## UNITED STATES PATENT AND TRADEMARK OFFICE



# Patent Basics for Inventors, Entrepreneurs, and Start-ups

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### **Outline**

- Why Patents?
- Types of Patents
- Patent Examiner Duty
- Patent Examination Process
- USPTO Resources

# **Constitutional Authority**

- Congress shall have the power ...
  - to regulate commerce with foreign nations, and among the several states, and with Indian tribes. --U.S. Const. art. I, § 8, cl. 3.
  - 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. -- U.S. Const. art. I, § 8, cl. 8.



### What is a Patent?

- A Property Right
  - Right to <u>exclude others</u> from making, using, selling, offering for sale or importing the claimed invention
  - Limited term
  - Territorial: protection only in territory that granted patent; NO world-wide patent



# Why get a Patent?

- A patent can be:
  - Used to deter others from a market
  - Used as a marketing tool to promote unique aspects of a product
  - Assert/enforce rights against an infringer or competitor
  - Used as collateral to obtain funding
  - Create revenue sell or license like other property



# **Types of Patents**

#### **Utility**

New and useful process, machine, article of manufacture, or composition of matter, or any new and useful improvement thereof

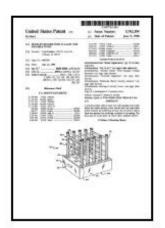


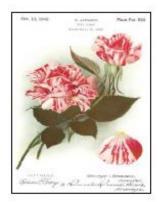
Any new, original and ornamental design; protects the way an object appears

#### **Plant**

Whoever invents or discovers and asexually produces any distinct and new variety of plant









# Why do startups file Patents?

- Attractive to investors and buyers
- Deter patent infringement lawsuits
- Can increase leveraging power
   i.e. mergers and acquisitions
- Patents are a form of property than can add value to a company's assets



## Do I really need a patent?

#### - Myths -

- "If I just publish, I will prevent anyone from getting a patent on my invention"
  - What if already patented?
  - No Patent Claim = No Protection
  - Can't exclude others from market
- "I'm not going to get a patent, because other countries will steal my invention"
  - How will you keep it secret?
- "I just want my invention to be available"
  - Who will invest in development, scale-up, clinical trials, production if it can be easily copied?



# **Utility Patent Claims**

- Defines what applicant believes is the invention
- Must particularly point out and distinctly claim the subject matter which applicant regards as their invention or discovery
- Must conform to the invention as set forth in the specification – terms and phrases used in the claims must find clear support or antecedent basis in the written description



# Patents support investment in, and development of, inventions

- Oncomouse (US Patent 4,736,866)
- Streptomycin (US Patent 2,449,866)
- Cochlear implant (Australian patent 46563, US Patent 4,267,410)
- CPAP (continuous positive airway pressure) mask for sleep apnea (US Patent 4,944,310)



# **Cochlear Implant**

- University of Melbourne, Australia
- Patents in multiple countries, including Australia (46563) and US (4,267,410)
- Enabled commercial development, manufacturing, and wider availability

# **Cochlear Implant**

United States Patent [19] [11] 4,267,410 Forster et al. [45] May 12, 1981

#### We claim:

- 1. An aural prosthesis system comprising:
- a first part adapted to be located exteriorally of the body to transmit a data signal and a second part adapted to be located within the body to receive said data signal,
- said data signal comprising a plurality of sequential frames of an audio signal,
- each of said frames having a set of channel signals, each member of said set of channel signals including a first portion indicative of the channel signal intensity and a second portion indicative of the channel signal timing within the associated frame,
- a transmitter in said first part for transmitting said frames of said data signal as a series of sets of channel signals.
- a receiver in said second part for receiving the signal transmitted by said transmitter,

- first storage means in said second part for storing each member of a set of channel signals as it is received,
- loading means to load said sets of channel signals into said first storage means,
- second storage means in said second part to store each member of a set of channel signals,
- a plurality of electrodes adapted to be coupled to stimulate aural nerve endings, and
- coupling means to couple each member of the set of channel signals in said second storage means to a separate one of said electrodes, said first portion of each said members of said set determining the intensity of stimulation to be applied by the associated electrode and said second portion of each of said members of said set determining the time within the associated frame in which that stimulation is initiated by said associated electrode,

said coupling means coupling the channel signals of a frame from said second storage means to said electrodes while said loading means is loading the set of channel signals from the next successive frame into said first storage means.



