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Patentability and the Patent System

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General Topics for Discussion

What is a patent?

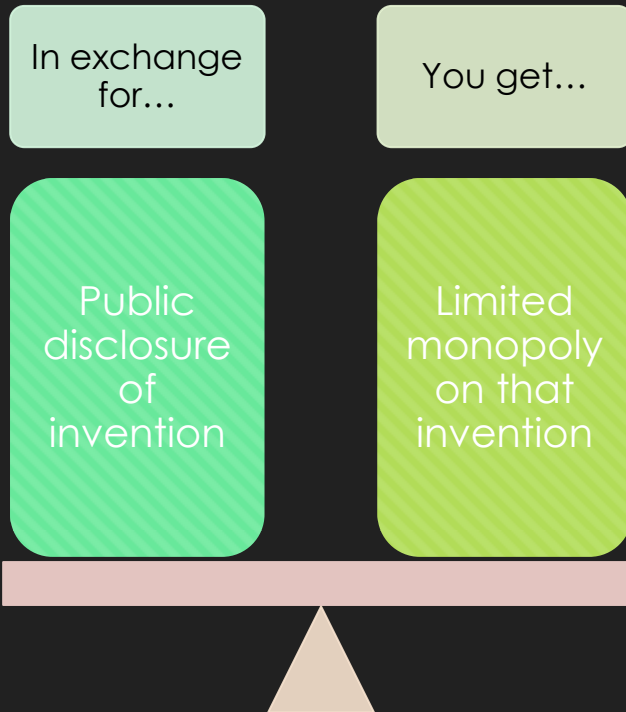
Why should I care about patents?

How do I get a patent?

What Is a Patent?

- Bundle of intangible rights granted by a national or regional patent office
 - United States Patent & Trademark Office (USPTO)
 - European Patent Office (EPO)
 - Canadian Intellectual Property Office (CIPO)
 - African Regional Intellectual Property Organization (ARIPO)
- Right to **exclude** others from making, using, offering for sale, or selling the patented invention
- Rights are territorial
- Monopoly for a limited time

What Is a Patent?



Types of Patents and Patent Applications in the US

Utility

- Provisional application
- Utility patent application, utility patent

Design

- Design patent application, design patent

Plant

- Provisional application
- Plant patent application, plant patent (USPTO)
- Utility patent application, utility patent (USPTO)
- Plant variety protection application, Plant Variety Protection Certificate (USDA)

Plant Variety Protection

USPTO (plant patent)

- New and distinct
- Not found in an uncultivated state
- Asexually reproduced by inventor
- Prevent others from using, offering for sale, or selling the plant so reproduced, or any of its parts, throughout the US, or importing the plant so reproduced or any parts thereof, into the US
- Protects a single genome (infringement may be difficult to prove)
- *Cannabis* varieties are plant patent-eligible (PP27,475 – Cannabis plant named 'Ecuadorian Sativa')

Plant Variety Protection

USPTO (utility patent)

- Novel and non-obvious
- Prevent others from making, using, selling, offering for sale, or importing into the US the patented invention
- Examples:
 - Transgenic plants
 - Plant components (genes, chromosomes)
 - Plant products (oils, pharmaceuticals, extracts, fruit)
 - Plant culture cells
 - Plant breeding or growing methods

Plant Variety Protection

USDA (Plant Variety Protection Certificate)

- New and distinct, uniform, and stable
- Sexually reproduced or asexually reproduced
- Prevent others from selling the variety, offering it for sale, reproducing it, importing or exporting it to/from the US, or using it in producing (vs. developing) a hybrid or different variety therefrom
- PVPC covers the protected variety, essentially derived variety may also be eligible under separate certificate
- Crop exemption and research (or breeder's) exemption
- USDA used to deny applications for *Cannabis* varieties, but under new Farm Bill is accepting applications for industrial hemp varieties

Designs



Protects an ornamental design



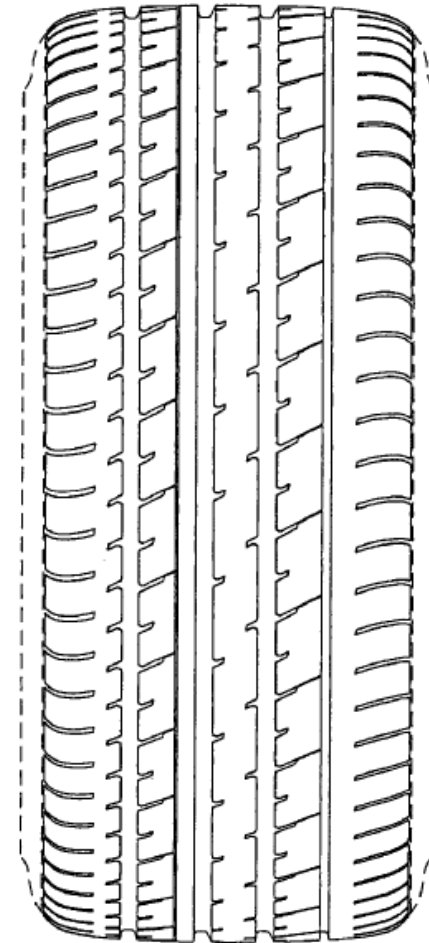
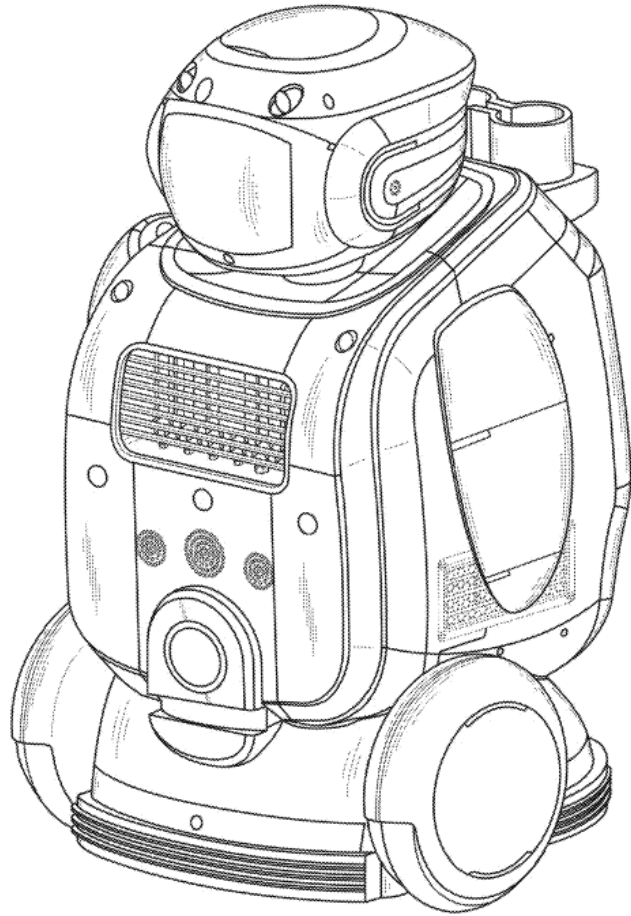
Typically easier and faster to obtain a design patent than a utility patent, but the claim scope is narrower

