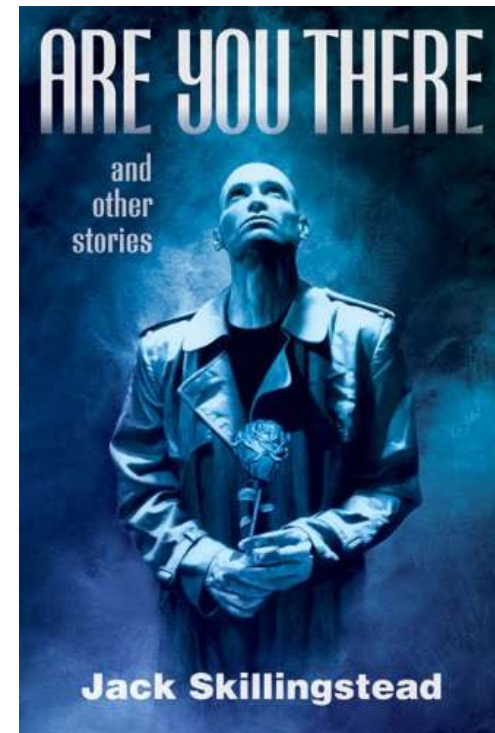


# Intellectual Property

MAE 2250

# Are you here?

- A. Yes
- B. No
- C. Only physically (but not spiritually)
- D. Spiritually (only my clicker)
- E. Whatever



