased on that inquiry, the specification must . . . show that the inventor actually invented the invention claimed.”⁵⁵ Thus, rather than asking did the patent disclosure enable the claimed subject matter, written description asks whether the patent disclosure can prove that the applicant invented the claimed subject matter. There is a difference between these requirements. As opposed to enablement, written description does not involve the leading question, *if asked to* could a person of skill make and use the claimed subject matter.⁵⁶ Instead written description asks, whether a person of skill is directed to make and use the claimed subject matter after following the instructions of the patent disclosure. This is generally stricter than enablement and it limits claim scope to those embodiments that are disclosed in the patent. In other words, absent some broadening language, a specification that only describes an apple pie and how to make and use it, does not provide written description support for other pies even if that specification enables such other pies.

In addition to those four substantive limits on claim scope, there is a related requirement that mandates the minimum level of precision by which claims must be written. The statute mandates that claims delineate their boundaries “particularly” and “distinctly.”⁵⁷ Though for some time the Federal Circuit had been rather permissive with this indefiniteness requirement, invalidating claims under this provision only when they were not “amenable to construction” or “insolubly ambiguous.”⁵⁸ Recently the Supreme Court intervened and raised the bar for patent applicants. Now

53. See *In re DiLeone*, 436 F.2d 1404, 1405 n.1 (C.C.P.A. 1971) (“Consider the case where the [patent] discusses only compound A and contains no broadening language of any kind. This might very well enable one skilled in the art to make and use compounds B and C”); see also *Liivak*, *supra* note 29, at 14.

54. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1345 (Fed. Cir. 2010) (en banc).

55. *Id.* at 1351.

56. See *Liivak*, *supra* note 29, at 14.

57. 35 U.S.C. § 112(b) (2012).

58. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005), *abrogated by* *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014).

claims meet the indefiniteness requirement only if the claim delineates “the scope of the invention” with “reasonable certainty.”⁵⁹

C. Initial Claiming Strategy: Go Broad

These six statutory requirements are the primary regulators of claim scope.⁶⁰ The PTO polices them during patent examination. For an initial claim in an application to mature into an issued claim, the applicant must surmount all of these six patentability requirements.

In light of that, what is the conventional wisdom regarding claiming strategies? Do applicants claim only what they think the PTO will grant? Certainly initial claims that will surely be weeded out by the PTO are just a waste of time but what happens if applicants aren’t sure what will and what will not be allowed by the PTO? In that case, applicants must think more strategically and that is where overclaiming arises. Without a doubt patent applicants aim to get as much technological real estate as the PTO will grant.⁶¹ In other words, based on the prior art and based on the fullness of the applicant’s disclosure, patent attorneys aim to ensure that all available claim scope available ends up in the issued patent.

As a general rule, patent attorneys try to leave nothing on the table. Broad protection is “[a]n important, if not the most important, objective” for a patent attorney and her client.⁶² That goal is universally held.⁶³ And patent attorneys do not do this just to make clients happy. Failure to gain broad enough protection has been the source of multiple malpractice cases.⁶⁴

59. *Nautilus*, 134 S. Ct. at 2124.

60. Some would include statutory subject matter from 35 U.S.C. § 101 as a limit on claim scope. I generally agree with that characterization and I consider § 101 as closely related to the written description requirement of § 112. *See* Liivak, *supra* note 30, at 68–69.

61. MARTIN J. ADELMAN ET AL., *CASES AND MATERIALS ON PATENT LAW* 467 (3d ed. 2009) (“[A] skillful claims drafter seeks to write the broadest claim the PTO will allow”); ROBERT P. MERGES & JOHN F. DUFFY, *PATENT LAW AND POLICY* 27 (4th ed. 2007) (“The overall goal when drafting claims is to make them as broad as the Patent Office will allow.”); Chiang, *supra* note 5 **Error! Bookmark not defined.**, at 522 (“[P]atentees will draft claims to cover as much as they can possibly get away with.”).

62. Steven W. Lundberg, Gregory M. Stark & Ann M. McCrackin, *Crafting the Claims*, in *ELECTRONIC AND SOFTWARE PATENTS: LAW AND PRACTICE* 349, 385 (Steven W. Lundberg et al. eds., 3d ed. 2011) (“An important, if not the most important, objective in drafting claims is to obtain the broadest possible coverage.”).

63. *See e.g.*, ROBERT D. FISH, *STRATEGIC PATENTING* 145 (2007) (“Every patent attorney with whom I have ever discussed the issue said that he tries to claim as broadly as possible.”).

64. *See* *Minkin v. Gibbons, P.C.*, 680 F.3d 1341, 1345 (Fed. Cir. 2012) (“In mid-2007, however, Minkin learned that Danaher had successfully designed around the constraints of the ‘363 patent to make and sell its own version of the ERP. Minkin, recognizing that the Danaher

Of course, the doctrinal hurdles of novelty, nonobviousness, and the disclosure requirements (and even statutory subject matter)⁶⁵ should police any overclaiming by applicants. But failure to consistently enforce these “[leads] to a large number of patentees claiming to own something much broader than what they actually contributed to the world.”⁶⁶ One resolution is, of course, to strengthen and to better police these requirements.

Though plausible on first blush, those suggestions all have a common weakness: it is up to the PTO and the courts to enforce these requirements.⁶⁷ Tun-Jen Chiang emphasizes this dynamic: “Once we consider a rational, self-interested patentee’s actual incentives, it becomes obvious that . . . patentees will draft claims to cover as much as they can possibly get away with.”⁶⁸ Similarly, Sean Seymore laments “patentees intentionally draft ambiguous claims in an effort to expand their patent rights as far as possible.”⁶⁹

Indeed, this general strategy is seen in numerous guides for claim drafting. The first step necessarily begins with broad initial claims. If you want a broad claim, you need to ask for one. The PTO will not suggest one for you. Patent attorneys are instructed to “[a]im broadly, to capture as much scope as possible, knowing it is likely the claims will be amended in light of cited art

tool was non-infringing as it avoided the 3:1 ratio for the pivots, sued Gibbons for patent prosecution malpractice in state court.”); *Byrne v. Wood, Herron & Evans, LLP*, 450 F. App’x 956, 957 (Fed. Cir. 2011), *vacated*, 568 U.S. 1190 (2013) (“This is a legal malpractice action in which Stephen Byrne alleges that WHE was negligent in failing to secure broader patent protection for his invention, which relates to an improvement to a grass and weed trimmer used in landscaping. Byrne alleges that, as a result of WHE’s negligence, he was unsuccessful in a patent infringement lawsuit against Black & Decker Corporation and related entities.”); *Warren v. Eckert Seamans Cherin & Mellott*, 45 Pa. D. & C.4th 75, 77 (Ct. C.P. 2000) (“This is a legal malpractice case in which plaintiffs seek damages in excess of \$12,000,000 because of defendants’ alleged failure to obtain a patent of appropriate breadth and scope.”); *see also, e.g.*, DAVID HRICK & MERCEDES MEYER, *PATENT ETHICS: PROSECUTION* 1–5 (2009).

65. *See* Mark A. Lemley et al., *Life After Bilski*, 63 STAN. L. REV. 1315, 1315 (2011) (“[T]he rule against patenting abstract ideas is an effort to prevent inventors from claiming their ideas too broadly.”); Oskar Liivak, *Establishing an Island of Patent Sanity*, 78 BROOK. L. REV. 1335, 1372 (2013).