### Provisional v. Non-Provisional

#### Provisional

- Automatically abandoned after one year period
- no claims required
- written disclosure must meet same requirements as non-provisional
- not allowed for design
- not examined; cannot mature into a patent

#### Non-Provisional

- At least one claim required
- written disclosure must meet requirements of 35 USC 112 1st paragraph.
- Examined for patentability, can result in a patent.

# When should you file?

United States is a First Inventor to File System!

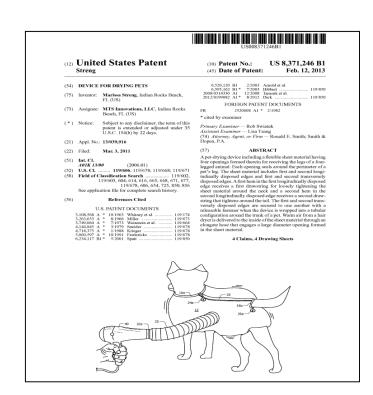
- Filing outside the United States?
  - You must file before public disclosure
- Only want US protection?
  - You can file within one year after public disclosure



### Non-provisional - Parts, Form and Content

#### **Arrangement of Application**

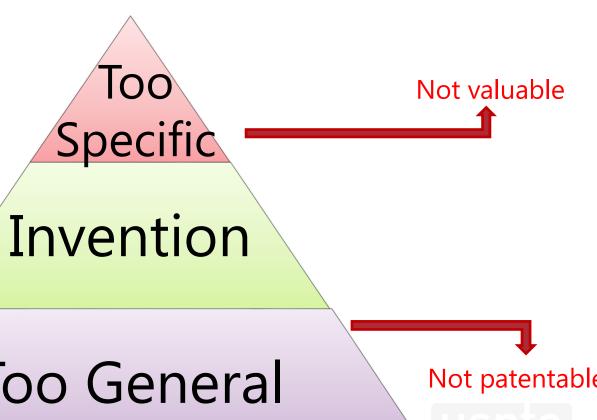
- Title
- Cross-Reference to Related Applications
- Statement Regarding Federally Sponsored Research or Development
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings
- Detailed Description of the Invention
- Claims
- Abstract
- Drawings
- Sequence or Computer Program Listings





# Claim Scope

What information should a patent application claim?

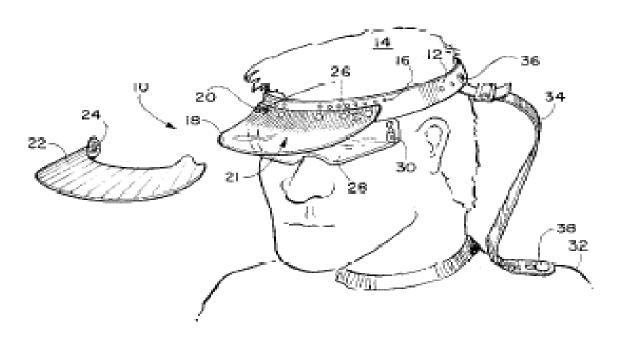


Too General

Not patentable

### **Example of an Independent Device Claim**

US Patent No. 6,009,555, titled "Multiple component headgear system."





### **Example of an Independent Device Claim**

Preamble Transitional Phrase

1. A headgear apparatus comprising:

a headband member having a frontal;

a visor member removably secured to said frontal portion of said headband; and

an eye shield member removably secured to said frontal portion of said headband.

### **Examples of Dependent Claims**

A **dependent** claim incorporates by reference all the limitations of the claim to which it refers.

- A headgear apparatus as in claim 1) wherein <u>said</u> eye shield member is adjustable with respect to <u>said</u> headband member.
- 3. A headgear apparatus as in claim 1, wherein <u>said</u> visor member and <u>said</u> eye shield member are secured to <u>said</u> frontal portion of <u>said</u> headband member by <u>a</u> set of rivets.
- 4. A headgear apparatus as in claim 2, wherein **said** headband member is formed from neoprene fabric

### **Patent Examination**

- Patent Examiner reviews contents of the application for compliance with all U.S. patent legal requirements
- Burden is on the examiner: An applicant is entitled to a patent unless...
  - Requirements of U.S. patent law are not met

