

**Sughrue**

SUGHRUE MION, PLLC

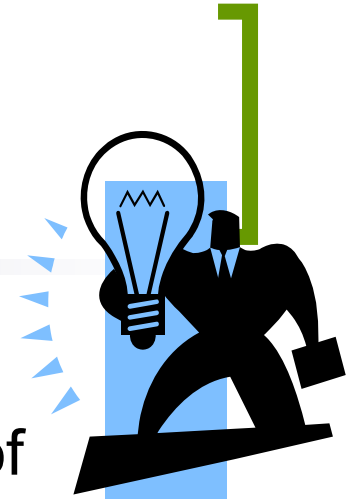


# Protecting Your Intellectual Property

March 31, 2011

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# Intellectual Property Defined



- Webster's: "property that derives from the work of the mind"
- Includes intangible assets such as ideas, inventions, phrases, symbols, designs and musical, literary and artistic works
- It is an exclusive legal property right
- "Intellectual Property" ("IP") refers to the legal rights, not the intellectual work itself

# Types of IP

- Copyrights – protect creative works



- Trademarks – protect identities of products

- Patents – protect useful, tangible ideas



- Trade Secrets – protect commercial knowledge



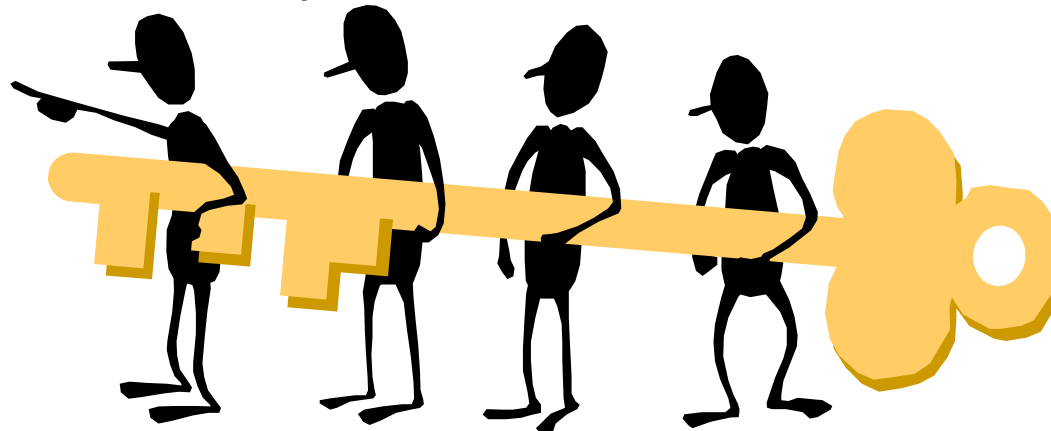
March 31 - April 1, 2011

San Diego Regional Renewable Energy Technology  
Acceleration Program – Commercialization Bootcamp



# Synergy of IP Protection

- All forms of IP protection work together:
  - Trade secrets to protect the “know how” and related
  - Patents to protect the first known ideas and commercial embodiments
  - Copyrights to protect designs, publications, programs and marketing
  - Trademarks to protect names, brands and labels



# Why Protect IP?

- Just like real property, society protects intellectual property rights to promote progress and economic growth
- Constitution grants Congress 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.
- Recent studies estimate that 2/3 of the value of large businesses in the US can be traced to intangible assets (Shapiro/Pham, July 2007).

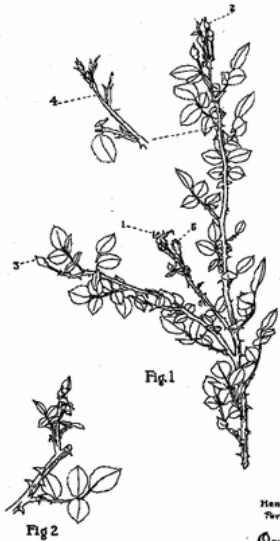


# Patents

- U.S.-granted property right to exclude others from making, using, selling or offering to sell an invention in the U.S., or importing it into the U.S., for a period of 20 years from the application filing date
- The invention is then fully disclosed for public benefit
- Foreign patent protection available as well
- Cost of obtaining patents is high

# Types of Patents

Aug. 18, 1931. H. F. BOGENBERG Plant Pat. 1  
CLIMBING OR TRAILING ROSE  
Filed Aug. 6, 1930



INVENTOR.  
Henry F. Bogenberg.  
Per  
*Opunt*  
Oswald M. Kelen

## Utility

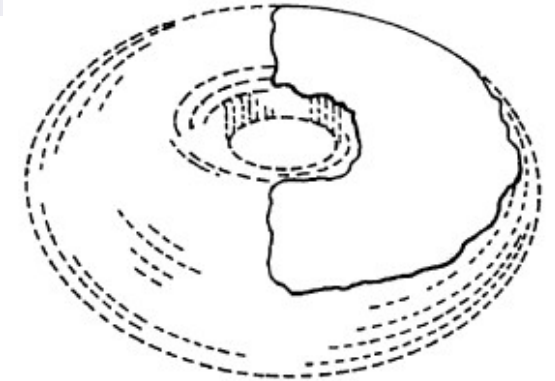
Utility patents are those patents which are new and useful and directed to a method, process, machine, device, article of manufacture, computer program, or chemical compound.

## Design

Design patents are those patents granted on the ornamental design of a functional item.

