

Overview of Intellectual Property

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Outlines

- What is Intellectual Property (IP)?
- Why is IP Important?
- Types of IP and How to Protect Them
- Patentability Requirements
- Patenting Processes and IP Careers
- Public Disclosure and Inventorship
- Legal Assistance and Other Resources

Property and Value



PROPERTY

Real
Personal
Capital
Intellectual

VALUE CREATION

ACTIVITY

Product Creation
Investment
Improvement
Sale
Rent or Licensing

RESULTS

Revenues/Profits
Employment
Appreciation
Solution of
Needs

What is Intellectual Property (IP)?

- Intellectual property refers to creations of the mind:
 - inventions;
 - literary, dramatic, musical and artistic works;
 - symbols, names and images used in commerce.



Why is IP Important?

- Policy makers – Encourage technology transfer and promote economic growth
- Companies – Keep competitive edges
- Entrepreneurs – Attract investors
- Consumers – Buy products/services with confidence
- Engineers, researchers – Create/use IP with rewards



Types of IP

- Patent
 - Protects invention
- Trademark
 - Protects company brand name and logo used in commerce
- Copyright
 - Protects literary, musical and artistic works
- Trade Secret
 - Protects any confidential business information that provides an enterprise a competitive edge

What Is A Patent?

- A grant of property right by the government to the inventor (or his heirs or assigns), acting through the United State Patent and Trademark Office (USPTO).
- In exchange, the assignee (owner) of the patent has the right to exclude others from making, selling, or using the invention for a limited period of time, usually 20 years from the time of application. This right extends throughout the United States and its territories and possessions.
- Territorial
- Full disclosure
- Patents represent the latest advances in technology and as such are indicators of the leading technology in any field and are an excellent resource for researchers.

Patentability Requirements

Allowable subject matter
(Statutory class - 35 U.S.C.
S101):

- Processes (methods);
- Machines;
- Articles of manufacture;
- Compositions;
- “New use” of one of the four

1. Usefulness – the invention must have a function (useful purpose)
2. Novelty – there must be no previous patent or mention in any publication (“prior art”) (*S102*)
3. Nonobviousness – the invention must not be easily apparent to someone “skilled in the art” (*S103*)
4. Full Disclosure

What Can Not Be Patented?

- The laws of nature
- Physical phenomena
- Mathematical algorithm or equation
- Abstract ideas
- Inventions useful solely for atomic weapons (Atomic Energy Act of 1954)

Examples: Are these patentable?

- New mineral discovered in the earth?
- New plant found in the wild?
- $E=mc^2$ (Einstein)? or the law of gravity (Newton)?
- Electrical signal?
- Mixtures of ingredients, such as medicines?
- *Engineered mice for cancer research?*
- *Modified microorganisms to break down pollutants?*

Biotechnology - health care, agriculture, food processing, bioremediation, forestry, enzymes, chemicals, cosmetics, energy, paper making, electronics, textiles and mining

Utility Patent



223,898

- Utility Patent (1790-):

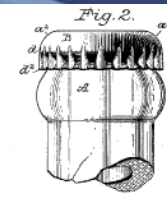
Granted to anyone who invents or discovers *any new and useful process, machine, article of manufacture, or composition of matter*, or any new and useful improvement thereof.

(> 10,000,000)

- Most common type of patent

- Term: **20 years from filing** (June 1995-)

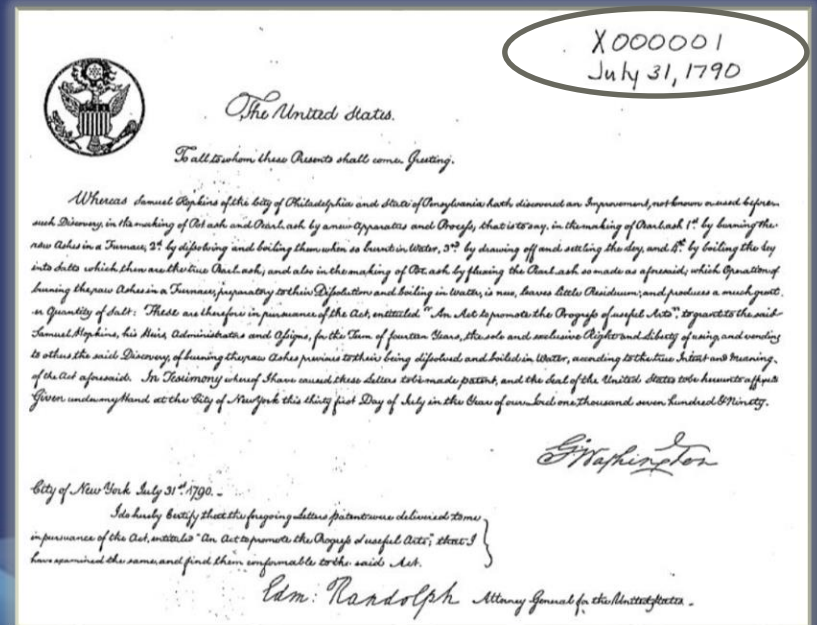
- Administrated by the USPTO



468,226

U.S. Patent Grants

U.S. Patent Number	Year Granted
X1	1790
1,000,000	1911
5,000,000	1991
7,000,000	2006
8,000,000	2011
10,000,000	2018



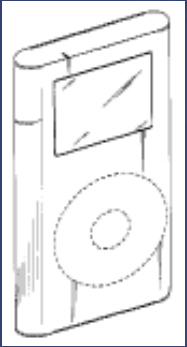
The first U.S. Patent: X000001

Issue Date: July 31, 1790

Inventor: Samuel Hopkins

Invention: A process of making potash, an ingredient used in fertilizer

Design Patent



D551,680

- Design Patent (1842-):

Granted to anyone who invents *a new, original,* and **ornamental design** for an article of manufacture. (>885,000)

- Protects the *appearance* of the product
- A “D” precedes the patent number
- Term: **15 years from issuing** (May 2015-)



D11,023

Utility Patent vs. Design Patent

(12) **United States Patent**
Karakotsios

(10) Patent No.: **US 8,451,344 B1**
 (45) Date of Patent: **May 28, 2013**

(54) **ELECTRONIC DEVICES WITH SIDE VIEWING CAPABILITY**

(75) Inventor: **Kenneth M. Karakotsios**, San Jose, CA (US)

(73) Assignee: **Amazon Technologies, Inc.**, Reno, NV (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(h) by 266 days.

(21) Appl. No.: **13/071,096**

(22) Filed: **Mar. 24, 2011**

(51) Int. Cl. **H04N 5/22** (2006.01)
H04N 5/232 (2006.01)

(52) U.S. Cl. **348/222.1**; 348/211.11

(58) Field of Classification Search
 USPC 348/222.1, 211.99, 211.1-211.14, 348/143; 455/556.1, 556.2

See application file for complete search history.

