

# Inventors

DECEMBER 2015 Volume 31 Issue 12

DIGEST

**Profit  
Potential**  
LICENSE,  
MANUFACTURE  
OR SELL  
YOUR IDEA?

## Suck It Up

**JAMES DYSON  
DISCOVERS THE POWER  
BEHIND A GREAT  
VACUUM CLEANER**

**The Sweet Spot**  
CONNECTING  
WITH THE BALL

**The Power  
of the Pitch**  
FOUR  
PREPARATION  
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**To Patent or  
Not to Patent?**  
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## Lights, Vacuums, Action

Most people associate the name James Dyson with the vacuum cleaner that bears his name, but Dyson is much more than the man who revolutionized vacuum cleaner technology. The subject of this month's cover story, Dyson is also an entrepreneur, industrialist and philanthropist, who has given millions of dollars to further the cause of design engineering education.

He established the James Dyson Foundation, which is "dedicated to encouraging young people to think differently, make mistakes, invent and realize their engineering potential" in 2002. The Foundation now has offices in seven countries, including the 2011 opening of one in Chicago.

The Foundation also runs the James Dyson Award, an international design competition "that celebrates, encourages and inspires the next generation of design engineers." The annual award is open to current and recent design engineering students as part of the Foundation's mission to instill excitement about design engineering in young people. Without Dyson's education as an industrial designer and engineer, he may not have achieved the level of success he has experienced over the course of his career, and Dyson wants to cultivate that challenge and create opportunity for others.

Of course, even the best inventions need to be successfully marketed, which is a subject Dyson also knows a thing or two about. Dyson formed his own company only after having his technology turned down by every vacuum cleaner manufacturer with whom he talked.

Three articles this month address Dyson's former dilemma. Contributing writer John Rau discusses the advantages of licensing, manufacturing or selling your idea, and Jack Lander gives advice on marketing an invention without a patent. Edison Nation chief engineer and *Inventors Digest* contributor Jerry Losaw writes about his experience at the recent Amazon Inventions Tour and offers pointers for improving a pitch, which can be a vital first step in getting a product to market.

December's Eye on Washington focuses on software patents, patent examiner quality, trade secret trolls and my favorite—obviousness. I have been slowly wrapping my head around patent terminology since I read my first article by Gene Quinn last May. The patent system is complicated, fraught with contradictions and evolving, which makes it difficult for novices, and, sometimes experts, to understand. Quinn provides a detailed explanation of the term "obviousness" in *Blurred Lines*, but as you'll notice from the story's title, "obviousness," is still an ambiguous subject.

In recognition of the holiday season, Time Tested is an illuminating history of Christmas lights. Thanks to a handful of inventors, including Thomas Edison, who gave us the light bulb, and Nick Holonyak, creator of the first practical LED, lights are an integral part of the holiday season. Whether it's a single candle in a window, colorful bulbs draped over the branches of a tree, a star shining in the nighttime sky or the glow of Rudolph's red nose, lights give us joy during the longest, dark days of winter.

Happy Holidays,

Cama McNamara

# SEND

## H.R.9 ~~AND~~ S.1137

## BACK TO THE



# DRAWING BOARD

THE PATENT ACT AND INNOVATION ACT EACH DO ONE THING WELL: UNITE GROUPS THAT OPPOSE BOTH. THIS LEGISLATION'S SWEEPING LANGUAGE WILL UNDERMINE THE PATENT SYSTEM AND THE JOBS THIS SYSTEM CREATES. JOIN THE DIVERSE COALITION OF INVENTORS, UNIVERSITIES, VENTURE CAPITALISTS, START-UPS, TECHNOLOGY BUSINESSES AND LIFE SCIENCE COMPANIES ASKING POLICYMAKERS TO KEEP AMERICA'S COMPETITIVE ADVANTAGE STRONG.

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AMERICAN  
INVENTOR

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# Contents

December 2015 Volume 31 Issue 12

## Features

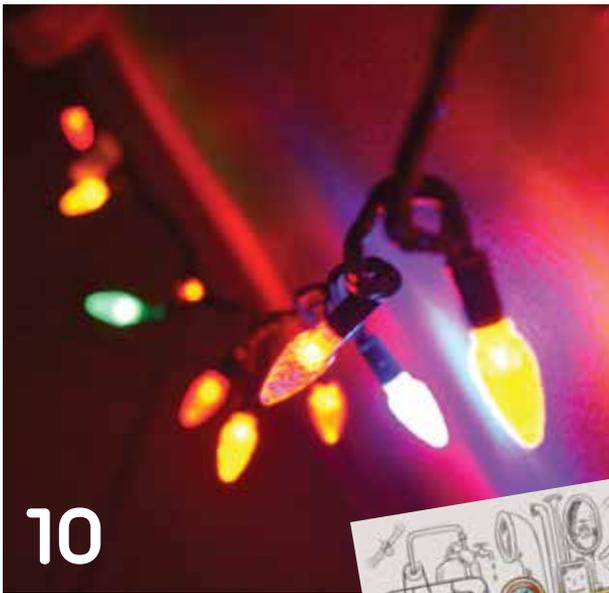
- 24 Suck It Up**  
James Dyson Discovers the Power Behind a Great Vacuum Cleaner

## American Inventors

- 14 The Sweet Spot**  
Steve Geotsalitis Makes it Easier for Batters to Connect with the Ball
- 18 Queen of Clean**  
Josephine Dabish Fermanian Innovates Healthy Choices

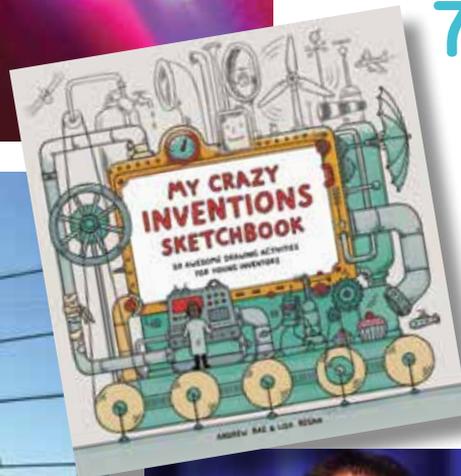
## Departments

- 7 Bright Ideas**  
Spotlight On Innovation
- 10 Time Tested**  
An Illuminating Tale of Christmas Lights
- 12 Marketing Tips**  
Do You License, Manufacture or Sell Your Idea?
- 22 Lander Zone**  
To Patent or Not to Patent?
- 30 Prototyping**  
The Power of the Pitch
- 32 Eye On Washington**  
Understanding Obviousness, Software Patents and Trade Secret Trolls



10

7



14



18

32



### ON THE COVER

James Dyson,  
photograph courtesy  
of Dyson Ltd.



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# Bright

# Ideas

Compiled by Taryn Walls

## REMI

### SLEEP TIGHT

[urbanhello.com](http://urbanhello.com)

Getting a good night's sleep is one of the most important aspects of health. Why not instill good sleeping habits in your child as soon as possible? REMI is a smart and customizable sleep companion that has the ability to learn, record and reinforce sleep routines as your kids grows up. The cute and friendly gumdrop is aesthetically pleasing, kid-friendly and more holistically advanced than other, simpler baby monitor products. REMI uses Bluetooth to connect to the app on tablets and Apple and Android devices.

You can customize REMI's color, alerts, lighting, music and more to create a completely personalized schedule with the associated app. For example, you can choose to display the time, date, facial expressions and lighting preferences to show your child when to get out of bed and when to sleep.

Comfort your child at night with the adjustable nightlight or her favorite lullaby. You can download your child's favorite music, record your own song or play some of REMI's sounds to settle down your child. You can also use REMI as a monitor to listen to your baby or talk with your child. The REMI app allows you to adjust the sound to hear more or less.

The REMI app can create and maintain a diary to help you identify ideal conditions to foster your child's sleep routine. Find out when your child sleeps best and when she wakes up. REMI costs \$54 and ships March 2016.



“We’re taught to do things the right way. But if you want to discover something that other people haven’t, you need to do things the wrong way. Initiate a failure by doing something that’s very silly, unthinkable, naughty, dangerous. Watching why that fails can take you on a completely different path. It’s exciting, actually. To me, solving problems is a bit like a drug. You’re on it, and you can’t get off.” — JAMES DYSON