## Plant

Plant patents are those patents granted to new and distinct asexually reproducing plants which are invented or discovered.



Surface Pattern Applied to Doughnut – US D458,003

# What rights does a patent provide?

- Negative Rights
  - A patent gives the patent owner the right to exclude others from making, selling, offering to sell
- These Rights are Territorial
  - Patent rights granted in the U.S. are territorial in that protection is only provided in the United States.
  - If an inventor would like protection in countries other than the U.S., then the inventor would have to seek protection in each country or through the European Patent Convention, or under the Patent Cooperative Treaty
- Personal Property
  - Patent rights function similar to rights associated with personal property in that patent rights can be bought and sold

# What does a patent look like?



US006772592B2

(12) **United States Patent**  
Gerber et al.

(10) **Patent No.:** US 6,772,592 B2  
(45) **Date of Patent:** Aug. 10, 2004

(54) **FLOAT DEPENDENT WAVE ENERGY DEVICE**

4,754,157 A \* 6/1988 Wadde ..... 290/53  
4,858,434 A \* 8/1989 Masuda ..... 60/398  
5,152,674 A \* 10/1992 Marx ..... 417/331  
5,461,862 A \* 10/1995 Ovdia ..... 60/502

(75) **Inventors:** James Gerber, Princeton, NJ (US);  
George W. Taylor, Princeton, NJ (US);  
Thomas J. Meany, Chadds Ford, PA (US)

\* cited by examiner

(73) **Assignee:** Ocean Power Technologies, Inc.,  
Pennington, NJ (US)

*Primary Examiner*—Sheldon J. Richter  
(74) *Attorney, Agent, or Firm*—Henry I. Schanzer

(\* ) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(57) **ABSTRACT**

Apparatus for converting energy contained in surface waves on a body of water to useful energy comprises a float from which is suspended a fully or effectively fully submerged inverted cup-shaped member having a closed top end and an open bottom end. Disposed within the top space is a compressible fluid separated by a flexible membrane from a column of water filling the bottom open end of the submerged member. Passing surface waves cause pressure variations at the bottom end of the member causing changes in the water column height and corresponding changes in the buoyancy of the member. The buoyancy changes induce vertical oscillations of the member relative to the float and known means are used for converting the relative movements of the float and submerged member to useful energy. Preferably, the float vertically oscillates in synchronization with the passing waves, and the vertical movements of the float increase the relative movements between the float and the submerged member.

(21) **Appl. No.:** 10/357,675

(22) **Filed:** Feb. 4, 2003

(65) **Prior Publication Data**  
US 2003/0226358 A1 Dec. 11, 2003

**Related U.S. Application Data**  
(60) Provisional application No. 60/354,216, filed on Feb. 4, 2002.

(51) **Int. Cl.**<sup>7</sup> ..... F03B 13/12; F03G 7/00;  
F04B 35/00

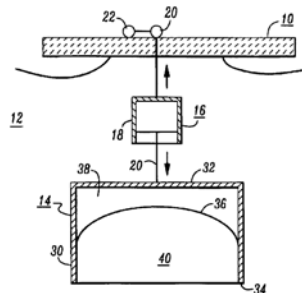
(52) **U.S. Cl.** ..... 60/495; 60/497; 60/501;  
290/53; 415/916; 417/331

(58) **Field of Search** ..... 60/495-507, 308;  
290/53; 415/916; 417/330-333

(56) **References Cited**

U.S. PATENT DOCUMENTS  
4,441,316 A \* 4/1984 Moody ..... 60/497

14 Claims, 3 Drawing Sheets



Cover page

(U.S. Pat. No. 6,772,592)

# What does a patent look like? (Cont'd)

U.S. Patent

Aug. 10, 2004

Sheet 1 of 3

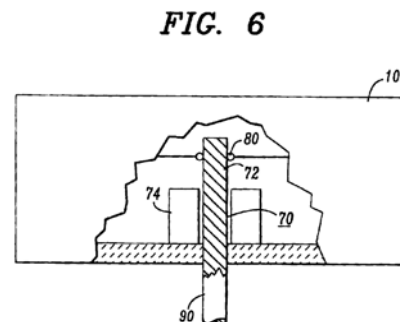
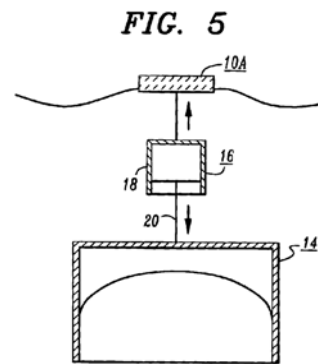
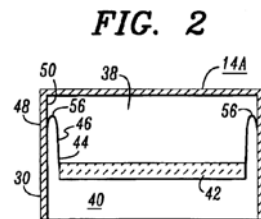
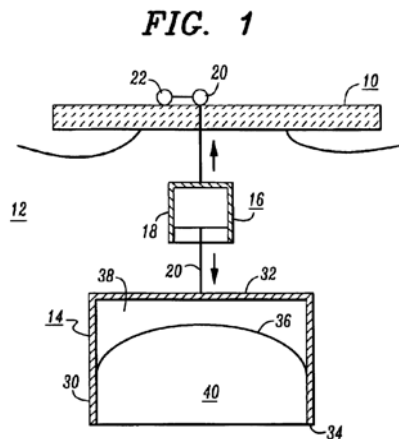
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U.S. Patent

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Sheet 3 of 3

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## Figures

- as many pages as necessary to support the claims

# What does a patent look like? (Cont'd)

1  
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**FLOAT DEPENDENT WAVE ENERGY DEVICE**

This application claims the benefit of the filing date of Provisional Application No. 60/354,216 filed Feb. 4, 2002, the subject matter of which application is incorporated herein by reference.