(56) **References Cited**

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7,626,569 B2 *	12/2009	Lanier	345/156
RE42,639 E *	8/2011	Anderson	348/272
8,243,967 B2 *	8/2012	Kirksey et al.	381/300
2010/0103244 A1 *	4/2010	Brandsma et al.	348/14.08
2011/0164105 A1 *	7/2011	Lee et al.	348/14.02
2012/0062729 A1 *	3/2012	Hart et al.	348/135

* cited by examiner

Primary Examiner — Aung S Moe
 Assistant Examiner — Amy Hsu
 (74) Attorney, Agent, or Firm — Novak Druce Connolly Bove + Quigg LLP

(57) **ABSTRACT**
 An electronic device can utilize one or more image capture elements on the sides or edges of the device to capture image information in a way that is more discrete than for conventional devices with a single camera on a back of the device. Further, the ability to utilize cameras on multiple sides of the device provides enhanced capability. Devices can utilize information such as the current orientation of a device to select one or more appropriate image capture elements to activate at a given time. The image information can be used to provide information about the user's surroundings, such as the names of people in a meeting, without making it obvious that the user is trying to determine that information.

27 Claims, 9 Drawing Sheets

(12) **United States Design Patent** (10) Patent No.: **US D884,673 S**
Han et al. (45) Date of Patent: **** May 19, 2020**

(54) **ELECTRONIC DEVICE**

(71) Applicant: **Amazon Technologies, Inc.**, Seattle, WA (US)

(72) Inventors: **Sun Joo Han**, San Francisco, CA (US); **Christopher Green**, San Francisco, CA (US); **Marc Rene Walliser**, San Francisco, CA (US); **Giles David Matthew McWilliam**, San Francisco, CA (US)

(73) Assignee: **Amazon Technologies, Inc.**, Seattle, WA (US)

(**) Term: **15 Years**

(21) Appl. No.: **29/607,451**

(22) Filed: **Jun. 13, 2017**

(51) LOC (12) Cl. **14-02**

(52) U.S. Cl. **D14/216**; D14/356; D14/171; D10/2

(58) Field of Classification Search
 USPC D14/167, 168, 170-172, 188, 194-196, D14/204, 209.1, 210-216, 219, 221, 222, D14/224, 239, 496, 139-131, 140.11, D14/141.3, 144, 356, 371, 388; D10/1, D10/2, 15, 22

CPC B60R 11/0217; G06F 1/1688; G10K 9/22; G10K 11/004; H03F 1/327; H04M 1/03; H04M 1/035; H04N 5/642; H04N 21/4852; H04R 1/02; H04R 1/06; H04R 1/021; H04R 1/025; H04R 1/026; H04R 1/028; H04R 1/105; H04R 1/323; H04R 1/403; H04R 1/2803; H04R 1/2834; H04R 5/02; H04R 7/20; H04R 9/06; H04R 9/025; H04R 2201/021; H04R 2400/00; H04R 2400/07; H04R 2499/11; H04R 2499/13; H04R 2499/15; H04S 3/00; H04S 7/30

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D514,548 S *	2/2006	Chan	D14/216
D525,880 S *	8/2006	Okamura	D10/15
D540,291 S *	4/2007	Heath	D14/137
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D600,569 S *	9/2009	Sadler	D10/15
D639,273 S *	6/2011	Chow	D14/209.1
D659,680 S *	5/2012	Kim	D14/216
D712,378 S *	9/2014	Mackiewicz	D14/216
D743,941 S *	11/2015	Pabis	D14/216
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D765,617 S *	9/2016	Mackiewicz	D14/216

(Continued)

OTHER PUBLICATIONS

The Canadian Office Action dated Jul. 23, 2018, for Canadian Application No. 178243, a counterpart Application of the U.S. Appl. No. 29/607,451, 1page.

(Continued)

Primary Examiner — Keli L Hill
 (74) Attorney, Agent, or Firm — Lee & Hayes, PC.

(57) **CLAIM**
 The ornamental design for an electronic device, as shown and described.

DESCRIPTION

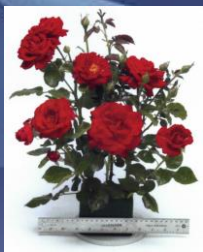
FIG. 1 is a top perspective view of an electronic device;
 FIG. 2 is a bottom perspective view thereof;
 FIG. 3 is a front view thereof;
 FIG. 4 is a back view thereof;
 FIG. 5 is a left-side view thereof;
 FIG. 6 is a right-side view thereof;
 FIG. 7 is a top view thereof; and
 FIG. 8 is a bottom view thereof.
 The broken lines depict portions of the electronic device that form no part of the claimed design.

1 Claim, 8 Drawing Sheets

Plant Patent



PP82



PP22571

- Plant Patent (1930-):

Granted to anyone who invents or discovers any *asexually reproduced any distinct* and new variety of plant (e.g. flowering plants, fruit trees or other hybrid plants) . (>30,000)




- A “PP” precedes the patent number
- Printed plant patents include color photographs (database does not)
- Term: **20 years from filing** (June 1995-)

Trademarks

- Any word, symbol, logo, slogan or phrase that is consistently associated with a product or service and identifies and distinguishes that product or service from others in the market place.
- **Terms: 10 year** (registration and **renewal**)
- Administered by USPTO.



Types of Trademarks

Type	Example
TM, SM, 	
Work mark	
Logo or symbol	
Slogan or phrase	<p>“I'M LOVIN' IT”</p> <p>“Just Do It”</p>
<i>Sound mark</i>	<p><u>72349496</u>, NBC Chime;</p> <p><u>73553567</u>, MGM Roaring Lion</p>
<i>Shape mark/Trade dress (non-functional)</i>	<p>Reese's Peanut Butter Cups wrapper;</p> <p>Coca Cola bottle</p>
<i>Color mark</i>	<p>UPS Brown;</p> <p>Tiffany Blue</p>
<i>Scent mark</i>	<p>Play-Doh;</p> <p>Flowery musk scent in Verizon stores</p>

Trademark Classification

- A way to categorize goods and services.
- International Class (IC)
- Pay fee based on number of ICs. (Lowest fee for each IC is \$225)

