



# CS-202: Law For Computer Science Professionals

Class 3: Patents

David W. Hansen, Instructor October 12, 2006

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# Another Presidential Tidbit

# Abraham Lincoln

"The patent system added the fuel of interest to the fire of genius."



#### Lincoln's Patent

On May 22, 1849, Abraham Lincoln received Patent No. 6469 for a device to lift boats over shoals, an invention which was never manufactured. However, it did make him the only U.S. president to hold a patent. Shown here is his scale model at the Smithsonian Institution in Washington, D.C.

# "The Fire Of Genius"

### **Butt Kicking Machine**

### (12) United States Patent

Armstrong

(10) Patent No.: (45) Date of Patent: US 6,293,874 B1 Sep. 25, 2001

(54) USER-OPERATED AMUSEMENT APPARATUS FOR KICKING THE USER'S BUTTOCKS

(76) Inventor: Joe W. Armstrong, 306 Kingston St., Lenoir, TN (US) 37771-2408

(\*) Notice: Subject to any disclaimer, the ter

Subject to any disclaimer, the term of this patent is extended or adjusted under 35

482/51, 72, 148

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/477,175

(22) Filed: Jan. 4, 2000

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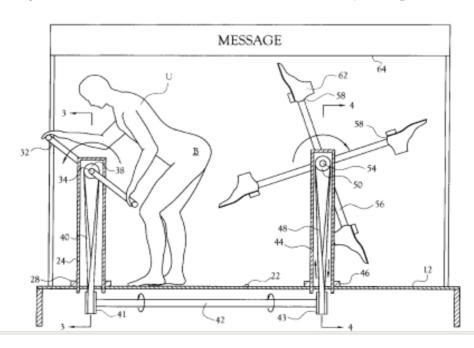
<sup>\*</sup> cited by examiner

Primary Examiner—Joe H. Cheng Assistant Examiner—Kim T. Nguyen (74) Attorney, Agent, or Firm—Pitts & Brittian, P.C.

#### (57) ABSTRACT

An amusement apparatus including a user-operated and controlled apparatus for self-infliction of repetitive blows to the user's buttocks by a plurality of elongated arms bearing flexible extensions that rotate under the user's control. The apparatus includes a platform foldable at a mid-section, having first post and second upstanding posts detachably mounted thereon. The first post is provided with a crank positioned at a height thereon which requires the user to bend forward toward the first post while grasping the crank with both hands, to prominently present his buttocks toward the second post. The second post is provided with a plurality of rotating arms detachably mounted thereon, with a central axis of the rotating arms positioned at a height generally level with the user's buttocks. The elongated arms are propelled by the user's movement of the crank, which is operatively connected by a drive train to the central axis of the rotating arms. As the user rotates the crank, the user's buttocks are paddled by flexible shoes located on each outboard end of the elongated arms to provide amusement to the user and viewers of the paddling. The amusement apparatus is foldable into a self-contained package for storage or shipping.

#### 14 Claims, 7 Drawing Sheets



# Mr. Armstrong

## SCIENTIFIC AMERICAN.COM

September 15, 2003

#### Kick Me, Myself and I

An inveterate tinkerer creates a technology for self-flagellators

By Gary Stix

The independent inventor is a symbol of American ingenuity who can justly claim credit for creations such as the photocopier and the implantable cardiac pacemaker. But this archetypal figure, whose ranks receive nearly one in five patents issued by the U.S. Patent and Trademark Office, may sometimes be more Rube Goldberg than Thomas Edison.

Take Joe Armstrong. The 70-year-old shares traits of both utilitarian and prankster. While residing in Phoenix, Armstrong made a living for almost 25 years off a patented invention that he devised for mounting aluminum-coated Mylar screens in car and truck windows to deflect the brutal Southwestern sun. Elvis Presley's Cadillac and seven of Imelda Marcos's Mercedes were adorned with the screens, according to Armstrong.

When he retired to Tennessee in 1989, he set up a shop in his garage in Lenoir City, about 30 miles southwest of Knoxville. Armstrong has never been able to suppress an impulse to tinker. "If I see something mechanical, I always study how I could make it work better," he says. A fan of the sports teams of the University of Tennessee, a school where he spent two and a half years in the 1950s, he would often hear the expression "to kick butt." He would also hear athletes and even ordinary mortals mutter to themselves, "I'm so sorry I did that, I could just kick my own butt."

