

PATENTS FOR POETS

TIMOTHY R. HOLBROOK*

INTRODUCTION

As undergraduate engineering students, my classmates and I would often scoff at the various math and science classes designed for persons not majoring in a hard science or engineering. We identified these classes by unfair, derogatory names, such as “Rocks for Jocks” (Geology) and “Physics for Poets.” Of course, our liberal arts friends all had writing skills that far surpassed those of us who were more concerned with boxing the correct answer on an exam than with writing a persuasive, engaging paper. We were lucky to write sentences that had both a subject and a verb. In law school, these roles often reverse, with the former liberal arts students having a leg up on writing as the “techies” are forced to learn how to write more precisely and persuasively. It usually is a rather painful wake-up call to the former science and engineering students.

In one class, however, these divergent worlds often collide again. That class is Patent Law. The techies believe that they will be able to better grasp the material because of their familiarity with science, whereas the students without technical backgrounds are often intimidated due to the subject matter of the cases, regardless of the complexities of the law itself. Indeed, many students believe that they cannot practice patent law without a technical background. Consequently, students without science and engineering degrees often do not take Patent Law.

I view this hesitancy as a mistake for anyone who plans on practicing some form of intellectual property. An understanding of all of the various disciplines that fall underneath the umbrella of intellectual property is essential to being an effective IP lawyer. Moreover, only persons who would like to practice before the Patent and Trademark Office prosecuting patent applications must have a technical degree; being a patent litigator only requires one to be a lawyer. Of course, many firms specializing in intellectual property law *prefer* associates to have technical degrees, even if they are only litigators.

* Edwin A. Heafey, Jr., Visiting Professor of Law, Stanford Law School (Fall 2007); Associate Professor of Law and Associate Director of the Program in Intellectual Property Law, Chicago-Kent College of Law. © Timothy R. Holbrook 2007.

A technical degree provides an easy filter for identifying potential hires and also guarantees that the new associate will not be intimidated by the technology that underlies a given case. It is possible, however, for students without technical backgrounds to pursue careers in intellectual property law, and even patent law. Indeed, as patent litigators will have to translate the relevant technology and patent to laypeople—judges and potentially jurors—persons with non-technical backgrounds can provide a helpful check in practice to make sure that the arguments and evidence are presented at an appropriate level. In other words, firms with a patent litigation practice should *want* to hire non-technical lawyers to facilitate their cases.

Consequently, students without science or engineering backgrounds should take patent law if they intend to practice IP, in my opinion. Many students may be *required* to do so, either in an intellectual property survey class or in a separate class that may be required for a school's intellectual property program.¹

Patent *law* is complex and challenging, which can intimidate any student. For those students without a technological or scientific background, however, the *technology*, not the law, can also prove to be intimidating, needlessly undermining their confidence. Consequently, it is important to teach patent law in a way that deemphasizes the technology involved in the cases and instead focuses on the law and policies that underlie the law. Indeed, various aspects of patent law are conceptually fairly simple; it is the legal doctrine that has become horribly complex. That is hard enough for students. When fear of the science or technology creeps into a student's mind, she can be distracted from truly mastering the subject matter of the class. Removing the fear of the technology permits all students to focus on what is important—the law—instead of being distracted by what is truly not relevant—the technology.

Of course, a patent professor must design the class with this dynamic in mind. Some important cases involve technology that may be difficult for students to understand, yet the case is seminal and must be taught. It is incumbent upon the professor to “de-tech” these cases and the class as a whole to make it accessible to all students. In other words, professors should be teaching “Patents for Poets.”

This Essay will explore various techniques both for teaching patent law in ways to deemphasize the technology and to deal with situations where the students simply must wrap their arms around the technology at a basic, lay level. Divorcing technology from the law is important not only in the class itself but also (and perhaps more crucially) on the *exam*, where fear and

1. For example, students in Chicago-Kent's intellectual property certificate program must take Patent Law in order to earn the certificate. See Chicago-Kent College of Law, *Requirements for the J.D. Certificate Program in Intellectual Property Law*, <http://www.kentlaw.edu/depts/ipp/requirements.html> (last visited Jan. 15, 2008).

intimidation of a technology may chill the performance of a student who otherwise comprehends the law. As such, the design of the examination, and the selection of a technology that is accessible to all, is crucial. This Essay therefore explores the problem of the exam as well.

I. TEACHING PATENT LAW: TAKING THE FEAR OF TECHNOLOGY OUT OF THE CLASSROOM

The law governing patent acquisition and enforcement is intimidating enough to many students, let alone those without a technical background. There is no denying that patent law constitutes a web of interrelated doctrines, some of which have appropriate symmetries and some which do not.² But, at a high level of generality, patent law concepts do make some common sense; it is the statutory or doctrinal application of those concepts that create problems. In this Part, I will detail how to teach various aspects of patent law divorced from the technical aspects of the case.

As to most of these issues, my approach can be generalized. My first step is to explain to the students *why* we have certain doctrines. By focusing on the policies that underlie a given topic, hopefully the students can begin to see why patent law possesses a certain requirement or rule. Next, I take that abstract policy and identify the particular statutory provision or doctrine that implements that policy. After introducing the law-specific topic, I then explore these doctrines using the particular cases. I never hide the ball from students and view my role as clarifying, not obfuscating with the belief the students can figure it out by sinking or swimming.

