Developing a Coherent Patent and Trade Secret Strategy—Easier Said Than Done!

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Few Questions of Great Importance Continue to Frustrate Mankind…
Why are we here?
Are we alone?
Is Elvis alive?
How can we adequately protect our company’s intellectual property?
Q: What is intellectual property?
A: Intangible legal rights resulting from intellectual creativity.

Q: How can I protect my intellectual property?
A: Patents, trade secrets, trademarks, copyrights, and agreements (e.g., non-disclosure agreements).
U.S. Constitution, Article I, Section 8

“The Congress shall have the 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.”
What is a US Patent?

Agreement between U.S. Government and Inventor

➢ An inventor is given property rights in invention
  o 20 years *from filing* for a utility patent
  o 15 years *from issuance* for a design patent

➢ The government (and public) is given information on how to make and use the invention

➢ Patents are obtained at the U.S. Patent & Trademark Office after examination (called “patent prosecution”)
  o It can take several years to obtain a patent but this process can be expedited
  o The “prosecution history” is publicly available
Types of Patents

1. Utility patents
   ➢ covers all types of inventions (e.g., mechanical, chemical, biotech, business methods)

2. Design patents
   ➢ covers the ornamental aspects of a structure or apparatus (i.e., the “look” of an object, not function).

3. Plant patents
   ➢ covers asexually reproduced plants found in cultivated areas
Parts of a Patent Application

Specification
➢ includes background of invention, summary of invention, description of figures, and detailed description of invention (e.g., may include definition of specific terms)

Claims
➢ defines the invention (e.g., apparatus, system, product, method of making and using product)

Drawings
➢ tables, graphs, photos
1. A wastewater treatment system comprising:
   a first sump for receiving wastewater to be treated;
   a first focal point inside the first sump for gathering the wastewater into a focused area;
   a filter for screening the wastewater after it leaves the first focal point;
   a second sump for receiving the wastewater after it leaves the filter;
   a second focal point inside the second sump for gathering suspended solids from the wastewater contained in the second sump;
   a protein skimmer for receiving the suspended solids from the second focal point and returning treated wastewater to the second sump;
   wherein the first focal point includes a ring inside the first sump; and
   wherein the second focal point includes a horizontal vortex formed by swirling water in the second sump.
1. A method for purifying a wastewater containing living biota comprising:
(a) introducing a wastewater into a biological treatment tank in which anaerobic conditions and aerobic conditions are maintained;
(b) introducing a first microorganism and a second microorganism into the biological treatment tank either before or after the introduction of the wastewater into the biological treatment tank, wherein the first microorganism belongs to *Bacillus methyloptrophicus* and the second microorganism belongs to *Bacillus subtilis*, and wherein the first microorganism and the second microorganism predominate over said living biota in the biological treatment tank; and
(c) introducing at least one activating agent comprising silicic acid into the biological treatment tank.
2. An apparatus for wastewater treatment, comprising: a charcoal tank into which wastewater to be biologically treated is introduced and which is filled with bioactivated charcoal submerged in water; and an oxygen dissolution tank downstream from and in fluid communication with the charcoal tank and having an input through which passes wastewater output from the charcoal tank, an activated carbon tower, downstream from and in fluid communication with the charcoal tank and the oxygen dissolution tank having a fluid input through which passes oxygenated wastewater from the oxygen dissolution tank, and said tower in a vessel separate to the charcoal tank, into which wastewater under treatment from the charcoal tank and oxygen dissolution tank is introduced, and which activated carbon tower contains non-submerged bioactivated carbon, and said tower further having a treated water outlet to a treated wastewater container.
CLAIM

The ornamental design for a wastewater pipe, as shown and described.
Patent Process Overview – U.S. Only

Conception

Additional work on invention (e.g., testing, other aspects)

1 year

File Provisional Patent Application

File Non-Provisional Patent Application

Patent Application Publishes (18 months after provisional is filed)

Patent Granted
The claimed invention must be:

➢ patent eligible (e.g., not a law of nature, natural phenomenon, or product of nature)
➢ novel
➢ non-obvious
➢ adequately described and enabled
➢ clear
Need Help Patenting Your Idea?

Shameless Advertisement

Disclaimer: This is just a joke and not an advertisement or solicitation for services!
Does a patent give you the freedom to practice (FTP) your invention?
A patent gives the patent holder the right to **exclude** others from:

- **Making** the invention
- **Using** the invention
- **Selling/Offering to sell** the invention
- **Importing** the invention into the U.S.

