

Novelty 35 USC 102
Obviousness 35 USC 103

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Objectives

- Introduction to Prior Art & Common Types of Prior Art References
- Application of a Prior Art Reference
- Overview of 35 USC 102 – Novelty
- Overview of 35 USC 103 – Obviousness
- Examples and Special Considerations

WHAT IS PRIOR ART?

- References- Printed Documents, including Patents and Published Patent Applications (Domestic and Foreign) and Other Printed Publications (Non-Patent Literature), such as magazine, newspaper articles, electronic publication, including an on-line databases, websites, or Internet publications. See MPEP 2126-2128.
- Applicant's Admissions of Prior Art (AAPA) – Statements made by applicant that certain information was "prior art". May appear e.g. in the "background" section of the specification, in the drawings, or in applicant's remarks. See MPEP 2129.

Admissions - Prior Art

- A statement by applicant during prosecution identifying work of another as “prior art” is an admission that that work is available as prior art against applicant’s claims, regardless of whether admitted prior art would otherwise qualify as prior art under statutory categories of 35 U.S.C. 102. *See MPEP 706.02 III and 2129.*
- When material is labeled and/or described as “prior art”, the examiner must determine whether the subject matter identified as “prior art” is applicant’s own work, or the work of another.

HOW IS PRIOR ART USED in a rejection under 102?

Under 35 U.S.C. 102, prior art is used to establish Lack of Novelty, more commonly referred to as “**anticipation**”

Anticipation– When a single prior art reference teaches each and every element of a claim. Elements of the claim may be expressly or inherently described in the single prior art reference.

A claim lacks **novelty** when it is **anticipated** by a single reference in the prior art.

New 35 USC 102 Statutory Framework

Prior Art 35 U.S.C. 102(a) (Basis for Rejection)	Exceptions 35 U.S.C. 102(b) (Not Basis for Rejection)	
102(a)(1) Disclosure with Prior Public Availability Date	102(b)(1)	(A) Grace Period Disclosure by Inventor or Obtained from Inventor
		(B) Grace Period Intervening Disclosure by Third Party
102(a)(2) U.S. Patent, U.S. Patent Application, and PCT Application with Prior Filing Date	102(b)(2)	(A) Disclosure Obtained from Inventor
		(B) Intervening Disclosure by Third Party
		(C) Commonly Owned Disclosure

35 USC 103

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, ***if the differences between the claimed invention and the prior art*** are such that the claimed invention as a whole ***would have been obvious*** before the effective filing date of the claimed invention ***to a person having ordinary skill in the art*** to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

When Should a Rejection Under 35 USC §103(a) be Made?

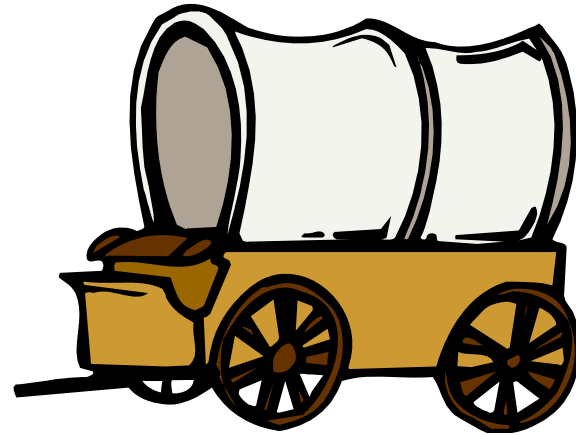
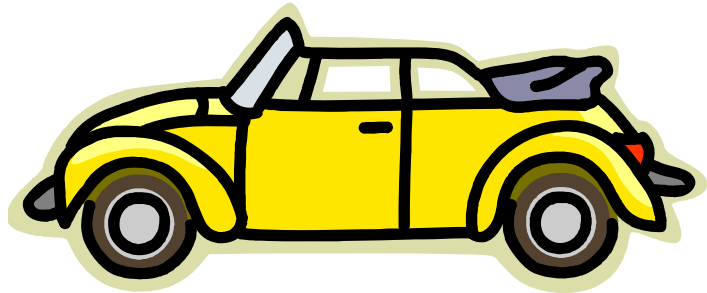
- A rejection based on 35 USC §103 is used when the claimed invention is ***not identically disclosed or described*** so the reference teachings must somehow be modified in order to meet the claims.
- The differences between the claimed invention and the reference teachings must have been ***obvious differences***:
 - ***at the time the invention was made*** and
 - ***to a person having ordinary skill in the art***

See: MPEP §706.02

Identical



Not Identical



Claims as a whole

In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious.

Stratoflex, Inc. v. Aeroquip Corp., 713 F2d 1530,
218 USPQ 871 (Fed Cir 1983)

PHOSITA

- Person having ordinary skill in the art
- Hypothetical person
- Depends upon the technical field of the invention
- Skill level of PHOSITA ***may not be the same as you***

35 USC §103

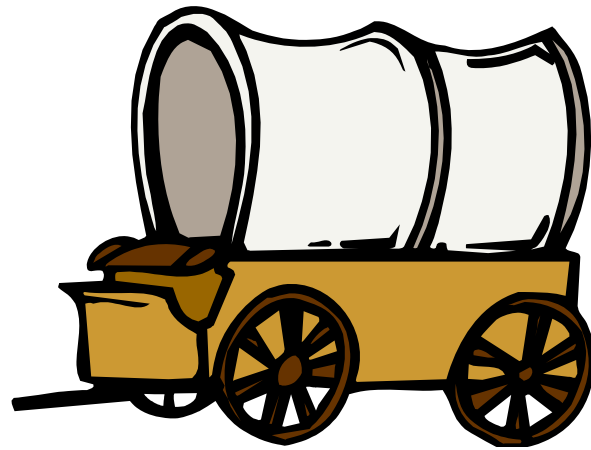
- The ultimate determination of whether an invention is or is not obvious is a ***legal conclusion*** based on underlying ***factual inquiries***.
- Factors to be considered when analyzing prior art under 35 USC 103 were articulated by the Supreme Court in a 1966 decision, ***Graham v. John Deere Co.***, 838 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

Obviousness – Graham v. John Deere Inquiries

- What is the scope and content of the prior art?
- What are the differences between the prior art and the claims at issue?
- What is the level of ordinary skill in the pertinent art at the time the invention was made?
- Does any objective evidence of nonobviousness exist?

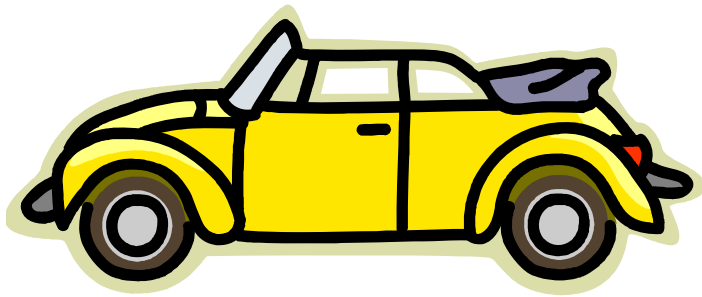
Obvious

Scope and content of the prior art

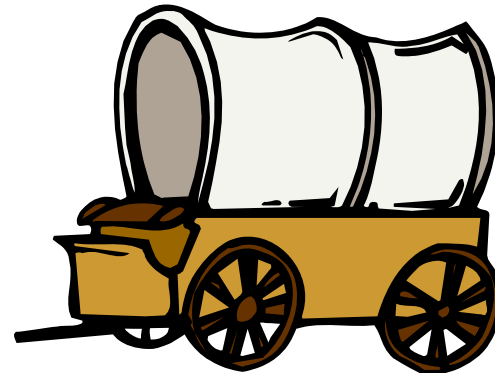


Prior Art

Identical? Obvious?



