

Alliance for Illinois Manufacturing
Intellectual Property (IP) Seminar

Tuesday, March 29, 2011

**What every business manager
needs to know about
patents and trade secrets**

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Disclaimer: This presentation is for general information only and does not constitute legal advice or form an attorney-client relationship. If you desire legal advice or representation, please contact an attorney as soon as possible.

Intellectual Property (IP) Topics

- **What do I need to know before launching a new product to avoid infringing on someone else's IP/ patent rights?**
- **How do I identify our company's intellectual property, and how do I protect it in order to maximize profits and prevent others from infringing on our rights?**
 - Protecting your product domestically and internationally
 - This part of presentation focuses on patents and trade secrets
 - Update on IP law and trends

OVERVIEW

- Identifying your company's intellectual property (IP)
 - ◆ IP Portfolio
 - ◆ IP Audit (for large portfolios)
- Inventions and launching new products
- Protecting products domestically and internationally
- Update on IP law and trends

What is Intellectual Property (IP) ?

- Patents
- Trade secrets
- Trademarks
- Copyrights

Inventions and New Products

- Focus here: patents, patentability & the patent application process
- But be aware: patent infringement
 - ◆ Infringement clearance: Imprecise and expensive (If accused of patent infringement, call a patent lawyer)
 - ◆ Stopping infringement by competitors: negotiation and litigation
- Trade secrets: All patents begin life as trade secrets, but one must keep them secret!

What is the invention?

- The invention is the essential (claimed) elements, including at least one novel element
- The product is generally NOT the invention
- To identify the invention requires two things:
 1. Know the new product
 2. Distinguish new product over prior art
- **Identifying the invention is the hardest and most important part of the patent process**

Inventions & Patents

- A patent application can be filed, after proof of concept, but before perfecting and going public
- Involve a patent attorney or in-house counsel
- A U.S. patent is the legal right to ***exclude*** others from making, using or selling the patented invention in the U.S.

Importance of Inventions & Patents

- Benefits to U.S.
 - “Improve the Economic, Environmental, & Social Well-Being of the United States”
- Benefits to Inventor/Company
 - Leveraged R&D Investment
 - Prestige and Recognition
 - Technology Steering
 - Enhances Recruitment & Retention
 - Revenues
 - Patent Ownership in Dealing with Contractors & Collaborators
- Benefits to Inventors/Companies
 - Recognition and Money

