

Hal, a/k/a Harold W. Milton, Jr., received a B.S. degree in aeronautical engineering from Purdue University in 1957 and worked for the Rocketdyne Division of North American Aviation test firing rocket engines for the Thor and Atlas missiles. Having been commissioned a 2<sup>nd</sup> Lt. upon graduation from ROTC at Purdue, he then attended pilot training in the U.S. Air Force. Because of his experience in the development of rocket engines, he was one of the first officers assigned to and for development of the missile training school for the USAF. As a missile maintenance officer, Hal monitored the building of a training launch pad for training the first crews of the Atlas ICBM missile sites, for which he received the Air Force Commendation Medal. Following the military tour, Hal enrolled at the Georgetown University Law Center, where he was a member of the Law Journal. Hal passed and was admitted to the Virginia Bar prior to graduating from law school in 1964. Later that same year, he was admitted to the Michigan Bar. During law school, Hal worked as an Examiner in the U.S. Patent and Trademark Office (USPTO) and then as a Patent Advisor in the Office of Naval Research, U.S. Navy. Hal entered the private practice of law in 1964 in metropolitan Detroit, Michigan, the area where he grew up. In the years since, he has engaged in all phases of patent, trademark and copyright practice, including prosecution of patent applications and licensing.



Hal has litigated various patented technologies; assisted new enterprises in protecting their technology to entice investment or the sale of the enterprise; and oversaw the creation of patent, trade secret and trademark portfolios during periods of significant growth for several large corporations. As one example, an automotive supplier developed a dominant patent portfolio over forty-five years from start-up to maintain a major portion of their relevant market. In another success story, Hal helped catapult a start-up company by obtaining a patent for them, which they immediately used to sue an established competitor to obtain both monetary damages and an injunction. Hal successfully argued before the Court of Customs and Patent Appeals to force the USPTO to curtail the rejection known as "undue multiplicity." Since 1970, Hal has trained over 100 individuals in the practice of patent prosecution and has developed a step-by-step method for sequentially preparing the sections of a patent application based upon appellate opinions. Hal authored a training book to support the method, which is used in a course currently taught by Hal in a Master's program at The University of Notre Dame dedicated to patent prosecution. In further support of the method, Hal developed a word processing computer program ([patentarchitect.com](http://patentarchitect.com)) to render more efficient and guide the preparation of a patent application, which is covered by two U.S. Patents and numerous pending applications. He has been added to America's Best Lawyers list published by Woodward/White, Inc.

Hal's articles:

"Improvements" in Patent Licenses: Presumptions and Clauses Derived from Case Law, 34 *AIPLA Q.J.* 333 (2006).

CIP Practice Under and Beyond the Proposed Rule Changes for Continuations, 88 *J. PAT. & TRADEMARK OFF. SOC'Y* 801 (2006).

A Lesson Worth Telling, *INTELLECTUAL PROPERTY TODAY*, July 2006 at p. 16.

The *KSR* Standard of Patentability, 89 *J. PAT. & TRADEMARK OFF. SOC'Y* 616 (2007).

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A Patent Entirely and Exclusively Focused On An Art-Additive Hits The Validity Bull's Eye, 8 *CHI-KENT J. INTELL. PROP.* 237 (2009).

Recognition and Presentation of a "New Result" to Reach a Safe Harbor, 10 *J. MARSHALL REV. INTELL. PROP. L.* 583 (2011).

How the Internet has Removed the Historical Rationale for "Non-Analogous Arts", 13 *J. MARSHALL REV. INTELL. PROP. L.* 68 (2013).

## **ACKNOWLEDGMENTS**

This book has its foundation in the confidence all of my clients placed in me over the years to perfect ownership in their creations of patentable intellectual property. An overwhelming client base forced me to train patent attorneys in order to fully service all of the clients while maintaining quality control. I was blessed with terrific clients. As a result, this book was written with the mental dexterity of all of those I have mentored in the art of patent prosecution! It is a tribute to years of mental tension striving for the best in patent prosecution to protect product concept, product tooling, patent portfolio integrity, licensing, and enforceability in litigation. I would like to say that I did not write patents for clients-I had clients in order to write patents. This book is the culmination of years of patent prosecution combined with over a decade of formal teaching in law schools while honing this book to this proven state of effectiveness. Simply said, this book combines and condenses over fifty years of learning, mentoring, teaching, and writing about patent prosecution.

