

PATENT CLAIMS: AN INTRODUCTION FOR THE PATENT-NEWBIE

If you are reading this, then some twist of fate has created a compelling need for you to become acquainted with the basics of patent law. Welcome, patent newbie! For most lay people, patent law is like a giant loaf of dry white toast.¹ And, newbie, you're about to consume a few slices of that dry white toast.

To keep your 'meal' to a minimum, this discussion will focus on one of the fundamental patent law concepts: patent claims (what they are).² The meal will include: appetizers (brief discussions of what a patent is and what a patent is not); a salad (a brief discussion of how one obtains a patent, i.e., a patent application, of which the claims are the most important part); and the main course (a detailed example comparing a patent claim to a fence that encloses a piece of land). Bon appetite!

All of this should leave you with an understanding of the following: a patent is an exclusionary right, i.e., a right to exclude others from trespassing on (infringing) the patentee's 'plot' of intellectual property; and the boundaries of the patentee's plot of intellectual property are defined by the claims, like a fence marks the perimeter of a plot of land.

WHAT A PATENT IS NOT

A patent is an example of intellectual property.³ Other examples of intellectual property are copyright and trademark. In contrast to patents, most lay people seem

¹ Admittedly, I base this remark primarily on personal experience and anecdotal evidence. Yet even on such a basis, it seems safe to state that the great majority of lay people have little awareness, and even less understanding, of Patent Law. As such, the great depth, breadth and complexity of Patent Law make it like a giant loaf dry white toast for which most lay people have little appetite. As my many years of practicing Patent Law suggest, I happen to like that dry white toast.

² This paper will focus on U.S. patent law only. A U.S. patent conveys rights that are only effective in the U.S.A.

³ Our law organizes property into two categories, real and personal. Real property refers to land, buildings and fixtures attached to land or buildings. Real property generally cannot be moved. By contrast, personal property is property that generally can be moved. Examples of personal property that are familiar to most lay people are physical things. But personal property also includes intangible property, i.e., property that is not tangible. Intangible property derives its value not from its physical attributes (it has none), but from its intellectual content. As such, it is commonly referred to as intellectual property.

to have a greater awareness of copyright law and trademark law, though most lay people tend not to understand these well either.⁴

WHAT A PATENT IS NOT

Let's first address what a patent is not. For those few amongst that great majority who are willing to hazard answering the question, there seems to be a general notion that a patent is some sort of governmental permission to do something with one's invention (such as make it, use it or sell it). That notion is incorrect. A patent is something different. So what really is a patent?

WHAT A PATENT IS

A patent is an exclusionary right.⁵ Here, the use of the adjective "exclusionary" means that this is a right to exclude others from your invention. More specifically, it is the right to exclude others from making or using or selling your invention.⁶ In this regard, a patent is a sword that can be used to exclude others, not a shield.

THE PATENT APPLICATION (HOW ONE OBTAINS A PATENT)

Before discussing some of what can be done with a patent, it is helpful to first discuss how one goes from having invented something to having a patent that protects the invention.

To obtain a patent in the USA, an applicant prepares a patent application and files the patent application with the United States Patent and Trademark Office ("USPTO"). The USPTO employs a great many Patent Examiners (over 8000 as of 2014⁷). The Patent Examiner reviews the application and determines whether it meets established substantive and formal requirements, i.e., she examines the application. During this examination, the Examiner will either permit the patent application to mature into a patent, or (and more typically) will reject the application

⁴ Again, I base this remark on primarily on personal experience and anecdotal evidence.

⁵ A right is "[a] moral or legal entitlement to have or obtain something or to act in a certain way." See http://www.oxforddictionaries.com/us/definition/american_english/right.

⁶ At this point in the discussion, we have not established how your invention is defined. Without such a definition, how could anyone else understand your invention? In a patent, the invention is defined by the claims. Patent claims are discussed in more detail below.

⁷ See <http://www.uspto.gov/dashboards/patents/kpis/kpiExaminers.kpixmap>.

on one or more grounds. If the application is rejected, then the applicant's Registered Patent Attorney/Agent will have the opportunity to engage in a written (sometimes also oral) negotiation that usually (but not always) results in the grant of the patent. Often, a consequence of the negotiation is that the scope of the protection which the USPTO is willing to afford to the applicant gets narrowed. But we are getting ahead of ourselves.