Armstrong marveled at the anatomical impossibility of this saying. Inspired, he set about to try to rectify technologically this evolutionary shortfall, even applying for a patent on what he ultimately invented. In 2001 the patent office issued patent number 6,293,874 for a "User-Operated Amusement Apparatus for Kicking the User's Buttocks." The self-flagellator consists

# Leavitt – 2004

#### US engineers perfect butt-kicking machine

By <u>Lucy Sherriff</u> (lucy.sherriff at theregister.co.uk) Published Wednesday 19th May 2004 13:24 GMT

A US engineering firm, Leavitt & Associates Engineers, has applied to patent a "Manually Self-Operated Butt-Kicking Machine". In simple terms, this is a chair with a hole in the seat combined with a kicking foot, all operated by the seat's occupant. It allows the operator to administer a "butt-kicking", should he or she feel it is appropriate.

The company says that it does not intend to bring the product to market, much to the relief, no doubt, of those working in the service industry. Instead, J. Reese Leavitt says, the chair will be rented out to groups for fundraising efforts. Tuning in perfectly to the mood of the time, office manager Sandy Burmeister told *The Idaho Statesman*: "Groups can use this to put someone dressed up like, say, Osama Bin Laden, and charge \$1 to kick his butt."

### Engineers Create Butt-Kicking Machine

#### Backside Booter Designed To Motivate

The engineers at Leavitt and Associates in Idaho have developed an interesting new device designed to motivate employees.

"We think we're simple-minded engineers," said Leavitt. "There's a simple solution for every problem and we always seek to find that simple solution."

Leavitt says he has researched a patent on the Butt-Kicking Machine and has found no matches.

Leavitt and his associates plan on renting out the machine for fundraisers.

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# Title 35, § 102 – "Novelty"

# A person shall be entitled to a patent unless—

. . .

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application.
- Requires identity of invention.

# § 103 – "Non-Obvious"

"(a) A patent may not be obtained though the invention is not ["new" under section 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made *to a* person having ordinary skill in the art to which said subject matter pertains. . . . "

## Booth – 1988



Robert P. Booth, of Wirtz, Virginia, designed and built the ass-kicker sometime around 1988. He has added several improvements to it over time and continues to maintain it, though apparently some other party lettered the now-weathered sign that faces the road. Bob Booth is a retired building contractor who among other things designed his own house and has restored several antique cars. He does not appear to have any particular attachment to asses, and in every other way appears to be what he is: a friendly, quite ingenious country inventor.

### Why The World's Only Ass-Kicking Machine Was Invented

The explanation Bob Booth gave us was that some time ago (probably in the middle 1980s) he was

traveling in North Carolina and saw a similar device, though much simpler and (in our opinion) probably an inferior design. He found it amusing and decided to build one of his own. It's been in his front yard ever since.

### The World's Only Ass-Kicking Machine, A Funny Site of the Day (M. Durrett, About.com)

This water-propelled marvel with whirling suede sneakers resides in Wirtz, Virginia, and will punt you silly.

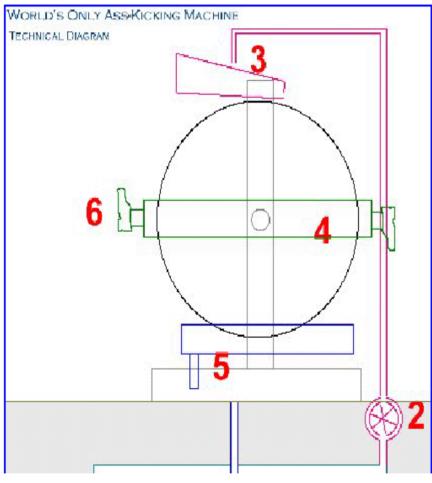
The kindly folks at Ass-Kicker Central share photographs, commentary, and technical diagrams of The World's Only Ass-Kicking Machine. They also answer an obvious question: "Does The World's Only Ass-Kicking Machine Really Kick Ass?"

"We are almost certain it kicks big-time ass.

(Inventor Bob Booth's) anecdotal report
about being attacked by the ass-kicker when
he got too close to it and 'it started up by
itself,' plus the rugged design and Bob's
conservative output rating of 100 asses per
minute convince us that this device does,
indeed, kick ass."

### How The World's Only Ass-Kicking Machine Works

#### A Technical Discussion



The World's Only Ass-Kicking Machine is simple yet elegant in design. We will initially detail the method of operation, and then discuss the design in more detail.

