

## Patents



Eddie Van Halen's guitar support:

<https://patentimages.storage.googleapis.com/41/59/63/c6466edd855de4/US4656917.pdf>

## Class schedule

Class	Topic
9/9	Introduction A ridiculously fast history of intellectual property in America
9/23	Copyrights
9/30	Trademarks
10/7	<b>Patents</b>
10/14	Digital futures



Course materials are on:  
<https://queenlake.com/wise-2021/ip4us/>

Intellectual Property for the Rest of Us - Class 3

UNITED STATES  
PATENT AND TRADEMARK OFFICE

[About Us](#)
[Jobs](#)
[Contact Us](#)
[MyUSPTO](#)

[Patents](#)
[Trademarks](#)
[IP Policy](#)
[Learning and Resources](#)

Getting started

- Patent basics
- Process overview
- Legal assistance and resources
- Inventor and entrepreneur resources
- International cooperation
- Patent FAQs

Application process

- Search for patents
- Learn about patent classification
- Filing online
- Checking application status
- Responding to Office actions
- Petitions
- Patent Trial and Appeal Board

Maintaining a patent

- Maintenance fees
- Correcting your patent
- Transferring ownership
- Ordering certified documents

Tools & links

- [About EFS-Web](#)  
File a patent application online with EFS-web
- [Check application status](#)  
Check patent application status with public PAIR and private PAIR
- [Patent Trial & Appeal Board](#)  
Resolve disputes regarding patents with PTAB
- [More tools & links](#)
- [Patent Center](#)  
Try the beta replacement for EFS-Web, Private PAIR and Public PAIR
- [Fees and payment](#)  
Pay maintenance fees and learn more about filing fees and other payments
- [Global Dossier](#)  
View international patent filings

Building blocks of opportunity

How Debbie Sterling challenged the status quo in the toy industry and made STEM more accessible for girls. [FULL STORY](#)>

[Patent basics >](#)  
[Trademark basics >](#)  
[Inventor & entrepreneur resources >](#)

# United States Patent and Trademark Office

<http://www.uspto.gov/>



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3

## Patents

- › The law
- › Recent case law
- › Obtaining and using patents
- › Patents in the wild



In 1813, Thomas Jefferson had this to say about patents: "He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me." A noble thought indeed but try telling that to two parties locked in a multimillion-dollar court case over a bagless vacuum cleaner.  
– Tony Dunnell [\[source\]](#)



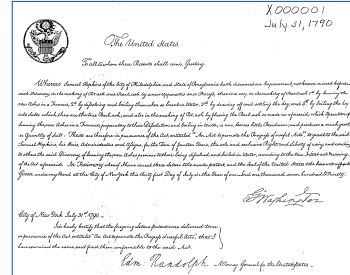
SharkNinja Cleans Up Over Dyson  
[\[Link\]](#)

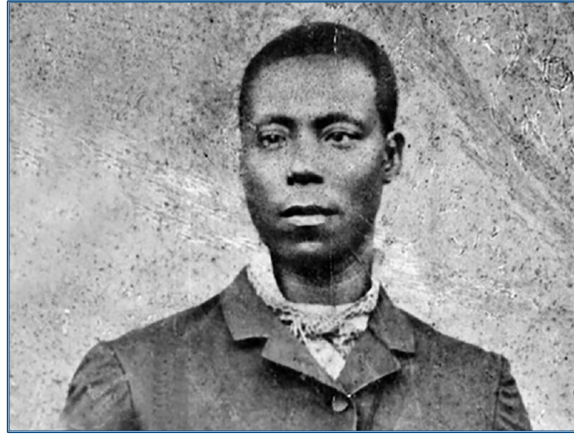
## On Patents



## Patent law

- ▶ First U.S. Patent issued on July 31, 1790 Samuel Hopkins was issued the first patent for a process of making potash, an ingredient used in fertilizer. The patent was signed by President George Washington
- ▶ 1830s – expansion to allow aliens to file patent applications, add clarity on novelty, and use prior to filing
- ▶ 1842 – design patents permitted
- ▶ 1930 – first plant patent
- ▶ 1965 – first software patent
- ▶ 1998 – business methods
- ▶ Current patent law: 35 U.S.C





