

The Role of Patent Law in the Research & Development Process

Brent Chatham
Patent Attorney
Leydig, Voit & Mayer, LTD.

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INTELLECTUAL PROPERTY LAW

What is a Patent?

- A Negative Right—not an Affirmative Right
- Quid pro quo of the Patent System:
 - An “Enabling” Disclosure of a
 - “Novel,” “Non-obvious,” and “Useful”
 - “Machine, Article of Manufacture, Composition of Matter, or Process”
 - Exclusions: “Laws of Nature,” “Physical Phenomena,” “Abstract Ideas”
 - (in exchange for)
 - Grant of a Limited Monopoly

Why do we have Patents?

- Costly to Innovate, Cheap to Imitate
 - Utilitarian, not Moral, Justification
- Patent Policy aims to Balance:
 - Providing an Incentive to Innovate
 - Promote development of technologies that might not otherwise be produced (or be produced as fast)
 - Social Costs of a Private Monopoly
 - Restricted output; higher prices

U.S. Constitution, Article I, Section 8, Clause 8:

The Congress shall have Power...

To promote the Progress of Science and useful Arts by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries...

First U.S. Patent



The United States.

To all to whom these Presents shall come. Greeting.

Whereas Samuel Hopkins of the City of Philadelphia and State of Pennsylvania hath discovered an Improvement, not known or used before, such Discovery, in the making of Pot ash and Pearl ash by a new Apparatus and Process; that is to say, in the making of Pearl ash 1st. by burning the raw Ashes in a Furnace, 2^d. by dissolving and boiling them when so burnt in Water, 3^d. by drawing off and settling the Lye, and 4th. by boiling the Lye into Salts which then are the true Pearl ash; and also in the making of Pot ash by fluxing the Pearl ash so made as aforesaid; which Operation of burning the raw Ashes in a Furnace, preparatory to their Dissolution and boiling in Water, is new, leaves little Residuum; and produces a much greater Quantity of Salt: These are therefore in pursuance of the Act, entitled "An Act to promote the Progress of useful Arts", to grant to the said Samuel Hopkins, his Heirs, Administrators and Assigns, for the Term of fourteen Years, the sole and exclusive Right and Liberty of using, and vending to others the said Discovery, of burning the raw Ashes previous to their being dissolved and boiled in Water, according to the true Intent and Meaning of the Act aforesaid. In Testimony whereof I have caused these Letters to be made patent, and the Seal of the United States to be hereunto affixed Given under my Hand at the City of New York this thirty first Day of July in the Year of our Lord one thousand seven hundred & Ninety.

G. Washington

City of New York July 31st. 1790. -

I do hereby certify that the foregoing Letters patent were delivered to me in pursuance of the Act, entitled "An Act to promote the Progress of useful Arts"; that I have examined the same, and find them conformable to the said Act.

Edm: Randolph Attorney General for the United States. -

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July 31, 1790



Product Development Process

- Provisional Patent Applications
- Non-provisional Patent Applications
 - Specification
 - Claims
 - Drawings
 - Inventor Oath and Declaration
 - Filing Search and Examination Fees

- The Problem of Interpretation: The Core and the Penumbra of Natural Language
 - H.L.A. Hart's Legal Positivism
- Core of Determinate Meanings
 - Loosely, meanings that all native speakers of a language would agree on
- Penumbra of Indeterminate Cases
 - Loosely, meanings that native speakers of a language could reasonably disagree about

- Prosecution of Patent Applications
 - PTO (Examiner) “examines” Application
 - PTO Issues Office Action
 - Applicant Responds
- Allowance and Issue
 - Notice of Allowance
 - Continuation Applications



Product Development Process

- “Patent Landscape” Analysis
 - Freedom to Operate/Clearance Search
- Non-Infringement Opinions
- Invalidity Opinions
- USPTO Proceedings
 - Post Grant Review
 - Inter Partes Review

- Characteristics of Innovation
 - Pharmaceuticals
 - Business Methods
 - Software
 - Biotechnology
 - Integrated Circuits
 - Telecommunications



Product Development Process

- Litigation
 - Complaint
 - Answer/Counterclaims/Defenses
 - Discovery
 - Claim Construction (“Markman Hearing”)
 - Resolve Indeterminacy of Claim Language
 - Pre-Trial Motions
 - Trial

- Patent Examiner
- Patent Agent
 - [http://www.uspto.gov/sites/default/files/OED GRB.pdf](http://www.uspto.gov/sites/default/files/OED_GRB.pdf)
 - “Scientific and Technical Training Requirements”
 - Bachelor’s Degree in Recognized Technological Subject (Physics, Engineering Physics)
 - Patent Bar Exam
- Patent Attorney
 - J.D., Admitted to State Bar, Admitted to Patent Bar

Pros

- Variety of Technologies
- High Project Turnover Rate
- Requires “Soft” Skills
- Requires Analysis from a Variety of Perspectives: Legal, Technological, Business, Public Policy

Cons

- Lack of Depth—Sacrificed for Breadth
- Occasionally (or Frequently) Requires Long Hours
- Rarely Requires “Hard” Skills

- Techne vs. Episteme
- Marketability
 - Physics is Fundamental to a *Variety* of Engineering Disciplines—thus Highly Marketable in the Patent World
- Conceptualization of Abstract Ideas
 - Useful in Law and Physics

Questions?

Thank You

Brent Chatham

bchatham@leydig.com

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