A. *Novelty and Nonobviousness*

In order to obtain a patent on an invention, the invention must both be new and a significant advancement over the state of the art. These requirements are found in patent law in the novelty and non-obviousness requirements, respectively.³ These concepts are basic in their underlying premise: an applicant cannot get a patent on a device that already exists—or is anticipated by the prior art—nor on one which is merely a trivial advance in the state of the art, even if it did not yet exist.⁴ There is no reason to reward an applicant with a patent if their creation already existed or it was a natural, inevitable step in technological progression.

While the concepts that underlie these doctrines are fairly straightforward, the statutory provisions and legal doctrines that implement them are not. The

2. See, e.g., Alan L. Durham, *Patent Symmetry*, 87 B.U. L. REV. 969 (2007); Timothy R. Holbrook, *Possession in Patent Law*, 59 SMU L. REV. 123 (2006).

3. 35 U.S.C. §§ 101–103 (2000).

4. Christopher A. Cotropia, *Nonobviousness and the Federal Circuit: An Empirical Analysis of Recent Case Law*, 82 NOTRE DAME L. REV. 911, 915–16 (2007).

Patent Act defines what information is relevant for determining whether the invention is novel or nonobvious in 35 U.S.C. § 102. It is this statutory provision, not the law of anticipation, that troubles students.

Typical prior art includes scientific articles, previously issued patents, and public acts or sales of the invention claimed in the patent. Section 102 establishes a variety of conditions that determine whether certain publications or activities count as prior art, and uses various timing triggers in making this assessment, none of which relate to the others and some of which overlap.⁵ Explaining and divining the differences between §§ 102(a)–(g) creates considerable difficulties for patent students. The students should keep their eyes on the one key ball, however: trying to assess whether the invention is truly “new.” The various nuances within § 102 have a number of policies that underlie them and which inform why the conditions contained in § 102 exist. As § 102 is generally a codification of the common law as it existed before 1952, often there are court decisions that explain why these various provisions exist. Exploring these policies, and why they are important in assessing the novelty of the invention, can help the students understand this rather difficult and somewhat arbitrary statutory provision.⁶

Novelty itself is a term of art within patent law because it requires that the entirety of the claimed invention be disclosed in a single prior art reference, such as one patent or one previous patent application.⁷ Additionally, that reference must be sufficiently clear so that someone with average technical skill in the relevant field could make the invention based simply on that

5. 35 U.S.C. § 102 (2000).

6. A special comment should be made about the statutory bars of § 102(b). These provisions can be particularly helpful in teaching and testing patent law because they tend to be far less technical in nature. The public use bar simply asks whether the invention was being used in a way sufficiently accessible to the public. *See* 35 U.S.C. § 102(b). The legal analysis focuses more on the nature of the use of the invention and the persons who had access to it, as opposed to the way in which the invention works. *See, e.g.,* *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 424 F.3d 1374, 1380–83 (Fed. Cir. 2005). Similarly, the on-sale bar typically involves an analysis of the nature of the commercial activity surrounding the invention. *See, e.g.,* *Plumtree Software, Inc. v. Datamize, LLC*, 473 F.3d 1152, 1161–64 (Fed. Cir. 2006); *see* Timothy R. Holbrook, *The Risks of Early Commercialization of an Invention: The On-Sale Bar to Patentability*, in 2 *INTELLECTUAL PROPERTY AND INFORMATION WEALTH: ISSUES AND PRACTICES IN THE DIGITAL AGE* 37–54 (Peter K. Yu ed., Praeger Publishers 2007). While there may be occasions where the technical aspects of the invention become important—particularly if the issue is whether an invention is ready for patenting, *see Pfaff v. Wells Elecs.*, 525 U.S. 55, 67–69 (1998); *Cargill, Inc. v. Canbra Foods, Ltd.*, 476 F.3d 1359, 1370–72 (Fed. Cir. 2007)—typically the facts involve traditional, historical facts—what happened and when—as opposed to technical facts. These doctrines, therefore, tend to be more readily accessible to students. These can also be relatively easier to test on an exam as well.

7. *See In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990).

reference.⁸ These requirements are, respectively, the identity requirement and the enablement requirement. Finally, the reference may inherently disclose a claim limitation if it is necessarily a part of the prior art's disclosure.⁹ To be inherent, the implicit disclosure must be necessarily present.¹⁰ Although there is some controversy over this doctrine at present,¹¹ conceptually it is fairly easy for students to grasp.

Obviousness, in contrast, presents a significant challenge for students. It is generally an amorphous area of law that practitioners and academics—let alone students—struggle to fully comprehend. Conceptually, the doctrine is fairly straightforward: an innovation is not eligible for patent protection if it is a trivial advance in the state of the art.¹² Patent protection should not be available for an advance that inevitably would have occurred.¹³ Necessity is the mother of invention, not necessarily the patent system. Innovation will occur without the patent system, and thus not all innovations are eligible for patent protection.