66. DAN L. BURK & MARK A. LEMLEY, *THE PATENT CRISIS AND HOW THE COURTS CAN SOLVE IT* 160 (2009).

67. *See* Ryan Davis, *Attys Have Key Role in Ensuring Patent Quality, Experts Say*, LAW360 (Apr. 27, 2016, 8:38 PM), <http://www.law360.com/articles/786202/attys-have-key-role-in-ensuring-patent-quality-experts-say> (arguing for a role for patent applicants in the process of improving patent quality).

68. Chiang, *supra* note 5, at 522.

69. Sean B. Seymore, *The Teaching Function of Patents*, 85 NOTRE DAME L. REV. 621, 638 (2010).

during patent prosecution.”⁷⁰ As put by a treatise of patent ethics, “absent contrary instructions from a client, a practitioner should seek for a client the broadest valid claims available.”⁷¹

There is a scorched earth feel to the strategy:

Do not stop until you have the broadest available claims of all available types. Claim the widgets your client sells, the widgets your client’s competitor sells, the process your client uses to make the widgets, the sub-widgets the client assembles to make complete widgets, the process in which your client’s customers use the widgets to make widget subassemblies, the widget subassemblies, etc.⁷²

Ultimately “the attorney searches the field and the prior art, and then tries to claim everything that is available to be claimed.”⁷³ Notably the only prudential limits to these initial claims, is to avoid knowingly submitting claims that cover the prior art.⁷⁴

This worry about prior art primarily focuses only on novelty and obviousness—the patentability requirements that can be classed as rearward-looking. The forward-looking disclosure requirements do not seem to matter in this initial claim calculus. The patent bar is aware of its duties to avoid claiming the prior art but they seem unaware of similar duties toward claims to the future.⁷⁵ The focus of the disclosure requirements, the invention—the thing created by the inventor—does not figure prominently in these initial claiming strategies.⁷⁶ In fact, some counsel ignore the invention

70. Christopher Hall, *Testing a Patent Application Claim*, WOMBLE CARLYLE BLOGS: HIGH-TECH PAT. AGENT (Mar. 9, 2015, 6:21 PM), <http://siliconvalleypatent.blogspot.com/2015/03/testing-patent-application-claim.html>.

71. HRICK & MEYER, *supra* note 64, at 81.

72. George F. Wheeler, *Creative Claim Drafting: Claim Drafting Strategies, Specification Preparation, and Prosecution Tactics*, 3 J. MARSHALL REV. INTELL. PROP. L. 34, 53 (2003).

73. FISH, *supra* note 63, at 147.

74. Robert R. Sachs, *Claim Space: A Tool for Defining Claim Strategy*, FENWICK & WEST LLP, https://www.fenwick.com/fenwickdocuments/claim_space.pdf (last visited Dec. 24, 2017) (“‘Draft the broadest method and system claims that you can.’ This is the advice that most patent practitioners start out with, and more often than not, end up using by default as the basis of their entire claim drafting strategy. This approach essentially guides the practitioner to craft claims limited only by the prior art.”).

75. Many inequitable conduct claims are founded on allegations that the patent applicant failed her duty to properly disclose all prior art known to the applicant at the time of filing. *See* 37 C.F.R. § 1.56 (2017).

76. Some patent attorneys may justify this view by citing the comments of Judge Giles S. Rich who stated, “[W]hen all is said and done and the court has spoken, what is it that the claims point out? What the inventors invented? Or the scope of the invention? Not likely! It is the claims that have determined what infringes the patentee’s right to exclude, construed in the light of the

altogether: “What the inventor thinks he invented is almost irrelevant, because it becomes a very minor aspect of the claimed subject matter.”⁷⁷ As described below, incautious and overly aggressive application of such strategies is precisely what runs afoul of the prohibitions on overclaiming.

D. Overclaiming and Pure Functional Claiming

1. Defining Overclaiming

As suggested in the previous section the patent applicant and her attorneys have strong incentives to submit broad initial claims to the PTO. But breadth of claims (measured in an absolute sense) is not necessarily the overclaiming that is the focus here. Overclaiming is a relational measure. It measures what has been disclosed in the patent against what has been claimed. Overclaiming as used here means claiming beyond what the applicant invented and disclosed in the application. If an invention is broadly disclosed with a broad set of variations, then a broad claim covering those broad variations is not problematic. The applicant invented broadly and is claiming accordingly.

As used here overclaiming is defined as claims that reach beyond what was invented and disclosed by the applicant. Put another way, overclaiming is defined as claims that *should* run afoul of patent law’s disclosure requirements, in particular the written description requirement.⁷⁸ As mentioned above, the written description “test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art. Based on that inquiry, the specification must . . . show that the inventor actually invented the invention claimed.”⁷⁹ This is an inherently relational test that compares what the specification discloses (and therefore subject matter that the applicant can prove to have invented) against what the applicant claims to have invented. Overclaiming

specification . . . [T]he claims are the measure of the patentee’s right to exclude rather than the measure of what was invented.” Giles Rich, *Foreword* to DONALD S. CHISUM ET AL., *PRINCIPLES OF PATENT LAW*, at vi (2d ed. 2001) (italics omitted). In other work I have emphasized that this quote and those like it are being used to justify what claims are meant to communicate. That is some have taken such comments as defining the interpretive meaning of claims. I think this is a mistake. The comments are instead describing the legal effect of claims once they have been processed by the PTO. Issued claims do define the “patentable invention” and therefore do define the rights of exclusion. *See* Liivak, *supra* note 34, at 1854. But initial claims are best understood as a statement by the applicant that represents what they have invented.

77. FISH, *supra* note 63, at 147.

78. *See supra* text accompanying notes 54–56 (discussing the written description requirement).

79. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc).

is the act of filing initial claims that extend beyond what was invented. Accordingly, if the written description requirement and indeed the whole of the disclosure requirements were applied strictly and consistently then overclaiming would never result in allowed patent claims. But this doesn't always happen and when such a claim slips through, the patent applicant gets a windfall. As a shorthand, willful overclaiming that will be the focus of the criminal sanctions is the willful submission of patent claims that violate patent law's written description requirement.

2. Pure Functional Claims and Overclaiming

At first glance, it might appear that overclaiming is rather easy: just claim more than you have invented. For claims that are introduced during prosecution this is largely true. Overclaiming can happen with any type of broad claim.⁸⁰ For original claims, meaning those claims that accompany the initial patent application, the story turns out to be a bit more complicated and more interesting.

Original claims are part of the specification⁸¹ and can provide written description support for themselves.⁸² In other words, the claims themselves form part of the specification and can be used to prove that the applicant did in fact invent the subject matter claimed. This is particularly important when an applicant claims using structural language. Structural language of the claim itself can sometimes satisfy the written description requirement. The structural language is telling us what the invention *is*. And that act of describing it also provides proof that they in fact invented that subject matter.⁸³ In other words, initial claims that use structural language are not usually the type of overclaiming described here. For example, imagine a patent that discloses some machine with two components that are held together with machine screws. Assume that this particular embodiment is thoroughly detailed in the patent application. That disclosure can corroborate that the applicant invented the particular embodiment using machine screws and thus a claim covering only that embodiment would be perfectly legitimate. Now imagine the applicant also includes a broader initial claim

80. Yet in theory such claims should never be allowed as they, by definition, are introducing new matter into the specification.

81. 35 U.S.C. § 112(b) (2012) (defining the role of claims as the conclusion (and therefore part of) the specification).

82. *Ariad*, 598 F.3d at 1349.