Invention



Prior Art

Identical? Obvious?

May be

- Wheels
- Soft Fabric Cover
- Can be steered
- Land vehicles
- Propelled by other than human power

May be not

- **Metal versus wood frame**
- **Engine versus horses**
- **Windows**
- **Different wheels**
- **Headlights**

Claimed Invention

- Defines what applicant believes is the invention
- Claim must be viewed as a whole
- Cannot distill the invention to its parts
- Analysis of the problem being solved

Differences

- Comparison between the claimed invention and the prior art (analogous art and non-analogous art)
- Determine similarities and differences in structure and function

Secondary Considerations

- Unexpected Results
- Long felt need/Failure of Others
- Commercial Success
- Copying by Others
- Inoperability of Prior Art
- Skepticism of Experts

Determining level of ordinary skill in the art

- Types of problems encountered in the art
- Prior art solutions
- Rapidity of innovation
- Sophistication of the technology
- Educational level of active workers in the field
- All factors not necessary for every case
- Examiners may rely upon their own technical expertise to describe the knowledge and skills of PHOSITA

Claim Interpretation

- Claims are given their broadest reasonable interpretation consistent with the specification*
- This determines the examiner's search
- There does not have to be a structural similarity between the prior art and the invention may have a similar utility

*In re Abbott Diabetes Care Inc., 104 USPQ2d 1337, 1342 (Fed. Cir. 2012)

Rationale

“[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”
KSR, 550 U.S. 398, 82 USPQ2d 1385 at 1396.

Combining References

- A single reference does not need to teach all aspects of the claimed invention; a 103 rejection may be based on a combination of references.
- The Supreme Court discussed “the need for caution in granting a patent based on the combination of elements found in the prior art.” *KSR* at page 1395.

Combining References (*cont.*)

- “Often it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR* at page 1396.

What to Search For

- Search for the claimed subject matter but should also look for prior art related to disclosed features which might reasonably be expected to be claimed as set forth in *MPEP* §904.02.
- References that provide a teaching or suggestion to combine the claimed elements are preferable to those that do not have such a teaching or suggestion. See: *MPEP* §2141

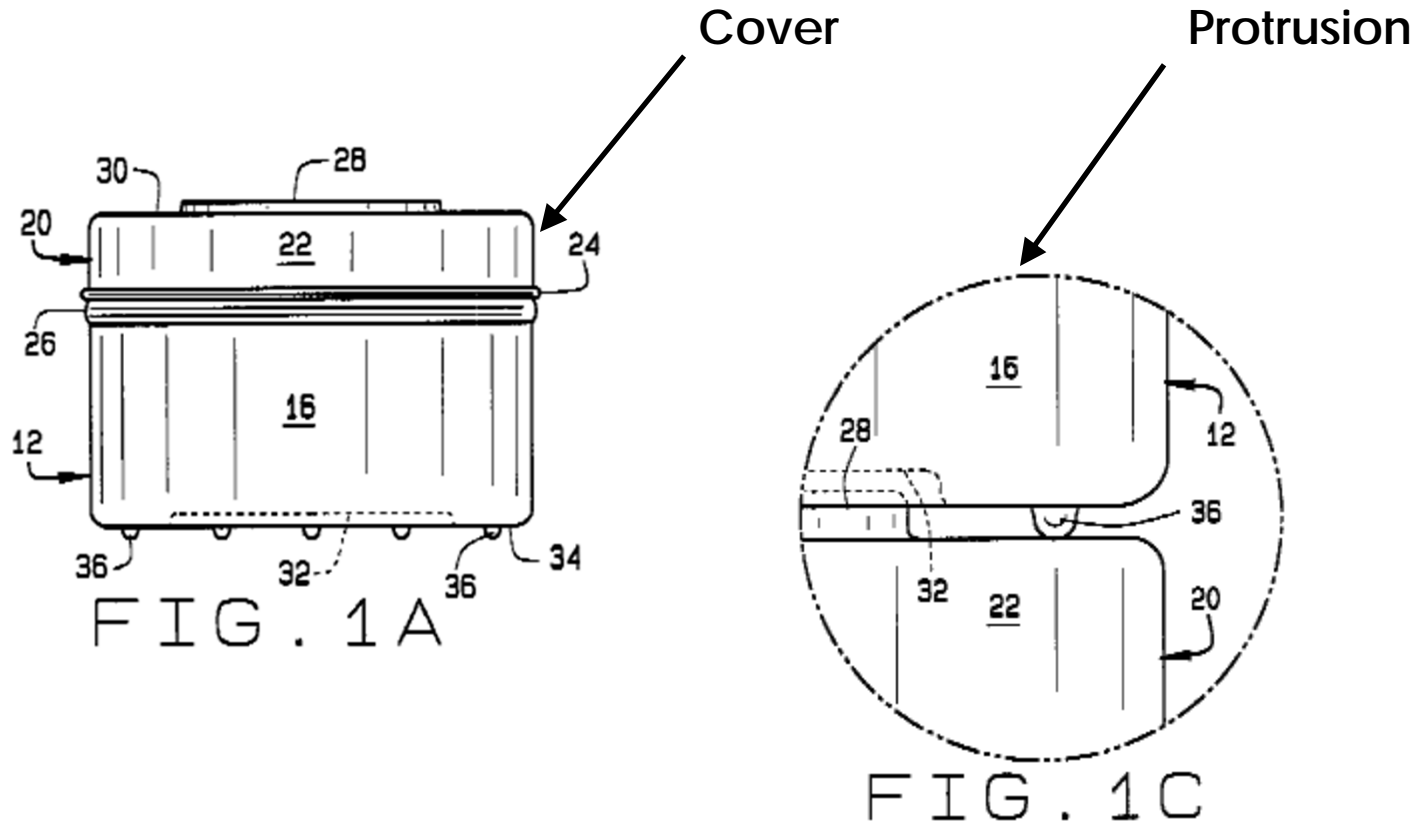
Analogous Prior Art

- “(A)ny need or problem known in the field of endeavor at the time of invention and addressed by the patent [or application at issue] can provide a reason for combining the elements in the manner claimed.” *KSR* at 1397.
- Therefore, Examiners are not limited to using only prior art from Applicant’s field of endeavor. Examiners can use references from fields which logically would have commended themselves to an inventor’s attention in considering the invention as a whole. See: *MPEP* §2141.01(a)

Applicant's Rebuttal Arguments

- Elements are not combinable
- Destruction of the reference
- Combination of elements works differently than individual elements
- The prior art fails to teach an element
- Non-analogous art
- Impermissible hindsight
- Not an exclusive list of arguments