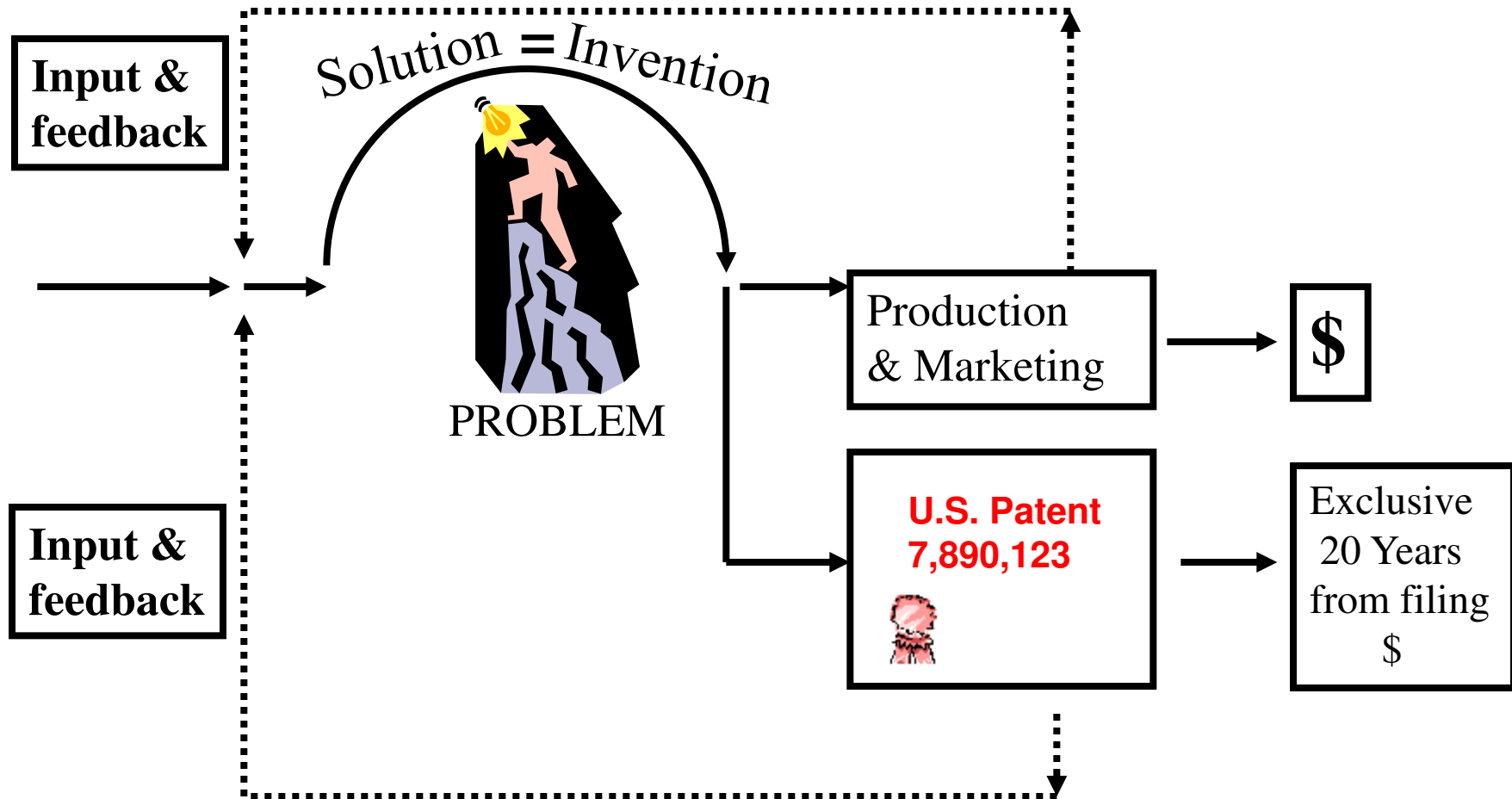
Inventions

- Study the problem & the known facts
- Identify the need
- Draw from other areas
- Solve the problem
- Proof of concept
- What did they invent?

Goldilocks School Of Patents

- “I have a concept” (too soon)
- “In the last 2 years this product has really taken off!” (too late)
- “I’ve tested prototype in secret & plan to go to market” (just right)

The Inventive Process



The Engineer's Biggest Patent Mistake

“All I did was solve the problem.”

“It can't be patentable.”

Solutions and problem-solving, i.e., inventions, are *highly likely* to be patentable

- “Minor” improvements often are patentable
- Recognizing the problem is part of the invention.
- The solution (invention) may seem obvious to the inventor, but not to the ordinary person

What is Patentable?

- Any “invention” that is
 - New (even if it is a combination of old elements)
 - Not obvious AND
 - Useful (for anything, low threshold)
- Software and implementations often are patentable
- In other words, most new devices, methods and improvements are patentable

Is it a Patentable Invention?

- Many engineers and scientists fail to appreciate their own inventions
- Engineers and scientists should not “filter” any invention disclosure: If you make any development that might be new and useful, submit an invention disclosure
- Let Company, patent attorney & Patent Office determine patentability

Types of Patents

■ Utility Patents

- Technology protected by a U.S. and/or foreign patent, classified broadly as chemical, mechanical, electrical/computer including software or biotechnical and then into more detailed classes and subclasses.
- Provisional and Non-provisional

■ Design Patents

A new, original, and ornamental design for an article of manufacture.

■ Plant Patents (e.g., hybrids)

US Design Patent 374,252



US00D374252S

United States Patent [19]

[11] **Patent Number:** **Des. 374,252**

Stambolic et al.