83. Even here though an applicant can overclaim. Even where an applicant can delineate the structural elements of the subject matter, if they have not disclosed how to make it, then such a claim is overclaiming.

covering the same machine but the claim reads “wherein the [two components] are held together with welds, adhesives, or mechanical fasteners.” Such a claim is broader than the preferred embodiment yet it is perfectly valid under written description. As that initial claim is part of the specification, the broad claim provides its own support. It can indeed corroborate that the applicant had conceived of embodiments of the machine that use a variety of connecting methods (i.e. welds, adhesives, or fasteners). In short, use of structural language in original claims will generally not lead to overclaiming as the claim itself provides the needed support for the claimed subject matter.⁸⁴

But not all claims utilize structural language. Since the 1952 Patent Act functional language has been explicitly allowed in claims.⁸⁵ And where functional language is used then the specter of overclaiming emerges. Generally functional language draws a claim boundary not by describing what an invention is, but instead by describing what the invention does.⁸⁶ Importantly if given its plain meaning such a claim covers any technology that accomplished the claimed function. It is evident that such claims can be very broad and very valuable. But even here not all functional language leads to overclaiming.

The type of functional claims that are explicitly allowed by statute are largely immune to the pitfalls of overclaiming.⁸⁷ So-called means plus function claiming of 35 U.S.C. § 112(f) is, by statute, construed to cover less than its plain meaning. It only covers the corresponding subject matter that is disclosed in the specification.⁸⁸ In an important sense § 112(f) provides a safe

84. Though structurally defined claim elements generally can corroborate that the applicant had conceived of that particular structural element, it is conceivable for original structural claim elements to still run afoul of § 112(a) where the rest of the specification does not teach either how to make or how to use the embodiment using those structural elements. This is likely to be rare but it deserves mention nonetheless. In any event, whenever a claim extends beyond subject matter for which the specification can provide proof of conception then the applicant is overclaiming.

85. See 3 DONALD S. CHISUM, CHISUM ON PATENTS 8-17 to -19 (Matthew Bender ed., Matthew Bender Elite Prods. 2016) (1978) (giving the history of functional claiming).

86. See JANICE M. MUELLER, PATENT LAW 87 (3d ed. 2009) (describing functional claiming).

87. I say largely because the statute instructs such means plus function claims to be understood as “cover[ing] the corresponding structure, material, or acts described in the specification and equivalents thereof.” The caveat to § 112(f) as a safe harbor is that modern patent law has a curious understanding of “equivalents thereof” for § 112(f). Because of that understanding it is still possible (in fact it is likely) that a claim that aims to utilize the protections of § 112(f) will be construed to cover subject matter that the applicant did not necessarily invent.

88. See *In re Hyatt*, 708 F.2d 712, 713–14 (Fed. Cir. 1983).

harbor against overclaiming for patent applicants.⁸⁹ Though using functional language, the safe harbor ensures that the scope of that claim never exceeds what was disclosed in the specification. Likely because of its narrow coverage, this particular style of functional claiming has fallen out of favor.⁹⁰

Yet not all functional language falls under the aegis of § 112(f). Such claims are generally seen as unobjectionable per se.⁹¹ Functional language that falls outside § 112(f) is construed as it is written and such claims can quite easily overclaim. These “pure” functional claims are therefore a main focus of this article. Such claims are understood to cover any and all subject matter that perform the claimed function. As a general matter, patent law focuses on the invention—the particular *means* for accomplishing some useful ends. By using *structural* language in a claim, the applicant delineates by describing what the claimed invention *is*. Pure functional language is different. It circumscribes a boundary by claiming the *ends* performed or accomplished rather than by specifying the actual *means* for accomplishing some ends. Such language covers all means that accomplish that result. It is here that a patent applicant can easily overclaim. But note that patent applicants might really want such claims as they can effectively block large swaths of competition by ensnaring any substitute technology that accomplishes the stated function. This focus on the ends rather than the means should give us pause. After all, as the Supreme Court stated, “a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion.”⁹² Not coincidentally such true functional claims are prevalent among patents litigated by patent assertion entities.⁹³

Recent cases have addressed some of these overbreadth concerns and have tightened broad pure functional claiming. Recently in *Williamson v. Citrix*, the Court of Appeals for the Federal Circuit en banc revised the standards for determining when a functional claim limitation should be understood as a

89. Though perhaps safe from claiming more than was disclosed, if no structure is disclosed in the specification then means plus function claims are struck down for indefiniteness under §112(b). See *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (en banc).

90. Lemley, *supra* note 21, at 918–19 (“In short, while the 1952 Act theoretically restored functional claiming, the option it offered was not really functional claiming at all and has not been viewed as an attractive option for those seeking broad patent claims.”); see also Crouch, *supra* note 21.

91. See CHISUM, *supra* note 85, at 8-335 (“Under the better view today, functional language in claims is not objectionable per se so long as it avoids these problems of undue breadth and vagueness.”).

92. *Brenner v. Manson*, 383 U.S. 519, 536 (1966).

93. Colleen V. Chien & Aashish R. Karkhanis, *Functional Claiming and Software Patents* 40 (Santa Clara Univ. Sch. of Law, Working Paper No. 06-13, 2013), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2215867.

“means-plus-function” limitation of the § 112(f) safe harbor.⁹⁴ The court rejected the former “strong” presumption that claim limitations that did not explicitly use the “means” syntax would not be construed as a § 112(f) limitation.⁹⁵ The presumption remains but it is no longer a “strong” one. The result is that now it is somewhat easier to convince courts to construe functional claim language narrowly.⁹⁶

In addition, the Federal Circuit has been strengthening the written description requirement and especially its application to pure functional claims. Indeed, the written description requirement reinforced by the Federal Circuit in *Ariad v. Lilly* is one of the most important tools for invalidating these overly broad functional claims.⁹⁷ And indeed, the Federal Circuit has emphasized that functional claims are inherently suspect.⁹⁸ The main rationale for invalidity is that use of functional claiming leads directly to overclaiming. As put by the Federal Circuit in *Fiers v. Revel*, such claims improperly “attempt to preempt the future before it has arrived.”⁹⁹

Yet even with these recent court cases that somewhat curb the use of true functional claims, they remain an incredibly powerful tool for patent applicants. They can cover vast swaths of technological real estate very easily. And because they claim not by delineating how to accomplish some end but rather by delineating anything that accomplishes that end, such claims are seen as uniquely capable of capturing after arising technology and later developed competition. Because of that, applicants eagerly seek out these claims. But as described by the Federal Circuit, those claims are also

94. *Williamson*, 792 F.3d at 1348–49.

95. *Id.* at 1349.

96. The presumption is overcome when “the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Williamson*, 792 F.3d at 1348 (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

97. *Abbvie Deutschland GmbH & Co. v. Janssen Biotech, Inc.*, 759 F.3d 1285, 1300 (Fed. Cir. 2014) (“The written description requirement guards against claims that ‘merely recite a description of the problem to be solved while claiming all solutions to it and . . . cover any compound later actually invented and determined to fall within the claim’s functional boundaries.’” (quoting *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1353 (Fed. Cir. 2010) (en banc))).

98. *Id.* at 1301 (“Functionally defined genus claims can be inherently vulnerable to invalidity challenge for lack of written description support.”).

99. *Fiers v. Revel*, 984 F.2d 1164, 1171 (Fed. Cir. 1993). For some types of functional claims, namely single means claims, the courts have been even more forceful in finding such claims invalid. See *In re Hyatt*, 708 F.2d 712, 714 (Fed. Cir. 1983) (Single means claims run afoul of § 112 because such claims “cover[] every conceivable means for achieving the stated result, while the specification discloses at most only those means known to the inventor.” (citing *O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 112 (1853))).

“inherently vulnerable” to invalidity under the written description requirement.¹⁰⁰

The next part outlines another inherent problem for such claims. Though claims with pure functional language might be desirable for their reach, applicants that willfully and knowingly file such claims are likely committing a crime. By covering every means for solving some problem rather than limiting themselves to the particular means that they conceived, true functional claims are likely to exceed what was invented by the applicant. Willfully including such claims inherently leads to trouble with the patent oath.

