ABC'S OF PATENTS – WHAT EVERY ENTREPRENEUR SHOULD KNOW

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1. Introduction

Remember the ABC's you memorized in grade school when learning the English language? It went something like this: "A" is for "apple", "B" is for "boy", "C" is for "cat", and so on. By analogy, to begin to understand patents and what they can do for a business, it is helpful for an entrepreneur to learn the "ABC's" of patents.

While the ABC's of patents may take on different forms, this paper presents one form that the author has found to be quite effective. It goes like this. "A" is for "Assets" of the patent kind which entrepreneurs should recognize as being key tools for advancing a business. "B" is for "Basics" as in the basics of patent law which every entrepreneur should know. "C" is for "Competent" as in "competent patent attorney" without which even the best innovation may fail due to the failures in patent protection. And so on.

If an entrepreneur can learn these ABC's of patents, he or she will begin to understand how effective patent assets can be as a tool for enhancing the value of a businesses.

2. "A" is for "Assets" of the Patent Kind which Entrepreneurs Should Recognize as Being Key Tools for Advancing a Business

In the 1950s and 1960s, companies used high production manufacturing systems to enhance shareholder value. In the 1970s, the focus turned to finance and economics. In the 1980's, innovative marketing initiatives and global business expansion became the new tools of corporate management. In the 1990's, management turned to technology and quality systems to expand their business. Today, intellectual property – namely, the

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rights associated with the development, protection and exploitation of innovation – provides managers with an effective tool for building and expanding a business.[2]

Why has intellectual property become such an important business tool today? The fact of the matter is that since before the first U.S. patent issued on July 31, 1790 intellectual property has always been important.[3]

The importance of intellectual property was not lost on our U.S. Presidents. President George Washington, by some counts, received a patent on a sowing device.[4] In 1772, President Washington also received a trademark for flour.[5] President Thomas Jefferson was an accomplished innovator with such inventions to his name as a metal plow and a macaroni making machine.[6] President Abraham Lincoln, who was awarded a patent – by other counts the first patent ever issued to a U.S. President [7] - called the introduction of patent laws one of the three most important developments "in the world's history", along with the discovery of America and the perfection of printing.[8]

Nor, since the recognition of intellectual property as protectable assets, has the importance of intellectual property been lost on big business. In terms of brand recognition, in 2007, Google surpassed Microsoft as the most powerful brand. With a brand value of $66.4 billion, more than 40% of Google's $149 billion stock market

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[2] "Intellectual Property is a CEO Thing", ipFrontline, Andy Gibbs (former member of the USPTO Public Advisory Committee), March 5, 2001.

[3] On July 31, 1790, the first patent issued to Samuel Hopkins of Philadelphia for a cleaning formula used in soap making. See, http://www.uspto.gov/web/offices/ac/ahrpa/opa/kids/kidprimer.html

[4] See http://www.adec.edu/clemson/papers/campbell-chapter1.html referencing Campbell, John R. *Reclaiming a Lost Heritage: Land-Grant and Other Higher Education Initiatives for the Twenty-first Century*, Ames: Iowa State University Press, 1995; see also Mechanics of Patent Claim Drafting, John L. Landis, 2nd Ed., Practicing Law Institute, 1974.

[5] See, http://stconsultant.blogspot.com/2007_02_01_archive.html, John Daly PhD (former Agency of International Development), February 19, 2007; see also "Invention Mysteries: The Little-Known Stories Behind Well-Known Inventions", Paul Niemann, Nov, 2004

[6] See http://inventors.about.com/library/inventors/bljefferson.htm

[7] On May 22, 1849, President Lincoln was issued Patent # 6,469 for *"A Device for Buoying Vessels Over Shoals"*. Abraham Lincoln was a legislator in Illinois at the time of the patent grant. See http://inventors.about.com/od/lstartinventors/a/Abraham_Lincoln.htm

[8] See footnote 7.

capitalization can be traced to the Google brand.[9] [10] In a 2004 report, the copyright industries business of $600 billion alone accounted for six percent of the U.S. GDP.[11] With patent-intensive pharmaceutical and computer industries added to the mix – but still excluding financial services and equipment makers - , these combined industries accounted for 9.2 percent of the U.S. GDP.[12]

There is a direct correlation between innovation and business growth. In 2005, U.S. intellectual property was valued at between $5 trillion and $5.5 trillion, equal to about 45% of U.S. gross domestic product (GDP) and greater than the GDP of any other nation.[13] [14] According to a 2004 study by the Federal Reserve System, U.S. companies were investing about as much in idea-related intangibles as they were spending plant, equipment, and other tangible forms of investment.[15] About $1 trillion a year was being spent on idea-related intangibles including software, R&D costs to develop products subject to patents, licenses and copyrights, and advertising and market research spending to create brands.[16] According to the same study, more than 80% of the gains in the growth rate of U.S. productivity in the latter 1990's were due to the development and

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[9] "Google Surpasses Microsoft As Most Powerful Brand", Thomas Claburn, EE Times, April 24, 2007.

