

# Patent Law

Prof. Roger Ford

Monday, November 6, 2017

Class 19 – Infringement I: claim  
construction & literal infringement

# Recap

# Recap

- Utility overview
- Operability
- Beneficial or moral utility
- Practical or specific utility

**Today's agenda**

# Today's agenda

- Claim construction
- Claim-construction procedure
- Literal infringement

**Claim construction**

# Claim-construction background

- Patent claims exist to set out the boundaries of the patent holder's exclusive rights
- But we add another layer of indirection, in which the court construes the claims

# Claim-construction background

- Why construe claims?

# Claim-construction background

## → Why construe claims?

- Patents describe new things
- Patents are written at time X and evaluated at time Y
- Applicants have incentive to write vague claims
- Litigants have an incentive to disagree about claim meaning

# Claim-construction background

## → Sources of evidence of claim meaning?

# Claim-construction background

- Sources of evidence of claim meaning?
- Patent
  - Prosecution history
  - Other patents in the field
  - Other documents by inventor (articles &c)
  - Usage in the field
  - Articles
  - Dictionaries

# Claim-construction background

- Sources of evidence of claim meaning?
- Patent **intrinsic evidence**
  - Prosecution history **intrinsic evidence**
  - Other patents in the field
  - Other documents by inventor (articles &c)
  - Usage in the field
  - Articles
  - Dictionaries

# Claim-construction background

→ Sources of evidence of claim meaning?

- Patent **intrinsic evidence**
- Prosecution history **intrinsic evidence**
- Other patents in the field
- Other documents by inventor (articles &c)
- Usage in the field
- Articles **extrinsic evidence**
- Dictionaries **extrinsic evidence**

# Claim-construction background

→ *Texas Digital* rule (**now repudiated**):

The best sources of evidence are dictionaries and other extrinsic evidence

- **Why?**

# Claim-construction background

- *Texas Digital* rule (**now repudiated**):  
The best sources of evidence are dictionaries and other extrinsic evidence
- The goal: eliminate strategic game-playing by experts, since dictionaries are objective, contemporaneous evidence of a claim's meaning

# Claim-construction background

- *Texas Digital* rule (**now repudiated**):  
The best sources of evidence are dictionaries and other extrinsic evidence
- The problem (#1): clever lawyers will still look for the best dictionary
  - The problem (#2): dictionaries are written with a different purpose and don't necessarily reflect the patent's use



United States Patent [19]  
Phillips

[11] Patent Number: 4,677,798  
[45] Date of Patent: Jul. 7, 1987

[54] STEEL SHELL MODULES FOR PRISONER DETENTION FACILITIES

[76] Inventor: Edward H. Phillips, P.O. Box 979, Fort Collins, Colo. 80522

[21] Appl. No.: 852,021

[22] Filed: Apr. 14, 1986

[51] Int. Cl.<sup>4</sup> ED4H 3/08

[52] U.S. Cl. 52/106; 52/79.4;

[58] Field of Search 52/79.9; 52/144; 52/404; 109/79.4;

52/79.5; 79.9; 79.12; 144; 245; 404; 109/78; 79

References Cited

U.S. PATENT DOCUMENTS

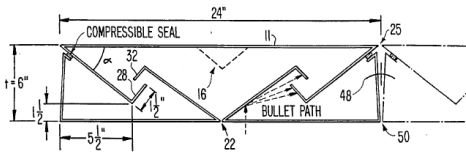
1,100,804 6/1914 White  
3,312,019 4/1967 Faerber 52/106  
3,722,152 3/1973 Schlatter et al. 52/106 X  
3,769,766 11/1973 Spindel 52/79.4  
3,899,043 8/1975 Hall 52/79.9 X  
4,494,348 1/1985 Kastelic 52/404 X

Primary Examiner—J. Karl Bell  
Attorney, Agent, or Firm—Laurence R. Brown

ABSTRACT

Vandalism resistant building modules suitable for deten-

tion and secured storage facilities provide good architectural properties and significant resistance to noise, fire and impact. Thus, steel shell modules are welded together to produce steel inner and outer walls. The modules contain strengthening and bullet deflecting internally directed steel baffles and various types of insulating materials. Construction is facilitated by providing modules that are welded together along only two lines coinciding with mating end positions on the steel plate inner and outer walls. Three steel panel pieces are formed into a module, each being partly triangular in cross section so that only one weld seam between two of the panels is required in assembling the three pieces which thereby form the internal baffles at angles for deflecting bullets. The baffles form an intermediate barrier between the walls and flanges at the ends of the module between which an insulating rope is compressed to provide a thermal and sound barrier between the inner and outer steel walls. Different types of internally disposed insulating materials may be disposed on either side of the intermediate barrier thus to provide the best combination of impact, fire and sound resistant properties.