II. CRIMINALITY OF OVERCLAIMING

This part shows that there is an unappreciated fact that should curb the practice of initial overclaiming: overclaiming is criminal. The criminality of overclaiming is relatively straightforward. For quite some time the patent statute via 35 U.S.C. § 5 has already emphasized that a willful false statement to the PTO can be prosecuted under 18 U.S.C. § 1001.¹⁰¹ After the AIA, this is now explicitly emphasized for patent applicants when signing the required oath.¹⁰² § 1001 and its prohibition of “making false statements” to the government is well known and well used in the context of general corporate and white-collar crime.¹⁰³ It broadly prohibits “knowingly and willfully” making any “materially false statement[s] or representation[s]” to any branch of the United States government.¹⁰⁴ The courts have generally defined five elements for a conviction under § 1001. A person commits the crime when he or she makes a false and material statement or representation to a federal agency knowingly and willfully.¹⁰⁵ The central issue is whether a patent applicant that knowingly overclaims is knowingly making a false statement to the PTO via the oath. This part walks through the relevant statutory provisions to show how patent law makes overclaiming a crime.

100. *Abbvie*, 759 F.3d at 1301.

101. 35 U.S.C. § 25 (2012).

102. *Id.* § 115(i) (requiring applicants filing the oath to explicitly acknowledge the fact “that any willful false statement made in such declaration or statement is punishable under § 1001 of title 18 by fine or imprisonment of not more than 5 years, or both”).

103. BRICKEY, *supra* note 16, at 199 (devoting an entire chapter of a casebook to 18 U.S.C. § 1001).

104. 18 U.S.C. § 1001 (2012).

105. TAX DIV., U.S. DEP’T OF JUSTICE, CRIMINAL TAX MANUAL § 24.01, at 1–2 (2017), <https://www.justice.gov/sites/default/files/tax/legacy/2015/03/27/CTM%20Chapter%2024.pdf>.

A. False Oath Because of Misjoinder or Non-joinder of True Inventors

Nearly forty years ago patent scholars provided a comprehensive account of criminal liability and other penalties for fraud by patent applicants.¹⁰⁶ That work identified that false statements regarding inventorship as one basis for criminal prosecution.¹⁰⁷ Though not common, prosecutions have occurred. In *Patterson v. United States*, the Ninth Circuit Court of Appeals affirmed a perjury conviction for a patent applicant that had made a false oath as to inventorship.¹⁰⁸ In *Meehan v. United States*, the Ninth Circuit affirmed two convictions for perjury where the defendants had falsely testified as to the origin of a drawing that was used to prove inventorship.¹⁰⁹ In *Mas v. United States*, the D.C. Circuit affirmed a conviction for submission of “false, fraudulent and fictitious statements” during the course of a patent interference before the PTO.¹¹⁰ And in *United States v. Markham*, the Court of Appeals for the Fifth Circuit affirmed the conviction of a defendant for filing a false oath that intentionally misstated the identities of the original inventors.¹¹¹

B. False Oath via Overclaiming

Rather than false statements as to *who* invented, this article focuses on another mode by which an oath can be false. Applicants can make a false statement to the government by claiming to have invented subject matter that they did not in fact invent. In order to show that an applicant’s oath can be false for overclaiming, care must be given to the exact wording of the patent oath. In order to prove falsity (and especially when that falsity is used as the basis for a criminal prosecution) we must look carefully at the exact representations that applicants are making in their oaths. The America Invents Act (AIA) modified the statutory language governing the inventor’s oath and thus the following analysis proceeds by separately considering the language before and after the AIA. Though there are differences in language

106. See generally, e.g., Kayton et al., *supra* note 18. In addition to the criminal liability, that work further outlined that the false statements could be the basis for a host of other penalties including inequitable conduct, antitrust claims, attorney’s fees in litigation, and attorney sanctions and disbarment. *Id.* at 2–86.

107. *Id.* at 78 (“An assertion that the defendant was the sole inventor, when in reality he purloined the invention from another, would be in this category.”).

108. *Patterson v. United States*, 202 F. 208, 209–12 (9th Cir. 1913).

109. *Meehan v. United States*, 70 F.2d 857, 858 (9th Cir. 1934).

110. *Mas v. United States*, 151 F.2d 32, 32 (D.C. Cir. 1945).

111. *United States v. Markham*, 537 F.2d 187, 193 (5th Cir. 1976).

and analysis, the result is the same: willfully claiming more than was invented leads to making a willfully false statement to the PTO.

1. Overclaiming and the Oath After the AIA

All patent applications filed after September 16, 2012 are bound by the new requirements of the AIA.¹¹² The statute requires applicants to swear to “be the original inventor or an original joint inventor of *a* claimed invention in the application.”¹¹³ At first glance this requirement does not seem to impact overclaiming very much. As long as the applicant can truthfully claim to have invented *an* invention claimed by the application then it appears that signing such an oath will not be a false statement. In other words, if I have invented some part of the things claimed in the application, and even if other claims extend beyond that, then my signed oath does not appear to be false. Having invented any part of the claimed subject matter appears to be enough.¹¹⁴

But this initial impression is incorrect. Closer inspection of § 115(a) reveals other constraints. In particular, a patent application must also “include . . . the name of the inventor for any invention claimed in the application” and each of these listed inventors must similarly sign an oath.¹¹⁵ Taken together these provisions require that all the claimed subject matter must have been invented by at least one of the listed inventors. In other words, there can be no claimed subject matter that is not sworn to be part of at least one inventor’s original conception.

For instance, consider the simplest example where there is only one inventor listed on the application. What statement is that applicant making by filing the oath? In filing the application and filing the oath, this sole inventor is swearing not only to be an original inventor of *a* claimed invention found in the application but is in fact swearing to be the original inventor of *all* the claimed subject matter because no other inventor is identified. And this logic extends to more complicated examples with multiple true inventors. Even in those more complicated cases, no claimed subject matter can be filed without being the original creation of at least one of the listed inventors. In short, filing the oath includes the representation that the listed inventors swear to

112. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 35, 125 Stat. 284, 341 (2011) (codified as amended at 35 U.S.C. § 115 (2012)).

113. 35 U.S.C. § 115(b)(2) (2012) (emphasis added).

114. *See id.* § 100(j) (defining the “claimed invention” as “the subject matter defined by a claim in a patent or an application for a patent”).

115. *Id.* § 115(a).

have invented *all* the subject matter claimed in the application.¹¹⁶ As a consequence, where applicants overclaim, they are filing a false statement with the PTO by filing that oath.

2. Overclaiming and the Oath Before the AIA

Prior to the AIA, the oath differed in exact wording but the arguments for falsity of an overclaiming oath differed though the results are the same.¹¹⁷ The pre-AIA statutory language required that an applicant “make oath that he believes himself to be the original and first inventor of the process, machine, manufacture, or composition of matter, or improvement thereof, for which he solicits a patent.”¹¹⁸ By signing the oath, exactly what kind of representation was the applicant making? Surely the applicant was representing that he invented (i.e. conceived himself) the process, machine, manufacture, or composition for which he solicits a patent. But what does that exactly mean in relation to the claimed subject matter?