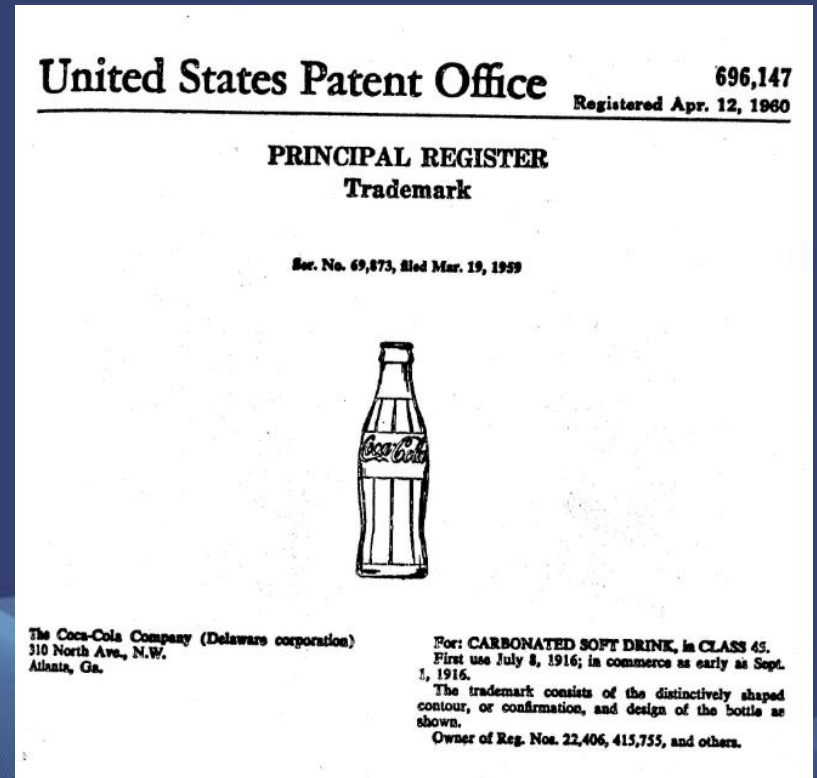
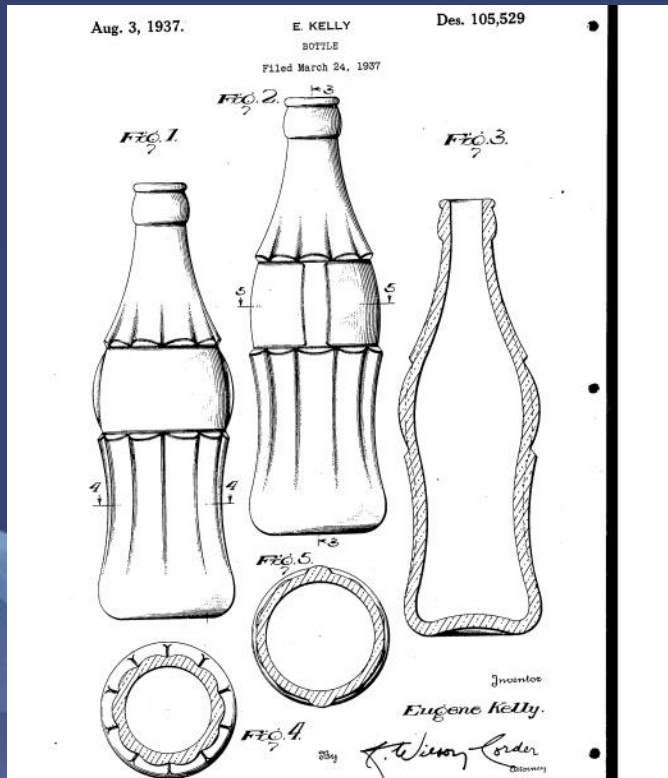
Goods

001 Chemicals	018 Leather goods
002 Paints	019 Non-metallic building materials
003 Cosmetics and cleaning products	020 Furniture and articles not otherwise
004 Lubricants and fuels	021 Housewares and glass
005 Pharmaceuticals	022 Cordage and fibers
006 Metal goods	023 Yarns and threads
007 Machinery	024 Fabrics
008 Hand tools	025 Clothing
009 Electrical and scientific apparatus	026 Fancy goods
010 Medical apparatus	027 Floor coverings
011 Environmental control apparatus	028 Toys and sporting goods
012 Vehicles	029 Meats and processed foods
013 Firearms	030 Staple foods
014 Jewelry	031 Natural agricultural products
015 Musical instruments	032 Light beverages
016 Paper goods and printed matter	033 Wines and spirits
017 Rubber goods	034 Smokers articles

Services

035 Advertising and business	041 Education and entertainment
036 Insurance and financial	042 Computer, scientific and legal
037 Construction and repair	043 Hotels and restaurants
038 Communication	044 Medical, beauty and agricultural
039 Transportation and storage	045 Personal
040 Material treatment	

Design Patent vs. Trademark



Copyrights

- A legal right given to an author, artist, composer, or programmer, to exclude others from publishing or copying literary, dramatic, musical, artistic, or software works.
- Duration of protection:
 - life plus 70 years (individuals),
 - lesser of 95 years from publication or 120 years from creation (anonymous or for hire works)
- Administered by the Copyright Office, Library of Congress



Copyrights – Exclusive Rights

Copyright ownership gives the holder of the copyright in an original work of authorship **six exclusive rights**:

- The right to **reproduce** and make copies of an original work;
- The right to **prepare derivative works** based on the original work;
- The right to **distribute copies** to the public by sale or another form of transfer, such as rental or lending;
- The right to **publicly perform** the work;
- The right to **publicly display** the work, and
- The right to **perform sound recordings** publicly through digital audio transmission.

These rights can be transferred by licensing or assignment.

Trade Secrets

- Any information that is not known generally and that affords its owner a *competitive business advantage*.
 - design,
 - pattern
 - device,
 - process, method,
 - program,
 - compilation,
 - composition,
 - formula
 - technique,
 - client lists at a company



Trade Secrets

Advantages and Disadvantages

Advantages

- Kept as property of its owner as long as it remains secret, while patents have limited term. (The oldest known trade secret has been kept since 1623)
- Can be exploited on a global basis, while patents are only valid in the country in which they were obtained

Disadvantages

- Once they become public, the owner has limited legal remedies to prevent others from making, selling, or using the invention
- Owner takes on the responsibility of protecting it and preventing its disclosure, which may cost a lot of money

Ways to Lose A Trade Secret:

- Owner or owner-authorized disclosure
- Reverse engineering
- Independent development
- Failure to take reasonable efforts to preserve confidentiality



Trade Secret vs. Patent

Trade Secret

- Indefinite
- Not registered or disclosed
- Can be separately discovered
- Protected by common law
- Remedy only if the secret is illegally appropriated

Patent

- 20 year term
- Require public disclosure
- Right to exclude others
- Protected by patent law
- Remedy for infringement

Why Patent?

- Gain entry into a market (or deter others)
- A marketing tool to promote unique aspects of a product
- Enforce rights against an infringer or competitor
- Used as security to obtain funding
- Create revenue – sell or license like other property

What Kind of IP Protections Needed?

Patent?

Utility Patent:
Semiconductor circuit
Touch screen
Antenna
Speaker
Device housing
Battery/Power control

Design Patent:
The look of the phone
Placement of button & speaker
Surface finish
Color pattern of trim



Trademark?

Made by Apple (logo)
Product iPhone
Software: iOS, Safari

Copyright?

Ring tone
Software code
Instruction manual

Trade Secret?

