Bad Patent Claims—The Patent Litigator's Nightmare

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Every patent issued by the US Patent and Trademark Office (USPTO) must include at least one claim. This is a requirement of the patent statute, 35 U.S.C. § 112, second paragraph:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

A patent claim sets the legal bounds of the technical area within which the patent owner has the legal right to exclude others from making, using, and selling. As required by the statute, each claim must precisely define the limits of the invention it covers, and each claim must be supported by the teachings of the remainder of the patent specification. Claims are not technical descriptions of the disclosed inventions but are legal documents like the descriptions of lands by metes and bounds in a deed which defines the area conveyed but do not describe the land. It is the claim, not the specification, which distinguishes what infringes from what does not.

A patent claim can be thought of as a thing sitting on a raft, floating on the sea of prior art. Fall into the sea, and your claim drowns—it is invalid. Stay in the middle of the raft, and your claim is safe from the prior art, but it also protects very little—what patent attorneys sometimes call a "picture claim." Claims that are broader than the basic aspect of the invention also can be drafted—right up to the edge of the raft—that is, right up to the edge of the prior art. These claims, if fully supported by the patent specification, should be very good claims—claims that not only protect the invention, but they also are designed to capture what the inventor's competitors might try to make in "their versions" of the invention.

Patent infringement, either literal or by equivalence, is determined solely by comparing an accused product, not with a preferred embodiment described in the specification, or with a commercialized version of the patentee's invention, but with the properly and previously construed claims in suit. In other words, it is only the claims that define the exclusive rights of a patent. The disclosure of a patent is in the public domain but for what the claims forbid. In addition, for purposes of infringement, each claim of a patent defines a separate invention. That is, each claim of a patent defines a separate right to exclude. One claim of a patent may be infringed without another being infringed.

The Claim Is the Name of the Game

Many patent practitioners, myself included, start writing claims as the first step of the patent drafting process. Once we know what the invention is—as claimed in the middle of the raft—we can then develop other claims to help better protect the invention, to the broadest extent available, avoiding the prior art, and covering what we think the competition will change in attempts to make other versions of the invention. Only at this stage are we ready to draft a complete specification that describes how to make and use the invention and all of the variations thereof that have been claimed. Clearly this process takes time and effort, both of which can be expensive. Claim drafting is generally the most expensive part of the patent drafting process. But if the claims fail to particularly point out and distinctly claim the subject matter which the applicant regards as his invention, they can and should be held invalid, either by the USPTO or by the courts in litigation.

Recently I heard an in-house patent counsel complain to a room full of outside patent attorneys that nobody knows how to write claims anymore. I don't believe that this statement is true, but it does reflect a perception that is common among in-house patent counsel. Why is this belief common? What has caused this perception? Is it a reality?

There are many contributing factors:

- Cost controls can lead to poor claim drafting.
- Poor patent disclosure documents can result in poorly drafted claims.

- Inexperience of the claim drafter can result in poorly drafted claims.
- Poor language and grammar skills can result in poorly drafted claims.

But these problem areas can and should be corrected, at the latest, during prosecution of the patent application in the USPTO. Patent examiners can and should make rejections so that the claims that issue are in compliance with the rules of the USPTO. If a bad claim makes it out of the USPTO, the patent owner often will not notice the error until litigation occurs. At this stage, it is typically too late to fix a bad claim. As one judge said:

> It is the job of the patentee, and not the court, to write patents carefully and consistently.

How does a bad claim come to light during litigation? The answer to this question is now commonly known by one word: MARKMAN.

Over ten years ago, in the case of *Markman v. Westview Instruments, Inc.*, Justice Souter delivered the opinion of the Supreme Court regarding the issue of patent claim construction, which is summarized as follows:

> The question here is whether the interpretation of a so-called patent claim, the portion of the patent document that defines the scope of the patentee's rights, is a matter of law reserved entirely for the court, or subject to a Seventh Amendment guarantee that a jury will determine the meaning of any disputed term of art about which expert testimony is offered. We hold that the construction of a patent, including terms of art within its claim, is exclusively within the province of the court.

In the *Markman* decision, the Court held that construing the meaning of language in a patent claim is solely a question of law to be determined by a judge, not a question of fact for a jury. Competitors should be able to rest assured, if infringement litigation occurs, that a judge, trained in the law, will similarly analyze the text of the patent and its associated public record and apply the established rules of construction, and in that way arrive at the true and consistent scope of the patent owner's rights to be given legal effect.

