



# Patent Basics

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October 15, 2019



## Patent Topics

- Overview – What is a Patent?
- Types and Parts of U.S. Patents
- Typical Patent Application Process
- My company has a Patent – Now What?
- My company makes a product – how do we know if it infringes a patent?
- My company's product infringes a patent – what should we do?



# Overview

## Let's start at the very beginning...

- Congress shall have the 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.”

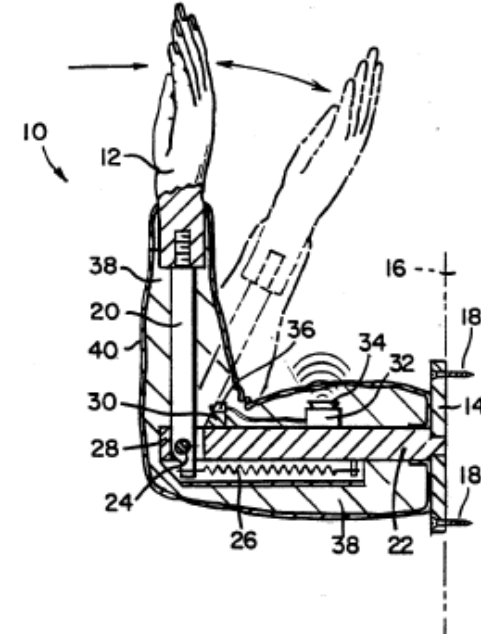
- Article 1, Section 8, Clause 8 of U.S. Constitution



## What is a patent?

- A patent is a legal document defining an invention
- No different than a property deed (but describes an invention rather than tangible property)
- Patents can be bought, sold, licensed, etc. like any other piece of personal property

		US005356330A	
<b>United States Patent</b> [19]		[11] <b>Patent Number:</b>	<b>5,356,330</b>
<b>Cohen</b>		[45] <b>Date of Patent:</b>	<b>Oct. 18, 1994</b>
[54] <b>APPARATUS FOR SIMULATING A "HIGH FIVE"</b>	3,804,406 4/1974 Viscione .....	482/83 X	
	3,877,697 4/1975 Lersch .		
	3,927,879 12/1975 Long et al. ....	482/83	
[76] <b>Inventor:</b> Albert Cohen, 176 N. Lake Ave., Troy, N.Y. 12180	4,381,620 5/1983 Panzarella .		
	5,171,197 12/1992 Healy et al. ....	482/83	
[21] <b>Appl. No.:</b> 163,856	<b>FOREIGN PATENT DOCUMENTS</b>		
[22] <b>Filed:</b> Dec. 7, 1993	563984 7/1977 U.S.S.R. ....	482/83	
[51] <b>Int. Cl.</b> .....	A63H 33/00; A63H 3/36		<i>Primary Examiner</i> —Robert A. Hafer
[52] <b>U.S. Cl.</b> .....	446/491; 446/390; 472/70		<i>Assistant Examiner</i> —D. Neal Muir
[58] <b>Field of Search</b> .....	446/390, 485, 491; 40/418, 490; 472/70; 482/83, 84, 85, 86		<i>Attorney, Agent, or Firm</i> —Schmeiser, Morelle & Watts
[56] <b>References Cited</b>			[57] <b>ABSTRACT</b>
	<b>U.S. PATENT DOCUMENTS</b>		
1,425,945 8/1922 Congdon .			An apparatus for simulating a "high-five" including a lower arm portion having a simulated hand removably attached thereto, an upper arm portion, an elbow joint for pivotally securing the lower arm portion to the upper arm portion, and a spring biasing element for biasing the upper and lower arm portions towards a predetermined alignment.
2,484,343 10/1949 Hawes .			
2,583,780 2/1952 Johnson .			
2,937,872 5/1960 Gilman .			
3,251,842 5/1966 Zalkind .			
3,427,021 2/1969 Dosato .....	482/83		
3,755,960 9/1973 Tepper et al. ....	446/299		
			12 Claims, 3 Drawing Sheets