???

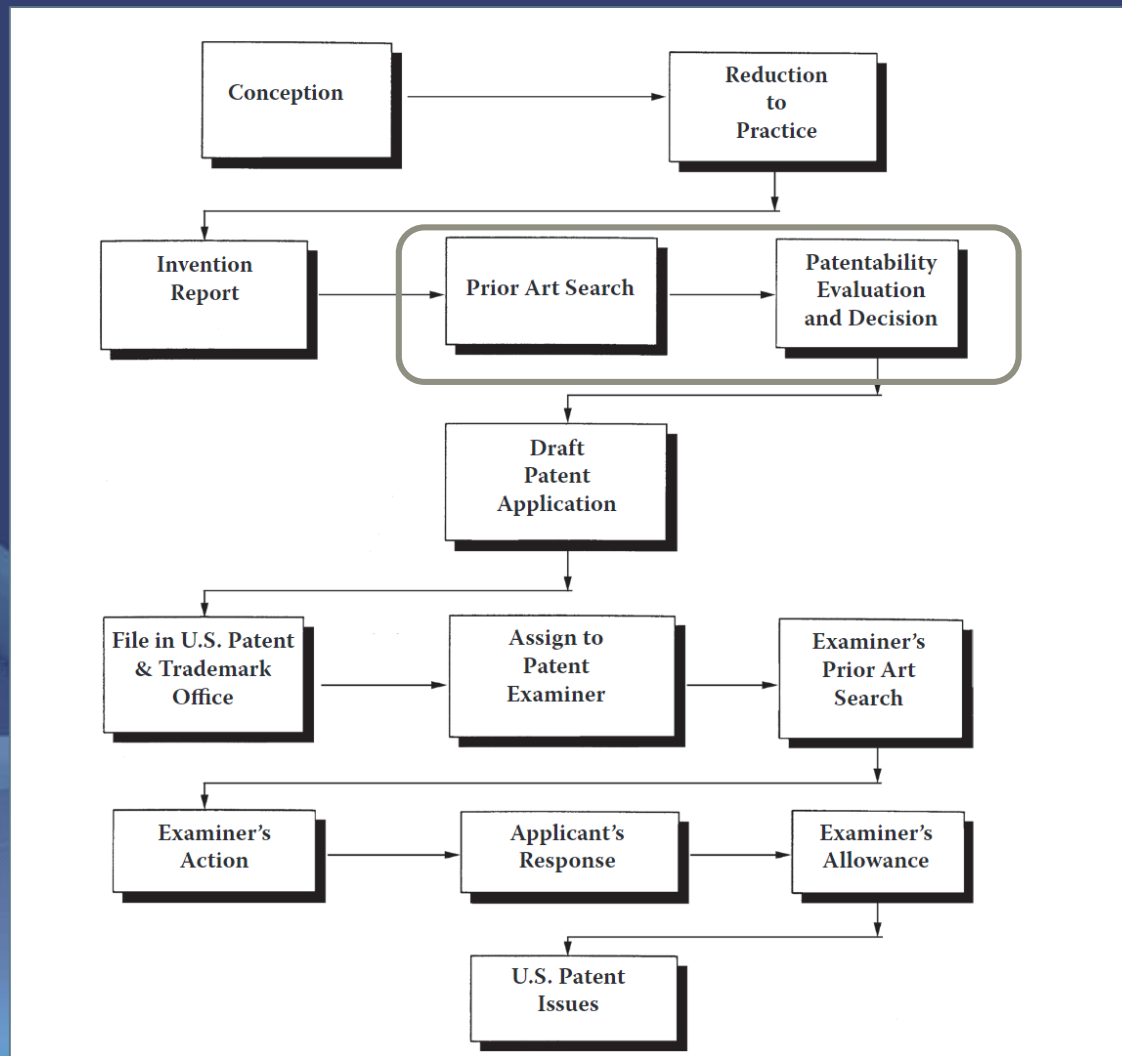
IP Awareness Assessment Tool

IP Awareness Assessment

- <https://ipassessment.uspto.gov/>
- General categories:
 - IP Strategies & Best Practices
 - International IP Rights
 - IP Asset Tracking
 - Licensing Technology to Others
 - Using Technology of Others
- Additional Categories:
 - Copyrights
 - Design Patents
 - Trademarks
 - Trade Secrets
 - Utility Patents
- Pre-assessment (5 questions, < 1 min.)
- Full assessment (62 questions, ~ 30 min.)



Evolution of a Patent— from Conception to Issuance



Patenting Processes

1. Determine the type of Intellectual Property protection
2. Determine if your invention is patentable

How to Conduct a Preliminary U.S. Patent Search: A Step by Step Strategy

Attorneys and agents with licenses to practice before the USPTO

3. What kind of patent do you need? What kind of filing (provisional, non-provisional) fits your situation?
4. Get your documentation ready to apply (Filing a New Application)
5. Prepare and submit your initial application
6. Work with your examiner
7. Receive your patent approval
8. Maintain your patent



Leahy–Smith America Invents Act (AIA)

- U.S. federal statute, passed in 2011 and effective 2012.
- Key elements:
 - "first-to-invent" system -> "first inventor-to-file" system
 - "publication-conditioned grace period" – One Year
 - added "Micro entity" status
 - reduced fees

United States Code Title 35 – Patents:

<https://www.govinfo.gov/app/collection/uscode/2018/title35>

Code of Federal Regulations Title 37 – Patents, Trademarks, Copyrights:

<https://www.govinfo.gov/app/collection/cfr/2019/title37>

Provisional Patent Application (PPA)

- Place holder application - used to establish priority date for invention disclosed
- Priority date = first filing date
- Not published unless converted to a non-provisional application
- 12 month to convert to non-provisional application
- Simplified filing (What not required: patent claims, oath of declaration, and disclosure of prior art)
- Not examined by the USPTO
- “Patent pending” status

When to File PPA?

- Before public disclosure
 - conference presentation, poster session, invention expo, department seminar, meeting with sponsors/investors, collaborators, competitors
- Once inventors have reduced their invention to practice
- With a good plan for how to reduce their invention to practice, but will continue working on it over the next year



PPA: Basic Requirements

- **Provisional application filing status**
 - Micro Entity status (gross income <\$189,537)
 - Small Entity status (<500 employees)
- **Provisional application cover sheet**
 - The name(s) of all inventors
 - Title of the invention
 - Correspondence address
- **Specification**
- **Drawings**



Non-Provisional Application

- Brief **abstract** (150 words)
 - concise summary of your invention
- **Drawings** (if any)
 - Illustrations of the general concept of the invention, specific embodiments, variations, prior/existing technology
- Descriptive **specification**
 - “Written description” requirement - clearly convey the information that an applicant regards as the invention
 - “Enablement” requirement – invention described in sufficient detail to allow a similarly skilled person to reproduce the invention without undue efforts
- *Numbered listing of **claims***
 - *Define the boundary of the protection offered by the utility patent*
 - *Correspond with disclosure and are supported in drawing*

Patent Example: Electric Vehicle Battery Pack (5,378,555)

[54] ELECTRIC VEHICLE BATTERY PACK

[56] References Cited

[75] Inventors: John E. Waters, Fishers; Brent A. Harris, Alexandria; Ross A. Gresley; William E. Boys, both of Anderson; Daniel R. Brouns, Indianapolis, all of Ind.