Notwithstanding this fairly straightforward basis for the non-obviousness requirement, the doctrine itself is rather difficult to grasp, particularly for students. The doctrine is far more akin to a standard than a rule, requiring the balancing of the factors identified in the Supreme Court's seminal *Graham v. John Deere* case: the scope and content of the prior art; the differences between the claimed invention and the prior art; the level of skill in the art; and any relevant secondary considerations, such as commercial success, long-felt but unsolved need, or unexpected results.¹⁴

This analysis generally requires an inquiry into the actual invention and prior art, thus necessitating some understanding of the technology. As such, I tend to emphasize the *process* of performing the analysis over necessarily knowing the technological facts. For example, when going over the merits portion of the *Graham* decision, I focus less on the actual facts of the case and instead highlight how the court is implementing the factors it identified. I generally follow this analysis up by emphasizing that, on the exam, following the process is far more vital than necessarily reaching the "correct" conclusion as to whether a claim is obvious; indeed, I design problems to make sure there generally is not a correct, or even a "more correct," answer. By emphasizing both the policy underlying the obviousness requirement and the process by

8. *Titanium Metals Corp. of Am. v. Banner*, 778 F.2d 775, 781 (Fed. Cir. 1985).

9. *Rosco, Inc. v. Mirror Lite Co.*, 304 F.3d 1373, 1380 (Fed. Cir. 2002).

10. *Id.*

11. See generally Dan L. Burk & Mark A. Lemley, *Inherency*, 47 WM. & MARY L. REV. 371 (2005).

12. See *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 5–6 (1966).

13. See *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741–43 (2007).

14. *Graham*, 383 U.S. at 17–18.

which the student should perform the analysis, I try to minimize the importance of the technology in the cases.

B. Enablement/Written Description

While divorcing the technology from the law may be possible in some areas of the law, it may be more difficult in others. This is particularly true for the disclosure doctrines of enablement and written description. The patent specification must contain a written description of the invention and teach how to make and use the invention.¹⁵ Each of these doctrines, in their current incarnation under the Federal Circuit, create difficulties for teachers of patent law given how intertwined the technology can be with the doctrine.

Enablement, like obviousness, is easy to understand as a policy matter. It is central to the quid pro quo of the patent system: to get the right to exclude, the inventor must disclose her invention sufficiently to guarantee that the public can practice it when the term ends (and to be able to learn about the invention during the patent term).¹⁶ Whether the patent provides an enabling disclosure, while ultimately a legal question, is based on numerous factual considerations. To be enabling, some experimentation is permissible so long as it does not become “undue.”¹⁷ The seminal case in this area is *In re Wands*, in which the Federal Circuit enumerated a non-exclusive list of factors for determining whether undue experimentation would be required:

- (1) quantity of experimentation necessary,
- (2) amount of direction or guidance presented,
- (3) presence or absence of working examples,
- (4) nature of the invention,
- (5) state of the prior art,
- (6) relative skill of those in the art,
- (7) predictability or unpredictability of the art, and
- (8) breadth of the claims.¹⁸

15. 35 U.S.C. § 112, ¶ 1 (2000). Discussions of best mode are generally fairly straightforward because the inquiry involves asking, “what did the inventor *believe* was the best method of practicing the invention?” The students need not understand the technology itself but instead understand that the inquiry is an attempt to divine what was in the inventor’s mind at the time she filed her application (and whether that belief has been memorialized in the patent itself). Best mode, while perhaps a least favored doctrine in patent law itself, *see* Holbrook, *supra* note 2, at 130–31, generally is a breath of fresh air for students during the semester.

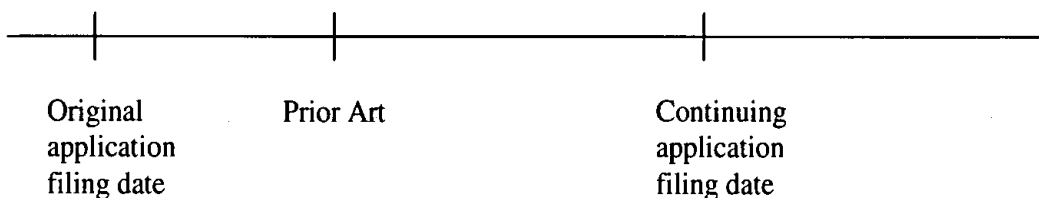
16. *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 186–87 (1933); Holbrook, *supra* note 2 at 128, 133; Mark D. Janis, *On Courts Herding Cats: Contending with the “Written Description” Requirement (and Other Unruly Patent Disclosure Doctrines)*, 2 WASH. U. J.L. & POL’Y 55, 55–57 (2000).

17. *In re Wands*, 858 F.2d 731, 736–37 (Fed. Cir. 1988).

18. *Id.* at 737.