**The First African-American to Hold a Patent Invented  
'Dry Scouring' [\[Link\]](#)**



Details on the patent lost because of a fire in 1836 [\[Link\]](#)

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7

## Executive orders

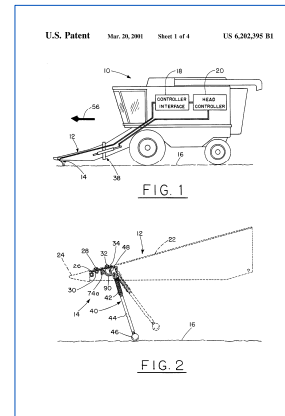
- ▶ Executive Order 10096--Providing for a uniform patent policy for the Government with respect to inventions made by Government employees and for the administration of such policy [\[Link\]](#)
- ▶ Executive Order 12591--Facilitating access to science and technology [\[Link\]](#)
- ▶ Full list here: Federal Executive Orders relating to Federally-funded Inventions [\[Link\]](#)





## Case law

- Graham v. John Deere Co. 383 U.S. 1 (1966)  
Clarifying the nonobviousness clause
- Gottschalk v. Benson (S. Ct. 1972)  
Disallows software patents
- Diamond v. Diehr (S. Ct. 1981)  
Allowed a patent, even though a computer program was involved
- State Street Bank & Trust Co. v. Signature Financial Group, Inc. (Fed. Cir. 1998)  
Established that software is patentable, even though there is no machine transformation



## America Invents Act of 2013 [\[Link\]](#)

- First Inventor to File - Section 3
- Human Organism Patents - Section 33
- Patents on Tax Strategies - Section 14
- Virtual Marking and False Marking Limits - Section 16
- Prioritized Examination - Sections 11(h), 25



Intellectual Property for the Rest of Us 10

### First Inventor to File - Section 3

Under this section, the U.S. transitions from a First to Invent patent system to a system where priority is given to the first inventor to file a patent application.

### Human Organism Patents - Section 33

The AIA prohibits granting patents for human organisms. This provision does not apply to previously issued patents.

### Patents on Tax Strategies - Section 14

After the date of enactment of the AIA, “any strategy for reducing, avoiding, or deferring tax liability” is considered insufficient to distinguish a claimed invention from the prior art for purposes of evaluating an invention for novelty and nonobviousness.

### Virtual Marking and False Marking Limits - Section 16

Allows patent owners to identify their products with the web address containing the patent information.

Limits false marking lawsuits to those filed by the U.S. government or by a competitor who can prove competitive injury.

May use a patent that covered the product, but has since expired.

### Prioritized Examination - Sections 11(h), 25

The AIA gives patent applicants the option to request prioritized examination for inventions that are “important to the national economy or national

competitiveness.

## About patents

- Definition
- Why patent?
- Why not patent?



## Definition

Black's Law dictionary has more than seven pages of definitions regarding patents and patent-related topics.

- Patent – The right to exclude others from making, using, marketing, selling, offering for sale, or importing an invention for a specified period (20 years from the date of filing), granted by the federal government to the inventor if the device or process is novel, useful, and nonobvious. [35 USCA §§ 101–103](#).



## Why Patent?

- › To obtain exclusive rights to your invention
- › To recoup research and development costs
- › To attract investors
- › Patents are often about business, rather than invention.