[45] **Date of Patent:** ****Oct. 1, 1996**

[54] **HAND-HELD ELECTRONIC GAME HOUSING**

[57] **CLAIM**

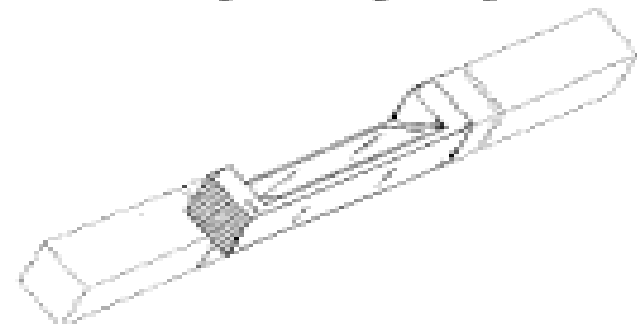
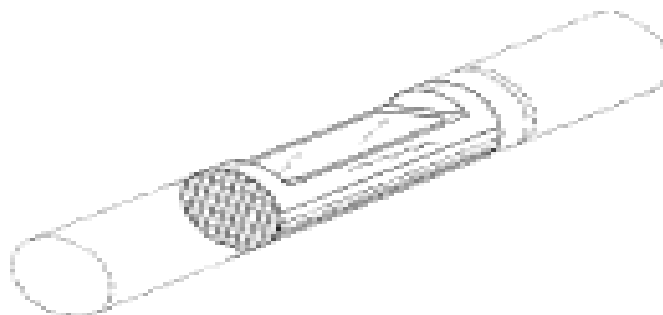
[75] **Inventors:** Zarko Stambolic, Oak Park; Shari L. Smith, Chicago; Howard J. Morrison, Riverwoods, all of Ill.

The ornamental design for the hand-held electronic game housing, as shown and described.

[73] **Assignee:** Tiger Electronics, Inc., Vernon Hills, Ill.

DESCRIPTION

FIG. 1 is a perspective view of a first embodiment of a hand-held electronic game housing showing our new design;





US007010647B1

United States Patent
Karamchetty et al.

(10) **Patent No.:** US 7,010,647 B1
(45) **Date of Patent:** Mar. 7, 2006

(54) **COMPUTER SYSTEM WITH REMOVABLE DATA STORAGE DEVICE AND METHOD**

(75) **Inventors:** Somayajulu D. Karamchetty, Columbia, MD (US); Alan E. Barrick, Mount Airy, MD (US); James Gantt, Duluth, GA (US)

(73) **Assignee:** The United States of America as represented by the Secretary of the Army, Washington, DC (US)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 373 days.

(21) **Appl. No.:** 10/318,666

(22) **Filed:** Dec. 13, 2002

(51) **Int. Cl.**
G06F 12/14 (2006.01)

(52) **U.S. Cl.** 711/115; 711/102; 711/103; 711/104; 711/163; 711/164

(58) **Field of Classification Search** 711/102-104, 711/115, 163, 164; 713/182-186
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,141,078 A 2/1979 Bridges, Jr. et al.

5,153,918 A * 10/1992 Tuai 713/182
5,319,711 A * 6/1994 Servi 380/247
5,339,073 A * 8/1994 Dodd et al. 340/5.61
5,455,409 A 10/1995 Smith et al.
5,629,981 A * 5/1997 Nerlikar 713/168
5,933,395 A 8/1999 Dang et al.