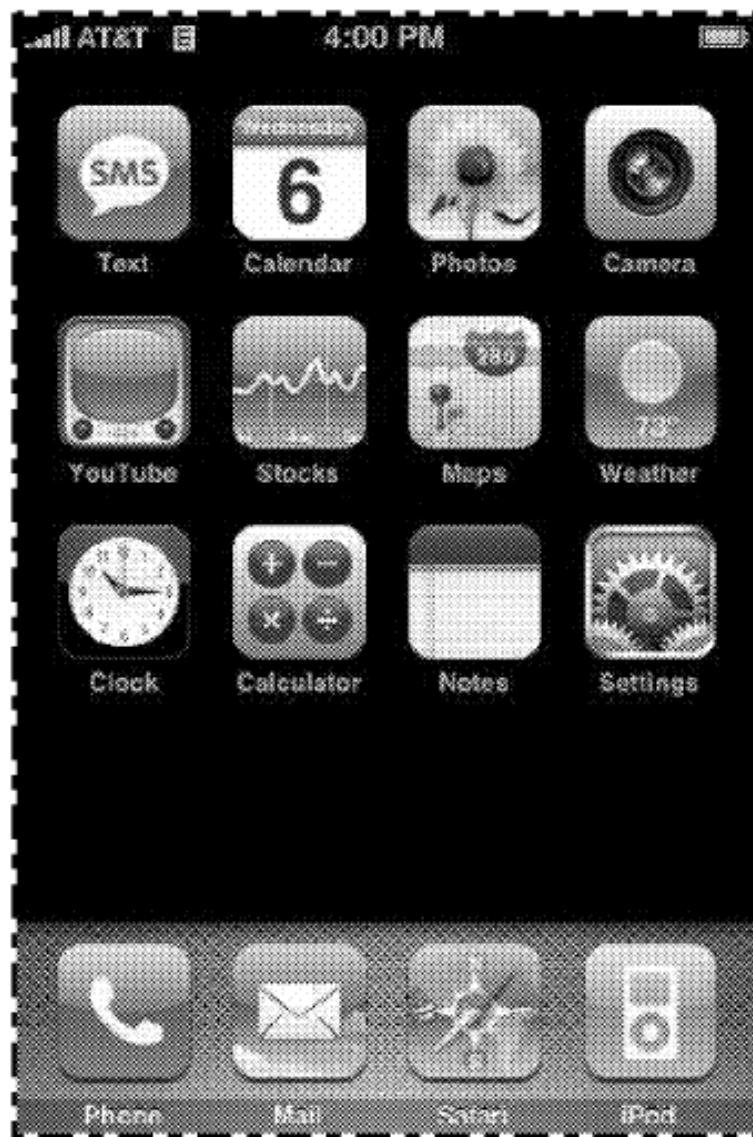
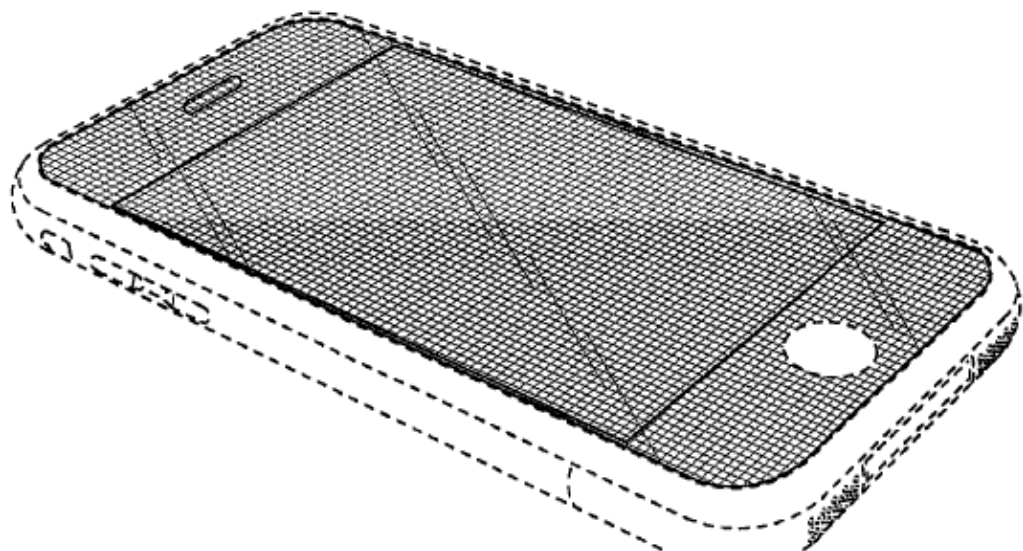
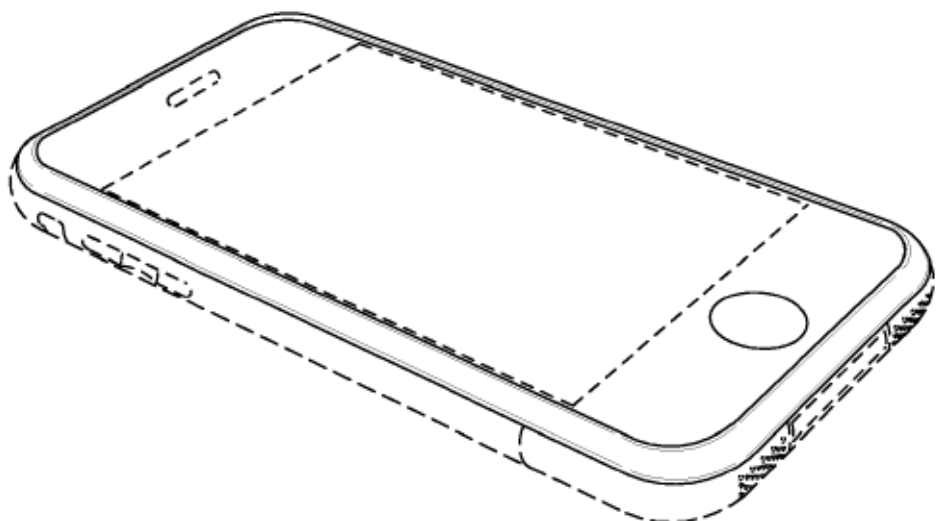