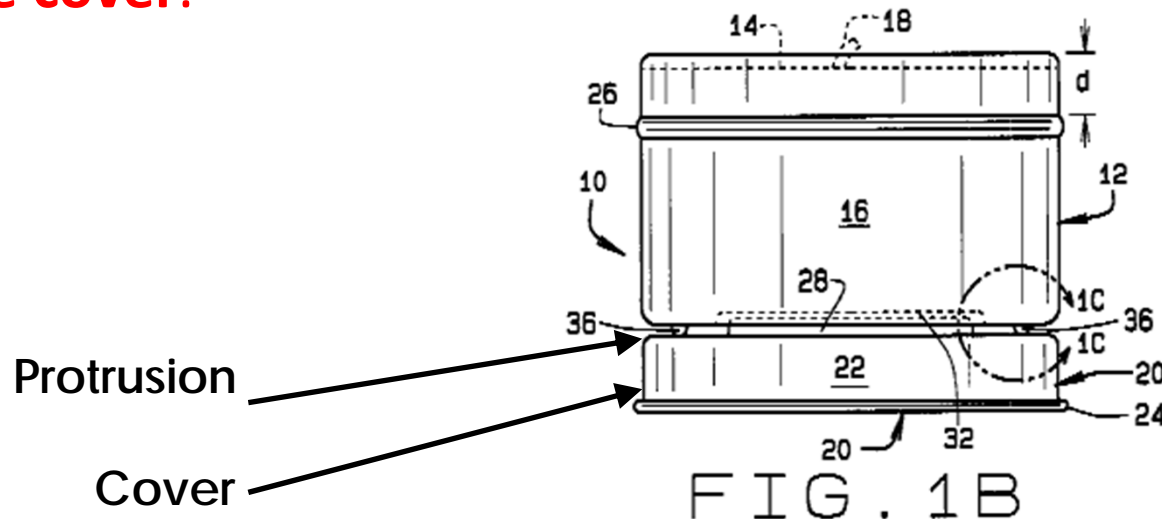
Example - Candle



Ball Aerosol and Specialty Container Inc. v. Limited Brands Inc.,
89 USPQ2d 1870 (Fed. Cir. 2009)

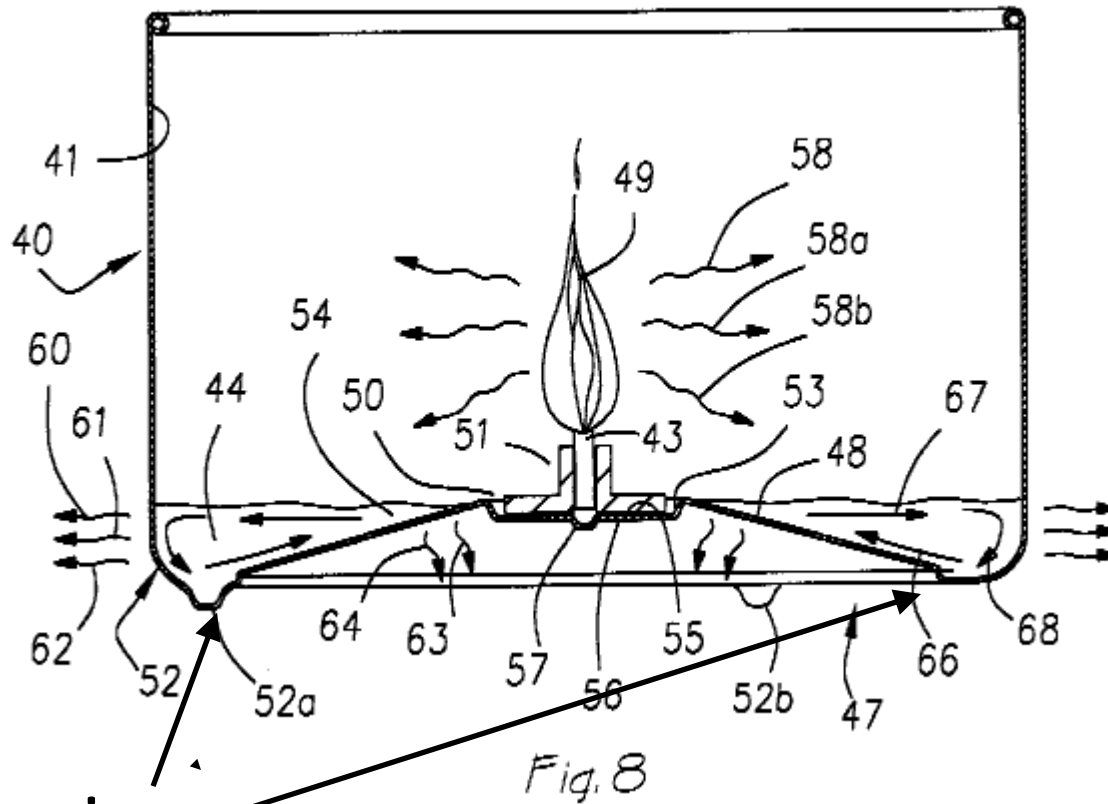
Example

1. A candle tin (10) comprising: ..., **the cover (20), when removed, being placed upon the surface with the holder (12) being set upon the cover for the cover to support the holder above the surface** whereby the heat generated by the burning candle (14) does not damage the surface, ... and, **protrusions formed on the closed end of the holder and extending therefrom, the protrusions resting upon the closed end of the cover to seat the holder on the cover.**



Example – Prior Art (A)

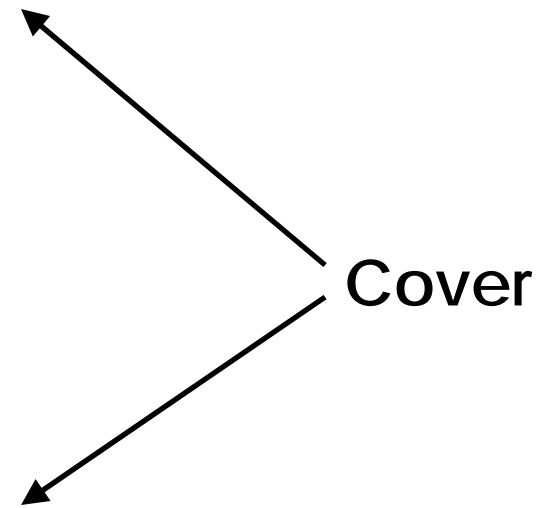
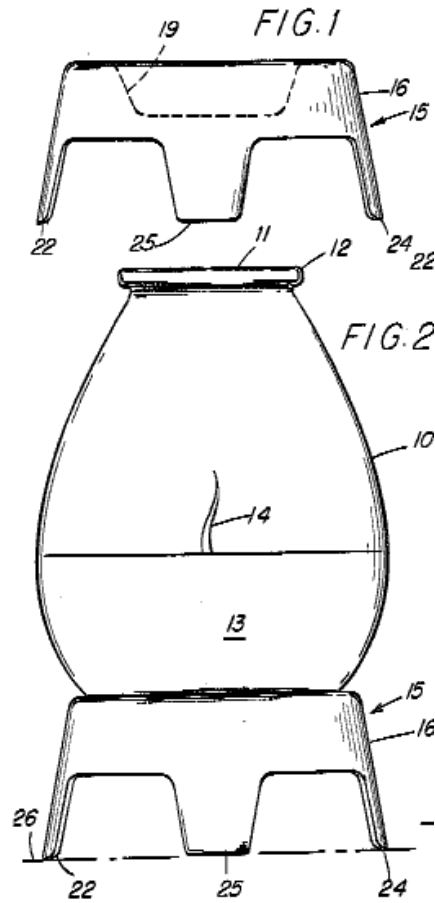
Wright



Protrusions

Example – Prior Art (B)

Marchi



Example – Federal Circuit Decision

Motivation to combine the references.

As explained in *KSR*, “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.”