## **DEDICATION**

This book is dedicated to Peter A. Hochstein. I worked with Peter for nearly forty (40) years and obtained nearly one hundred (100) patents in his name. Peter was a genius and died at the age of sixty-five (65) on May 29, 2011. Serving Peter helped and encouraged me to perfect the art of patent prosecution. My greatest wish is that this book will help you serve someone of Peter's stature.

## **PRELUDE**

To paraphrase Thomas Jefferson<sup>1</sup> and the U. S. Supreme Court<sup>2</sup>, just because an inventor is the first to make a discovery, the inventor has no natural right to own that discovery. However, the patent system provides incentive to make such discoveries. Abraham Lincoln, himself an inventor in a U.S. Patent<sup>3</sup>, said the following: "The patent system . . . added the fuel

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<sup>1</sup> Letter from Thomas Jefferson to Isaac McPherson (Aug. 18, 1813), in 6 THE WRITINGS OF THOMAS JEFFERSON, 180-181 (Henry A. Washington ed., Taylor & Maury, 1854), (See Section 5.03 herein).

<sup>2</sup> *Graham v. John Deere Co.*, 383 U.S. 1 (1966), (See Section 5.03 herein).

<sup>3</sup> U.S. Patent No. 6,469 (filed Mar. 10, 1849).

of interest to the fire of genius.”<sup>4</sup> The grant of a patent to prevent others from using that discovery for a limited time is a reward to the first to discover. The patent is an incentive for the exclusive right to exclude to rapidly further human knowledge for the benefit of society. Every country’s patent system is the incentive for the continuing creation of wealth, which inures to the benefit of that country. A reliable patent system provides an incentive for inventors to spend long hours in their garrets, laboratories, and workshops, and for companies to support and invest in such inventors. I have been blessed to have worked for many of these inventors. As the world becomes more economically interconnected and dependent, there is a need to provide more specific guidance in preparing a patent application for universal acceptance and enforcement in all countries of the world. That is an objective of this book.

Being the author of a patent invalidated by the United States Supreme Court in the landmark *KSR* patent case is usually not a resume builder!<sup>5</sup> However, this book has been honed by fifty (50) years of continually finessing patent preparation in terms of quality and efficiency while heeding the admonishments of others to establish certain principles that were overstepped in the prosecution of the patent in *KSR* to yet further hone the preparation process. In other words, the complete story of *KSR* rounded out and verified a legal test of patentability running through historical landmark United States Supreme Court cases and which legal test can be used with inventors to discuss patentability to avoid the elusive and subjective “obviousness” test of patentability.

The most important influence on my patent prosecution has been working for private inventors and companies dependent upon patent protection for their first cries of life and continued survival. I was greatly influenced by the automotive supplier business which is highly competitive and requires continuous innovation to improve the product to retain market share. Based upon history of great inventions and verified by my experience, technology moves forward in very small increments, each increment being dependent upon the experience of previous knowledge. This competitive automotive environment focused my efforts on obtaining patent protection to prevent copying of very incremental product innovations by serially drafting very focused and specific patent applications which are clearly distinct from one another in a long line of patents. These automotive products are qualified by testing and specified by the automotive manufacturers thereby making it important to obtain very

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<sup>4</sup> Abraham Lincoln, Second Lecture on Discoveries and Inventions (Feb. 11, 1859).

<sup>5</sup> *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007).

specific patent coverage on each individual product design to force the competitor to innovate around that patent-protected product design. Based upon the experience as an examiner in the U. S. Patent Office (USPTO), I knew that most examiners would grant a patent if the claims of the patent application clearly and distinctly recited something new: a principle adhered to and verified during my fifty (50) years of patent prosecution.

As my client base grew over the years and demanded more help, I began training evening law school students. These students are not merely law clerks in the traditional sense because law clerks typically have no prior knowledge useful to the law. My students act as interns because I use their prior technical knowledge, typically engineering, to understand a potential invention and to search and understand technical literature to make sure the invention could not be found in the prior technical literature. These prior technical skills are used to search technologies and to prepare patent applications. The patent law is overlaid as needed and in a very structured progression. My intern program is philosophically similar to the USPTO program of hiring people with technical backgrounds to act as examiners.