International design protection may be available

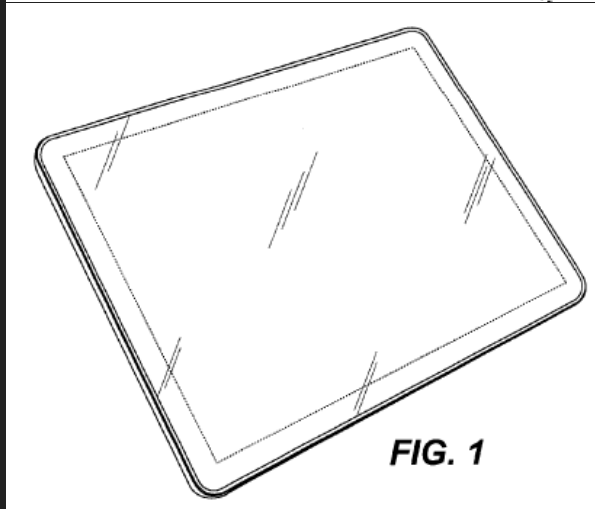
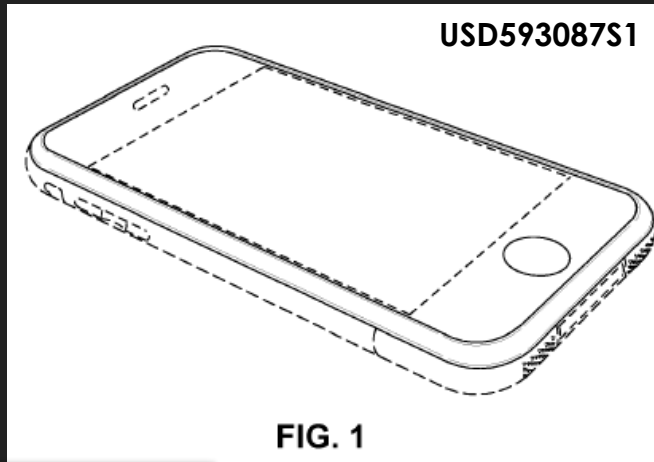
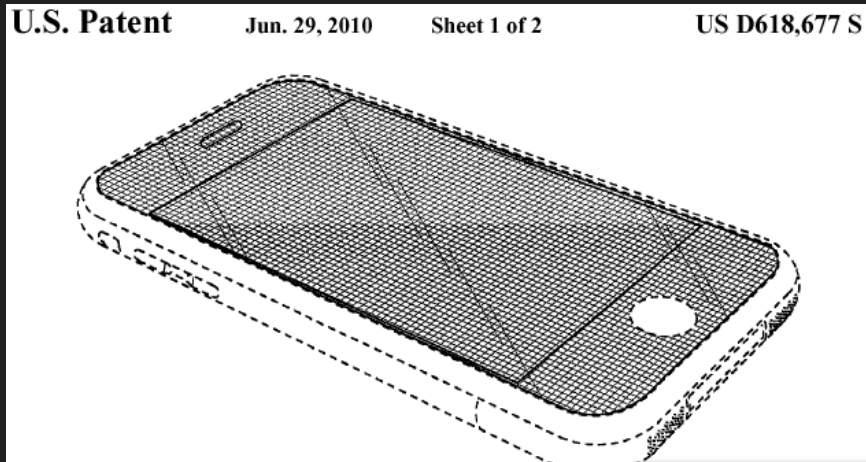


Term is 15 years from date of grant (if application was filed after May 13, 2015)





Apple v. Samsung (2012-2018): \$533 Million Verdict for Apple (Design) \$5.3 Million Verdict for Apple (Utility)



Adidas v. Sketchers (2016)



Provisional Patent Application vs. Utility Patent Application



Provisional application

Establishes a filing date and allows you to use the phrase “patent pending”

Gives a year to test the market

Not examined

Automatically expires one year from filing date

Will never mature into an issued patent – ***must file utility application before expiration of the provisional***



Utility application

Methods of performing a process, physical products, pharmaceutical compositions, genetically modified plants, improvements in computer functionality (possibly)

Undergoes substantive examination, may mature into issued patent if it meets criteria for patentability

