



CREATIVE CLAIM DRAFTING: CLAIM DRAFTING STRATEGIES,
SPECIFICATION PREPARATION, AND PROSECUTION TACTICS

GEORGE F. WHEELER

ABSTRACT

Patent prosecution is becoming more complex with every new rule, statute, and court decision. Rather than approaching the changes with a glass-is-half-empty view, the author explains why this development is a boon to the importance of skilled patent prosecutors. The author reviews the latest developments that have given added scrutiny to the patent drafting process and provides nine tips to assist patent prosecution in the current environment.

Copyright © 2003 The John Marshall Law School

Cite as 3 J. MARSHALL REV. INTELL. PROP. L. 34

CREATIVE CLAIM DRAFTING: CLAIM DRAFTING STRATEGIES, SPECIFICATION PREPARATION, AND PROSECUTION TACTICS

GEORGE F. WHEELER*

INTRODUCTION

Every year, patent prosecution becomes more difficult. Rule changes, new statutes, and case law developments add complexity to the law. At the same time, the demand for good patent prosecutors has never been greater, as patents have increased vastly in importance since I started practicing patent law in 1977. This is not to say that patent prosecution was ever easy. The United States Supreme Court recognized in the nineteenth century that patent prosecution is exceedingly difficult:

The specification and claims of a patent, particularly if the invention be at all complicated, constitute one of the most difficult legal instruments to draw with accuracy, and in view of the fact that valuable inventions are often placed in the hands of inexperienced persons to prepare such specifications and claims, it is no matter of surprise that the latter frequently fail to describe with requisite certainty the exact invention of the patentee, and err either in claiming that which the patentee had not in fact invented, or in omitting some element which was a valuable or essential part of his actual invention.¹

Before the United States Circuit Court of Appeals for the Federal Circuit (the “Federal Circuit”) was founded in 1982, patents were less important economically than they are now. This is largely because a large proportion of them were found invalid or unenforceable.² In addition, damages for infringement are considerably higher now than in 1982.³ Many companies would choose to “roll the dice” and infringe a patent without taking a license. Even if the patent successfully enforced, the recovery would probably be a modest license royalty.

Before the 1980’s, patent prosecution was a small art practiced by a few people, for the most part attracting little attention. Patents were rarely in the news. Most of the big general practice law firms didn’t have patent attorneys at all, for litigation or

* LL.M., The John Marshall Law School, 1991, J.D., University of Wisconsin, 1977, B.S. Chemistry, University of Wisconsin, 1974. Mr. Wheeler is a partner at McAndrews, Held, & Malloy, Chicago, Illinois. He is admitted to practice before the Wisconsin, Ohio, and Illinois bars, and registered to practice before the United States Patent and Trademark Office. He has served as the Chair of the Chemical Practice Committee of the AIPLA. Mr. Wheeler previously worked for a total of nine years as an in-house patent attorney for The Proctor & Gamble Company and Morton Thiokol, Inc.

¹ *Topliff v. Topliff*, 145 U.S. 156, 171 (1892); *see also*, *Sperry v. Florida*, 373 U.S. 379, 383 (1963).

² Many patents were found unenforceable for “misuse,” a defense that rarely prevails today.

³ *See* Paul M. Janicke, *Contemporary Issues in Patent Damages*, 42 AM. U. L. REV. 691, 693 (1993) (noting the increase in damage awards in the first ten years of the Federal Circuit’s existence).

prosecution. They left that type of work to the attorneys in small patent firms. For the patent bar, big general practice firms were fertile referral sources, not competitors.

The Federal Circuit changed all this when it was created in 1982 to hear all patent appeals.⁴ Patents were much more likely to be found valid in the Federal Circuit. In the early days patents were also more likely to be held infringed, particularly under an expansive doctrine of equivalents. Damages recoveries rocketed, and the big general practice firms fought to obtain lucrative patent litigation work.

Patent jury trials came into vogue, and became a vehicle for sidestepping legal analysis. Cases were put into the jury “black box,” and juries proved to be more pro-patentee than judges and were willing to award large verdicts, which often were affirmed on appeal.⁵ At this time, claims were less important than before, since all one needed to support a jury verdict was some basis on which a reasonable juror could find infringement. The principal issues, including claim construction, either directly or indirectly turned on questions of fact, resolved by juries. Moreover, expert testimony by technological experts and patent experts could often be used to “spin” the meaning of the words of a claim.

More recently, the pendulum has reversed course again. Patents still are far more often found valid than invalid, and rarely are found unenforceable, whether for inequitable conduct or for patent misuse. However, patent trials are increasingly being taken away from juries by the aggressive use of summary judgments, and it is much more difficult to prove infringement than it once was. An enormous damage judgment is not unusual for infringement on a large scale, but first the patent must be found both valid and infringed.

Probably the biggest reason for this shift is the realization that, when the fate of a patent was in the hands of a jury, opponents of the patent had great difficulty deciding just how widely they had to circumvent the patent to avoid its reach. How would a jury of lay people interpret the claims (or would they even pay any attention to them)? Who would the jury regard as wearing the “white hat”? Could the experts convince the jury that the true meaning of the claim was far from its plain meaning?

Recently, the Federal Circuit’s and Supreme Court’s *Markman*,⁶ *Hilton–Davis*,⁷ and *Festo*⁸ decisions, as well as others, have placed great emphasis on the “notice” function of the patent and its prosecution history. Now, following the *Markman*⁹ decision, judges decide what the claims mean, and they do so in great detail. The “plain meaning” of the claim is the principal focus of analysis:

⁴ The Heil Co. v. Snyder Ind., Inc., 763 F. Supp. 422, 424 (D. Neb., 1991).

⁵ See Kimberly A. Moore, *Judges, Juries, and Patent Cases – An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 368 (2000).

⁶ *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996).

⁷ *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512 (Fed. Cir. 1995), *rev’d*, *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997).

⁸ *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558 (Fed. Cir. 2000) [hereinafter *Festo I*], *rev’d*, 535 U.S. 722 (2002) [hereinafter *Festo II*], *on remand*, 2003 U.S. App. LEXIS 19867 (Fed. Cir. 2003) [hereinafter *Festo III*].

⁹ *Markman*, 52 F.3d 967 (Fed. Cr. 1995).

First, we look to the words of the claims themselves, both asserted and nonasserted, to define the scope of the patented invention. . . . [W]ords in a claim are generally given their ordinary and customary meaning¹⁰

“There is a heavy presumption” that claim terms “mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art.”¹¹

Recently, the Federal Circuit has placed great emphasis on the use of general dictionaries to construe the claims.¹² For ordinary words that have no specialized meanings, “standard dictionaries of the English language are the proper source of ordinary meaning of the phrase.”¹³ Technical dictionaries, encyclopedias and treatises “may be used for establishing specialized meanings in particular fields of art.”¹⁴ The relevant definitions of the claim terms are those in resources published as of the date the patents issued, whether in dictionaries, encyclopedias or treatises.¹⁵

Unless compelled otherwise, a court will give a claim term the full range of its ordinary meaning as understood by persons skilled in the relevant art.¹⁶ Where there is more than one possibly pertinent dictionary definition for a word, it may be construed to encompass each alternative, except to the extent the specification or prosecution history clearly demonstrates that one or more of the multiple meanings was not intended.¹⁷

Because words often have multiple dictionary definitions, some having no relation to the claimed invention, the intrinsic record must always be consulted to identify which of the different possible dictionary meanings of the claim terms in issue is most consistent with the use of the words by the inventor. . . . [T]he intrinsic record also must be examined in every case to determine whether the presumption of ordinary and customary meaning is rebutted [by an explicit definition of the term different from its ordinary meaning]. . . . The presumption [that a term has its ordinary meaning] also will be rebutted if the inventor has disavowed or disclaimed scope of coverage, by using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.¹⁸

¹⁰ Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996) (citations omitted); *accord*, Inverness Med. Switzerland GmbH v. Princeton Biomeditech Corp., 309 F.3d 1365, 1369 (Fed. Cir. 2002).

¹¹ Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1202 (Fed. Cir. 2002) (citations omitted).

¹² *Warner Lambert*, 309 F.3d at 1378 (Fed. Cir. 2002); *Princeton Biomeditech*, 309 F.3d at 1369; *Texas Digital Sys.*, 308 F.3d at 1202–03.

¹³ *Warner Lambert*, 309 F.3d at 1378 (Fed. Cir. 2002); *Princeton Biomeditech*, 309 F.3d at 1369.

¹⁴ *Warner Lambert*, 309 F.3d at 1378.