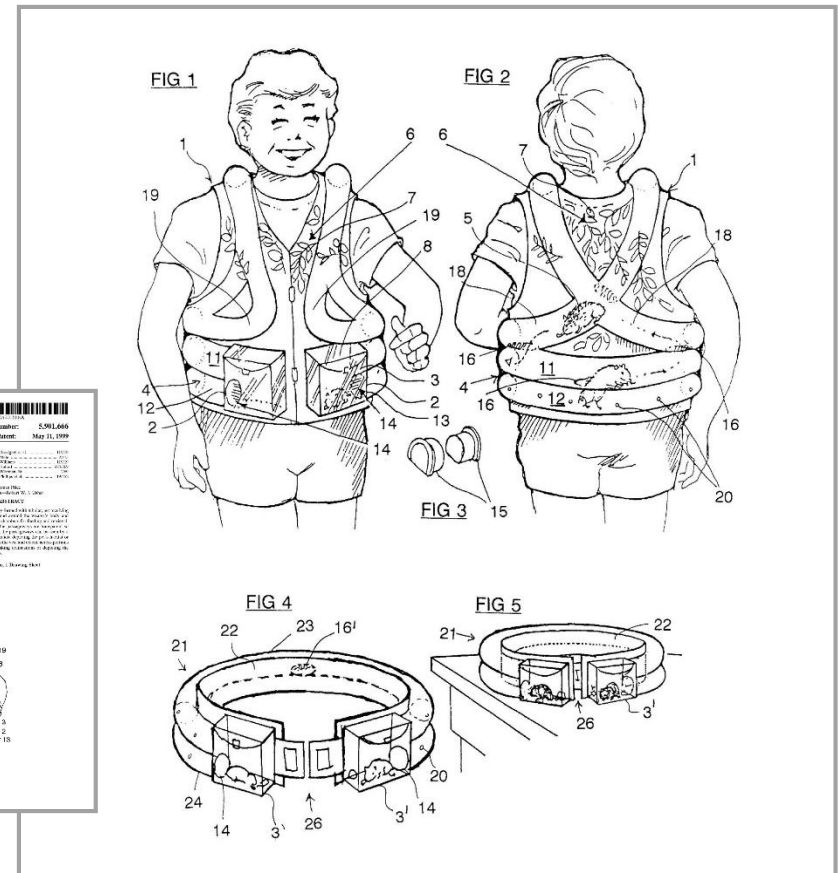


## What is the purpose of a patent?

- Patents provide their owner(s) the legal right to **EXCLUDE** others from:
  - making, using, selling, offering to sell, and importing an “invention”
- One who performs any of these activities without the consent of the patent owner is said to “**INFRINGE**” the patent
- Patents **DO NOT** grant the right to make, use or sell the invention
  - e.g., by “making” your invention, you may infringe other patents even though your invention is patentable

## Policy Behind Patents

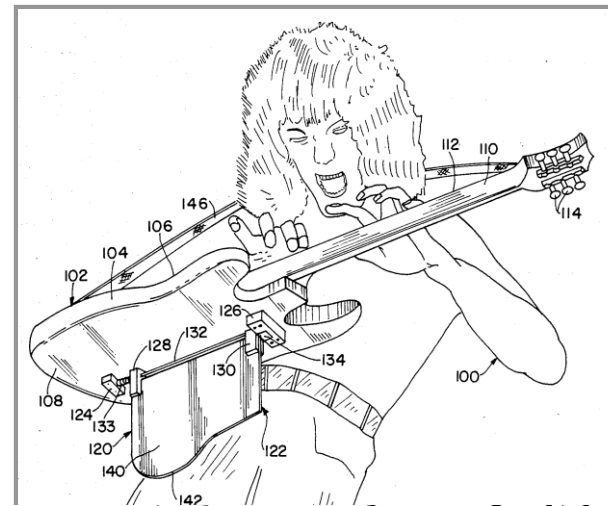
- Encourage creation
  - If everyone could copy what you create, would you invest time and money to create?
- Disseminate knowledge
  - Patents require a full disclosure of the invention, which adds to the general public knowledge
  - Quid Pro Quo



*Pet Display Clothing, 1999*

## What if you don't have a patent?

- There is no requirement that you obtain a patent on a commercial product
- **But without a patent, the Free Market Rule applies**
  - Technology can be legally copied (reverse engineered) unless specifically protected by law.



