



Introduction to patents

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UNITED STATES
PATENT AND TRADEMARK OFFICE[®]

Notice

This content is for informational purposes only and is not legal advice. Please consult with appropriate sources for legal authority and guidance on these matters.

Outline

Background

- History.
- Role of the USPTO.
- Why invention matters.

Expansion

- What is a patent.
- Types of patents.
- Who can be an inventor.

Patent roadmap

- Patent application journey.



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Historical foundation of intellectual property

- Intellectual property (IP) is deeply rooted in our nation's history.
 - U.S. Constitution article 1, section 8, clause 8:
"The Congress shall have 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 ... "



The USPTO is America's innovation agency

Committed to:

- Fostering innovation and economic growth.
- Creating a reliable, predictable, and high-quality IP system.

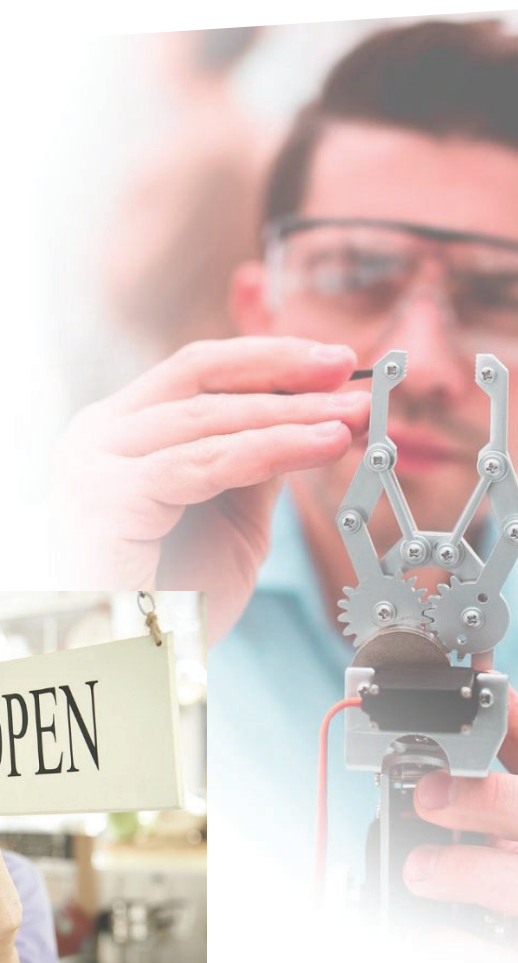


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Why invention matters/ what this means to you

Patents can:

- Promote innovation and help safeguard your inventions.
- Help companies grow.
- Benefit the community by making new goods and services available.
- Provide personal growth, development, and advancement.