¹⁵ *Id.* at 1378; *Princeton Biomeditech*, 309 F.3d at 1370; *Texas Digital Sys.*, 308 F.3d at 1202–03.

¹⁶ *Id.* at 1203.

¹⁷ *Warner Lambert*, 309 F.3d at 1379.

¹⁸ Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1203–04 (Fed. Cir. 2002)

“As resources and references to inform and aid courts and judges in the understanding of technology and terminology, it is entirely proper for both trial and appellate judges to consult [dictionaries, encyclopedias and treatises] at any stage of a litigation, regardless of whether they have been offered by a party in evidence or not. Thus, categorizing them as ‘extrinsic evidence’ or even ‘a special form of extrinsic evidence’ is misplaced and does not inform the analysis.”¹⁹ “[T]he patent disclosure serves to point away from the improper meanings and toward the proper meanings.”²⁰ The prosecution history “cannot be used to limit the scope of a claim unless the applicant took a position before the [United States Patent and Trademark Office leading one skilled in the art] to believe that the applicant had disavowed coverage of the relevant subject matter.”²¹

Once the claims are construed as a matter of law, few if any material issues of fact regarding infringement usually remain. If infringement is not literal, the doctrine of equivalents is harder to prove than ever. The doctrine of equivalents is applied claim element by claim element, and not to the claim as a whole, which narrows the doctrine’s reach considerably.²² And of course, the doctrine of equivalents narrowly escaped death after the Supreme Court’s *Festo* decision,²³ although it is not yet clear how often the doctrine of equivalents will be applied, particularly if the claim limitation in question has been narrowed during prosecution of the patent in suit.

Therefore, one has a much better chance of figuring out what the claims of a patent mean today, and whether the patentee or its opponent should win. I submit that a competitor of the patentee has much better notice than before of the metes and bounds of the patented invention, aided by review of the specification and prosecution history, and with the help of dictionaries and treatises. That is precisely what the current Federal Circuit is trying very hard to achieve.

One of the early Federal Circuit cases emphasizing the “public notice function” of claims is *Sage Products, Inc. v. Devon Industries, Inc.*²⁴ Some of the Federal Circuit’s more telling reasoning in that case is as follows:

Applied more broadly, the doctrine would conflict with the primacy of the claims in defining the scope of a patentee’s exclusive rights. Thus, for a patentee who has claimed an invention narrowly, there may not be infringement under the doctrine of equivalents in many cases, even though the patentee might have been able to claim more broadly. If it were otherwise, then claims would be reduced to functional abstracts, devoid of meaningful structural limitations on which the public could rely If Sage desired broad patent protection for any container that performed a function similar to its claimed container, it could have sought claims with

¹⁹ *Id.* at 1203.

²⁰ *Warner Lambert*, 309 F.3d at 1378 (citations omitted).

²¹ *Id.* at 1382.

²² *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997). “Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole.” *Id.*

²³ *Festo II*, 535 U.S. 722 (2002).

²⁴ *Sage Prods., Inc. v. Devon Indus. Inc.*, 126 F.3d 1420 (Fed. Cir. 1997).

fewer structural encumbrances Instead, Sage left the PTO with manifestly limited claims that it now seeks to expand through the doctrine of equivalents. However, as between the patentee who had a clear opportunity to negotiate broader claims but did not do so, and the public at large, it is the patentee who must bear the cost of its failure to seek protection for this foreseeable alteration of its claimed structure This court recognizes that such reasoning places a premium on forethought in patent drafting. Indeed this premium may lead to higher costs of patent prosecution. However, the alternative rule – allowing broad play for the doctrine of equivalents to encompass foreseeable variations, not just of a claim element, but of a patent claim – also leads to higher costs. Society at large would bear these latter costs in the form of virtual foreclosure of competitive activity within the penumbra of each issued patent claim Given a choice of imposing the higher costs of careful prosecution on patentees, or imposing the costs of foreclosed business activity on the public at large, this court believes the costs are properly imposed on the group best positioned to determine whether or not a particular invention warrants investment at a higher level, that is, the patentees.²⁵

Returning to the status of patent prosecution today, I submit that the water glass is half-full, not half-empty. The Federal Circuit, in *Sage* and many other cases, has put the onus on the prosecutor to write claims that are infringed, without resort in most cases to the doctrine of equivalents, – the part of the glass occupied by air. The water in the glass is the Federal Circuit's view that if a patent owner wants better claims it must pay for the work necessary to obtain them. That is nothing less than a patent prosecutor's full employment act. The only people who can prosecute patent applications are registered patent attorneys and agents, and only a fraction of the lawyers in the world who call themselves “IP” lawyers are registered patent attorneys.

In other words, you can either look at this extra scrutiny of the patent drafting process as a problem or as an opportunity to make a very good living by developing a high level of skill in patent drafting and prosecution. I prefer the latter view. What follows are nine tips, some of which are variations of well-known themes and others of which come strictly from my own thought and experience.

I. WRITE CLAIMS THAT WILL BE LITERALLY INFRINGED

The first tip I have to offer is that the doctrine of equivalents is a long shot. Certainly, it makes sense for litigators to rely on the doctrine of equivalents when they get into trouble, as with an adverse claim construction, and they are reaching down to the bottom of their bag of tricks. But in my view, prosecutors should not spend most of their time writing claims with the objective of obtaining broader coverage than their literal scope under the doctrine of equivalents. Work hard to get the broadest claims available and a desirable range of narrower claims to protect

²⁵ *Sage*, 126 F.3d at 1424–25 (citations omitted).

against invalidity attacks, rather than pulling your punches in hope of producing a claim that is literally narrow as printed in the patent but effectively broad in litigation.

For the last four years, I have reviewed all the precedential Federal Circuit cases addressing the doctrine of equivalents. My methodology was not sophisticated, and precedential cases are the tip of the iceberg.²⁶ Nonetheless, the results I obtained are illuminating.

Even before *Festo* was decided *en banc* by the Federal Circuit (*Festo I*),²⁷ few cases were being won based on the doctrine of equivalents. In 1999, the year when the panel initially deciding the *Festo* case found infringement by equivalents,²⁸ I found eleven precedential Federal Circuit cases determining the patentee's rights under the doctrine of equivalents. Infringement was found in only three of those cases, one of which was the *Festo* panel decision later overturned *en banc*. So the odds were only two out of eleven, less than twenty percent, in 1999. That's a long shot.

Of all precedential Federal Circuit cases for 2000, most if not all of which were decided before *Festo I* was published, I found twenty precedential cases discussing the doctrine of equivalents. I found no infringement by equivalents in any case, though several cases were remanded for further consideration of this issue. The odds that year, based on my survey, were zero percent. There was essentially no doctrine of equivalents in the Federal Circuit in 2000, even before *Festo I* was decided.

In 2001, in the wake of *Festo I*,²⁹ I found thirty-seven precedential cases that discussed the doctrine of equivalents. Of these, infringement under the doctrine of equivalents was found in only two cases, and was denied in twenty-six cases.³⁰ That's a success rate of two out of twenty-eight, or about seven percent. Those are certainly poor odds.

In 2002, the year of the Supreme Court *Festo* decision (*Festo II*)³¹, I counted seventeen precedential Federal Circuit decisions addressing the doctrine of equivalents. Of these cases, eight decided the issue of infringement under the doctrine of equivalents, while nine cases were remanded by the Federal Circuit on this issue. Infringement was found under the doctrine of equivalents in only one case (affirming the court below). In seven cases the Federal Circuit denied application of the doctrine of equivalents. Thus, infringement under the doctrine of equivalents was found one time in eight. Even though in last year's *Festo* decision, the Supreme Court reaffirmed the importance of the doctrine of equivalents to the patent system, the doctrine of equivalents remains a long shot.

The Supreme Court's *Festo II* decision has given the doctrine of equivalents a relatively small role, in my view. True, amending a claim does not work as an absolute bar.³² But there are more grounds than before for finding an amendment

²⁶ See Appellant's Petition for Certiorari, *Southern Clay Prods., Inc. v. United Catalysts Inc.*, 43 Fed. Appx. 379 (Fed. Cir. 2002) (criticizing the designation of Federal Circuit opinions as "non-precedential."), *cert. denied*, 123 S.Ct. 1259 (2003).

²⁷ *Festo I*, 234 F.3d 558.

²⁸ *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 187 F.3d 1381 (Fed. Cir. 1999).

²⁹ *Festo I*, 234 F.3d 558.

³⁰ Several cases were remanded for further consideration of this issue.

³¹ *Festo II*, 535 U.S. 722.