File a utility application within 1 year

Provisional
Application



Utility
Application

March 01, 2021

March 01, 2022

Utility

- Term is 20 years from earliest priority date
 - US utility can claim priority to provisional application, PCT, or foreign application
 - Provisional term not calculated in patent term
 - Patent Term Adjustment (PTA) may be available if delays are caused by USPTO during prosecution
 - Patent Term Extension (PTE) for a patent claiming a product that requires regulatory approval (e.g., pharmaceuticals, food additives, medical devices)
- Continuation, continuation-in-part (CIP), and divisional applications permitted
 - No new matter may be added, except to CIP applications
 - For CIP applications, risk parent application may be cited as prior art

Utility Protection Outside the US

International Application

- Patent Cooperation Treaty application
 - International application
 - Examined, but won't mature into issued patent (no such thing as "international patent")
 - Favorable examination in international stage can help expedite examination of regional applications
- Placeholder for at least 30 months
 - Can defer National Stage filing decisions and many costs
- File with a Receiving Office (RO) and select International Searching Authority (ISA)
 - ISA may be the same or different than RO
 - Available ISAs and ROs determined by nationality of Applicant(s)

Regional Application

- National Stage from PCT application
 - Deadline for most countries is either 30 months or 31 months from earliest priority deadline of PCT application
 - 152 contracting States
 - Cannot add new matter to application
- Bypass Continuation application (US)
 - Claims priority to PCT
 - Can add new matter (Bypass CIP)
- Direct regional application
 - Direct filing (without PCT) with regional patent office

Utility Protection Outside the US

International Application

Regional Application

Canada

Patent Cooperation Treaty (PCT) application

Europe

United States

Japan

Mexico

Germany

France

Spain

Why Should I Care about Patents?

Just some examples...

Patent Owner

Attract investors/collaborators and add value to business

Create a "moat" that sets you apart from competitors

Creates prior art that may block competitors from getting their own patent

May be able to adapt existing applications to cover a competitor's product

Must have issued patent to enforce rights against others

Non-owner

Patent holder can prevent you from selling your products

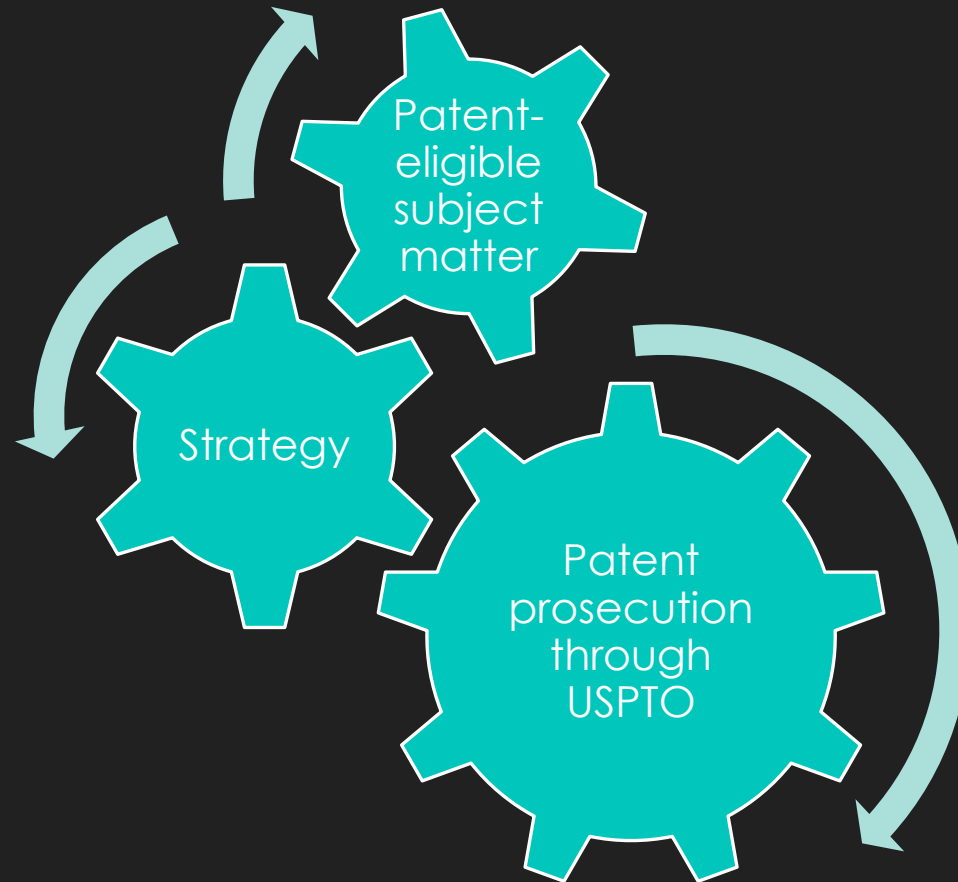
Patent holder can prevent you from selling your products

Can help identify target businesses for acquisition/collaboration

Indicators of market/technology trends

Prior art obstacles to obtaining your own patent

How Do I Get a Patent?



(...and What Do I Do with It Once I Have It?)



Further research and development



Marketing



Licensing and license maintenance



Royalty collection



Patent enforcement

How Do I Get a Patent?



PATENT-ELIGIBLE
SUBJECT MATTER



PATENTABILITY
SEARCH



EXAMINATION

Subject Matter Eligibility

Threshold question

Unless the claims recite additional elements that integrate the judicial exception into a practical application