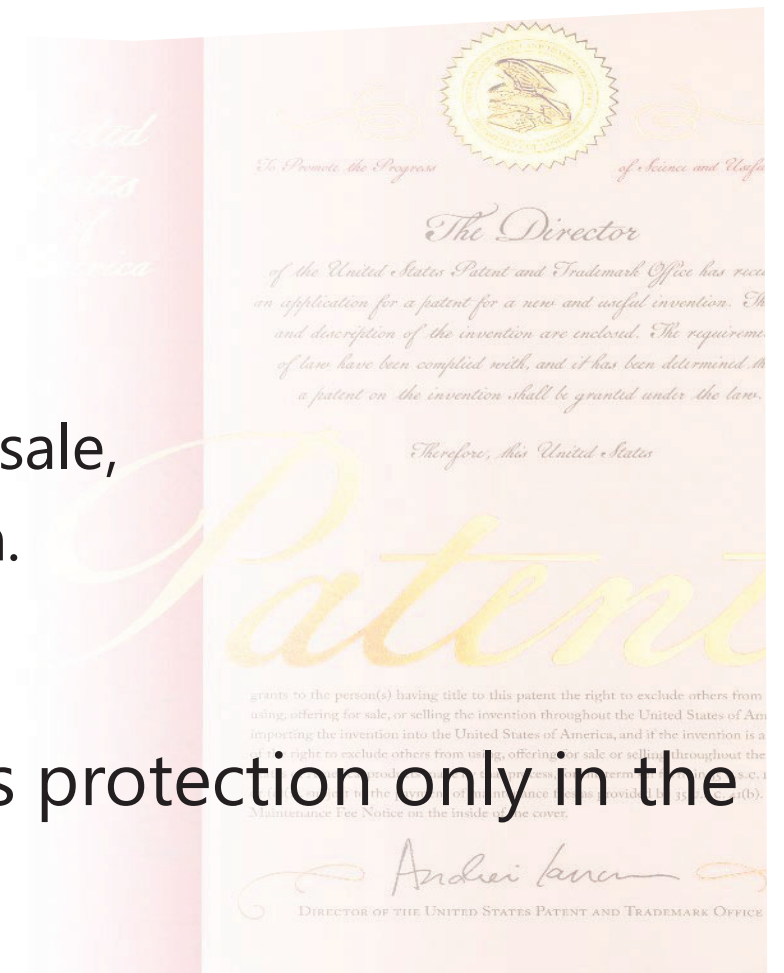


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What is a patent?

The right to **exclude others** from:

- making, using, selling, offering for sale, or importing the claimed invention.
- Limited term.
- Territorial: A U.S. patent provides protection **only in the United States**.
 - No worldwide patents.

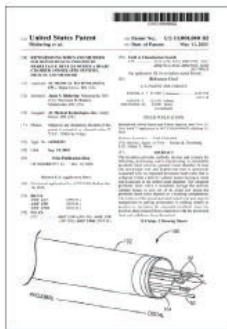


Types of patents

Utility

Protects how an invention works, functions, or is made for 20 years from filing date

- Process
- Machine
- Article of manufacture
- Composition of matter



Design

Protects the way a product or article looks, the ornamental expression for 15 years from the date of grant



Plant

Protects newly invented strains of asexually reproducing flowering plants, fruit trees, and other hybrid plants for 20 years from filing date



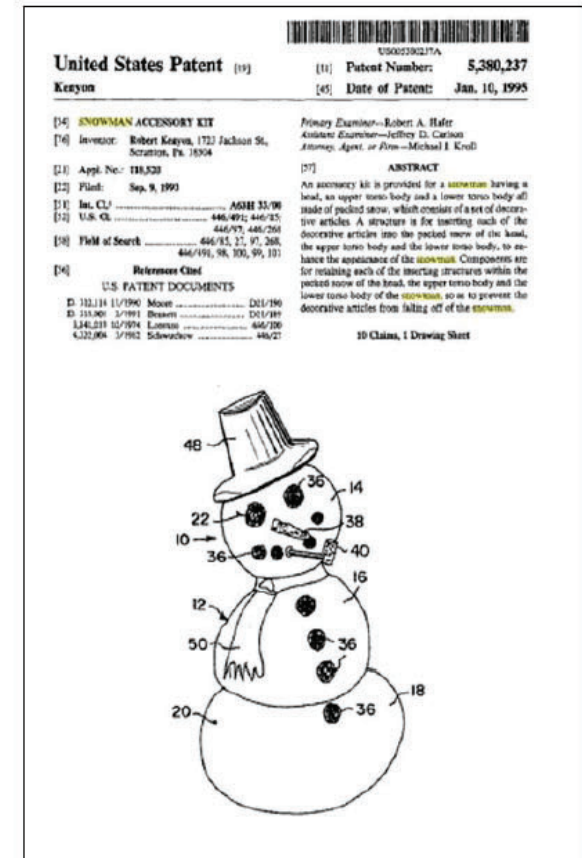
Utility applications

Provisional

- Not examined or published
- Expires after one year
- Only for utility patents

Non-Provisional

- Examined: claims required, formal requirements must be met
- Published
 - 18 months from earliest filing date
 - Unless request for non-publication at filing
- Can become a patent