Although *Wands* is considered the seminal enablement case, it is also incredibly difficult to teach given the technology involved. The title of the patent is “Immunoassay Utilizing Monoclonal High Affinity IgM Antibodies,”¹⁹ which is scary enough to most people. The facts of the case are rather complex; thus, I do not recommend actually teaching the *Wands* case—the technology is simply too intimidating to students without a technical background (and possibly even to students with one). Further compounding the problem is that enablement most typically arises in the more unpredictable technological fields, such as chemistry, materials science, or biotechnology, none of which typically facilitate confidence and comfort within students. Thus, selecting a case that is both accessible and informative can be challenging. Moreover, it is quite difficult to *test* this issue on an exam given the inextricable link between enablement and the relevant technology. I often focus on the various factors listed in *Wands* when writing the exam, and also use some “trigger” words to suggest a problem, such as various failures in the inventive process or some experiments that fail while others succeed. Again, I emphasize the process of the analysis rather than the actual outcome.

Similarly, the separate doctrine of written description can also be challenging. Historically, courts and the United States Patent and Trademark Office (PTO) used the written description requirement to police new matter entering a patent application.²⁰ At the PTO, the addition of new matter results in the loss of the filing date for that new matter.²¹ In litigation, it can result in invalidation of the claim that relies on the new matter if an intervening piece of prior art arises between the original filing date and the date on which the new matter was added.²² The diagram below explains this use of the written description:



If the original application does not adequately describe the invention claimed in the continuing application (typically a continuation, continuation-in-part, or a divisional application), then the applicant loses the benefit of the earlier filing

19. *Id.* at 733.

20. *See Janis, supra* note 16, at 59–60 (discussing three historical uses of written description to police new matter).

21. *See* 35 U.S.C. § 132(a) (2000); MANUAL OF PATENT EXAMINING PROCEDURE § 706.03(o) (8th ed. Rev. 5 Aug. 2006).

22. *See Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1560, 1565 (Fed. Cir. 1991).

date.²³ As such, she must rely upon the application date of the continuing application and now must overcome the prior art that arose between the two filing dates.

In recent years, however, the Federal Circuit has expanded the doctrine of written description beyond this historical context, applying it to originally filed claims, for which there is no new matter requirement.²⁴ Although dubbed by some as a “super-enablement” requirement,²⁵ the court has invalidated claims because the written description of the invention in the specification is insufficient, regardless of new matter or intervening prior art.²⁶ The court has even invalidated a claim that was present in the originally filed application, rejecting the idea that the claim could *ipso facto* serve as its own sufficient disclosure.²⁷

This variant of written description creates a number of difficulties for teaching the doctrine. First, this new use of the written description requirement arose first in the context of gene patents, where the court concluded that, in order to claim a cDNA sequence, the applicant must disclose the sequence within the specification.²⁸ Although the court has retreated to some extent from this holding—allowing the written description requirement to be satisfied based on homology (where the gene structure is similar to a known gene structure)²⁹—the court has continued to apply this more recent version of the doctrine.³⁰ Unfortunately for students, understanding this doctrine’s origins requires at least a basic understanding of genetics, which many students may lack. When I teach this class, I do provide a primer on genetics, but even this minor dalliance into technology often puts off my students.

Second, the doctrine is difficult to explain conceptually to students without bleeding into the idea of enablement. The test offered by the courts—that the inventor must show possession of the invention³¹—affords little insight into how to demonstrate such possession, absent showing how to make and use the

23. Janis, *supra* note 16, at 59.

24. *See, e.g.*, *Regents of the Univ. of Cal. v. Eli Lilly & Co.*, 119 F.3d 1559, 1566–69 (Fed. Cir. 1997).

25. *See, e.g.*, Janice M. Mueller, *The Evolving Application of the Written Description Requirement to Biotechnological Inventions*, 13 BERKELEY TECH. L.J. 615, 633 (1998).

26. *See, e.g.*, *Lilly*, 119 F.3d at 1568.

27. *Id.* at 1567. *See generally* Holbrook, *supra* note 2, at 128; Mueller, *supra* note 25, at 628–33.

28. *Lilly*, 119 F.3d at 1566–67.

29. *Invitrogen Corp. v. Clontech Labs., Inc.*, 429 F.3d 1052, 1073–74 (Fed. Cir. 2005); *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 323 F.3d 956, 963–964 (Fed. Cir. 2002).

30. *See, e.g.*, *Lizardtech, Inc. v. Earth Res. Mapping*, 424 F.3d 1336, 1344–47 (Fed. Cir. 2005); *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1478–80 (Fed. Cir. 1998).

31. *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563–64 (Fed. Cir. 1991).

invention, which is enablement. Thus, for written description, teachers face the daunting one-two punch of technology intertwined with conceptual difficulty.