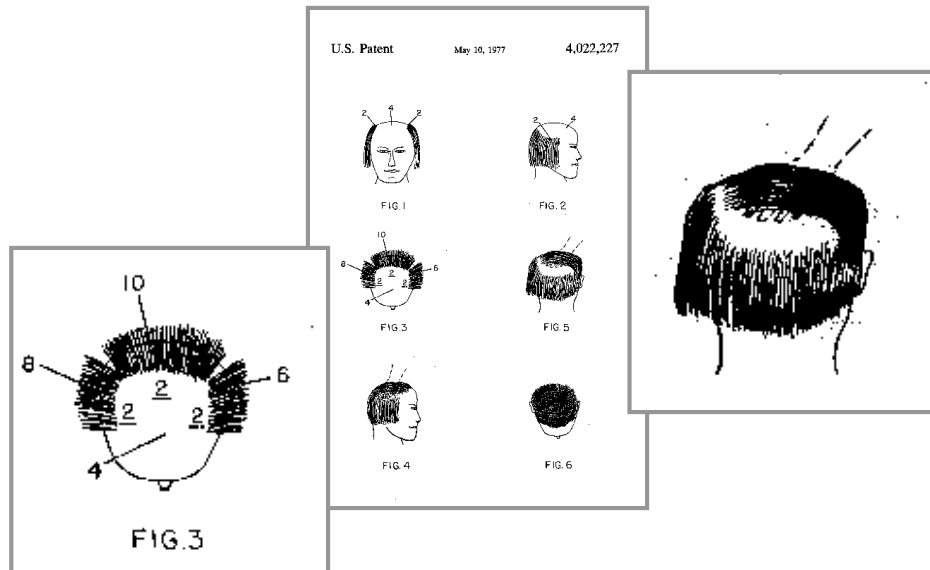
**To create new playing techniques and sounds, it is desirable that the guitar be supported in a manner which leaves both hands of the player free to explore the strings which overlie the guitar body and fretted neck.**

*Van Halen, 1987*



## So why would you want a patent?

- Patents generate business advantages
  - Protect R&D investment by preventing competitor copying
  - Provide defensive measure if conflict with competitor
  - Provide deterrence (threat of being sued can be enough to deter competition)
  - Secure single provider status
  - Royalty revenue
  - Marketing advantage
  - Appease investors



## Patents vs. Other IP Rights

- What is the difference between patents, copyrights, and trademarks?
  - Patent
    - right to exclude others from practicing the claimed invention
    - no requirement that use invention commercially
    - rights lasts a limited time (e.g., 20 years from filing)
  - Trademark
    - right to exclude others from using a similar brand for similar goods
    - must use in commerce to secure rights
    - rights lasts an unlimited time (as long as using in commerce)
  - Copyright
    - right to exclude others from copying work of authorship
    - automatic right upon creation
    - limited time (life of author plus 70 years or 120 from creation)



## Difference Between Patents and Trade Secrets

- Patent
  - Full disclosure, 20 year Monopoly
  - E.g., New swivel mechanism on vacuum cleaner
- Trade Secret
  - No disclosure, no monopoly
  - E.g., Formula for Coca-Cola, Certain Manufacturing Processes
  - If your innovation is capable of being reverse engineered, and you don't want your competitors to copy, apply for a patent



# Types of U.S. Patents

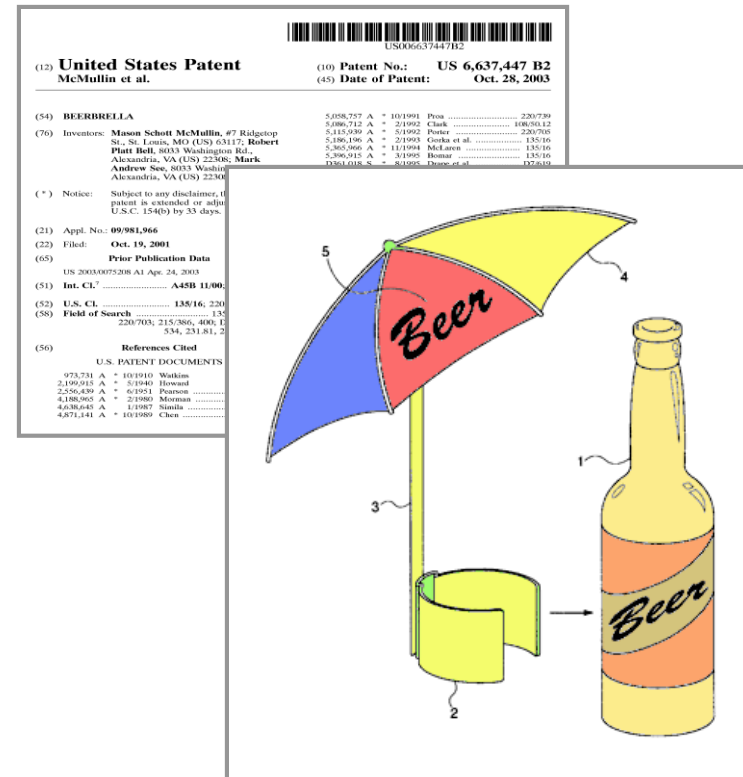


## Vocabulary

- You file a “patent application”
- A “patent application” is automatically published 18 months from filing
  - THIS IS NOT AN ISSUANCE OF A PATENT
- A “patent” issues or is granted from the “patent application”
  - A patent application is examined by a patent examiner and must be approved by the patent examiner to be issued as a patent
  - You have no rights to exclude anyone until you have a patent
- Once you file a patent application, you can mark a product “Patent Pending”