Method and apparatus for a pillow including foam pieces of various sizes  
[\[Link\]](#)

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13

## Why not patent?

- › Trade secrets may be preferable
- › It costs too much in money or time
- › Why didn't we patent the spreadsheet? Were we stupid? [\[Link\]](#)
- › Because you believe that patents inhibit creativity



## How it works

- Inventing something
- Deciding to patent your invention
- Applying for your patent
  - What to do while waiting?
  - Revising your application
- Using your patent
  - Marking your product [note new case law]
  - Licensing your patent
  - Selling your patent
- Protecting your patent



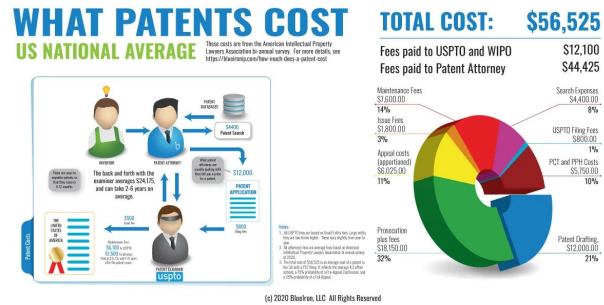
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15



## How much does it cost?

- ▶ In summary:
  - ~\$3500-\$4500 – basic utility patent
  - ~\$5000-\$7000 – computer and electronics
  - Additional legal fees
- ▶ Current Fee Schedule [\[Link\]](#)
  - \$220-\$330 for basic filing
  - Additional fees for searches, claims, and attorneys

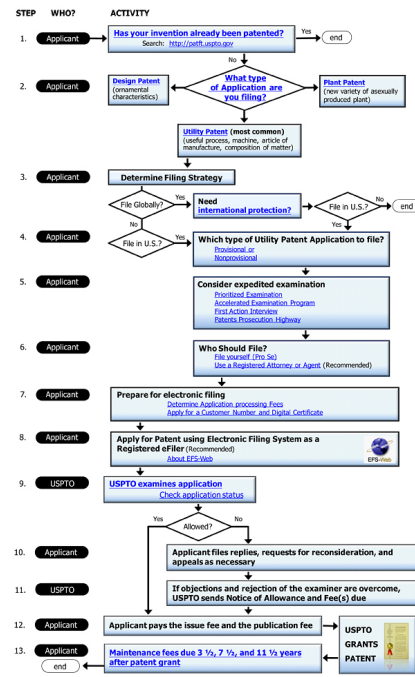


# Applying for your patent

- ▶ How it works
- ▶ How much does it cost?
  - How much do you have?
- ▶ How long does it take?
  - Average is 22 months



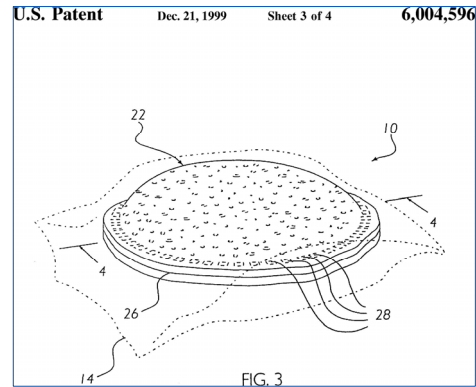
[Click here to see full size image.](#)



17

## What can be patented?

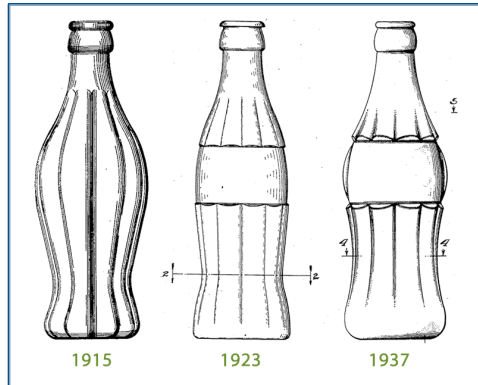
- ▶ The invention must be one of the patentable subjects as specified in the law:
  - A utility patent describes how a thing works
  - A design patent describes how a thing looks. (Similar to but not quite the same as a trademark.) **Note:** the term of a design patent is 15 years.
  - A plant patents describes a new, asexually reproducing plant, other than one found in the wild
- ▶ It must be useful.
- ▶ It must be novel.
- ▶ It must be nonobvious.