FOREIGN PATENT DOCUMENTS

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* cited by examiner

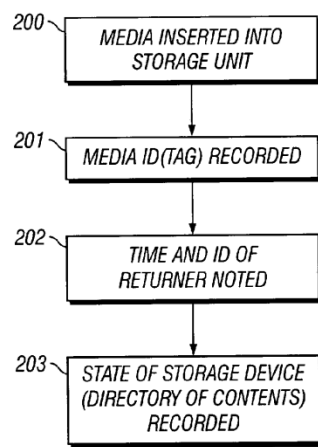
Primary Examiner—T Nguyen

(74) *Attorney, Agent, or Firm*—William Randolph

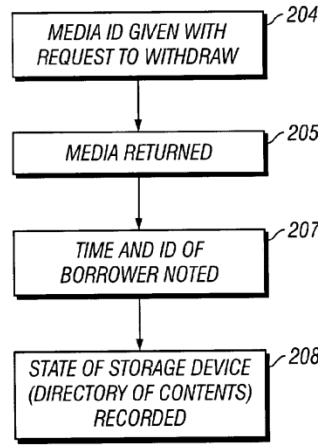
(57) **ABSTRACT**

A computer system and method for securely storing data are provided. A Radio Frequency Identification Device (RFID) tag is applied to a removable data storage device that is able to be inserted and removed from the computer system. An identification code is assigned to respective removable data storage devices in which the identification code and other information associated with the removable data storage devices are stored at the computer system upon insertion and retrieval of the removable data storage devices to and from the computer system.

14 Claims, 12 Drawing Sheets



DEPOSIT MEDIA INTO STORAGE



RETRIEVE MEDIA FROM STORAGE

Utility Patent

For example:
Mechanical
Chemical
Electrical
Biomedical
Software

US 6,694,853 - What is it? CLAIMS

TITLE: Apparatus for Encasing a Product

Claim 5. Looping and conveying apparatus for use with means adapted to issue forth an elongated linked casing, said apparatus comprising:

a support;

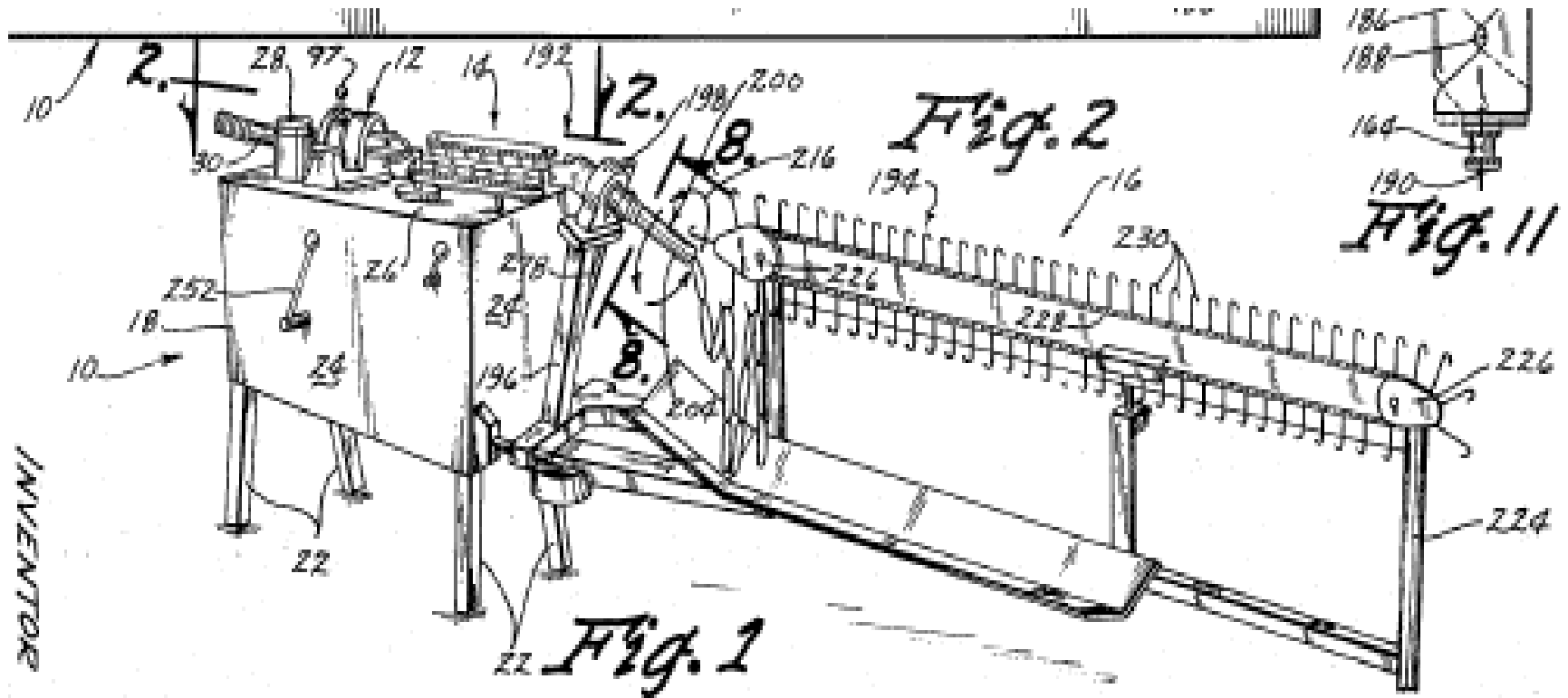
an elongated tube-like horn extension having first and second end portions and a bore extending therethrough and therebetween for slidably receiving said casing, said second end portion having a length substantially greater than the length of said first end portion,