**BACKGROUND OF THE INVENTION**

This invention relates to means for extracting energy from waves on the surface of a body of water, and relates particularly to improvements over the device and method disclosed in U.S. Pat. No. 4,441,316 to Moody.

In the Moody patent, a cup-shaped chamber is disposed, open end down, on the surface of a body of water on which surface waves occur. The chamber floats on the surface with the lower, open end of the chamber submerged. The chamber is normally filled with a column of water to a level equal to that of the surrounding water. As surface waves pass the container, the variations in water pressure caused by the passing waves induce oscillations in the height of the water column in the container. In the embodiment disclosed in FIG. 8 of the patent, a piston is disposed within the upper portion of the container and floats on the surface of the water column therein. The piston, including a piston rod which extends upwardly through the closed upper end of the container, is fixedly attached to a hydraulic pump. Accordingly, as the height of the water column varies within the container in response to passing waves, the piston within the container is caused to vertically oscillate for driving the hydraulic pump for pressurizing a hydraulic fluid which is used for driving an electrical generator for generating electrical energy.

The patent does not discuss how the container itself, aside from the movements of the water column therein, reacts to the passing waves. A problem, not discussed in the patent, is that, to the extent that the floating container bobs up and down in concert with the passing waves, thus reducing the depth changing effects of the waves, pressure variations at the bottom of the container are reduced resulting in a corresponding reduction in the amplitude of oscillations of the water column within the container. This reduces the amount of energy generated by the system.

**SUMMARY OF THE INVENTION**

A cup-shaped member similar to that disclosed in the Moody patent (the subject matter of which is incorporated herein by reference) is disposed, open end down, in completely (or, as described hereinafter, "effectively" completely) submerged relation beneath and dependent from a float. A column of water extends into the submerged member which includes, between the upper surface of the water column and the member closed upper end, a compressible fluid, e.g., air. Preferably, the water column and the overlying fluid are separated by an impervious, movable barrier for preventing direct contact between the water and the overlying fluid while allowing changes in the height of the water column. The submerged member is rigidly connected, e.g., by a vertical rod extending upwardly from the upper end of the member, to an energy converter, e.g., a hydraulic pump-electrical generator arrangement as disclosed in the patent.

In use, the height of the water column within the submerged member oscillates in response to overpassing surface waves. In response to such oscillations, the buoyancy of the member is changed resulting in vertical oscillations of

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the member beneath the float. Such oscillating movements drive the energy converter.

In one embodiment, the float from which the submerged member is dependent is of sufficient size relative to the passing surface waves as to be relatively immovable in response to the waves. Accordingly, the amplitude of the movements of the submerged member relative to the float is determined essentially solely by the movements of the member.

In a second embodiment, the float is dimensioned for vertical movements which are essentially in phase with the passing waves. Such wave-induced movements of the float increase the amplitude of the relative movements between the float and the submerged member for increasing the energy conversion efficiency of the system. For example, with a cresting wave tending to lift the float, an upward force is applied by the float to, e.g., the casing of the hydraulic cylinder. Simultaneously, owing to the increased water pressure caused by the wave, a decreased buoyancy of the submerged member applies a downward force to, e.g., the piston of the hydraulic cylinder. Thus, movements of the float, in addition to movements of the submerged member, drive the hydraulic cylinder.

Because the phase relationship of the movements of the float and the submerged member are of particular importance in the above-described second embodiment, means are preferably employed for synchronizing the movements of the submerged member with that of the float. Known means, such as the phase controlling mechanisms disclosed in the Moody patent, can be used.

In still another embodiment, a portion of an "effectively completely" submerged member extends above the water surface for increasing the volume of the air chamber. This provides increased changes in buoyancy, for greater power output, with a relatively small increase in the mass of the system.

**DESCRIPTION OF THE DRAWINGS**

The drawings are schematic and not to scale.

FIG. 1 shows a side sectional view of a system according to the present invention including a submerged member dependent from a float of such size as to be relatively vertically stationary in response to passing waves;

FIG. 2 shows a modification of the submerged member shown in FIG. 1;

FIG. 3 is a view similar to FIG. 1 but showing an arrangement for increasing the air volume associated with the submerged member;

FIG. 4 is a view similar to FIG. 2 but showing a mechanism for synchronizing the movements of the submerged member with the passing waves;

FIG. 5 is a view similar to FIG. 1 except using a float vertically movable in phase with the passing waves; and

FIG. 6 is a side view, partially broken away, showing a linear generation energy transducer mounted within a surface float.

**DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION**

An energy extracting system, according to the present invention, is shown schematically in FIG. 1. The system includes a float 10 on the surface of a body 12 of water, preferably one experiencing large and constant surface waves. The system also includes a wave energy converter

## Specification

- background of the relevant "art"
- the problems associated with what has been done in the past
- description of the invention and how the invention solves the problem

# What does a patent look like? (Cont'd)

US 6,772,592 B2

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said converter being hollow and including a closed top end and an open bottom end;  
a compressible fluid disposed within said converter and being exposed to pressure variations in said body of water caused by overpassing surface waves for varying the volume of said fluid for varying the buoyancy of said converter; and  
means responsive to said buoyancy changes for generating forces for driving an energy transducer for generating useful energy.