Patent Eligible

Process

Machine

Manufacture

Composition of matter

NOT Patent Eligible

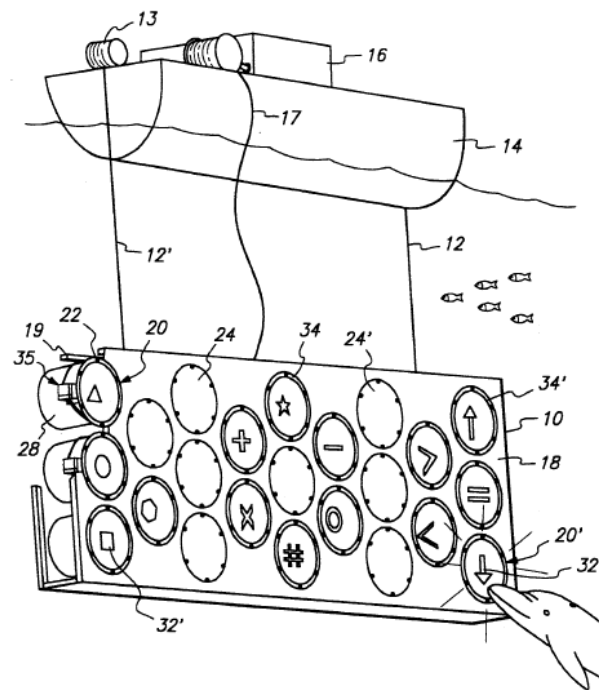
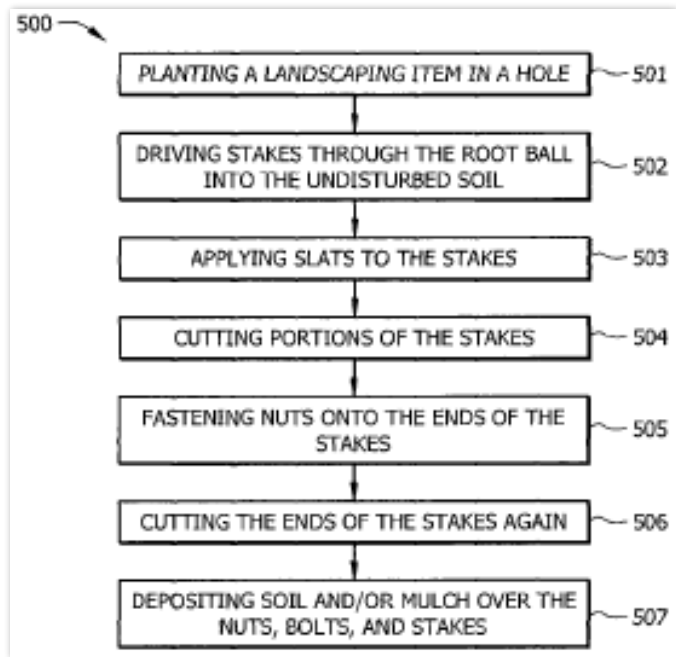
Laws of nature

Natural phenomena

Abstract ideas

(e.g., mathematical concepts, certain methods of organizing human activity, mental processes, fundamental economic practices, managing interactions between people)

("Judicial Exceptions")



Method

US 8,316,579

Landscape stabilization systems and methods

Machine

US 5,392,735 – owned by The Walt Disney Company

Marine mammal communication device

Nature-Based Products: Patentable?

- Claim: A method comprising providing a pomelo fruit.
 - INELIGIBLE. No difference between this process claim and the fruit itself (product of nature).
- Claim: A beverage composition comprising pomelo juice and an effective amount of added preservative.
 - ELIGIBLE. No naturally occurring counterpart to the claimed combination.
- Claim: A kit for preparing goat milk yogurt comprising: *Streptococcus thermophilus* and *Lactobacillus alexandrinus*.
 - INELIGIBLE. No differences between claimed bacteria and naturally occurring bacteria.
- Claim: A yogurt starter culture comprising: goat milk mixed with *Streptococcus thermophilus* and *Lactobacillus alexandrinus*.
 - ELIGIBLE. Mixture of bacteria and milk has different characteristics than either species on its own.

Apps, Software, and Business Methods: Patentable?

- May fall into abstract idea category, but apps, software, and business methods **not excluded categories of subject matter**
 - To be patent eligible, the claim as a whole must amount to **significantly more** than the recited exception itself
 - For example, a product or process that **applies** the exception in a meaningful way
 - Simply implementing a mathematical principle on a physical machine (e.g., a computer) is **not** a patentable application of that principle – mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention
 - Examples of what may be considered “significantly more”:
 - Improvements to another technology or technical field
 - Improvements to the functioning of the computer itself
 - Effecting a transformation or reduction of a particular article to a different state or thing

Criteria for Patentability

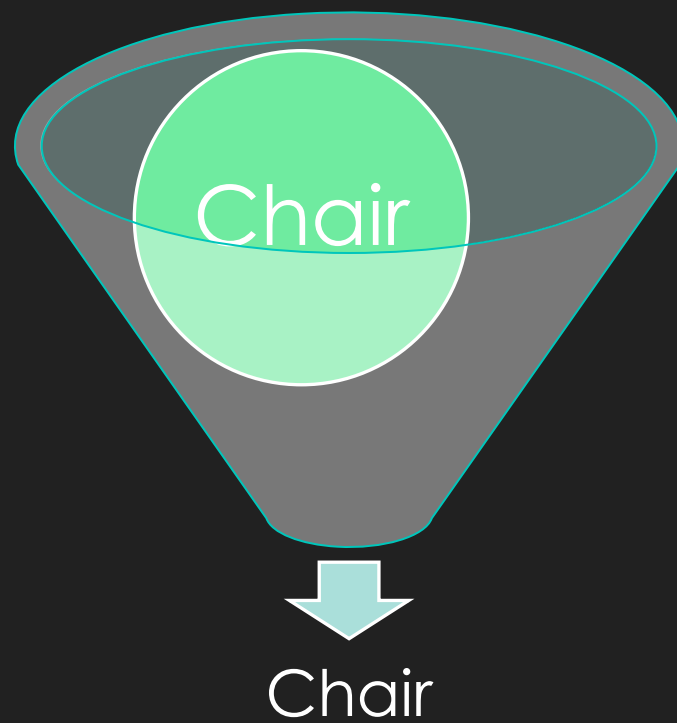
- In addition to being directed to patent-eligible subject matter, the claims must be:
 - New
 - Useful
 - Non-Obvious
- ...and not publicly disclosed more than one year before filing date ...
 - In the US
 - Most other countries impose an absolute bar
- What is “public disclosure”? *“The claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public” (35 U.S.C. § 102(1)(1)).*
 - Can include even secret sales, uses, disclosures, etc. !