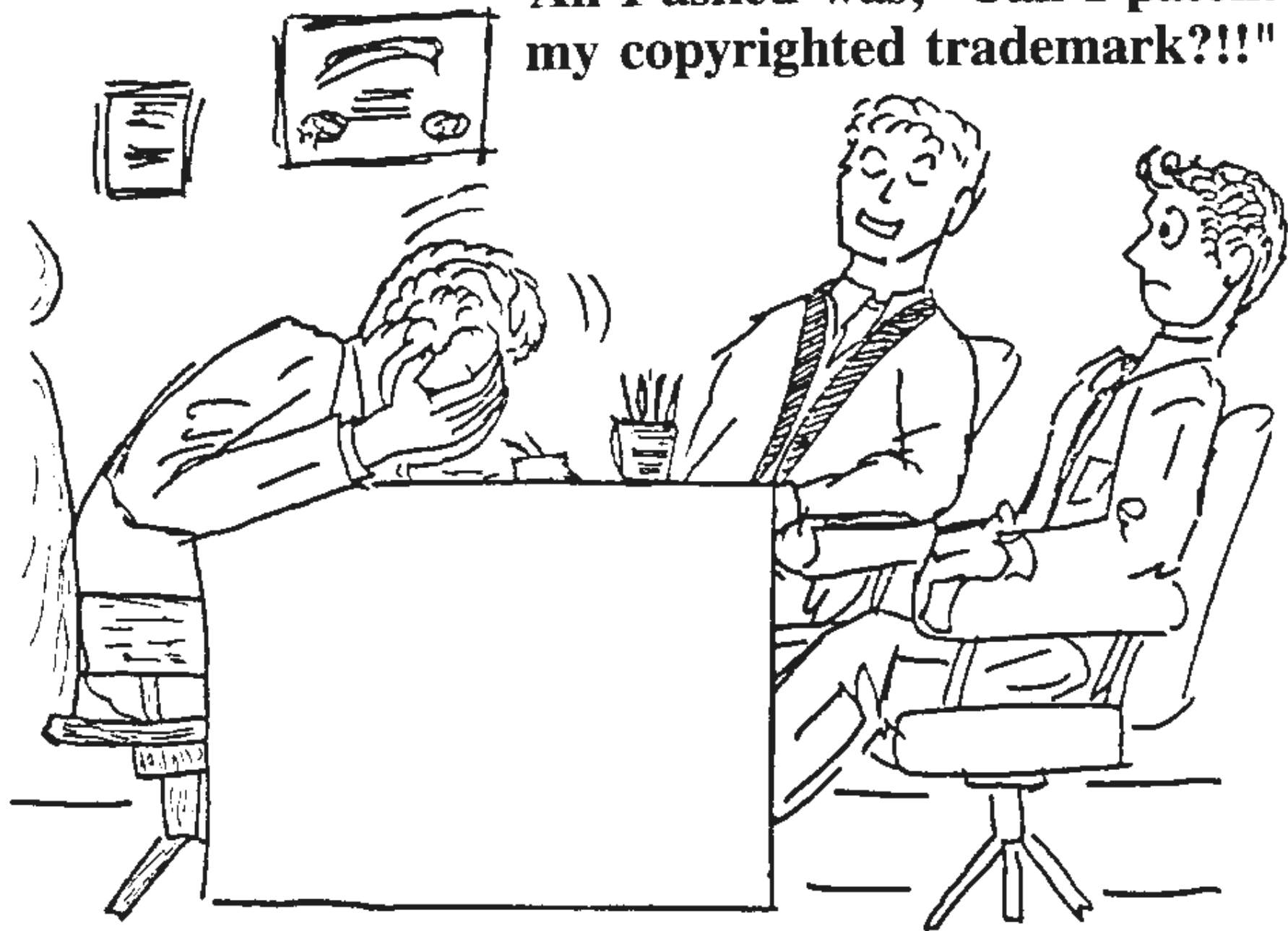
# Phases

- Phase 0: Planning
- Phase 1: Conceptual design
- Phase 2: System design
- Phase 3: Detail design
- Phase 4: Testing and refinement
- Phase 5: Production ramp-up



**Iterate**

**"All I asked was, 'Can I patent my copyrighted trademark?!'"**



“Intelligence is the new form of property.”

—(Charles Handy)

# Intellectual property

- “People with ideas – people who own ideas – have more powerful than people who work machines and, in many cases more powerful than the people who own machines.”

- (Howkins, 2002)

# Intellectual property

- “Intellectual property can be defined as something produced by the mind, of which the ownership or right to use may be legally protected by copyright, patent, trademark, etc. Intellectual property includes industrial, literary and artistic works.”

(Al-Hawamdeh & Hart, 2002)



MakerBot Replicator<sup>™</sup> 2  
DESKTOP 3D PRINTER

MakerBot Replicator<sup>™</sup> 2  
DESKTOP 3D PRINTER





MATT



First-ever 10% post-consumer fiber cup  
and 100% post-consumer fiber sleeve





US008056757B2

(12) **United States Patent**  
**Mansour et al.**

(10) **Patent No.:** **US 8,056,757 B2**  
(45) **Date of Patent:** **Nov. 15, 2011**

(54) **HOT BEVERAGE CUP SLEEVE**

(75) **Inventors:** **Rached Ben Mansour, Dhahran (SA);  
Muhammad A. Hawwa, Dhahran (SA)**

(73) **Assignee:** **King Fahd University of Petroleum  
and Minerals, Dhahran (SA)**

(\* ) **Notice:** Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 567 days.

(21) **Appl. No.:** **12/222,163**

(22) **Filed:** **Aug. 4, 2008**

(65) **Prior Publication Data**

US 2010/0025414 A1 Feb. 4, 2010

(51) **Int. Cl.**  
**B65D 25/00** (2006.01)

(52) **U.S. Cl.** ..... **220/739; 220/737**

(58) **Field of Classification Search** ..... 220/738,  
220/739, 592.17, 737, 740, 741, 742, 743,  
229/403, 493/007

See application file for complete search history.

(56) **References Cited**

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5,713,512 A \* 2/1998 Baroni ..... 229-403

6,814,253 B2 11/2004 Wong  
6,926,197 B2 \* 8/2005 Hed et al. .... 229-403  
6,986,438 B2 1/2006 Leung

**FOREIGN PATENT DOCUMENTS**

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**OTHER PUBLICATIONS**

JP 02005104578 A abstract translation.\*

\* cited by examiner

*Primary Examiner* — Anthony Stashick

*Assistant Examiner* — Jeffrey Allen

(74) *Attorney, Agent, or Firm* — Richard C. Litman

(57) **ABSTRACT**

A hot beverage cup and sleeve bring together two modes of heat transfer, conduction and radiation. The sleeve has an inner face with a plurality of high reflectivity surfaces for radiating heat back to the cup. The sleeve also has a plurality of insulating members for containing insulating air. Each of the insulating members is positioned to space the high reflectivity surfaces away from the cup. A low emissivity film can be adhered to the cup without touching the insulating members. The film can also be attached to the sleeve facing but spaced from the high reflectivity surfaces. This cup and sleeve arrangements minimize thermal contact and reduce heat transfer. Thus, the hot beverage cup and sleeve protect a person's hand as well as extend the time of keeping the beverage hot.