U.S. PATENT DOCUMENTS

3,657,021 4/1972 Mathews 429/97
4,109,064 8/1978 Warner et al. 429/99 X
4,365,681 12/1982 Singh 180/68.5
5,061,579 10/1991 Ishimoto 429/100 X

[73] Assignee: General Motors Corporation, Detroit, Mich.

Primary Examiner—Anthony Skapars
Attorney, Agent, or Firm—Lawrence B. Plant

[21] Appl. No.: 172,705

[22] Filed: Dec. 27, 1993

[57] ABSTRACT

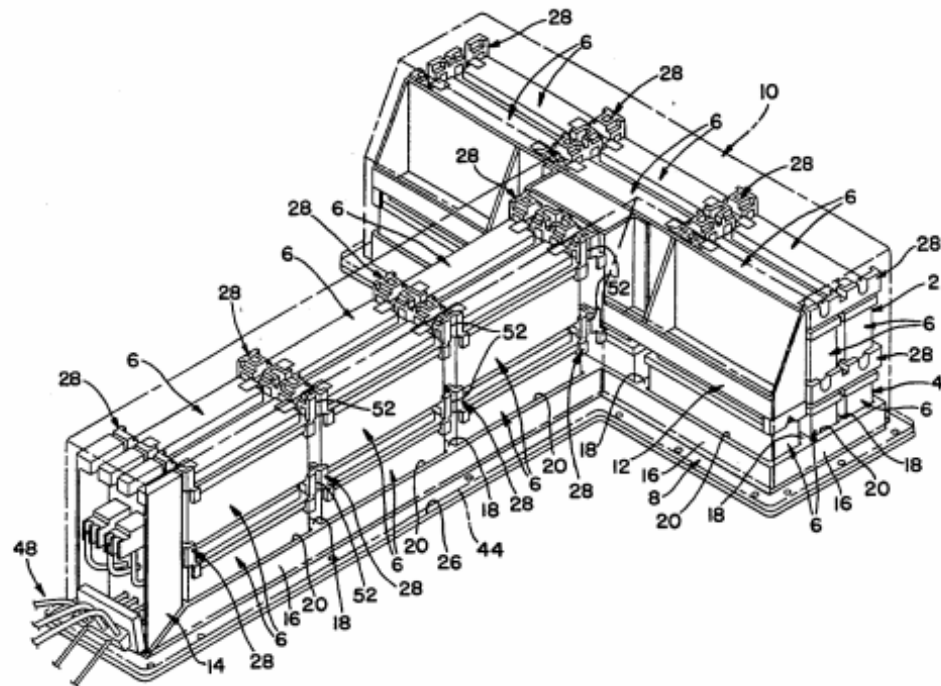
An electric vehicle battery pack including a plurality of batteries ganged together in an underlying tray. The tray preferably has a plurality of pockets therein each for receiving an individual battery. The batteries are interlocked one to the next and held in place in the tray by a housing which bears down on the batteries by means of a resilient spacer positioned between the tops of the batteries and the ceiling of the housing. The pack forms a structural part of the vehicle in which it is used.

[51] Int. Cl.⁶ H01M 2/10

[52] U.S. Cl. 429/97; 429/99;
429/123; 180/68.5

[58] Field of Search 429/96, 97, 99, 100,
429/123; 180/68.5; 206/333; 307/150

26 Claims, 5 Drawing Sheets



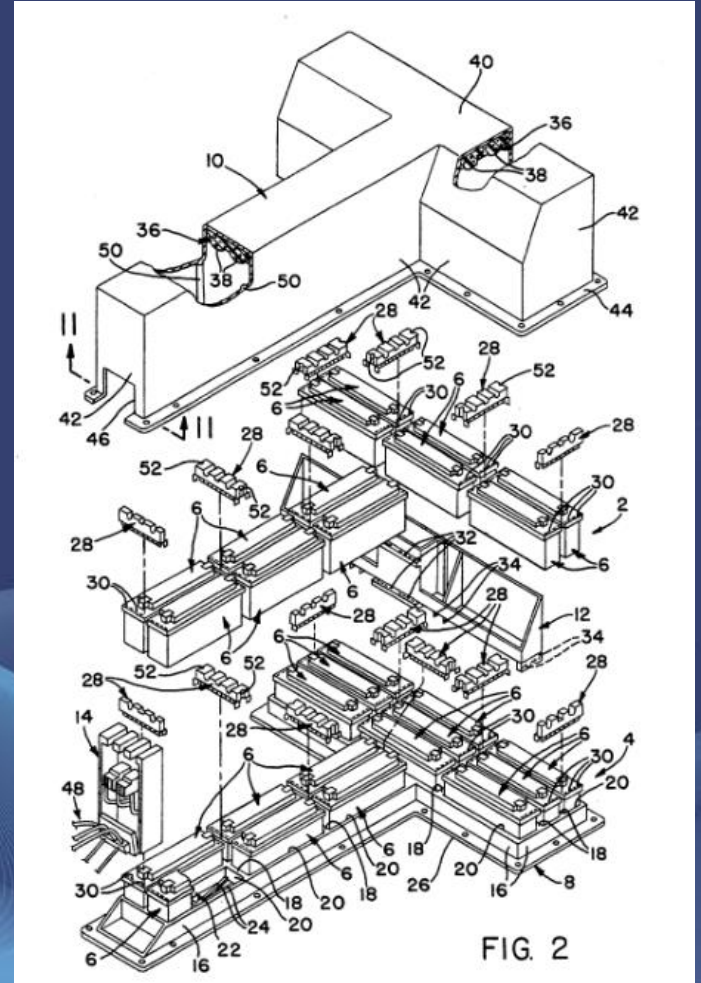
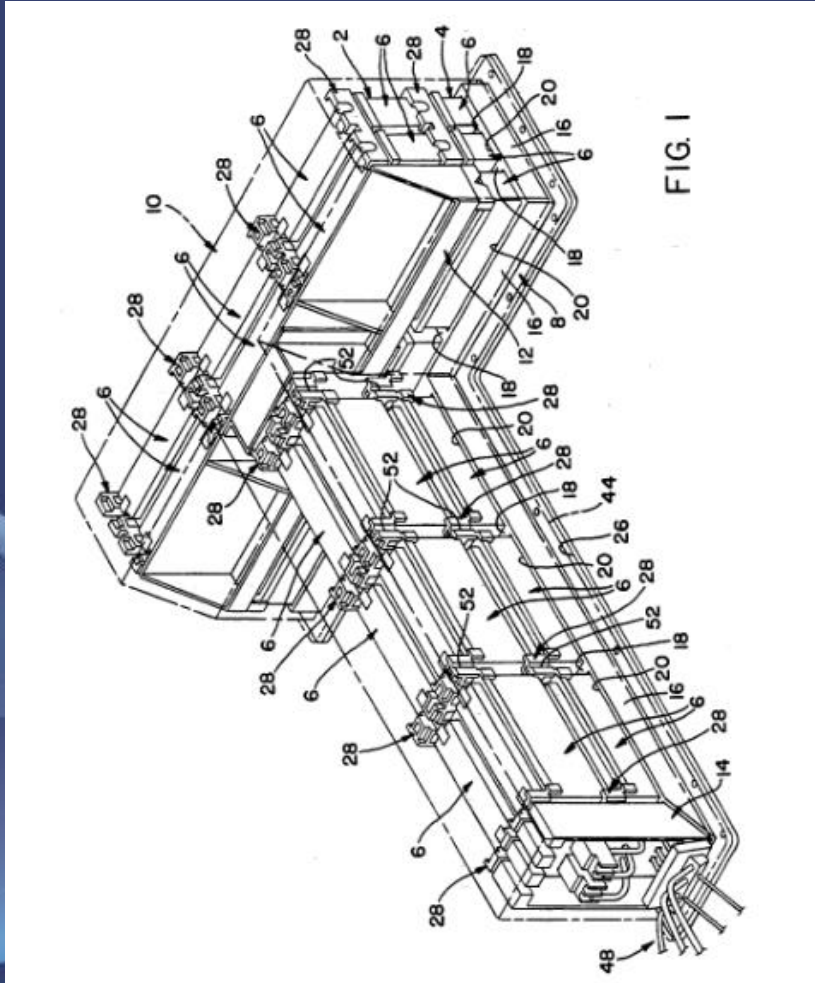
Classifications