# U.S. Patent No. 4,677,798

→ "Steel shell modules for prisoner detention facilities"

United States Patent [19]  
Phillips

[11] Patent Number: 4,677,798  
[45] Date of Patent: Jul. 7, 1987

[54] STEEL SHELL MODULES FOR PRISONER DETENTION FACILITIES

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[52] U.S. Cl. 52/106; 52/79.4;

[58] Field of Search 52/79.9; 52/144; 52/404; 109/79.4;

52/79.5; 79.9; 79.12; 144; 245; 404; 109/78; 79

References Cited

U.S. PATENT DOCUMENTS

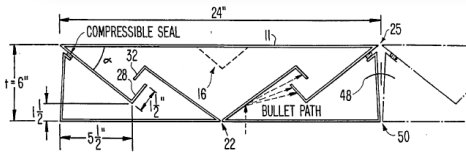
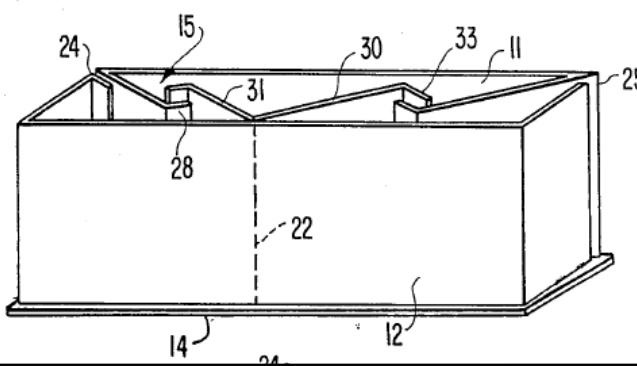
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3,312,019 4/1967 Faerber 52/106  
3,722,152 3/1973 Schlatter et al. 52/106 X  
3,769,766 11/1973 Spindel 52/79.4  
3,899,043 8/1975 Hall 52/79.9 X  
4,494,348 1/1985 Kastelic 52/404 X

Primary Examiner—J. Karl Bell  
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ABSTRACT

Vandalism resistant building modules suitable for deten-

FIG. 2.



# U.S. Patent No. 4,677,798

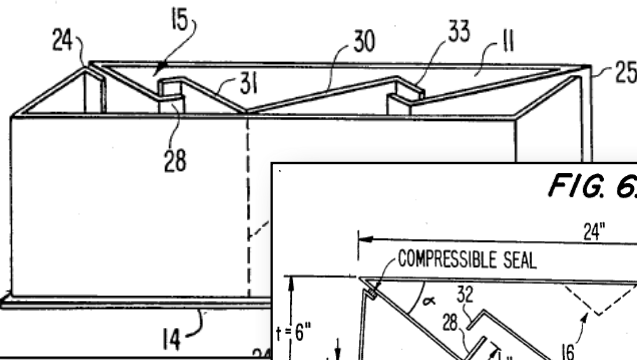
"Steel shell modules for prisoner detention facilities"

United States Patent [19] Phillips [45] Date of Patent: Jul. 7, 1987

# U.S. Patent No. 4,677,798

[54] STEEL SHELL MODULES FOR PRISONER DETENTION FACILITIES  
 [76] Inventor: Edward Fort C  
 [21] Appl. No.: 852,022  
 [22] Filed: Apr. 1, 1982  
 [51] Int. Cl. 4: E04B 1/00  
 [52] U.S. Cl.: 52/79.5, 79.9, 79.10  
 [58] Field of Search: 52/79.5, 79.9, 79.10  
 [56] References Cited:  
 1,100,804 6/1914 W  
 3,312,019 4/1967 Fg  
 3,722,152 3/1973 Sg  
 3,769,766 11/1973 Sg  
 3,899,043 8/1975 H  
 4,494,348 1/1985 K  
 Primary Examiner—J. K. AB  
 Attorney, Agent, or Firm—Vandalism resistant building

FIG. 2.



Steel shell modules for prisoner detention facilities

FIG. 6.

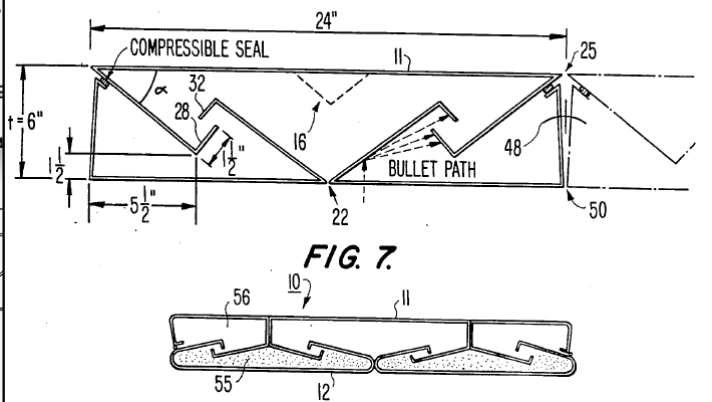
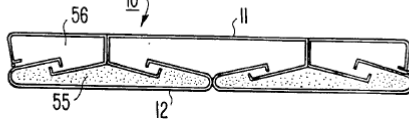


FIG. 7.