**18 Claims, 6 Drawing Sheets**





US008056757B2

(12) **United States Patent**  
**Mansour et al.**

(10) **Patent No.:** **US 8,056,757 B2**  
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(58) **Field of Classification Search** ..... 220/738,  
220/739, 592.17, 737, 740, 741, 742, 743,  
229/403, 493/007

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5,713,512 A \* 2/1998 Baroni ..... 229-403

6,814,253 B2 11/2004 Wong  
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JP 02005104578 A abstract translation.\*

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**18 Claims, 6 Drawing Sheets**



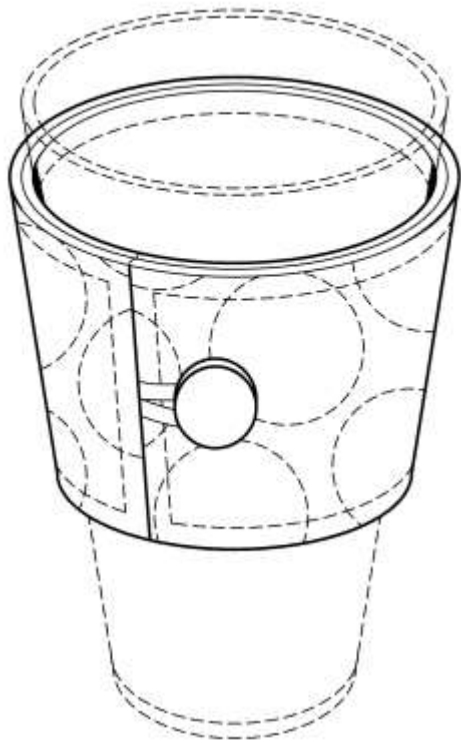


FIG. 1

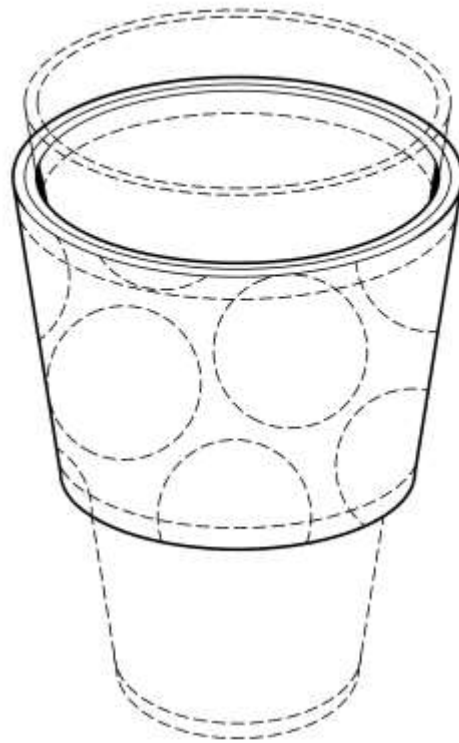


FIG. 2

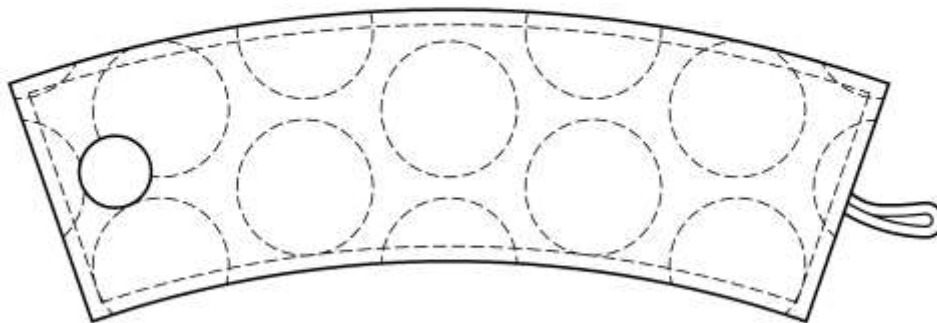


FIG. 3





**STARBUCKS®**

Decaf

Shots

Syrup

Milk

Custom

Drink

die.me

# Value

- Stopping competition
- Barrier to entry
- Assets
- Proof of right to operate
- Cross licensing



# Types of IP

- Trade Secrets
- Patents
- Trademarks
- Copyrights
- Unfair Competition



# Trade secrets

- Obtained by creating something and obfuscating it
  - Good for complex products that cannot be reverse engineered (SW, electronics)
  - Difficult for obvious inventions (Mechanical)
- Last as long as you can protect it
  - Why companies will not sue on TS

?

natural flavouring

caffeine flavouring

sugar

caramel (e150d)

phosphoric acid

carbonated water



# Copyright

- To protect non-utilitarian creations
- Obtained by creating something
  - perfected by declaration and registration
- Last as long as owner lives + 70 years

Musical score for five staves, including vocal lines and piano accompaniment. The notation includes notes, rests, and dynamic markings.