## Rocketbook

### DIGITAL DOODLES

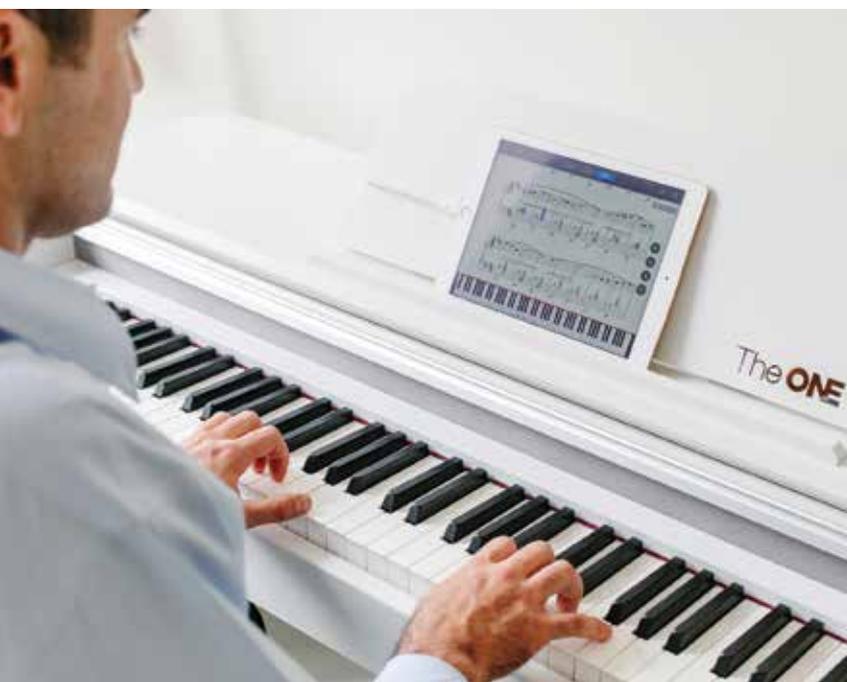
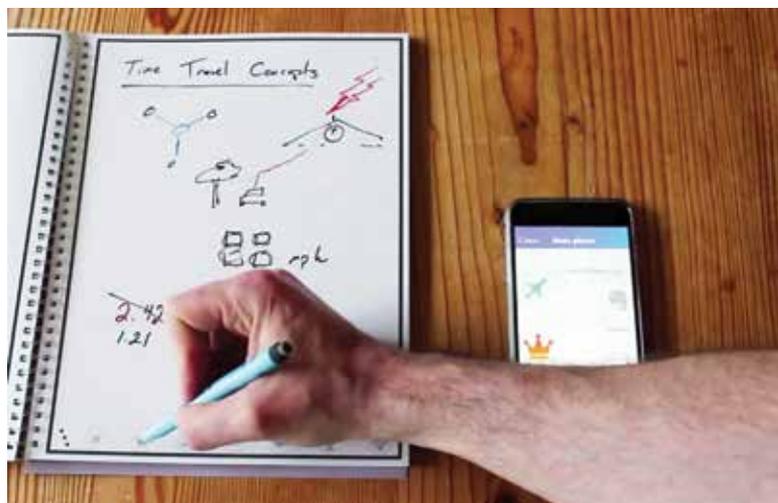
*rocketbook.it*

Have you ever wanted to convert your handwritten lecture notes, doodles, original lyrics or drawings to a digital format? Now you don't need a clunky scanner or tedious transcriber to do so. Rocket Innovations has created the efficient and convenient Rocketbook to solve the paper-to-screen problem by pairing a notebook with an app, available on Apple iOS and Android.

The bottom of each page in the notebook has seven icons that correspond to a site of your choice, such as Dropbox, Google Docs, Evernote or your email. Select one, and the Rocketbook app will scan the page and send it to the correct destination in a JPG format. The app selects, crops, and color balances each page. Emails are sent in a PDF format.

The app can scan surfaces other than the Rocketbook, such as a whiteboard, although the performance has not been thoroughly tested. Rocketbook is compatible with any pen, but if you use Pilot FriXion pens, heating the notebook in a microwave for 30 seconds will erase the ink so you can have fresh pages again and again.

Rocketbook comes in standard and executive sizes. The acid-free, fine-grain paper features a dotted grid pattern. The book is microwave-safe, as is the polypropylene binding. Rocketbook is \$45 and will ship February 2016.



## Follow The Light

### THE ONE PIANO LEARNING SYSTEM

*smartpiano.com*

The ONE Smart Piano is designed for students to learn to play the piano without knowing how to read music. The ONE features a digital piano with keys backlit with red and blue LEDs that are synced to music available through a free app. All the student needs to do is connect a mobile device to the piano, download the song and play the keys indicated by the lights. Students can choose from thousands of pieces of sheet music, which range from Beethoven to the Beatles. While the song is playing, the sheet music is displayed on the smartphone or tablet, so the student can learn the notes along the way. When a student becomes familiar with a song, the lights can be disabled and the song played without the aid of the learning system, which is offered in a full upright piano or digital keyboard. Video lessons from instructor Tom Hoffman are available, as is a game that tracks correct notes and timing. The ONE Smart Piano retails for \$1,499, and the ONE Light Keyboard is \$299.99.

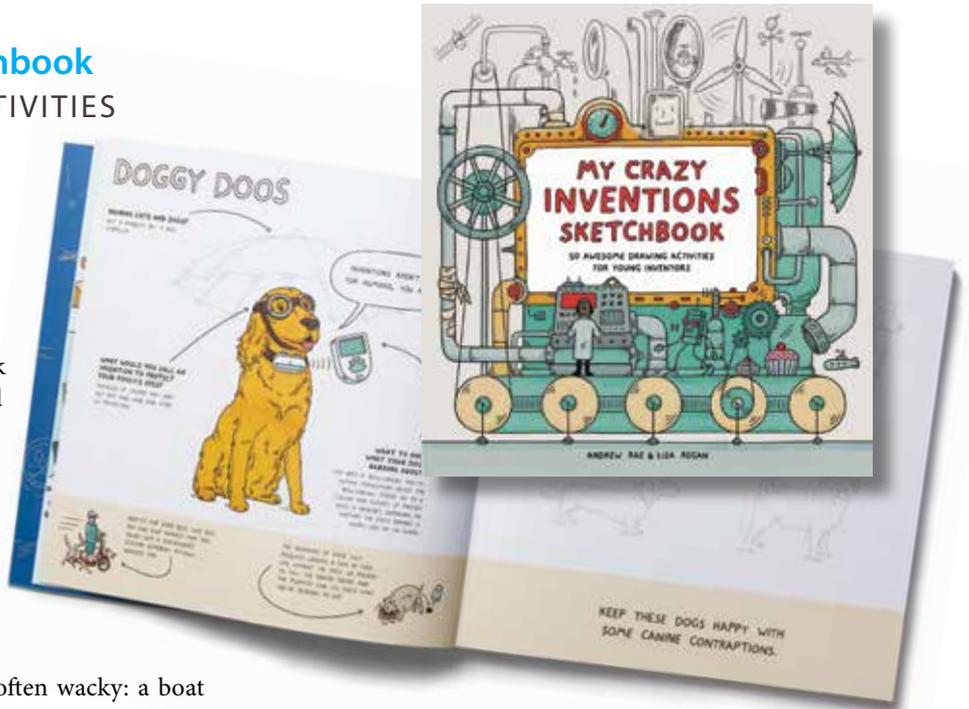
## My Crazy Inventions Sketchbook

50 AWESOME DRAWING ACTIVITIES FOR YOUNG INVENTORS

By Andrew Rae and Lisa Regan  
London: Laurence King Publishing, 2015  
128 pages, paperback, \$15.95

Every child will appreciate this doodle book filled with inspiring ideas, fun facts and vivid illustrations that “encourage young minds to reach for the sky.” *My Crazy Inventions Sketchbook* offers opportunities for learning, as well as imagination development, through pages that prompt readers to invent and draw their own robots, athletic shoes, candy, writing tools, dream cars and time machines.

The included inventions are real, but often wacky: a boat that flies, an alarm clock that smells like bacon, a portable pedestrian crossing and duster slippers for cats to clean the floors as they walk. One page shows a flying hovercraft, and the opposite page has a picture of a boat and poses the question: How would you make this boat fly? Another page is filled with robots; opposite it is a space for a child to draw the one in her imagination. The blank page opposite a Ferris wheel encourages readers to draw their own fairground rides.



As children make their way through the thought-provoking book, they will also learn the concepts of an invention’s patentability: usefulness, problem solving ability and originality. The final pages of *My Crazy Inventions Sketchbook* discuss how to get an idea patented, followed by a patent application and certificate. Whether or not a child becomes the next Einstein, *My Crazy Inventions Sketchbook* is a fun means to encourage creative thinking.

— Cama McNamara



## Hey Joe Coffee Mug

JOE TO GO

[heyjoecoffee.com](http://heyjoecoffee.com)

Sometimes we don’t have time to wait for the counter-top brewer or stop by a coffee shop for that all-important first cup of joe. The Hey Joe Coffee Mug is a sleek, tasty solution for busy America. The product is a portable brewing system and mug all in one, so you can take it in the car, to work or anywhere else you need a caffeine fix.

The Hey Joe Coffee Mug system has two reservoirs separated by a hot plate and a coffee pod tray. After being heated by the hot plate, water drips from the top reservoir to the bottom through the pod. The 12-ounce mug only takes four minutes to brew, leaves very little waste and is powered by a rechargeable battery. The cup even cleans itself; just put a bit of soap and water in the top reservoir and press brew. Every mug comes with a rechargeable battery, a charger and a one-month supply of Hey Joe Coffee, which can also be purchased as a subscription service—enough for one cup each day. The company is working to develop a reusable empty filter for coffee lovers who want to use their own blends. Pre-order the Hey Joe Coffee Mug for \$69, or purchase later at retail for \$99.



# The Evolution of Christmas Lights

## An Illuminating Tale

One of the most time-tested traditions of the holiday season is hanging strings of lights. From the radiant twinkle of white lights on a Christmas tree to Clark Griswold's outlandish multi-color display, holiday lights are enchanting additions to dark winter nights.

### Burning Down The House

Legend has it that Martin Luther first decorated a fir tree with candles as a sign of the birth of Jesus around the year 1500. The idea caught on, and by the 17th century, Germans were decorating Christmas trees with candles that were either pinned to the branches or joined with melted wax. This practice, as you might imagine, led to more than one home fire.