The only reasonable interpretation of the thing (or things) “for which [the applicant] solicits a patent” is the claimed subject matter. In other words, prior to the AIA, applicants were swearing to have invented all of the claimed subject matter. This interpretation of the pre-AIA oath finds support in the legislative history for the AIA. Commenting on the then in force provisions, the House Reports describe the pre-AIA oath as “requir[ing] an inventor (or if relevant, joint inventors) to execute an oath stating that he believes himself to be an original inventor of the claimed invention.”¹¹⁹ In other words, the thing for which the applicant “solicits a patent” is synonymous with the

116. Note that the new oath does not require the inventors to swear to be the “first” inventors of the claimed subject matter as the pre-AIA oath required. There is an important distinction between being an original inventor and a first inventor. Originality simply requires that the applicant conceived of the subject matter without deriving from another. A first inventor is not only original but is also first in time. One can be an original inventor (in fact there can be multiple original inventors) without being the first inventor.

117. As the statute of limitations for 18 U.S.C. § 1001 is five years from the time the false statement was made and as the AIA went into effect on September 15, 2012, this section describing false oaths from pre-AIA applications is soon going to be irrelevant for § 1001 prosecutions. Despite that, the alternative non-criminal avenues for pursuing false statements to the PTO that are described in Part II are still nonetheless available.

118. 35 U.S.C. § 115 (2006), *amended by* 35 U.S.C. § 115 (2012 & Supp. 2016).

119. H.R. REP. NO. 112-98, at 43 (2011); H.R. REP. NO. 110-314, at 24 (2007) (“[E]very inventor must sign an oath as part of the patent application stating that the inventor believes he or she is the true inventor of the invention claimed in the application.”).

“claimed subject matter.” As with the post-AIA oath, an applicant that knowingly overclaims is knowingly filing a false oath.¹²⁰

Prior to the AIA when the United States was not yet a first to file patent system, the oath also differed slightly in another aspect. Applicants did not just swear to be the “original” inventor. They also swore to be (at least to their knowledge) the “first” inventor.¹²¹ Being first and being original address two related but distinct issues.¹²² Swearing to be an original inventor just requires that the applicant conceived of the subject matter themselves rather than having derived the subject matter from someone or somewhere else (independent of others conceiving of it first). In contrast, swearing to be the first inventor means that the inventor believes they are the first to have conceived of the claimed subject matter. The upshot is that, prior to the AIA, an oath could be false in two different overclaiming scenarios. First, an applicant that claimed beyond what the applicant actually conceived would be falsely stating that he was the *original* inventor of the claimed subject matter. Second, even if the applicant was an original inventor, if the applicant was aware that someone else invented before him, and he still filed his applicant and oath (and even disclosed the relevant prior art), then he would be making a criminally false oath because he knew he was not the *first* inventor of some claimed subject matter. As mentioned above, the patent bar does seem to be aware of their duties to avoid claiming prior art, but this appears to derive from 37 C.F.R. § 1.56 rather than concerns about a false oath. As the AIA moved the United States to a first to file (rather than first to invent) system, the amendments removed the part of oath that references being the “first” inventor. In any event, though applicants no longer swear to be the first inventor, before and after the AIA inventors are stating that they are the original inventors of all the claimed subject matter.

C. Overclaiming and 18 U.S.C. § 1001

As the above sections showed, overclaiming forces patent applicants to file a false patent oath. That a statement is false alone does not make for a

120. Admittedly the argument here requires this extra step and as such the interpretation is more contestable relative to the arguments post-AIA.

121. Because a primary goal of the AIA was to move the United States to a first-to-file system, rather than a first-to-invent, inventors no longer need to be the first to invent. Now they need to be an original inventor and the first to arrive at the Patent Office.

122. See *Pennock v. Dialogue*, 27 U.S. (2 Pet.) 1, 23 (1829) (noting the difference between novelty and originality is that “if known or used before his supposed discovery [the inventor] is not the first, although he may be a true inventor” (italics omitted)).

violation of § 1001. It is worth working through the other elements of a § 1001 case to see how a false oath from overclaiming fits. All of the elements are relatively easy to establish for the case of overclaiming. First, the previous section focused on falsity of the statement due to overclaiming—namely claiming more than they can prove to have invented. An oath attached to an application with such claims is false. What remains is that the false statement must be “material” and made “knowingly and willfully.”

Based on the importance of claims—even initial claims—the false oath is material and is being made to a federal agency, the PTO.¹²³ As to materiality, the courts simply require that the false statement has “a natural tendency to influence” the agency, in this case, the PTO. As claims are central to the entire patent endeavor, an overbroad claim and an oath that the applicant has invented that broadly surely influence the PTO to first examine the overbroad claims and making such an initial claim is a necessary step toward allowing those claims to issue.

This leaves consideration of “knowingly and willfully.” As to the required mens rea of this crime, the Department of Justice’s Criminal Resource Manual states that “[t]he term “willfully” means no more than that the forbidden act was done deliberately and with knowledge, and does not require proof of evil intent.”¹²⁴ The statement must be made with the intent to convince the agency that it is true but that intent need not rise to the level of an intent to defraud.¹²⁵ Patent applicants are certainly aiming to convince the PTO of the truth of their oath and its related claims. Where a patent applicant submits claims they are certainly trying to get exclusive rights commensurate with those claims. The statute gives patentees rights only to their “patented invention.”¹²⁶ Patent applicants intend to convince the PTO that their “patentable invention” extends to and includes all that they submit as initial claims. If the applicant has read and understood the claims, then they

123. *Neder v. United States*, 527 U.S. 1, 16 (1999) (quoting *Kungys v. United States*, 485 U.S. 759, 770 (1988)).

124. U.S. DEP’T OF JUSTICE, U.S. ATTORNEYS’ MANUAL: CRIMINAL RESOURCE MANUAL § 910 (1997), <http://www.justice.gov/usam/criminal-resource-manual-910-knowingly-and-willfully> (citing *McClanahan v. United States*, 230 F.2d 919, 924 (5th Cir. 1955), *cert. denied*, 352 U.S. 824 (1956); *McBride v. United States*, 225 F.2d 249, 255 (5th Cir. 1955), *cert. denied*, 350 U.S. 934 (1956)).

125. *Id.* (“The statement must have been made with an intent to deceive, a design to induce belief in the falsity or to mislead, but § 1001 does not require an intent to defraud—that is, the intent to deprive someone of something by means of deceit.” (quoting *United States v. Lichenstein*, 610 F.2d 1272, 1276–77 (5th Cir. 1980), *cert. denied*, 447 U.S. 907 (1980))).

126. 35 U.S.C. § 271 (2012).

certainly are knowingly and willfully trying to convince the PTO that the oath is true.

Perhaps most interestingly, applicants cannot escape by pleading ignorance of the claims, “[r]eckless disregard of whether a statement is true, or a conscious effort to avoid learning the truth, can be construed as acting ‘knowingly.’”¹²⁷ In other words, an applicant may not be able to dodge a criminal overclaiming charge by arguing that the patent attorney wrote the claims and that the applicant did not take time to read them. Also interestingly, the courts have made clear that corporations can themselves be convicted of violating § 1001.¹²⁸

Though all of these prongs are rather easy to establish for the overclaiming case, there are safeguards for applicants that are worth noting. The burden of proving falsity rests with the government.¹²⁹ And ambiguities in the allegedly false statement (for example, the factual question of whether the applicant really claimed more than they invented) will be interpreted in favor of the applicant.¹³⁰ And lastly, the statute of limitations for violations of § 1001 is limited to five years from the time the false statement is made.¹³¹

III. POLICY: OVERCLAIMING IS STEALING

The doctrinal discussion above has stressed that overclaiming is no different than claiming an invention that was derived from another. The oath is false and punishable if the invention was derived from another as well as when the claims exceed what was in fact invented. This part highlights the

127. U.S. DEP’T OF JUSTICE, *supra* note 124, § 910 (citing *United States v. Evans*, 559 F.2d 244, 246 (5th Cir. 1977), *cert. denied*, 434 U.S. 1015 (1978)).