1. *Andante*  
 2. *Allegretto*  
 3. *Allegro*  
 4. *Allegro*  
 5. *Allegro*  
 6. *Allegro*  
 7. *Allegro*  
 8. *Allegro*  
 9. *Allegro*  
 10. *Allegro*

11. *Allegro*  
 12. *Allegro*  
 13. *Allegro*  
 14. *Allegro*  
 15. *Allegro*  
 16. *Allegro*  
 17. *Allegro*  
 18. *Allegro*  
 19. *Allegro*  
 20. *Allegro*

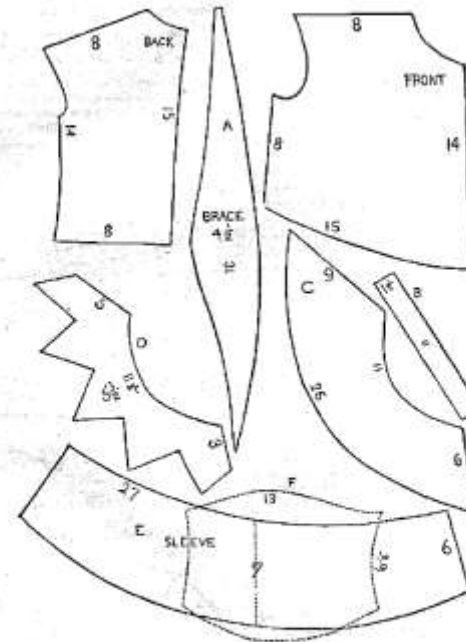


# Is a dress copyrightable?



## DIAGRAM OF LADY'S DRESS.

(See page 6.)



## EMBROIDERY FOR A CHILD'S HANDKERCHIEF.



# Trademarks

- Need to be applied for
  - Must be used commercially
- Originally to protect the customer
  - Now also for brand value





SONY



Microsoft



Carlsberg



Canon

NOKIA  
Connecting People



Coca-Cola

PLAYBOY



Mercedes-Benz

# Types of patents

- Utility
- Plant
- Design

# Utility Patent

- Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title. (35 U.S.C. § 101)

# Plant Patents

- Whoever invents or discovers and asexually reproduces any distinct and new variety of plant, including cultivated spores, mutants, hybrids, and newly found seedlings, other than a tuber propagated plant or a plant found in an uncultivated state. . . (35 U.S.C. § 161)
  - No bacteria or similar single-cell organisms need apply!

# Design Patents

- Whoever invents any new, original, and ornamental design for an article of manufacture may obtain a patent. (35 U.S.C. § 171)

# Life & Duration

- Life of utility patent - 17 years from date of issue of Patent if application filed before June 95 or 20 years from date of filing application after June 95
- Effective only in the U.S. (foreign patent applications filed separately based on U.S. application are available).