[10] Following Google's brand value of $66.4 billion is: General Electric ($61.9 billion), Microsoft ($54.9 billion), Coca-Cola ($44.1 billion), China Mobile ($41.2 billion), Marlboro/Altria ($39.2 billion), Wal-Mart ($36.9 billion), Citigroup ($33.7 billion), IBM ($33.6 billion), and Toyota ($33.4 billion). See footnote 8.

[11] "Copyright Industries in the U.S. Economy, The 2004 Report," Stephen Siwek, Economists Incorporated, October 2004.

[12] The Economic Value of Intellectual Property, R. J. Shaparo and K. A. Hasset, Oct. 2005.

[13] See footnote 12.

[14] This is no longer the case with respect to China. In 2006, the estimated GDP of China is $10.17 trillion est. See https://www.cia.gov/library/publications/the-world-factbook/print/ch.html.

[15] Carol Corrado, Charles Hulten, Daniel Sichel, "Measuring Capital and Technology: An Expanded Framework," Federal Reserve Board, Finance and Economics Discussion Series, No. 2004-65, August 2004. See also, footnote 12.

[16] See footnote 15.

application of new ideas.[17] By extrapolation, new ideas accounted for nearly 90% of the growth rate between 2001 and 2003.[18]

The increase of patent filings with the U.S. Patent Office reinforces the existence of this correlation. Table 1 shows the patent issue number and date of issuance. After the issuance of the first U.S. patent on July 31, 1790, more than 121 years would pass before the USPTO would issue its one millionth patent. It would take about a *fifth* of that time both before the issuance of the second millionth patent (about 24 years) and the third millionth patent (about 26 years). It would take about an *eighth* of that time both before the issuance of the four millionth patent (about 15 years) and the five millionth patent (about 15 years). The current rate for patent filings is about a million filings per seven years (it took about eight years for the six millionth patent to issue and seven years for the seven millionth patent to issue). These statistics show the U.S. Patent Office issuing seventeen times as many patents today for every patent the USPTO issued during its first 121 years as an office.[19]

Patent Number	Issue Year
1	Jul 31, 1790
1,000,000	Aug 8, 1911
2,000,000	Apr 30, 1935
3,000,000	Sep 12, 1961
4,000,000	Dec 28, 1976
5,000,000	Mar 19, 1991
6,000,000	Dec 7, 1999
7,000,000	Feb 14. 2006

Table 1. Data taken from USPTO Website

Further corroborating the existence of this correlation between intellectual property and economic value are the high stakes that have come to be known in patent litigation today. Table 2 shows a listing of the top awards and settlements resulting from

[17] Between 1995 and 2001, 28% was due to the development of new information technologies, 34% due to capital investment in those technologies; 10% due to R&D and 10% due to worker efficiency innovations. See footnote 12.
[18] See footnote 12.
[19] The USPTO is issuing a million patents today in about one-seventeenth of the time it took the USPTO to issue its first million patents (i.e., 121 years).

patent litigation in 2006. In 2006, Defendant Research in Motion (RIM), the makers of the Blackberry® handset paid $613M to NTP to settle a patent lawsuit after a jury found RIM to infringe a patent held by NTP. Also in 2006, Tyco International paid Masimo Corp. $330M and Nokia paid InterDigital Comm. Corp. $253M as a result of patent litigation. The potential return on intellectual property investments can be staggering. Which is why the buzz in the business world today is about intellectual property, particularly patents.