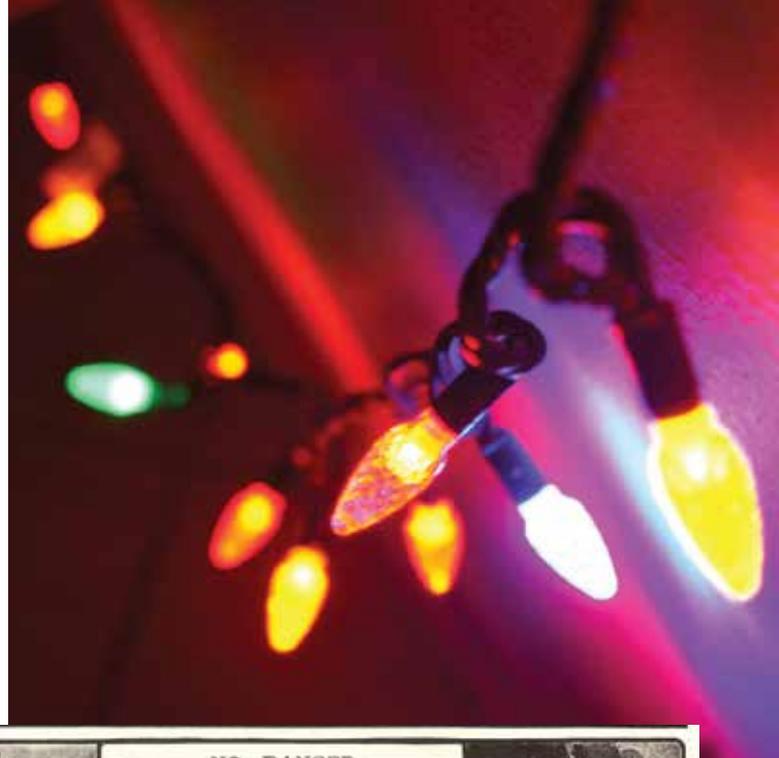
Over time, the tradition of lighting trees spread throughout Europe. Illuminated trees became popular in England in the late 1800s during the reign of Queen Victoria, and from there, the tradition crossed the ocean to the United States.

By 1890, inventors had developed ways to safely attach an open flame to a tree using clip-on candleholders and small lanterns, but even then, a large flammable tree in the living room was risky. People usually put up their Christmas trees only for a few days, lit the candles for a few minutes each night—and always kept a bucket of sand or water nearby in case of fire. Of course, accidents still happened, and eventually insurance companies refused to pay for damages caused by Christmas tree candles.

### Edison Sees the Light

The glowing Christmas tree lived on thanks to Thomas Edison and

his incandescent light bulb. Searching for a way to advertise his invention, on December 31, 1879, Edison created the first electric holiday light display by stringing some of his recently patented bulbs outside his Menlo Park laboratory for passing commuters on the nearby railway to see. The display heightened Yuletide excitement, but it took almost 40 more years for electric Christmas lights to become a mainstay of the holiday season.



### The Father of Christmas Lights

Edward Hibberd Johnson, a close friend of Edison and the president of Edison Electric Illuminating Company of New York, created the first strand of electric Christmas lights. In 1882, two years after Edison's light display, Johnson hand-wired 80 red, white and blue light bulbs and wound them around his Christmas tree in the parlor of his Fifth Avenue home in New York City. Not only was the tree illuminated, it also revolved six times a minute. An electric current drawn from Edison's main office eight miles away powered the lights and the crank that rotated the tree.

The world, however, was not ready to replace tree candles with electric lights. There was a great mistrust of electricity because it was so new, and hot bulbs on a dry tree could still be dangerous. Rather than a string of lights ready to drape over the branches, as we have now, those first bulbs lacked screw-in sockets and required the tedious process of wiring each lamp individually. As a result, only the wealthy could afford to hire an electrician to put together a string of Christmas lights. Society's elite spent as much as \$300 (\$2,000 in today's dollars) per tree to hire electricians to install lights on their trees and be available in case a bulb burned out or broke.

### Bright Spots

Over the next few years, Johnson and Edison experimented with and improved upon Johnson's electric tree lights. In 1890, they introduced them to the public and published a 28-page brochure about "Edison miniature lamps for Christmas trees."



The public, however, was hesitant to embrace the new technology until 1895, when President Grover Cleveland proudly sponsored the first electrically lit Christmas tree in the White House. The huge tree featured more than one hundred multicolored lights.

In 1903, General Electric introduced “Edison Miniature Lamps for Christmas Trees.” These pre-assembled eight-lamp strings, called festoons, featured pre-wired porcelain sockets, miniature glass bulbs and a screw-in plug that attached to a wall or ceiling light socket. An ad for the lights noted: “Can only be used in houses having electric lights.” The \$12 price for a three-festoon set was beyond the reach of most consumers, so GE offered a rental option, as did some department stores: \$1.50 for the season.

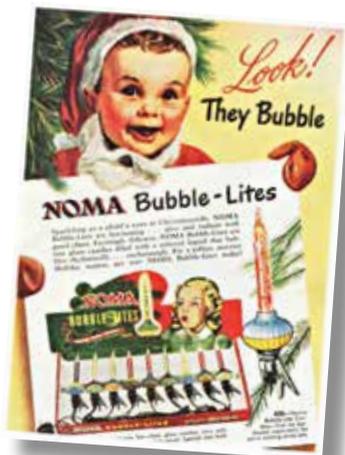
GE attempted to patent its Christmas lighting festoon, but the patent application was refused because the product was based on knowledge an ordinary electrician had. With the market wide open, other companies and inventors began to produce their own tree light sets, and the American Christmas light industry was born.

### Albert Sadacca Strings Lighting’s Future

Among those who took advantage of the opportunity was Albert Sadacca, who saw the potential for safety and profit in the new phenomenon. The Sadacca family owned a novelty lighting company, and in 1917, after a tragic fire in New York City involving Christmas tree candles, the teenaged Sadacca suggested that the store sell strands of Christmas lights.

By the 1920s, Sadacca and his brothers, Henri and Leon, had organized a trade association—the National Outfit Manufacturers Association—with the 15 companies selling Christmas lights. The first year, only one hundred strings of white lights sold, but the second year, Sadacca used brightly colored bulbs, which fostered the growth of the multi-million dollar company.

Even though NOMA Electric Company was formed three years prior to the Great Depression,



the appeal of Christmas lights was great enough to pull the company through tough times. Worried about the company’s future, NOMA’s nostalgic advertisements featured families gathered around a lighted tree, which increased sales.

Over time, the company made improvements in Christmas lights and expanded the product line. In 1945, NOMA introduced the bubble light, which became the best-selling light of its time. NOMA also introduced the world to tulip petal flower lights, tinsel starburst lights and “Lighted Ice” globes. NOMA Electric and its effervescent products cornered the Christmas light market until the company went bankrupt the 1960s, but that didn’t prevent other companies from introducing flamingo-shaped lights, as well as chili peppers, beer cans and a miniature version of the leg lamp from *A Christmas Story*.

### Technology Changes

By the late 1940s, two new holiday traditions had been established in many American homes: the annual untangling of gnarled strands of Christmas lights, and the process of finding and replacing the one bulb that ruins the entire string. In recent years, bulbs have been undergoing their first revolution in nearly a century. Incandescent bulbs are slowly being replaced by energy- and cost-efficient LEDs.

LEDs did not get high marks from consumers when first introduced in the 1990s, but they have gained popularity as manufacturers have made improvements. Most notable holiday displays have made the switch to LEDs, including the U.S. Capitol Christmas tree in 2006 and the Rockefeller Center tree in 2007.

Each year, Christmas lights gain in popularity as small towns, botanical gardens, shopping malls and even entire neighborhoods enhance light displays. All these lights add up to a very lucrative business. It is estimated that over 150 million sets of lights are sold nationwide each year, making them a huge part of the \$6 billion dollar Christmas decoration industry.

No matter the technology at hand, lights will remain part of our holiday traditions for years to come. Their glowing blinks and twinkles add sparkle and cheer to this celebrated season.

— Carrie Boyd



# Profit Potential

Do You License, Manufacture or Sell Your Idea? BY JOHN G. RAU



WAVEBREAKMEDIA LTD/THINKSTOCK

**S**o you have an idea for a new product and, in addition to deciding whether or not to try to patent it, you are wondering if your product has potential for profit. At this point in the development phase, it would be extremely difficult to credibly estimate your invention's potential to make money. More than likely, you haven't had the opportunity to conduct the research, competitive evaluations or analysis of information necessary to make this overall assessment, but there are steps that you can take to gain insight into this issue.

First, you should perform, or have performed for you, an initial patent search to ascertain if your new product idea is potentially patentable. If the search results reveal that it is not patentable because it conflicts with prior art and, in particular, infringes on one or more currently valid patents, then its profit potential is zero. Hence, move on to new product ideas.

It is important to recognize, however, that a patent is not necessary in order to market an invention commercially. An inventor

**A licensing agreement is appealing because the licensee assumes all of the risks.**

may make, use or sell an invention without the benefit of a patent provided it doesn't infringe an existing patent. The answer to the profit potential question lies within the context of how you choose to proceed with your new product idea. The potential for profit will be different in each case. Your choices are to license your invention, manufacture and sell the product on your own, or sell your invention to a second party.

## License Your Invention

Before moving forward with a decision to license your product, you should get some type of intellectual property protection to prove ownership. At this point, the best strategy is to file a provisional patent application, which will give you one year of ownership from the time of filing to further research the profit potential from licensing.

A licensing agreement basically assigns the rights of your invention to a company for commercial use or development for a

The financial rewards (of doing it yourself) are potentially much greater than licensing a product to a manufacturer.

specific period of time. In return, you receive a series of payments, or royalties, that can be calculated in various ways, such as X dollars per unit sold or, more generally, Y percent of sales (typically based on wholesale prices). A licensing agreement is appealing because the licensee assumes all of the risks—from manufacturing to marketing and distributing the product—and takes responsibility for stopping those that might infringe on the product's patent(s).

The profit potential is the cumulative sum of the royalty payments over the agreed period of time set forth in the licensing agreement. The establishment of a royalty is based on a number of considerations:

- **Who is taking the bigger risk?** If your potential licensee has to invest heavily in the development and marketing of your new product in an unproven market, and your exposure to risk is small by comparison, a large royalty would be difficult to justify.
- **How special or unique is your new product idea?** If there is no close competition and, as a result, your potential licensee can charge a high price for it, you deserve a high royalty. If competition will keep profits low, your royalty percentage will also be low.
- **In what quantities will your new product sell?** Generally speaking, products that sell in high volumes have much lower royalty rates than those in lower volumes.