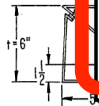
United States Patent [19] Phillips [45] Date of Patent: Jul. 7, 1987

# U.S. Patent No. 4,677,798

[54] STEEL SHELL MODULES FOR PRISONER DETENTION FACILITIES and secured storage facilities provide good archi-  
 [76] Inventor: Edward Fort C  
 [21] Appl. No.: 852,022  
 [22] Filed: Apr. 1, 1982  
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 [52] U.S. Cl.: 52/79.5, 79.9, 79.10  
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 1,100,804 6/1914 W  
 3,312,019 4/1967 Fg  
 3,722,152 3/1973 Sg  
 3,769,766 11/1973 Sg  
 3,899,043 8/1975 H  
 4,494,348 1/1985 K  
 Primary Examiner—J. K. AB  
 Attorney, Agent, or Firm—Vandalism resistant building

I claim:

1. Building modules adapted to fit together for construction of fire, sound and impact resistant security barriers and rooms for use in securing records and persons, comprising in combination, an outer shell of substantially parallelepiped shaped with two outer steel plate panel sections of greater surface area serving as inner and outer walls for a structure when a plurality of the modules are fitted together, sealant means spacing the two panel sections from steel to steel contact with each other by a thermal-acoustical barrier material, and further means disposed inside the shell for increasing its load bearing capacity comprising internal steel baffles extending inwardly from the steel shell walls.

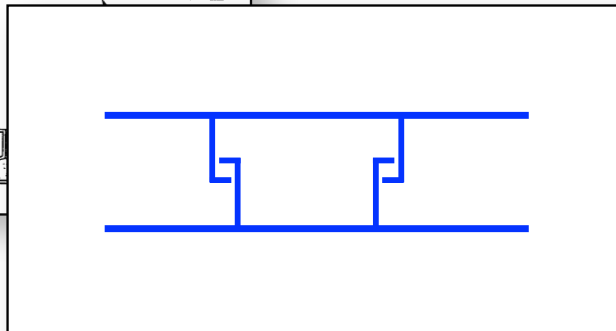
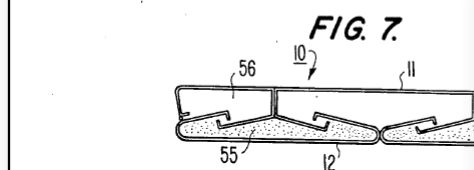
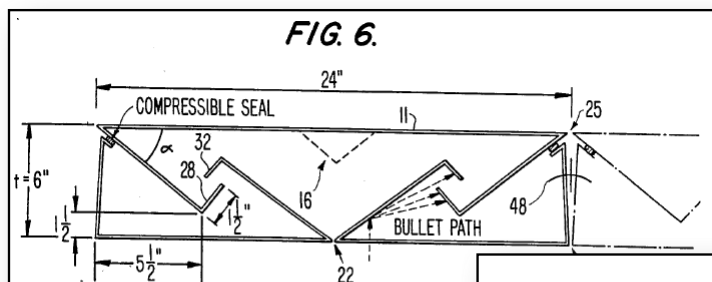


# Phillips v. AWH Corp.

→ The claim-construction issues:

- Is "baffles" a § 112 ¶ 6 / § 112(f) means-plus-function limitation?
- If not, can the baffles extend 90° from the wall, or just angles greater and less than 90°?

# Phillips v. AWH Corp.



# *Phillips v. AWH Corp.*

→ New rule?

# *Phillips v. AWH Corp.*

→ New rule?

- We construe claims to have their ordinary meaning, as understood by someone of ordinary skill in the art, in light of the patent as a whole and the prosecution history

# *Phillips v. AWH Corp.*

→ Advantage?

# *Phillips v. AWH Corp.*

→ Advantage?

- More likely to give us a claim construction that relates to what the inventor actually intended to claim

# *Phillips v. AWH Corp.*

→ Disadvantage?

# *Phillips v. AWH Corp.*

→ Disadvantage?