³² *Festo II*, 535 U.S. at 736.

creates an estoppel. Any amendment made for “reasons relating to patentability” other than avoiding the prior art creates an estoppel.³³

Whatever the influence of *Festo II* as the law develops, the doctrine of equivalents remains what it has always been – an exceptional doctrine to right a manifest wrong at the expense of the notice function of claims.³⁴

Application of the doctrine of equivalents is the exception, however, not the rule, for if the public comes to believe (or fear) that the language of patent claims can never be relied on, and that the doctrine of equivalents is simply the second prong of every infringement charge, regularly available to extend protection beyond the scope of the claims, then claims will cease to serve their intended purpose. Competitors will never know whether their actions infringe a granted patent.³⁵

If a patentee wants the best available protection, the retained patent prosecutor must do the work of discovering the available protection in view of the prior art and obtaining the broadest possible claims to literally cover the invention and reasonably foreseeable variants. Many narrower but non-trivial claims should be provided as fallback positions in case better prior art is found after the patent issues. This usually happens if the patent is worth fighting over. There are several specific steps you can take to accomplish this goal. Some of the following tips may help.

II. DON'T RELY MAINLY ON MEANS-PLUS-FUNCTION CLAIMS; WRITE BROADER CLAIMS TOO

“Means plus function” claiming under 35 U.S.C. § 112, ¶ 6, has not been a safe harbor for patent holders, for the most part. I will not discuss all the complexities of means-plus-function law and practice here, but I did a survey similar to that for doctrine of equivalents above to get some idea of the odds that a means-plus-function claim will be found infringed. In 2000, seventy-five percent of all the precedential Federal Circuit cases I found determining whether means-plus-function clauses were infringed found no infringement. So the typical means-plus-function claim, which commonly is not supported by an extensive recitation of equivalents in the specification, is a long shot as well.

At the beginning of my career, I was taught to use means-plus-function language as a way to expand the literal words used in the claim to cover equivalents. For example, if part A is attached to part B by a rivet in my disclosed embodiment, I was taught to refer to “rivet means,” instead of just a rivet, to expand the claim to cover the equivalents of rivets. Regardless of what was written in the specification, this

³³ *Id.*

³⁴ *Texas Instruments, Inc. v. U.S. Int'l Trade Comm'n*, 805 F.2d 1558, 1572 (Fed. Cir. 1986) (“The doctrine of equivalents . . . exists solely for the equitable purpose of preventing an infringer from stealing the benefit of an invention.”); *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 29 (1997) (“[T]he doctrine of equivalents, when applied broadly, conflicts with the definitional and public notice functions of the statutory claiming requirement.”).

³⁵ *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991).

was thought to include other fasteners such as screws and nails, and possibly even adhesives, welding, or duct tape, if the finder of fact was inclined to be liberal.

The modern case-law reads 35 U.S.C. § 112, ¶ 6 literally. The scope of equivalents is limited to what is disclosed in the specification and its equivalents. In the Federal Circuit, the scope of these equivalents has been narrow.

Section 112 . . . permits means-plus-function language in a combination claim, but with a “string attached.” The “attached string” limits the applicant to the structure, material, or acts in the specification and their equivalents. Indeed the section operates more like the reverse doctrine of equivalents than the doctrine of equivalents because it restricts the coverage of literal claim language.³⁶

A solid means-plus-function claim is just as difficult to draft as any other type of claim. It just moves more of the effort to drafting the specification.³⁷ But functional language can be used to great advantage without using means-plus-function clauses.

[T]he fact that a particular mechanism – here “detent mechanism” – is defined in functional terms is not sufficient to convert a claim element containing that term into a “means for performing a specified function” within the meaning of section 112(6).³⁸

“A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used.”³⁹ Avoiding the use of means-plus-function language is relatively straightforward – the claim is generally not in means-plus-function format if it simply does not use the actual word “means.”⁴⁰

For example, the following is presumed to be, and plainly is, a means-plus-function clause limited to the specific structure disclosed in the specification and its equivalents:

- Means for joining the panel A to the housing B.

Even if you can't come up with anything else, you will at least technically make an opponent's challenge more difficult by changing the above to:

- An element for joining the panel A to the housing B.

This phrase is problematical, however, as it is entirely analogous to a means-plus-function claims, reciting a nonspecific structural word (“element”) followed by a function performed by the element.⁴¹ So go a step further by reciting:

- A fastener for joining the panel A to the housing B.

³⁶ Valmont Indus., Inc. v. Reinke Mfg. Co., 983 F.2d 1039, 1043 (Fed. Cir. 1993).

³⁷ See *infra* Section III.

³⁸ Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583 (Fed. Cir. 1996).

³⁹ See U.S. Patent and Trademark Office, MANUAL OF PATENT EXAMINING PROCEDURE [hereinafter MPEP] § 2173.05(g) (8th ed. 2003).

⁴⁰ Greenberg, 91 F.3d at 1583.

⁴¹ See Mas-Hamilton Group v. LaGard, Inc., 156 F.3d 1206, 1214 (Fed. Cir. 1998) (interpreting “a lever moving element for moving the lever from its disengaged position” as a means-plus-function clause, despite the fact that it does not recite “means”).

This formulation almost certainly is not a means-plus-function clause, as the word “fastener,” though a marker for any discrete structure that accomplishes the aim of fastening, is a well-known name for a limited range of structures.⁴² Still, one would be wise as a patent prosecutor, not to simply assume that this claim covers welding, glue, an interference fit, clamps, or other fastening modalities. One can end-run this problem entirely by refocusing the clause to directly recite the condition of A and B, instead of worrying about how that condition is achieved. The claim could thus recite:

- The panel A joined to the housing B.

I would expect this clause to cover any way to join a panel to a housing, whether employing fasteners, glue, welding, an interference fit, etc., particularly with an expansively written specification.⁴³ It is certainly not a means-plus-function clause, as it does not cite any element nonspecifically, though it does indirectly define a function that must be performed by some structure.

You can go even further, to avoid the argument that the panel A and housing B must be originally separate parts, by changing the above language to:

- The panel A forming a part of the housing B
- or
- The panel A of the housing B.

As the preceding bullet points illustrate, one good way to write a clause of a claim, or an entire claim, is to write a statement descriptive of the embodiment the inventor has described, then start a new line and rewrite the statement to take out a limitation, claim language, or something else that, on further study could be avoided, and continuing the process through several iterations. This is in essence writing your claims backward by starting with a narrow claim and progressively broadening it.

Therefore, don't write the first independent claim that comes to mind, such as a means-plus-function claim, and then put the rest of your attention immediately toward the goal of writing narrower claims. Instead, write what seems to be a suitable claim, then work on successive iterations to broaden it. As you write each claim, stop to think how you would attempt to circumvent it if you were a third party trying to design around it. Then think of a broader claim that avoids that design-around without reading on the prior art. When you are done, you will have written a better independent claim. You can use the limitations of earlier versions to write dependent claims.

III. WRITE THE SPECIFICATION EXPANSIVELY

The Federal Circuit, in *Gentry Gallery*,⁴⁴ *Tronzo*⁴⁵ and other decisions, has focused new attention on the scope of disclosure needed in the specification of a patent to support broad claims, even in mechanical cases. “It is a truism that a claim need not be limited to a preferred embodiment[,] [h]owever, in a given case, the scope of

⁴² See *Greenberg*, 91 F.3d 1580.

⁴³ See *infra* Section III.

⁴⁴ *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1479 (Fed. Cir. 1998).

⁴⁵ *Tronzo v. Biomet, Inc.*, 156 F.3d 1154 (Fed. Cir. 1998).

the right to exclude may be limited by a narrow disclosure.”⁴⁶ The Federal Circuit often limits the plain meaning of a claim when there is limited disclosure, or worse yet, an indication that some feature not addressed by the claim is either essential or prohibited. You can do several things to avoid these difficulties.

First, convey in your specification that there are many ways to carry out the invention. Challenge the inventors to conceive several different embodiments of the invention, with many different features. Describe more than one embodiment when you can do so.

Even if the inventor has provided only a single embodiment, you can introduce broadening language showing that many variations are contemplated. This is particularly important when writing means-plus-function claims. Going back to the preceding example,⁴⁷ in addition to reciting the obvious fact that the rivet C joins the panel A to the housing B in Figure 1, brainstorm a little. State that, instead of a rivet, the panel A could be joined to the housing B in a variety of ways, as by fasteners of any type, glue, an interference fit, the weight of one resting on the other, etc. You might also mention welding or any other way you can think of that is known to those skilled in the art. Then when your competitor comes up with a fastening modality not specifically stated, like binding A and B together with rope, your claims may well be held to include binding with rope, even though you did not think of this specific possibility when writing the specification. In other words, even if no one can think of every possibility, be sure to convey that you have defined the invention to allow for many different possibilities.