I edit and review the search reports and patent applications with the interns to maintain quality control. The first and very basic thing I learned was that it is very difficult and time consuming to wait and review a completed patent application prepared by a trainee or subordinate. A onetime review of a completed application requires simultaneous attention to a technically accurate and complete and thorough understanding of the preferred embodiment, accurate use of terminology, the use of proper and complete claim language, including antecedents, etc. In addition, a onetime review requires a simultaneous lookout for all of the errors that have historically been committed by others and about which numerous treatises have been written — a daunting task!

Because there are simply too many lessons to convey to a trainee by editing all of the sections of a patent application at one time, the review and editing of a patent application is often not given sufficient attention due to the pressures of time and other tasks. It is much easier and of better quality to train by creating the application in increments or sections to be reviewed and edited before proceeding to the next increment or section. In this manner, the lessons of each section will mentally stick and errors will not be carried throughout the application.

After forty five (45) years of editing work product prepared by numerous subordinates and trainees intermingled with other client responsibilities, I turned over most client responsibilities to other attorneys and devoted myself to training full time. I also began teaching a law school

class on patent preparation. I have taught at Michigan State University, College of Law; Wayne State University, Law School, and University of Notre Dame Master of Science in Patent Law. It is this combination of organizing the full-time training and preparing a curriculum for the law class that forced me to survey and to organize what I had learned in years of practice and training. This drove me to reduce to writing a formal methodology for preparing and reviewing a series of patent applications.

In addition, I reviewed the writings of other patent preparation commentators and have integrated and relied upon the best in this methodology. I am compelled to single out Paul Cole who through his writing has significantly contributed to this book by forcing me to reconcile my methodology with his truths. This book has to a large degree been perfected by students in numerous law school classes and significantly by the patent preparation class in the Master of Science dedicated to patent prosecution at the University of Notre Dame. The organization of training also led me to a computer guru, Jacob Allen, to develop a word processing program-patentarchitect.com-to mechanically facilitate the drafting steps and to prevent common errors in the conflicting use of words and numbering of elements (U.S. Patents 7,890,851 and 8,612,853, other patents pending). The website patentarchitect.com includes a detailed tutorial in preparing an actual patent.

This book is meant to be a guide for a patent preparer, especially as an interactive tool for a mentor and an efficient and quality program for experienced patent preparers. The object of this book is to present an architectural methodology for preparing a patent application in an interrelationship of patent sections with specific content as suggested and supported by the case law. In other words, this book interweaves the lessons learned from case law with the tried and true experience in mechanical steps for preparing a patent application.

Some steps advocated in this book may not be acceptable to some practitioners because one or more steps may violate some learned technique or may be contrary to some court decision with which they have had to deal. However, with minor changes at the end of preparation, a patent application written using this method will satisfy the idiosyncrasies of almost any practitioner. Once practiced and understood, this method will reward practitioners with efficient and error-free preparation of a patent application that is suitable for filing in the various patent offices throughout the world. Most importantly, this method is very efficient as a tool in training and is helpful to new practitioners to quickly develop a routine of preparing patent applications at a very high skill level. Also, supervisory attorneys will find the section by section methodology very efficient in

incrementally reviewing patent applications prepared by subordinate attorneys and will personally benefit from enhanced quality and increased efficiency by the use of the steps of specific content advocated herein.

The architectural method with steps of specific content set forth in this book is greatly facilitated by word processing on a computer. That enhancement is made more efficient by the word processing program-patentarchitect.com-dedicated to preparing a patent application. Just as the steam engine leveraged the muscles of man, the computer has leveraged the brain of man; that leverage should be used to maximum advantage to align and interrelate the steps in the preparation of a patent application.

The drafting of a patent application is a skill built upon aptitude. It is not learned from books but from practice in the same manner great athletes practice to hone their skills. In order to practice, one must first learn the moves or routine. The moves and routine set forth here have been learned and developed during years of practice and teaching generations of new patent attorneys the art of patent prosecution. Just as the athlete works up a sweat in practicing and honing skills, the patent preparer must work up a mental tension in drafting a patent application. While it is not an easy practice, there is great satisfaction in using a highly honed skill. Good luck!

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