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18

Crustless PB&J eventually overturned on obviousness



**“a bottle which a person could recognize even if they felt it in the dark...”**



What are Design Patents? [\[Link\]](#)

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19

Coca-Cola design goals: <https://coke2design.wordpress.com/2011/03/26/the-contour-bottle-a-brief-history/>

What You Need to Know About, and Why You Need, Design Patents -

[https://www.jdsupra.com/legalnews/what-you-need-to-know-about-and-why-you-3863891/?utm\\_source=pocket\\_mylist](https://www.jdsupra.com/legalnews/what-you-need-to-know-about-and-why-you-3863891/?utm_source=pocket_mylist)



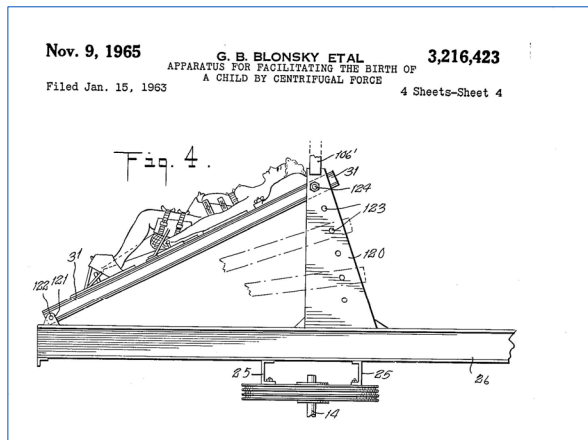
## Alice Corporation Pty. Ltd. v. CLS Bank International et al.



Maybe software is an abstract idea that can't be patented. Maybe

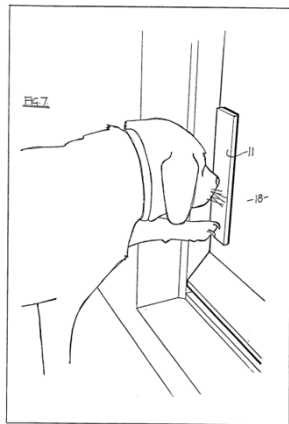
## Key concepts

- › Prior art
- › Usefulness
- › Novelty
- › Nonobviousness



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21



GB 2 117 179 A



## Prior art



UK Patent – Entry signal system for pets [\[Link\]](#)

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22

## It must be useful

- ▶ It must work
  - You can't obtain a patent for a perpetual motion machine.
- ▶ It must be for a legal purpose
  - You can't patent a machine that's intended to deceive.
- ▶ It doesn't have to be saleable

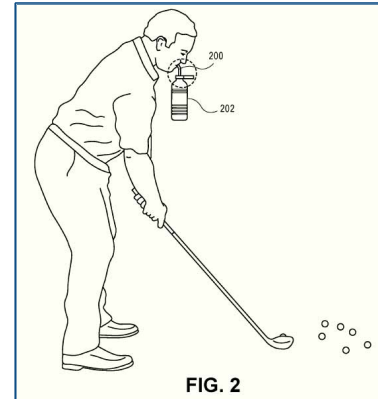
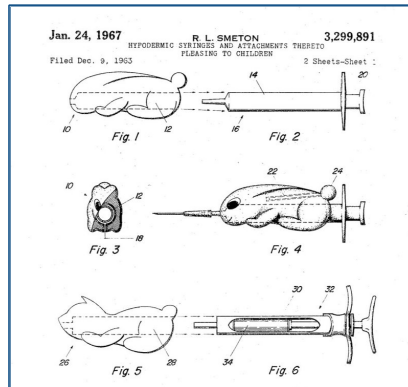


FIG. 2  
Golfer's Yips Mitigator [\[Link\]](#)





Just because it's patented doesn't mean that it's a good idea.