Patent value – 2006 Litigation awards/settlements

Count	Date	Defendant	Plaintiff	Amount (US$M)
1	3/1/2006	Research in Motion	NTP	613
2	1/24/2006	Tyco International	Masimo Corp	330
3	4/27/2006	Nokia	InterDigital Comm. Corp	253
4	2/7/2006	Mosanto	Reagents, Univ. of Calif.	200
5	7/28/2006	Hynix	Rambus	133
6	9/6/2006	Samsung	InterDigital Comm. Corp	134
7	4/19/2006	Microsoft,Autodesk	Z4 Technologies	133
8	7/12/2006	Alcon Inc.	Advanced Medical Optics	121
9	7/7/2006	Direct TV	Finisar Corp	115.9
10	8/28/2006	ABC/NBC/CBS/Fox	Echostar Comm.	100
11	8/24/2006	Apple	Creative	100
12	1/26/2006	Media Tek Inc.	Zoran Corp.	85
13	9/6/2006	Start Licensing	Advanced Cell Technology Inc	80
14	7/27/2006	Microsoft	Lee Keung-hae	75
15	12/5/2006	Medtronic	Dr. Eckhard Alt	75
16	4/14/2006	Echostar Comm.	Tivo	74
17	5/5/2006	Conexant Systems	Texas Instruments	70
18	7/21/2006	Teva Pharmaceutical Ind.	Pfizer	70
19	5/31/2006	Eli-Lilly	Ariad Technologies	65.2
20	1/24/2006	Tyco International	Applied Medical Resources	64.5
21	9/15/2006	Zebra Technologies Corp	Paxar	63
22	7/24/2006	Boston Comm. Group	Freedom Wireless	55.3
23	7/22/2006	Chunghwa Picture Tubes	LG Philips LCD Co.	53.5
24	10/6/2006	Thomson Financial	MuniAuction	38.4
25	1/23/2006	Medtronic	Edward Lifesciences Corp	37.5
Total				**3,139.3**

Table 2. 2006 Patent Litigation Awards/Settlement.[20]

[20] U.S. Patent Values Decline in 2006, A.T. Gomes and T. George, Intellectual Property Asset Management, Feb/Mar 2007, pp. 12-13.

3. "B" is for "Basics" As In the Basics of Patent Law Which Every Entrepreneur Should Know

A "patent" is a property right in a product that is formed in the mind. The intellectual product or work protected by a patent is an invention. The patent provides a certain shroud of protection to the intellectual product.

The shroud of protection provided by a patent is defined by laws. Because patent protection is grounded in property rights, the shroud of protection provided by a patent is a bundle of property rights. These rights are "property" rights in the sense that they are based on the legal right to exclude others from using the property and in that ownership of the rights can be transferred. As such, the bundle of property rights includes the right to own and sell and to exclude others from using the intellectual product.

To visualize the bundle of property rights that come from owning a patent, a comparison of patent rights to the bundle of rights that come from owning a house or car is helpful. Table 3 contrasts these bundles of rights.

Property Type	**Real Property**	**Personal Property**	
		Tangible	**Intangible**
	House	**Car**	**Patent**
Title Evidence of Ownership	Guarantee Deed Simple Deed Quitclaim Deed	Car Title	Issued Patent
Right to Own	Right to Own	Right to Own	Right to Own
Duration of Ownership	Unlimited duration	Unlimited duration	Utility and Plant - 20 years from date of filing Design – 14 years from date of issue Plant variety protection certificate - - 20 years from date of issue
Scope of Property	Meets and Bounds Defined in Deed	Vehicle Identification in Bill of Sale	Scope of Claims of Patent
Right to Possess (i.e., control)	Right to Possess	Right to Possess	Right to Possess
Right to Exclude others from using the property	RIGHT TO EXCLUDE others from using your house	RIGHT TO EXCLUDE others from using your car	RIGHT TO EXCLUDE others Utility and Design - - from making, using, offering to sell, or selling any patented invention, within the U.S. or importing into the U.S. any patented invention Plant - - From asexually reproducing the plant, and from using, offering for sale, or selling the plant so reproduced, or any of its parts, throughout the U.S, or from importing the plant so reproduced, or any parts thereof

Right to Use	Right to Use	Right to Use	NO RIGHT TO USE (right to use only if not infringing another patent)
Right to Quiet Enjoyment	Trespass	Theft	Infringement Direct, contributory or by inducement
Right to Allow Others to Use	Lease	Lease	License
Right to Sell	Right to Sell	Right to Sell	Right to Assign
Right to Enforce	Suit for Trespass	Suit for Trespass	Patent Infringement Suit
Infringement proof	Unauthorized entry	Unauthorized entry	Utility Literal or by equivalents Design Substantially similar plus Literal or equivalent point of novelty

Table 3. Bundle of rights that come from owning property.[21]

a. What is a Patent?