A court may read a lot into the disclosure of only a single embodiment in the specification:

The specification shows only a structure whereby the restriction ring is “part of” the cover, in permanent attachment. This is not simply the preferred embodiment; it is the only embodiment This is not a case of limiting the claims to a “preferred embodiment” of an invention that has been more broadly disclosed Nor is this a case of limiting claims to immaterial details of a broader invention as set forth in the specification The summary judgment of literal infringement is reversed.⁴⁸

In *Toro*, the claim language, “said cover *including* means for increasing the pressure,” where the “means” described in the specification was a “restriction ring,” was interpreted such that the restriction ring must be *attached to* the cover as shown in the specification.⁴⁹ So think of other variations, particularly for any element that will be recited in the claims.

Second, couch anything specific in terms of “in this embodiment . . .” or “in one aspect of the invention,” and certainly do not exclude alternatives outside the disclosed embodiment. Don’t follow the lead of the prosecutor who wrote the specifications of the patents litigated in the *SciMed* case.⁵⁰ In *SciMed*, the prosecutor

⁴⁶ *Gentry Gallery*, 134 F.3d at 1479.

⁴⁷ See *supra* Section II.

⁴⁸ *Toro Co. v. White Consolidated Ind.*, 199 F.3d 1295, 1301–02 (Fed. Cir. 1999).

⁴⁹ *Id.* at 1302 (emphasis added).

⁵⁰ *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337 (Fed. Cir. 2001).

wrote a disclaimer in the specification, conceding subject matter that could have otherwise fallen within the scope of the claim language. He wrote: “The intermediate sleeve structure defined above is the basic sleeve structure for all embodiments of the present invention contemplated and disclosed herein”⁵¹

The Federal Circuit held, as a result: “This language defines SciMed's invention in a way that excludes the dual, or side-by-side, lumen arrangement.”⁵² The *SciMed* prosecutor finished the job by writing the rest of the specification consistent with his disclaimer:

SciMed argues that the references to the annular inflation lumen are meant only to refer to the preferred embodiment of the invention, and not to indicate that the claims should be construed as limited to a structure employing coaxial lumens. That argument, however, flies in the face of the many statements in the written description that define “the invention” as employing a coaxial lumen structure and distinguish the prior art in part on the ground that it used a dual lumen structure, which had [stated disadvantages].⁵³

To avoid undue limitation of your claims to the disclosed embodiments, you obviously should avoid writing disclaimers in your specification. Broad claims will be read consistent with any clearly limiting language in the specification. Additionally, don't recite that “the invention” has certain features. State that “this embodiment” employs the features, and where the context permits, state that other embodiments without these features are contemplated as well. Avoid using mandatory language in the specification; use exemplary and broadening language instead.

Also, consider leaving out a recitation of “objects of the invention.” I learned to always recite objects of the invention in every patent application. Since then, I occasionally still recite objects, usually only if I am working for someone who is used to seeing them. It occurred to me one day that I never heard of a patent being found invalid or not infringed for lack of a recitation of objects, or valid or infringed because objects were recited. Objects usually are redundant of the background and summary sections of the specification, and can become a problem in litigation if any are not met by the accused structure.

As the disclosure states, identifying the only purpose relevant to the console, “another object of the present invention is to provide . . . a console positioned between [the reclining seats] that accommodates the controls for both of the reclining seats.” Thus, locating the controls anywhere but on the console is outside the stated purpose of the invention.⁵⁴

⁵¹ U.S. Patent No. 5,156,594 (issued Oct. 20, 1992) at col. 8, ll 3–14; U.S. Patent No. 5,217,482 (issued June 8, 1993) at col. 8, ll 6–17; U.S. Patent No. 5,395,334 (issued March 7, 1995) at col. 8, ll 18–29.

⁵² *SciMed*, 242 F.3d at 1343.

⁵³ *Id.* at 1343–44.

⁵⁴ *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1479 (Fed. Cir. 1998) (citation omitted).

If you do recite objects, make them modest, and state that no particular object needs to be entirely satisfied. If you state more than one object, make it clear that they are alternatives. A formulation I have used, when stating objects, is to recite the following after the objects:

- At least one of the preceding objects is met, in whole or in part, by the present invention, in which [then proceeding to summarize the invention].

This statement is much better than the statement in the *Gentry* patent – , “[f]rom the foregoing description it will be appreciated that the sectional sofa of this invention accomplishes all of the objects of this invention set forth above.”⁵⁵ This is not to say that you cannot state what are the objects of the invention, although you will do better to instead state its potential advantages, again making clear that the invention is not limited to an embodiment having all the stated advantages to the highest degree.

IV. CLAIM IN A CIRCLE, NOT A CHAIN

The United States Patent and Trademark Office (PTO) recommends claiming in a chain, from broad to narrow.

Many of the difficulties encountered in the prosecution of patent applications after final rejection may be alleviated if each applicant includes, at the time of filing or no later than the first response, claims varying from the broadest to which he or she believes he or she is entitled to the most detailed that he or she is willing to accept.

Claims should preferably be arranged *in order of scope* so that the first claim presented is the broadest.⁵⁶

In other words, claim 2 depends from independent claim 1, claim 3 depends from claim 2, claim 4 depends from claim 3, and so forth. Claim 1 is the broadest claim you are brave enough to assert, and the last claim is supposedly the narrowest you are willing to accept.

This practice results in a one-dimensional claim set that is easy for the PTO to examine. The examiner searches claim 1. If the examiner finds good prior art the examiner goes on to claim 2, claim 3, and so forth until the examiner can no longer find good enough prior art to make a rejection of a particular claim. Let us assume that claim 6 is the first one to survive scrutiny. The examiner rejects claims 1–5, finds allowable subject matter in claims 6–10, turns in the office action, and stops. Making the examiner's job easier certainly is commendable, but claiming a chain makes the patent much easier to avoid, in many instances.

One obvious problem with this approach is that it invites the examiner to keep going far down the chain of claims; the examiner assumes you are willing to accept even the last claim in line. That is not to say that you should never write a chain of dependent claims. From the patentee's point of view, a chain of claims is fine for

⁵⁵ U.S. Patent No. 5,064,244 (issued Nov. 12, 1991) at col. 4, ll 48–50.

⁵⁶ MPEP, *supra* note 39, at § 608.01(m) (emphasis added).

expressing gradations of the same limitation. But a single chain of dependent claims introducing different types of limitations will inherently lack some claims of broad or intermediate scope that you should be asserting if you want broad protection, and will contain many claims so narrow that they may be of little use in litigation.

Below is an illustration of the limitations of chain claiming, which is not a problem in these claims:

1. A vehicle having at least one wheel.
2. The vehicle of claim 1, having at least two wheels.
3. The vehicle of claim 2, having at least three wheels.
4. The vehicle of claim 3, having at least four wheels.

Each claim recites a subset of the same limitation in the previous claim. If you are practicing the limitation of claim 4 (four wheels), you necessarily are practicing the limitations of all the preceding claims (respectively, three wheels, two wheels, and one wheel).

Of course, it is not necessary to write the above claims as a chain. They also can be written in “wheel and spoke” format, which I am calling a “circle” here, in which each dependent claim or “spoke” separately depends from claim 1, the “hub”:

1. I claim a vehicle having at least one wheel.
2. The vehicle of claim 1, having at least two wheels.
3. The vehicle of claim 1, having at least three wheels.
4. The vehicle of claim 1, having at least four wheels.

The chain format and the circle format are equivalent in the above examples; the only difference is a matter of style. Of course, if you are enforcing one of these dependent claims in court, the claim chart is also shorter and easier to follow if you use the circle format.

The chain approach can get you into trouble, however, if you have more than one type of feature that might make a dependent claim patentable if the independent claim is not. For example, consider the following chain of claims:

1. A vehicle.
2. Claim 1, with wheels.
3. Claim 2, with a door.
4. Claim 3, with a sunroof.
5. Claim 4, with a headlight.
6. Claim 5, with a motor.

Assume further that the examiner finds claims 5 and 6 patentable but rejects claims 1–4, so a patent issues containing claims 5 (i.e. the combination of claims 1 + 2 + 3 + 4 + 5) and claim 6 (i.e. the combination of 1 + 2 + 3 + 4 + 5 + 6). The problem with this chain of claims is that the claims were allowed for the single reason that they require a vehicle having a headlight, which evidently is not shown by the prior art. These claims contain other limitations (wheels, a door, and a sunroof) that may not have been necessary to allowance, but are necessary to infringe the claims. These surplus limitations give those skilled in the art avenues to design around.