- A known supply of water is held in an underground tank located below the frame of the ass-kicker.
- A 110v electric pump controlled by a switch accessible to the operator pumps the water to a height of about six feet.
- The water flows out into a sluice approximately the same width as the drive wheel
- The water falls into the buckets of the overshot-type

# Title 35, § 102 – "Novelty"

# A person shall be entitled to a patent unless—

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent . . .

## Inventorship

- "Conception is the touchstone of inventorship, the completion of the mental part of invention."
- There can be one or more inventors and their "inventive contribution" can be discrete and identifiable, or the inseparable result of collaborative brainstorming.
- Absent an agreement to the contrary, each inventor owns "a pro rata undivided interest in the entire patent, no matter what their respective contributions."
- Inventorship can be corrected when "through error":
  - A person is named on a patent, or
  - An inventor is not named on a patent and the error does not involve "deceptive intent" by the omitted inventor.



■ home ■ about wine prism ■ wine prism conception ■ technology transfer

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#### **Product Conception**

Based on the Venturi Flow System of aerating wine during fermentation, the Wine Prism was actually conceived of by a 4-year-old boy. One evening while his parents were enjoying a glass of wine, a young Dominic questioned his father about drinking his wine with a straw as he was doing with his milk. After being told that you want to mix a little bit of air with the wine to better taste and evaluate the wine, Dominic returned from the kitchen with a skewer and announced, "Dad, all you need to do is poke a hole in the straw to let in some air!"

Experiments in the lab and by experts in the wine industry have proven the efficacy of the Wine Prism. Since then the Wine Prism has been used in areas of the world from Argentina and Australia to France and Russia.

Patent law requires that all contributors to an invention must be listed on the patent application, which is what you see below, Dominic's signature as it appeared on the original application. And yes, with the sale of every Wine Prism, Dominic's college fund piggy bank receives a donation.



#### IN THE UNITED STATES DEPARTMENT OF COMMERCE BEFORE THE PATENT AND TRADEMARK OFFICE

NOW COMES THE APPLICANTs in the patent application being filed concurrently herewith and avers that:

Applicant:

DOMINIO MICHAEN GATES

Dominic Michael Gates

Date Signed

#### UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6.702.193 B1 Page 1 of 1

DATED : March 9, 2004 INVENTOR(S) : David Alan Gates

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

#### Title page,

Item [75], Inventors, please add the following inventors:

-- Dominic Michael Gates Christina Kennedy Gates --

Signed and Sealed this

Sixth Day of July, 2004

Jon W.Dudu

# Infringement

# Direct Infringement

Title 35, § 271(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.

# "Inducing" Infringement

Title 35, § 271(b):

- (b) Whoever *actively induces* infringement of a patent shall be liable as an infringer.
- Must be intentional.
- Requires direct infringement.

# Infringement

- To prove infringement, the patentee must show that the accused device meets each claim limitation.
- This is known as the "All Elements Rule."
- Doctrine of Equivalents
  - Cannot avoid infringement by making "insubstantial" changes



# Creative: Music Hierarchy

#### (12) United States Patent

Goodman et al.

(10) Patent No.:

US 6,928,433 B2

(45) Date of Patent:

Aug. 9, 2005

#### (54) AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

- (75) Inventors: Ron Goodman, Santa Cruz, CA (US); Howard N. Egan, Capitola, CA (US)
- (73) Assignce: Creative Technology LTD, Singapore
- (\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 323 days.
- (21) Appl. No.: 09/755,723
- (22) Filed: Jan. 5, 2001
- (65) Prior Publication Data US 2002/0147728 A1 Oct. 10. 2002

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84/611-614; 707/104.1, 3, 4, 102; 386/46

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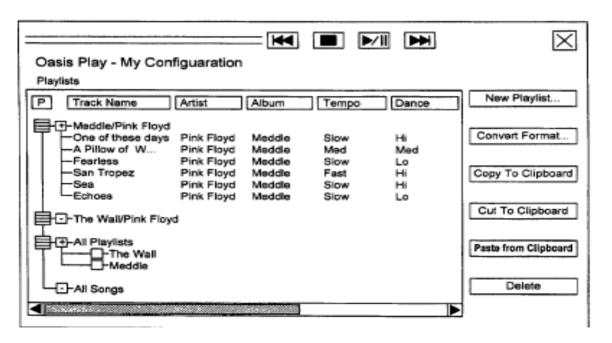
\* cited by examiner

Primary Examiner—Charlos Rones (74) Attorney, Agent, or Firm—Russell N. Swerdon; Creative Technology LTD

(57) ABSTRACT

A method, performed by software executing on the processor of a portable music playback device, that automatically files tracks according to hierarchical structure of categories to organize tracks in a logical order. A user interface is utilized to change the hierarchy, view track names, and select tracks for playback or other operations.