- We have competing axioms on both sides
- We read claims in light of the specification and prosecution history
- But we don't import limitations from the specification into the claims
- That's a hard line to walk

# *Phillips v. AWH Corp.*

→ New process:

- (1a) Context of the claim and surrounding claims
- (1b) Specification
- (1c) Prosecution history
- (2) Extrinsic evidence

# *Phillips v. AWH Corp.*

→ By the way: This approach has never been approved by the Supreme Court

- But *Teva v. Sandoz* (Sup. Ct. 2015) is largely consistent

“We recognize that a district court’s construction of a patent claim, like a district court’s interpretation of a written instrument, often requires the judge only to examine and to **construe the document’s words without requiring the judge to resolve any underlying factual disputes**. As all parties agree, when the district court reviews **only evidence intrinsic to the patent** (the patent claims and specifications, along with the patent’s prosecution history), the judge’s determination will amount solely to a **determination of law**, and the Court of Appeals will review that construction de novo. \* \* \*

*Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S.Ct. 831, 840–41 (2015)

“In some cases, however, the district court will need to **look beyond the patent’s intrinsic evidence and to consult extrinsic evidence** in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period. \* \* \* In cases where those subsidiary facts are in dispute, courts will need to make **subsidiary factual findings about that extrinsic evidence**. These are the ‘evidentiary underpinnings’ of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.”

*Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S.Ct. 831, 840–41 (2015)



# Phillips v. AWH Corp.

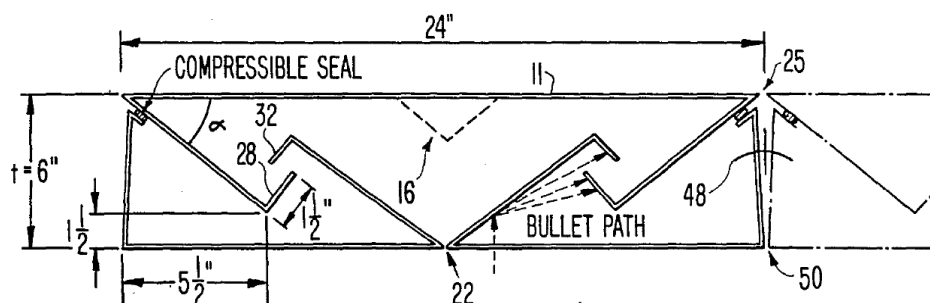
- Okay, so let's construe "baffles"
- (1a) Context of the claim and surrounding claims

2. Modules as defined in claim 1 wherein the steel baffles are oriented with the panel sections disposed at angles for deflecting projectiles such as bullets able to penetrate the steel plates.

# Phillips v. AWH Corp.

- Okay, so let's construe "baffles"
- (1a) Context of the claim and surrounding claims

FIG. 6.



# *Phillips v. AWH Corp.*

- Okay, so let's construe "baffles"
  - (1b) Specification

## DISCLOSURE OF THE INVENTION

This invention provides modular equipment for formulating detention structures comprising of a multiplicity of interchangeable modules of similar size having steel plate inner and outer wall sections defining end closures and internally directed load supporting baffles. The modules comprise three steel plate wall panel sections of partially triangular cross section shape positioned to provide the internally directed baffles and the end closure walls. Modules of a size that may be manually processed are abutted together end to end in registration and welded together along two weld lines to form walls for the detention structure. The ends are indented so that the two weld lines at the wall section surfaces are the sole lines of registered contact.

The baffles provided by the triangular shaped panels to extend inwardly form an intermediate interlocking barrier with the baffles disposed at such angles that bullets which might penetrate the outer steel panels are deflected. Flanges are formed between the inner and outer wall panels between which a ropelike insulating seal is compressed to isolate the two walls. Two different kinds of filler insulating material may be inserted on opposite sides of the intermediate layer to increase the versatility of the modules. Thus, insulation properties, impact properties or load bearing properties may be emphasized by the appropriate filler materials.

## *Phillips v. AWH Corp.*

- Okay, so let's construe "baffles"
- (1c) Prosecution history
  - (2) Extrinsic evidence

# Post-Phillips

- Claim construction is still really hard and indeterminate
  - Much like statutory interpretation
  - There are several maxims, rules of thumb, and common practices
  - Internal divisions on the Federal Circuit
  - The claim-construction reversal rate on the Federal Circuit is 30–50%

## Ordinary meaning v. contextual meaning

- Many cases prioritize “ordinary meaning”
  - Usually, this leads to broader patent claims
- Other cases prioritize “contextual meaning”

# Example: *Nystrom v. TREX*

- Specification repeatedly assumed that all “board”s were made of wood
- Court: in context, the best construction of “board” is “wooden board”
  - Even though some claims required a board made from wood!

## Lexicographer

- Applicants can act as their own lexicographers
- Usually, this is implicit
  - Often, intended to broaden a claim
  - “[W]here the scanning and image reproduction aspects are separate (within or without the same housing), but cooperate to produce the effect of a plain paper photocopy machine ... the two aspects are deemed to define a photocopy machine as that term is used herein.”