In the above example, the allowed claims (5 and 6) can be designed around by providing a vehicle that has a headlight but not a sunroof. The claims can also be

designed around by providing a hovercraft or a boat with a headlight. A hovercraft and a boat do not have wheels, but get the same benefit from a headlight as any other type of vehicle. The claims are avoided as well by a motorcycle or a bicycle, which do not have doors but can have a headlight.

You can get broader claims, in this example, by originally presenting your claims as a circle, as follows:

1. A vehicle.
2. Claim 1, with wheels.
3. Claim 1, with a door.
4. Claim 1, with a sunroof.
5. Claim 1, with a headlight.
6. Claim 1, with a motor.

The examiner will reject claims 1–4, as above, but may allow claim 5 (1 + 5), which has a feature (a headlight) he or she was unable to find in the prior art. But claim 5 is broader here than it was in the chain prosecution first shown above. With this broader claim in your patent, it is infringed by any vehicle that has a headlight, whether it is a hovercraft, a boat, a motorcycle, a bicycle, or a car that has no sunroof.

With slightly more effort, you can also obtain narrower protection that may be more resistant to invalidating prior art by taking all the rejected claims and making them depend from allowable claim 5. The resulting claims are:

1. ~~A vehicle.~~ (cancelled)
2. Claim 5, with wheels.
3. Claim 5, with a door.
4. Claim 5, with a sunroof.
5. A vehicle with a headlight.
6. Claim 5, with a motor.

Since claim 5 was allowable, any claim depending from claim 5 also is allowable. An infringer will have a harder time avoiding the circle of claims resulting from making each dependent claim depend directly from the independent claim. All the claims listed above yielded only by claiming a circle are as broad or broader than the broadest claims obtained by chain claiming, and cover the subject matter much more comprehensively.

Thus, I recommend that claims be written as follows:

- Identify each feature or combination of a minimum number of features that is not shown in the prior art (in other words, find each combination having just one feature distinguishing each prior art reference);
- Write independent claims for each individually novel feature and for each combination including exactly one novel feature;
- Write dependent claims to the extent desired claiming more than one novel feature (this can be done after prosecution has revealed which independent claims are regarded as patentable, providing there is a basis for each dependent claim in the original specification);
- Write dependent claims to the extent desired claiming narrower versions of the single feature in each independent claim (this also can be done after the broad claims are prosecuted).

This plan is not as complicated as it may look at first blush. The main idea is that the broadest claims submitted commonly should differ from each of the closest prior art references by just one feature. The differentiating feature should be different enough that there is some hope of proving nonobviousness, but when in doubt, claim broadly and fight for patentability.

Why should each broadest claim differ by only one feature from each prior art reference? Because, at least in my experience, an examiner will generally allow a case if the claim has *one element* the examiner cannot find in the prior art, or *one element* the examiner cannot bring into the main reference by properly combining another reference. “To establish a *prima facie* case of obviousness, three basic criteria must be met . . . [T]he prior art reference (or references when combined) must teach or suggest *all* the claim limitations.”⁵⁷

On the other hand, even a large number of individually obvious features, combined in one claim, will not necessarily make it patentable.⁵⁸ So the goal is to find each single feature or single element in a combination that makes a difference to patentability and capture each one in a claim that has no nonessential limitations.

When writing dependent claims, claim a circle, adding each limitation directly to the independent claim. Save chain claiming for variants of the same limitation, like numerical ranges and genus/subgenus/species claims. Finally, do not necessarily present the narrowest dependent claims that you are willing to accept when you file the application. At least get the broadest claims right, and provide a lot of small fallbacks in your specification, so you can bring new features into the claims after you have prosecuted the broad claims to find out what is patentable.

V. THE EXAMINER IS NEVER WRONG

This is a simple point that is often lost on lawyers. Nobody likes to take a position, then be forced by someone else to back off. You might think that examiners are different, since they almost always reject every claim on the first action, but ultimately most applications issue as patents. My experience is that examiners are just as reluctant to retract an initial position as anyone else.

Examiners can be as reluctant to change position as they desire. The PTO productivity incentives give examiners more of an incentive to reject claims, especially in the first application, than to allow claims. If the examiner pushes the applicant into a continuation, the examiner will get more credit for less work, since the first action in a continuation yields the same credit as first action in an original application, for less work.

But lawyers are taught to argue, and they commonly take an explicit position that the examiner is wrong about a rejection: “I am right and you are wrong.” How can you make any progress during examination without gainsaying the examiner, especially when, as is often the case, the examiner has not given the first rejection much thought, and there are holes in it?

⁵⁷ MPEP, *supra* note 39, at § 2142 (emphasis added).

⁵⁸ See *In re Gorman*, 933 F.2d 982, 987 (Fed. Cir. 1991) (affirming a rejection based on a combination of thirteen references).

A better approach is to recognize that you don't need to prove the examiner is wrong to get allowance; you merely need to prove that the prior art isn't good enough. In other words, focus on the prior art, not the examiner. It is the prior art's fault that the rejection will not hold up.

Do not answer a rejection like most people do, which is something like this:

The examiner rejected claim 1 as anticipated by the Smith reference. The applicant respectfully traverses this rejection. The examiner erred in rejecting the claims because the examiner has not pointed to any reference to the tabulating lever of claim 1 in the Smith reference.

Why not answer this way? You are telling the examiner he or she is wrong for rejecting the claim. The examiner has to accept blame to allow the claim. Instead, say this:

The Smith reference does not anticipate, as the reference fails to show the tabulating lever recited in claim 1. Therefore claim 1 is patentable.

The difference in the second response is that you are not saying the examiner has a problem; Smith simply failed to anticipate. In sum, don't personalize your attack as a failing of the examiner. You can not (validly) patent water, even if you are nice to the examiner, but you will get nowhere if you annoy the examiner.

VI. CITE THE MPEP, NOT CASE LAW

A fact often overlooked about the MPEP, the PTO policy manual governing the examiner's work, is that it now contains many reasons why the examiner should allow your claims. Chapter 2100 of the MPEP is a more-recently introduced section covering what an examiner must do to establish a *prima facie* case of obviousness, show the claim is indefinite, address functional claim limitations, etc. One of my favorite quotes from chapter 2100 of the MPEP is this:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.⁵⁹

Many first Office actions do not meet one or more of the quoted requirements.

As a lawyer you know, particularly if you look at the Foreword of the MPEP, that the MPEP is not the highest authority. The Patent Act, Title 35 of the United

⁵⁹ MPEP, *supra* note 39, at § 2142.

States Code,⁶⁰ is the law of the land, and Title 37 of the Code of Federal Regulations⁶¹ has the force of law unless it contradicts the statute. As a lawyer, you know that a statute trumps a contrary rule, and statutes and rules both trump the MPEP. You get your arguments respecting the meaning of the statutes and rules from case law, whenever possible, relying on the rule of *stare decisis*.

But examiners are not lawyers; most of them do not go to law school before or during their careers as examiners in the USPTO. Examiners learn that everything they need to know about patent law is in the MPEP. They are unfamiliar with how to find, cite, and use cases. An examiner may not know, for example, that a Federal Circuit opinion written after the 1952 patent statute was enacted should carry more weight than a 1910 district court opinion relying on a different statute altogether.

To an examiner, arguments based on case law carry little weight. Furthermore, many examiners view a lawyer's argument relying on case law as fast-talking or talking down to the examiner: "I'm a lawyer and you are not, so you must obey me." This attitude overlooks the fact that the examiner has the upper hand during regular prosecution.

These problems can be avoided by relying on authority of any kind only when you need to do so. When you do need to rely on authority, use the MPEP, whenever possible. The examiner can look up the quote at his or her desk, so the examiner doesn't need to worry whether you are quoting out of context, or using one favorable case and failing to mention other unfavorable decisions on point. Additionally, you are citing the one authority the examiner has been told to accept. If you are tempted to rely on a case, at least look in the MPEP case index to see if the same argument has been imported into the MPEP, and thus validated in the eyes of the examiner. If so, cite the MPEP, even if the cited text is quoted from the case.

Again, just use the MPEP cite as a starting point for an argument that the prior art is deficient, the claim is definite, or the like. Do not lecture the examiner on the law.

VII. DON'T PILE ON CLAIM LIMITATIONS OR PATENTABILITY ARGUMENTS.

This is based on a true story; the specific facts have been changed, but the situation occurs frequently.