## Types of U.S. Patents

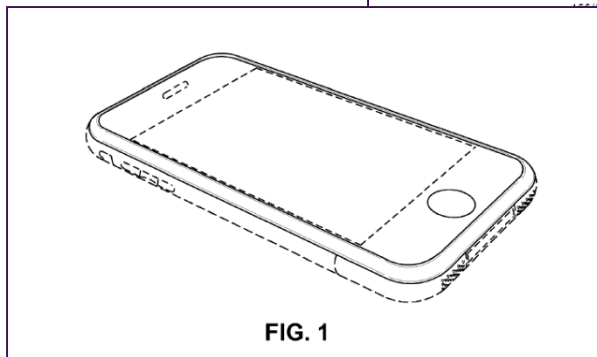
- Utility (most common)
  - Invention defined in terms of structure and function




*Beerrella, 2003*

# Types of Patent Applications

- Design
  - Invention defined in terms of ornamental appearance (e.g. how it looks)
    - Shapes
    - Contours
    - Surface textures



*iPhone, 2009*



US00D593087S

(12) **United States Design Patent** (10) **Patent No.:** **US D593,087 S**  
**Andre et al.** (45) **Date of Patent:** **\*\* May 26, 2009**

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(54) **ELECTRONIC DEVICE** (56) **References Cited**

(75) Inventors: **Bartley K. Andre**, Menlo Park, CA (US); **Daniel J. Coster**, San Francisco, CA (US); **Daniele De Iulius**, San Francisco, CA (US); **Richard P. Howarth**, San Francisco, CA (US); **Jonathan P. Ivo**, San Francisco, CA (US); **Steve Jobs**, Palo Alto, CA (US); **Duncan Robert Kerr**, San Francisco, CA (US); **Shin Nishihori**, San Francisco, CA (US); **Matthew Dean Rohrbach**, San Francisco, CA (US); **Douglas B. Satzger**, Menlo Park, CA (US); **Calvin O. Seid**, Palo Alto, CA (US); **Christopher J. Stringer**, Portola Valley, CA (US); **Eugene Antony Whang**, San Francisco, CA (US); **Rico Zorkendorfer**, San Francisco, CA (US)

(73) Assignee: **Apple Inc.**, Cupertino, CA (US)

(\*\*) Term: **14 Years**

(21) Appl. No.: **29/282,833**

(22) Filed: **Jul. 30, 2007**

**Related U.S. Application Data**

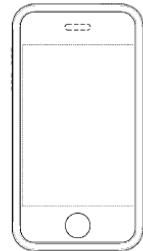

(63) Continuation of application No. 29/270,880, filed on Jan. 5, 2007, now Pat. No. Des. 558,756.

(51) **LOC (9) Cl.** ..... **14-03**

(52) **U.S. Cl.** ..... **D14/341; D14/203.7; D14/138 G**

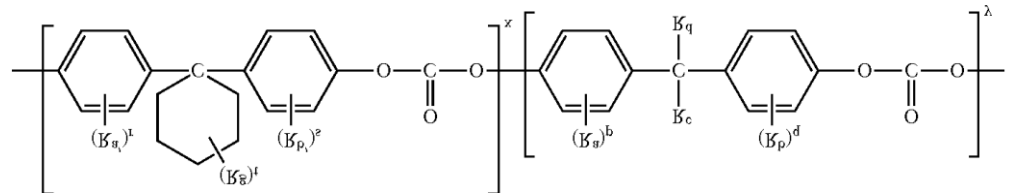
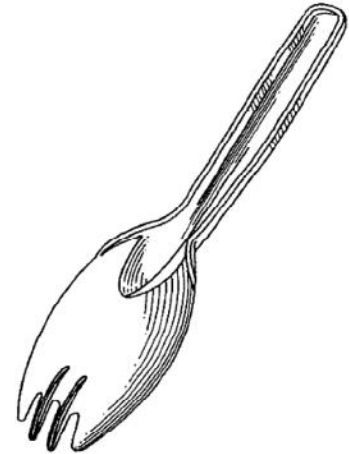
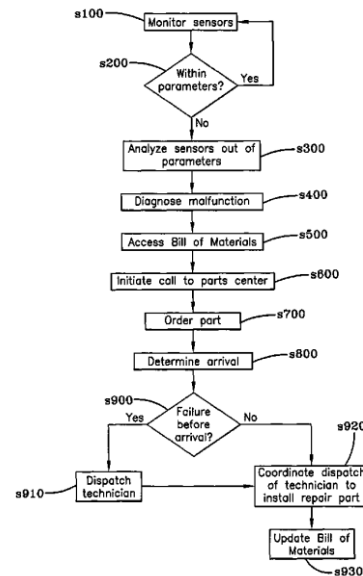
(58) **Field of Classification Search** ..... **D14/137, D14/138, 147, 191, 218, 247-248, 341-347, D14/496, 138 R, 138 AA, 138 AB, 138 AC, D14/138 AD, 138 C, 138 G; D10/65, 78, D10/104; D13/168; D18/7; 455/556.1, 575.1, 575.3; 345/169**  
 lete search history.