- B60K1/04 - Arrangement or mounting of electrical propulsion units of the electric storage means for propulsion.
- H01M2/1083 – Mounting vehicle battery - Fixing on vehicles.

Abstract

- An electric vehicle battery pack *including* a plurality of *batteries* ganged together in an underlying *tray*. The *tray* preferably has a plurality of pockets therein each for receiving an individual *battery*. The *batteries* are interlocked one to the next and held in place in the *tray* by a housing which bears down on the *batteries* by means of a resilient spacer positioned between the tops of the *batteries* and the ceiling of the *housing*. The *pack* forms a structural part of the vehicle in which it is used. (88 words)

Drawings



Descriptions

- FIG. 1 depicts a battery pack for an electric vehicle including an upper tier 2 and a lower tier 4 of individual batteries 6 all nested in a supporting tray 8 and securely held in place thereon by a housing 10 (shown in phantom). An accessory tray 12 may be provided inside the housing 8 for mounting any of a variety of electronic devices for controlling and/or monitoring the pack's charge, discharge, charge balance, performance, and the like. Alternatively, another row of batteries 6 may replace the tray 12. A console 14 may be provided at the end of the pack for mounting additional control/monitoring devices and receiving wiring from within the pack.
- FIG. 2 is an exploded view of the pack of FIG. 1. The underlying supporting tray 8 includes a plurality of upstanding walls 16 and partitions 18 which together define a plurality of pockets 20 each receiving one of the batteries 6 in the lower tier 4. The pockets 20 have a floor 22 therein which in turn has ribs 24 extending upwardly therefrom for stiffening the tray 8. A perimetrical flange 26 extends about the perimeter of the support tray 8 and provides means for attaching the housing 10 to the tray 8 while at the same time providing additional strength/stiffness to the tray 8.

Claims

The embodiments of the invention in which an exclusive property or privilege is claimed as defined as follows:

1. A battery pack for an electric vehicle **comprising** a plurality of individual batteries ganged together and nesting in an underlying supporting tray, and interlock means engaging the ends of said batteries for preventing relative movement between adjacent batteries in the pack, said supporting tray comprising a plurality of intersecting, upstanding walls stiffening said tray and defining a plurality of pockets each receiving a one of said batteries, a perimetrical flange extending outboard said upstanding walls, a housing enclosing said pack, said housing comprising a ceiling wall, a plurality of side walls depending from said ceiling wall, and a peripheral flange extending outwardly from the edges of said sidewalls opposite said ceiling wall and overlying said perimetrical flange, a resilient spacer compressed between said ceiling wall and the tops of the batteries, and fastener means joining said perimetrical and peripheral flanges securely together so as to provide a rigid structure which provides structural strength to said vehicle while substantially immobilizing the batteries against movement.

Parts of A Claim

A claim has three main parts:

- A **preamble** or introduction
- A **transitional phrase**:
 - comprising (open); or
 - consisting of (closed); or
 - consisting essentially of (open, but excludes materials or steps that materially affect the basic and novel characteristics of the invention)
- A **body** reciting the elements of the invention

(Source: See: MPEP 608.01(m) & 2111.03)

Preamble

- A Preamble is an introductory phrase of a claim and might:
 - Summarize the invention;
 - Summarize its relation to the prior art;
 - Summarize its intended use or properties; and
 - Constitute a limitation of the claimed device or process.

Examples of Preamble

Object of Invention

Cooking all kinds of grains

Making tea

Treating diabetes

Non-motorized vehicle

Preamble

An apparatus for cooking grains

A method for making tea

A composition for treating diabetes

A non motorized land vehicle

Example Claim Formats

General Format:

- Preamble, transitional phrase:
 - Element (#1);
 - Element (#2);
 - Element (#3), characterized in that, Element (#4)
- Example:
 - 1. An apparatus, *comprising*: a plurality of printed pages; a binding configured to hold the printed pages together; a cover attached to the binding, *characterized in that*, the cover is detachable from the binding.

Example Claim Formats

Means-Plus Function-Claims:

- Recite function performed by structures disclosed in the specification instead of specifically defined structures
- The means-plus-function clauses recited in the claim must be adequately described by the structure carrying the recited function

Claim example:

1. An apparatus for cooking rice, comprising: a means for holding rice; and a heater configured to heat the rice-holding means

Example Claim Formats

Improvement claims format:

- **Preamble** – statement of the most relevant prior art
- **Transitional Phrase** – “wherein the improvement comprises”
- The **body** – provides the novel feature(s) of the invention

Claim example:

1. A game device having a handle, a throat portion and a head portion connected to the throat portion, wherein the improvement comprises a protrusion being secured to the handle.