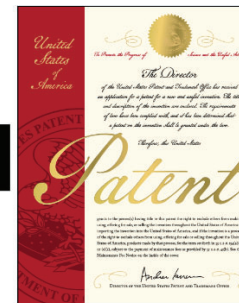
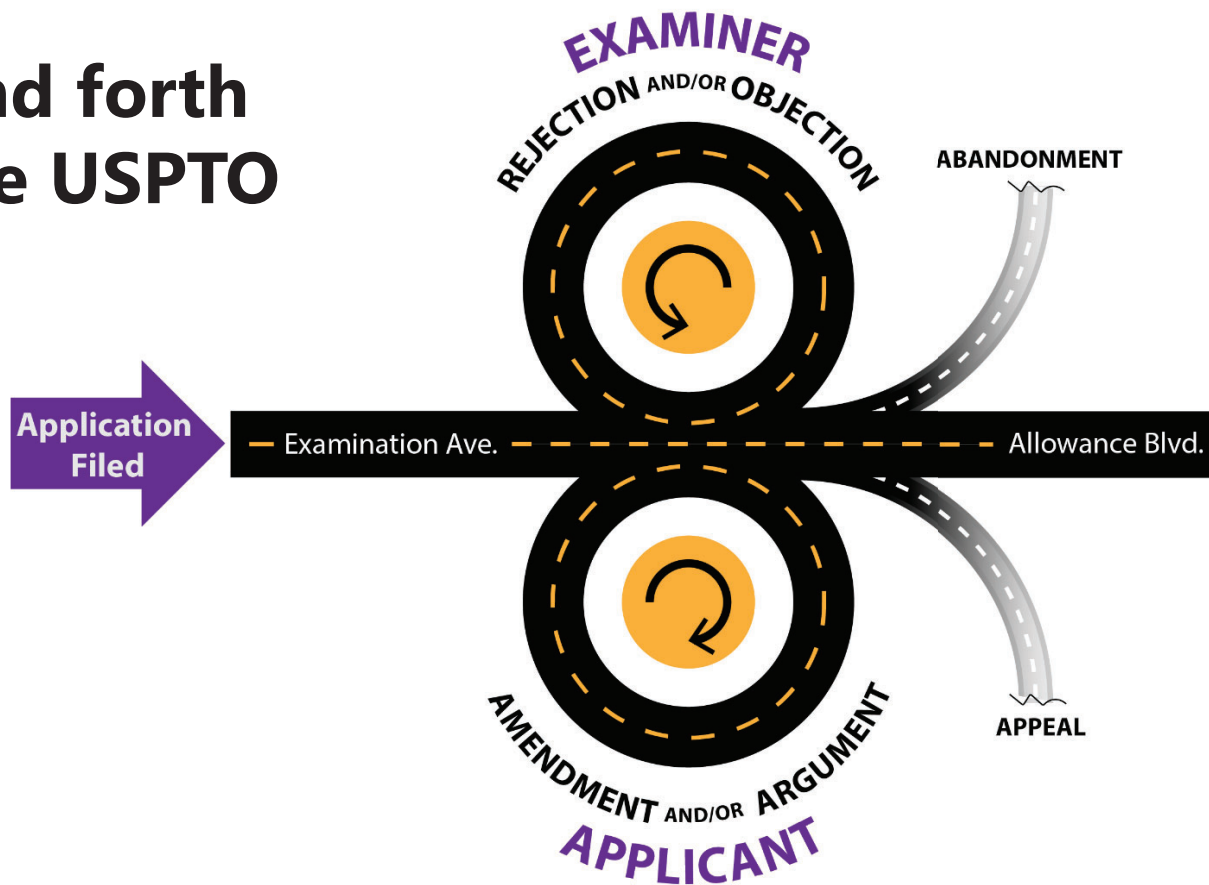
Who can be an inventor on a patent?

- Any person who contributes to the conception of an invention.
 - Alone, or in combination with others.