A prosecutor obtained a patent, and litigators from another firm ended up enforcing it. The original independent claim filed in the patent application recited a salt composition including additive A. During prosecution the claim in question was rejected, so the prosecutor amended the claim by requiring additive A to have a particular particle size range — 5 to 50 microns. The rejection was maintained, so the prosecutor further amended the claim to recite additive B as well as additive A. The examiner found the addition of additive B persuasive, so the claim issued in a patent. Claim 1 as patented thus recited the particle size range of additive A and the presence of additive B.

During enforcement of the patent, the scope of A and B was easily interpreted. The only claim construction issue related to the scope of the particle size range. The

⁶⁰ 35 U.S.C. (2003).

⁶¹ 37 C.F.R. (2003).

debate was whether the claim meant that (1) the average particle size was between 5 and 50 microns, or (2) every particle had to be between 5 and 50 microns in size.

The accused infringer, when developing the accused product, employed a salt composition including additives A and B. The accused infringer attempted to design around by merely circumventing the particle size range limitation, by using a mixture of half 25-micron particles and half 200-micron particles, and urged the second claim interpretation above. Thus, the lawsuit could have been lost because of a dispute concerning the particle size range amendment, which did nothing to get the claim allowed.

There are two morals to this story. First, when possible, interview with an examiner before putting an amendment in the claim, to see if it is likely to make the claim allowable. Not all examiners will give such an indication, but do this if you believe it will be effective with a given examiner. Second, if a limitation proves ineffective to avoid the prior art, don't leave it in the claim. Take it back out of the broadest claim. Otherwise it may give an infringer an easy way to circumvent the claim.

Similarly, add just one limitation to the claim at a time by amendment. If you want to try more alternatives, write each alternative into a different claim. You again want to find each single amendment that yields patentable subject matter, so your claims will be as broad as possible.

Further, when you are presenting a patentability argument, and you have identified several reasons why you can argue the claim is allowable over the prior art, you don't need to make all the arguments at once. For example, assume you can argue that claim 1 has three limitations that the Jones prior art lacks. If you argue that each of the three limitations distinguishes claim 1 from Jones, you have just relied upon each of the three arguments to avoid the Jones prior art. You have no hope of arguing that an accused device has the equivalent of any of the three limitations, at least under *Festo II*⁶² as we know it.

On the other hand, if you only make one of the arguments, and the claim is allowed, you have not argued the other two distinctions over Jones to establish patentability. In court, the litigator can always raise these other distinctions if needed, in a context (outside the PTO) that does not generate an estoppel. But you have preserved two equivalents positions that otherwise would be foreclosed. Of course, a still more enlightened course, when you can avoid the best prior art by asserting any of three different limitations, would be to present three claims, each including just one of the three limitations.

VIII. DON'T WRITE YOUR OPPONENTS' TRIAL EXHIBITS

This is another tip that comes from working closely with litigators in our firm. Litigators are always looking for a single document that makes their point for them. If you need to show two, three, or four documents to make a point, it is a much weaker point. Also, litigators have a trick, when they have a "smoking gun" document that does the whole job. They keep that document in front of the factfinder. For example, if the smoking gun is used in a PowerPoint® slide, the

⁶² *Festo II*, 535 U.S. 722 (2002).

litigator may put the smoking gun up last, and leave the projector on. Alternatively, the document may be put on a trial board that always seems to be on top of the stack, and visible to the jury. That one document, out of thousands, may have an inordinate impact on the result of the case.

Many of us have been inadvertently trained to write smoking guns during patent prosecution. For example, here is a classic Office Action response, in the remarks submitted when amending a claim:

The examiner has rejected claim 1 as anticipated by the Smith reference. Claim 1 has been amended to remove this anticipation by an amendment reciting a tabulating lever. The Smith reference shows no tabulating lever. As amended, the claim is allowable over the Smith reference.

What is wrong with this? You have plainly stated in your own words, in a short passage, that the examiner rejected your claim based on the Smith prior art, and you amended the claim as a result. This would look fine for the accused infringer on a billboard in the courtroom.

Another approach, assuming the same claim amendment was made, would be to write the following remark:

The examiner has asked the applicant to show that Claim 1 is patentable in view of the prior art. Claim 1 recites a tabulating lever, which the Smith reference fails to show. Claim 1 is therefore patentable over the Smith reference.

Why is this better? It makes the same argument without drawing any attention at all to two negative facts: that the claim was REJECTED as ANTICIPATED, and then was AMENDED to avoid the rejection. The main message is that the Smith reference is inferior. Also, this approach makes patent prosecution between the prosecutor and the examiner a win-win scenario. The examiner did not reject you; the examiner just challenged you to show that the invention is patentable over the closest prior art.

To prove what happened here, a challenger must show the claim was amended by reference to one or more marked up claims and the examiner's rejection, as well as your statement. In fact, you can avoid even presenting a marked up claim under the current rules, so all the connecting links would need to be arguments or documents prepared by the litigator, instead of prosecution documents.

Of course, during litigation, a litigator can still show that you did amend the claim, and that the feature of your invention avoiding the Smith reference is your tabulating lever. This tip will not make all your problems go away, but it at least puts a more positive spin on the amendment, and makes the infringer's job a lot harder. It eliminates the smoking gun document.

IX. DON'T JUST OBTAIN A PATENT; BUILD A PATENT POSITION

A patent claim is like a brick — generally useless as a shelter, no matter how big it is. Ten patent claims are like ten bricks. There is no way to keep warm in a house consisting of ten bricks scattered around you with gaps between them: the wind will get around them and go straight to you. Even ten thousand bricks, if positioned with gaps between them, will not keep you warm. But a well-made portfolio of patent claims, blocking every gap in your patent position, is like a brick house made of an unbroken wall encircling you, with a solid roof above. The wind can't get you then, even if you are in a hurricane.

Of course, not every patent portfolio can be like a perfectly mortared, virtually airtight brick house. Prior art creates gaps in coverage that can not always be filled. But you do have a variety of claims at your command. Use all that are applicable to build the best shelter possible for your client. As I have indicated above, take pains to write the broadest available claims. Write many independent claims, each ideally having a different, single distinction over the closest prior art.

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. Claim the business method your client uses to distribute the widgets efficiently. Claim the surface finish on the widgets that makes them better. Get design patents on your client's widgets with surface ornamentation. Get claims with means-plus-function limitations, conventional structural claims, claims with non-means-plus-function functional elements, method claims, composition claims, and improvement claims.

You may choose to start by patenting what your client sells. If you succeed in that endeavor, however, do not stop trying to come up with more claims, particularly by thinking about how competitors will try to circumvent your existing claims and by filling those gaps with more bricks and mortar.

As the market for the invention develops, follow the choices that your client and other manufacturers make, and write narrower claims covering those detailed embodiments more narrowly. I call these “niche claims” — narrow claims that happen to cover the “sweet spots” representing what your client and competitors are doing commercially right now. These niche claims, being narrow, are more protected against the prior art, and yet cover what the competition is doing. A single niche claim is easily avoided, but a brick wall of many niche claims, covering many desirable alternatives, is much harder to avoid. And since each niche claim, individually, is narrow, they are all difficult to invalidate. You actually can have a broad patent position made up largely of narrow niche claims.

Even during litigation, continue to prosecute claims that fix problems found during litigation. Sometimes you can even issue new patents that solve problems in the litigation, and get those patents added to the litigation.

When you are obtaining an extensive patent position, there are several pitfalls you must avoid. First, you need to pay special attention to avoiding double patenting problems. Double patenting has two aspects — same-invention-type double patenting and obviousness-type double patenting. To remedy obviousness-type double

patenting, use terminal disclaimers liberally. Since most patent families now will expire at the same time, after 20 years, a terminal disclaimer will not even cost you any patent term, in most cases. If, however, your patent family comes to contain improvement patents not supported by the specifications of your earliest filed applications, you may want to:

- Avoid putting any obvious variants of the previous claims in the improvement patent application,
- Avoid claiming priority to the original application if it doesn't do you any good anyway. Remember that the original application must support at least one complete claim you are asserting in your continuing application. Otherwise the claim to priority has no value and hastens the expiration of the continuation.
- Keep in mind as well that you can file a terminal disclaimer after a patent has issued.

To avoid same-invention-type double patenting, you need to write all your claims in an organized form that allows you to compare them easily. Keep track of all the claims in all related cases in one plan. In your plan, write all the dependent claims in independent form, including all the limitations of the antecedent claims. That way, you can detect same invention double patenting arising through different combinations in dependent claims.