A patent is a bundle of rights that protects an invention. A patent is a bundle of rights to an invention that is granted by a government to the patent holder. The patent grant is in the form of an issued patent. You must file an application with the Patent Office to secure the patent. The patent grant is for a limited duration of time. For a utility or plant patent, the life of the patent is 20 years from the date of filing. For a design patent, the life of the patent is 14 years from the date of issue. In exchange for the patent grant from the government, the inventor is required to disclose details of his invention to the public.

b. Types of Patents

There are essentially three kinds of patents. They are utility patents, design patents and plant patents. Only the utility and design patents are addressed in this paper.

Utility patents protect new products or compositions, structures, functional features, and methods or processes. Table 4 illustrates a new product and some utility patent protections that may be available to it.

[21] "The Art of Intellectual Property - - Patent, Copyright, Trademark, and Trade Secret Essentials for Professionals, P.R. Juhasz, 2006 Conference on Legal Issues for Design Professionals, Houston, Texas, June 22, 2006.

New Computer Product	Available Utility Patent Protection
Product	Computer
Composition	Liquid Crystal used for Display
Structure	Clam Shell
Functional Feature	Circuit for Turning Off an Overheating Battery
Method	Software
Process	Process for making the computer or the liquid crystal

Table 4. Illustrative Utility Patent Protections on a New Product[22]

Design patents protect the ornamental design for an article of manufacture. The design of Apple Computer's IPOD® is one example of an ornamental design protected by a design patent. This design patent issued as design patent No. D497,618. The design patent protects only the appearance of the article, but not its structural or functional features. The structural or functional features of an article would be protected by a utility patent.

While the protection provided by each kind of patent is different, the issued patent will generally include the following parts: (1) a disclosure of the invention, (2) drawings which show the invention, and (3) claims which define in legal terms what is patented.

c. Patentability

Not every invention is patentable. For an invention to be patentable, the invention must be useful. The invention must also be novel and non-obvious. In addition, the invention and corresponding application must meet other requirements for patentability.

Novelty *on the one hand* means that the invention must *not* have been publicly disclosed, publicly used or offered for sale by you or your representative. Public disclosure can occur by traditional publication of a paper describing the invention. It can also occur by non-traditional posting of information about the invention on a Website.

[22] See footnote 21 above.

Public use can occur by testing without a confidentiality agreement. An offer for sale of a product that embodies the invention is an offer to sell the invention.

The U.S. laws provide a *one year* grace period of time after any of the foregoing events has taken place to file a patent on the invention before the invention will be deemed to be no longer novel. Outside the U.S., however, most countries follow an absolute novelty requirement. Those countries provide for no grace period of time to file the application after the occurrence of any of the foregoing events. In those countries, any one of the foregoing events will bar patentability of the invention.

Novelty *on the other hand* also means that the invention is not already known to the public by someone else. If the invention has already been described by someone else in a publication anywhere in the world or someone else has already publicly used or sold your invention in the U.S., the invention may no longer be patentable in the U.S. because it is no longer novel. In other words, if the prior work or "prior art" of someone else reveals every element of your invention, it will bar patentability of your invention.

In the U.S., if the prior art was put into the public domain by someone else within one year of the date you file your patent application, U.S. law allows you to swear the date of your invention behind the piece of prior art. This means that you may be able to overcome the prior art if you are able to prove that you conceived of your invention prior to the date of the prior art. Among other things, you also need to demonstrate that you were reasonably diligent in reducing your invention to practice. If you are able to do so, you may be able to remove the prior art as a bar to patentability of your invention. However, because of the absolute novelty requirement in most countries, the existence of the prior art may without more bar patentability of your invention outside the U.S.

In addition to being novel, the invention must also be non-obvious. Generally, an invention is obvious if two or more pieces of prior art when combined describe or reveal all of the features of your invention. The prior art can be a publication or an existing product. The U.S. Supreme Court recently provided a two-prong test for a patent to be obvious in view of a combination of prior art. First, the problem sought to be solved by

the patent must have existed at the time of the invention. Second, the solution of the patent would have been obvious in view of the combination.[23] Otherwise the existence of pieces of prior art without more do not make the invention obvious. Obviousness can also exist based on a single reference alone if it was obviousness to modify the reference.