Fortunately, from a teaching perspective,³² the Federal Circuit has shifted this doctrine from a biotech-specific doctrine to a more generalized one. In *Gentry Galley Inc. v. Berklene Corp.*, the court invalidated claims directed towards a sectional sofa with controls for the recliner portion of the sofa.³³ Specifically, the court concluded that the specification did not support claims “in which the location of the recliner controls is other than on the console.”³⁴ The court reasoned that

... the original disclosure clearly identifies the console as the only possible location for the controls. It provides for only the most minor variation in the location of the controls, noting that the control “may be mounted on top or side surfaces of the console rather than on the front wall . . . without departing from this invention.” ‘244 patent, col. 2, line 68 to col. 3, line 3. No similar variation beyond the console is even suggested.³⁵

Similarly, in *Lizardtech, Inc. v. Earth Resource Mapping, Inc.*, the Federal Circuit invalidated a method claim because the specification disclosed only one algorithm for performing the step whereas the claim at issue was generic as to the particular algorithm used.³⁶

Explaining the doctrine conceptually still remains tricky. Indeed, the court itself struggles with how written description, divorced from policing new matter, is different than enablement. In its analysis in *Lizardtech*, the court reasoned that

[t]hose two requirements usually rise and fall together. That is, a recitation of how to make and use the invention across the full breadth of the claim is ordinarily sufficient to demonstrate that the inventor possesses the full scope of the invention, and vice versa.³⁷

Unhelpfully, the court offered no guidance as to how to discern whether an issue is one of written description or of enablement. Instead of using this difficulty as a liability, however, I try to spin it into something positive—“look students, even the judges can’t figure this out, so give yourselves a little bit of a break!” I then try to play with the possession idea as the measure for written description and push the students to distinguish possession from enablement.

32. And, in my opinion, unfortunately for patent law. See Holbrook, *supra* note 2, at 161–63.

33. *Gentry Gallery, Inc. v. Berklene Corp.*, 134 F.3d 1473, 1479 (Fed. Cir. 1998).

34. *Id.*

35. *Id.*

36. *Lizardtech, Inc. v. Earth Res. Mapping, Inc.*, 424 F.3d 1336, 1344 (Fed. Cir. 2005).

37. *Id.* at 1345. The case law relied upon in the decision, however, is all written description decisions, confirming that *Lizardtech* addresses solely that doctrine.

The *Lizardtech* decision can be helpful in this regard, as the decision appears to conflate enablement and written description, although the case law it draws upon all deals with written description.³⁸ This discussion often helps elucidate the tough line-drawing that is to be done in this area. Additionally, the dissents from and concurrences in the court's decision not to take *Lizardtech* en banc are very helpful for elucidating the current debate over the Federal Circuit's written description jurisprudence.³⁹ These cases provide a fairly easy scenario for testing both the written description requirement and claim construction doctrine: the exam specification should disclose only one embodiment, while the claim at issue should be broader, covering potentially other embodiments. In this fairly non-technical manner, a professor can test both of these doctrines and explore the various pros and cons of the current doctrine.

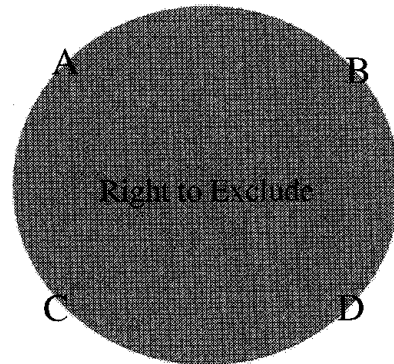
C. *The Doctrine of Equivalents and Its Limitations*

Nothing seems to draw more ire and elicit more fear than equivalency in patent law. Trying to explain this doctrine can be difficult, particularly because the question of equivalency is closely tethered to the technology involved.⁴⁰ I often explain the idea of equivalency graphically using the below diagrams.

LITERAL SCOPE

Claim 1. My invention, comprising:

A
B
C
D



38. *See id.* at 1344–47.

39. *See Lizardtech, Inc. v. Earth Res. Mapping, Inc.*, 433 F.3d 1373, 1374–81 (Fed. Cir. 2006).

40. Moreover, differentiating the doctrine of equivalents from equivalency under § 112, ¶ 6 can also be quite challenging. *See* 35 U.S.C. § 112, ¶ 6 (2000). I often use the Federal Circuit's various "additional views" in *Dawn Equip. Co. v. Ky. Farms Inc.*, 140 F.3d 1009 (Fed. Cir. 1998), to show that (1) the Federal Circuit has difficulty with the distinction; (2) the policies underlying the two doctrines differ; and (3) there are some doctrinal differences between the two.

EQUIVALENCY

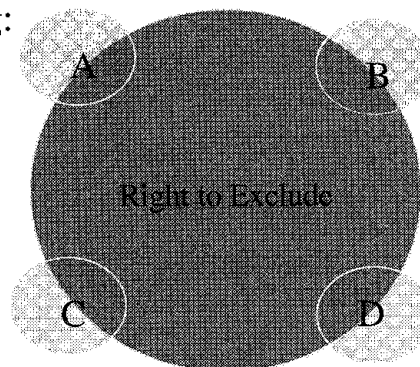
Claim 1. My invention, comprising:

A (and equivalents)

B (and equivalents)

C (and equivalents)

D (and equivalents)



The diagrams explain the doctrine of equivalents visually. I rely upon the metaphor of a claim acting as the “fence” delineating the scope of the patent’s right to exclude to explain peripheral claiming and use the limitations in the first diagram to demarcate the boundary lines of the claim. The patentee is entitled, absent application of one of the limitations of the doctrine of equivalents, to equivalents to each claim limitation, as shown in the second diagram.⁴¹ The “expanded” area shows that the patentee is entitled to a zone around each claim limitation beyond the literal scope of the claim, keeping the emphasis again on the limitations and not the invention as a whole.