A common royalty rate for consumer products is generally in the range of 3 to 10 percent of the wholesale price, not the retail price. A rule of thumb for consumer products is that the retail price is typically four to five times the wholesale price. Let's assume this ratio is 5 to 1, and your product has a retail price of \$20. This would mean the wholesale price is \$4. Using a fairly standard royalty rate of 5 percent of the wholesale price, you would receive 20 cents for every item sold.

Don't be too quick to reject this number. If the licensee sells one million units per year, you will receive on the order of \$200,000 per year, or \$50,000 on a quarterly basis. This is a very good profit. The licensee assumed all the risks, sent you a check every quarter, and you didn't have to do anything. Recognize, of course, that this is an illustrative example of how licensing works and why it is a potentially attractive option for inventors.

## Do It Yourself

If you would like to start a company and sell your new product yourself, you will control manufacturing, marketing and distribution, and so direct its profit potential. This will most likely require a significant amount of capital. Keep in mind that when you license a product to a manufacturer, the company is going to manufacture, advertise, market and finance it. The company most likely has a network of distributors and retailers available to get your new product into the marketplace. If you form a company, you will be starting from scratch. You will need capital, and

you will also need to establish relationships with distributors and retailers.

In this situation, you will have to spend considerable time studying the market for your invention. Who will use the product? How many people will buy it? How much will it cost to make? What is the sales price? How can the market be reached (direct sales, Internet sales, distributors, major retailers, etc.)? You may discover that, even if your new product is unique, the market might not be profitable. Obviously, you don't want to spend a lot of time on a product with a small market share

Another challenge you will face is determining the best way to manufacture and distribute your new product. Some products lend themselves to garage-manufacturing operations and others are better suited to purchasing components, hiring job shops to perform machining operations and assembling the product in your garage.

Other products require full-blown manufacturing facilities. In this situation, you may be better off purchasing a finished product from a manufacturer and selling it on your own. The issues are much more complex in the "do it yourself" situation, and it is not easy to estimate the profit potential without having prepared a detailed business plan. However, the financial rewards are potentially much greater than licensing a product to a manufacturer, which is the reason that this option is attractive to inventors. If you have little to no experience in the areas of managing a company, manufacturing, and marketing and distributing products, these will be high-risk areas that could easily impact your profit potential. If you are not a risk taker, doing it yourself could be a poor decision.

## Sell Your Inventions

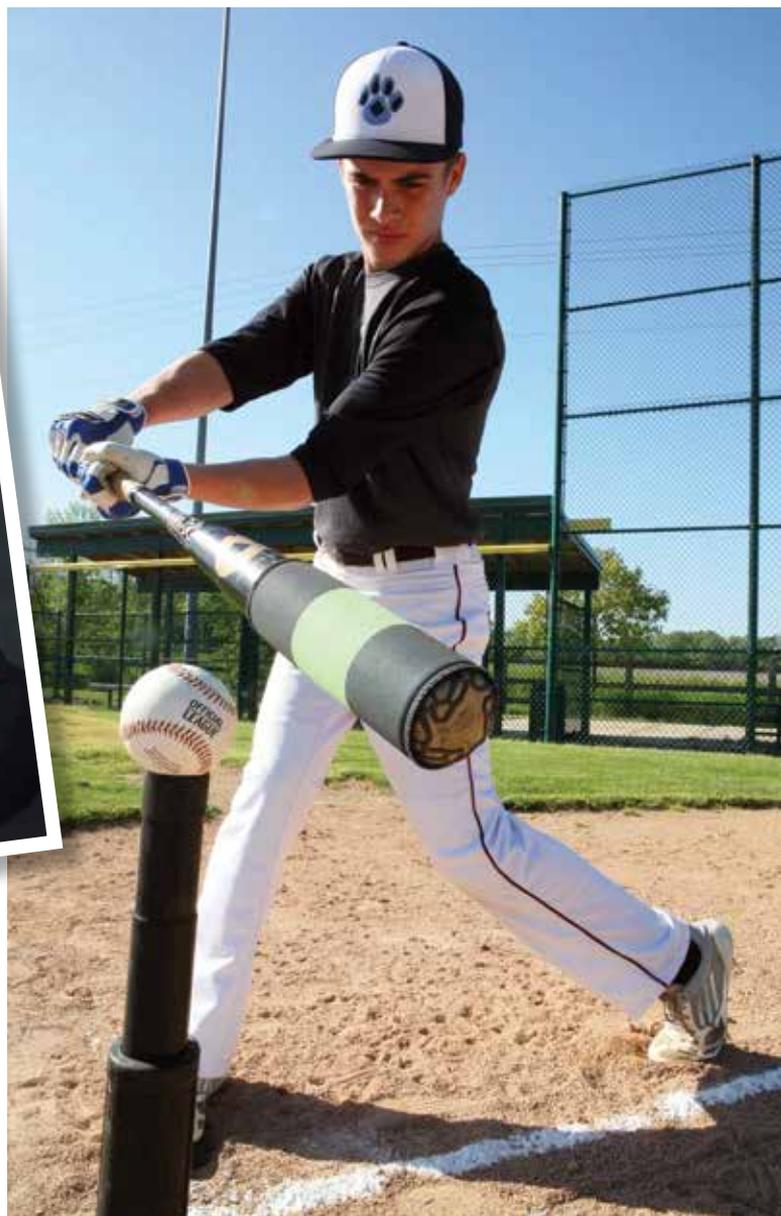
If you decide to move forward and patent your new product idea, which gives you ownership, at some time you could consider selling your invention. The value of the product at the point of sale would be based on its performance track record, such as licensing revenue, product sales and profits from manufacturing operations. This would mean that any possible future commercial opportunities, including royalties, would no longer belong to you.

Remember that ideas are worth nothing. It's the product or service that results from the idea that has the profit potential. ☛

Ideas are worth nothing. It's the product or service that results from the idea that has the profit potential.

**John G. Rau**, president/CEO of Ultra-Research Inc., has more than 25 years experience conducting market research for ideas, inventions and other forms of intellectual property. He can be reached at (714) 281-0150 or [ultraresch@cs.com](mailto:ultraresch@cs.com).





## The Sweet Spot

Steve Geotsalitis Makes it Easier for Batters to Connect with the Ball

BY EDITH G. TOLCHIN

Sometimes the greatest inventions are the most basic and simplest of ideas. A few years ago, while serving as a consultant at the Resource Center of INPEX, I met inventor Steve Geotsalitis. I quickly discovered that his brain was constantly cranking out new sports and fitness ideas. Geotsalitis' most recent invention, CALL the SHOT™, is a baseball training device. In the following interview, Geotsalitis discusses CALL the SHOT and offers novice inventors tips on bringing new products to market.

*(Editor's Note: Interview has been edited for clarity and brevity.)*

Founder of Pantelis Innovations, Steve Geotsalitis, invented CALL the SHOT™ to assist athletes with hitting the most efficient and powerful part of the bat.

**Edith G. Tolchin:** Tell *Inventors Digest* readers about this product and why it is something no one previously thought about.

**Steve Geotsalitis:** CALL the SHOT is a unique training device to assist athletes with hitting the most efficient and powerful part of the bat—the elusive “sweet spot.” The main objective of CALL the SHOT is to help batters focus on the sweet spot at the moment the bat hits the ball. Additionally, CALL the SHOT helps batters develop better visual acuity and consistency. Bat designs are colorful, which can draw the eye away from the ball as the bat is being swung. Our design objective was to allow the batter to better focus on the sweet spot, as well as to visually “remove” the bat colors. The sleeve has three colored areas: black, green, black. The two black areas cover up most of the bat coloration, and when the bat is swung, all the batter essentially sees is the green sweet-spot area.

This product is geared toward baseball/softball batters age four and up. It comes in three sizes to accommodate all conventional

bats (except big barrels). CALL the SHOT is made of rubber and stretch material that allows it to fit snugly without damaging the bat. It weighs two ounces and does not modify the batter's swing or power. It is cold-water washable and should be air dried.

I developed the idea from watching my son teach my grandson, Steven, from the time he played T-ball through high school baseball. One day, when Steven was about seven years old, he told me that he saw the ball hit the bat at the moment it happened. That kicked my creative mind into gear and started development of this product. There are many other devices on the market to help batters, but most of them either require set up or take up a lot of space and can be cumbersome to use and carry around. Additionally, CALL the SHOT is inexpensive compared to other products. It is patent pending and the name is trademarked.

**EGT: Who can benefit from this product?**

**SG:** First are the batters, and second are the coaches, managers and parents. CALL the SHOT can be used in a batting cage, off the batting tee, with a coach or parent pitching, or with a pitching machine. It can also be used on the field. The colorization of the product allows coaches, managers and parents to see the sweet spot contact point better. With the addition of video, it is much easier to show the batter his mistakes and make instant corrections.

**EGT: Do you make a living as an inventor? Are you a serial inventor?**

**SG:** More like an obsessed inventor. I live to create and invent products that solve problems. If I'm not waking up in the middle of the night to work on a redesign for an idea, sending follow-up emails or directing my team, I'm not working hard enough. I've had over 30 years of idea innovation, creative drive and the passion to succeed.

I was an Air Force staff sergeant (E5) trained in the medical services in the Vietnam era. I worked in the printing industry for years. In my free time I managed to obtain a fifth-degree black belt in Chinese Kenpo Karate, as well as a first-degree black belt in Shaolin Kung Fu. My absolute favorite vocation was being a nationally certified massage therapist specializing in sports injuries and chronic disorders and disabilities. Inventing has been my passion through all of this.