16 Claims, 12 Drawing Sheets



# Creative: Music Hierarchy

U.S. Patent

Aug. 9, 2005

Sheet 3 of 12

US 6,928,433 B2

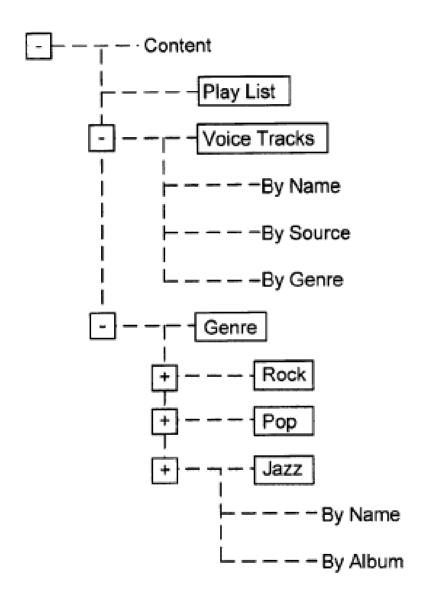


FIG. 4.

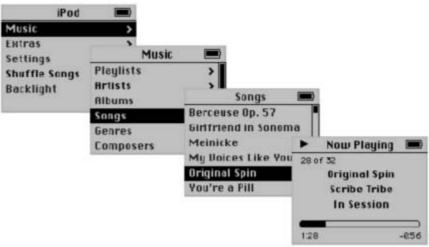
# Creative: Music Hierarchy

#### What is claimed is:

- 1. A method of selecting at least one track from a plurality of tracks stored in a computer-readable medium of a portable media player configured to present sequentially a first, second, and third display screen on the display of the media player, the plurality of tracks accessed according to a hierarchy, the hierarchy having a plurality of categories, subcategories, and items respectively in a first, second, and third level of the hierarchy, the method comprising:
  - selecting a category in the first display screen of the portable media player;
  - displaying the subcategories belonging to the selected 50 category in a listing presented in the second display screen;
  - selecting a subcategory in the second display screen; displaying the items belonging to the selected subcategory in a listing presented in the third display screen; and 55 accessing at least one track based on a selection made in one of the display screens.

# **Creative: The iPod**





iPod Menus

# Creative: Apple Settlement

-		Store	iPod + iTunes		.Mac		QuickTime		Support	Mac OS X
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### Apple & Creative Announce Broad Settlement Ending Legal Disputes Between the Companies

CUPERTINO, California and SINGAPORE – August 23, 2006 – Apple® and Creative Technology, Ltd. today announced a broad settlement ending all legal disputes between the two companies. Apple will pay Creative \$100 million for a paid-up license to use Creative's recently awarded patent in all Apple products. Apple can recoup a portion of its payment if Creative is successful in licensing this patent to others. In addition, the companies announced that Creative has joined Apple's "Made for iPod" program and will be announcing their own iPod® accessory products later this year.

"Creative is very fortunate to have been granted this early patent," said Steve Jobs, Apple's CEO. "This settlement resolves all of our differences with Creative, including the five lawsuits currently pending between the companies, and removes the uncertainty and distraction of prolonged litigation."

"We're very pleased to have reached an amicable settlement with Apple and to have opened up significant new opportunities for Creative," said Sim Wong Hoo, chairman and CEO of Creative. "Apple has built a huge ecosystem for its iPod and with our upcoming participation in the Made for iPod program we are very excited about this new market opportunity for our speaker systems, our just-introduced line of earphones and headphones, and our future family of X-Fi audio enhancement products. We expect that the one-time licensing payment of \$100 million will contribute approximately \$.85 of earnings per share to our current quarter, ending September 30, 2006."