Under *Markman*, the first step in determining patent infringement is for the court to interpret each claim in the litigation to ascertain its precise scope and meaning before comparing it to the accused device. In the second step, the court determines whether the claims "read on" the accused device; that is, are all elements of the claim found in the product or process of the person charged with being an infringer.

Common Claim Construction Rules

- Usually, each claim in a patent has a different scope.
- Usually, a dependent claim has a narrower scope than the claim from which it depends.
- Usually, an independent claim has a broader scope than a claim that depends from it.
- Usually, claims are not limited to the preferred embodiment disclosed in the specification.
- Usually, different words in a patent have different meanings.
- Usually, the same word in a patent has the same meaning.
- Usually, the meaning should align with the purpose of the invention described.
- Usually, general descriptive terms are given their full meaning.
- Usually, if possible, claims should be construed so as to preserve their validity.
- Usually, absent broadening language, numerical ranges are construed exactly as written.
- Usually, absent recitation of order, steps of a method are not construed to have a particular order.
- Usually, absent highly persuasive evidentiary support, a construction should literally read on the preferred embodiment.

Thus, following these common claim construction rules, the District Court judge must construe the words of the patent claims that are at issue in a given case. Terms used in patent claims are to be given the ordinary meaning that a person having ordinary skill in the art would have given them at the time the invention was made, unless it appears that the inventor used them differently and was clear in the specification that a different meaning was intended. Patent claims do not exist in a vacuum; they are a part of the entire patent document, which includes the specification, the drawings (if any) and the claims. Thus, the Federal District Courts, when called on to determine the meaning of patent claims, are charged with determining the ordinary meaning of the claim language, and the courts are encouraged to resort to both the specification and the prosecution history to determine if the inventor used the disputed terms differently than their ordinary accustomed meaning. The claims are the starting point.

Examples of Claims That Hurt

Now that you know why claims are so important in patent protection, we can review a few cases in which claim errors hurt the patent owner.

Case 1—*Lipitor*

In August of 2006 in the case of *Pfizer Inc. v. Ranbaxy Laboratories Ltd.*, Pfizer's basic patent, which provides generic coverage on its top-selling drug Lipitor, was upheld by the Court of Appeals for the Federal Circuit, but a second, longer-running patent, with a claim directed specifically to the active ingredient of that drug, was ruled invalid due to a technical defect in the claim that covered the active ingredient.[1]

This means that while Pfizer still has patent protection on the cholesterol-cutting drug until the expiration of the generic '893 patent, it no longer has patent protection up to the expiration date of the '995 patent. This ruling reduces the period of patent protection on Lipitor by about 15 months, a critical amount of time, considering that sales of this drug totaled $12.2 billion in 2005. When a pharmaceutical company loses patent protection on a brand-name drug, the price typically plunges in the face of generic competition, and sales typically sink to a fraction of the original level.

The ruling was the result of a patent infringement suit brought by Pfizer against Ranbaxy Laboratories Ltd., the Indian maker of generic drugs that filed an application with the Food and Drug Administration to produce a generic version of Lipitor. Ranbaxy argued on appeal that the '893 patent claims did not cover Lipitor, and that the '995 patent claim to Lipitor was invalid. They won only the second argument, where the appellate court reversed the decision of the district court, invalidating the claim to Lipitor as being in violation of 35 U.S.C. 112, fourth paragraph, which requires:

> . . . a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

Pfizer only asserted dependent claim 6 of the '995 patent. This claim depends from Claim 2, which further depends from Claim 1. Claim 6, as issued, reads:

> 6. The hemicalcium salt of the compound of claim 2.

Claim 2 is another dependent claim, which refers to and narrows the scope of Claim 1. Claim 2 reads as follows:

> 2. A compound of claim 1 which is [R-(R*R*)]-2-(4-fluoropheny1)-13-6- di hydroxy-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)carbonyl]-1H-pyrrole-1-heptanoic acid.