The patent laws specify a number of other requirements that need to be met for an invention to be patentable. For instance, the application must describe the invention, enable one skilled in the art how to make the invention, and disclose the best mode or form of the invention known to the inventor. The claims of the patent must clearly define the scope of the invention. In addition, during the time that the patent application is before the Patent Office, that is, during the time that the application is being prosecuted, the inventor has a duty to disclose all prior art he or she knows of that may impact patentability.

d. Right to License

A patent gives the holder the right to license his patented invention. A license is a contract between the patent holder, known as the licensor, and another party, known as the licensee. Under the license, the licensor grants the licensee the right to practice his or her patented invention. In exchange for the license grant, the licensee will typically provide something of value to the licensee. In many cases, the value provided by a licensee is a royalty payment. The payment can be structured to be periodically made so as to form an ongoing royalty stream to the licensor. The payment can also be structured as a one time up front lump sum payment. There are many other ways to structure the payment.

While royalty payments are the typical kind of value that patent holders receive for the patent, by no means are royalty payments the only kind of value that a patent holder can receive for his patent. The real value of a patent lies in the competitive advantage you gain by having the patent. There are five fundamental ways in which this competitive advantage can create opportunities and revenue streams for your business.

[23] *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007),

These five ways are through: (a) license-out strategies; (b) license-in strategies; (c) business leveraging strategies; (d) capital formation strategies; and (e) patent defensive strategies.

License-out strategies involve the licensing out of patents in a way that supports your business. Table 5 shows a number of license-out strategies and some of their benefits and risks.

Strategy	Upside	Downside
License patent to augment your core sales. (direct use license)	If the market demand exceeds your production capability, you share in product deliveries made by your competitor. Supports a second source for your customer's product needs	If your production capability exceeds the market demand, you may lose market share because you have given away your competitive advantage. Could increase competitive pricing which could erode your margins
License patent for a non-competitive use (limited use license)	Creates a revenue stream from a market you are not presently servicing	You have created a competitor should you decide to enter that market
License patent for use in a geographic area (geographical area license)	Direct use upside if geographical area is one you are servicing If you are not servicing that geographical area, it creates a revenue stream from a geographical area you are not presently servicing	Direct use downside if geographical area is one you are servicing. If you are not servicing that geographical area, you have created a competitor should you decide to enter the market
R&D License	Creates new applications for existing markets Creates new applications for new markets	Licensee typically gets favorable licensing terms in exchange for R&D effort. (e.g., reduced royalty rate) Licensee could create and own significant improvement inventions which could shift control of the market to the licensee
License to after-market service providers	Creates a revenue stream from a market you are not presently servicing	You have created a competitor should you decide to enter that market

Table 5. Some Patent License-Out Strategies[24]

[24] See footnote 21 above.

License-in strategies involve taking a license out under a patent in order to create a business opportunity or revenue streams. You may need a license from a dominant patent holder in order to make your own product. As one example, take the case where Company X holds a patent on product ABC that prevents Company Y from making the product ABC part of its patented ABCD product. In this example, Company Y needs a license from Company X before it can make its patented ABCD product.

Even if your motivation for licensing-in a patent is unrelated to your own patent, there may be other reasons why securing a license may be advantageous. As one example, if you do not have the R&D capital to create your own technology, a license may give you access to technology without the R&D expense. As another example, even if you have the R&D capital to create your own technology, taking a license under an off-the-shelf patent may free up your R&D capital for use on other critical technical innovation.

Patents can be critical components of a business leveraging strategy. Patents can be used to strike strategic alliances, create joint ventures, or support franchising.

Patents can make your business more attractive to venture capitalists, investors or other sources of capital infusion. With the capital infusion, you can spend more on R&D, hiring, and other activities that can lead to more business opportunities and revenues.

A patent portfolio also gives you leverage in the event a patent or other lawsuit is brought against your company. The portfolio may give you bargaining chips to use in negotiating a patent cross-license or some other business settlement of the dispute.

The body of laws that govern patent licenses is the law of contracts which enforces the promises of people. A breach of a license provision in a contract would be enforced under the law of contracts.

e. Comparison of U.S. and Foreign Patent Law

Table 6 provides a general comparison of Patent laws in the U.S. and foreign

countries.

	Patent	
	U.S.	Foreign
Requirements	1 year grace period to file	First to File Absolute Novelty
Duration of Ownership	Utility, plant - - 20 years from date of filing Design – 14 years from date of issue Plant Certificate 20 years from date of issue	Utility - 20 years from date of filing
Filing	In Name of Inventor	In Name of Owner
Select Treaties	European Patent Organization Patent Cooperation Treaty	
Costs	10:5 Rule $10,000 to prepare patent + $5,000 filing and other fees per country	
Maintenance	Required at 3-1/2, 7-1/2 and 11-1/2 years	Required generally annually

Table 6. Comparison of U.S. and Foreign IP Law[25]

4. "C" is for "Competent" as in "Competent Patent Attorney" Without Which Even the Best Innovation May Fail Due to the Failures in Patent Protection

A story is worth a thousand examples. History is filled with stories of inventors who have reached for but failed to grab the brass ring. In many cases, their failure may be attributed in large part to their failure to secure competent protection on their invention. As always some stories more than others better show how important competent patent lawyering can be to the success or failure of an invention. One of the more illustrative of these stories is the story of the Wright Brothers patent.