PARTS OF A PATENT APPLICATION

Patent applications include three parts: a specification (a written description of the invention in detail); drawings (illustrations of aspects of the invention);⁸ and claims. While all three parts are important, the claims are what define the invention, and thus what defines the scope of protection provided by the patent. For the layperson, the role played by claims (and their phraseology) can be difficult to understand. Here, some comparison might help that understanding.

A PATENT CLAIM IS LIKE A FENCE

It is common practice for a land-owner to erect a fence that encloses real property, i.e., her plot on a piece of land. To further explain a patent application, we will draw an analogy to that common practice. The drawings and specification of a patent application are like the land on which the person owns a plot, and the claims of a patent application are like the fence which the land-owner erects to mark the perimeter.

A fence is an obstacle that impedes a person from traveling into the area enclosed by the fence; it deters trespass. In other words, the fence is used to exclude the traveler from setting foot on the enclosed land, i.e., the fence is a tool of exclusion. Recalling that a patent is an exclusionary right, the patent's claims are the tools by which the patent owner excludes others from making, using and/or selling the patented invention.

⁸ Admittedly, some patent applications, e.g., related to chemical compounds, do not contain drawings.

A FENCE EXAMPLE: ALEX'S LAND RUSH PLOT

Let's construct an example to explore this analogy. To do so, let's go back to the late 1880's and early 1890's in the USA, to the era of the "land rush" (or "land run"). During the first land rush in 1889 into what was then the Oklahoma Territory, at an appointed time and at an appointed starting location, people could rush into an area of unassigned land and claim pieces of it as their own.⁹ The unassigned land had been divided into square, 160 acre plots (1/2 mile by 1/2 mile) at which a surveyor had placed cornerstone markers.¹⁰

Now let's suppose that Alex is at such a land rush and is the first person to reach a plot of land illustrated below in FIG. 1. Alex's plot has a large flat meadow (which lacks trees) in the middle, a swampy area at one edge, a river at one edge, mountains at on one edge and a dense forest at the other edge. The intersections of these landmarks roughly align with the cornerstone markers of Alex's plot. It so happens that Alex has four neighbors, Skyler to the north, Jordan to the south, Casey to the east, and Riley to the west.

Let's also assume that Alex wishes to enclose the perimeter of her plot of land with a fence. Let's further assume that circumstances prevent Alex from employing a surveyor to mark the "ideal" property lines, namely ideal-lines F1 (red lines; see FIG. 1, below). While Alex would prefer to enclose all of her land, it is most important to Alex that the large, flat, tree-less meadow be enclosed by the fence.

*<< Remainder of page
intentionally left blank. >>*

⁹ If a person lived on and improved the piece of land that she had claimed for five years continuously, then the U.S. government would recognize that person as the owner of that piece of land. *See* <http://okgenweb.org/~land/>; <http://digital.library.okstate.edu/encyclopedia/entries/L/LA014.html>; and <https://www.nationalcowboymuseum.org/research/exhibits/rushes/default.aspx>.

¹⁰ *See* <https://www.nationalcowboymuseum.org/research/exhibits/rushes/default.aspx>; and <http://www.landprints.com/LpRectangularSurveySystem.htm>; and <http://digital.library.okstate.edu/encyclopedia/entries/L/LA014.html>.