The assessment of whether something is equivalent or not can be difficult for students to understand. The various tests generally require an evaluation of the technology. For example, the assessment of whether the element in the accused device performs substantially the same function in substantially the same way to yield substantially the same result⁴² necessarily requires an assessment of factual context: how the invention works. As such, explaining how the test is to be applied requires some information regarding the technology. Again, I emphasize the process, particularly of the “function-way-result” test, and use the Supreme Court’s seminal decision in *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.* to explain it.⁴³ In testing the tripartite test on the exam, I use words that allude to the three factors, such as the “manner” by which a device works. Also, using other factors, such as known interchangeability,⁴⁴ can be easier to explain and to test, as the facts can

41. See *Graver Tank & Mfg. Co. v. Linde Air Prods., Inc.*, 339 U.S. 605, 606 (1950). The All Elements Rule mandates that the doctrine of equivalents be applied on a limitation by limitation basis. *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 29 (1997).

42. *Graver Tank*, 339 U.S. at 608.

43. *Id.* at 608.

44. See *id.* at 609.

abstractly mention that others in the field knew or did not know that the asserted equivalent could work.

One problem with teaching this area of the law is that the Federal Circuit addresses the factual issue of equivalency so rarely, given the numerous legal limitations on the doctrine. Fortunately for an educator, these limitations tend to be far less technologically dependent. Prosecution history estoppel, while procedurally complex given the *Festo*⁴⁵ line of cases, is fairly easy to understand conceptually and factually: if the applicant gave up the asserted equivalent during prosecution of the patent at the PTO, generally she cannot use the doctrine of equivalents to recapture that equivalent.⁴⁶ Similarly, the public dedication rule is fairly straightforward: if the patentee disclosed a version of the patented invention but failed to claim it, then that embodiment is dedicated to the public, free from coverage under the doctrine of equivalents.⁴⁷ Indeed, the Federal Circuit seems to be articulating the rule that if the inventor possessed the equivalent during the application process and failed to claim it, then the doctrine of equivalents is unavailable.⁴⁸ These rules are fairly easy to explain and apply due in large part to the formalistic nature of the rules.⁴⁹ While as a matter of patent policy these rules may be troubling, they certainly do make teaching patent law a bit easier.

Teaching patent law in a way that divorces the technical from the legal can be difficult. My primary focus is to first explain why particular doctrines exist and then to provide a process by which the students can analyze the issue. To me, their ultimate conclusions are less important than the approach they take to analyzing the problems. In this way, even for those areas where the technical and the legal inextricably blend, I can hopefully minimize any anxiety that non-technical students may experience when confronting these issues.

II. TESTING PATENT LAW: ELIMINATING ANXIETY ON THE EXAM

While teaching patent law can be difficult, *testing* patent law can be equally as challenging. In order to give the students a “real world” exposure to the application of patent law to various facts, necessarily an instructor must use some sort of technology. The technology chosen should be a fairly simple one. But how does one find appropriate subject matter?

45. See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722 (2002).

46. *Id.* at 733–34.

47. See *Schoenhaus v. Genesco, Inc.*, 440 F.3d 1354, 1359 (Fed. Cir. 2006).

48. *Holbrook*, *supra* note 2, at 164–69.

49. See Timothy R. Holbrook, *The Supreme Court's Complicity in Federal Circuit Formalism*, 20 SANTA CLARA COMPUTER & HIGH TECH. L.J. 1 (2003); John R. Thomas, *A Review of Recent Decisions of the United States Court of Appeals for the Federal Circuit*, 52 AM. U.L. REV. 771 (2003).

One thing to do is to monitor Federal Circuit or district court decisions. I check the Federal Circuit's webpage every day, and peruse the district courts' decisions in the *United States Patent Quarterly (USPQ)*, looking for decisions where the technology or the claim term at issue is basic. For example, the Federal Circuit's decisions in *Nystrom v. TREX Co., Inc.* involved the issue of whether the term "board" meant boards made of wood or boards made of other materials.⁵⁰ This claim construction issue was fairly straightforward and easy for students to understand. The seminal decision in *Cybor Corp. v. FAS Technologies*, which confirmed de novo review of claim construction, involved interpretation of the word "to."⁵¹ The case *Virkler v. Herbert Enterprises* involved an ice cream scoop hollowed out to allow warm water inside, facilitating scooping the ice cream.⁵² Minor changes to these claims and facts are easy to make to ensure that the test is not identical to the actual case.⁵³

Another great source of patents to use on an exam are some of the highly questionable patents. The PTO has been criticized for issuing patents on inventions that are not truly innovative or are not the subject matter that most people would view as worthy of patent protection.⁵⁴ Many web pages track these sorts of patents, providing a great resource for patent professors. For example, www.totallyabsurd.com identifies real patents on seemingly absurd inventions.⁵⁵ The webpage *Patents: Dead or Alive* identifies some patents that are in force and others that are not.⁵⁶

Although bad patents may reflect poorly on the patent system, they make excellent test questions. These patents are usually viewed as bad because they represent trivial advances in a technology or because the technology itself is so simple. If these patents are bad in the eyes of a lay person, they should be questionable in the eyes of a patent law student. Moreover, adding a touch of humor to the exam by using some of these odd inventions can decrease the stress level for the student during the exam.