bearing means on said support having an axis of rotation and rotatably supporting said first end portion of said horn extension, said second end portion having a longitudinal axis which is substantially straight and which is angularly disposed with respect to the longitudinal axis of said first end portion and angularly disposed with respect to said axes of rotation of said bearing means,

drive means for rotating said horn extension on said bearing means;
and

a conveyor including a plurality of spaced apart hooks thereon and also including carrying means for moving said hooks along a predetermined path, said conveyor being positioned so that said hooks will pass adjacent said second end of said horn extension when being moved by said carrying means, whereupon said hooks will catch and carry away said casing at spaced points along the length of said casing as said casing passes out of said second end of said horn extension.

US 6,694,853 – A picture is worth a thousand words



Inventor & Assignee



USD007010647B1

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

(10) Patent No.: **US 7,010,647 B1**
(45) Date of Patent: **Mar. 7, 2006**

(54) **COMPUTER SYSTEM WITH REMOVABLE
DATA STORAGE DEVICE AND METHOD**

(75) Inventors: Somayajulu D. Karamchetty,
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5,455,409 A 10/1995 Smith et al.
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5,933,395 A 8/1999 Dang et al.

FOREIGN PATENT DOCUMENTS

(73) Assignee: The United States of America as
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Army, Washington, DC (US)

JP 05189795 7/1993

* cited by examiner

Conditions for Patentability

35 U.S.C. § 102: Novelty and loss of right to patent

A person shall be entitled to a patent unless—

* * *

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the application for patent, or
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States...

Conditions for Patentability

35 U.S.C. § 103: **Nonobvious** subject matter

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Conditions for Patentability

35 U.S.C. 112: Specification

In addition, the patent application must include

a full and complete detailed written description of the claimed invention sufficient

to enable one of ordinary skill in the art to make, use and practice the claimed invention.