<p>D289,873 S 5/1987 Gennell et al.</p> <p>D337,569 S 7/1993 Kando</p> <p>D420,354 S * 2/2000 Morales ..... D14/191</p> <p>D424,535 S 5/2000 Peltola</p> <p>D456,023 S 4/2002 Andre et al.</p> <p>D489,731 S 5/2004 Huang</p> <p>D498,754 S 11/2004 Blyth</p> <p>D499,423 S 12/2004 Bahroscha et al.</p> <p>D502,173 S 2/2005 Jung et al.</p> <p>D504,889 S 5/2005 Andre et al.</p> <p>D505,950 S 6/2005 Summit et al.</p> <p>D507,003 S 7/2005 Pai et al.</p> <p>D514,121 S 1/2006 Johnson</p> <p>D514,590 S 2/2006 Naruki</p> <p>D519,116 S 4/2006 Tanaka et al.</p> <p>D519,523 S 4/2006 Chin et al.</p> <p>D520,020 S 5/2006 Senda et al.</p> <p>D528,542 S 9/2006 Luminosu et al.</p> <p>D528,561 S 9/2006 Ka-Wei et al.</p> <p>D529,045 S 9/2006 Shin</p> <p>D532,791 S 11/2006 Kim</p> <p>D534,143 S 12/2006 Lheem</p> <p>D535,281 S 1/2007 Yang</p> <p>D536,691 S 2/2007 Park</p> <p>D536,962 S * 2/2007 Tanner ..... D9/424</p> <p>D538,822 S 3/2007 Andre et al.</p> <p>D541,298 S 4/2007 Andre et al.</p> <p>D541,299 S 4/2007 Andre et al.</p> <p>D541,785 S * 5/2007 Hwang et al. .... D14/138</p> <p>D546,313 S 7/2007 Lheem</p> <p>D548,732 S 8/2007 Cebe et al.</p> <p>D548,747 S 8/2007 Andre et al.</p> <p>D554,098 S * 10/2007 Lee ..... D14/138</p> <p>D556,211 S 11/2007 Howard</p> <p>D557,238 S 12/2007 Kim</p> <p>7,303,424 B2* 12/2007 Tu et al. .... 439/372</p> <p>D558,460 S * 1/2008 Yu et al. .... D6/308</p> <p>D558,756 S 1/2008 Andre et al.</p> <p>D558,757 S 1/2008 Andre et al.</p> <p>D558,758 S * 1/2008 Andre et al. .... D14/341</p> <p>D558,792 S 1/2008 Chigira</p> <p>D560,683 S * 1/2008 Lee ..... D14/496</p> <p>D560,686 S 1/2008 Kim et al.</p> <p>D561,153 S 2/2008 Hong et al.</p> <p>D561,204 S 2/2008 Toh</p>	<p><b>U.S. PATENT DOCUMENTS</b></p>
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## What things can be patented?