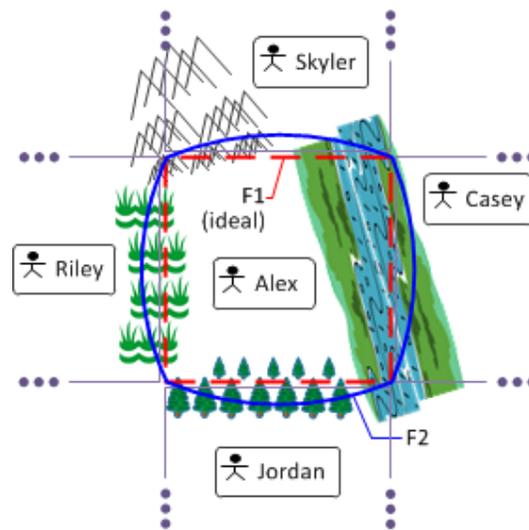


FIG. 2

Compared to the other fences F3-F5 (see FIGS. 3-5, below), the fence F2 (blue lines) encloses the largest area. While Alex is not certain where the ideal property lines (red lines F1; see FIGS. 1-2, above) are located, Alex is a reasonable person and so accepts the possibility that one or more of the sidelines of the fence F2 (blue lines) may extend too far out so that one or more of the sidelines sits on a piece of Skyler's land, Jordan's land, Casey's land and/or Riley's land.

Because Alex is reasonable, she constructs the fence F3 (orange lines; see FIG. 3, below) that encloses a smaller area of land than the fence F2 (blue lines). Similar to the fence F2 (blue lines), Alex bows out the sidelines of the fence F3 (orange lines) albeit not as far out as the sidelines of the fence F2 (blue lines) are bowed. The fence F3 (orange lines) encloses a smaller area than the fence F2 (blue lines). Though (again) Alex is not certain where the ideal property lines F1 (red lines) are located, Alex's confidence that no part of the fence F3 (orange lines) extends onto a neighbor's land is greater than Alex's confidence that no part of the fence F2 (blue lines) extends onto a neighbor's land.

<< Remainder of page
intentionally left blank. >>

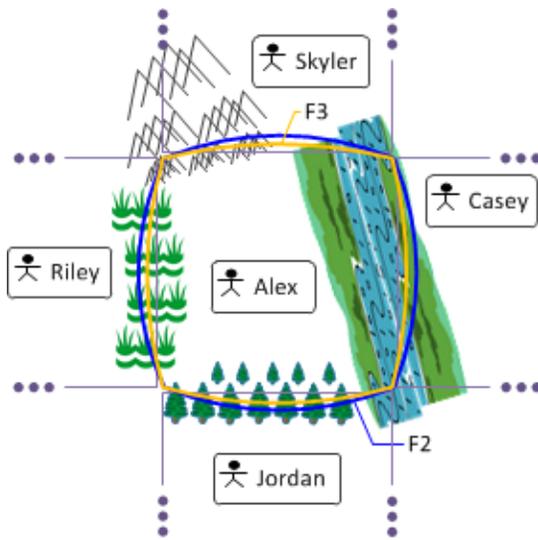


FIG. 3

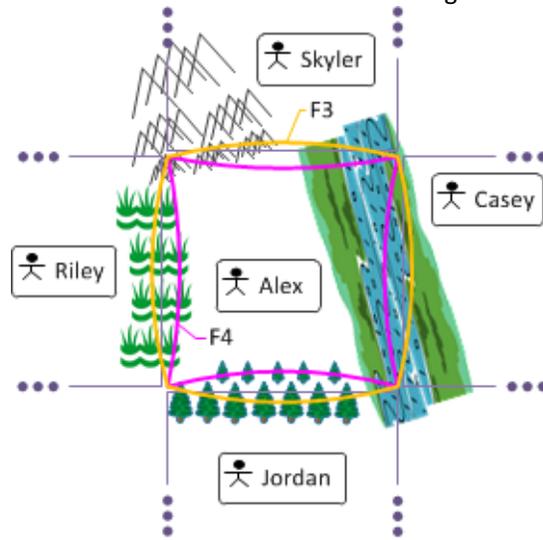


FIG. 4

Alex is not only reasonable, but a bit cautious, too. So Alex builds the fence F4 (pink lines; see FIG. 4, above). Again, as only the location of the cornerstone markers are known, Alex bows the sidelines of the fence F4 (pink lines) inward so that each sideline is a concave arc. The fence F4 (pink lines) encloses a smaller area than the fence F3 (orange lines). Again, though Alex is not certain where the ideal property lines F1 (red lines) are located, as between fence F3 (orange lines) and fence F4 (pink lines) Alex is yet more confident that no part of the fence F4 (pink lines) extends onto a neighbor's land than she is confident that no part of the fence F3 (orange lines) extends onto a neighbor's land.