Example Claim Formats

Claim Sets:

1. Independent claim

- Broadest claim
- Standalone and does not need a limitation from another claim in order to be complete
- Patent application may have more than one (1) independent claim

2. Dependent claim

- Depends on another either an independent claim or dependent claim
- Must not extend the scope of protection of the invention defined in the independent claim(s)

Example Claim Sets

CLAIM:

- 1. A game device having a handle, a throat portion and a head portion connected to the throat portion, wherein the improvement comprises a protrusion secured to the handle.
- **2. A game device according to claim 1, wherein the protrusion is configured to receive the palm of the user**

Checklist for Drafting Claims*

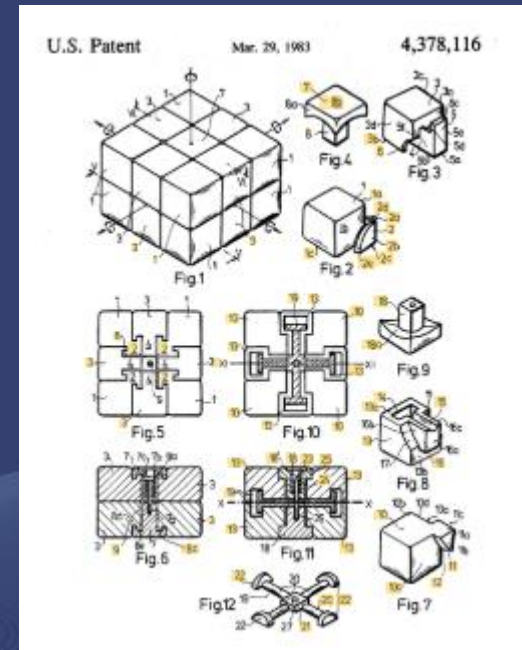
- Be clear and unambiguous
- Be independent or dependent
- Must use terms from the specification
- Should be phrased in a two-part form (prior art plus improvement)
- Each claim should define a novel and nonobvious invention over the prior art.

(* Adapted from a patent attorney's list)

Additional Claim Example

What is claimed is:

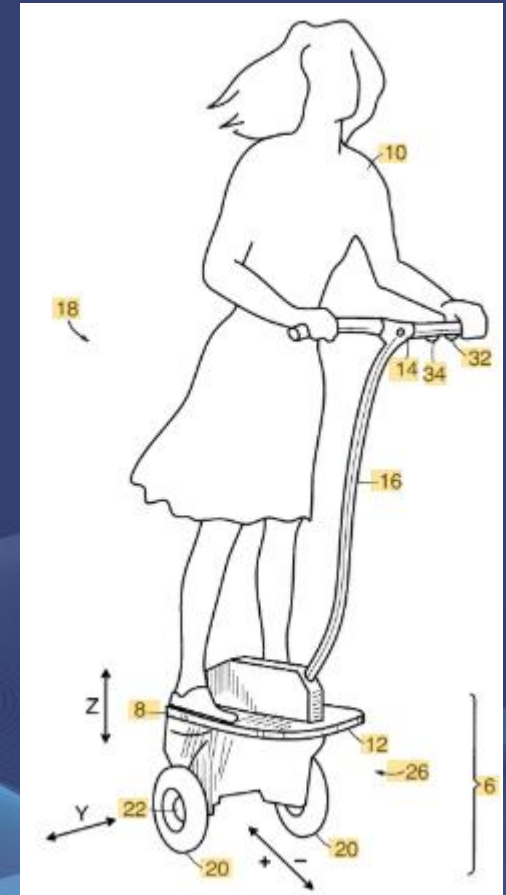
1. In a spatial logical toy assembled from a plurality of toy elements, of which a predetermined number may be rotated in the direction of the spatial axes starting from the geometrical center of the logical toy, the improvement wherein the spatial logical toy is formed by a total of eighteen toy elements, of which two sets of eight toy elements each comprise substantially cubiforms with integrally formed cam elements and each of the sets comprise eight identical toy elements, and two connecting toy elements, and means for joining the connecting toy elements to coact with the cam elements to form an integrated toy body, the joining means comprising a single screw enclosed by a spring.



More Claim Example

What is claimed is:

1. A device for carrying a user, the device **comprising**:
 - a. a platform which supports a payload including the user,
 - b. a ground-contacting module, mounted to the platform, including at least one ground-contacting member and defining a fore-aft plane;
 - c. a motorized drive arrangement, coupled to the ground-contacting module; the drive arrangement, ground-contacting module and payload constituting a system being unstable with respect to tipping when the motorized drive is not powered; the motorized drive arrangement causing, when powered, automatically balanced operation of the system in an operating position that is unstable with respect to tipping in at least a fore-aft plane when the motorized drive arrangement is not powered; and
 - d. a user input control that receives an indication from the user of a specified pitch of the device under conditions of motion at uniform velocity.



U.S. Patenting Fees (Effective March 1, 2020)

	<u>Micro Entity</u>
• Basic filing fee - Utility (paper filing - + non-electronic filing fee)	\$75
• Basic filing fee – Design	\$50
• Provisional application (utility) filing fee	\$70
• Utility Search Fee	\$165
• Utility Examination Fee	\$190
• Utility issue fee	\$250
• Maintenance fee due at 3.5 years	\$400
• Maintenance fee due at 7.5 years	\$900
• Maintenance fee due at 11.5 years	\$1850

IP Career Paths & Basic Requirements

- Patent Examiner (S&E, U.S. citizen)
- Patent Agent (S&E, patent bar)
- Patent Attorney (S&E, patent bar, J.D.)
- Trademark Attorney (Any field, J.D.)
- Technical Advisor for IP law firms (S&E)
- Technology Licensing Associate at Tech Transfer office (S&E)
- Patent Searcher/Analyst (S&E, *MS, PhD*, training)
- IP Consultant (Any field, business)
- Intellectual Asset Managers (Mix of S&E, business, and law)
- IP Strategists (Mix of S&E, business, and law)

Common IP Issues at University Campus

- Patenting vs. invention disclosure
- Risks of various disclosure activities
 - Presentations
 - Interesting parties
 - Collaborations
- Determining inventorship

Public Disclosure by Law

- By Law 35 USC 102
 - “A person shall be entitled to a patent unless (a) the claimed invention was patented, ***described in a printed publication***, or ***in*** public use, on sale, ***or otherwise available to the public before*** the effective filing date of the claimed invention”
- *Publically available* if it can be found by interested persons using reasonable diligence
- Not necessary to show that anyone actually inspected the references
- 1 year grace period in U.S.