The patent application roadmap

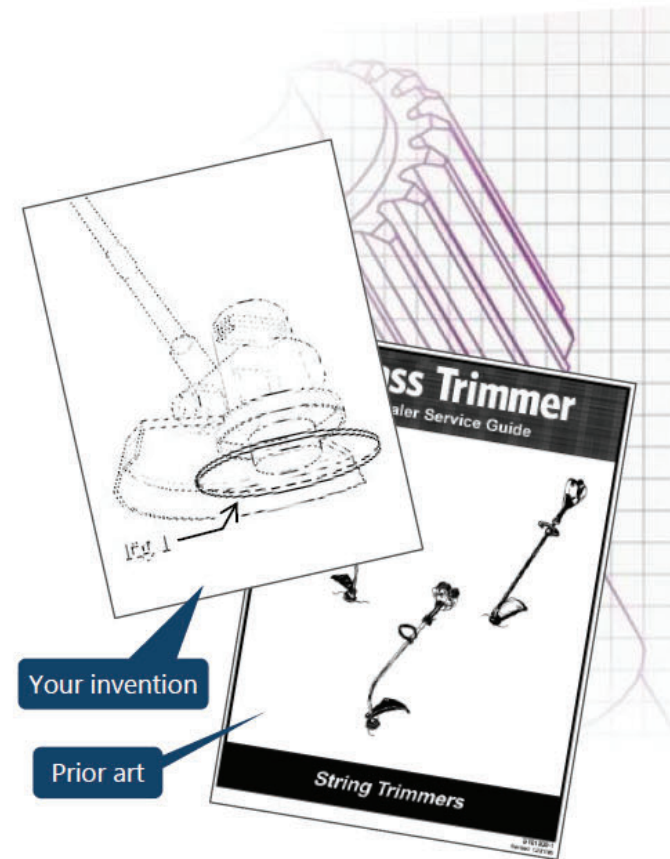
Back and forth with the USPTO



Hurdles to patenting

Is the invention:

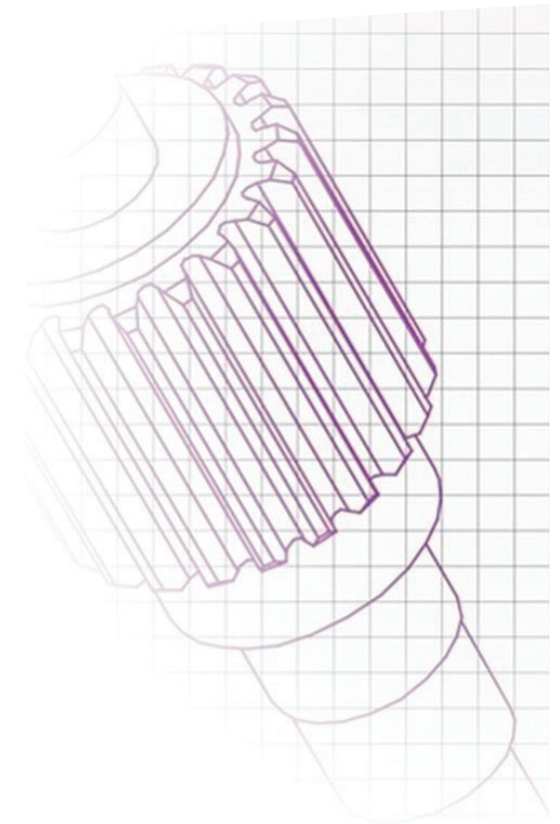
- “Novel”: e.g., the invention is new, was not described in the prior art or known
- “Non-obvious”: e.g., the differences between the invention and prior art would not have been obvious to someone in that field
- Does it have “utility”: e.g., does it function as intended



What is prior art?

Prior art includes: patents, printed publications, and other disclosures that were available to the public before your effective filing date; or U.S. patents and published patent applications effectively filed before your effective filing date.

***Note:** More detailed guidance on what can and cannot be considered prior art can be found in the Manual of Patent Examining Procedure (MPEP) sections 2120-2129 and 2152-2154 - <https://www.uspto.gov/web/offices/pac/mpep/mpep-2100.html>.

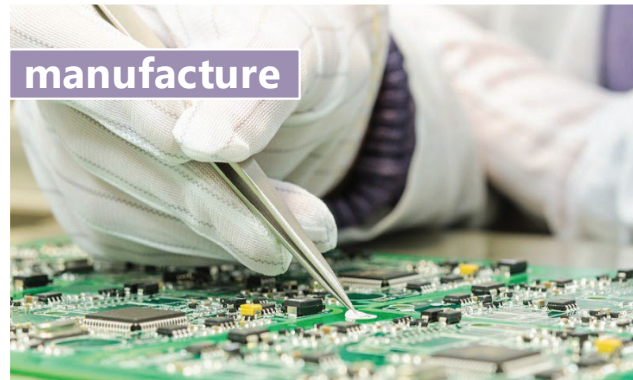


What is NOT patentable?