Novelty

- The claimed invention is not disclosed in a single reference

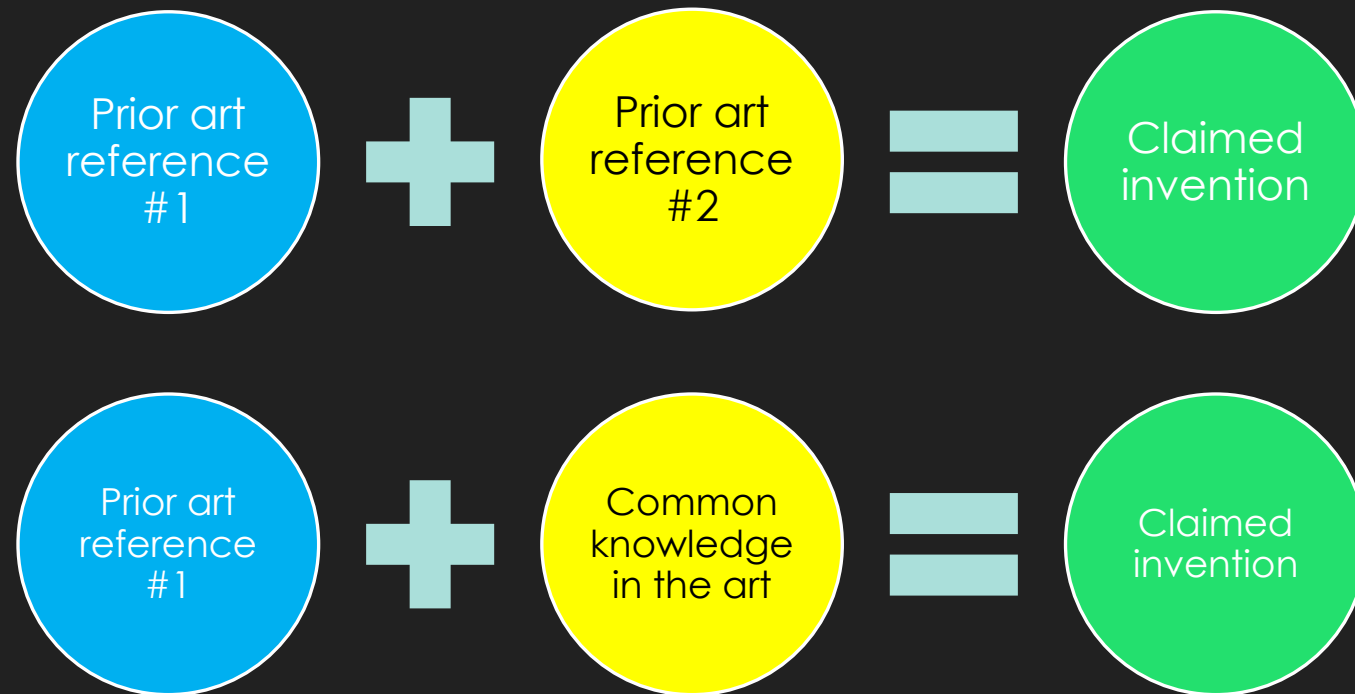


Novelty

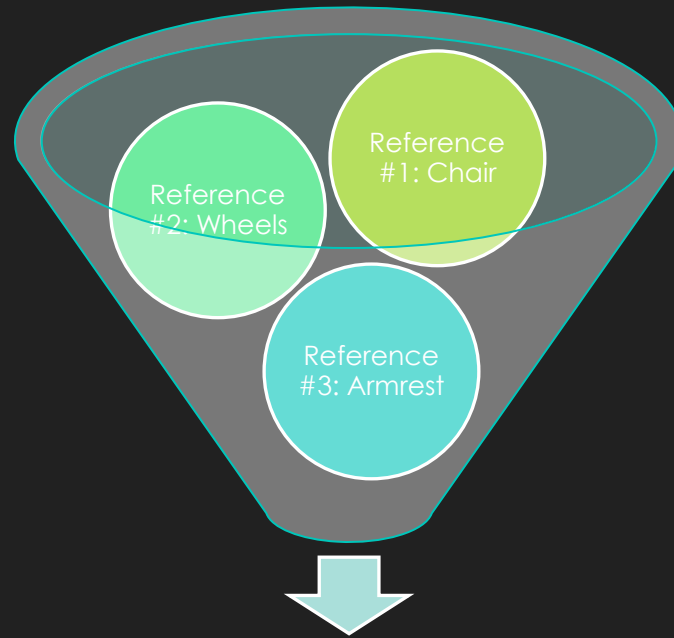


Obviousness

- The claimed invention is not disclosed by one or more references



Obviousness



Chair comprising at least one wheel and at least one armrest

Where Do I Start?

Research

- Patentability search
- Freedom-to-operate search
- Cost estimates (patent attorney, prototyping, manufacturing, marketing, shipping, etc.)

Use Caution

- Strictly limit the number of people to whom you disclose your idea
- If possible, don't talk about your idea to anyone until a patent application has been filed or until you've decided not to file an application
- Whenever possible, only disclose your idea to others under a non-disclosure / confidentiality agreement (clearly define confidential information and time limit of the agreement)

Take Good Notes

- If you're working as a team, identify who conceived of which features of the invention
- Inventors must be properly named in a patent application, determined by the claims
- Document the problem and how the invention solves that problem

File

- Once you've decided to pursue patent protection, file an application as soon as possible – the USPTO is now a **first to file system** (race to the Patent Office)
- File the type of application that fits your budget, timeline, and stage of development of the invention