# *Liebel-Flarsheim Co. v. Medrad, Inc.*

- The written-description consequences of *Phillips*
- Medrad's application: explicitly recited a pressure jacket
  - During prosecution, Medrad becomes aware of a jacketless system and amends its claims to cover such a system

# *Liebel-Flarsheim Co. v. Medrad, Inc.*

- The written-description consequences of *Phillips*
- Claim ultimately requires a "high pressure power injector"
  - District court, relying on specification: this requires a pressure jacket
  - Federal Circuit: nope, the claim is not ambiguous, so we don't need to look to the specification

# *Liebel-Flarsheim Co. v. Medrad, Inc.*

- The written-description consequences of *Phillips*
- *Three years pass*
  - District court: claim is invalid for lacking written description
  - Federal Circuit affirms

**Claim-construction  
procedure**

# Claim-construction procedure

- Claim construction is a question of law for the court, not the jury
- In most cases, district courts hold “*Markman* hearings” to construe disputed claim terms
  - briefing, expert testimony, argument, and so forth

# Claim-construction procedure

- On appeal to the Federal Circuit:
  - reversal rates are high
  - until 2015: *de novo* review (no deference to district court)
  - in 2015: *Teva v. Sandoz*



“In *Markman v. Westview Instruments, Inc.*, we explained that a patent claim is that ‘portion of the patent document that defines the scope of the patentee’s rights.’ **We held that ‘the construction of a patent, including terms of art within its claim,’ is not for a jury but ‘exclusively’ for ‘the court’ to determine.** That is so even where the construction of a term of art has **‘evidentiary underpinnings.’”**

*Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S.Ct. 831, 835 (2015)

“Today’s case involves claim construction with ‘evidentiary underpinnings.’ And, it requires us to determine **what standard the Court of Appeals should use when it reviews a trial judge’s resolution of an underlying factual dispute.** Should the Court of Appeals review the district court’s factfinding *de novo* as it would review a question of law? Or, should it review that factfinding as it would review a trial judge’s factfinding in other cases, namely by taking them as correct ‘unless clearly erroneous?’ *See* Fed. Rule Civ. Proc. 52(a) (6). **We hold that the appellate court must apply a ‘clear error,’ not a *de novo*, standard of review.”**

*Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S.Ct. 831, 835 (2015)

# Claim-construction procedure

→ After *Teva v. Sandoz*:

- reversal rates remain high
- review is unchanged in most cases, because under *Phillips*, we look first to intrinsic evidence, which is still reviewed *de novo*
- predictions that district courts would rely more on extrinsic evidence have not come to pass

**Literal infringement**

**(post-AIA) 35 U.S.C. § 271 — Infringement of Patent**

(a) Except as otherwise provided in this title, whoever without authority **makes, uses, offers to sell, or sells** any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.

(b) Whoever **actively induces** infringement of a patent shall be liable as an infringer.

(c) Whoever offers to sell or sells within the United States or imports into the United States a **component of a patented machine**, manufacture, combination or composition, or a **material or apparatus for use in practicing a patented process**, constituting a material part of the invention, **knowing the same to be especially made or especially adapted for use in an infringement** of such patent, and **not a staple article** or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer. \* \* \*

**(post-AIA) 35 U.S.C. § 271 — Infringement of Patent**

\* \* \* (f)

(1) Whoever without authority **supplies** or causes to be supplied in or from the United States **all or a substantial portion of the components of a patented invention**, where such components are uncombined in whole or in part, in such manner as to **actively induce the combination of such components outside of the United States** in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.

(2) Whoever without authority **supplies** or causes to be supplied in or from the United States **any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article** or commodity of commerce suitable for substantial noninfringing use, where such component is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer. \* \* \*

## **(post-AIA) 35 U.S.C. § 271 — Infringement of Patent**

\* \* \* (g) Whoever without authority **imports** into the United States or **offers to sell, sells, or uses** within the United States a **product which is made by a process patented in the United States** shall be liable as an infringer, if the importation, offer to sell, sale, or use of the product occurs during the term of such process patent. In an action for infringement of a process patent, no remedy may be granted for infringement on account of the noncommercial use or retail sale of a product unless there is no adequate remedy under this title for infringement on account of the importation or other use, offer to sell, or sale of that product. A product which is made by a patented process will, for purposes of this title, not be considered to be so made after—

- (1) it is materially changed by subsequent processes; or
- (2) it becomes a trivial and nonessential component of another product. \* \* \*

# **Infringement background**

- **Two dimensions of infringement:**
- **Direct versus indirect**
  - **Literal versus equivalents**

# Infringement background

- **Direct infringement**: infringement by the defendant's own behavior
- **Indirect infringement**: liability for the behavior of a third party
- **Literal infringement**: literally practicing every element of a patent claim
- **Infringement by equivalents**: practicing every element of a claim, but one or more by the doctrine of equivalents

2/16/80 XR 4,239,129

**United States Patent** [19] **4,239,129**  
**Esposito** [45] **Dec. 16, 1980**

[54] **WATER PISTOL AND/OR FLASHLIGHT STRUCTURE** 3,365,838 1/1968 Butler ..... 222/79 X  
3,578,789 5/1971 Ferri ..... 222/79