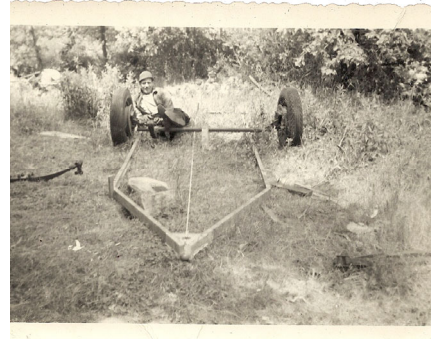
Hypodermic Syringes And Attachments Thereto Pleasing To Children

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## It has to be nonobvious

- Even if it's useful and novel, if a smart person could have or should have already thought of it, you can't obtain a patent.
- You can change the type material used in a device

Jefferson's comment on "chain, rope, or leather"



## It must be new

You can't patent an invention that

- ▶ Has been known and used by others § 102(a)
- ▶ Is in use or on sale § 102(b)
- ▶ Has been abandoned: § 102(c)
- ▶ Is the subject of a foreign patent § 102(d)
- ▶ Has been described in another patent or application § 102(e)
- ▶ Wasn't invented by the inventor § 102(f)
- ▶ Was first invented by someone § 102(g)



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26

Walking golf ball [\[Link\]](#)

## Protecting your patent

- ▶ Follow new patent filings
- ▶ Follow products in your market area
  - [Americana: Wrenching Sears – TIME](#)
- ▶ Watch court decisions
  - [CAFC](#)- Court of Appeals for the Federal Circuit
  - Federal District courts
  - State courts (contracts and licensing)
- ▶ Watch for patent trolls
  - [Intellectual Ventures Files Its First Lawsuits; Giant Patent Troll Awakened | Techdirt](#)

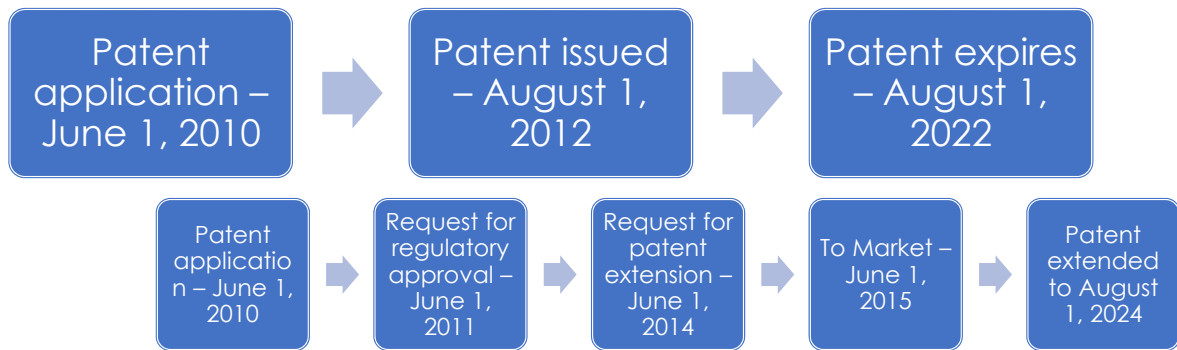


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27

*Nathan Myhrvold, founder and chief executive office of Intellectual Ventures and primary author of the Modernist Cuisine books, speaks onstage at The New York Times Food for Tomorrow Conference in 2015.*

## Extensions to patent terms [\[Link\]](#)



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28



## About patents held by the U.S. Government



Patent No. 6,630,507: Why the U.S. government holds a patent on cannabis plant compounds [\[Link\]](#)

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29

The U.S. Government owns on a scale of 30,000 patents and receives new grants for 1,000 or more each year.