- **Cannot** patent an idea
 - Must be able to be developed into a **new, nonobvious** and **useful machine, manufacture, process,** or **composition of matter** that can actually accomplish the task
- **Cannot** patent natural phenomena
- **Cannot** patent abstract ideas



What is eligible for utility patent protection?



35 U.S.C. § 101

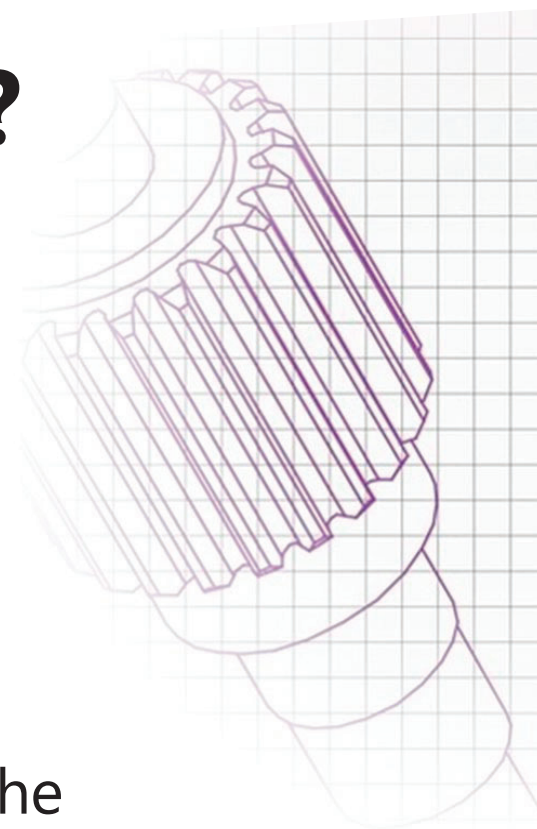


What do I need to disclose?

A patent is a *quid pro quo*:

- In exchange for:
 - The right to exclude others from making, using, importing, or selling your invention for a limited time period.
- You must fully disclose your invention so the public can benefit from it and expand on it.

35 U.S.C. § 112



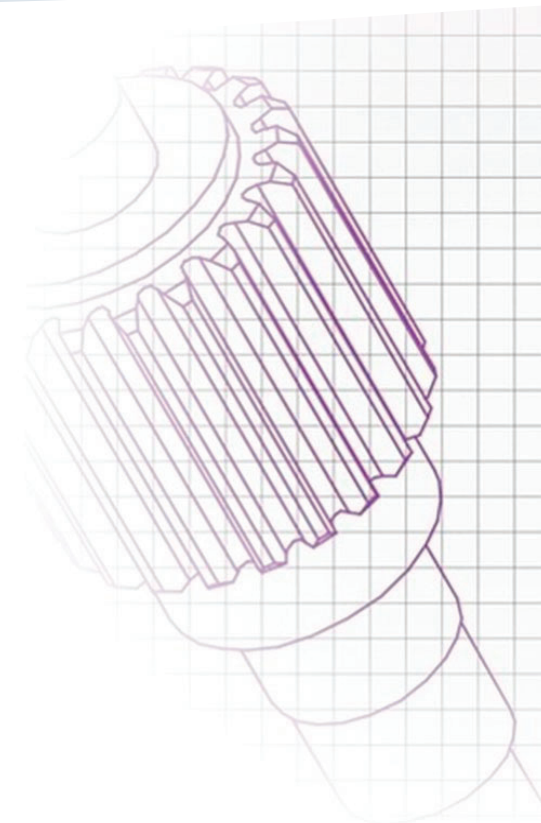
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What do I need to disclose?

Does the disclosure:

- Demonstrate that the inventor was in possession of the claimed invention?
- Teach one of ordinary skill to make and use the invention without undue experimentation?
- Describe the best mode contemplated for carrying out the invention by the inventor?