**EGT: What gave you the desire to become an inventor?**

**SG:** I inherited the creativeness from my dad, who was a tinkerer. The main thing that sticks in my head is a product he created in the mid 1950s, when he started using the relatively new Styrofoam beads. He created a process to compress and shape them into circular tubs—ice buckets with detached lids. He was making prototypes and giving them away, and I was amazed with the machines that made the buckets and how the whole

process worked. A friend of his ran with the idea, and my dad never got a cent. When I started this company, I made a point that the same thing would not happen again. I have a team to help me and protect what we do. My company's first name, Pan-telis Innovations, is his name, Peter, in Greek.

**EGT: What other products have you invented, and explain why you've decided for now not to develop those ideas.**

**SG:** We have about seven other ideas in various stages of design and development. Another product for personal training is ready to go, but instead of going to market with it, we want to sell the patent and product outright. As a small company, it's really difficult to move forward with multiple products. The overhead, liability insurance and the resources (monetarily and otherwise) are a drain on people and the bank. We prefer to slow our entries into the marketplace and make sure that the product will function as designed and tested, rather than have an aftermarket correction or adjustment.

**“As a small company, it's really difficult to move forward with multiple products. ... We prefer to slow our entries into the marketplace and make sure that the product will function as designed and tested, rather than have an aftermarket correction or adjustment.” — STEVE GEOTSALITIS**

**EGT: What is the process of product development for a sewn textile invention geared toward children? Were there government regulations? What was the first step?**

**SG:** The key to developing a product is losing sleep. Your creative juices have no time frame, so you need to run while thoughts are in your mind. Document them well. The process for CALL the SHOT started with a web search on the USPTO site to find out if there was a product like it already on the market. The next step was to research the market size and talk with local coaches and parents to find out if there were a need and interest. From there, I researched bat sizes, bat resonance, hand sting and the general composition of bats.

Having a good mental image of what I needed to do, I then did rough hand drawings of the idea, including measurements and descriptions. The hardest part was figuring out the best materials to construct the product. I requested material samples from many companies, did durability tests and made rough samples from each. Once I figured out which of the samples worked best for CALL the SHOT, I moved to colorization and bonding methods for the two types of materials chosen.

Once I received the material, the next generation of product samples was made. Then we began in-house and field tests, followed by another round of tweaking and the next round of test samples. CALL the SHOT went through six revisions to reach the final result.



**“ My suggestion for all inventors is not to go through the process without help. Talk to multiple sources and don’t necessarily go with the first one.” — STEVE GEOTSALITIS**

My next step was to take my rough revised drawings, measurements and material information to a CAD designer for complete professional drawings. When we had a viable product, field tests with young players to collegiate players confirmed its effectiveness. The next step was finding a manufacturer to produce it, then marketing it.

Luckily Pantelis Innovations was exhibiting the product at INPEX, where we were trying to gain exposure. We heard about EGT Global Trading at the Resource Center and later began working with the company to learn about product safety, manufacturing and the subsequent importing aspects of product development.

**EGT: What other steps were involved?**

**SG:** The next step was developing the packaging. Since Call the SHOT will be used by adults as well as children, there is a requirement to address children’s packaging and product marking regulations. I was introduced to packaging designer Josh Wallace, who listened to my explanation, read the information and CAD drawings sent to him, and came up with six different ideas for packaging, as well as several ideas for a product logo. We chose one and made revisions until we had a package that was representative of what we needed. The packaging required child warnings, ventilation holes, QR codes for retailers, instructions and proper labeling—much more than I figured was necessary.

**EGT: What came after you had your prototypes and packaging mockups?**

**SG:** My next step was to find and secure an overseas manufacturer, which is a monumental task for anyone with no contacts or experience negotiating overseas. With guidance from my consultant, I chose a reputable factory with a 15-year track record and submitted the project scope, design, drawings and pictures.

Workers quickly made samples for me to approve or modify, and provided a quote sheet for each model and quantity breakdown.

**EGT: What did you do after you received the quotes?**

**SG:** I placed an order, which was more involved than I expected. I was instructed to make a wire transfer of 30 percent of the total order value to get the manufacturing started, with the balance to be paid after the testing was completed and the products were ready to be shipped. During that time, a Consumer Product Safety Commission’s accredited lab thoroughly tested samples. Included were burn, material separation, shredding and toxicity tests. It was very detailed but necessary to receive approval for use of the product in the United States.

**EGT: Did your product pass product safety testing that is required for all products used by children 12 and under?**

**SG:** The Consumer Product Safety Improvement Act tests were in-depth, detailed and involved, but CALL the SHOT passed with flying colors. Had it not passed, CALL the SHOT would have required a redesign.

**EGT: After the factory was given the green light to proceed with mass production and you approved the samples, what steps did you take to make sure the factory didn’t slip in any poor quality or defective pieces?**

**SG:** Prior to the products being shipped, an additional test for quality control had to be conducted by an independent company. I contacted KRT Audit Corporation to do the visual and physical inspection. The company was very thorough and provided detailed documents and pictures of their inspection of the products. It included what carton number the individual samples were taken from, pictures of drop testing the cartons,

loose threads, stretch testing of seams and much more. Once I was able to review the extensive report, we gave the factory in China the go ahead to ship.

**EGT: The product is now in the United States. How do you plan to sell it?**

**SG:** We are receiving online orders through our existing website and recently hired a web designer who is hard at work with a total overhaul of the the site. The advantage of using independent representatives is that they have the burden of income taxes and health insurance. They have no direct connection to our company, which decreases the liability and overhead. We are using their contacts to get into big box stores and other distributorships that we can't get into ourselves.

**EGT: What lessons have you learned in this new career path as an importer? Would you say that product development, manufacturing and importing are easier than or more difficult than you'd imagined?**

**SG:** The process, from development through importing and distribution, was definitely more difficult than I thought it would be. My suggestion for all inventors is not to go through the process without help. Talk to multiple sources and don't necessarily go with the first one. A little extra time and research make life simpler in the long run. Without great people, I might have even given up. I am very fortunate to have an excellent support team.

I've also been extremely fortunate that my wife, Marcia, has been beside me every step of the way. She is a business guru and MBA graduate, who knows the ins and outs of business and contracts. Her knowledge and expertise have been my beacon of light through all this fog.

**EGT: What is your sales plan for CALL the SHOT ?**

**SG:** Our plan is to get the independent reps moving, get the new website up and running, and continue to update our Facebook page so that people can get information and place orders.

**EGT: Do you have any final pearls of wisdom for our readers?**

**SG:** My first three suggestions are research, research and research. From there, get a support team that has your back at all times. If they don't respond quickly to any and all of your questions and concerns, then you are not at the top of their list and you should move on. Last, make sure that everyone you speak to signs a non-disclosure agreement. ☺

For information, visit [www.calltheshot.biz](http://www.calltheshot.biz).

Edie Tolchin has contributed to *Inventors Digest* since 2000. She is the author of *Secrets of Successful Inventing* and owner of EGT Global Trading, which for more than 25 years has helped inventors with product safety issues, sourcing and China manufacturing. Contact Edie at [egt@egtglobaltrading.com](mailto:egt@egtglobaltrading.com).



## 2 Critical Steps to getting your NEW PRODUCT "out there"

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# Queen of Clean

Josephine Dabish Fermanian Innovates Healthy Choices

BY JEREMY LOSAW



Josephine Dabish Fermanian developed her organic cleaner, Germs Begone, after her son, Roman, developed a sensitivity to cleaning chemicals.

**W**e are fortunate to live in a world in which most of our basic needs are met, and we can focus on pursuits of leisure and passion. Despite numerous modern conveniences, there are still troublesome annoyances in life. Josephine Dabish Fermanian is a woman who prefers to see these little annoyances as problems begging for unique solutions. The self-proclaimed Mother of Innovation began her inventor journey with an organic cleaner—Germs Begone—that came to be because she and her son had a sensitivity to cleaning chemicals. She has since developed other products that help us live healthier, safer and cleaner lives.

A former high school teacher, Dabish Fermanian says the inventing bug hit her after repeatedly feeling ill from the effects of the chemicals used to clean her classroom. “I felt like there was something sitting on my chest,” she says. Dabish Fermanian knew there had to be a way to kill germs without harsh chemicals, but she didn’t get serious about finding a solution until after her son, Roman, was born in 2004.

After un-satisfactorily trying eco-friendly cleaners purchased at the local health-food store, Dabish Fermanian set out to create her own. She began with a recipe her grandmother had learned from her housekeeper that had been passed down through the family. The natural, bleach-free cleaner was a blend of essential oils and Castile soap. Dabish Fermanian experimented with the blend at home and gave samples to her friends to test side-by-side with name-brand cleaners.

After three formulations, Dabish Fermanian had a blend that she and her test crew thought worked well. However, she had only anecdotal evidence, and she wanted real data to bolster her claims. A graduate of the University of Michigan, Dabish Fermanian returned to her alma mater for help. She was put in touch with the chemical testing lab at the University of Michigan in Dearborn, where lab technicians put the formula through standard testing protocols and found it was every bit as good as the chemical-based cleaners made by leading manufacturers.



Get a Grip, a non-slip strip that prevents towels from falling onto the floor, took five years to develop.



**“I was sourcing locally before people understood the concept.”**

— JOSEPHINE DABISH FERMANIAN

### Trade Secrets

Realizing the value of her product, Dabish Fermanian filed for a provisional patent on the formula for Germs Begone to protect her interests when discussing her product with potential manufacturers. She later opted not to pursue a utility patent because the value she would receive from the patent was not worth the price of the legal fees for filing. Instead, she let the application lapse and continued to manufacture Germs Begone as a trade secret.