The Federal Funding of R&D: Who Gets the Patent Rights? [\[Link\]](#)

Some U.S. government patents are held in secrecy for national security purposes: The U.S. Government's Secret Inventions [\[Link\]](#)

Government Owned Patents: Everything You Need to Know [\[Link\]](#)

The Government's Patent Policy: The Bayh-Dole Act and "Authorization and Consent" [\[Link\]](#)

Rank	Owner	2020
1	International Business Machines Corp	9130
2	Samsung Electronics Co Ltd	6415
3	Canon Inc	3225
4	Microsoft Technology Licensing LLC	2905
5	Intel Corp	2867
6	Taiwan Semiconductor Manufacturing Co TSMC Ltd	2833
7	LG Electronics Inc	2831
8	Apple Inc	2792
9	Huawei Technologies Co Ltd	2761
10	Qualcomm Inc	2276
11	Amazon Technologies Inc	2244
12	Sony Corp	2239
13	BOE Technology Group Co Ltd	2144
14	Toyota Motor Corp	2079
15	Ford Global Technologies LLC	2025
16	Samsung Display Co Ltd	1902
17	Google LLC	1817
18	General Electric Co	1760
19	Micron Technology Inc	1535
20	Hyundai Motor Co	1464

## Patents issued in 2020 [\[Link\]](#)

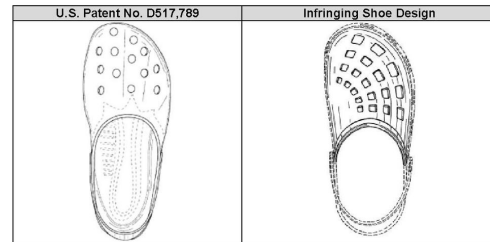


IBM has been the consistent leader since 1993.

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## Patent infringement

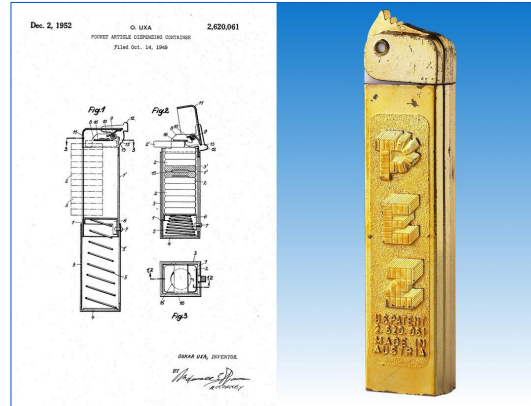
- ▶ Someone uses your patent without your permission
- ▶ Someone uses an idea very similar to yours
  - You can object to a new patent award
  - You can sue for infringement
- ▶ Software patents can also be covered under copyright law





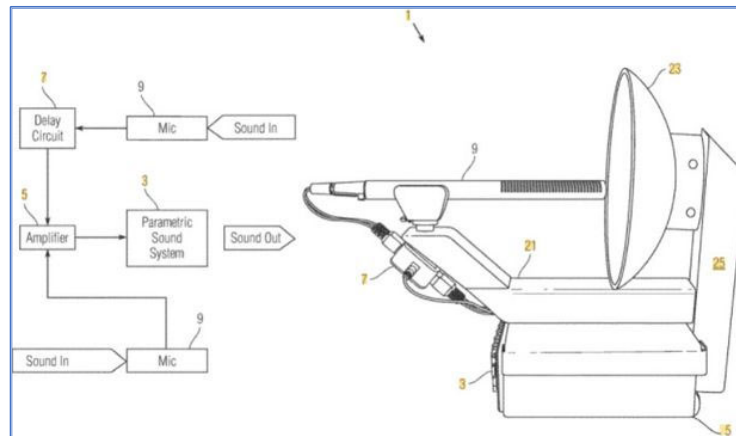
## Using your patents

- ▶ Applying it to your product
  - Note: recent court decision on patent marking [\[Link\]](#)
- ▶ Licensing your patent
- ▶ Selling your patent