A person who practices the invention **without the permission of** the patent holder **infringes** the patent!!!
Right to Exclude v. FTP

Earlier patent to chair

Your later invention: chair with arms

➢ You could patent the chair with arms (and exclude others for this invention), but you would be covered by the earlier patent to the chair.
**Claim**: An apparatus *comprising* A, B, and C.

<table>
<thead>
<tr>
<th>Product</th>
<th>Covered by Claims?</th>
</tr>
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<tbody>
<tr>
<td>A and C</td>
<td>No</td>
</tr>
<tr>
<td>A, C, and D</td>
<td>No</td>
</tr>
<tr>
<td>A, B, and C</td>
<td>Yes</td>
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<tr>
<td>A, B, C, and D</td>
<td>Yes</td>
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</tbody>
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Inventorship v. Ownership

➢ Inventorship is a legal question based on each inventor’s contribution, and not something you can simply “agree” on.

➢ In order to be an inventor, you must contribute to the “conception” of the invention, not simply be a “pair of hands.”

➢ Ownership—unlike inventorship—can be agreed on (e.g., as condition of employment, agreement between two companies, etc.).

➢ In the absence of an agreement, each inventor has full rights to exploit the invention, without accounting to the other inventor(s).

GET IT IN WRITING!!!
Why Invest in Patents?

➢ Exclusivity in the market (stop infringers from copying)
➢ Marketing advantage ("patented formulation", "patent pending")
➢ Patented products warrant higher prices
➢ Deterrent effect on competitors
   ➢ competitor may decide not to pursue invention
   ➢ competitor may need to invest heavily to "design around" patent
Why Invest in Patents?

➢ Potential licensing revenue
  o royalty on products sold incorporating patented technology
  o exclusive or non-exclusive licenses

➢ Royalty-free cross licensing

➢ Prevent others from patenting your inventions

➢ Increase value of company

➢ Leverage in contract negotiations and litigation (e.g., cross-claims)
Trade Secrets
In 2013, the Commission on the Theft of American Intellectual Property reported U.S. losses over $300 billion to international intellectual property theft—*in 2017, the estimate doubled to $600 billion.*

In 2016, Congress passed Defend Trade Secrets Act—resulting in a *30% increase in trade secrets cases filed.*

Courts have awarded—and parties settled for—*hundreds of millions of dollars for misappropriation of trade secrets.*

The DOJ has stepped up prosecution of trade secret theft (e.g., Chinese scientist sentenced 10 years for conspiring to steal genetically modified rice).
Q: What is a trade secret?

A: Information that derives independent economic value from not being generally known to or readily ascertainable by other persons; and is the subject of reasonable efforts to maintain its secrecy.

➢ includes technical and/or business information
What is a Trade Secret?

Technical Information

- Plans, designs and patterns, such as those for specialized equipment
- Processes and formulas, such as those for the manufacture of drugs, foods, chemicals or other materials (e.g., the formula for Coca-Cola)
- Methods and techniques for manufacturing
- Engineering notebooks
- Negative information, e.g., the designs that didn’t work
- Computer software (programs or source code)
**What is a Trade Secret?**

“I have not failed. I’ve just found 10,000 ways that won’t work.” – Thomas Edison

➢ “negative know-how” can be very valuable trade secrets

➢ misappropriation can result in a competitor saving lots of time and money, and getting to market much faster

➢ typical situation is a former employee going to a competitor

➢ recent cases highlight the importance of “negative know-how”

  - *Genentech v. JHL Biotech* – scientist stole Genentech’s information re: testing biologic product and allowed JHL to get to market quickly.
What is a Trade Secret?

Business Information

- Financial information prior to public release
- Cost and pricing information
- Manufacturing information
- Internal market analyses or forecasts
- Customer lists
- Unannounced business relationships one is negotiating or has entered into
- Information about business opportunities, such as opportunities to acquire another company or product
- Marketing and advertising plans, both for existing and planned products
- Personnel information (e.g., key employees, compensation plans)
What is a Trade Secret?

Q: What is not a trade secret or when does something cease to be a trade secret?

A: Examples include:

➢ Public disclosure of trade secret (e.g., publication of information online)
➢ Independent invention
➢ Reverse engineering
➢ Obtaining information without obligation to keep it confidential
➢ Information obtaining from other sources
Q: Who owns a trade secret?

A: The person who discovered or invented the secret. (Although, generally the employer in employer/employee situation.)

➢ written agreements are very important!

➢ a trade secret can be licensed (require receiving party to take reasonable measures to protect secrets)

➢ a trade secret can be co-owned

➢ a trade secret can be transferred (e.g., in the sale of a business)
Q: What level of secrecy is required?

A: Steps taken to maintain secrecy must be “reasonable” under the circumstances.