# INVENTION PATENTABLE IF.....



- NEW
- USEFUL
- NOT OBVIOUS
- PERTAINS TO PATENTABLE SUBJECT MATTER UNLESS
- GRANT OF PATENT IS NOT BARRED

# SUBJECT MATTER PATENTABLE

- A PROCESS
- A MACHINE
- A COMPOSITION OF MATTER
- A MANUFACTURE

*35 USC Section 101*



The  
United  
States  
of  
America



The Commissioner of  
Patents and Trademarks

*Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.*

*Therefore, this*

United States Patent

*Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.*

*If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.*

*If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.*

*Bruce Lehman*

Commissioner of Patents and Trademarks

*Andrea Morton*  
Agent



US005486821A

7-5348

**United States Patent** (19)

Stevens et al.

[11] Patent Number: 5,486,821

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

[54] ARTIFICIAL HORIZON ALTITUDE WARNING SYSTEM

[75] Inventors: David E. Stevens, St. Louis, Mo.; Leonard A. Teatone, Pensacola, Fla.

[73] Assignee: The United States of America as represented by the Secretary of the Navy, Washington, D.C.

[21] Appl. No.: 249,658

[22] Filed: May 26, 1994

[51] Int. Cl.<sup>5</sup> G08B 23/00

[52] U.S. Cl. 340/970; 340/974; 340/977; 340/980

[58] Field of Search 340/970, 973, 340/974, 975, 980, 977, 982; 342/29; 345/7, 139; 364/433, 434

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 NASA Conference Publication 2306, "Peripheral Vision Horizon Display (PVHD)", (Mar. 15-16, 1983).

Primary Examiner—John K. Peng

Assistant Examiner—Benjamin C. Lee

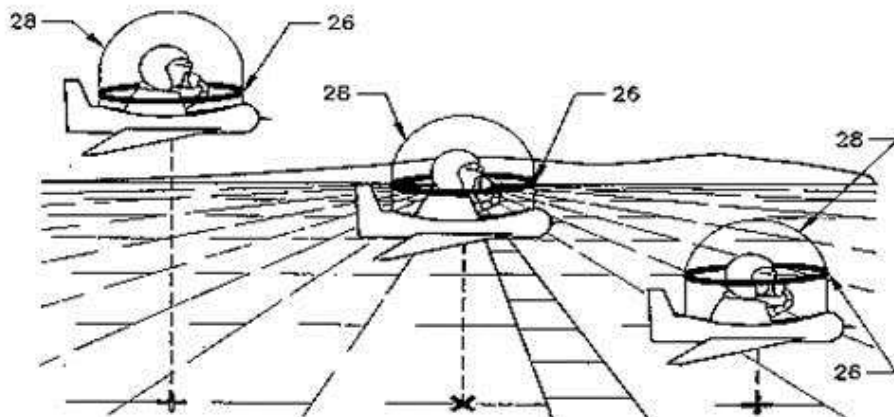
Attorney, Agent, or Firm—A. David Spevack; William C. Garvert

[57]

## ABSTRACT

An artificial horizon altitude warning system is provided for helping to prevent a controlled flight of an aircraft into the ground. The artificial horizon altitude warning system comprises an altimeter for gathering altitude information about the aircraft and generating an altitude signal; a laser assembly for producing a light in a cockpit of the aircraft; and a controller for receiving the altitude signal and for positioning the light in the cockpit to form an artificial line based on the altitude signal, the artificial line being positioned so as to be disposed along the arcuate length corresponding to the location of an actual horizon as viewed by a pilot of the aircraft.

18 Claims, 3 Drawing Sheets



# Claims

- Description – full embodiment, quantitative
- Claims – Hierarchical: from broad to specific



US007958961B1

(12) **United States Patent**  
**Schade**(10) **Patent No.:** **US 7,958,961 B1**  
(45) **Date of Patent:** **Jun. 14, 2011**(54) **SEGWAY WITH GOLF IMPROVEMENTS**(76) **Inventor:** **Christopher W. Schade, Fishers, IN (US)**(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 104 days.(21) **Appl. No.:** **12/548,313**(22) **Filed:** **Aug. 26, 2009****Related U.S. Application Data**

(60) Provisional application No. 61/091,967, filed on Aug. 26, 2008.