- See 35 U.S.C. § 101
  - A process
    - Manufacturing (e.g. for making a product)
    - Web-based (e.g. smart phone app sending and receiving data to and from a server)
  - A machine or article of manufacture
  - A composition of matter
  - Any new and useful improvement thereof







## Parts of a Patent Application

- Description and drawings enabling someone skilled in the art to make and use the invention
  - Referred to as the “specification”
  - To obtain rights, need to disclose knowledge (public policy)
- **Claims** defining scope of rights
  - Like a deed to land
  - Use words to describe boundaries of invention
    - Example:
      1. Pencil including:
        - a piece of lead; and
        - a red eraser connected to the piece of lead.
    - In above example, I can only stop others from making, using, selling, offering for sale, and importing pencils with:
      - a piece of lead and
      - a connected red eraser

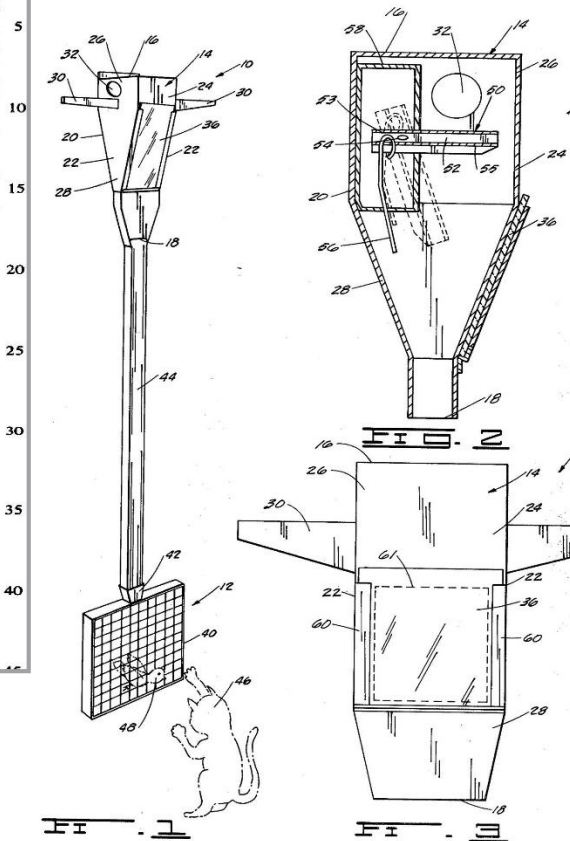
# Description, Drawings, and Claims Example

ary perch 30. The bird then enters the enclosed housing 14 through the entrance opening 32 wherein the bird alights on the balanced tube 52. At this time, the bird's weight combined with the weight of second end 55 of the balanced tube 52 overcomes the weight of the first end 53 of the balanced tube 52 and the balanced weight 56 thereby lowering the bird downwardly into the tapered lower portion 28 of the housing 14. The bird is lulled into believing that he is not in danger since the pivot tube 52 simulates the end of a tree branch. Also, as the bird is lowered on the pivot tube 52, the bird can see the opening 61 in the front 24 of the housing 14, which is covered by the glass window 36 although the bird is not aware of this. As the bird is lowered, the end 53 of the tube 52 comes to rest against the side of the pivot frame 58. At this point, the bird resting on the end 55 of the pivot tube 52 is adjacent the inside of the glass window 36. When the bird goes to fly out through the glass window 36, he leaves the pivot tube 52 which immediately is raised to its original horizontal position by the balanced weight 56. The bird is now trapped since the pivot tube 52 blocks his escape through the entrance openings 32. Therefore, his only means of leaving the housing 14 is through the open bottom portion 18. The bird then finds his way downwardly through the open bottom portion 18 through the down spout 44 and into the cat feeder 12. In the mean time, the cat or any other neighborhood cats who are aware of the cat feeder 12, are patiently waiting nearby. When the bird arrives in the cat feeder 12, he is anxious to escape and sticks his head through the 1" wire mesh 62 of the cage 40. The bird is not able to get the rest of his body through the mesh 62, but is aided by the cat who quickly pulls the bird out of the cage 40 with his paw, and is rewarded with a fresh bird dinner. The subject bird trap successfully traps sparrows to the delight of the owner of the invention and to the enjoyment of cats who dine on birds.

Changes may be made in the construction and arrangement of the parts or elements of the embodiment as disclosed herein without departing from the spirit or scope of the invention as defined in the following claims.

*Bird Trap and  
Cat Feeder, 1979*

U.S. Patent Apr. 24, 1979 Sheet 1 of 2 4,150,505



- I claim:
1. A bird trap and cat feeder for catching a bird and in particular, a sparrow, and feeding the bird to a cat, the trap comprising:
    - an enclosed bird housing having an upper portion, a tapered lower portion, a back, a front, a top, an open bottom, and sides;
    - an entrance hole mounted in the side of the upper portion of said housing for receiving the bird there-through;
    - a glass window mounted in an opening in the tapered lower portion of said housing;
    - a balanced pivot tube pivotally mounted on a pivot pin inside said housing, a first end of said pivot tube is attached to a balance weight for balancing said tube in a horizontal position, a second end of said tube is disposed adjacent and below said entrance hole for receiving the bird thereon, the second end of said pivot tube with the bird thereon lowered downwardly, when the second end of said pivot tube is lowered downwardly the second end is disposed in the tapered lower portion of said housing and adjacent said glass window; and



## Claim Example

- What is claimed is:
- 1. A seat, comprising:
  - three legs;
  - a seating surface mounted to the three legs;
  - a backrest coupled to the seating surface for supporting the back of a user.