The next challenge was locating a factory to manufacture Germs Begone. Dabish Fermanian’s goal was to keep the product, including the bottles and labels, produced in her native state, Michigan. She researched manufacturers online and followed up on leads over the phone. After six months, she was able to find factories in Michigan to make the cleaner, bottles and trigger.

During her sourcing search, Dabish Fermanian was tempted with big-money offers to have the product made overseas, but she was more concerned about keeping jobs in the states than growing the business quickly. “I had offers to license the product and have it sold all over the world under a different name, but I said, ‘No. I’m keeping it Michigan,’” says Dabish Fermanian.

After a year of work—and a \$3,500 investment, which Dabish Fermanian financed with savings and credit cards—Germs Begone was bottled and ready for market. Dabish Fermanian established an ecommerce site to sell the product, and several local stores agreed to carry it. Word about the product’s effectiveness spread quickly.

### Josephine Dabish Fermanian’s Advice for Inventors

- I don’t own a patent. My current opinion is that if you think you can license your product to a company, go with a provisional patent, which buys you a year.
- Find another party to invest in the patent if you really need one.
- Do your research and figure out which companies would benefit from having your invention in their product line.
- Many companies will refuse to see products that either come from outside sources or are non-patented ideas. Don’t give up.
- Make sure no one else has a product that fulfills that need.
- Keep your day job because nothing happens overnight.

*Editor’s Note: For more information on trade secrets, read A Fear of Trade Secret Trolls Is Unfounded on page 39.*

Dabish Fermanian made her first commercial sale at her son's preschool after she began using it to clean her son's table as an alternative to the bleach solution used before snack time. Soon, the other teachers requested to use it, too, and eventually, the preschool purchasing agent began buying Germs Begone for all the classrooms. Dabish Fermanian's most recent sale was to Kroger, which will place the product in 28 stores in 2016.

## A Name to Remember

When Germs Begone customers began clamoring for a hand sanitizer, Dabish Fermanian developed all-natural "Wash Your Hands," so named because that was what she told her son before meals: "Wash your hands." Dabish Fermanian says that the right name is crucial to the sales of any product. This is evident when examining the simple yet descriptive labels on her other inventions: Get a Grip, Glow Knob and Clean Woman. "You need to come up with a name people will remember," she says.

Get a Grip is a non-slip strip that quickly attaches to a towel bar to prevent towels from falling onto the floor. Dabish Fermanian says it took five years to develop the product because she wanted to use recycled material that was made in the United States. "I was sourcing locally before people understood the concept," she says.

She also helped develop the Clean Woman motion-activated feminine disposal system to create a more sanitary experience in women's public restrooms. "I partnered with a Canadian

company called Frost to produce Clean Woman," she says. "I was building a box and discovered the company had something that would work for me, so we combined our product and Clean Woman was co-branded." The disposal system, which also took five years from start to finish to develop, has been sold to supermarkets, office buildings and hospitals in Michigan. "The key to any product is finding a solution to everyday wants and needs," Dabish Fermanian says.

Glow Knobs was her answer to knocking over lamps in the middle of the night. As you might imagine, the glowing knobs, which replace regular switches on lamps, guide your eyes so that turning on a lamp on in the middle of the night is a little safer.

Dabish Fermanian says there are more innovative products on the way, but it is too early in the development process to discuss them. She will admit, however, to one she's working on that will "revolutionize the way we clean our teeth." It will be another jewel in the crown of the Queen of Clean. 🍊

**Jeremy Losaw** is a freelance writer and engineering manager for Eventys. He was the 1994 Searles Middle School Geography Bee Champion. He blogs at [blog.edisonnation.com/category/prototyping/](http://blog.edisonnation.com/category/prototyping/).



## Birth of the New Future

### THE USPTO OPENS IN SILICON VALLEY

In 1965, I was one of the handful of organizers of the Patent Library in Sunnyvale, Calif., which was one of the first facilities outside Washington, D.C., where inventors could conduct research on their brainchild. The facility still exists, but it is now overshadowed by the October 15, 2015 opening of the United States Patent and Trademark Office in San Jose, Calif.

Over the years, I have been privileged to work with a variety of inventors, beginning in the 1940s with my father, Philip J. Udell, and his several household products. At that time, discovering the patentability of a product was difficult. Inventors could not afford to go to Washington to look at the files of previously patented inventions, and personal computers and the Internet did not exist.

However, this past October, on land that was once filled with apricot orchards and tomato fields, I, along with several hundred people, attended the grand opening celebration of the new Silicon Valley location of the United States Patent and Trademark Office. The office, which is a smaller version of the main one in Alexandria, Va., will connect the world-renown center of technology, business venture and creativity to government resources. Inventors will have the opportunity to meet directly with the judges and examiners who will help forge the future growth of this high-tech, economic sector of the country.

— Lawrence J. Udell



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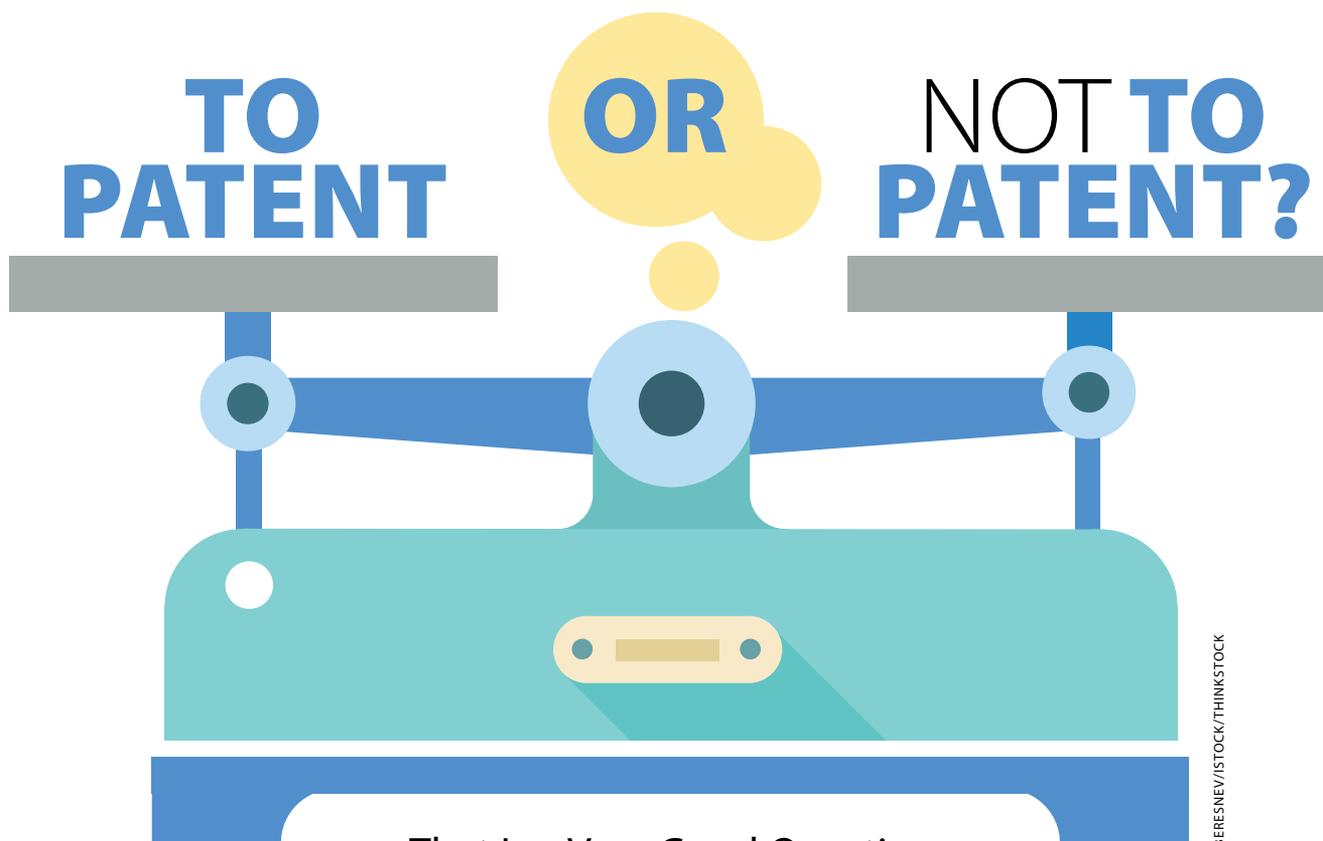
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## That Is a Very Good Question

BY JACK LANDER

In my November column, I suggested proceeding without a patent as one option in the event that H.R.9 is passed. This bill contains a clause that obligates the loser of a patent lawsuit to pay for the other party's legal expenses. This would make the enforcement of patents through the courts impractical due to the high risk of losing and facing legal expenses that could bankrupt the average inventor. Only wealthy individuals or medium- to large- size companies ordinarily have the money to take on such litigation. This month I address whether or not to apply for a patent.

Since the inception of the Patent Office in 1790, patenting has been viewed as a legitimate means to limit competition and profit from producing and marketing inventions, or licensing patents. But the high cost of preparation makes patents expensive: Average costs are around \$900 per page. Assuming your invention is not complicated, your application may consist of 10 pages and perhaps 10 claims. But if the rejections that are cited in your first "office action" are difficult to rebut, the total cost could exceed \$10,000. Assuming your objective is to produce and market, you must ask yourself how long it will take to repay yourself out of presumed profits for this investment.

### Licensing Without a Patent

In my many years as a corporate product designer, independent inventor and advisor to a few thousand inventors, I have never known a case in which an inventor has licensed the rights to his invention without having a patent or a patent application on file. Although there is at least one author who claims it is possible, I would never advise an inventor to try it. Today's corporate presumption is that everything is in the public domain until an inventor proves it isn't by getting a patent on the invention.