128. *Id.* § 917, <https://www.justice.gov/usam/criminal-resource-manual-917-corporate-crimes> (“It is well settled that a corporation may be convicted for 18 U.S.C. § 1001 violations. See *New York Central v. H.R.R. Co.*, 212 U.S. 481, 492 (1909) *aff’d*, 212 U.S. 500 (1909); *United States v. Gold*, 743 F.2d 800, 823 (11th Cir. 1984), *cert. denied*, 469 U.S. 1217, (1985); *United States v. Cincotta*, 689 F.2d 238 (1st Cir.), *cert. denied*, 459 U.S. 991 (1982); *United States v. DeMauro*, 581 F.2d 50, 54 & n.3 (2d Cir. 1978).”).

129. *Id.* § 912, <https://www.justice.gov/usam/criminal-resource-manual-912-falsity> (“Section 1001 of Title 18, United States Code, requires that the statement or representation actually be false, and the government has the burden of establishing the alleged falsity of the statement.”).

130. *Id.* (“But if a defendant’s statement (or the government’s question or form requiring an answer) is ambiguous, it is incumbent upon the government to negate any reasonable interpretation that could make the defendant’s statement factually correct. See *United States v. Anderson*, 579 F.2d 455 (8th Cir.), *cert. denied*, 439 U.S. 980 (1978); *United States v. Race*, 632 F.2d 1114 (4th Cir. 1980); *United States v. Migliaccio*, 34 F.3d 1517 (10th Cir. 1994) (involving § 1341).”).

131. 18 U.S.C. § 3282 (2012).

policy side of that argument. Copying an invention from another and then filing a patent for it is generally understood as reprehensible and indeed the existing criminal cases for false oaths have focused on such cases of derivation. Such stealing can lead to multiple injustices. First, the thief gets a patent and is able to gain the benefits of the patent. The rewards of the exclusive rights go to the thief. Second, by being first to patent the invention, the thief also prevents the true inventor from getting her rightfully earned patent (unless the derivation is properly aired and remedied). Lastly, not only does the true inventor miss out on the gains of a patent but also the thief could enforce the patent against the true inventor. The thief could use the exclusive rights of the patent to prevent the true inventor from ever making, using or selling her invention.¹³² All these concerns reinforce the notion that patent applicants that file applications on stolen inventions should not benefit from their thefts.

In the case of overclaiming, these same injustices are present. At first, it appears less like a clear case of theft. In a case of overclaiming truly novel subject matter, there is no derivation from another *at the time of filing*. At the time of filing it does not appear that the overclaiming is stealing from anyone but careful consideration reveals little difference. The stealing does not happen at the time of filing; rather, the injustice arises later when someone else ultimately does invent the subject matter claimed that had been overclaimed. When that occurs the situation closely resembles a classic case of derivation. A non-inventor is getting exclusive rights over an invention that was not original to that non-inventor. The later true inventor cannot make, use, or sell her invention without permission from the overclaimer. Furthermore, there is a chance that the later true inventor will not be able to patent their true invention at all depending on the role the earlier overclaimed patent plays as prior art. The later patent may not issue at all depending on the earlier patent. In short, if derivation is condemned, as most seem to agree then so should overclaiming.

Outside these equitable concerns, the criminality of overclaiming can be further justified on the normative grounds of institutional design. The PTO has a tough job especially if they are to shoulder the entire burden of picking proper from improper claims. Inventors invent when they conceive the invention—this is largely a mental achievement. Why would we force the PTO to shoulder sorting out what was invented when, instead, a criminal sanction places the duty on the party with the best information regarding what

132. The only societal benefit of such derivation and patenting is that, when the derived patent does expire, the public will be able to freely use the patent. Though good for society, that benefit is of little solace to the true inventor.

was in fact invented. In this sense, the criminal sanctions are seen as an information forcing penalty rule.¹³³

IV. ENFORCEMENT

Though a criminal prosecution by the Department of Justice is the most obvious enforcement mechanism for overclaiming, there are other avenues. These include *Walker Process* antitrust claims, the defense of inequitable conduct, and the award of attorney's fees in litigation. This part discusses the details of these various enforcement mechanisms.

A. Criminal Cases from the DOJ

The Criminal Division of the Department of Justice is the entity that can directly enforce a violation of 18 U.S.C. § 1001.¹³⁴ As noted above, these prosecutions are rare.¹³⁵ In certain circumstances, the Director of the PTO has the duty to report fraudulent activity to the Attorney General.¹³⁶ And even when reported, the case need not be pursued. In short, the criminality of overclaiming has a lot of rhetorical impact on the patent bar but actual substantive punishment will likely arrive indirectly. As discussed next, other entities and other avenues can utilize the criminality of overclaiming.

B. Walker Process Antitrust Claims

The antitrust laws can be used to leverage a criminally false oath as a sword in civil litigation. A number of different entities could bring such claims including the Antitrust Division of the Department of Justice, the Federal Trade Commission (FTC), state attorneys general, and private parties. Notably, both the FTC and state attorneys general have been rather

133. Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87, 94 (1989); see also William Bishop, *The Contract-Tort Boundary and the Economics of Insurance*, 12 J. LEGAL STUD. 241, 254 (1983) (discussing *Hadley v. Baxendale* and connecting its ruling with information forcing); Paul Milgrom & John Roberts, *Relying on the Information of Interested Parties*, 17 RAND J. ECON. 18, 19–20 (1986); Chris William Sanchirico, *Relying on the Information of Interested—and Potentially Dishonest—Parties*, 3 AM. L. & ECON. REV. 320, 321 (2001).

134. See 18 U.S.C. § 1001 (2012).

135. See *supra* notes 106–111 and accompanying text.

136. 35 U.S.C. § 257(e) (2012) (“If the Director becomes aware [of fraud] . . . [for a patent undergoing] supplemental examination . . . [or] reexamination . . . the Director shall also refer the matter to the Attorney General . . .”).

active in patent assertion activities and thus may be quite motivated to pursue antitrust claims based on a fraudulently broad patent.¹³⁷

As a general matter, the antitrust laws are not used to review the procurement and enforcement of patent rights generally.¹³⁸ Petitioning the government for things like the grant of a patent or for its later enforcement is protected “even if that petitioning has anticompetitive effects.”¹³⁹ But this immunity falls away in cases where the patent was procured through fraud or if the subsequent patent litigation (even if the patent itself was procured validly) is a sham.¹⁴⁰

In particular, in *Walker Process Equipment v. Food Machinery & Chemical*, the Supreme Court held that “enforcement of a patent procured by fraud on the Patent Office may be violative of § 2 of the Sherman Act provided the other elements necessary to a § 2 case are present.”¹⁴¹ Accordingly, the criminal act of knowingly filing a false oath en route to an overbroad patent could form the basis for an antitrust suit brought by the antitrust authorities.¹⁴²

137. Daniel Nazer, *Notorious Scanner Troll Settles with FTC*, ELECTRONIC FRONTIER FOUND. (Nov. 6, 2014), <https://www.eff.org/deeplinks/2014/11/notorious-scanner-troll-settles-ftc>; Julie Samuels, *42 State Attorneys General Support Patent Reform*, ELECTRONIC FRONTIER FOUND. (Feb. 24, 2014), <https://www.eff.org/deeplinks/2014/02/42-state-attorneys-general-support-patent-reform>.

138. See *United Mine Workers v. Pennington*, 381 U.S. 657, 664 (1965); *E. R.R. Presidents Conference v. Noerr Motor Freight, Inc.*, 365 U.S. 127, 144 (1961).