50. See 424 F.3d 1136, 1142–46 (Fed. Cir. 2005), *superseding* 374 F.3d 1105 (Fed. Cir. 2004).

51. 138 F.3d 1448, 1458–59 (Fed. Cir. 1998) (en banc).

52. 403 F. Supp. 2d 1141, 1143 (M.D. Fla. 2005).

53. This can be an enormous concern for those who use open book examinations. For this reason, it likely is better to rely on district court rather than Federal Circuit decisions because students are far more likely to be aware of the latter.

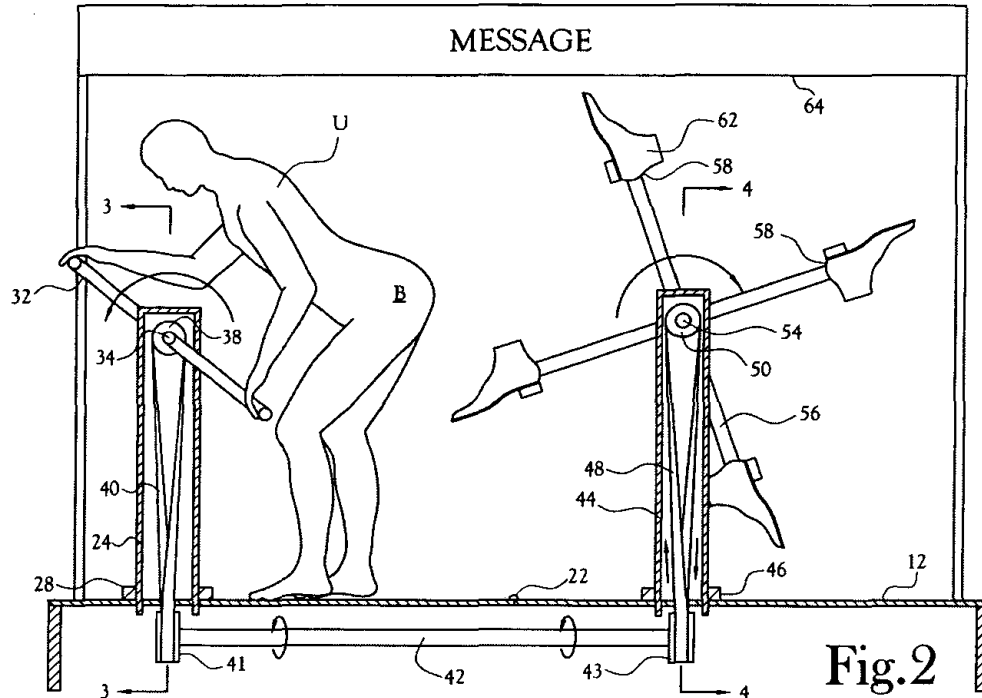
54. See Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495 (2001).

55. *Totally Absurd Inventions: America's Goofiest Patents*, <http://totallyabsurd.com> (last visited Jan. 15, 2008).

56. *Patents: Dead or Alive*, <http://blog.patents-tms.com/doa/doa.html> (last visited Jan. 15, 2008).

A few examples of these types of patents follow, with diagrams and the claims.

- U.S. Patent No. 6,293,874, entitled “User-Operated Amusement Apparatus for Kicking the User’s Buttocks” (I dub it the “Butt Kicker Patent”).⁵⁷



1. An amusement apparatus operated and controlled by a user, comprising:
 - a platform having a first end and a second end;
 - first post and second posts detachably mounted on said platform, said first post positioned toward said first end and said second post positioned toward said second end of said platform at a distance from said first post sufficient to permit the user to locate therebetween, facing said first post;
 - said first post having a crank positioned at a height thereon which requires the user to bend forward toward said first post while grasping said crank with both hands, to prominently present his buttocks toward said second post;
 - said second post including a top end having a plurality of rotating arms detachably mounted thereon, said plurality of rotating arms having a central axis positioned at a height generally level with the user's buttocks;
 - an outboard end on each of said plurality of rotating arms; and
 - a drive train operatively interconnecting between said crank and said central axis of said plurality of rotating arms;
 whereby as the user bends forward while grasping said crank, the user bends at his waist to predominantly present his buttocks toward said outboard end on each of said plurality of rotating arms, and the user operates said crank to

57. U.S. Patent No. 6,293,874 (filed Jan. 4, 2000).

engage said drive train and to rotate said plurality of rotating arms, causing each respective outboard end on each of said plurality of rotating arms to sequentially strike the user's buttocks.⁵⁸

This odd patent—aside from providing a moment of levity for the students during the arduous exam-taking process—provides an easy basis to test a variety of issues. To begin, does—or should—this invention satisfy the utility requirement? The simplicity of the invention and the claim language affords numerous options for a professor to tweak the patent to test a variety of issues. For example, a professor could rewrite the claim to be specific to the use of feet on the rotating arms. The specification could also be written to show only feet; the accused device could use hands, so that it slaps instead of kicking. A second claim could be generic to the type of appendage used to perform the kicking, while the specification could be altered to cover only feet. This minor change would allow the professor to test issues of claim construction (is the patentee entitled to coverage of more than just feet?), written description (should the *Lizardtech* and *Gentry Galley* line of cases invalidate a claim if the literal scope is broader than just feet?), and equivalency (are feet substantially the same as hands?).