Claim 1, which is limited by Claim 2, reads as follows:

> 1. [R-(R*,R*)]-2-(4-fluoropheny1)-13,6-dihydroxy-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)-carbonyl]-1H-pyrrole-1-heptanoic acid or (2R-trans)-5-(4-fluoropheny1)-2-(1-methylethyl)-N,4-diphenyl-142- (tetrahydro-4-hydroxy-6-oxo-2H-pyran-2-ypethyl]-1H-pyrrole-3-carboxamide; or pharmaceutically acceptable salts thereof.

To recap; Claim 6 recites a single salt compound, the "hemicalcium salt" of the compound of Claim 2. Claim 2, in turn, is dependent on Claim 1, and recites a single compound, known as atorvastatin acid. Notably, Claim 2 does not include the pharmaceutically acceptable salts of atorvastatin acid, which are recited only in Claim 1, which recites the compounds (1) atorvastatin acid; (2) atorvastatin lactone; and (3) pharmaceutically acceptable salts thereof.

The district court found that claim 6 was unambiguous to the extent that the patentee intended to claim the hemicalcium salt of atorvastatin acid. The court further recognized that as a matter of standard chemical nomenclature, chemists typically refer to a salt of an acid, even though they are aware that the complete acid is technically no longer present in the salt form.

What's Wrong With Claim 6?

- Does Claim 6 add more elements or limitations to Claim 2?—No.
- Does Claim 6 specify some particular aspect of Claim 2?—No.
- Does Claim 6 narrow the scope of Claim 2?—No.

The appellate court fully recognized that the patentee was attempting to claim what might otherwise have been patentable subject matter. The court stated that claim 6 could have been properly drafted either as dependent from claim 1 or as an independent claim, *i.e.*, the hemicalcium salt of atorvastatin acid.

The appellate court refused to rewrite the claim to preserve its validity, stating that if the only claim construction that is consistent with the claim's language and the written description renders the claim invalid, then the claim is simply invalid.

What can Pfizer do now? One idea is to seek correction of the '995 patent by way of reissue. Claim 6 has been found invalid as written due to a technical defect, and thus the patentee has a right to correct this by way of reissue. Cancel Claim 6 and add a new claim that properly covers the hemicalcium salt of atorvastatin acid.

Case 2—How Hot Is My Dough?

In *Chef America Inc. v. Lamb-Weston Inc.*, the Federal Circuit held that a claim requiring that dough be brought to a temperature of about 400°F to 850°F required that the dough itself rather than the oven in which it was being heated had to achieve the stated temperatures. In making this claim construction, there was no infringement when dough was heated in an oven and the oven was at a temperature in the range. The appellate court was not persuaded that the oven temperature was what was meant even when it was pointed out that if dough were heated to the top end of the stated range it would be turned into charcoal.

Claim 1 of U.S. Patent No. 4,761,290, reads as follows:

> 1. A process for producing a dough product which is convertible upon finish cooking by baking or exposure to microwaves in the presence of a microwave susceptor into a cooked dough product having a light, flaky, crispy texture, which comprises the steps of: providing a dough; applying a layer of shortening flakes to at least one side of said dough; coating a light batter to a thickness in the range of about 0.001 inch to 0.125 inch over said at least one side of said dough to which said shortening flakes have been applied; heating the resulting batter-coated dough to a temperature in the range of about 400°F to 850°F for a period of time ranging from about 10 seconds to 5 minutes to first set said batter and then subsequently melt said shortening flakes, whereby air cells are formed in said batter and the surface of said dough; and cooling the resulting dough product.

Note the following language of this claim and think about what it really says to do to this dough product:

> heating the resulting batter-coated dough to a temperature in the range of about 400°F *to* 850°F

The question for the court was whether: (a) the dough itself is to be heated to that temperature or (b) the claim only specifies the temperature at which the dough is to be heated, *i.e.*, the temperature of the oven. The Court said, sorry, while we know what you intended to claim (only the oven temperature), the claim makes perfect grammatical sense, and must be interpreted as written. The claim requires heating the dough to 400°F to 850°F, at which point it would be burnt to a crisp.

What Went Wrong?

Basic rules of claim construction were missed by the inventors, the patent owner, and the litigating attorneys. Did any of these folks notice the "to" language as being different from the teaching of the specification? Certainly the accused infringer noticed the claim language, which was not practiced by their version of the invention. They simply heated the oven to a temperature in the range specified in the claim—the dough itself never got that hot.