2. Apparatus according to claim 1 including a flexible membrane separating said compressible fluid from said body of water.

3. Apparatus according to claim 1 including means for synchronizing movements of said converter with overpassing surface waves.

4. An apparatus according to claim 3 wherein said float is vertically movable in response to, and in-phase relation with, said surface waves.

5. Apparatus according to claim 1 including a movable, rigid barrier separating said fluid from said water, said barrier being movable within said converter in response to water pressure variations caused by passing waves.

6. Apparatus according to claim 5 including an energy transducer disposed within said float for converting movements of said converter to useful energy.

7. Apparatus according to claim 6 wherein said energy transducer comprises a linear electrical generator comprising a linear stator and a magnet, said stator being connected to said converter for causing movements of said stator relative to a magnetic field from said magnet for generating electrical energy.

8. Apparatus for extracting energy from surface waves on a body of water comprising a float and a wave energy converter suspended from said float within said water;

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said converter being hollow and including a closed top end and an open bottom end;  
a compressible fluid disposed within said converter and being exposed to pressure variations in said body of water caused by overpassing surface waves for varying the volume of said fluid for varying the buoyancy of said converter; and  
means disposed between said converter and said float for converting relative movements between said converter and said float into useful energy.

9. Apparatus according to claim 8 including a movable member hermetically separating said compressible fluid from said body of water.

10. Apparatus according to claim 8 wherein said converter is fully submerged within said water.

11. Apparatus according to claim 8 including means for synchronizing movements of said converter with overpassing surface waves.

12. An apparatus according to claim 11 wherein said float is vertically movable in response to, and in-phase relation with, said surface waves.

13. Apparatus according to claim 8 wherein said converter top end extends upwardly out of the water for providing above-water hollow space within the container not contributing to the buoyancy of the converter.

14. Apparatus according to claim 13 wherein said top end comprises a stem portion of small lateral dimensions for displacing only relatively small volumes of water in response to surface waves passing by and contacting said stem portion, and said stem portion being topped by an enlarged portion spaced out of contact with said waves.

\* \* \* \* \*

## Claims

- very last page(s) of the patent
- provide the scope of the invention to the public
- must distinctly point out and describe what the inventor considers as the invention
- most important page(s)!

# What does a patent look like? (Cont'd)

## Sample claim from U.S. Pat. No. 6,772,592

1. Apparatus for extracting energy from surface waves on a body of water comprising a float and a wave energy converter suspended from said float within said water;

said converter being hollow and including a closed top end and an open bottom end;

a compressible fluid disposed within said converter and being exposed to pressure variations in said body of water caused by overpassing surface waves for varying the volume of said fluid for varying the buoyancy of said converter; and

means responsive to said buoyancy changes for generating forces for driving an energy transducer for generating useful energy.

# What is an “invention”?

- Webster’s: “a new, useful process, machine, improvement, etc., that did not exist previously and that is recognized as the product of some unique intuition or genius, as distinguished from ordinary mechanical skill or craftsmanship.”
- USPTO: “Anything under the sun made by man” as long as it is novel, useful, and unobvious.
  - Excludes laws of nature, physical phenomena and abstract ideas
  - Invention = conception + reduction to practice

# Am I an inventor?

- Inventorship is a legal determination governed by U.S. Patent Laws
  - USPTO: anyone who conceived the invention
  - "[C]onception is established when the invention is made sufficiently clear to enable one skilled in the art to reduce it to practice without the exercise of extensive experimentation or the exercise of inventive skill." *Hiatt v. Ziegler*, 179 USPQ 757, 763 (Bd. Pat. Inter. 1973).
- An inventor need not make a contribution to every claim of a patent. A contribution to one claim is enough.



# ...but I *want* to be an inventor!

- Inventor ≠ Author
- "In arriving at conception [the inventor] may consider and adopt ideas and materials derived from many sources [such as] a suggestion from an employee, or hired consultant so long as he maintains intellectual domination of the work of making the invention down to the successful testing, selecting or rejecting as he goes, even if such suggestion [or material] proves to be the key that unlocks his problem." *Morse v. Porter*, 155 USPQ 280, 283 (Bd. Pat. Inter. 1965).
- Did you actually contribute to the conception of the invention, such as the physical structure or operative steps, or did you merely act under the direction and supervision of the conceivers?
- Intentionally misrepresenting inventorship is grounds for invalidation of the patent!

# What is reduction to practice?

- Reduction to Practice  $\neq$  Proof of Concept
- Reduction to practice may be an actual reduction or a constructive reduction to practice which occurs when a patent application on the claimed invention is filed.
- The inventor is not required to reduce the invention to practice!
- “[I]t is not essential for the inventor to be personally involved in carrying out process steps, where implementation of those steps does not require the exercise of inventive skill.”; *In re DeBaun*, 687 F.2d 459, 463, 214 USPQ 933, 936 (CCPA 1982)

# Who can get a patent?

- In the U.S., the **first to invent** has the right to a patent to an invention if the following requirements are met:
  - An inventor who is first to conceive the invention and who works diligently to reduce it to practice prevails even against earlier filer.
  - Record your actions and ideas (e.g., lab notebooks)
  - Actual reduction to practice or Constructive reduction to practice
  - 1 year bar (Public use or On sale)
- If more than one application claims the same invention, then the USPTO conducts an Interference proceeding to determine who was the first to invent.
  - Foreign activity or foreign priority can be used by the applicant to show earlier date of invention
- In most foreign countries, the **first to file** an application has the right to a patent!