(51) **Int. Cl.**  
**B60K 28/04** (2006.01)(52) **U.S. Cl.** ..... **180/273; 180/19.1; 180/218; 280/727**(58) **Field of Classification Search** ..... **180/19.1, 180/19.2, 19.3, 218, 273; 280/727**  
See application file for complete search history.(56) **References Cited****U.S. PATENT DOCUMENTS**

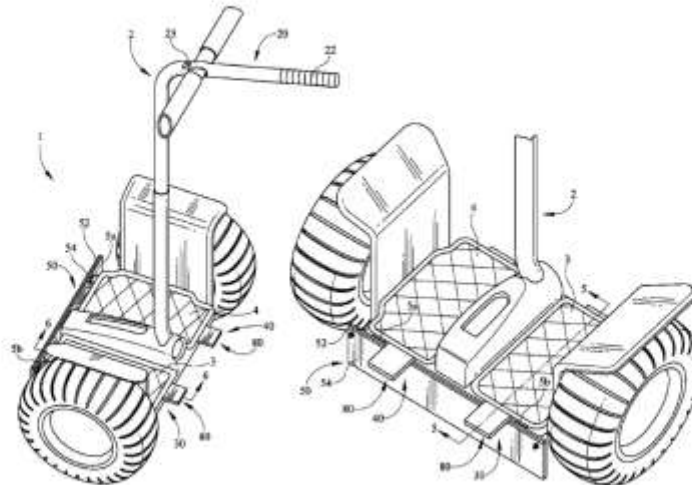
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2007/0205241	A1	9/2007	Mouso
2009/0242265	A1*	10/2009	Whitstone, Jr. .... 180-19.2

\* cited by examiner

*Primary Examiner* — Paul N. Dickson*Assistant Examiner* — Barry Gooden, Jr.(74) *Attorney, Agent, or Firm* — Chad Bruggeman; Middleton Reutlinger**ABSTRACT**

(57) A SEGWAY adapted with a mechanism to manually override the rider detection mechanical sensors to allow a golfer to choose to ride or not ride the SEGWAY while playing golf. A handle attachment extends outwardly enabling the golfer to manually steer and thus control the speed and direction of the SEGWAY while not riding the SEGWAY. The golfer can ride, walk, or run as desired in unison with the improved SEGWAY. A rider detection override mechanism is positioned under each existing step pad. A counterweight is placed at the rear of the SEGWAY to balance the SEGWAY when there is no rider present.

**10 Claims, 6 Drawing Sheets**

## Claims

1. (canceled)

2. A vehicle for transporting a payload over a surface, the vehicle comprising: a support for supporting a payload; an enclosure for at least partially enclosing the payload; two laterally disposed ground-contacting elements coupled to at least one of the enclosure or the support; a drive coupled to the ground-contacting elements; and a controller coupled to the drive, for governing the operation of the drive at least in response to position of the center of gravity of the vehicle to dynamically control balancing of the vehicle by moving the ground-contacting elements fore and aft of the vehicle.