35 U.S.C. § 112 (a)



Specification

- Written description of the invention
- How to make and use the invention
- Clear, full, concise, and exact terms to allow any person skilled in the technology of the invention to make and use the invention
- At least one specific embodiment
- Best mode
- Concludes with at least one claim (must begin on a new page)

Specification sections

- Abstract
- Title of the Invention
- Common sections relating to disclosure
 - Background
 - Brief summary of the invention
 - Brief description of the drawings (list of all figures by number with brief statement of what the figure depicts)
 - Detailed description of the invention
- Claims

Drawings

- Part of disclosure of the invention, and are required if necessary to understand the invention
 - A drawing necessary to understand the invention cannot be introduced after the filing date
- Must show every feature of the invention claimed
- Must contain as many views as necessary to show the invention

37 CFR 1.84: Two acceptable standards for Drawings:

- 1: Black and white drawings are normally required for utility and design applications
- 2: Color drawings are permitted in design applications



Brief description of the drawings

- If drawings (e.g., figures or flow diagrams) are part of the application papers, this section needs to be provided before the application is considered complete and released from initial processing
- This section must include a brief statement of what each figure depicts (e.g. a front view of the invention, an expanded view of the elements prior to assembly)

Abstract

- Starts on a separate sheet with the Heading “Abstract”
- Must be 150 words or less; 1.5 or double spaced
- Narrative form; single paragraph
- Points out what is new in the technology
- Not a repeat of the claim(s) or Brief Summary
- Written to enable the public to quickly determine the nature of the technical disclosures of the invention

See MPEP § 608.01(b) for more information



Detailed description of the invention

- Very important part of the application
- Explain the invention and the process of making and using it in full, clear, concise and exact terms.
- Focus on explaining the structures, processes or compositions of the invention.
- Refer to the figures, if applicable, and explain the different parts by use of reference numerals shown in the figures.

See MPEP § 608.01(g) for more information

Detailed description of the invention

- The detailed description should provide clear support or antecedent basis for all terms used in the claims so that the meaning of the claim terms in the claims may be ascertainable by reference to the description.
- It may be helpful to draft your claims first.
 - By doing so, you can decide on the terminology to use and make sure that terminology is consistent throughout the specification.
 - You can also figure out which terms need to be defined or explained in more detail in the specification.
 - The claims can be a checklist to make sure the detailed description provides clear support for the claims.

Claim(s)

If it is in the claim, it **must** be in the specification:

- Defines the invention and what aspects are legally enforceable
- Must conform to the invention as set forth in the remainder of the specification
- Terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims are clearly understood by reference to the description



Claim(s)

- A non-provisional patent application must
 - Have at least one claim particularly pointing out and distinctly defining the invention
- A claim may be written in independent or dependent form
- A dependent claim refers to a claim previously set forth and then further limits the claimed invention
- A claim in dependent form incorporates by reference all the limitations of the claim to which it refers