# How do I get a patent?

- Step 1: Invent something!
  - Even when the prior art and the claimed subject matter are not identical, a claim is unpatentable if the differences are such that:
    - the subject matter as a whole would have been obvious at the time the invention was made
    - to an artisan of ordinary skill in the art to which the subject matter relates
  - Does your invention yield any surprising or unexpected results?
  - When in doubt, ask the Technology Transfer Office!



# How do I get a patent? (Cont'd)

- Step 2: Complete an invention disclosure form
  - A detailed description of your work that allows you to describe why you think you have an invention that should be protected
  - Most universities and companies have standardized forms
  - Include as much detail as possible!
  - Include known players in the field and known publications
  - Obtain any required signatures prior to submission
  - Be mindful of any deadlines!



# How do I get a patent? (Cont'd)

- Step 3: Invention disclosure form is evaluated by:
  - Technology Transfer Office (TTO)
  - In-house Legal Department
- The invention is then evaluated for:
  - projected costs to prepare and file an application
  - novelty of the technology
  - ability to license / cross-licensee
  - ability / desirability to enforce the patent
  - ability / desirability to spin-off a company

# How do I get a patent? (Cont'd)

- Step 4: Engage a law firm / patent attorney
  - The invention disclosure is sent to a patent attorney
    - Budget for the preparation and filing of an application
    - Time frame by which the application must be filed
    - Contact information of inventor(s) / laboratory also provided
    - What type of application to file?
  - Provide all data to the patent attorney ASAP!!
  - Work with the patent attorney to ensure that the invention is adequately described in the application.

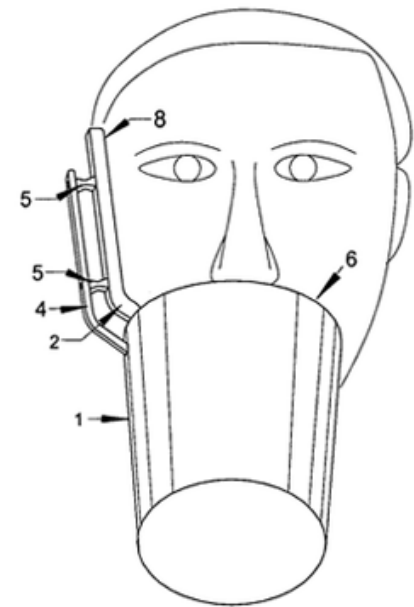


# Types of Applications

- U.S. Provisional application
  - An application that establishes domestic priority in the U.S.
  - No absolute need for claims in a provisional, but at least one claim is recommended
  - Disclosure of the invention
  - Not examined - anatomy not critical
  - Starts 1 year clock
  - Must file non-provisional or an International PCT application within a year to claim priority to provisional

# Types of Applications (Cont'd)

- U.S. Non-provisional application
  - An application that can mature into a U.S. Patent after all of the requirements of U.S. patent laws are satisfied
  - Anatomy of application is important
  - Disclosure/data
  - Claims and an inventor's oath/declaration are required



Device for treatment of hiccups  
US Pat. No. 7,062,320

# Types of Applications (Cont'd)

- International Application
  - Patent Cooperation Treaty (PCT)
    - Filing of a single application that can later be introduced into almost any foreign country
    - Allows for a unified prior art search, which is performed by the International Searching Authority (ISA)
- European Patent Convention (EPC)
  - First-to-file system
  - Prosecution similar to the U.S.
  - Official languages are English, French, and German
- Other foreign countries
  - An Application will have to be filed in each country where patent protection is desired
  - Generally applications will target countries where the resulting product will be marketed
  - Protection for a patent only extends to the country where the patent is granted

# Preparation of the Application (How can I help?)

- Data/Figures
  - Patents are black and white – need to be reproducible
  - Color pictures/graphs are only acceptable under special circumstance – very rare
  - Identify the data that is most relevant to the invention
  - Figures illustrate that which is necessary for the understanding of the subject matter sought to be patented
- Claims
  - The claims provide the scope of the invention to the public
  - Must distinctly point out and describe what the inventor considers as the invention
  - The claim meaning is based on meaning to “one of ordinary skill” in the relevant technology
  - All requirements regarding patentability are determined based on the claims

# Preparation of the Application (Cont'd)

## Requirements under 35 USC § 101

1. One invention
  - Although not explicitly stated in 35 U.S.C. § 101, only one patent may be granted per invention.
2. Useful/utility
  - 35 U.S.C. § 101 explicitly states that the invention must be a “useful”
3. Statutory subject matter
  - 35 U.S.C. § 101 specifies that a patent may be granted for a process, machine, article of manufacture, or composition of matter. These categories constitute statutory subject matter

# Preparation of the Application (Cont'd)

- Enablement
  - must disclose how to make and use invention without undue experimentation;
  - Original specification must enable one of ordinary skill to make and use an embodiment of the invention;
  - It is acceptable that one of ordinary skill must perform routine experimentation to make the invention; and
  - There is no requirement to disclose well known information to fulfill the enablement requirement.