[76] **Inventor:** Gary F. Esposito, 5862 Lexington Ave., Portage, Ind. 46368  
*Primary Examiner*—Stanley H. Tollberg  
*Attorney, Agent, or Firm*—Charles S. Penfold

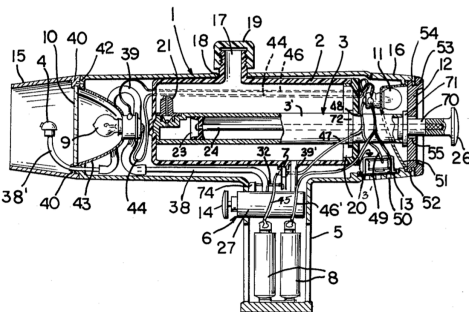
[21] **Appl. No.:** 964,680  
[22] **Filed:** Nov. 29, 1978  
[51] **Int. Cl.:** F41B 9/00  
[52] **U.S. Cl.:** 222/79; 362/112  
[58] **Field of Search:** 222/79, 113; 273/84 R; 362/112, 109, 113

[56] **References Cited**  
**U.S. PATENT DOCUMENTS**  
2,536,484 1/1951 Avery ..... 362/112  
2,629,516 2/1953 Bodham ..... 222/79  
2,668,159 8/1953 Renfield ..... 362/112 X  
2,660,000 11/1953 Strayer ..... 362/112 X  
3,240,924 3/1966 Darby ..... 362/112

35 Claims, 12 Drawing Figures

## U.S. Patent No. 4,239,129

→ "Water pistol and/or flashlight structure"



2/16/80 XR 4,239,129

United States Patent [11] 4,239,129  
Esposito [45] Dec. 16, 1980

[54] WATER PISTOL AND/OR FLASHLIGHT STRUCTURE 3,365,838 1/1968 Butler 222/79 X  
3,578,789 5/1971 Ferri 222/79  
[76] Inventor: Gary F. Esposito, 5862 Lexington Ave., Portage, Ind. 46368 Primary Examiner—Stanley H. Tollberg Attorney, Agent, or Firm—Charles S. Pentfold  
[21] Appl. No.: 964,680 [57] ABSTRACT  
[22] Filed: Nov. 29, 1978 The subject invention involves a toy water pistol which embodies improvements with respect to a reciprocal pump therefor for building up pressure against a liquid  
[51] Int. Cl. F41B 9/00  
[52] U.S. Cl. 222/79; 362/112  
[58] Field of Search

[56] References Cited  
U.S. PATENT DOCUMENTS  
2,536,484 1/1951 Avery  
2,629,516 2/1953 Badian  
2,665,159 8/1953 Rotfeld  
2,660,000 11/1953 Strayer  
3,240,924 3/1966 Darby

# U.S. Patent No. 4,239,129

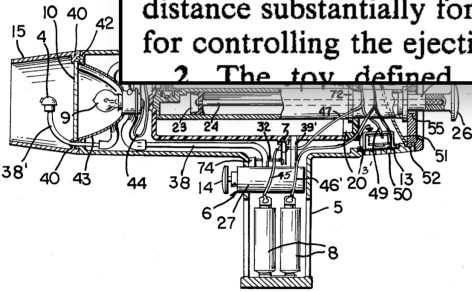
→ "Water pistol

tion of the components herein shown and described.

I claim:

1. A toy comprising an elongated housing having a chamber therein for a liquid, a pump including a piston having an exposed rod end extending rearwardly of said toy facilitating manual operation for building up an appreciable amount of pressure in said chamber for ejecting a stream of liquid therefrom an appreciable distance substantially forwardly of said toy, and means for controlling the ejection.

2. The toy defined in claim 1 including means



2/16/80 XR 4,239,129

United States Patent [11] 4,239,129  
Esposito [45] Dec. 16, 1980

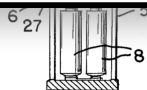
[54] WATER PISTOL STRUCTURE  
[76] Inventor: Gary F. Esposito, 5862 Lexington Ave., Portage, Ind. 46368  
[21] Appl. No.: 964,680  
[22] Filed: Nov. 29, 1978  
[51] Int. Cl. F41B 9/00  
[52] U.S. Cl. 222/79; 362/112  
[58] Field of Search


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2,665,159 8/1953 Rotfeld  
2,660,000 11/1953 Strayer  
3,240,924 3/1966 Darby


# U.S. Patent No. 4,239,129



(a different)  
Super Soaker



'129 patent claims	<p>Super Soaker</p> 
1. A toy comprising	✓
an elongated housing having a chamber therein for a liquid,	✗
a pump including a piston having an exposed rod end extending rearwardly of said toy	✓
facilitating manual operation for building up an appreciable amount of pressure in said chamber for ejecting a stream of liquid therefrom an appreciable distance substantially forwardly of said toy, and	✓
means for controlling the ejection.	✓