On March 23, 1903, Orville and Wilbur Wright filed an application for patent on a flying machine.[26] On December 17, 2003, Orville Wright made the first powered flight

[25] See footnote 21 above.
[26] See U.S. Pat. No. 821,393 which issued to O & W. Wright on a Flying Machine.

in a controllable aircraft.[27] On May 22, 1906, Orville and Wilbur were awarded U.S. Patent No. 821,393 on a flying machine.[28]

The Wright Brothers were not alone in their work to create a powered controllable flying machine. At the turn of the 20th century, a number of inventors were actively engaged in this pursuit.[29] Among them was Samuel Pierpont Langley, whose work was heavily financed by the U.S. Army. In October, 1903, the Langley Large Aerodome "A" took off from a launch boat and crashed into the Potamic River.[30] Two months later, Orville Wright successfully piloted the first controlled flight.

Figure 1 shows the design of the Langley Aerodome "A" based on 1898 design work. Figure 2 shows Figure 1 of the Wright Brother's patent. [31] The patentability of the Wright Patent was judged against the work of others that existed prior to the Wright Brother's invention (i.e., prior art) including the work of Langley. While Aviation historians may consider Langley's work to be the world's first sustained flight by a powered heavier-than-air craft, the Wright Brother's are credited with the world's first controllable flight. Figure 3 shows claim 1 of the Wright Patent – in other words one of the structures the Wright Brothers claimed as their invention. As shown in Figure 3, claim 1 of the Wright Patent issued on a structure for "controlling" flight. The claim recites that structure as wing warping. Today, that structure is known as an aileron.[32] The patentability of Wright's wing warping feature was judged against the absence of that structure in the prior work of others. Neither the Langley work nor the work of

[27] Orville Wright from the Web Site http://www.wrightstories.com/airplane.html
[28] See footnote 26.
[29] See http://www.flyingmachines.org
[30] See http://www.flyingmachines.org/lang.html
[31] See footnote 26.
[32] See, http://www.wrightstories.com/patent

others alone described or in combination suggested such a feature. [33]