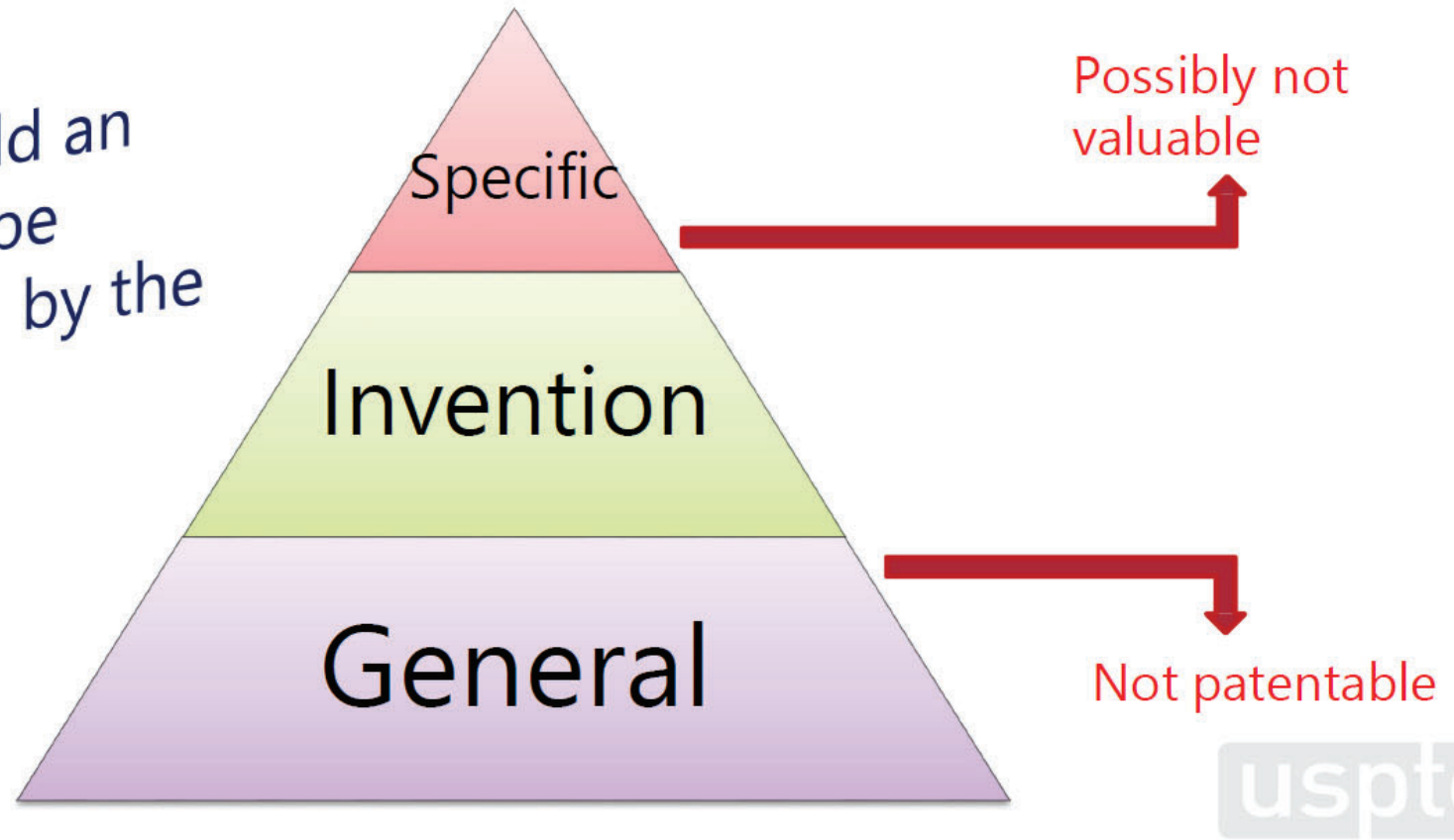
Claim drafting

A claim in a Utility application or patent has three (3) main parts:

1. A preamble or the introduction;
2. A transitional phrase, such as:
 - “comprising” (open);
 - “consisting of” (closed)
3. A body reciting the elements of the invention.

Claims

How should an invention be delineated by the claims?



Resources

- Helpline: 1-800-PTO-9199
- Patent and Trademark Resource Centers (PTRC):
 - <https://www.uspto.gov/learning-and-resources/support-centers/patent-and-trademark-resource-centers-ptrc/ptrc-locations>
- Inventors Assistance Center:
 - <https://www.uspto.gov/learning-and-resources/support-centers/inventors-assistance-center-iac>
- Trademark Assistance Center:
 - <https://www.uspto.gov/learning-and-resources/support-centers/trademark-assistance-center>
- Pro Se Assistance Center:
 - <https://www.uspto.gov/patents/patents-ombuds/pro-se-assistance-center>



Resources

- USPTO Events:
 - <https://www.uspto.gov/about-us/events>
- IP Identifier:
 - <https://ipidentifier.uspto.gov/#/identifier/welcome>
- Inventor and entrepreneur resources:
 - <https://www.uspto.gov/learning-and-resources/inventors-entrepreneurs-resources>
- First-Time Filer Expedited Examination Pilot Program:
 - <https://www.uspto.gov/initiatives/first-time-filer-expedited-examination-program>
- Micro-entity status:
 - <https://www.uspto.gov/patents/laws/micro-entity-status>