  
US5486000A

**United States Patent** [19] [11] **Patent Number:** **5,486,000**

**Chorne** [45] **Date of Patent:** **Jan. 23, 1996**

[54] **WEIGHTED GOLF IRON CLUB HEAD** 1,917,774 7/1933 Ogg ..... 273/167 F  
2,007,377 7/1935 Link ..... 273/167 F  
[76] **Inventor: Robert Chorne, 99 Russell Pl.,** 2,550,846 5/1951 Milligan ..... 273/167 A  
**Freeport, N.Y. 11520** 3,814,457 6/1974 Winquist ..... 273/167 F  
4,621,813 11/1986 Solheim ..... 273/77 A

[21] **Appl. No.:** 173,056  
[22] **Filed:** Dec. 27, 1993 *Primary Examiner—Sebastiano Passaniti*  
*Attorney, Agent, or Firm—F. Eugene Davis, IV*

**Related U.S. Application Data** [57] **ABSTRACT**

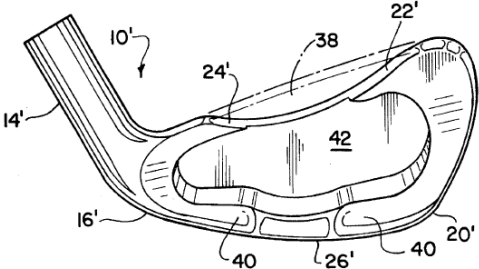
[63] Continuation-in-part of Ser. No. 886,173, May 21, 1992, Pat. No. Des. 343,216, Ser. No. 729,173, Jul. 17, 1991, Pat. No. 5,196,465, Ser. No. 643,860, Jan. 27, 1991, abandoned, and Ser. No. 469,825, Jan. 24, 1990, Pat. No. Des. 326,130, said Ser. No. 729,173 is a continuation-in-part of Ser. No. 643,860, which is a continuation-in-part of Ser. No. 469,825.

[51] **Int. Cl.<sup>6</sup>** ..... **A63B 53/04**  
[52] **U.S. Cl.** ..... **273/169; 273/167 F; 273/167 H; 273/167 A**

[58] **Field of Search** ..... 273/167 R, 77 R, 273/77 A, 167 A, 167 D, 167 E, 167 F, 169, 171, 172, 173, 174, 175, 193 R, 194 R, 194 A, 167 H

[56] **References Cited**  
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835,735 11/1906 Robertson ..... 273/167 F

6 Claims, 2 Drawing Sheets



# U.S. Patent No. 5,486,000

→ “Weighted golf iron club head”

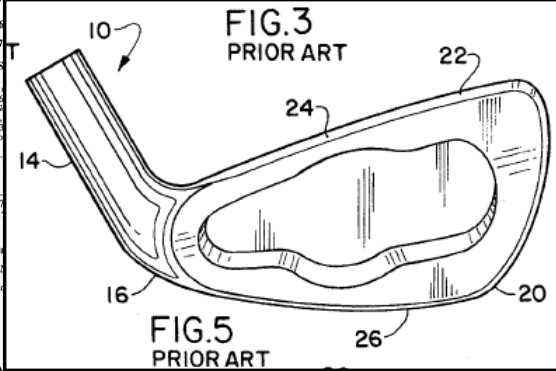
United States Patent [19] [11] Patent Number: **5,486,000**  
**Chorne** [45] Date of Patent: **Jan. 23, 1996**



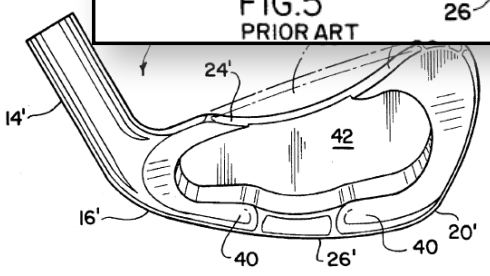
**U.S. Patent No.  
 5,486,000**

[54] WEIGHTED GOLF IRON CLUB HEAD 1,917,774 7/1933 Ogg ..... 273/167 F  
 2,007,377 7/1935 Link ..... 273/167 F  
 [76] Inventor: **Robert Chorne, 99 Russell Pl.,** 2,550,846 5/1951 Milligan ..... 273/167 A  
 Freeport, Conn. 01061 3,816,487 6/1974 Wilmitt ..... 273/167 F