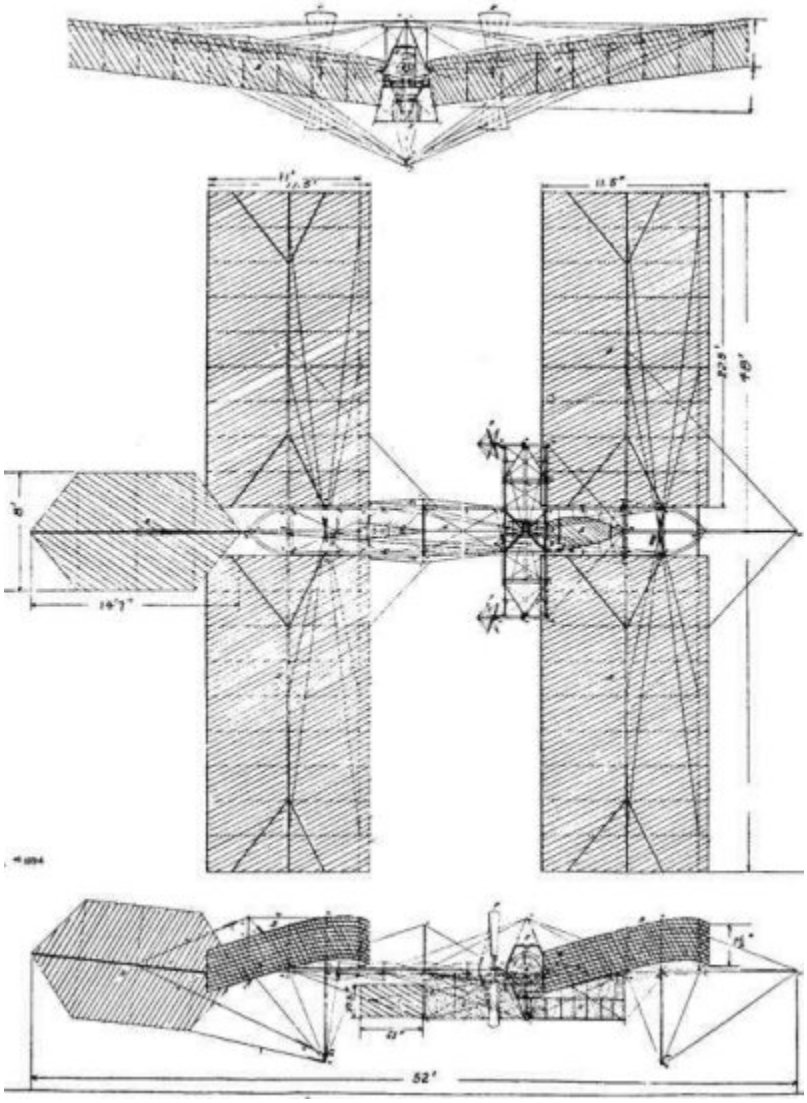

Figure 1. Drawings of the Langley Aerodome "A" 1903 dating back to 1898 designs[34]

[33] See footnote 27 above

[34] See http://www.aerospaceweb.org/question/history/q0004.shtml

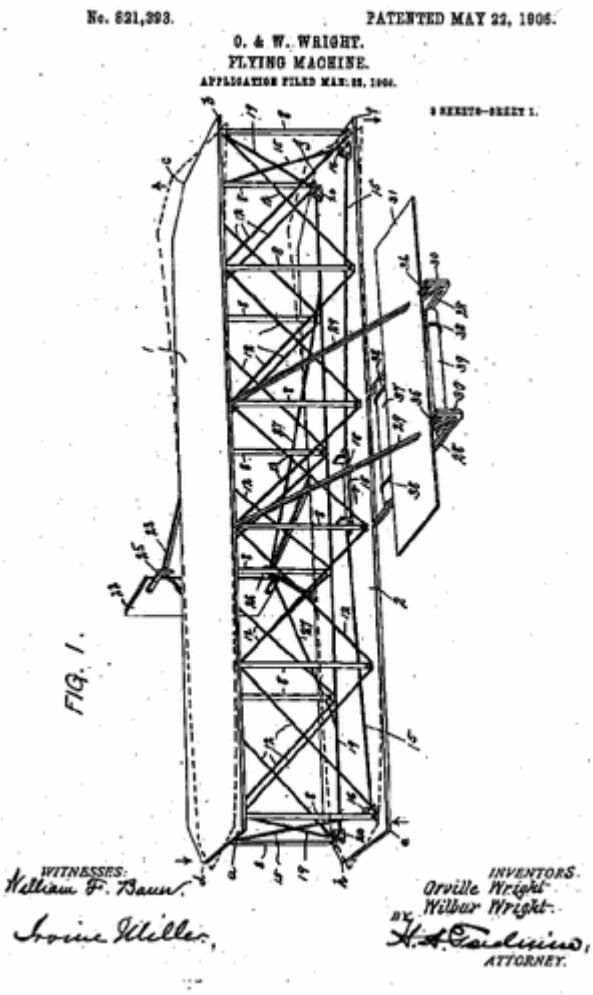

Figure 2. Figure 1 of the Wright Patent

1. In a flying-machine, a normally flat aeroplane having *lateral marginal portions capable of movement to different positions above or blow the normal plane of the body of the aeroplane, such movement being about an axis transverse to the line of flight, whereby said lateral marginal portions may be moved to different angles relatively to the normal plane of the body of the aeroplane, so as to present to the atmosphere different angles of incidence, and means for so moving said lateral marginal portions*, substantially as described. (emphasis added)

Figure 3. Claim 1 of the Wright Patent reciting wing warping structure for controlling a flying machine

No plane can fly without using the patented technology of the Wright Brothers. Yet it would take eight years of patent litigation against Curtiss and the Herring-Curtis Co. and others before the airplane industry would finally license the Wright Patent. From the outset, the airplane industry contended that the Wright Patent was not new because of the work of Louis-Pierre Mouillard not before the Patent Office. They also claimed the Wright Patent was not new and was further obvious because of "prior disclosure" by Chanute and Wilbur Wright. Figure 4 shows Mouillard's work directed to a glider.[35] Even if Mouillard suggested wing twisting to slow the wing on one side relative to the other, Mouillard never used a rudder on his glider and never coordinated wing twisting with a rudder. The Wright Brothers also claimed this coordinated feature in their patent. Figure 5 shows claim 8 of the Wright Patent which recites this coordinated aileron and rudder feature.

