

Inventive Solutions

Protecting Your Invention 101

- **Thank** you for being here
- **Phones** ringers off/vibrate
- **Interrupt** only if don't **understand**
- **Specific** questions, pls wait to **end**
- **Powerpoint** will be **posted** on **website**

Outline of Topics

Overview & Introduction

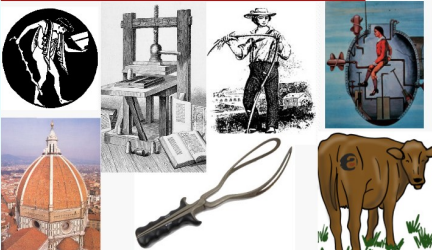
- **Copyrights, Trademarks & Trade Secrets**
 - **Patents – Design & Utility**
 - **Prior Art Searches & Provisionals**
 - **International Applications**
 - **Patents – Process, Risks, Benefits**
- Questions



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- 1st Three: **Registration not mandatory**
- Business IP
- IP = Intellectual Property
- Q: what was **first use of IP?**

Overview: Early Intellectual Property



- **Sybaris** = luxury & dishes (500BCE yr)
- **Brunelleschi** =Dome/boat/crane -1421CE
- Gutnbg **Press** = Copyright/NO pat (15th C.)
- **Farm** tools = Scythe (1836 #72 US patent)
- Skunkwks = Combat **submersible** (1775)
- Cattle **Brands** (= Trademark)
- Birth **Foreceps** = Ypatents? (1570/180 yr)

Introduction – Some Questions

- Are you **inventing**/designing a **new** product?
- Do you need **protection** for your product/idea?
- Could someone **claim** your ideas as their own?
- How are patents & IP **enforced**?
- What are the **benefits** & risks of **patents & IP**?
- How can IP help my products/business **succeed**?
- Are there more **affordable** ways to protect IP?

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- Not just protect from idea **theft** or infringement, but to determine if you actually have **rights**.
- You may be **infringing** on someone else.

Introduction – Some Answers

- IP **protects** inventions, reputations & businesses
- IP lets you **disclose** ideas while minimizing risks
- IP allows you to **profit** from your hard work
- IP can **prevent** copying, importing & knockoffs
- IP helps create **certainty** about **ownership**
- IP can be **licensed**, sold, & used as collateral
- IP, if properly employed, can be more **affordable**

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- Quick review of Biz IP available
- Copyrights
- Trademarks
- Trade Secrets

Copyrights © – Examples



6

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- Broadcasting, Movies, Artwork, Audio
- Media, communications, email, websites
- Software, Written Works, Books, Plays
- Music, Film, Photographs, Performances
- Engineering & technical drawings
- 3d printer files

Copyrights © – Basic Info

Definition	Exclusive right to reproduce a creative work secured by a country for its creator.
Examples	Literary, artistic, musical & dramatic works; recordings, performance, communications
Criteria	Original work. Rights to contracted work properly transferred. (i.e. bills paid)
Costs	Owner/Date: Free; Return Mail: Postage Registration: CA\$63/US\$45 online each
Duration	Generally, lifetime of creator plus 70 years Cannot protect inventions or trade names .

7

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- **Simple declaration**
- Owner + creation date
- **On each copy** of protected work
- Can **register later** if needed
- Must be able to **prove first use date**

Trademarks TM/SM/® – Examples



8

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- Most valuable & recognizable trademarks on Earth
- **Service Mark**
- **Illegal** to use ® without **Registration**
- AKA Brand, Brandname, Tradename

Trademarks TM/SM/® – Basic Info

Definition	Exclusive right to use, reproduce or sell a word, symbol or design (or combination)
Examples	Business Name, Product Logo, Brandname Distinctive Words, Shapes, Sounds, Media.
Criteria	Distinctiveness , Usage (commodity class) Territory (legal jurisdiction enforced)
Costs	Application: CA\$458/597; US\$250/350 Statement of Use: US\$100(if not in applic.)
Duration	Indefinitely: when maintenance fees paid. (5th year-US then every 10th year [US/CA])

9

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- **Distinctive in product class**
- To keep, **usage** must be shown
- **Indefinite** use if **maintenance** paid
- Idea in **public domain**, use TM to protect brand reputation & quality of manufacture

Trade Secrets



10

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- Can you **keep a secret**?
- Transition from **business IP tools** to IP that must be **registered** with govt.