# Wine Tasting Straw

#### (12) United States Patent Gates

(10) Patent No.: US

US 6,702,193 B1

Mar. 9, 2004

#### (54) WINE TASTING STRAW

(76) Inventor: David Alan Gates, 117 Robin St.,

Napa, CA (US) 94558

(\*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 10/206,487
 (22) Filed: Jul. 25, 2002

(51) Int. CL<sup>7</sup> ...... A47G 21/18; G03B 9/20

(52) U.S. Cl. 239/33; 239/16 (58) Field of Search 239/33, 24, 16;

220/254.2, 254.8, 705, 707, 708, 710, 709

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Primary Examiner-Davis Hwu

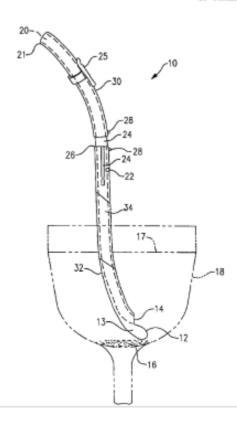
(45) Date of Patent:

(74) Attorney, Agent, or Firm-Risto A. Rinne, Jr.

#### (57) ABSTRACT

An apparatus and method for the tasting of wine includes providing a conduit with an upper end and an opposite bottom end. The bottom end is sealed and preferably solid and it includes a first opening that is disposed slightly above the bottom end. The first opening is adapted to permit the wine, absent any sedimentation, to enter into the conduit when a partial vacuum is created at the upper end. A smaller second opening is provided between the upper end and the first opening that is adapted to introduce a quantity of ambient air into the conduit when a partial vacuum is created. The quantity of ambient air that is introduced is limited by the small size of the second opening to ensure that a partial vacuum sufficient to draw the wine through the conduit is maintained. The ambient air mixes with the wine that is passing through the conduit to aerate the wine in the conduit prior to its tasting.

#### 15 Claims, 1 Drawing Sheet



# "Independent" Claim 1

A wine tasting straw, comprising:

- (a) a conduit that includes an opening at each end thereof; and
- (b) an opening through a wall of said conduit that is disposed intermediate said each end of said conduit,

wherein said opening through a wall includes a cross-sectional area that is smaller than a cross-sectional area of said opening at each end thereof, and

wherein when a first end of said conduit is disposed in a fluid sufficient so that a lower one of said openings at each end is disposed in said fluid, said opening through a wall of said conduit is not disposed in said fluid.

# "Dependent" Claims

- 3. The wine tasting straw of claim 2 wherein said wine tasting straw is formed of a glass.
- 4. The wine tasting straw of claim 2 wherein said shaft includes a curved portion.
- 5. The wine tasting straw of claim 4 wherein said shaft includes a second curved portion.
- The wine tasting straw of claim 5 wherein said shaft includes an S shape thereto.
- 7. The wine tasting straw of claim 2 wherein said second opening includes a diameter that does not exceed one-sixteenth of an inch.

### **HANSEN'S AERATING STRAW (Take 1)**

### "Your Wine Never Tasted Better"

- 1. Remove straw from package.
- 2. Cut a small hole in the side of the straw about 4 inches from the end that does not bend.
- 3. Insert this end of the straw in a glass of wine, making sure that the hole is above the level of the wine.
- 4. For even better flavor, bend the top end of the straw before drinking.
- 5. Enjoy!!

### **HANSEN'S POWER STRAW (Take 2)**

### "Your Wine Never Flowed Quicker"

- 1. Remove straw from package.
- 2. Cut a small hole in the side of the straw no more than 1 inch from the end that does not bend.
- 3. Insert this end of the straw in a glass of wine, making sure that the hole is in the wine.
- 4. For even better flavor, bend the top end of the straw before drinking.
- 5. Enjoy!!

### **HANSEN'S COOLER STRAW (Take 3)**

### "Your Coffee Never Sipped Cooler"

### A Starbucks<sup>TM</sup> Exclusive

- 1. Remove straw from package.
- 2. Cut a small hole in the side of the straw about 4 inches from the end that does not bend.
- 3. Insert this end of the straw in a cup of coffee, making sure that the hole is above the level of the coffee.
- 4. Sip away the hole will help cool the coffee.
- 5. For even better flavor, bend the top end of the straw before drinking.
- 6. Enjoy!!

### **HANSEN'S COOLER STRAW (Take 4)**

### "Your Coffee Never Sipped Cooler"

### A Robert Mondavi<sup>TM</sup> Exclusive

- 1. Remove straw from package.
- 2. Cut a small hole in the side of the straw about 4 inches from the end that does not bend.
- 3. Insert this end of the straw in a cup of coffee, making sure that the hole is above the level of the coffee.
- 4. Sip away the hole will help cool the coffee.
- 5. For even better flavor, bend the top end of the straw before drinking.
- 6. Enjoy!!
- 7. IMPORTANT: Do not use this product to aerate wine.