Difference Between Federal Courts And Patent Office

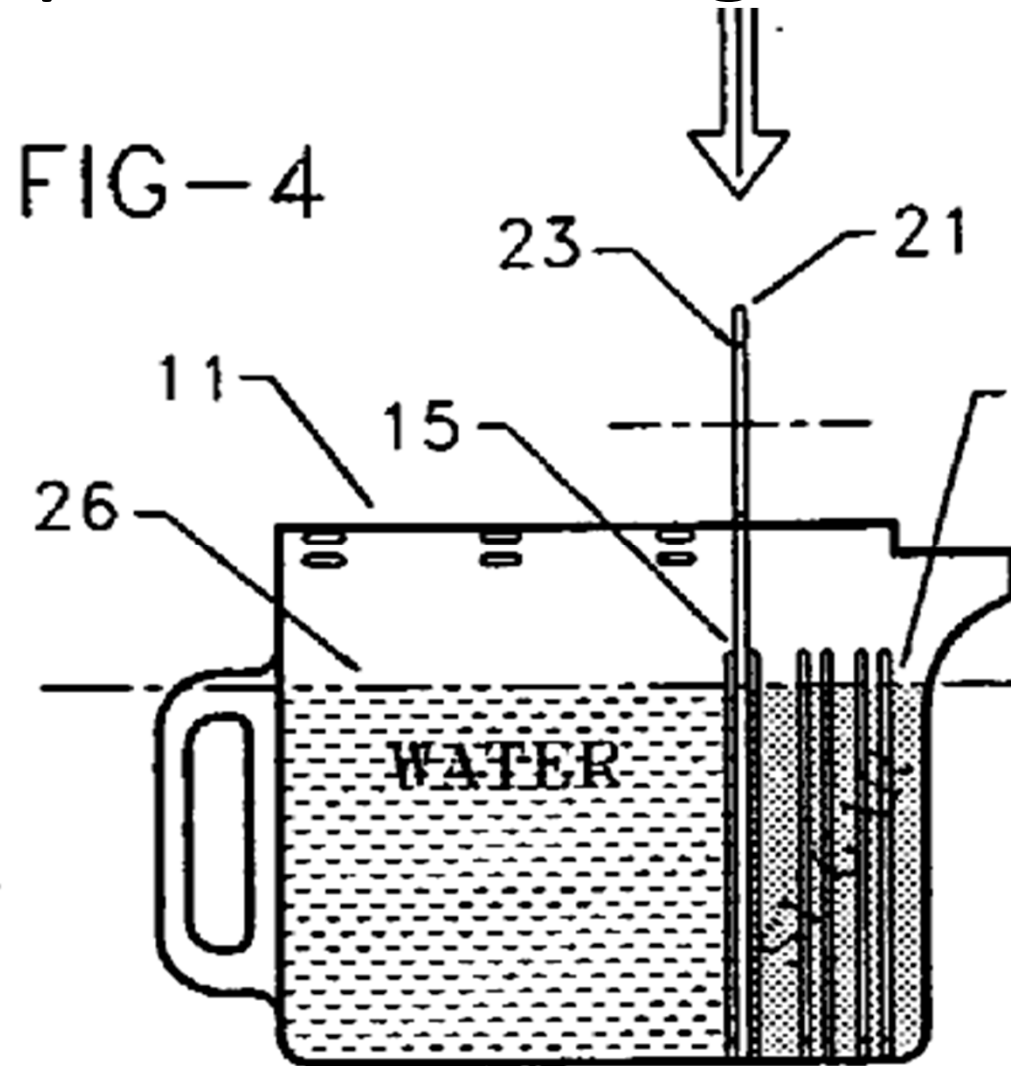
Federal Court

- Infringement
- Validity
- Not flexible
- Cannot amend patent

Patent Office

- **Patentability**
- **Prosecution is flexible (give and take to determine appropriate claim scope)**
- **Amendments by applicant permitted**
- **Rebuttal arguments accepted**
- **Secondary considerations**

Example – Hummingbird Pitcher



In re Klein, 98 USPQ2d 1991 (Fed. Cir. 2011)

Example - Claim

A ... nectar mixing device for use in preparation of sugar-water nectar for feeding hummingbirds, orioles or butterflies ... comprising:

a container ... and

a divider movably held by said receiving means for forming a compartment within said container ... said compartment is adapted to receive sugar, and ... removal of said divider ... allows mixing of said sugar and water to occur

Prior Art Reference 1

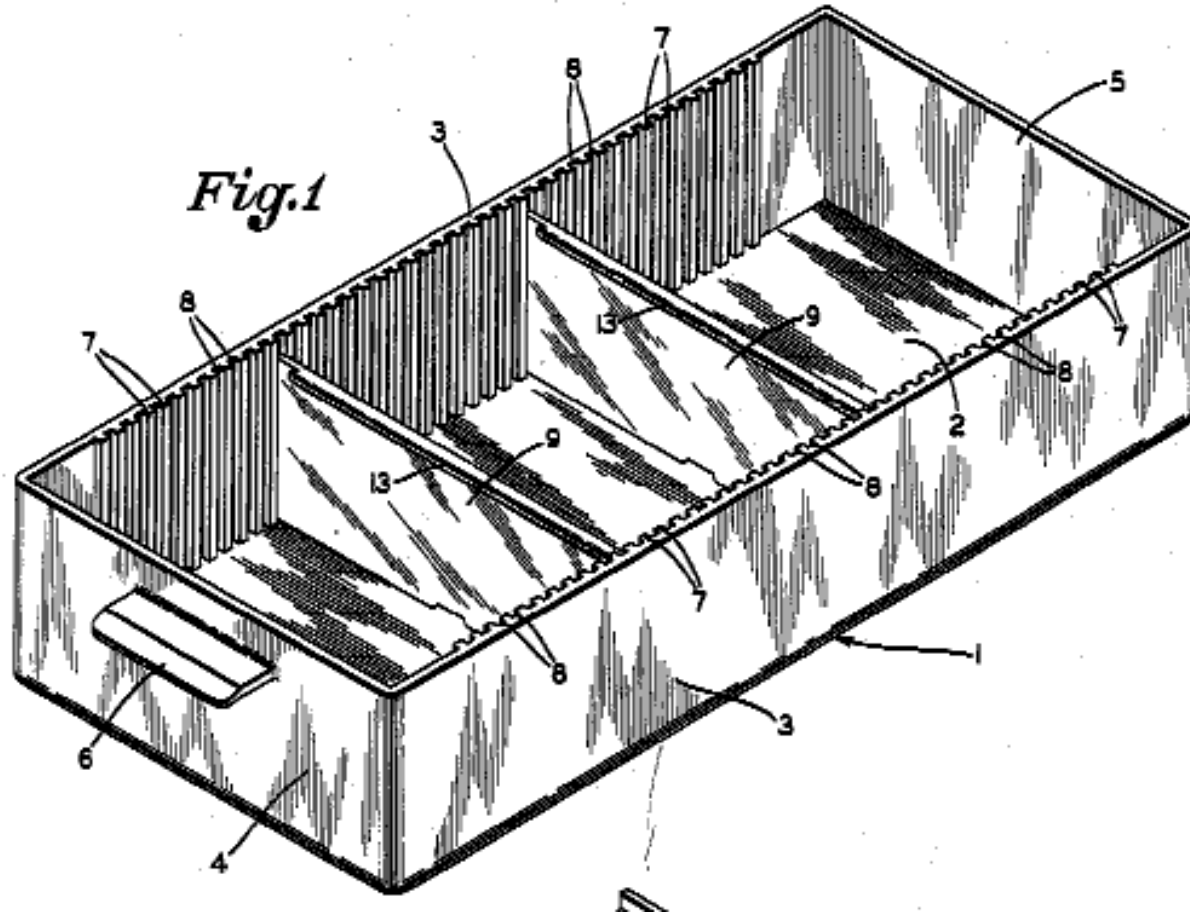
At the present time, the currently recommended sugar to water proportions are:

Hummingbird Feeder Nectar - 1 part table sugar to 4 parts water
Oriole Feeder Nectar - 1 part table sugar to 6 parts water
Butterfly Feeder Nectar - 1 part table sugar to 9 parts water.