Another point relating to prosecuting of families of patents: which claims should you emphasize early in prosecution, and which should wait until later? Under the twenty-years-from-filing patent term, you might wonder why anyone would wait to file continuing and divisional patent applications for initially divided out and rejected claims until prosecution of a preceding application was concluded. After all, this reduces the effective term of your later patents, now that a patent expires twenty years after the priority application was filed, regardless of how long one waits to file and prosecute the later case.

But there are reasons to not actively prosecute all your divided-out continuing application claims at once in a barrage of patent applications, many of which are likely to be assigned to a single Examiner. Examiners have a natural tendency to allow broader claims in a later-generation case than in the first application filed. There are at least four reasons for this.

One reason is when you file a first patent application, the examiner has only the benefit of whatever prior art you have disclosed plus whatever additional prior art the examiner finds. The examiner, in most instances, has done a relatively short search, directed only to issued (and perhaps published) United States patent documents and the broadest claims. Many examiners appreciate that they have seen only the tip of the iceberg at this time.

When you file a second or third generation application on essentially the same subject matter, the situation is often much different. If you have carried out Patent Cooperation Treaty (PCT) and foreign patent prosecution, several patent offices have searched in different databases in different languages. Any third-party patent applications filed but unpublished and unpatented at the time of your initial application have issued. Your examiner may have carried out some additional searching, or at least updated the previous search. At this point, the examiner has

reason to be more confident that the potential 102(e) prior art⁶³ has been rooted out. After five to seven years have elapsed, other related patents may have been tested by opposition or reexamination procedures. After an examiner feels comfortable that the necessary prior art is at hand, the examiner has fewer qualms about issuing broad claims.

A second reason why this strategy has value is that, once the examiner has allowed some claims, the examiner has taken a position that the application has at least some merit. Issuing related claims becomes easier for the examiner, as this just reaffirms the validity of the examiner's earlier position.

A third reason why later prosecution is often easier is that you can focus more on claims that were cast aside in previous applications. There is only so much an examiner, or anyone, can do in the limited time the PTO allots for examination of one patent application. If you carry out more examinations, more claims can be evaluated and allowed.

A fourth reason why later prosecution is often easier is that if you can develop a good working relationship with the examiner in earlier cases, the relationship will work to your benefit in later cases. If the examiner can trust you to be reasonable, the examiner will be much more likely to consider your ideas on how the claims at hand can be allowed. Of course, if you play fast and loose with the examiner, it will have the opposite effect.

Moreover, even if the examiner proves intractable, you can isolate and appeal rejected claims or present experimental evidence in some applications without bringing your entire program to a halt, as you at least have some of the claims needed to make a portfolio. Your competitors need to overcome your first line of defense, and worry about what claims in your pipeline will issue in the future and create additional problems.

To take advantage of the comparative ease of subsequent prosecution, while keeping your options open, it makes sense to keep at least one application pending in important cases, even after you are running out of new ideas for claims that are likely to be patentable. One reason for keeping the tree alive, after you think you have harvested all the apples, is that you may find a way to “recapture” and patent a claim you conceded (or failed to think of) earlier in prosecution.

If you need to go into reissue, you can only broaden your claims within two years after the original patent was granted,⁶⁴ but there is no such rule for a continuation of original prosecution.⁶⁵ Also, you are prohibited from recapturing ground given up during original prosecution in a reissue application,⁶⁶ even if you are not broadening the claims or you are acting within two years. Again, no such rule constrains continuation applications claiming priority to the first pertinent application. Moreover, your competitors do not accrue any intervening rights that restrict the enforcement of a continuation application.

If you keep track of what your competitors are doing, you can attempt to write claims supported by an early priority date and reading upon your competitors' products and processes. Of course, if you do this, do tell the PTO about the pertinent

⁶³ 35 U.S.C. § 102(e) (2002).

⁶⁴ 35 U.S.C. § 251 (2003).

⁶⁵ See 35 U.S.C. § 120 (1999).

⁶⁶ *In re Clement*, 131 F.3d 1464 (Fed. Cir. 1999).

competitors' activity you are monitoring. Follow the industry and your competitors, and adapt your claims to them.

Now I will address two other pitfalls to be avoided when prosecuting a family of patents in your quest to obtain a comprehensive patent position. Two cases in particular impose new requirements on a prosecutor who harvests patent rights from an application while filing continuation cases to mine further content out of the patent, as I am suggesting.⁶⁷

The *McGrew* case requires a prosecutor to be diligent in finding and addressing claims published or issued by third parties, and copying those claims into the prosecutor's own application if the application supports the claims and the applicant may be the first inventor.⁶⁸ The absolute deadline for copying claims is one year from the time the claims are published or issued.⁶⁹ If the prosecutor fails to copy the claims in time, even if the applicant is legally the first inventor, the applicant is not entitled to these claims, and thus these claims will represent gaps in the patent position that cannot be filled.

In *McGrew*, the applicant admitted that he was presenting claims to the same invention addressed by claims in the Takeuchi patent.⁷⁰ The Takeuchi patent was issued more than one year earlier, although McGrew claimed priority to an application pre-dating Takeuchi.⁷¹ The Federal Circuit affirmed the Board's rejection of the appealed claims on the sole ground that they are barred under 35 U.S.C. § 135(b) because they were not made within one year of the granting of another United States patent claiming the same or substantially the same subject matter.⁷² The case applied 35 U.S.C. § 135(b) as a "one-year bar" to an applicant who is not in an interference situation.⁷³

The new law amending 35 U.S.C. § 135(b) further complicates this situation.⁷⁴ Now, a claim that is the same or substantially the same as a claim presented in a published United States patent application must be copied within one year of its publication date to avoid the 35 U.S.C. § 135(b) one-year bar.⁷⁵ Under the *McGrew* one-year bar following publication, you should actively work to present in your first application all the claims you hope someday to patent. When your application is published, unless your competitors copy claims in time, you will have reserved to yourself claims that your opponents cannot patent.

35 U.S.C. § 135(b) suggests an additional strategy to place obstacles in the way of competitors. Assume your client is far from developing the invention you are to patent. Assume the inventor can identify the elements a successful product needs to have, but has not yet figured out how to enable those elements, or in a chemical case has not

⁶⁷ See *In re McGrew*, 120 F.3d 1236 (Fed. Cir. 1997); *Symbol Tech., Inc. v. Lemelson Med., Educ. & Research Found.*, 277 F.3d 1361 (Fed. Cir. 2002).

⁶⁸ *In re McGrew*, 120 F.3d at 1237.

⁶⁹ 35 U.S.C. § 135(b) (2000).

⁷⁰ *In re McGrew*, 120 F.3d at 1237.

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.*; see also *In re Berger*, 279 F.3d 975 (Fed. Cir. 2002) (applying the rule of *In re McGrew*).

⁷⁴ 35 U.S.C. § 135(b) (2000)

⁷⁵ *Id.*

discovered any utility for the invention. In other words, you know what to claim, but you can't write a description that satisfies 35 U.S.C. §§ 101⁷⁶ and 112.⁷⁷

One strategy you might employ is to claim the invention, even though you can't support it yet. I will refer to such unsupported claims as "blue-sky claims." When your application is published, the blue-sky claims as filed will be published, whether or not they are patentable in your application. This will start the 35 U.S.C. § 135(b) one year bar running for competitors, even if you never are able to patent these blue-sky claims. Under current law, this strategy may prevent others who discover how to satisfy 35 U.S.C. §§ 101 and 112 from patenting the blue-sky claims in their own applications, unless they copy these blue-sky claims into their own applications within one year after they are published. Those unaware of this issue may be reluctant to copy claims they can't support. This may work to your benefit.

Of course, this strategy might be argued to be unfair to third parties if carried to an extreme, and the law may in the future develop a remedy to address this problem. But the law hasn't developed yet, so this strategy may have some appeal until that point is reached.

X. PROSECUTION LACHES

Now I will address another problem you need to be aware of when prosecuting a family of patents: "prosecution laches."

In *Symbol Tech., Inc. v. Lemelson Med., Educ. & Res. Found., LP*,⁷⁸ the Federal Circuit held that the long dormant defense of prosecution *laches* remains viable. "[A]s a matter of law, the equitable doctrine of laches may be applied to bar enforcement of patent claims that issued after an unreasonable and unexplained delay in prosecution even though the applicant complied with pertinent statutes and rules."⁷⁹

The Federal Circuit relied in part on *Webster*,⁸⁰ summarizing that decision by proclaiming that "a two-year delay was prima facie evidence of unreasonableness."⁸¹ However, in *Crown Cork & Seal Co. v. Ferdinand Guttman Co.*, "the Court held that the presumptive two-year time limit of *Webster* was dictum because it was 'not directly applicable to the precise question of laches upon which the case turned.'"⁸²

Prosecution laches has largely been directed at the up-to-forty-year submarine patent strategy attributed to the most famous accused American patent submariner – Jerome Lemelson,⁸³ and to clear abuses of the privilege of filing continuation

⁷⁶ 35 U.S.C. §101 (1952).