Alex is not only a bit cautious, but also prefers to 'play it safe' by building the fence, F5 (brown lines; see FIG. 5, below). Similar to the fence F4 (pink lines), Alex bows the sidelines of the fence F5 (brown lines) inward albeit farther inward than the sidelines of the fence F4 (pink lines) are bowed. The fence F5 (brown lines) encloses a smaller area than the fence F4 (pink lines). Again, though Alex is not certain where the ideal property lines F1 (red lines) are located, Alex's confidence that any part of the fence F5 (brown lines) does not extend onto a neighbor's land is greater than Alex's confidence that any part of the fence F4 (pink lines) does not extend onto a neighbor's land.

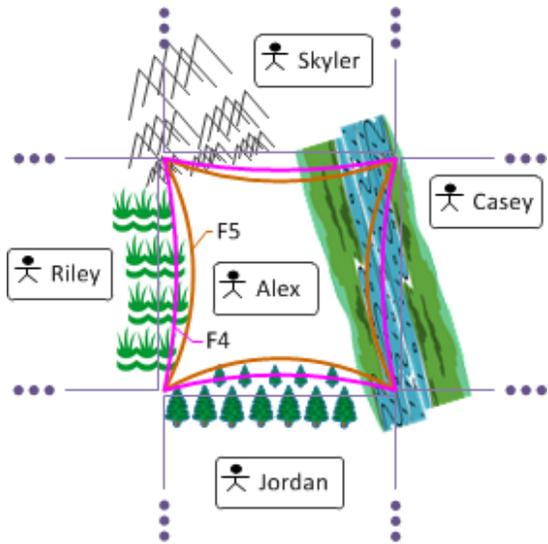


FIG. 5

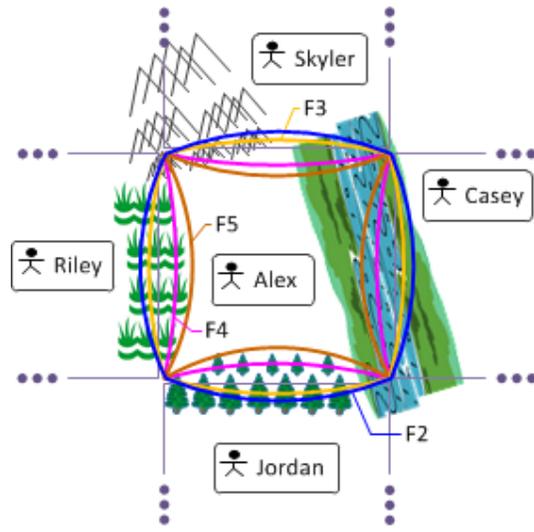


FIG. 6 (all fences F2-F5)

Now suppose that a government Land-Agent visits and agrees to consider which of Alex's fences (F2-F5, see FIG. 6, above) are located properly. After brief consideration (including a brief tour of the area), the government Land-Agent states an initial/first opinion that at least Alex's fence F2 (blue lines) extends onto each of his neighbor's land. The Land-Agent also informs Alex that her tight travel schedule requires her to leave, but offers to return and consider what fence-related actions Alex might have taken in the interim and/or listen to Alex's reasons why Alex believes the fences all sit on Alex's land. After the Land-Agent leaves, Alex remembers that fences F2 (blue lines) and F3 (orange lines) were located with the understanding that one or more sections of the fences might be located on neighboring lands. So Alex decides to remove the fence F2 (blue lines), leaving the fences F3 (orange lines), F4 (brown lines) and F5 (pink lines); see FIG. 7, below.

Weeks pass. The Land-Agent returns and is pleased to see that Alex has removed the fence F2 (blue lines). After further consideration (including another brief tour of the area), however, the Land-Agent states her second opinion that Alex's fence F3 (orange lines) also extends onto at least neighbor Casey's land and neighbor Jordan's land, and briefly explains her reasoning. Just as before, the Land-Agent also informs Alex that her tight travel schedule requires her to leave, but

offers to return and consider what fence-related actions Alex might have taken in the interim and/or listen to Alex's reasons why Alex believes that the fence F3 (orange lines) sits on Alex's land. After the Land-Agent leaves, Alex thinks about the Land-Agent's second opinion. Unlike the Land-Agent's initial opinion regarding the fence F2 (blue lines), Alex disagrees with the Land-Agent's second opinion regarding the fence F3 (orange lines).