Trade Secrets – Basic Info

Definition	Confidential Business Information protected by civil (CA) & criminal (US) law.
Examples	Client lists, Formulas, Recipes, IC designs, Business plans, Sales strategies, Lab notes
Criteria	Valuable & Secured (document thoroughly if item is a complex article of manufacture)
Costs	Locks, Notices of Confidentiality, Not telling anyone, encryption, Security Procedures.
Duration	Legally protected as long as not in public domain & reasonable efforts to keep secret

11

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- Software
- SpaceX & Tesla IP, sometimes
- ideas become **obsolete too quickly**

Trade Secrets – Theory

- **Information** used in a **business**, not generally known, of some economic **value**, and maintained in **secrecy**
- Rights protected only if reasonable **steps** taken to **ensure confidentiality** with **no casual disclosures** (require **NDA** before disclosing)
- 🇨🇦 **Canada** - Protected by **common law** = **civil** action = breach of confidence, contract law
- 🇺🇸 **U.S.** - Protected by **proprietary** right = **criminal** action = felony, may recover losses

12

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Trade Secrets – Application

- Always use **Non-disclosure Agreements** when possible
- **Identify** valuable secrets, enact policies to **secure** from unauthorized access or disclosure
- **No Publication** or **Public disclosures**
- **Grace period** allows creators to file patent application within year if idea disclosed by someone else (not all countries)
- **Disadvantage** – No way to know if idea is **infringing** on someone else's idea without a thorough **search**
- **Advantages** – indefinite protection, in any country, with no processing delay or fees due, ever.

13

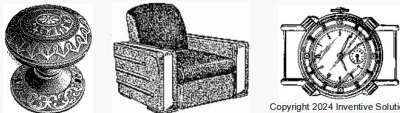
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[water & air break]

- Next: discuss patents
- The **simplest** patent: design

Patents (Design) – Examples

- **Visual / ornamental characteristics** embodied in, or applied to, an **article of manufacture**
- **Sometimes used when patent unavailable**
- Avoid Invention Scams – **design is not utility**



14

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- Filigree **ornamentation** on door knob
- **Styling** in chair upholstery
- **Shape & styling** of watch
- Invention marketing companies charge for full patent, but often only file designs

Patents (Design) – Basic Info

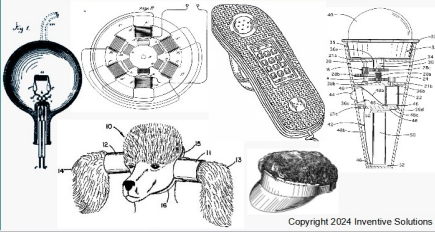
Definition	Exclusive right to make, import, rent, or sell the aesthetic qualities of a functional article
Examples	Statue of Liberty, Coke bottle, office chair, architecture, automobile, airplane, spoon
Criteria	novel features of shape, configuration, pattern or ornament of finished article
Costs	CA\$567 [Filing>Issue]; CA\$496 [Maint. Fee]* US\$415>1660:[Filing>Search>Exam>Issue]
Duration	10-15 yrs (CA) or 15 yrs (US) (*Due by end of 5th year from registration)

15

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- **Much cheaper**, but **protection limited to appearance**, not functional elements
- **Industrial Design** in Canada

Patents – Overview



16

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- Edison's Electric **Lamp** (1880)
- Nikola Tesla's Alternating **Motor** (1896)
- Animal Ear Protectors (1980)
- Flipflop Phone (1989)
- Combined Visor & Hairpiece
- Motorized Icecream Cone (1999)

Patents (Utility) – Basic Info

Definition	Exclusive right to manufacture, use, or sell a specific product or process
Examples	Machines, mechanical devices, methods of manufacture, matter, software algorithms
Criteria	New (1 st in world), Useful (workable), and Non-obvious (to anyone skilled in field)
Fees	CA\$504>1248 [Apply>Exam>Final] US\$680>2495[Filing>Search>Exam>Issue]
Duration	†20 years only as long as owner pays incrementally increasing maintenance fees

18

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- **New** = why **search** so important
- **Non-obvious** = full disclosure & history makes case for **inventive step**