⁷⁷ 35 U.S.C. §112 (1975).

⁷⁸ *Symbol Tech., Inc. v. Lemelson Med., Educ. & Res. Found., LP*, 277 F.3d 1361 (Fed. Cir. 2002).

⁷⁹ *Lemelson*, 277 F.3d at 1363.

⁸⁰ *Webster Electric Co. v. Splitdorf Electrical Co.*, 264 U.S. 463 (1924).

⁸¹ *Lemelson*, 277 F.3d at 1364.

⁸² *Crown Cork & Seal Co. v. Ferdinand Guttman Co.*, 304 U.S. 159, 167 (1938).

⁸³ Mark A. Lemley, *An Empirical Study of the Twenty-Year Patent Term*, 22 AIPLA Q.J. 369, 379 (1994) (discussing the most famous holder of 'submarine patents', Jerome Lemelson.). Lemelson holds nearly 500 U.S. patents on a range of inventions. Among his patents are U.S. Patent No. 5,177,645 (issued Jan. 5, 1993) with a pendency of thirty-eight years; U.S. Patent 5,351,078 (issued September 27, 1994) with a pendency of nearly forty years; and U.S. Patent No. 5,283,641 (issued

applications by refiling an application repeatedly without prosecuting it.⁸⁴ Of course, now that patents only last twenty years from the earliest claimed priority date, you can't run a submarine campaign as long as Jerome Lemelson did. But the *Lemelson* decision does not limit itself to a campaign of more than twenty years, and the recent case of *In re Bogese* affirmed a finding of prosecution laches by the PTO for a series of applications extending seventeen years.⁸⁵ Are you subject to a laches defense if you file a continuation or two more than would be necessary to obtain a patent? Probably not, but there is no defined safe harbor as yet.

Both *McGrew* and *Lemelson* are ideally avoided by the following approach:

- present all your claims right away,
- continue to maintain all rejected claims until it is clear that they cannot be allowed, and
- permit all claims to issue as soon as they are found allowable; fight for the broader claims in separate continuing applications.

In addition to avoiding prosecution laches, if your published application contains broad claims at an early date, under *McGrew* you will be creating a one-year time clock for others, even before any of your claims issues in a patent.⁸⁶ You may be able to pre-empt the field broadly, as you don't need to get the claims allowed to poison the well. You can simply publish them.

XI. REISSUE, DON'T REEXAMINE

I have already advised that the best approach to improve your patent position is to keep an application pending that claims priority back to your earliest cases. But what if you have no pending continuation, either because you were previously unaware of that strategy, or because you inherited a patent prosecuted by someone else, and different claims are needed? If you are confronted with a choice whether to reissue or reexamine your patent, usually reissue is the better course.

Reissue applications, until relatively recently, were extremely unpalatable to most people, except in the instance where new, problematic prior art was discovered after the original patent issued. The reason was simple – the applicant had to provide a very detailed recitation of every alleged error, specifying what was the error, when the error occurred, and when and under what circumstances it was discovered.⁸⁷ The MPEP states:

Reissue oaths or declarations must point out specifically what the defects are and how and when the errors arose, and how and when errors were discovered. If additional defects or errors are discovered after filing and during the examination of the application, a supplemental reissue oath or declaration must be filed pointing out such defects or errors and how and

February 1, 1994) with a pendency of thirty-nine years. Lemelson has at least fifteen patents that stem from a single application on December 24, 1954. *Id.*

⁸⁴ *In re Bogese*, 303 F.3d 1362 (Fed. Cir. 2002).

⁸⁵ *Id.*

⁸⁶ *In re McGrew* 120 F.3d 1236, 1237 (Fed. Cir. 1997).

⁸⁷ 37 C.F.R. § 1.175 (1992).

when they arose and how and when they were discovered. Any change or departure from the original specification or claims represents an “error” in the original patent under 35 U.S.C. 251 and must be addressed in the original, or a supplemental, reissue oath or declaration under 37 CFR 1.175.⁸⁸

In many instances, the error was pinned on the prosecuting attorney, which often made life very difficult for that attorney. It is easy for a client to start from the proposition that an attorney has confessed error and leap to the conclusion that he or she is incompetent. The inventors were not happy if the error was blamed on them, either. The PTO often requested more and more particulars, and any new rejection requiring an amendment led to the identification of an additional error that had to be confessed. Writing and filing an acceptable oath often dominated the reissue process.

Fortunately, the bad old days of reissue are over.⁸⁹ Now, the applicant need only identify one error, even if more than one error is being corrected:

Applicant need only specify in the reissue oath/declaration one of the errors upon which reissue is based. Where applicant specifies one such error, this requirement of a reissue oath/declaration is satisfied It is not necessary, however, to point out how (or when) the error arose or occurred. Further, it is not necessary to point out how (or when) the error was discovered.⁹⁰

The specified error can be of a very minor or innocuous character, such as that one narrow claim is missing a word, or new prior art was discovered after the original patent issued. That's it. You do not need a donkey to pin the tail to.

After that, at the end of prosecution you simply file a supplemental oath stating that all the other errors were made without deceptive intent. No gory details are necessary at any time. You no longer need to write your opponent's Exhibit A to reform your patent.

Of course, you can still reexamine your patent, which does not require you to allege an error, though you do need to find a substantial new question of patentability. Most applicants favor not admitting an error. But now that the onerous oath has been overturned, other advantages of reissue become more important.

Today, reissue has several advantages over reexamination.

- You can file broader claims than those within the original patent within two years; if you broaden in some respects, you can later broaden in other respects.
- You can address more types of errors. Reexamination must be based on new published or patented prior art. Reissue can be based on unpublished art (like public use or “on sale” activity), errors under 35 U.S.C. § 112, typographical errors, inventorship errors, and others.

⁸⁸ U.S. Patent and Trademark Office, MANUAL OF PATENT EXAMINING PROCEDURE § 1414 (6th ed. 1995).

⁸⁹ See 37 C.F.R. § 1.175 (1997).

⁹⁰ MPEP, *supra* note 39, at § 1414.

- Reexamination is concluded in one proceeding, generally allowing only two Office actions and no continuation practice. You can file a continuation of a reissue application.
- Once ordered to proceed, no one can abandon a reexamination. The procedure necessarily ends in a certificate passing judgment on the claims. If you stop prosecuting while the claims are rejected, the claims are cancelled. A reissue application can be abandoned, though one needs to think about what one says in a reissue application, to avoid embarrassment if the proceeding is later abandoned. Your competitors have access to the file.
- Anyone can track a reexamination on the public Patent Application Information Retrieval ("PAIR") system. For some reason, reissue applications are not available on the public PAIR system, even though you do have access to the paper file.

The single problem with reissue is that, despite what you read in the MPEP, it is very slow. Reissue applications commonly are pending for several years before being issued.

Reissue practice has become more popular today than reexamination practice. You can see this by looking in the Official Gazette⁹¹ each week, where the PTO publishes a notice of each reissue application and each request for reexamination a few months after it is filed. You will find today that there are usually, if not always, far more reissue applications than reexaminations. This reverses the trend, compared to before the reissue rule was liberalized.

Finally, what if some claims in a patent are clearly invalid, others are not, and your client does not want to undergo the costs and risks of additional prosecution in a reissue or reexamination? In this instance, if you do not seek additional patent claims, you can do what you want to do by disclaiming the clearly invalid claims.

In sum, if you need to correct a patent, reconsider using reissue practice, or in some instances a disclaimer, instead of reissue.

X. CONCLUSION

I hope I have given you at least some new ideas about how you can prosecute patents more successfully. Consider using some of them in your daily practice. Once again, the nine tips are:

- Tip #1: Write Claims That Will Be Literally Infringed
- Tip #2: Don't Rely Too Heavily On Means-Plus-Function Claims
- Tip #3: Write The Specification Expansively
- Tip #4: Claim In A Circle, Not In A Chain
- Tip #5: The Examiner Is Never Wrong.
- Tip #6: Cite The MPEP, Not Case Law.
- Tip #7: Don't Pile On Claim Limitations Or Patentability Arguments.
- Tip #8: Don't Write Your Opponents' Trial Exhibits.
- Tip #9: Don't Just Obtain A Patent; Build A Patent Position

⁹¹ Off. Gaz. Pat. Office