139. See 1 HOVENKAMP ET AL., *IP AND ANTITRUST* 11-6 (2d ed. 2010).

140. See *id.* at 11-30.

141. *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 174 (1965).

142. But there are cases that appear to create a tension between the requirements of 18 U.S.C. § 1001 and *Walker Process* antitrust claims. See *Cataphote Corp. v. Desoto Chem. Coatings, Inc.*, 450 F.2d 769, 772 (9th Cir. 1971) (“The road to the Patent Office is so tortuous and patent litigation is usually so complex, that ‘knowing and willful fraud’ as the term is used in *Walker*, can mean no less than clear, convincing proof of intentional fraud involving affirmative dishonesty, ‘a deliberately planned and carefully executed scheme to defraud . . . the Patent Office.’ . . . Patent fraud cases prior to *Walker* required a rigorous standard of deceit. . . . *Walker* requires no less.” (internal citations omitted)). The criminal cases simply require that the defendant knowingly made the false statement to the PTO while some of these cases appear to require more for a *Walker Process* claim. They are looking for “clear, convincing proof” of a “deliberately planned . . . scheme.” *Id.* (quoting *Hazel-Atlas Glass Co. v. Hartford-Empire Co.*, 322 U.S. 238, 245 (1944)). Perhaps all the § 1001 violations could be shoehorned to fit this description and perhaps they should. Otherwise patent law will be in the awkward position of having patent applicants committing felonies for false statements but whose actions somehow still do not rise to the level of *Walker Process* fraud. Such dissonance does not make sense and likely our understanding of *Walker Process* should give way to come in line with the larger body of § 1001 criminal law.

Furthermore, section 4 of the Clayton Act allows injured private parties to bring lawsuits for violations of the antitrust laws.¹⁴³ The Court has made clear that invalidity of an asserted patent cannot alone support such a case.¹⁴⁴ Instead the relevant patent must be “shown to have been procured by knowing and willful fraud practiced by the defendant on the Patent Office or, if the defendant was not the original patent applicant, he had been enforcing the patent with knowledge of the fraudulent manner in which it was obtained.”¹⁴⁵ Again this standard appears to be satisfied where the case can be made that the applicant knowingly and willfully made a false statement to the PTO to gain a patent with such broad claims.

Note though that these antitrust claims have a self-regulating character. For the criminal case, the filing of the false oath is the act that completes the crime. For the antitrust claims, not only does there need to be a false oath (for fraud on the PTO element) but the patent needs to be asserted as well. Thus, if a patentee finds themselves in possession of a patent with some claims that may have resulted from overclaiming, then the patentee can avoid antitrust liability by simply refusing to assert those claims. In short, though antitrust claims can be brought by a reasonably diverse set of actors, patent holders can avoid this risk simply by not asserting those claims. The claims that were not attained through overclaiming may be able to be asserted without violating the antitrust laws. Despite this safety valve for antitrust, such safety valves do exist for unenforceability described next.

C. *Inequitable Conduct*

In addition to the direct criminal enforcement and its use as a sword via antitrust claims, the criminality of overclaiming can be used as a basis for the defense of patent unenforceability due to inequitable conduct.¹⁴⁶ Generally this defense is based on the notion that a patent procured by fraud on the Patent Office should not be enforced by a court even if the patent is otherwise

143. *Walker*, 382 U.S. at 174 (Where other elements of an antitrust violation have been established then “the treble damage provisions of § 4 of the Clayton Act would be available to an injured party.”).

144. *Id.* at 179 (Harlan, J., concurring) (“[A] private cause of action would not be made out if the plaintiff: (1) showed no more than invalidity of the patent arising, for example, from a judicial finding of ‘obviousness’ . . .”).

145. *Id.*

146. *Hebert v. Lisle Corp.*, 99 F.3d 1109, 1116 (Fed. Cir. 1996) (“A holding of unenforceability based on the filing of a false oath requires that the oath was false, and made with knowledge of the falsity. . . . Knowledge of falsity is predicate to intent to deceive.”).

valid.¹⁴⁷ If found, inequitable conduct renders the entire patent (and at times an entire family of patents) unenforceable. In part because of this harsh result, the doctrine has been called the “atomic bomb” of patent law.¹⁴⁸ Recently the Federal Circuit revisited the standards for finding inequitable conduct in *Therasense v. Becton Dickinson*.¹⁴⁹ To assert the defense, the defendant has to prove that the patent applicant engaged in acts or omissions that amount to fraud on the Patent Office. Both the materiality and the intent of the conduct are examined. As to materiality, *Therasense* set a “but-for” standard. Conduct satisfies the materiality prong of inequitable conduct only if “but for” the conduct, the PTO would not have allowed a claim.¹⁵⁰ As to intent, the Federal Circuit held that “[t]o prevail on a claim of inequitable conduct, the accused infringer must prove that the patentee acted with the specific intent to deceive the PTO.”¹⁵¹

Assuming that evidence for criminal overclaiming exists (even if the criminal statute of limitations has expired) then both the requisite level of materiality and intent for inequitable conduct follow. But for the filing of an overly broad claim, the PTO would not have granted it.¹⁵² As put by the Federal Circuit “there is no room to argue that submission of false affidavits is not material.”¹⁵³ Similarly, an applicant’s intent when filing a claim is for the PTO to grant that claim and the oath underscores the penalties for filing a willfully false oath. In short, if the applicant’s conduct is a felony for a false statement, it is “absurd” to argue that the conduct does not rise to inequitable conduct.¹⁵⁴

Interestingly, in contrast to the antitrust claims discussed in the previous subsection, the defense of inequitable conduct could be used to render a patent unenforceable even where the problematic overly broad claims are never asserted. A defendant can raise a claim of inequitable conduct if any of

147. David O. Taylor, *Patent Fraud*, 83 TEMP. L. REV. 49, 51 (2010).

148. *Therasense, Inc. v. Becton, Dickinson, & Co.*, 649 F.3d 1276, 1288 (Fed. Cir. 2011) (en banc) (quoting *Aventis Pharma S.A. v. Amphastar Pharm., Inc.*, 525 F.3d 1334, 1349 (Fed. Cir. 2008) (Rader, J., dissenting)).

149. *Id.* at 1287.

150. *Id.* at 1295.

151. *Id.* at 1290.

152. This test does seem to remove inequitable conduct as a defense where an applicant overclaims but the PTO does not allow that claim (for example because the claim is invalid under § 112).

153. *Gen. Electro Music Corp. v. Samick Music Corp.*, 19 F.3d 1405, 1411 (Fed. Cir. 1994) (quoting *Rohm & Haas Co. v. Crystal Chem. Co.*, 722 F.2d 1556, 1561 (Fed. Cir. 1983)).

154. *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 42 (2006) (“It would be absurd to assume that Congress intended to provide that the use of a patent that merited punishment as a felony would not constitute ‘misuse.’”).

the claims of the asserted patent were procured by fraud on the Patent Office. But as mentioned above, inequitable conduct because of a false oath can be avoided if the oath is properly amended to correct the false statement prior to issuance.¹⁵⁵

D. Attorney's Fees

In addition to bringing antitrust counterclaims and inequitable conduct claims, private litigants could also use a false oath as the basis for the award of attorney's fees.¹⁵⁶ In a case where the patent applicant was alleged to have amended its claims specifically to ensnare a competitor's product the court did not find enough to support an antitrust claim but the court did award attorney's fees to the defendant.¹⁵⁷ The court noted that "considering the evidence heretofore discussed, [we find] that the action can be said to have been brought in bad faith; that it is an exceptional case within the meaning of 35 U.S.C. § 285; and, that reasonable attorney's fees should be awarded to the prevailing party."¹⁵⁸ And courts finding a false oath via overclaiming could similarly award attorney's fees especially where the harsher penalties from antitrust or even inequitable conduct are not warranted.