Public Disclosure in Europe

- By Article 54 of the European Patent Convention
 - Covers “everything made available to the public”
 - Conditions:
 - Relevant disclosure must be available to at least one member of the public;
 - Disclosure has to actually teach the information to be used in evaluation of patentability; and
 - Technical teaching of the prior art must be enabled
- No grace period

Examples of Public Disclosure

- Invention competitions, design expo, etc.
- Conventional academic publications (printed or online), e.g. abstracts, posters, papers, proceedings, master's theses, Ph.D. dissertations
- Open thesis defenses, presentations, poster sessions, department and campus seminars
- Information posted online and publicly available abstracts of funded grant proposals.
- Email correspondence

Public Disclosure Recommendations

Before public disclosure, consider:

- Confidentiality agreements – multi-lateral, e.g. commercially sensitive info.
- Non-Disclosure Agreement (NDA) – unilateral, e.g. For startup -> vendors, suppliers, potential investors
- Filing patent application early (before collaboration)
- Establishing expectation of confidentiality
- Using anti-copying software
- Creating disclaimers



Joint Inventorship

- By Law: 35 U.S.C. § 116.

When an invention is made by two or more persons jointly, they shall apply for patent jointly and each make the required oath, except as otherwise provided in this title.

Inventors may apply for a patent jointly even though

- (1) they did not physically work together or at the same time,
- (2) each did not make the same type or amount of contribution, or
- (3) each did not make a contribution to the subject matter of every claim of the patent.

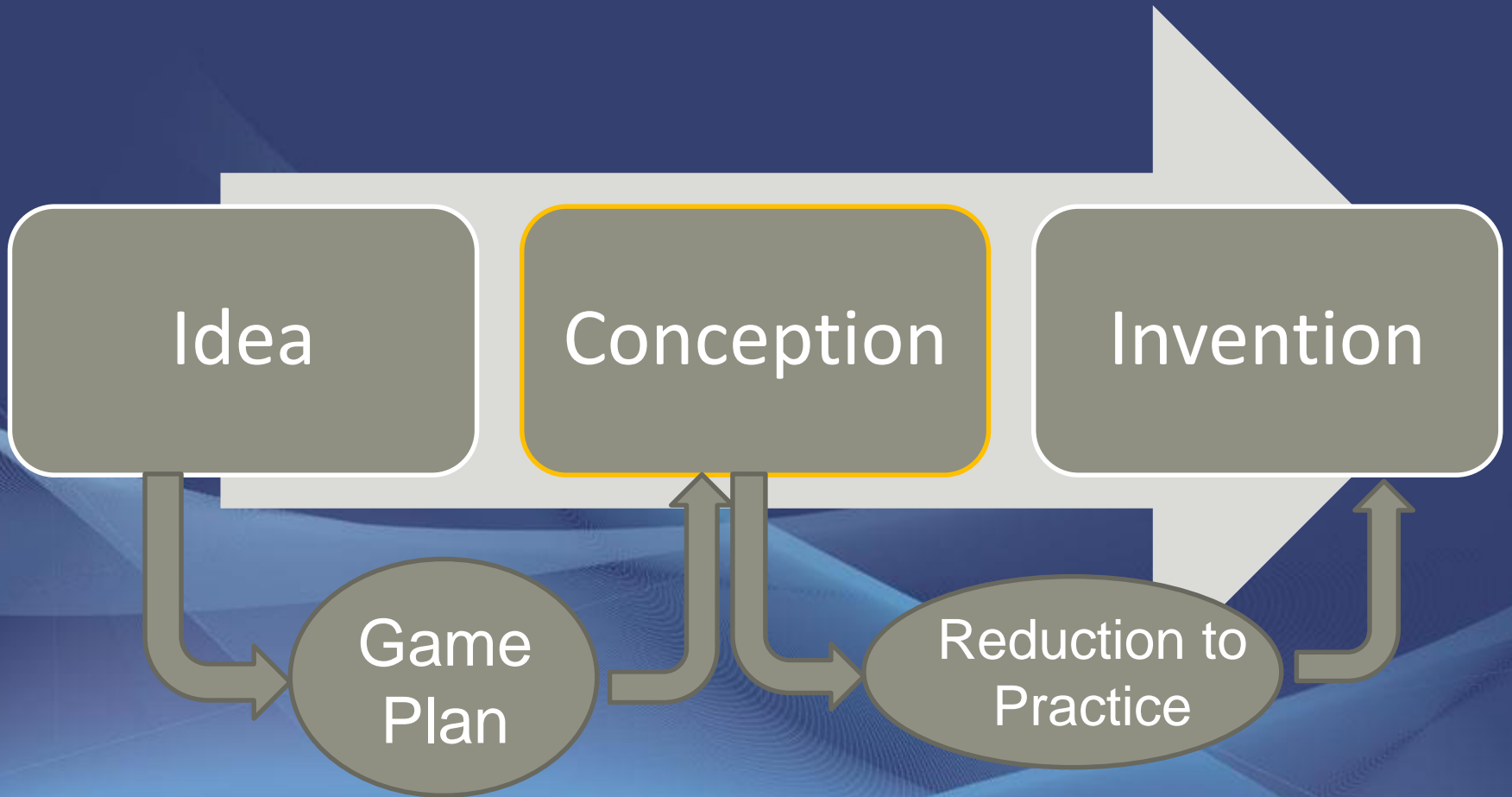
** Note: Each joint inventor will own 100% of any patent issued.*

Inventorship

True or False?

1. An inventor is someone who came up with the idea for the invention?
 - True
 - False
2. An inventor is someone who diligently works on making the invention?
 - True
 - False

Idea to Invention



Determining Inventorship

Who can be considered inventor(s)?

- Some one who contributes to **Conception** - the mental aspect of inventing

Who cannot be considered inventor(s)?

- Someone who only contributes to **Reduction to Practice** (e.g. lab tech, attorney, manufacturer)
- Some one who only contributes to an **idea**



Legal Assistance

- [GT Legal Buzz](#)
- [Registered Patent Attorney and Agents](#)
- [Patent Pro Bono Program](#)
- Georgia PATENTS (gapatents.org)
- [Law School Clinical Certification Program](#)



Further Readings

- Gordon, T. (2012). *Patent fundamentals for scientists and engineers* (3rd ed.). CRC Press.
- Grissom, Fred E., and David Pressman (2008). *Inventor's Notebook a "patent It Yourself" Companion*. 5th ed. Nolo Press.
- Lo, Jack, and Pressman, David (2019). *How to make patent drawings : a Patent It Yourself Companion*. (8th ed.) Nolo Press.
- Lo, Jack, and Pressman, David (1999). *How to make patent drawings yourself*. (2nd ed.) Nolo Press.
- Ma, M. (2015). *Fundamentals of patenting and licensing for scientists and engineers*. (2nd ed.) World Scientific.
- Pressman, D., Blau, D. (2018). *Patent it yourself: your step-by-step guide to filing at the U.S. Patent Office*. (19th ed.) Nolo Press.

Other Resources

- USPTO Inventor Assistance Center:
<https://www.uspto.gov/learning-and-resources/support-centers/inventors-assistance-center-iac>
- Georgia Tech PTRC (for information consultation and training):
 - Email: patentscoordinator@library.gatech.edu
 - Phone: 404-385-7185
 - PTRC Patent Guide:
http://libguides.gatech.edu/patent_guide

Questions?