Case 3—Do Not Rely on the USPTO's Claim Construction

In October of 2006, in *SRAM Corp. v. AD-II Engineering*, the Court of Appeals for the Federal Circuit reversed the district court's grant of summary judgment of infringement in favor of the patentee SRAM, and remanded the case for a determination of the effect of the prior art on the properly construed claim.

After reexamination, Claim 16 of U.S. Patent No. 4,900,291 reads as follows:

> 16. In a bicycle derailleur gear shifting system having a rear derailleur shifting mechanism, a shift actuator rotatably mounted on a bicycle handlebar generally coaxially of the handlebar, said shift actuator being mounted on and engaged over an outside of the handlebar inboard of a fixed handgrip on an end of the handlebar, and control cable means operatively connecting said actuator to said shifting mechanism, a method of performing down-shifting events from a relatively smaller origin freewheel sprocket to a relatively larger destination freewheel sprocket, which comprises: first rotating said shift actuator a sufficient amount to take up substantially all of the cumulative lost motion in said derailleur mechanism and said cable means; and then rotating said shift actuator a further amount so as to move the bicycle chain at least substantially the distance between the centers of said origin and destination sprockets.

On appeal, AD-II argued that the District Court was too narrow in its construction, and that a proper broad construction of the claims would render them invalid over prior art. The appellate court agreed that the construction by the District Court was too narrow. During prosecution (and three reexamination proceedings) the patent examiner construed the claim as if it defined the specification terms "precision indexed downshifting." This same claim construction was adopted by the district court. But look for those words in Claim 16—they are not there.

On appeal, the Federal Circuit gave those interpretations no deference. The appellate court held that:

> [P]aradoxically in this case, the PTO construed the claim narrowly, rather than broadly, by reading in the same limitation as did the district court. In doing so, the PTO erred for the same reasons as did

the district court. The Patent Examiner's actions thus provide no support for SRAM's argument. Furthermore, this court is not bound by the PTO's claim interpretation because we review claim construction de novo.

Case 4—How Fragile Is Your Gel?

In October of 2006, the Eastern District of Texas granted summary judgment of invalidity in *Halliburton Energy Services, Inc. v. M-I, LLC* because the claim language in dispute, namely "fragile gel," was indefinite and thus invalid under 35 U.S.C. 112, second paragraph.

Halliburton owns US Patent No. 6,887,832, which is directed toward a method for drilling, running casing in, and/or cementing a borehole in a subterranean formation without significant loss of drilling fluid. Most of the claims of '832 patent include the terms "fragile gel" or "fragile gel drilling fluid" that is defined in the specification of the patent as follows:

> A "fragile gel" as used herein is a "gel" that is easily disrupted or thinned, and that liquifies or becomes less gel-like and more liquid-like under stress, such as caused by moving the fluid, but which quickly returns to a gel when the movement or other stress is alleviated or removed, such as when circulation of the fluid is stopped, as for example when drilling is stopped. The "fragileness" of the "fragile gels" of the present invention contributes to the unique and surprising behavior and advantages of the present invention.
>
> The gels are so "fragile" that it is believed that they may be disrupted by a mere pressure wave or a compression wave during drilling. They seem to break instantaneously when disturbed, reversing from a gel back into a liquid form with minimum pressure, force and time and with less pressure, force and time than known to be required to convert prior art fluids from a gel-like state into a flowable state.
>
> When drilling is stopped while using a drilling fluid of the present invention, and consequently the stresses or forces associated with drilling are substantially reduced or removed, the drilling fluid forms a gel structure that allows it to suspend drill cuttings and weighting materials for delivery to the well surface. The drilling fluid of the invention suspends drill cuttings through its gel or gel-like characteristics, without need for organophilic clays to add viscosity to the fluid. As a result, sag problems do not occur. Nevertheless, when drilling is resumed, the fragile gel is so easily and instantly converted back into a liquid or flowable state that no initial appreciable or noticeable pressure spike is observed with pressure-while-drilling (PWD) equipment or instruments. In contrast, such pressure spikes are commonly or normally seen when using prior art fluids.

Halliburton argued that the terms can be construed (based on the specification language), while Defendant M-I argued that they cannot be construed. Concurrent with its claim construction briefing on the '832 Patent, M-I moved for summary judgment that the asserted claims of the '832 Patent are invalid because the term "fragile gel drilling fluid" is indefinite under 35 U.S.C. § 112, ¶ 2 and cannot be construed.