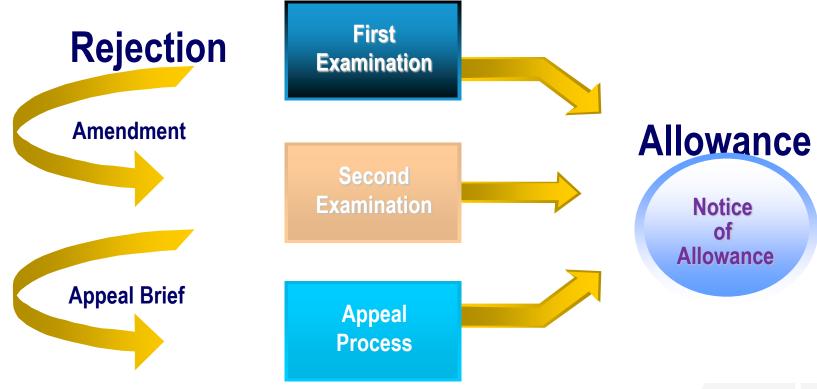


### What does a Patent Examiner do?

- Reads and understands invention
- Determines whether the application is adequate to define the metes and bounds of the claimed invention
- Determines the scope of the claims
- Searches existing technology for claimed invention
- Determines patentability of claimed invention
- Writes opinion called an Office action that notifies applicant of the examiner's patentability determination



### **The Examination Process**



Please note that a negative opinion by the examiner may be correct. In those instances, a patent will not be granted.



# **Understanding Prior Art Rejections**

- 35 USC 102 anticipation
  - Identical

35 USC 103 - obviousness

MPEP 2141 - 2144.09

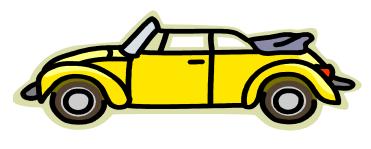


### **Identical**



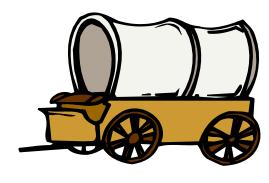


### **Identical?**



Invention

It's a trick question!



**Prior Art** 



### **Identical?**

#### May be identical

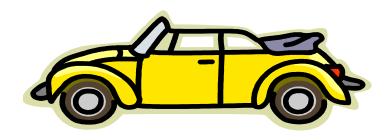
- Wheels
- Soft Fabric Cover
- Can be steered
- Land vehicles
- Seats
- Axle
- Propelled by other than human power

#### Not identical

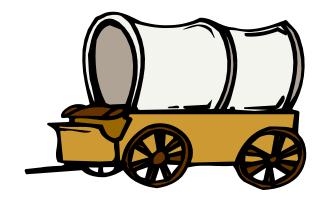
- Rubber Tires
- Metal versus wood frame
- Power Steering
- Engine versus horses
- Leather versus wood seats
- Windows
- Headlights
- Key
- Doors



### Is it Obvious?



Invention



Prior Art



### 35 USC 103 – The Law

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is **not identically disclosed** as set forth in section 102, if the differences between the claimed invention and the prior art are such that the **claimed invention as a whole** would have been obvious **before the effective filing date** of the claimed invention **to a person having ordinary skill in the art** to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

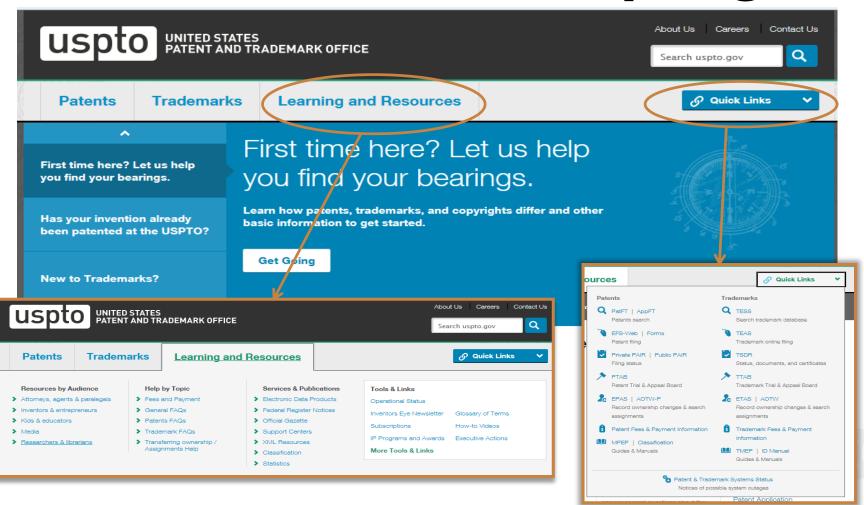


# Understanding Obviousness 35 USC 103 Simplified

- Not Identical
- Claims as a whole are obvious
- Before the effective filing date
- Person having ordinary skill in the art (PHOSITA)



## Resources - www.uspto.gov



# Thank You!

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