### Producing and Marketing Without a Patent

This decision depends on the profit potential of your product, which is unknown until you tool, produce and offer your product for sale. Let's face it: You have to be a cockeyed optimist to even think about inventing for profit. Most of the time the potential imagined is overstated, at least in the early stages before the production processes have been optimized and the most economical sources of materials and components have been found.

An invention is an investment, and common business wisdom advises that a typical new-product investment must pay itself back in two to three years. At the rate of change in technology

## As a producer of a low-volume niche product, you will find your competitors to be mainly small businesses that have limited time, finances and other resources to manufacture a copycat product, unless that product fits well into an established product line that already has a functioning market channel.

today—not only in high-tech but almost all non-commodity products—inventions run the risk of being obsolete before the patent is paid for.

How can you protect your new product without a patent? Consider these alternatives:

- **Invent for a limited market.** As a producer of a low-volume niche product, you will find your competitors to be mainly small businesses that have limited time, finances and other resources to manufacture a copycat product, unless that product fits well into an established product line that already has a functioning market channel. The often high-dollar investment in tooling a product—in particular, one that is plastic injection molded—acts as a deterrent to a would-be competitor, especially if there is any question about whether the market can sustain two producers.

- **Stay under the radar.** If potential competitors are to copy products, they must first discover them and assess their popularity. Most inventors do not have the money for extensive advertising early in the marketing process; thus the product may remain obscure to potential competitors for several months or more.

By keeping a low product profile, except in communications directed at potential customers, you gain a distinct advantage. Business people seldom copy products that don't show signs of a significant sales history. Discovering a product's success depends on watching it for a while. For example, if a product appears in issue after issue of a catalog, a potential competitor will know it is selling well enough to consider copying. Once the decision to copy is made, it may take several months to tool up and fill the pipeline.

- **File a provisional patent application.** If you've done a patent and product search, and believe your invention is novel, you can write and file your own provisional patent application. This allows you to state "patent pending" on the product for a year, which is the term of a provisional patent. Such warning should create hesitancy in a potential competitor. It also provides time to evaluate your product's potential and file for a utility patent if sales meet or exceed your dreams.

- **Be first in the market.** When catalogs were the inventor's main market-entry channel, it was advantageous to be first. Many catalogs preferred one-of-a-kind products, rather than two or more of the same type. One of my clients developed a product that was distinctly superior to the product catalogs were selling. However, when she submitted her product, she was told the company already had essentially the same product and didn't need another.

Amazon, however, has significantly reduced the advantage of being first in the market. It is not uncommon to find several competing products that perform the same function on Amazon. We don't know or care which producer got to Amazon first; we simply look for features, benefits and price, and take into account customer ratings.

Catalogs tend to be more restrictive. They carefully guard their return on investment on catalog space, making it advantageous to the inventor to submit a truly novel product. Catalogs depend on novel products, whereas Amazon sells both novel and well-established products.

- **Be second in the market.** The first producer is not always the most successful. The No. 2 producer may see the flaws in No. 1's products and enter the market with an improved version. The advantage is that the *market is already established*.

Understand: I'm not against patents. I have several and no doubt I'll have a few more before I decide to plunk down in my rocking chair and tell my great-grandchildren about how I almost became a multimillionaire. But I'm concerned about the effectiveness of the protection they will provide if H.R.9 with its "loser pays" clause passes. Fortunately, *Inventors Digest* will keep us well informed of its status. ☺

**Jack Lander**, a near legend in the inventing community, has been writing for *Inventors Digest* for 19 years. His latest book is *Marketing Your Invention—A Complete Guide to Licensing, Producing and Selling Your Invention*. You can reach him at [jack@inventor-mentor.com](mailto:jack@inventor-mentor.com).



# Suck It Up

## James Dyson Discovers The Power Behind a Great Vacuum

BY CAMA MCNAMARA

**J**ames Dyson began his remarkable career the same way many innovators do: He was frustrated by a problem and set out to find a solution. The difference between Dyson and most inventors, however, was his almost fanatical conviction to see his ideas successfully developed. This trait became markedly apparent the day he dismantled an expensive Hoover to find out why it wasn't effectively picking up debris and began a five-year pursuit of the perfect vacuum cleaner.

Dyson's name is now synonymous with the results of his dogged determination—the DC01—as well as the multi-billion dollar company that was founded upon it, but the early years of Dyson's inventor journey were filled with at least as many failures as successes, which Dyson takes in stride. "Failure is the key to success," Dyson says. "Success is made of 99 percent failure."

A former student at Byam Shaw School of Art, where he met his wife, Dierdre, and a graduate of London's prestigious Royal College of Art, Dyson studied interior and furniture design before turning his attention to industrial design. Those three disciplines—art, design and engineering—provided Dyson the perfect confluence of talent and skill to develop products that were aesthetically pleasing as well as functionally engineered.

Dyson began his career at Rotork, where he helped develop the Sea Truck, a high-speed, flat-hulled fiberglass landing craft that could deliver cargo where no harbor or jetty was available. In 1975, he won the first of many design awards, the Duke of Edinburgh's Special Prize, for the Sea Truck.

Dyson struck out on his own in 1974 with his Ballbarrow, the first major update to the wheelbarrow since medieval times. An avid gardener, Dyson's frustration with his wheelbarrow getting stuck in the mud led him to develop the improved design, which featured a large plastic ball rather than a wheel in





James Dyson with his son Jake in an Austin Mini Cooper, which is on Dyson's list of design icons.

the front. The ball provided greater stability for carrying heavy loads and increased maneuverability across rough terrain.

The Ballbarrow led to the establishment of Dyson's first company, his second honor, *Building Design* magazine's Innovation Award in 1977, and the understanding that a simple ball was far more than a plaything. It also taught Dyson the value of a patent. Naively, Dyson had assigned his patent to the company he formed with partners. Despite the popularity of the Ballbarrow, he made little money from the invention after he was squeezed out of his ownership stake in the business over a marketing strategy dispute.

### Revolutionary Forces

The lessons learned from this experience proved invaluable when, in 1979, Dyson began work on the invention that would make his an international household name. Dyson was in the process of renovating a home and cleaning debris when he decided to take his expensive vacuum apart to see why it was leaving dust and dirt behind.

He found the motor design had inherent flaws that caused clogging and reduced suction. In 1979, he established Dyson Ltd. and focused his attention on reinventing the household cleaner.

"He would be in the cellar day after day, night after night, trying to form a perfect plastic cone (with a machine). That's my most vivid memory—of him losing his rag each time it went wrong. But then I also remember when he came upstairs with the perfect one," his son Jake said in an April 2015 interview in *FT Magazine*.

Over a grueling five-year period, during which Dierdre supported her husband and their three children as a teacher, Dyson built 5,127 prototypes before he realized success. His reward, in 1983, was the DC01, a bagless vacuum cleaner with Dual Cyclonic technology that relied on centrifugal force to separate the dirt from the air and revolutionized the vacuum cleaner industry.

Yet, Dyson's struggle was far from over. The industry was not ready for such an unusual dirt-sucking beast. For several years, Dyson canvassed his technology to major vacuum manufacturers, who scoffed at the

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engineered.**



The Dyson Cinetic Big Ball Animal+Allergy vacuum has zero filter maintenance and is engineered to remove allergens.

bagless vacuum. Replacement bags were profit generators, and company executives didn't think consumers would want to see the dirt and dust a vacuum collected.

### "Say Goodbye to the Bag"

In 1986, Dyson decided to take his vacuum to Japan, where he managed to break into the market. Encouraged by this success, in 1993 Dyson opened a research center and factory in Malmesbury, Wiltshire. Two years later, and 10 years after his initial idea, he managed his first breakthrough in the United Kingdom with a television commercial that featured him telling viewers to "say goodbye to the bag." Consumers took Dyson at his word, and in 1995, the DC01 became the best-selling vacuum in the United Kingdom. The product was launched in the United States in 2002 with instant success.

Dyson followed his original vacuum cleaner with a series of improved vacuum designs and new household appliance technology—from the commercially unsuccessful CR01, a washing machine with two drums spinning in opposite directions with a 15-minute cycle—to the highly popular Dyson Airblade, a hand dryer that uses 420-mph sheets of air to scrape water off hands, like a windshield wiper.

One of Dyson's most recent developments is the Dyson Air-Multiplier, which uses Air Multiplier™ technology to amplify air 15 times, expelling 119 gallons of cool, smooth, uninterrupted air—with no blades. Dyson recently entered the highly competitive robotic vacuum cleaner market with the 360 Eye. It features 360-degree scanning and mapping for navigation, cyclonic dust separation, a custom-designed digital motor for high suction, tank treads for traction and a user interface via an app.

### Award-Winning Design

Since the introduction of the DC01 in 1993, Dyson has received numerous awards including *Design Week's* Designer of the Decade in 1999 and 2000, the Japan Industrial Designer's Association award in 2002, The Queen's Award for Innovation in 2004 and The Queens Award for International Trade in 2006.

The University of Bath presented Dyson with an honorary doctorate degree in engineering, and he was selected as a Fellow of the Royal Academy of Engineering in 2005. One of Dyson's greatest honors was his appointment as a Knight Bachelor in the 2007 New Year Honors. In addition, he has served as provost of the Royal College of Art since 2011.