The District Court judge concluded that the claims are invalid as a matter of law because they are indefinite. "The Court is unable to construe 'fragile gel drilling fluid' or 'fragile gel' such that those terms would have a meaning that is not purely subjective."

I don't know if Halliburton will appeal this decision to the Federal Circuit. But if they did, they could obtain at least a remand in my opinion, as it appears to me that there is a question of fact regarding what the teachings of the specification and the language of the claims would mean to a person having ordinary skill in this art. The following language clearly sets forth a comparative test:

> Nevertheless, when drilling is resumed, the fragile gel is so easily and instantly converted back into a liquid or flowable state that no initial appreciable or noticeable pressure spike is observed with pressure-while-drilling (PWD) equipment or instruments. In contrast, such pressure spikes are commonly or normally seen when using prior art fluids.

I believe that this language, if properly interpreted by a person having ordinary skill in this art, would make the claim language definite, as it appears to define a test for the determination as to whether a drilling fluid is a fragile gel or not. Terms like "initial appreciable" and "noticeable" are somewhat vague, but not necessarily so when put into the context of conventional drilling fluids, as required in the final sentence quoted above. So the person having ordinary skill in this art test is simple—conventional drilling fluids show a "noticeable" or "initially appreciable" pressure spike as measured with PWD equipment and fragile drilling fluids do not.

We'll see if this case comes out of the Federal Circuit in 2007.

Case 5—Random Markman Comments from the Court

In January of 2006, in *Maytag v. Electrolux* (ND Iowa), a patent infringement action, involving patents for plastic washing machine baskets and the process for making

them, the court, in its Markman Order, included the following comments:

> As has been the case in nearly all of the patent litigation that has come before this court, these and the other pertinent issues are both hotly contested and ably argued by both sides, even where particular disputes seem, at first blush, to be merely nit-picky, if not downright implausible. In this context, one of the parties cited this apt excerpt from a remarkably wise children's story:
>
> "When I use a word," Humpty Dumpty said, in rather a scornful tone, "it means just what I choose it to mean—neither more nor less."
>
> "The question is," said Alice, "whether you can make words mean so many different things."
>
> "The question is," said Humpty Dumpty, "which is to be master—that's all."
>
> [Lewis Carroll, *Alice's Adventures in Wonderland and Through the Looking Glass* 219 (George Stade ed., 2004) (1871)].

The irony in this case is that it is not altogether clear to the court just who is being Humpty Dumpty.

Case 6—You Put WHAT in the Claims?

Here is my final example of a "bad" claim. Quoted below is Claim 9 copied from US Patent Publication No. 2004-0161257A1, published by the USPTO on August 19, 2004:

> 9. The method of providing user interface displays in an image forming apparatus which is really a bogus claim included amongst real claims, and which should be removed before filing; wherein the claim is included to determine if the inventor actually read the claims and the inventor should instruct the attorneys to remove the claim.

Note, on November 7, 2006, a Preliminary Amendment was filed to cancel Claim 9, over three years after the application was filed, and over two years after the publication date. Here are the relevant remarks:

> *For the record:* Before the application was filed and before the inventor signed the declaration, the undersigned was instructed to delete claim 9. Through an oversight, claim 9 remained when the application was filed. Shortly thereafter, the undersigned was reminded to cancel claim 9. A preliminary amendment was prepared one week after the application was filed, but filing of the preliminary amendment was deferred until the application number was known. This preliminary amendment belatedly addresses the oversight.

What will a litigator do with this?

Practical Tip—Tactics to Avoid "Bad" Claims

Human nature being what it is the person who writes the claims is often the last person who will notice an error therein. You read claims that you have written as you intended them to be, not necessarily as they actually are. Thus, I recommend that before the issue fee is paid on a pending patent application, that someone who did not write the claims, should read them, and look for technical and/or grammatical errors. Better, that person could draw a claim chart of at least two columns, including the claim language on one side and the suggested plain meaning that the person having ordinary skill in this art (and judges) should ascribe to the claim language. If your patent has already issued, I suggest that the same review be made as soon as you think the patent will be litigated. The time to fix claiming errors is before the courts decide that the claims are invalid.

Note

1. *See*, United States Patent Nos. 4,681,893 and 5,273,995.