- Disclosure to someone not bound to secrecy destroys the secret
- Best practices include a combination of legal obligations (non-disclosure agreements), structural protections (physical security, labeling, handling and use policies, etc.), and routine audits
Exemplary Policies

Paper Documents

➢ Mark clearly as confidential/trade secret

➢ Limit/prohibit number of copies of confidential documents

➢ Control distribution of confidential documents (check-out/check-in system)

➢ Keep confidential documents in secure location (locked cabinet, vault)

➢ Require signing of NDA’s by those who access confidential documents and carefully
Exemplary Policies

Electronic Documents

➢ Encrypt information

➢ Control access to system hosting documents (hard drives and/or servers) by use of robust password/encryption

➢ Limit network connections/access to confidential information

➢ Prohibit/limit e-mailing of confidential information

➢ Prohibit/limit copying of confidential information onto portable media (such as thumb drives or external hard drives)

➢ Clearly mark/stamp digital files as confidential
Exemplary Policies

Employees

➢ Provide all employees with company trade secret policy and require a signed acknowledgment that it has been read

➢ Require all employment agreements to include NDAs

➢ Limit employee exposure to confidential information to that information they need to know

➢ Have recurring educational sessions on trade secrets and efforts to maintain secrecy

➢ Conduct exit interview of departing employees to remind them of company’s policies, and return relevant material
Q: How long does a trade secret last?

A: Theoretically forever, conditioned on maintenance of value and secrecy (e.g., Coca-Cola over 125 years old).

- Loss occurs when actual or potential value no longer exists, secret becomes known, or secret improperly disclosed.

- Disclosure of trade secret during litigation can be tricky (e.g., must identify trade secret with particularity).
Q: What rights does a trade secret owner have?

A: Protection against misappropriation

➢ “Misappropriation” means acquisition, disclosure, or use without express or implied authority or consent.

➢ But independent development, reverse engineering, or lawful acquisition is not misappropriation.

➢ Lawsuits involving trade secret misappropriation claims are on the rise; courts have awarded high judgments (e.g., >100 million dollars)
Misappropriation of Trade Secrets

Common Litigation Issues Involving Trade Secrets

➢ Failure to specifically identify trade secret

➢ Failure to show company took reasonable measures to keep secret

➢ Failure to show trade secret information was handled differently than other information

➢ An NDA alone may not be enough

➢ Failure to adequately mark documents

➢ Failure to limit access of departing employee
Trade Secrets for Your Business

➢ Trade secrets are valuable and becoming increasingly more valuable.

➢ Start thinking about trade secrets at outset of any project, business or collaboration with another company.

➢ Identify and record actual/potential trade secrets throughout development.

➢ Maintain secrecy.

➢ Back it up with good legal documents.
Working with Third Parties
Confidentiality Provisions in NDAs

Non-Disclosure Agreements are an important tool when disclosing confidential/secret information

- Definition of Confidential Information
- Marking requirements (e.g., mark documents)
- Obligation to disclose Confidential Information
- Permitted use of Confidential Information
- Duration of confidentiality obligations
- Return of Confidential Information
Should identify duty of confidentiality (or reference a separate Confidentiality Agreement)

Should reference trade secret policy and allow for employees acknowledge policy.

Should include a “present” assignment of IP rights.
  - I “hereby assign”
Joint Development

JDAs should contemplate the following IP considerations:

➢ What “background” IP is each party bringing to the project?
➢ Who will own the IP developed during work?
➢ How can the IP (e.g., background or jointly developed) be used during the project?
➢ What happens to the IP when the project is over?
➢ Who is responsible for prosecuting and enforcing patents?
Parties can consider the following for IP developed during the project:

- agree to jointly own any IP arising out of work
- agree that one party owns the IP and the other gets a license (e.g., exclusive license)
- form a new company that holds the IP
Avoiding Costly IP Mistakes

➢ Avoid public disclosures
  o Do not publish or present your innovation too early
    • Do not publish or present your innovation without first filing patent application
  o Do not discuss future innovations with others

➢ Secure IP ownership up front
  o Make sure all IP is assigned and thus owned by company as soon as possible
  o Put assignment clause in employment agreement.
  o Maintain confidentiality (e.g., mark docs, require NDAs, limit employees transfer of sensitive info).
Avoiding Costly IP Mistakes

➢ Create a robust trade secret policy…and stick to it!

➢ Consider filing patent application to “background IP” **before** working with another party to memorialize “your” inventions

➢ Do not use information or resources from prior employer
  - “borrowing” trade secrets, customer lists, etc. from a previous employer is prohibited
  - Prior employer could claim any IP is owned by them

➢ Think critically whether to patent an idea or keep it as a trade secret
Thank You

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