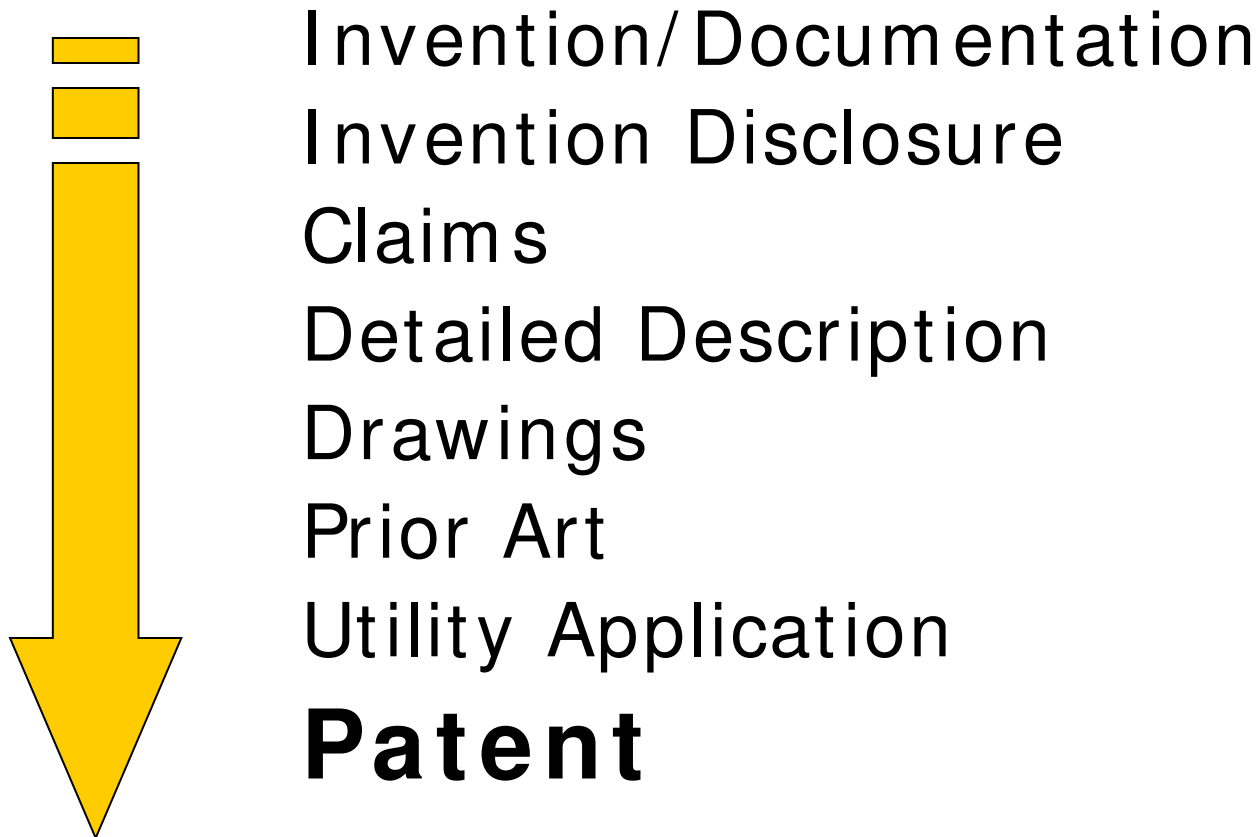
The best mode known to the inventor must be disclosed.

The specification must conclude with one or more claims distinctly setting forth that which the inventor believes to be his invention.

The Patent Process

- Inventor completes and submits invention disclosure to manager (in most companies)
- In a large company--patent committee review:
 - Determination of the company's interest and
 - Priority of the invention using criteria, such as available resources and commercial viability
- Patent attorney prepares and files application
- Patent attorney prosecutes application (responding to written actions from the Patent Office)
- Allowance and issuance of patent

Invention → Patent



Invention Disclosures

Invention disclosure(s)
must be written and submitted
to get started with the
patenting process

Some companies use
invention disclosure form

Invention Disclosures

- Inventors
- History
- Status
- Description
- Figures/ Drawings
- Signatures

Need for Details

A good invention disclosure (and patent application) is detailed

- What is your invention? (see above)
- Benefits/market
- Big picture or summary
- Very detailed description of invention
 - ◆ Describe even what seems obvious to you
 - ◆ Drill down into further details
 - ◆ Should be detailed enough to tell a college freshman how to practice the invention

Need for More Details

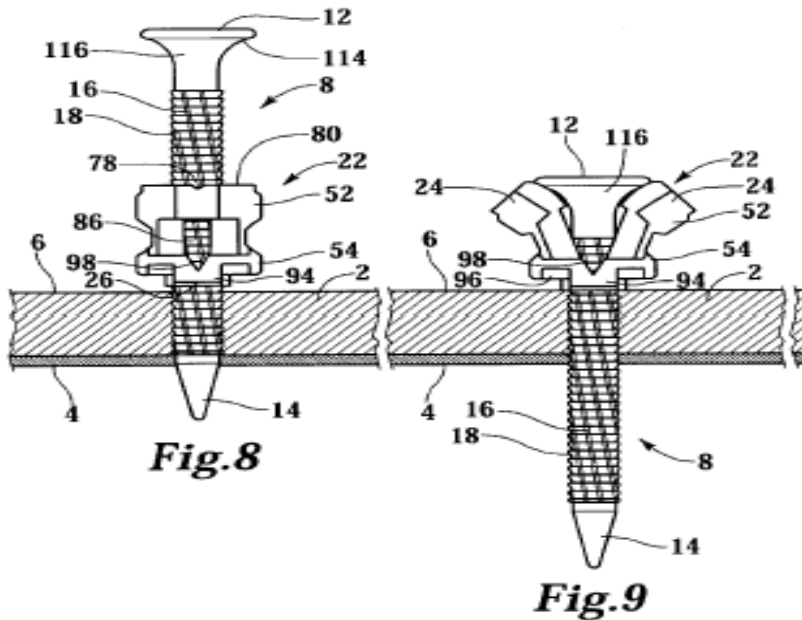
- Spell out everything - the Patent Office (examiner) will give you credit only for what you write down in detail and use plain English whenever possible
- Details will assist in drafting the application and may help get claims allowed
- Generally, one cannot add any new matter (words or specs) after filing, so put all the details in your disclosure from the beginning