Weeks pass. The Land-Agent returns and is surprised to see that Alex has not removed the fence F3 (orange lines). Alex explains, respectfully, why she disagrees, noting that it was foggy when the Land-Agent made the second tour of the land. As a result, the Land-Agent had not actually seen the cornerstone markers and so was not able to fully appreciate relationship of the fence F3 (orange lines) to the cornerstones. After brief deliberation (because the Land-Agent is still operating under a tight travel schedule), the Land-Agent agrees with Alex and states her third/last opinion that Alex may keep the fence F3 (orange lines); again, see FIG. 7 below.

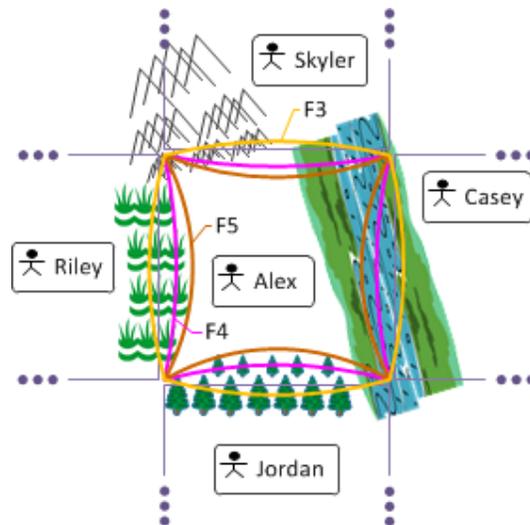


FIG. 7 (remaining fences F3-F5)

Before departing, however, the Land-Agent warns Alex that the neighbors Casey and Jordan might not be content with the Land-Agent's final opinion. If so, Casey and/or Jordan might file a lawsuit to have a court decide the proper boundary lines. For

example, Casey and/or Jordan might contend that the proper fence is the fence F4 (pink lines) or the fence F5 (brown lines). And if Casey and/or Jordan were to win their lawsuit, then Alex would be forced to remove the fence F3 (orange lines), and possibly the fence F4 (pink lines).

ALEX'S PLOT-OWNERSHIP EFFORTS ARE LIKE PATENT APPLICATION PREPARATION AND PROSECUTION

As stated above, patent claims are like fences used to mark the perimeter of a person's land. In our example, Alex's efforts to obtain ownership of the plot of land are analogous to preparing, filing and then prosecuting¹¹ a patent application for which Alex is the applicant. The land itself is like the specification of the patent application, a map of the land is like the drawings of the patent application, and the fences are like the claims of the patent application. Each claim of the patent application corresponds to one complete fence. When filed at the USPTO, Alex's patent application would have included four claims corresponding to Alex's four fences F2-F5.

The Land-Agent is analogous to a Patent Examiner at the USPTO. Each of the Land-Agent's visits to Alex is like an Office Action (a written document addressing the patent application's compliance with the substantive and formal requirements of

¹¹ 'Prosecuting a patent application' is a phrase that initially confuses most lay people. Before studying patent law, I had only heard prosecution in the context of the criminal justice system, e.g., 'John Doe was prosecuted for bank robbery.' Prosecution, however, does not arise solely in the context of criminal justice. The primary meaning of "prosecute" is to institute (invoke and then conduct) legal proceedings (a legal process) in respect of a claim or an offense. See http://www.oxforddictionaries.com/us/definition/american_english/prosecute.

In terms of criminal justice, a defendant in a prosecution is a person formally accused (charged) with allegedly having committed an offense (a crime). Prosecution through the criminal justice system is merely one example (albeit the one with which most lay people are familiar) of prosecution. Another example of prosecution arises in the context of granting citizenship, a legal process administered by the government agency known as the US Citizenship and Immigration Services ("USCIS"). An applicant (a would-be citizen) can be described as prosecuting her application for citizenship before the USCIS.