Software= US ↓; China ↑; UK/EU - fixing

Patents - Basic Concepts

- a **discovery** (idea) cannot be patented, only an **invention** (its physical manifestation; implementation)
- government **certifies the origin** of an invention; **enables owner's exclusive rights** to be **protected**
- equivalent to **registering** a property deed/title
- limited **monopoly** creates **incentive** to innovate
- registering is **cost** of proving/keeping **ownership**
- 90% are **improvements** to existing inventions

17

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- To delimit a **property**, one must survey the **boundaries** between adjacent **claims**
- Patent **examiner** does this by **separating competing** patent claims

Patents – Front Page

United States Patent (19) Patent Number: 5,115,996
 State of Patent: May 26, 1992

INVENTOR: Paul S. Miller, Dixon, Calif.
ASSIGNOR: Miller Instrumental, Inc., Dixon, Calif.
CLASS: 404/100
FIELD OF INVENTION: This invention relates to a device for measuring the force of a blow or impact.

BACKGROUND OF THE INVENTION: The present invention relates to a device for measuring the force of a blow or impact. The device is particularly useful for measuring the force of a blow or impact in a variety of applications, such as in the field of sports, where it is used to measure the force of a blow or impact on a player's head or neck.

BRIEF DESCRIPTION OF THE DRAWINGS: FIG. 1 is a perspective view of the device in its closed position. FIG. 2 is a perspective view of the device in its open position. FIG. 3 is a perspective view of the device in its open position, showing the internal components.

DETAILED DESCRIPTION: The device is a handheld device for measuring the force of a blow or impact. It consists of a main body and a handle. The main body is made of a rigid material and has a curved surface. The handle is made of a flexible material and is attached to the main body. The device is used by holding the handle and striking the main body with the object to be measured. The force of the blow or impact is measured by the deflection of the handle.

CLAIMS: 1. A device for measuring the force of a blow or impact, comprising: a main body having a curved surface; and a handle made of a flexible material and attached to the main body.

REFERENCES CITED: U.S. PATENT DOCUMENTS
 4,000,000 (1976) Miller et al.
 4,000,000 (1976) Miller et al.
 4,000,000 (1976) Miller et al.
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19

- **Inventor** = always a person
- **Date** = of registration, not filing
- **Classes** = Dewey system for patents
- **Prior Art** = most relevant patents
- **Abstract** = summary
- **Drawing** = representative

Patents (Utility) – Details

- Front Page
- Abstract
- Background
- Summary
- Description
- Drawings
- Claims



20

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- **Background** = shows prior art obsolete
- **Summary** = shows how invention better
- **Description** = demonstrates utility
- **Drawings** = must support description
- **Claims** = Structured Legal Argument (specification = patent minus claims)

Prior Art Searches – Basics

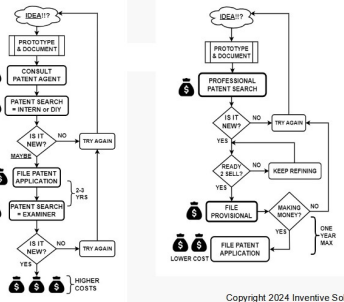
- **Prior Art** = All relevant patents or disclosures
- **Search first**, Patent later; not cart before horse
- Lawyers must **declare & avoid** relevant patents
- Inventors **experts** on their idea, not on **searches**
- Not all patents result in **profitable** products
- Patents **expire** = in public domain: unpatentable
- Applications not **published** till 18 mths from filing
- Should be done by objective **experienced** 3rd party

21

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[water & air break]

- To **define search parameters**, one must know **all critical details** of invention
- Necessary for **filing** a provisional or patent, so why not for a proper earliest **search**?