Applicant's specification –

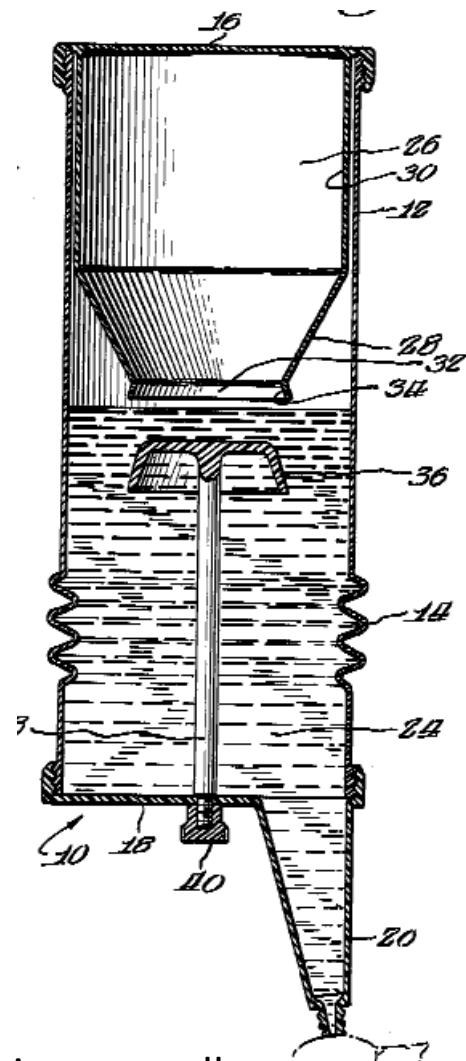
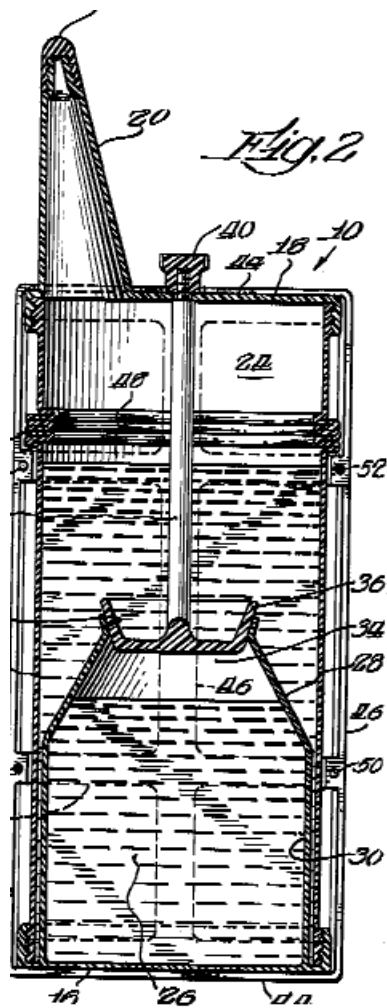
Page 2, Lines 1-9

Prior Art Reference 2



Note: Three different filing cabinet references were used to reject the claims

Prior Art Reference 3



Two different bottles were used to reject the claims as well

Appeals Court Decision

- [The] Board improperly failed to consider Mr. Klein's evidence of long-felt need to rebut the prima facie case of obviousness. However, since we have determined that the Board's finding that the five references at issue are analogous art is not supported by substantial evidence, the references do not qualify as prior art

Establishing a *Prima Facie* Case of Obviousness

- The key to supporting any rejection under 35 USC §103 is the clear articulation of the rationale or reason(s) why the claimed invention would have been obvious.
- Mere conclusory statements are not adequate to support a 35 USC §103 rejection. “(T)here must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 78 USPQ2d 1329, 1336.

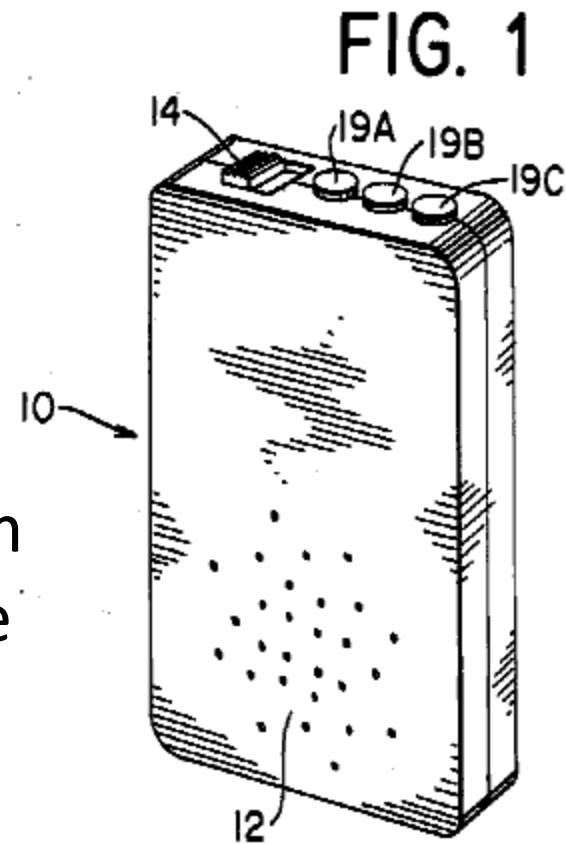
Establishing a *Prima Facie* Case of Obviousness (*cont.*)

- If a proposed modification of a prior art invention would render the invention being modified inoperable or unsatisfactory for its intended purpose, a *prima facie* case of obviousness cannot be established because there is no suggestion or motivation to make the modification.
- If a proposed modification of a prior art invention would change the principle of operation of the invention, then a *prima facie* case of obviousness cannot be established.
- In order to establish a *prima facie* case of obviousness, a reasonable expectation of success is needed.

Personal Alarm

A portable personal alarm which has a small size and achieves high sound levels utilizes the overdriving of a miniature buzzer.

Once activated, the alarm is reset by depressing the proper combination of buttons 19A, 19B or 19C.