Yet another example of prosecution arises in the context of granting patents, a legal process administered the USPTO. An applicant who files a patent application at the USPTO can be described as having begun prosecuting the application before the USPTO. The analysis by which a Patent-Examiner at the USPTO decides to grant a patent is referred to as examination of the patent application. During examination, the Patent Examiner evaluates the patent application with respect to the various requirements for a patent ('patentability requirements'). During most examinations, a negotiation between the Patent Examiner and the applicant takes place (primarily through written exchanges) regarding whether (and how) the application satisfies the patentability requirements. When someone refers to prosecution of a patent application before the USPTO, typically, she is attempting to call to mind such a negotiation with the Patent Examiner.

all patent applications) sent by the Patent Examiner to a patent applicant. Each of the Land-Agent's opinions is like the contents of an Office Action.

In particular, the Land-Agent's first visit and opinion are analogous to a first Office Action which includes a rejection of one of the claims. Alex's removal of the fence F2 (blue lines) is analogous to a written document filed by the applicant with the USPTO which responds to the first Office Action by cancelling (or amending) the rejected claim. The Land-Agent's second visit and second opinion are like a second Office Action which includes another rejection of a different one of the claims. Alex's explanation that the Land-Agent had not fully appreciated the relationship of the fence F3 (orange lines) to the cornerstone markers is like a written document filed by the applicant with the USPTO which responds to the second Office Action not by cancelling or amending the rejected claim but instead by arguing (in detail) why the applicant considers the rejection to be improper. The Land-Agent's third visit and final opinion are analogous to a Notice of Allowance (another type of written document) sent by the USPTO which informs the applicant that the remaining claims will grant as a patent.

AREA ENCLOSED BY FENCE IS LIKE CLAIM SCOPE

One way to assess the relative importance of Alex's fences is in terms of how much land a given fence encloses. As noted, the fence F2 (blue lines) encloses the largest area. In other words, the fence F2 (blue lines) can be described as providing (or affording) the largest scope of protection. The fence F3 (orange lines) lies just inside of the fence F2 (blue lines). As such, the fence F3 (orange lines) can be described as having a smaller scope than the fence F2 (blue lines), i.e., as providing a smaller scope of protection. Similarly, the fence F4 (pink lines) provides a smaller scope of protection than the fence F3 (orange lines). Lastly, the fence F5 (brown lines) provides a smaller scope of protection than the fence F4 (pink lines). In fact, the fence F5 (brown lines) provides the smallest scope of protection of the four fences F2-F5. Even though the fence F5 (brown lines) encloses the smallest area,

nevertheless it encloses the large, flat, tree-less meadow which, to Alex's thinking, is the most important part of her plot.

Because patent claims are like fences, amongst the claims of the patent application, the first claim corresponding to the fence F2 (blue lines) provides relatively the largest scope of protection. The fourth claim corresponding to the fence F5 (brown lines) provides relatively the smallest scope of protection.

LEVEL OF CONFIDENCE THAT FENCE WILL NOT BE REMOVED IS LIKE CLAIM'S STRENGTH

Another way to assess the importance of Alex's fences is in terms of Alex's relative level of confidence that a given fence would not have to be removed. Alex is most confident that the fence F5 (brown lines) will withstand any challenge that the neighbors might raise. By contrast, Alex was least confident that the fence F2 (blue lines) would withstand a challenge regarding its location. Alex had so little confidence in the location of the fence F2 (blue lines), that she removed the fence F2 (blue lines) based on the Land Agent's initial opinion.

Because patent claims are like fences, the fourth claim corresponding to the fence F5 (brown lines) is relatively the strongest claim. By contrast, the first claim corresponding to the fence F2 (blue lines) is relatively the weakest claim.

THE BOUNDARIES OF PATENT 'EXCLUSION' ARE DEFINED BY THE CLAIMS

As you prepare to brush away the few crumbs remaining from your 'meal of dry white toast,' let's recap. A patent is an exclusionary right. That is, a patent is a right to exclude others from trespassing on (infringing) the patentee's 'plot' of intellectual property. And the boundaries of the patentee's plot of intellectual property are defined by the claims, like the fence which marks the perimeter of a plot of land.