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## Claim Example

- What is claimed is:
- 1. A seat, comprising:
  - three legs;
  - a seating surface mounted to the three legs;
  - a backrest coupled to the seating surface for supporting the back of a user.
- 2. The seat of claim 1, wherein the seating surface is made of leather.





# Typical Patent Application Process





## When should I file for a patent?

- One year grace period for filing U.S. patent application:
  - Grace period starts when there is:
    - a sale or offer for sale
    - a public use (trade show)
    - a publication (published in journal, e.g.)
- If you don't file within these time period – you cannot obtain patent protection (free market rule)



## Overview of Patent Application Process

1. Inventor(s) conceives invention
2. Inventor(s) documents invention (how do you make and use)
3. Inventor sends documents to patent attorney or patent agent
4. Prepare and file patent application
5. “Prosecute” patent application
  - Discussion between USPTO and inventor/patent attorney about what subject matter is protectable
6. Patent issues or application is abandoned

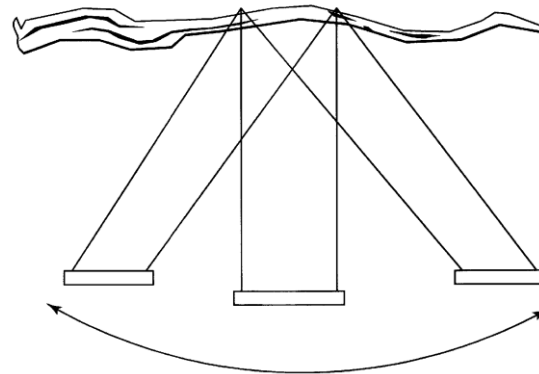


## Notes on Patent Application Process

- No requirement to create prototype or a commercial product
- Multiple year process
  - Typical patent prosecution process from filing to issuance takes 2 to 5 years
- Expensive process
  - Filing and prosecution costs can exceed \$20,000 over the life of a patent
- Inventors can file an application *per se* (without an attorney or agent), but this is not recommended

## What gets examined?

- Patent Examiner examines application for a number of requirements, but focus is on the claims and whether they recite something that is:
  1. Novel (is it different from everything existing before) (§ 102)  
AND
  2. Non-Obvious (is it obvious in view of what existed before) (§ 103)



**Figure 2**

<p>(12) <b>United States Patent</b> <b>Olson</b></p>	<p>(10) Patent No.: <b>US 6,368,227 B1</b> (45) Date of Patent: <b>Apr. 9, 2002</b></p>
<p>(54) <b>METHOD OF SWINGING ON A SWING</b> <span style="float: right;">5,413,298 A * 5/1995 Perreault ..... 248/228</span></p>	
<p>I claim:</p> <p>1. A method of swinging on a swing, the method comprising the steps of:</p> <ol style="list-style-type: none"> <li>a) suspending a seat for supporting a user between only two chains that are hung from a tree branch;</li> <li>b) positioning a user on the seat so that the user is facing a direction perpendicular to the tree branch;</li> <li>c) having the user pull alternately on one chain to induce movement of the user and the swing toward one side, and then on the other chain to induce movement of the user and the swing toward the other side; and</li> </ol>	

*Method of Swinging  
on a Swing, 2002*



## Notes on Examination

- After filing a patent application, a patent examiner issues an “Office action” setting forth any rejections
  - Rejections may be based on “prior art” – public information existing before the filing date of application that renders the claimed invention not novel (§ 102 rejection) or obvious (§ 103 rejection)
- Applicant files a “response” to the Office action
- Repeat until
  - Get a patent
  - Abandon application



## How do you know if you will get a patent?

- No guarantees!
  - Interpretation of claims and prior art can vary
  - What is “obvious” is very subjective



# I Have a Patent – Now What?



## Self-Policing

- You must enforce your own patent
- **Cease-desist letter – “STOP” or “PAY ME”**
  - If you suspect that someone is infringing on your patent (making, using, selling, offering for sale, or importing a product that is covered by your claims),
- **Lawsuit**
  - Can be expensive
  - If you are going to spend money to get your patent, you must be willing to spend money to enforce your patent