Hopkins, U.S. Patent 4,719,454

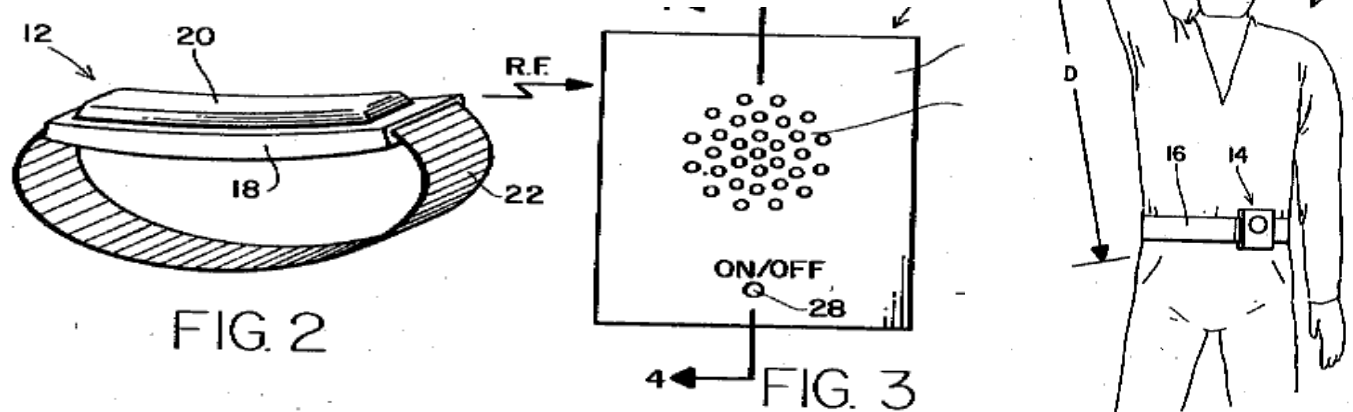
Applicant's Claimed Invention

An alarm device for personal use comprising:

- a housing having a top surface, a bottom surface, and side surfaces; (Hopkins)
- an alarm circuitry contained within said housing; (Hopkins)
- an activating switch located on the top surface of said housing; (Hopkins)
- wherein said housing has an opening on one of said surfaces; (Hopkins)
- and a deactivating switch; (Hopkins)
- wherein said deactivating switch is hidden from view. (????)

Personal Security Alarm

A personal security alarm characterized by a hand unit transmitter and a torso receiver/alarm.

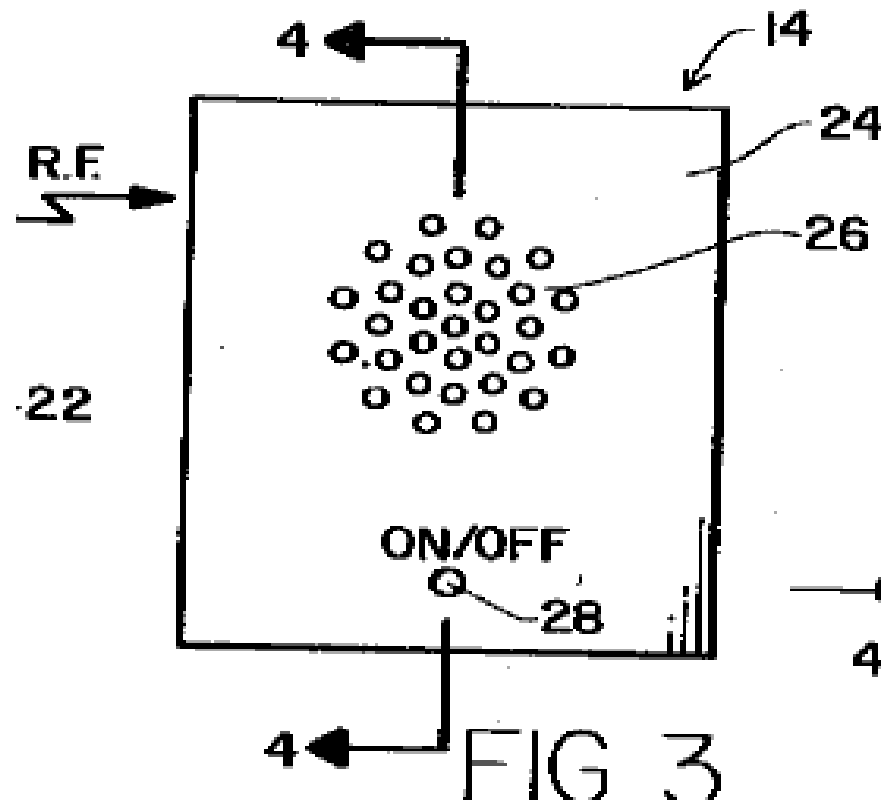


As the user either voluntarily or involuntarily clutches his or her fist, the actuator button (20) is depressed to energize the transmitter and cause the torso unit to emit a loud penetrating alarm.

Hiraki, U.S. Patent 4,587,516

Personal Security Alarm

The torso unit can only be turned off with a hidden switch accessed through an aperture (28).



Hiraki, U.S. Patent 4,587,516

Claimed Invention

An alarm device for personal use comprising:

- a housing having a top surface, a bottom surface, and side surfaces; (Hopkins)
- an alarm circuitry contained within said housing; (Hopkins)
- an activating switch located on the top surface of said housing, (Hopkins)
- wherein said housing has an opening on one of said surfaces; (Hopkins)
- and a deactivating switch, (Hopkins)
- wherein said deactivating switch is hidden from view. (Hiraki)

Is the Claimed Invention Obvious?

- All elements of the claimed invention are taught by either Hopkins or Hiraki.
- Would you reject the claimed invention under 35 USC §103 over this combination of references?

Additional Details from Hopkins

In the Background of the Invention, Hopkins refers to known personal alarms stating:

- “Therefore, during an attack a perpetrator can seize the alarm device and turn it off... before help is summoned.”

Additional Details from Hiraki

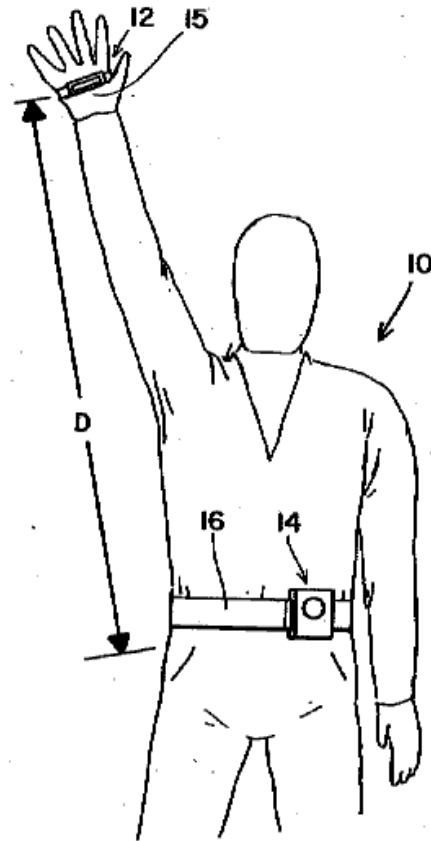
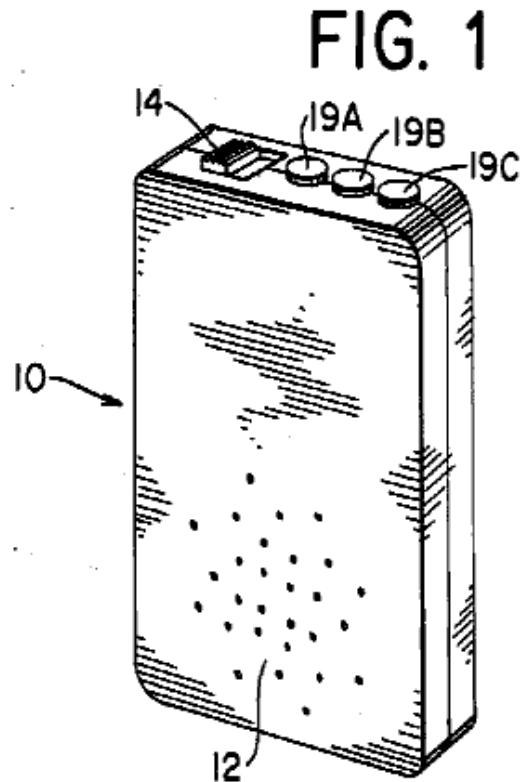
- In the Summary of the Invention, Hiraki states:
 - “Yet another object of this invention is to provide a personal security alarm which cannot be easily disabled by an assailant.”
- In the Detailed Description of Preferred Embodiments, Hiraki discloses:
 - “Since the on/off switch is hidden and difficult to access, it is unlikely that an assailant will remain at the scene long enough to figure how to turn off the alarm.”