Patentability Search

- As a first step, conduct a brief search yourself
 - Google, Google Patents (<https://patents.google.com/>)
 - FreePatentsOnline.com
 - USPTO databases: PatFT (<http://patft.uspto.gov/netahtml/PTO/search-bool.html>) for issued patents and AppFT (appft.uspto.gov/netahtml/PTO/search-bool.html) applications
 - New: Patent Public Search (<https://ppubs.uspto.gov/pubwebapp/static/pages/landing.html>)
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 - Regional databases
- Even if you don't find your product for sale, that doesn't necessarily mean it hasn't been patented, applied for, or publicly disclosed
- Recommend having a more formal search conducted by a patent attorney (or search company)

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SEARCH FIELDS

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Front body structure for vehicle

WO EP US CN JP KR DE · [US6866115B2](#) · Hiroyuki Miyasaka · Nissan Motor Co., Ltd.
Priority 2001-02-27 · Filed 2002-01-18 · Granted 2005-03-15 · Published 2005-03-15
21. The front **body** structure of claim 19, wherein the front-wheel traverse controller is arranged on a front end of the side sill and includes a guide part for shifting the front wheel inwardly in the vehicle's width direction at the **vehicle** front collision. 22. The front **body** structure of claim 19




Vehicle body shake absorber

US · [US3211491A](#) · Horace L Browne · Ford Motor Co
Priority 1963-11-29 · Filed 1963-11-29 · Granted 1965-10-12 · Published 1965-10-12
Oct. 12, 1965 H. BROWNE ETAL 3,211,491 **VEHICLE BODY** SHAKE ABSORBER 2 Sheets-Sheet 1 Filed NOV. 29, 1965 HORACZ 4. 3 4 0 PGJA-R? 4. M INVENTORS BY x 1 3 ATTORN EYS Oct. 12, 1965 1.. BROWNE ETAL 3,211,491 **VEHICLE BODY** SHAKE ABSORBER Filed Nov. 29, 1963 2 Sheets-Sheet 2 HOP/4C2 L fixPOW/ex. 205587 A. ...




Impact absorbing device and motor vehicle body structure incorporating the same

US FR GB IT · [US3899047A](#) · Teruo Maeda · Nissan Motor
Priority 1972-04-19 · Filed 1973-04-18 · Granted 1975-08-12 · Published 1975-08-12
An impact absorbing device of any of the configurations above described may be used either singly or through suitable modification, as a structural member of a **vehicle body**, not only mitigating impact on the **vehicle body**, but supporting operational parts or units such as, the engine or power ...




Unitized lightweight sedan automobile body construction

US DE FR GB SE · [US3423123A](#) · Henry W Wessells · Budd Co
Priority 1967-01-04 · Filed 1967-01-04 · Granted 1969-01-21 · Published 1969-01-21
13. A unitized lightweight **automobile body** construction as set forth in claim 1, which further includes inner rear quarter panels connected to said wheel housings, said rear floor panels and to said **body** panels at said exterior rear quarter panels for forming closed boxes at the rear of the wheel ...



Slidable and detachable interlocking connection of a vehicle body to a chassis

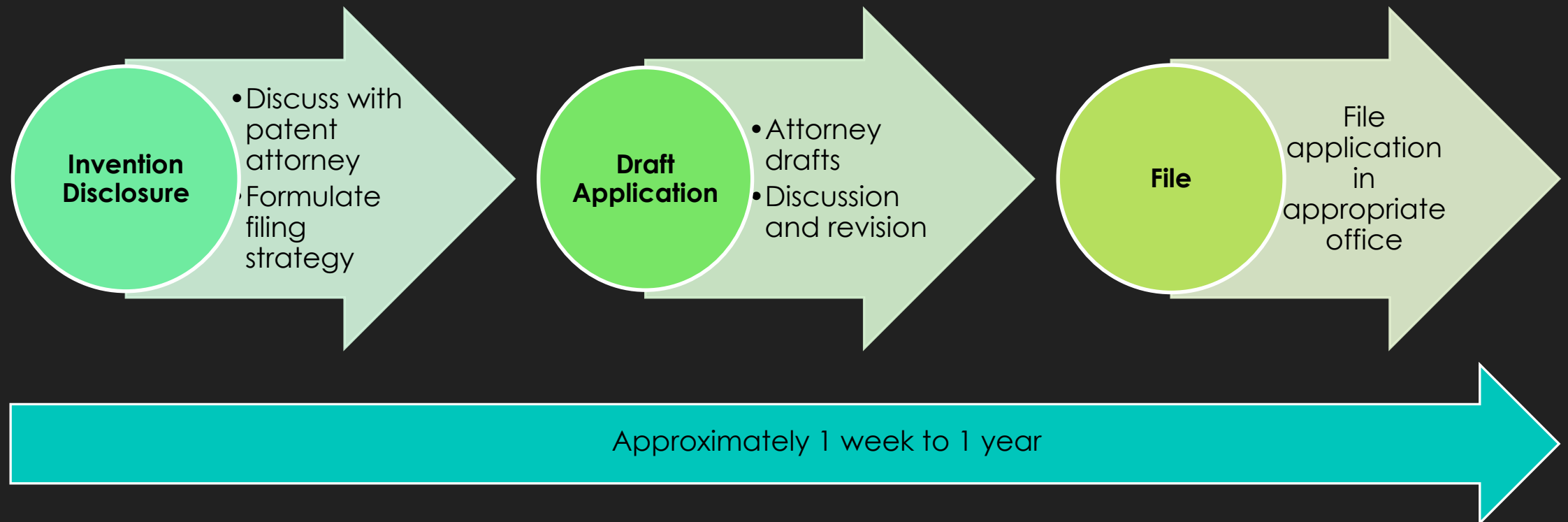
US · [US2927817A](#) · Raup Clyde Nelson · Raup Clyde Nelson
Priority 1958-01-13 · Filed 1958-01-13 · Granted 1960-03-08 · Published 1960-03-08
2- An automobile chassis and body assembly as in claim 1, said bulkheads having opposed



Patentability Search Benefits

- Identify competitors
- Identify potential collaborators/partners
- Identify patents for license or purchase
- Important part of business due diligence and can be attractive to investors or licensees
- Enhance understanding of relevant field of technology
- Reinforce excitement in the idea
- Economy: if you discover problematic references, may save the cost of filing patent application(s) before you invest too much money and time into the project

Preparing and Filing the Patent Application



Which Type of Application to File?