- Patent No. 6,049,912, entitled “Mountable Printable Placard with Headband” (I dub it the “Cranial Greeting Card”).⁵⁹



58. *Id.* at Fig. 2 & col. 6.

59. U.S. Patent No. 6,049,912 (filed Dec. 28, 1998).

1. A device for holding a placard, comprising:
 - a) a headband;
 - b) said headband having a slotted member;
 - c) said slotted member having a slot contained therein;
 - d) a placard containing a party slogan mounted in said slot; and,
 - e) said party slogan being contained in a balloon, wherein said slotted member further comprises teeth like appendages for grasping said placard.⁶⁰

The claim language here involves basic words that any student can understand. It would also be easy for a professor to alter the claim language to create various claim construction issues. For example, the term “balloon” does have a common meaning (“a nonporous bag of light material that can be inflated especially with air or gas”), but the term here means a “thought balloon” akin to what is seen in comic books. A second term to alter could be the term “party slogan” by having an accused device display a political statement instead.

Other “bad” patents that could make good, fun exam questions are:

- No. 4,022,227: “Method of Concealing Partial Baldness” (i.e., the “comb over” patent).⁶¹



FIG. 1



FIG. 2

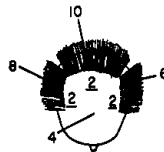


FIG. 3



FIG. 5



FIG. 4



FIG. 6

60. *Id.* at Fig. 1 & col. 4.

61. U.S. Patent No. 4,022,227 (filed Dec. 23, 1975). This patent could easily be challenged on obviousness grounds. Also, a claim construction question could be developed on whether someone who performs all of the steps but in a different order would infringe (i.e., is the order of the steps itself a claim limitation?).

1. A method for styling hair to cover bald areas using only the individual's own hair, comprising separating the hair on the head into several substantially equal sections, taking the hair on one section and placing it over the bald area, then taking the hair on another section and placing it over the first section, and finally taking the hair on the remaining sections and placing it over the other sections whereby the bald area will be completely covered.⁶²

- No. 6,004,596: The infamous "Sealed Crustless Sandwich."⁶³

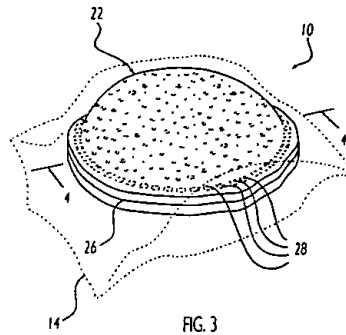


FIG. 3

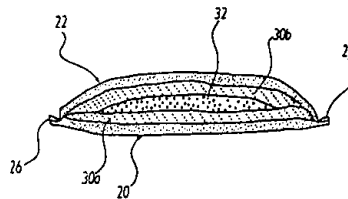


FIG. 4

1. A sealed crustless sandwich, comprising:
 a first bread layer having a first perimeter surface coplanar to a contact surface;
 at least one filling of an edible food juxtaposed to said contact surface;
 a second bread layer juxtaposed to said at least one filling opposite of said first bread layer, wherein said second bread layer includes a second perimeter surface similar to said first perimeter surface;
 a crimped edge directly between said first perimeter surface and said second perimeter surface for sealing said at least one filling between said first bread layer and said second bread layer;
 wherein a crust portion of said first bread layer and said second bread layer has been removed.⁶⁴

62. *Id.* at Figs. 1–6 & col. 2.

63. U.S. Patent No. 6,004,596 (filed Dec. 8, 1997). The terms "filling" in the claim could be a basis for an exam question, with certain fillings disclosed in the specification and others not. Also, one could test the use of something other than "bread," such as pizza dough or something else that would have a crust.

A few final considerations on designing a patent exam. First, consider using the various doctrines that are not as technology-intensive, such as the on-sale and public use bars to patentability. The facts surrounding these doctrines tend to be more historical in nature and less technical and therefore are more accessible to students. Second, feel free to create fairly straightforward prosecution histories to test claim construction and prosecution history estoppel. In my experience, subtle distinctions are often overlooked by the students because the process itself is difficult enough.

CONCLUSION

Patent Law is undeniably a difficult class to teach. The doctrine is complex, and the law is full of terms of art that are utterly unintelligible to an outsider. Introducing students to this complexity is incredibly challenging. When the fear of technology is added to this mix, the material can appear impossible to understand to students, particularly those who do not have a technological background. An understanding of patent law, however, is important for any lawyer interested in IP, whether they intend to practice patent law in some form or not, as even issues of valuation and licensing can be implicated by the various doctrines. Thus even corporate lawyers are better served if they have some understanding of patent law. Creating a class that is welcoming to all students, including the poets, makes the class more interesting and affords them a great start in their legal careers.

64. *Id.* at fig. 4 & col. 4.