V. THE ETHICS OF CLAIM BREADTH

All the foregoing is not intended to persuade the Department of Justice or the antitrust authorities to initiate large numbers of criminal cases against all but the most egregious cases of overclaiming. Rather the above is intended to have an impact on the practice of claim drafting. The criminality of overclaiming provides a counterweight to balance the patent attorney's duty to zealously represent the inventor. This article aims to underscore that applicants and their attorneys owe a duty to the patent system to craft claims that are easily understood and easily applied and are confined to the particulars of the invention disclosed in the patent. With that criminality in mind, patent prosecutors can (while still zealously representing their clients) avoid overclaiming. Forcing the patent bar to focus only on what was invented should lead to more accuracy and precision in claim drafting.

155. See 35 U.S.C. § 115(h) (2012).

156. *Crown Mach. & Tool Co. v. KVP-Sutherland Paper Co.*, 297 F. Supp. 542, 577 (N.D. Cal. 1967).

157. *Id.*

158. *Id.*

A. Impact on the Patent Bar

At first blush this new duty seems quite easy to fulfill: applicants and their attorneys should only claim subject matter that is original to the applicant. Claim only what you have invented and no more. Simple to state for sure but this directive becomes far more complex on closer inspection. Determining what exactly has been invented is no easy task primarily because patent law has (especially in the past fifty years) not aimed to define this critically important concept.¹⁵⁹ But that difficulty does not mean that the patent bar is not responsible for avoiding criminal overclaiming. There certainly will be easy cases where the applicant has claimed well beyond anything they can say that they invented but closer cases will be many.

An interesting comparison can be made to tax law. Professional responsibility of tax law provides a useful example where zealous advocacy to reduce a client's tax bill is balanced by care to avoid tax fraud and tax evasion. That duty too looks simple on first inspection. When asked "what was your annual income?" we should just write down the correct value. But of course any deeper consideration reveals all sorts of ambiguity and vagueness in the tax code that must be considered. And despite real uncertainty, the law forces tax professionals to carry out their duty even in the face of ambiguity. As put by Justice Brandeis, "If you are walking along a precipice no human being can tell you how near you can go to that precipice without falling over . . . but anybody can tell you where you can walk perfectly safely within convenient distance of that precipice."¹⁶⁰

Despite the lack of perfect clarity, the law still forces professionals to use their professional judgment to weigh the consequences of going too near the unstable cliff of legality.¹⁶¹ In similar fashion, patent professionals should be expected to use their judgment in deciding how far to claim despite any uncertainty.

As an initial stab at defining this needed ethics, the tax bar provides useful guideposts on the location of this precipice. Three terms are used in describing tax strategies: tax planning, tax avoidance, and finally tax evasion. The first is plainly legitimate both as to the spirit and letter of the tax laws and is "as American as apple pie."¹⁶² As put by Learned Hand, it denotes

159. See Cotropia, *supra* note 29, at 1855; Liivak, *supra* note 30, at 1.

160. ALPHEUS MASON, BRANDEIS: A FREE MAN'S LIFE 352 (1946); *see also* 1 BORIS I. BITTKER & LAWRENCE LOKKEN, FEDERAL TAXATION OF INCOME, ESTATES AND GIFTS 4-28 (3d ed. 1999).

161. *See* 1 BITTKER & LOKKEN, *supra* note 160, at 4-28.

162. *Id.* at 4-31.

simply “arranging one’s affairs as to keep taxes as low as possible.”¹⁶³ The latter, tax evasion, is illegitimate as to the spirit and letter of tax law and it subjects both the tax professional and the tax filer to a panoply of civil and criminal penalties.¹⁶⁴ As put by the Supreme Court, the purpose of these criminal provisions is “to induce prompt and forthright fulfillment of every duty under the income tax law.”¹⁶⁵

But where exactly is the boundary between legal tax planning and illegal evasion? The legal side of this boundary is the realm of tax avoidance. The Bittker and Lokken treatise provides a nice way to recognize this boundary. Tax avoidance is surely an explicit attempt to minimize tax liability but it is one that the “tax payer . . . is prepared to disclose fully to the IRS.”¹⁶⁶ In contrast, tax evasion has no component of such full, open disclosure and often entails “deception, concealment, destruction of records, and the like.”¹⁶⁷

For developing a professional ethics of claim breadth, the patent bar needs to work towards something similar. Just as minimizing tax liability is fine, so should maximizing claim scope. Rather the distinction is on the ability to provide a rationale for the claim breadth that the patent attorney is willing to provide to the PTO or courts when challenged. For example, claim breadth especially when using functional language needs to be backed by a defensible rationale for deploying that functional language. In many cases this rationale cannot be provided. But where it can, it provides an ongoing dialogue and discussion that helps to better illuminate the contours of the invention and aids in developing standards for the cautious and sparing use of things like pure functional claims.

B. Impact on Inventors

In addition, emphasis on the criminality of overclaiming will impact inventors and their practices as well. Most patents are granted to inventors working under employment contracts that obligate the inventors to work with the company’s patent attorneys to develop the patent application and obligate the inventor to ultimately assign the patent over to their employer. Surely inventors will fulfill their contractual obligations and surely they want their companies to secure broad patents but is it worth going to jail? Engineers

163. *Comm’r of Internal Revenue v. Newman*, 159 F.2d 848, 851 (2d Cir. 1947) (Hand, J., dissenting).

164. 6 BITTKER & LOKKEN, *supra* note 160, at 114-78 (“Chapter 75 of the [tax] Code creates more than a score of crimes and ‘other offenses’ against the federal revenue law.”).

165. *Spies v. United States*, 317 U.S. 492, 497 (1943).

166. 1 BITTKER & LOKKEN, *supra* note 160, at 4-29.

167. *Id.*

have famously noted that patent claims make no sense to them and that the claims often look nothing like what the inventor thought she has invented. Knowing about the criminality of filing overly broad claims will surely give inventors pause when signing the oath. How can an inventor sign off if she can't understand what she purportedly claims to have invented? Would you file a tax return that you could not in good faith make heads or tails of?

As an employee, *you* stand to go to jail for the false statement but your company stands to benefit from the broad claim. There have been interesting movements related to patent pledges within the tech sector.¹⁶⁸ Noting the criminality of overclaiming may well add to this social movement and give tech employees another reason to be questioning indefinite or overly broad claims. For example, new practice dynamics will develop if an inventor now objects to the breadth of the claims in a patent application and refuses to sign the oath. The prosecuting patent attorneys will now have to decide to either amend the claims or to tread with exceeding care in trying to convince the inventor that they did in fact invent what the application claims they invented.

CONCLUSION

Overly broad claims are a significant problem for patent law. The PTO cannot and was never intended to police scope alone. This is just not how the patent statute is written. Properly understood, patent applicants were meant to play a critical role in defining proper sized claims. Recognition of the criminality of overclaiming should make this duty clear to the patent bar and will lead to a development of standards for initial claim breadth. In turn that should lead to better patents with better claims that from the outset more closely hew to what the inventor in fact invented. As these develop, the PTO and courts must better define concepts like the invention. They need to better define how and when functional language can be used. All these developments should ultimately lead to a better functioning patent system.

168. See Suzanne Van Arsdale, *Innovator's Patent Agreement: Twitter's Defensive Patenting Strategy*, HARV. J.L. TECH. DIG. (Aug. 11, 2013), <http://jolt.law.harvard.edu/digest/innovators-patent-agreement-twitters-defensive-patenting-strategy>.