22

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- **Normal** method is too **expensive & risky**
- Use \$\$ **saved** with provisional for **next** good idea, if current idea not making \$\$

Provisional Application (for Utility)

Definition	Affordable pre-patent method to establish priority (US, PCT) & patent pending status
Examples	Protects disclosure while testing market & showing to manufacturers, VC's , Investors...
Criteria	As detailed as utility application; but usually excludes formal claims. (legal part of patent)
Costs	US\$70>280 : Filing fee: cost depends on entity status of inventor/company applying
Duration	Must apply for 'utility' before 1 year or risk losing rights forever (if public disclosure)

23

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- **DIY** is too **risky**, unless experienced technical **writer**, know all the **rules**
- Disclosure must **enable** building invention and include all **variations** (kitchen sink)

Provisionals – Considerations

- Filled up to **one year** following the date of first **sale** or **offer**, **public use** or **publication** – or when **idea ready**...
- **Filing & disclosure** may bar patent = some countries
- **Placeholder** for utility patent: **No examination/publicat.**
- If patent **not filed** & **idea disclosed**, **no patent** allowed
- Complete **description** & relevant **drawings** required

24

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- Needed if **inadvertent disclosure** made
- **Never published** unless PCT (30 mths)
- **Application** public **6 months** after filing if provisional **uses full year** of pendency

Provisionals – Advantages

- Provisional **specification** is bulk of patent **application**
- **Affordable** for startups, save \$\$ for manufacturing, etc.
- Time to **refine** product, test **market** & raise \$\$\$
- Can be used as **basis** for **PCT (Intl.)** application
- **Additional filings** OK if product improvements needed
- Establishes **earliest** effective filing date (gives extra yr)
- Confers **patent pending** status while disclosing
- **Better protection** than **NDA** when **disclosure** needed

25

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- Allow **delayed** spending \$\$\$ for patent filing when product is not proven out
- **extra year** – patent term starts with application, not provisional

International Applications

- Patent Cooperation Treaty (PCT) allows **multiple** country **filings** with only **one standard application**
- More **cost effective** than filing in each country
- Can be **filed** in any of ~180 Paris Convention states
- **Delays** local **filing/publication** 30 mths from priority
- Includes **International Search Report (ISR)**
- National **examinations** can be **delayed** (incl. fees)
- **Provisional** Application can be used as **basis** to file

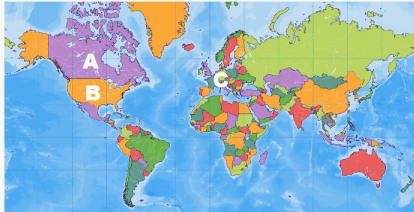
26

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[water & air break]

- Applications **not examined** – nationally
- Search Report results important for smooth national examination

Path of an International Application



27

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- A>B (CA: US **Provisional** Filed – 1 year)
- B>A (Provisional used to start **PCT: CA**)
- A>C (PCT Appl. filed with **WIPO: EU**;
Good **ISR** accelerates Nat. Filings)
- **PCT Allowance** > C>A,B, other countries..

Patents – Basic Process

- Prior Art **Search** to determine **novelty** (hours)
- **Provisional** or Utility **Patent** Application (tens of hrs)
- **Drawings** & file Provisional (hours) **INVENTOR** or **IP Svc. Prov.**
- **Claims** & file patent **application** **Lawyer > PATENT OFFICE**
- Pay fees to **search & examination** for **patentability**
- All examiner **objections** resolved (hopefully)
- Patent **allowed** & final issue fees paid
- **Certificate** issued (process takes 2-3 years, if lucky)

28

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Patents – Risks Without

- If idea **stolen** = **difficult/costly** to **recover** ownership
- No **examination** = **infringement risk** is not known
- No **IP ownership** = no **property** to **licence**
- No **IP ownership** = no **assets** or interested **investors**
- No **IP ownership** = no way to prevent **imports** of copies
- If **infringing** = must **stop selling**, refund \$, **pay** royalties

29

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- **First to file**
- **NDA's** are not enough
- **Open source** disclosure risks **infringement lawsuit** if a registered patent already exists

Patents – Benefits With

- Burglar **alarm** to infringers & **roadblock** to importers
- **Lowers risk** of infringement & litigation
- Gold standard for **investors** (Venture Capital)
- Can be **licensed** to manufacturers for **royalties**
- May be used as **asset** to negotiate more **funding**
- Creates greater **certainty** about **IP ownership**

30

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Affordable Patent & Research Services

- 20 years: **Provisionals**, Drawings, Searches
- **Certified** US Patent Paralegal & Technologist
- Free **confidential** consultation
- Non-disclosure protection
- **Affordable** rates
- Bulletproof IP



Thank You

- Thanks.
- Questions...