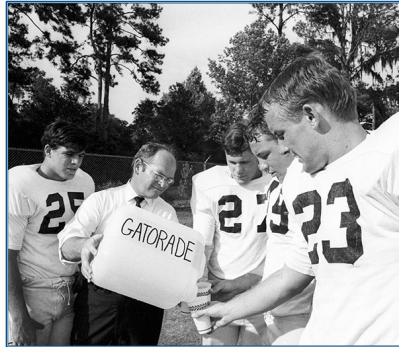
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32



## A New Navy Weapon Actually Stops You From Talking [Link]



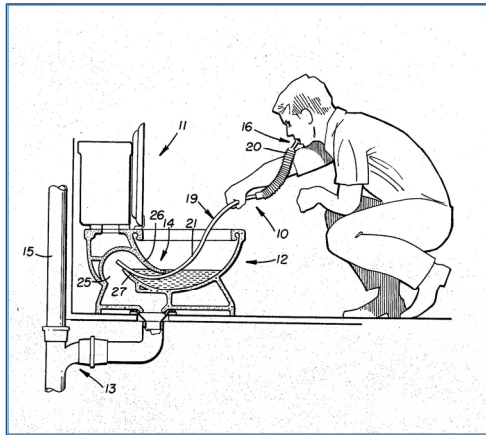


Why the University of Florida gets a ~\$20m cut of Gatorade profits every year [\[Link\]](#)



Patent expired, but trademarks last forever.

WISE Template 34



## Fresh-air breathing device and method

US Patent 4,320,756



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35

## Watching soap operas at 70 miles an hour

AutoVision system lets drivers watch TV while they are behind the wheel.

- ① Roof-mounted antenna picks up local TV station's signal
- ② Ceiling-mounted TV projector is powered by the car electric system
- ③ Curved mirror mounted on windshield catches image
- ④ Driver uses hand-held remote control to change channels or adjust volume
- ⑤ Driver watches TV picture while steering through traffic

Image seems to float about one car-length ahead of driver

SOURCE: AutoVision Associates

KRT

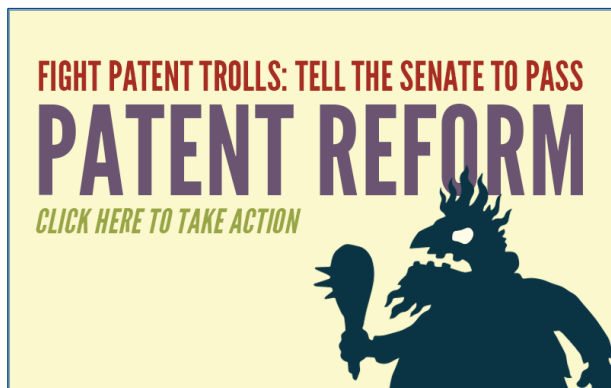
**AutoVision** [\[Link\]](#)



Ground vehicle head up display for passenger [\[Link\]](#)

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36

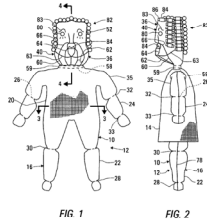


## On patent trolls



[Electronic Frontier Foundation](#)

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## Scented Doll with the Appearance of an Aged Person

U.S. Patent 6,805,607





Next week

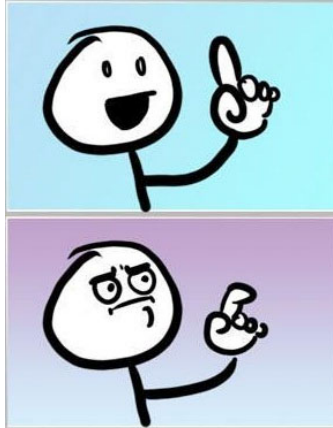


Digital futures

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39





Questions?