- Design = designs
- Plant = plants
- Utility:

Provisional

- Name inventors
- Written description
- Informal drawings ok
- Filing fee

Utility

- Name inventors
- Written description, at least one claim, formal drawings (if necessary)
- Oath/declaration from each inventor
- Filing, search, and examination fees

Provisional

Product is still in beta stage

Need time to evaluate project

Need to file quickly

Budget is limited

Utility

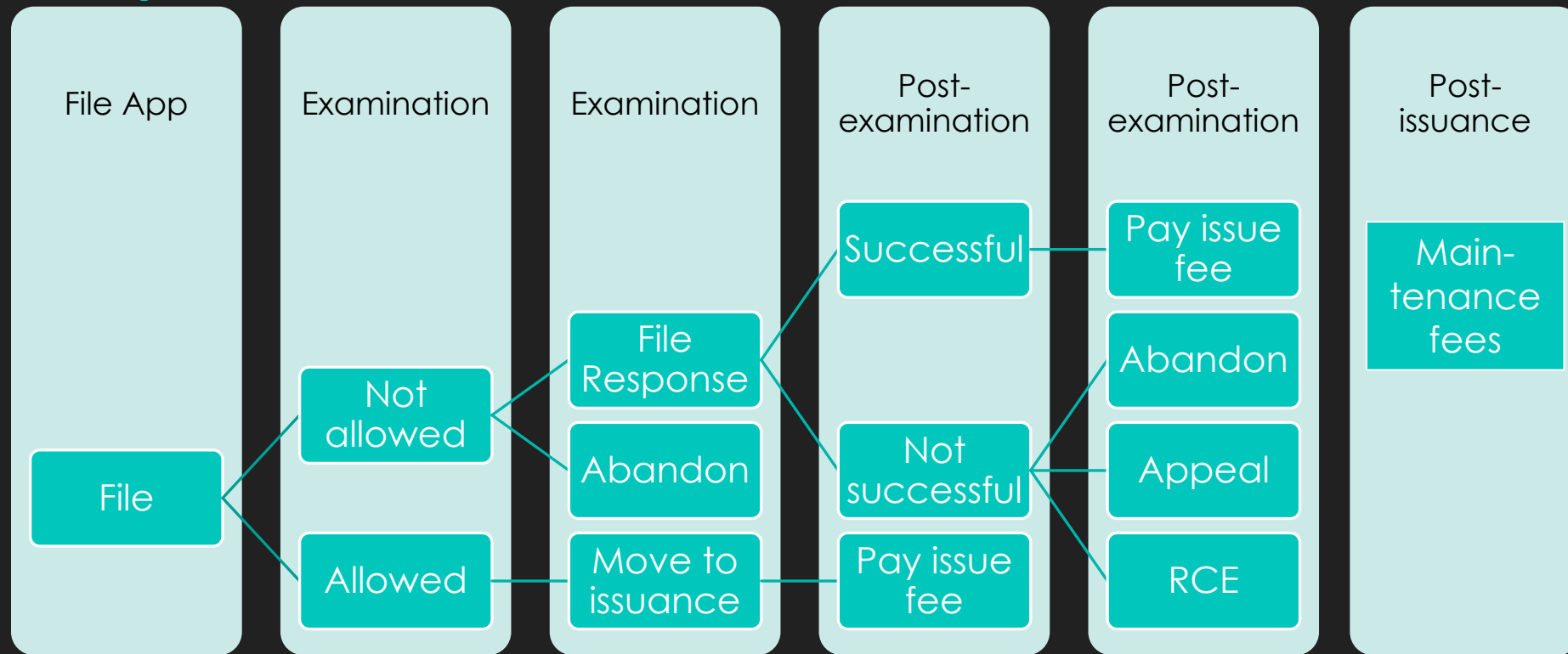
Product is fully developed

Want to reduce time to patent

Examination desired

Want to file abroad

Preparing and Filing the Patent Application



Approximately 3 years

Ethical and Other Considerations - Inventorship

- An application must include, or be amended to include, the name of the inventor for any invention claimed in the application” (37 CFR § 1.41)
- Deliberately concealing proper inventorship can invalidate the patent
- Inventor = person who contributes to the conception of the invention
- “Conception has been defined as ‘the complete performance of the mental part of the inventive act’ and it is ‘the formation in the mind of the inventor of a definitive and permanent idea of the complete and operative invention as it is thereafter to be applied in practice” (MPEP § 2138.04).
- Inventorship of parent application may be different than inventorship of continuing application.

Ethical and Other Considerations – Duty of Disclosure to the USPTO

- Duty of disclosure to USPTO by each individual associated with the filing and prosecution of a patent application of all information known to be material to patentability of any claim remaining under consideration in the application
 - Who:
 - Each inventor named on an application
 - Each attorney or agent who prepares or prosecutes the application
 - Every other person who is “substantively involved in the preparation or prosecution of the application and who is associated with the inventor, the applicant, an assignee, or anyone to whom there is an obligation to assign the application” (37 CFR § 1.56)
 - What:
 - Prior art such as patents and publications
 - “Information on enablement, possible prior public uses, sales, offers to sell, derived knowledge, prior invention by another, inventorship conflicts, litigation statements,” etc. (MPEP § 2001.04)

Patent Ownership and Inventorship

- In the US, the inventor(s) is the owner of an invention, unless it's assigned to another
- Assignments are critical!
 - Assignment from inventors (e.g., business partners) to business entity
 - Assignment from inventors to employer company
 - Assignment from Company A to Company B in the event of a merger or sale of company assets
- Assignee may be named as Applicant on patent application
- Assignee may be listed as owner on issued patent
- One owner vs. multiple owners of patent (licensing issues, control of prosecution, etc.)

Thank you!

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