# Preparation of the Application (Cont'd)

USP 6,329,919: System and method for providing reservation for restroom

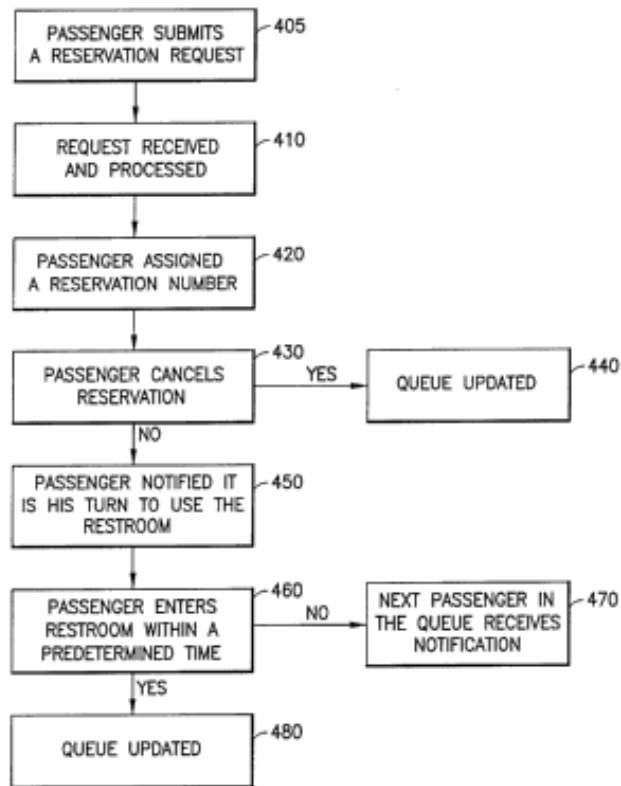


FIG.4

## Written description

- must provide an adequate written description of the invention;
- The original specification (including drawings and claims) must show that the inventor possessed the invention (all claim limitations) at the time of invention (e.g., filing date).

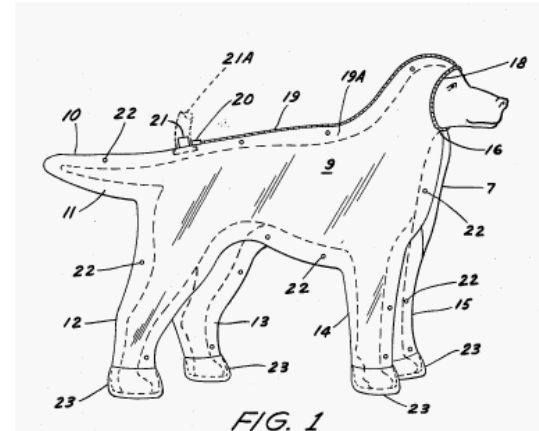
# Preparation of the Application (Cont'd)

- Best Mode
  - Set forth the best mode known by the inventor as of the filing date of the application;
  - Can appear in the detailed description or the claims; and
  - Original specification must also enable one of ordinary skill to make and use the embodiment of the invention considered best by the inventor.

# Preparation of the Application (Cont'd)

## Novelty - 35 U.S.C. § 102

- an inventor or applicant will not be granted a patent if their invention is not new or is already known by the public.
- The identical subject matter was made available to the public more than one year before applicant filed the first U.S. application.
- Examiner will look to prior art.



Dust cover for dogs  
US Pat. No. 3,150,641

# Preparation of the Application (Cont'd)

## Non-obviousness - 35 U.S.C. § 103

1. Even when the prior art and the claimed subject matter are not identical, a claim is unpatentable if the differences are such that:
  - the subject matter as a whole would have been obvious at the time the invention was made
  - to an artisan of ordinary skill in the art to which the subject matter relates.
2. A unanimous decision by the U.S. Supreme Court in *KSR International Co. v. TeleFlex Inc.*, No. 04-1350 (2007), may make it easier to combine prior art references to invalidate patents or prevent the issuance of a patent on the ground that the claimed invention is obvious.

# What happens after filing?

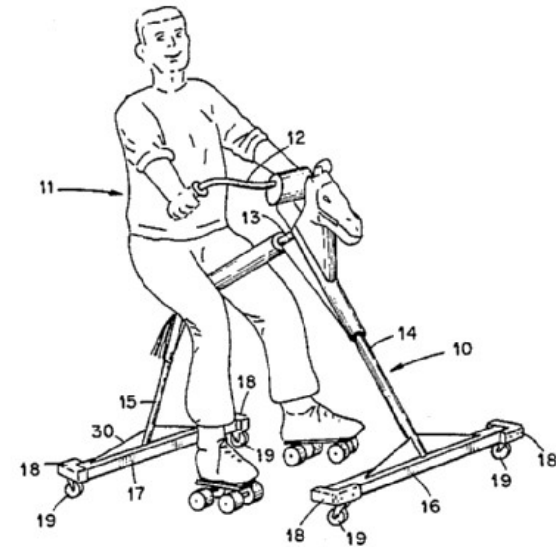
- Only non-provisional applications are examined in the U.S.
- An examiner trained in the relevant technology will search for any “prior art”
  - You may be asked to work with the law firm to help distinguish the invention from any cited references!
- Continue to generate supporting data

# Why can't I get a patent?

- Activities by inventors begin a 1-year clock to file in U.S.:
  - Public disclosure anywhere; experimental use is a narrow exception
  - Publication anywhere
  - Offer for sale or public use in the United States
  - Publication or patenting anywhere before the critical date prevents inventor from receiving a patent
- Activities by *others* is an absolute bar:
  - Public disclosure or use by others in the United States before the date of invention prevents inventor from receiving a patent.
  - Publication or patenting anywhere before the date of invention prevents inventor from receiving a patent
  - U.S. filing date “by another” before invention date prevents inventor from receiving a patent.
    - “By another” means by a different inventive entity. To be considered the same inventive entity, all inventors must be the same