## Patent Term – U.S. Utility Patents

- 20 years from application filing date
- 4-, 8-, and 12-year maintenance fees required

## Can someone stop me from using my invention?

- A patent only grants a right to **EXCLUDE** others from practicing the claimed invention
- A patent does not grant a right to practice an invention
- Can still infringe on other patents
  - E.g. A patented new engine design may infringe a broad patent covering all motorized vehicles

**My company makes a  
product – how do we know  
if it infringes a patent?**



## Clearance or “Freedom to Operate” Searching

- **Clearance**
  - Client wants to bring a product to market.
  - We try to assess whether others have patent protection that presents an infringement risk.
  - You are looking at claims of relevant patents to determine an infringement risk.

## Step 1: Client requests a search.

Please provide a U.S. clearance opinion in the above-referenced matter for a saw stand/hand truck. Disclosure of the design is attached and shown below. If you have any questions about the design, let me know.



If the design in this matter is cleared in the U.S., please extend this investigation to Canada and Mexico.

Also, please provide European and PCT search results in this matter to our Hong Kong office.



## Step 2: Determine Search Scope

- Determine what feature(s) to search.
  - What feature(s) does the client consider new and important?
  - Does the client's e-mail tell you what to search?
  - May need to be additional communication between engineer and attorney/agent to iron out details of product

## Step 3: Prepare a Clearance Search Request



FIG. 1

Include numbered drawings for clarity.

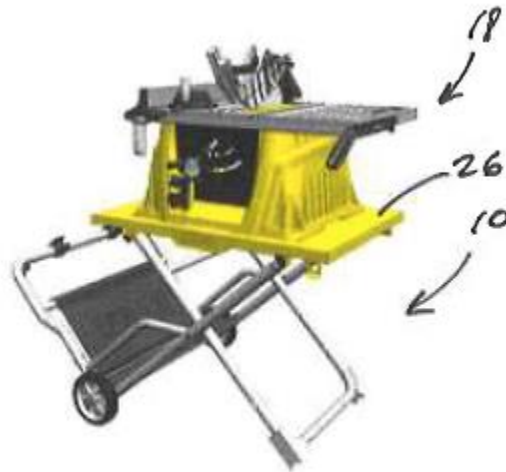


FIG. 2



FIG. 3

## Analyzing claims in view of the product

- E.g. client is producing a new pencil
- We run a search finding a patent claiming:
  1. A pencil including:
    - a piece of lead; and
    - a red eraser connected to the piece of lead.

What is claimed is:

1. A stand for a table saw including a table assembly and a base assembly secured to an underside of the table assembly, the stand comprising:
  - a leg and handle unit including two parallel leg elements, two handles at first ends of the leg elements respectively, two side rails each having one end connected to both the handle and the leg element, and a U-shaped support element at the other ends of the leg elements, a plurality of vertical metal tubes each provided at an end of the side rail joining both the handle and the leg element, a top of each metal tube is secured to a bottom of the table assembly wherein the leg element includes a laterally inward extending protrusion;
  - an upper support being U-shaped tubular and pivotably secured to the side rail, the upper support including two opposite lateral projections; and
  - a leg unit including two parallel leg members, and two wheels rotatably mounted at first ends of the leg members respectively;
  - wherein the other ends of the leg members are pivotably secured to the upper support and upper portions of the leg members are pivotably secured to the leg and handle unit;
  - wherein each projection of the upper support and the leg member of the leg unit are releasably engaged so as to limit a pivotal angle of the leg and handle unit relative to the leg unit.
2. The stand of claim 1, further comprising a projecting plate on each of one side, the other side, and a rear surface of the base assembly for receipt of tools including fences and cutting tools.



# My company's product infringes a patent – what do we do?



## What if my or my company's product infringes?

- **Defensive study**
  - is it possible the patent has claims that are actually invalid – should never been allowed by a patent office?
  - E.g., the examiner missed prior art that shows everything in the claim (e.g. the claim is invalid)?



## What if my company infringes a patent?

- **Design around**
  - Pencil example:
    1. A pencil including:
      - a piece of lead; and
      - a red eraser connected to the piece of lead.
  - Design around options:
    - Can you make the pencil using graphite instead of lead?
    - Can you make the eraser blue instead of red?
  - Engineers usually do not like design around
    - means more work, but this extra work may be worth it to save the company Millions of \$ in infringement costs



## What if my company infringes a patent?

- **License**
  - Pay a small royalty to company with patent as long as you can still remain profitable selling the product



**Questions?**