Reason to Combine

Hopkins

+

Hiraki



To prevent an assailant from easily deactivating the alarm.

Example – Combining Prior Art Elements

Crocs, Inc. v. U.S. Int'l Trade Comm'n

The claimed molded foam footwear, which included a foam base and a foam heel strap that (1) could pivot with respect to the base and (2) maintained a desired position behind the wearer's heel as a result of friction, was not obvious, even though –

- molded foam footwear as claimed, except for the strap, was known in the prior art
- flexible heel straps for shoes were known in the prior art

Combining Prior Art Elements: Crocs, Inc. v. U.S. Int'l Trade Comm'n

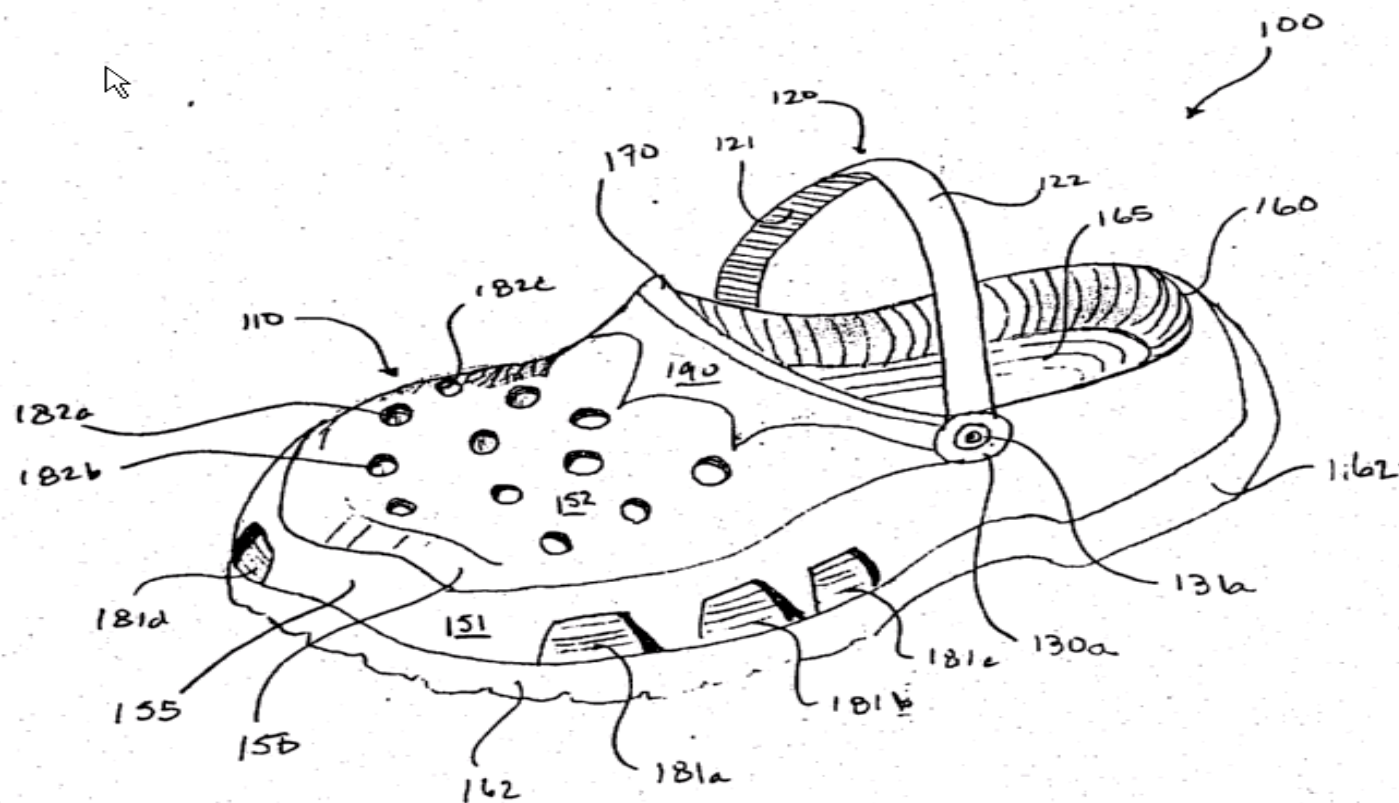
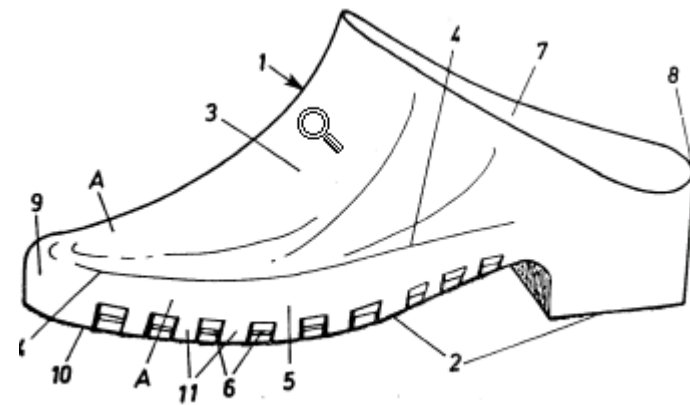
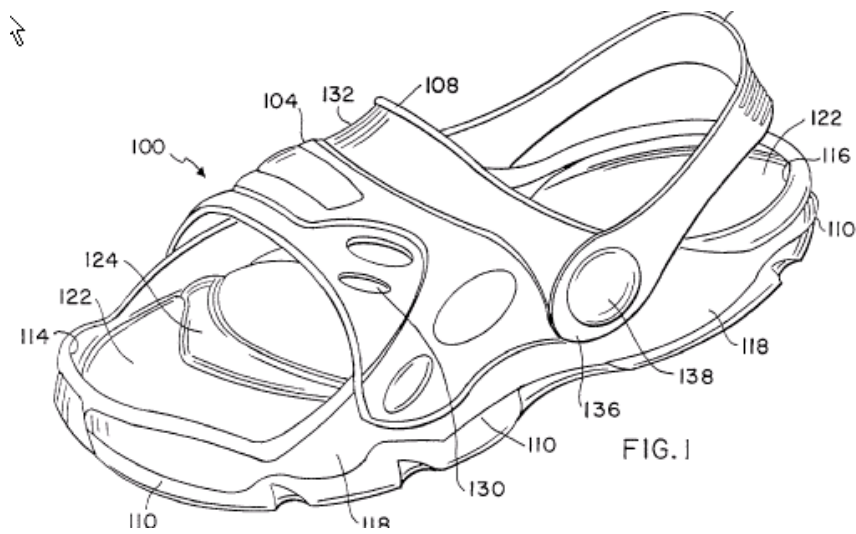


Fig. 1

Combining Prior Art Elements: Crocs, Inc. v. U.S. Int'l Trade Comm'n (*cont.*)



Combining Prior Art Elements: Crocs, Inc. v. U.S. Int'l Trade Comm'n (*cont.*)

Why was the claimed foam footwear nonobvious over the references applied?