# Why can't I get a patent? (Cont'd)

- Most foreign jurisdictions have absolute bar to patentability for activities:
  - Public disclosure anywhere by anyone
  - Publication anywhere by anyone
  - Offer for sale or public use anywhere by anyone



Mobile Vehicle for Training Skaters  
US Pat. No. 4,681,332

# Ethical Considerations

- Inventorship
  - A legal determination based on the claims
  - Willful misrepresentation of inventive entity can invalidate the patent!
  - Inventorship can be corrected during prosecution of the application
- Duty of Disclosure - Prior Art
  - Willful concealment of a publication or public disclosure can invalidate the patent!
- Fraud
  - Any inequitable conduct during prosecution can invalidate the patent!



# When is it the right time to consider patent protection?

- When in doubt, consult with the Technology Transfer Office
- When you decide to prepare a manuscript for publication
  - If an application is not filed before publication, foreign rights are lost.
- Evaluate current data and projected data collection over the next 12-18 months
  - In most foreign countries, data is critical to patentability
  - A non-provisional and/or PCT application must be filed within 1-year of the provisional application filing date

# Who owns my patent?

- Universities / Employers
  - Most employment contracts contain an obligation to assign ownership to the employer
    - Obligation to assist during prosecution of the application
  - Use of university / company resources to conceive and/or reduce an invention to practice will trigger an obligation to assign



# Of what use is a patent?



- Patents do not police themselves
  - Patentee must enforce the patent
  - Patent holder must watch out for and assert own rights
  - No requirement to practice or make the patented technology in order to enforce it against others
  - Universities typically do not use patents in their full defensive capacity
- Remedies include compensatory damages, lost profits, punitive damages and injunctions
- Patent infringement suits are generally considered expensive and lengthy

# Of what use is a patent? (Cont'd)

## Universities / Companies

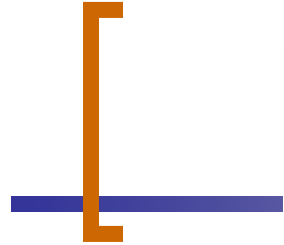
- Patent rights can be licensed and/or assigned
- Seek for funding
- Patent rights are assets of *value*
  - Evaluated when seeking funding/investors
    - What potential do applications have to become patents?
    - Does the application/patent cover the core technology?
    - Does the application/patent cover the product?
    - What potential is there for future IP?
  - Establish value in a company



# Questions?

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# Partnerships & Alliances

April 1, 2011

**Karen B. Dow, Esq.**  
**Scott Davison, Esq.**

# Partnerships & Alliances

## Overview

- Confidentiality
- Export Regulations
- Agreements
- Licenses
- Partnerships
- Starting a Company



# Confidentiality

- “Listen, do you want to know a secret?”
- Inappropriate sharing of information may negatively affect IP rights
- Colleagues in different institutions
- Casual conversations
- Presentations
- Abstracts, posters and articles



# Confidentiality (Cont'd)

- Non-Disclosure Agreement (NDA)
- Confidential Disclosure Agreement (CDA)
- One-way versus two-way exchange of information
- Time period of agreement
- Scope of disclosure/Use of disclosure
- Exceptions
  - Venture Capitalists typically will not execute a CDA



# Export Regulations

- Loose Lips Sink Ships...and patents
- It's Classified!
- Laws limit sharing technology and patentable information
- Rules on “exports” outside the U.S.
- Rules on “exports” inside the U.S.
- The acronym police: BIS, EAR, CCL, ECCN



# Export Regulations (Cont'd)

- Question: do you need an export control license?
- Answer: *probably not*, but you need to check anyway
- Four questions:
  - 1) What is being exported?
    - Classify your item
      - Is it on the CCL?
      - What is the ECCN number?
  - 2) Where it is being exported?
    - Review lists of countries
    - Review what can and cannot be exported to each



# Export Regulations (Cont'd)

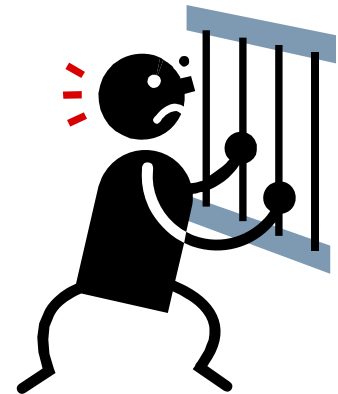
- 3) Who will receive the item?
  - Check the list, avoid the Axis of Evil
  - Plutonium to the Libyans: NO
  - Tokyo University Colleague: Yes
- 4) What will the item be used for?
  - Several prohibited “end uses”
  - Plutonium for warhead: NO
  - Plutonium for nuclear reactor: Yes



- May want to call your TTO or attorney
- Tip: if you figure this out yourself, show your work!