[21] Appl. No.: 173,056  
 [22] Filed: Dec. 27, 1994  
 Related U.S. Pat. Nos. 3,432,216 No. 3,190,465, Ser. No. and Ser. No. 469,825, said Ser. No. 725,373, 725,373, 643,860, which is a co-continuation-in-part of U.S. Pat. No. 3,432,216.  
 [51] Int. Cl. 6 .....  
 [52] U.S. Cl. .....  
 [58] Field of Search ..... 273/77, 169, 171, 11  
 [56] References Cited: U.S. PATENT LIT.: 835,735 11/1906 R



**"Weighted golf iron club head"**



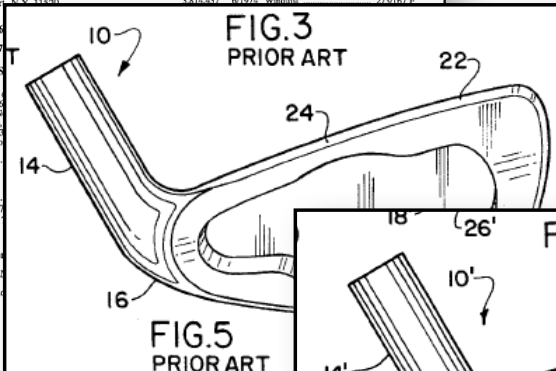
United States Patent [19] [11] Patent Number: **5,486,000**  
**Chorne** [45] Date of Patent: **Jan. 23, 1996**



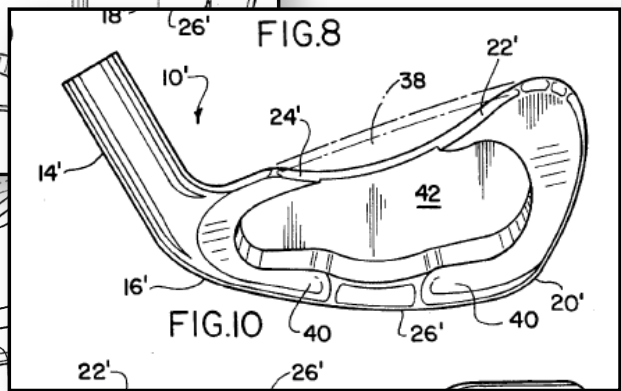
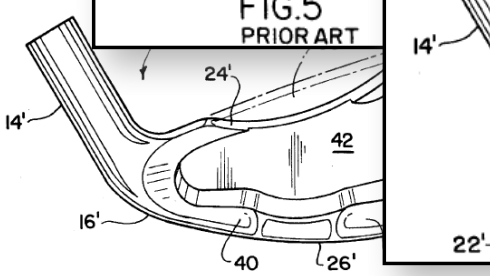
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 [51] Int. Cl. 6 .....  
 [52] U.S. Cl. .....  
 [58] Field of Search ..... 273/77, 169, 171, 11  
 [56] References Cited: U.S. PATENT LIT.: 835,735 11/1906 R



**"Weighted golf iron club head"**







# U.S. Patent No.

United States  
Chorne

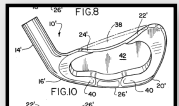
(54) WEIGHTED  
(76) Inventor: Re  
(21) Appl. No.: 17  
(22) Filed: De  
Related  
(63) Continuation-in-  
Pat. No. Des. 35  
No. 3,190,463, 4  
and Ser. No. 466  
said Ser. No. 77  
643,860, which  
(51) Int. Cl.<sup>6</sup>  
(52) U.S. Cl.  
(58) Field of Search  
169, 1  
(56) U.S. P  
835,735 11/199



**What is claimed is:**

**1. In a golf iron club head of a type having a ball-striking body of weight-imparting construction material inclined at a selected angle for driving a struck golf ball a corresponding selected height during its trajectory, said body having spaced-apart top and bottom surfaces bounding a ball-striking surface therebetween, the method of improving weight distribution comprising removing construction material from said top surface, relocating said removed construction material from said top surface to clearance positions below said top surface located adjacent opposite ends of said bottom, surface whereby said removed construction material from a location not used during ball-striking service of said golf iron, is of no adverse consequence thereto and said removed construction material in said relocated positions contributes to increasing said height attained by a struck golf ball.**

golf  
ad"

'000 patent claims	Accused club 
1. In a golf iron club head of a type having a ball-striking body of weight-imparting construction material inclined at a selected angle for driving a struck golf ball a corresponding selected height during its trajectory,	
said body having spaced-apart top and bottom surfaces bounding a ball-striking surface therebetween,	
the method of improving weight distribution comprising	
removing construction material from said top surface,	
relocating said removed construction material from said top surface to clearance positions below said top surface located adjacent opposite ends of said bottom, surface	
whereby said removed construction material from a location not used during ball-striking service of said golf iron, is of no adverse consequence thereto and	
said removed construction material in said relocated positions contributes to increasing said height attained by a struck golf ball.	

**Next time**

## **Next time**

- **Infringement: the doctrine of equivalents and prosecution history estoppel**