1. The prior art did not teach foam heel straps, or that a foam heel strap should be placed in contact with a foam base.
2. The prior art considered friction between a foam shoe base and a heel strap to be disadvantageous, and taught the use of washers to reduce friction.
3. Even if all elements had been taught by the prior art, the combination provided a result that was not predictable. Because the strap maintained its position without being in constant contact with the wearer's foot, the comfort of the wearer was increased.

Combining Prior Art Elements:
Crocs, Inc. v. U.S. Int'l Trade Comm'n (*cont.*)

Teaching point: A claimed combination of prior art elements may be nonobvious where the prior art teaches away from the claimed combination and the combination yields more than predictable results.

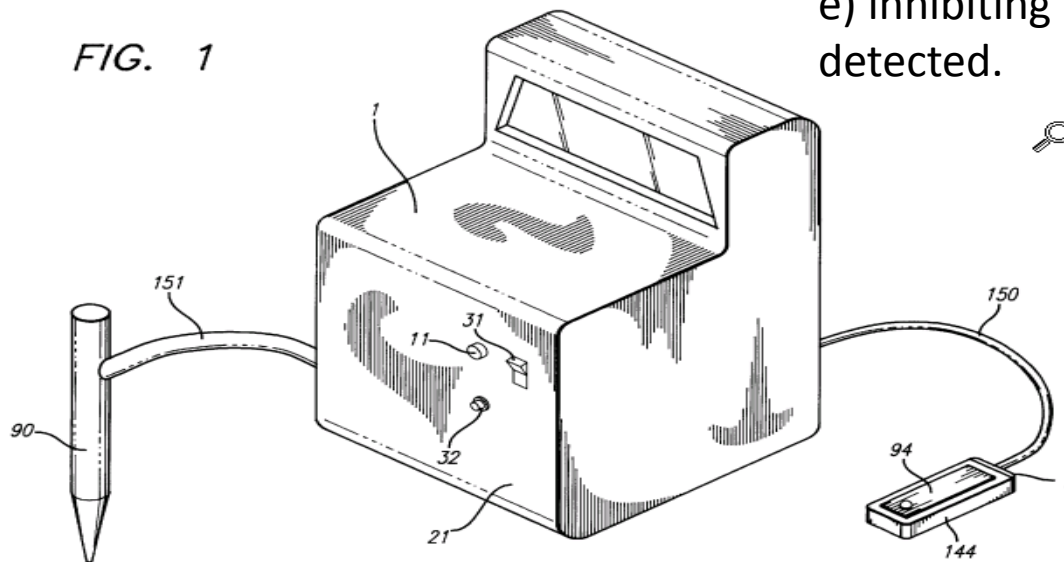
Substituting One Known Element for Another: Agrizap, Inc. v. Woodstream Corp.

The claimed stationary device for electrocution of pests such as rats and gophers that used a resistive electrical switch was obvious over the prior art references applied.

- The prior art taught a stationary pest control device that was the same as the claimed device except that it employed a mechanical pressure switch rather than a resistive electrical switch.
- Other references taught resistive electrical switches in the contexts of both a hand-held pest control device and a cattle prod.

Substituting One Known Element for Another: Agrizap, Inc. v. Woodstream Corp. (cont.)

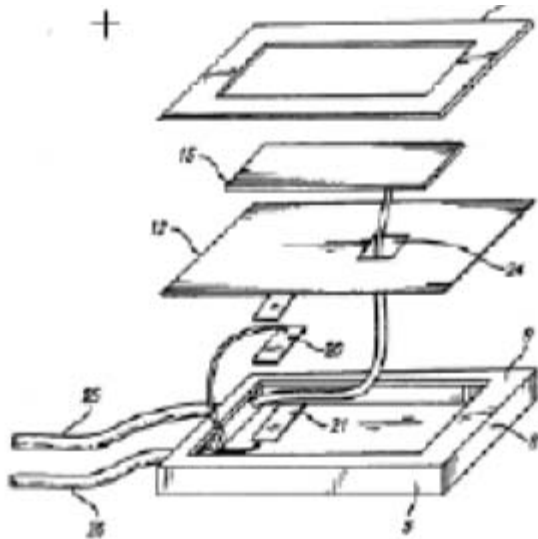
1. A method of electrocuting pests comprising the steps of:
 - a) sensing the presence of one of said pests ...;
 - b) triggering the activation of a high voltage and current generator....
 - c) generating sufficient voltage and current ...
 - d) deactivating said generator ...; and
 - e) inhibiting ..., until said reset signal is detected.



Substituting One Known Element for Another: Agrizap, Inc. v. Woodstream Corp. (cont.)

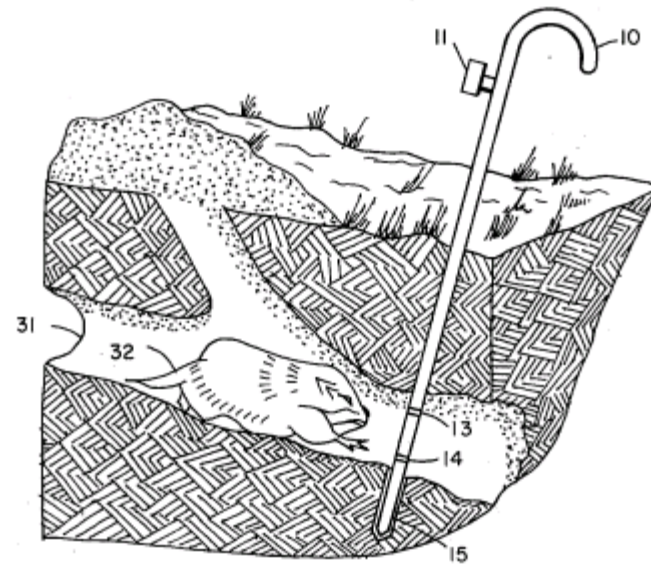
Prior Art

Portable pest electrocution device



Applicant's own prior art – uses a mechanical switch instead of a resistive switch to complete its circuit.

Electronic rodent exterminator



An electronic executing device used to demise gophers and other underground rodents” wherein the presence of the rodent completes the circuit when it touches two separate contact points

Substituting One Known Element for Another: Agrizap, Inc. v. Woodstream Corp. (cont.)

Why was the claimed pest control device that used a resistive electrical switch obvious?

1. The claimed invention is a simple substitution of one art-recognized switch for another.
2. The function of the resistive electrical switch was well-known and predictable.
3. The problem solved by using a resistive electrical switch rather than a mechanical switch in the hand-held pest-control device – malfunction due to dirt and moisture – also pertained to the stationary pest-control device.

Substituting One Known Element for Another:
Agrizap, Inc. v. Woodstream Corp. (*cont.*)

Teaching point: Analogous art is not limited to references in the field of endeavor of the invention, but also includes references that would have been recognized by those of ordinary skill in the art as useful for applicant's purpose.

THANK YOU

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www.uspto.gov/cornell