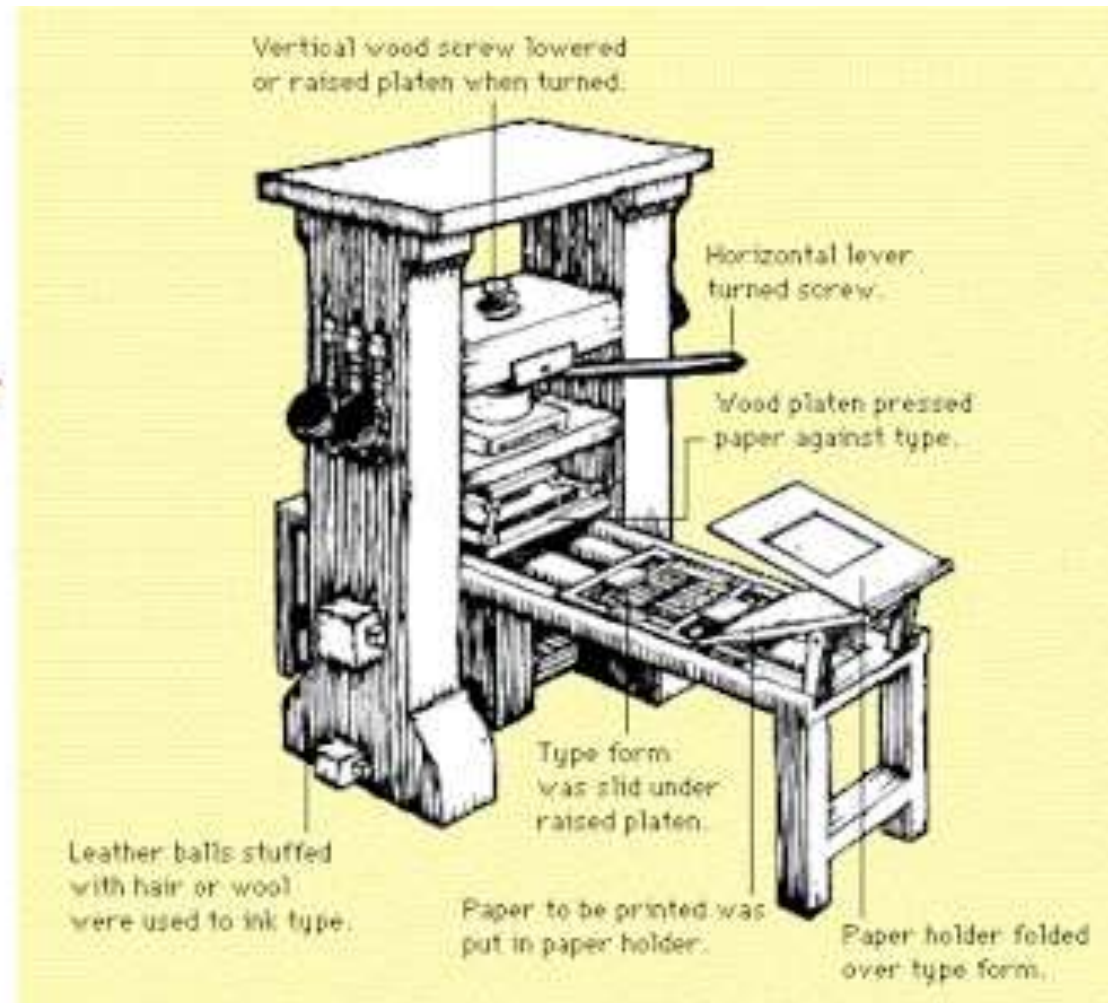
3. The vehicle of claim 2, comprising a second drive for delivering power to the ground-contacting elements to propel the vehicle fore and aft.

4. The vehicle of claim 2, wherein the drive is a motorized drive.

5. The vehicle of claim 2, wherein the controller coupled to the drive, governs the operation of the drive at least in response to pitch of the vehicle to dynamically control balancing of the vehicle.

Read more: <http://www.faqs.org/patents/app/20120239284#ixzz30NID7o2x>

# Patent models



# Foreign Rights

- PCT
  - Filing within year
  - Acquiring foreign rights from inventor
  - Making the Choice
- National Filings
- Cost
  - If you have to ask - you can't afford it

## 37 C. F. R.

### PART 404 LICENSING OF GOVERNMENT OWNED INVENTIONS

- **§ 404.5 Restrictions and conditions on all licenses granted under this part.**
  - (1) A license may be granted only if the applicant has supplied the Federal agency with a satisfactory plan for development or marketing of the invention, or both, and with information about the applicant's capability to fulfill the plan.
  - (2) A license granting rights to use or sell under a federally owned invention in the United States shall normally be granted only to a licensee who agrees that any products embodying the invention or produced through the use of the invention will be manufactured substantially in the United States.



# Are you still here?

- A. Yes
- B. No
- C. Only physically (but not spiritually)
- D. Spiritually (only my clicker is here)
- E. What-e-ver