# Export Regulations (Cont'd)

- US Patent & Trademark Office Foreign Filing License
  - Limited to restrictions on exporting information for the purpose of filing foreign patent applications
- Violations could result in:
  - Loss of patent rights...if you're lucky
  - Fines...if you're not so lucky
  - Criminal sanctions...if you're not lucky at all



# Material Transfer Agreement (MTA)

- Whose materials are they?
- Limitation on use
  - No sale, no human therapeutic or diagnostic use
- Limitation on distribution
- Publication – acknowledgement
- Proper use and disposal
- No use of name
- No warranty of representation – material experimental in nature
- Who owns IP created by use of the materials?
- Confidentiality and Reports



# Consulting

- So, you want to go out into the business world?
- Considerations:
  - Type of consulting
  - Time period
  - Amount of time contributed
  - Ownership of IP
  - Impact on own research
  - Impact on other contractual and grant obligations



# Consulting (Cont'd)

- Review institutional policies and handbooks
- Conflict of interest rules
- Sign-off by your institution



# Cooperative Research and Development Agreement (CRADA)

- Agreement or contract to facilitate the transfer of federally-funded R&D for use by state and local governments, institutions and the private sector
  - Especially small business
- Clauses or provisions
- Scope of work: each party's tasks and contributions
  - Personnel, equipment, materials, facilities, project

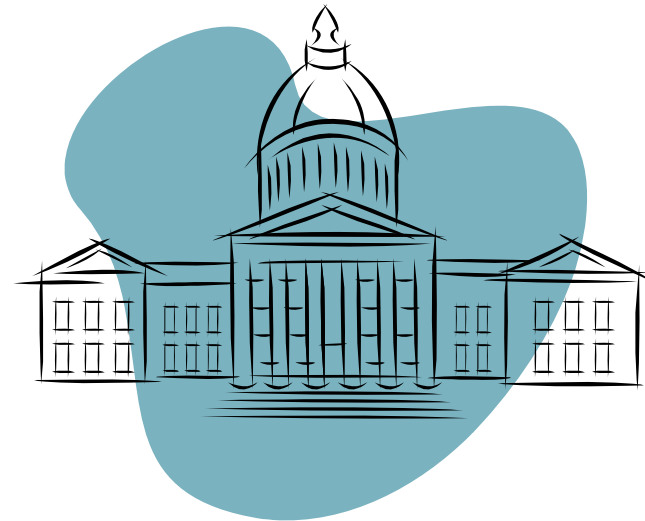


# CRADA (Cont'd)

- Finances
- IP rights – background IP, project IP, option/license
- Data and publication – and reports
- Duration and termination
- Liability
- Dispute Resolution

# CRADA (Cont'd)

- Confidentiality
- Government Rights
  - Unlimited, paid-up, non-exclusive, irrevocable, world-wide license
- Conflict of interest
- Possible extensions



# Research & Development Agreements

- Similar to CRADA clauses
- Impact of funding sources
- Limitations on related research



# SBIR/STTR

- We're in the money!
- SBIR: Small Business Innovation Research
- STTR: Small Business Technology Transfer
  - Cooperative research collaboration between small business concern (SBC) and non-profit research institution



# SBIR/STTR (Cont'd)

- US Small Business Administration (SBA)
  - [www.sbir.gov/solicitations](http://www.sbir.gov/solicitations)
  - [www.sbir.us/schedule](http://www.sbir.us/schedule)
- US government program providing funding to stimulate technological innovation in small companies
  - [www.grants.gov](http://www.grants.gov)



# SBIR/STTR (Cont'd)

- Department of Energy (DOE)
  - Solicitation inviting small businesses to apply for SBIR/STTR grants
  - Technical topics list: energy production, energy use, fundamental energy science, environmental management, nuclear proliferation
    - Phase I: Feasibility of innovative concepts with awards up to \$100K for about 9 months
    - Phase II: R&D effort with awards up to \$750K over 2 years (must win at Phase I)
    - Phase III: Agencies may award non-SBIR/STTR follow-on grants



# Licenses and Assignments

- You should say what you mean – or, mean what you say
- Assignment = transfer of ownership
- License = authorized use to another party, but retain ownership
- Who's who?
  - Licenser
  - Licensee
  - Sublicensee



# Licenses and Assignments (Cont'd)

## ■ License Clauses or Provisions:

- Subject matter – definitions
- Type – exclusive, sole, non-exclusive, co-owned, sublicense
- Territory – US, OUS, WW
- Field of Use
- Milestones/Diligence
- Payments – upfront, royalty, annual payment, upon milestone completion, offset
- ...



# Licenses and Assignments (Cont'd)

- License Clauses or Provisions:
  - Technology Assistance or Exchange (“know-how”)
  - Duration & Termination
  - Third party IP and related issues
  - IP ownership, control, funding, background IP
  - Improvements – disclosure, inventorship, ownership, license, impact on original technology
  - Post agreement obligations
  - ...



# Licenses and Assignments (Cont'd)

- Licenses Clauses or Provisions:
  - Liability/Indemnification – add definition
  - Confidentiality
  - Export regulations
  - Insurance
  - Bankruptcy
  - Tax consequences

# Partnerships

- Investigating the other party
- Identify and prioritize key objectives
- Change in partner – acquisition, bankruptcy, merger
- Alternative dispute resolution/litigation
- Control of decisions
- Plan for divorce



# Starting a Company

- Pandora's Box
- “The first thing we do, let's kill all the lawyers.”
  - Henry VI (Part 2), Act IV, Scene II
- Investors
- Key personnel
  - Release of rights and materials
- Past and current employment obligations
- Penny wise, pound foolish

# Starting a Company (Cont'd)

- Business plans/goals
- Incorporation
- Study industry/competition
- Incubator/space



# Questions?

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