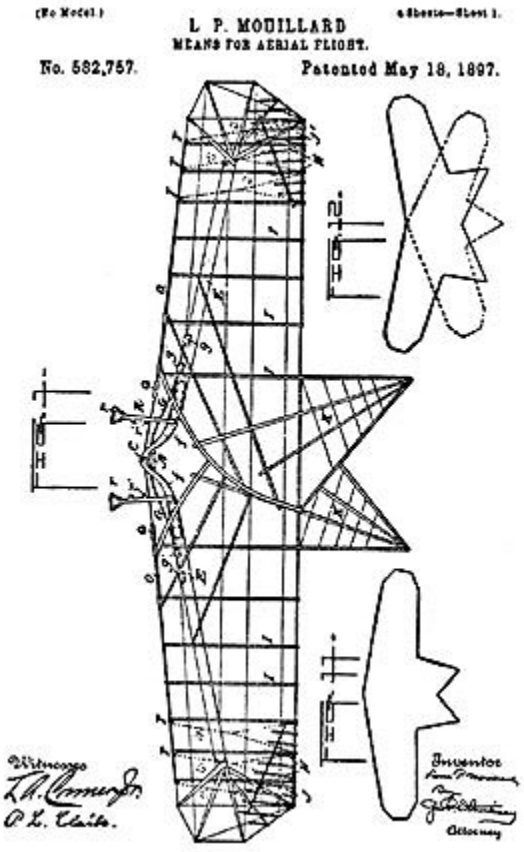

Figure 4. Mouillard Patent Raised In the Litigation of the Wright Patent

[35] See footnote 29 above under http://www.flyingmachines.org/moui.html

> 8. In a flying-machine, the combination, with two superposed and normally parallel aeroplanes, upright standards connecting the edges of said aeroplanes to maintain their equidistance, those standards at the lateral portions of said aeroplanes being connected therewith by flexible joints, and means for simultaneously moving both lateral portions of both aeroplanes into different angular relations to the normal planes of the bodies of the respective aeroplanes, the lateral portions on one side of the machine being moved to an angle different from that to which the lateral portions on the other side of the machine are moved, so as to present different angles of incidence at the two sides of the machine, *of a vertical rudder, and means where by said rudder is caused to present to the wind that side thereof nearest the side of the aeroplanes having the smaller angle of incidence and offering the least resistance to the atmosphere*, substantially as described.

Figure 5. Wright Patent Claim 8 Reciting Coordinated Wing Twisting with a Rudder

As indicated earlier, for eight years after the Wright Patent issued the airplane industry litigated the Wright Patent. For the Wright Brothers, the litigation lead to mixed results.[36] The German Supreme Court invalidated the corresponding German Patent over the prior art.[37] The French High Court announced a ruling favorable to the Wright Brothers but granted defense motions to review the prior art.[38] The U.S. Circuit Court of Appeals upheld the validity of the Wright Patent.[39] Instead of ending the battle in the United States at this point though, Curtiss redesigned his airplanes based on the advice of his patent attorney thus requiring the Wright Brothers to file yet another lawsuit.[40] It was not until the intercession of the U.S. Government at the start of World War I before the Wright Patent disputes were resolved.[41] [42]

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[36] Wilbur Wright died of typhoid fever in 1912 never to see the outcome of the patent litigation. See footnote 32 above.

[37] See footnote 32 above

[38] See footnote 32 above

[39] See footnote 32 above

[40] See footnote 32 above

[41] See footnote 32 above

[42] Members of the airplane association were granted use of the patented technology after payment of a blanket fee. As successors to the Wright Co., Curtiss and Wright-Martin each received $2 million under the agreement. See footnote 32 above.

The battles waged by the airplane industry over the Wright Patent underscores the importance of retaining good patent counsel in patent litigation and in all phases of patent protection. This includes the importance of using competent patent attorney in the drafting and filing of a patent application. Retaining good patent counsel can mean the difference between receiving a maximum or no return on your invention.

5. Conclusion

"A" is for "Assets" of the patent kind which entrepreneurs should recognize as being key tools for advancing a business. "B" is for "Basics" as in the basics of patent law which every entrepreneur should know. "C" is for "Competent" as in "competent patent attorney" without which even the best innovation may fail due to the failures in patent protection. If an entrepreneur learns these ABC's of patents, he or she will start to understand how effective patent assets can be as a tool for enhancing the value of a business.