Description of the Invention

- State the advantages of the invention over presently known devices, systems or processes. Also discuss/provide a background of the prior art.
- Discuss the problems which the invention is designed to solve, referring to any prior invention of a similar nature with which you may be familiar.
- Identify alternatives (welded, bolted or riveted).
- List all known and other possible uses for the invention.
- List the features of the invention that are believed to be novel.

US Pat 6,708,821 – Drawings

Collated Fasteners



- Identify claimed features with reference numerals.
- Show steps
- Consider exploded views, perspectives, cross-sections, close-ups
- Black and white line drawings (not photos or 3-D images).
- Multiple figures may be on a single sheet.

Good Records Make Good Evidence

- Maintaining technical notebooks
 - Signing and dating your work
 - Having two witnesses sign and date your notebook entries
 - “Read and understood by _____
[legible signature], dated _____.”

Recordkeeping

- Ideas for using “Electronic notebooks”
 - E-mail repository for disclosures
 - Read by managers
 - Back-up storage
 - Electronic signatures
 - HTML (data/drawings) attachments

Steps followed by Patent Attorney In Preparing Patent Application

- Review the invention disclosure and obtain additional details
- Search and analyze prior art
- Obtain patent drawings
- Draft claims
- Write specification

How a Patent Attorney Completes a Patent Application

- Draft background
- Draft detailed description
- Draft summary of invention and abstract
- Obtain and incorporate inventor comments
- Obtain inventor's signature
- File the patent application
- Disclose prior art to the Patent Office

Sense of Urgency

- **Race to the Patent Office to beat out competitors**
 - US has “first to invent” system
 - But “first to file” presumptively wins
- **Statutory bars:**
 - Most foreign countries require “absolute novelty”
 - In US, 1st public disclosure or commercial activity starts clock on one year “grace period”
 - Key date (for US and foreign rights) is filing date of US patent application
 - Foreign utility applications usually can claim benefit of US filing date if filed within one year after US filing

Confidentiality (Trade Secrets) and Timeliness

Confidentiality: Keep your invention secret until a U.S. patent application is filed

- Don't publish, offer, sell, or publicly use the invention
- Don't talk to contractors
- Don't talk at conferences or trade shows
- *Until* your patent application is on file

Require signed confidentiality agreement (NDA) before making any disclosure to outsiders

Timeliness: File application as soon as your invention is ready for patenting

Collaboration and Agreements

- The unintended joint venture:
Dangers and rewards of working with “outsiders” (vendors, customers, tech specialists)
- Confidentiality & Non-disclosure Agreements
- Assignment and Ownership of IP
- Licensing

Domestic and international

- USPTO– usually 1st priority
 - International Patent Applications (PCT)
 - Foreign Patents (most countries)
 - Trilateral: US, Japan (JPO), Europe (EPO)
 - IP5: Tri + Korea (KIPO), China (SIPO)
(IP5 offices: 90% of all pat apps worldwide)
- * Statutory bars and deadlines may apply!

Update on IP/patent law & trends

- US Patent & TM Office, Supreme Court, Congress are among many authorities active in intellectual property (IP) law
- Patent application filings continue to increase in US and worldwide
- Protecting products domestically and internationally with patents

Thank You!

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