**Replacement bags were profit generators, and company executives didn't think consumers would want to see the dirt and dust a vacuum collected.**

### Global Future

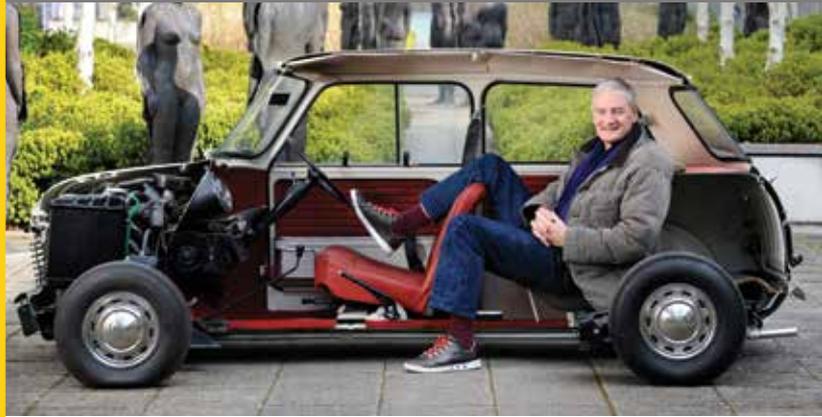
Over the course of 22 years, Dyson's company has literally transformed from one man working in his basement to a global technology firm that employs thousands of workers. Sir James Dyson continues to work alongside his team of nearly 4,000 engineers in the development of new ideas and products. His interest in the engineering field and the decline of engineering graduates, who are vital to the cause of innovation, have spurred him to commit millions of pounds to U.K. universities, including £12 million to the Imperial College London to fund a school of design engineering.

Amidst the company's exponential growth, Dyson has also returned to his roots, so to speak. With the purchase of a 3,000-acre estate in Lincolnshire his total land ownership in England is now 25,000 acres—more than Queen Elizabeth. His farm in Lincolnshire even supplies vegetables to local markets. "I grew up in agricultural north Norfolk. As a schoolboy and college student, I used to spend my holidays working on local farms harvesting potatoes, sprouts, parsley and blackcurrants," he said in an interview with *The Telegraph*. Perhaps Dyson's next big thing is related to farming. Dirt seems to course through his veins.



AM09 is Dyson's latest Air Multiplier™ and first fan heater to use Jet Focus technology.

*Inventors Digest* recently had the opportunity to ask the inventor, entrepreneur, industrialist and philanthropist about his inspiration, his philosophies and his goals for the James Dyson Foundation.



***Inventors Digest:* What were your favorite hobbies as a young boy?**

**James Dyson:** I volunteered to play the bassoon in the school orchestra. When I first saw the instrument, I was horrified. It was introduced as "the most difficult instrument in the orchestra," which, of course, meant I had to conquer it. Unfortunately, I have now had to put bassoon playing on the back burner, but it was good fun.

I also enjoyed long-distance running. I was quite good by time I turned 14. I would get up at six in the morning and run on the beach in Norfolk. Running taught me the physical and psychological strength that keeps you competitive.

**ID: How and why did you switch from furniture and interior design to engineering? Who inspired you?**

**JD:** I wanted to design with functional materials. At the Royal College of Art I took the leap from furniture design to industrial design, which was a chance to get my hands dirty, working with plastic and stainless steel. And so began a lifelong passion for functional design.

After graduating from the RCA, I was employed by local engineering company Rotork, where I designed my first project, the Sea Truck—a high-speed landing craft. Working alongside Jeremy Fry, I learnt to adopt an Edisonian approach to design, making prototype after prototype until you get it right.

**ID: What were the main lessons you taught your children about life? Inventing?**

**JD:** I admire the idea of wrong thinking, so I've always encouraged them to go out and try their own ideas, even if they're not particularly conventional. Especially if they're not conventional! I want my children to be free thinkers, and I happen to think they're doing quite well at each following their own paths—an inventor and engineer, a record label executive and a fashion designer.



James Dyson talks to future engineers at the USA headquarters of the James Dyson Foundation.

**ID: What is the most important characteristic of an innovator?**

**JD:** The most important qualities to me are a willingness to try new things, acceptance of failure when it comes, and perseverance to keep trying.

**ID: What inspires you to innovate?**

**JD:** To me, nothing beats the thrill of invention. Letting people go out and try their ideas, getting them totally involved and unleashing new thinking. They're not bound to any methodology; in fact, the stranger and riskier, the better.

**ID: Do you invent to solve problems or create opportunities?**

**JD:** At Dyson, it's not as clear-cut as that. If we can make something that already exists even better, we will. And we have large, dedicated teams working on advancing our current machines. But our focus is on also inventing and investing in new technologies, even when we aren't sure of their application yet.

**ID: What fascinated you so about vacuum cleaners?**

**JD:** It was more frustration that proved the mother of invention. In the late '70s, I bought a top-of-the-range vacuum cleaner and was immediately frustrated with how it instantly clogged and lost suction. My engineer's instinct kicked in. I ripped open the bag and noticed a layer of dust inside clogging the pores. This is a fundamental flaw with vacuum technology, which went undetected and unchallenged for almost 100 years. I was determined to develop a better vacuum cleaner that worked properly.

During a chance visit to a local sawmill, I noticed how the sawdust was removed from the air by large industrial cyclones. So I took the vacuum apart and rigged it up with a cardboard cyclone. While it didn't look great, it picked up more dust than the old bagged machine. After 5,127 prototypes, I had the first working vacuum cleaner with no bag.

**ID: What is your design process, in general?**

**JD:** It all begins with a problem. You see a problem you can solve, and you proceed in one of two ways: You either develop a

technology to solve that problem or you happen to come across a technology that solves that problem. Either way, the key is having the freedom to tinker, test, prototype, fail and try again. You never really know what working on one problem may lead to; often it can become the solution to something completely different and very exciting. That's part of the fun. Our Airblade hand dryer is a prime example: A failed application in one technology led to a fast and more effective hand-drying solution.

**ID: Do you have a favorite method for developing prototypes?**

**JD:** When I first started inventing, the best way to make prototypes was with cardboard. Today, it's a bit more advanced—CAD and SLS modeling. But I encourage my engineers to start with a cardboard prototype and see if it (the idea) will actually work. It's not always just thinking of an idea; you have to make sure it can work.

**ID: How many patents do you own?**

**JD:** Dyson holds over 3,000 patents for over 500 inventions, but that number grows almost daily.

**ID: What advice can you give readers about marketing products?**

**JD:** I'm no marketer; I'd rather be in the lab, but there was a time I didn't have that luxury. Once I had my first cyclonic vacuum cleaner, I traipsed around the globe trying to convince vacuum manufacturers to take on my idea. No one would have it. I was laughed off by every vacuum and appliance company you could think of. So I decided to do it by myself—like any other vacuum cleaner salesman. I showed people what it did, why it was different and why it performed better. I didn't give up until I sold my first model in Japan. Today, I live by the same mantra. Take risks, fail. Then try again. Don't give up on an idea you believe in.

**ID: Are there "green" products in your future?**

**JD:** Engineers don't start out to make something "green." They set out to make something that works better. To really achieve that goal, you have to do more with less. I took that approach over 20 years ago when designing our first vacuum. And we take that same approach today. For us, it's not green engineering, but rather lean engineering. We need real advancements in sustainable design, not just green products.

**ID: Are you working on any new projects you can discuss?**

**JD:** There would be too many to relay, even if my IP lawyers

would let me. We work on a pipeline of technology that spans 25 years. Some of the projects make it to market; some don't. But we learn from the failures. Right now a lot of my focus is on our range of environmental control products—fans, heaters, purifiers and humidifiers. We've tackled clean floors, but there's still so much to be done about indoor air quality. It can be up to 100 times worse than air quality outdoors. We're working on a few projects to help solve that problem.

**ID: Describe the James Dyson Foundation and what you hope to accomplish through it.**

**JD:** We have a profound shortage of engineers worldwide, and if we don't show students early on that it is an interesting and viable career path, that shortage will only grow. I started my Foundation in 2002 in the United Kingdom and brought it to the United States in 2011 to inspire young people to get involved with engineering.

My aim is to allow them to get hands-on training in engineering—think of problems, invent solutions, prototype, test, test again. The Foundation runs workshops in schools and sends Engineering Boxes out to any school that requests them. These are free reverse-engineering kits that allow students to disassemble a Dyson machine to discover how and why it works.

This year, the Foundation partnered with the City of Chicago to set up three state-of-the-art design and engineering labs in three Chicago Public Schools. Each school will receive industry-standard equipment for student use. And that's all just in the primary and high school level.

We also run a global design competition at the college and post-graduate level called the James Dyson Award with a simple brief: Design something that solves a problem. Some of the inventions that come from young people are truly astounding.

**ID: What innovator—living or deceased—do you most admire and why?**

**JD:** One of my heroes is Buckminster Fuller. He turned me into an engineer when, as a student, I discovered him in the mid-60s. He worked on his own, developing these light, geodesic structures when everyone else worked with concrete. His inventions were slightly mad, but they sparked the inventor in me. 📦

### What Makes James Dyson Tick?

- **Family:** Wife, Dierdre, and three children: Jake, a lighting designer, engineer and heir apparent to Dyson; Sam, a record label executive; and Emily, a fashion designer.
- **Favorite foods:** Cantuccini and jasmine tea
- **Favorite book:** *Olives: The Life and Lore of a Noble Fruit*, by Mort Rosenblum
- **Favorite song:** Bob Dylan's *Simple Twist of Fate*
- **He spends Sunday afternoons:** Gardening, landscaping, especially digging trenches with his JCB excavator
- **Favorite movie:** *Flash Of Genius*

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# The Power of the Pitch

## Four Preparation Pointers

BY JEREMY LOSAW

**T**he last weekend in September, Amazon and Edison Nation teamed up for the Amazon Inventions Tour. Held at the Infinite Energy Center in Duluth, Ga., the event was designed for inventors to pitch their ideas, with the ultimate goal of selling their products on Amazon. Attendees had the opportunity to make their pitches and network with inventors, entrepreneurs and company founders. They also heard from industry leaders, including Tom Charron, vice president product marketing, 3D Systems; Anthony Knight, acting commissioner, Office of Innovation Development, United States Patent and Trademark Office; Kate Drane, senior director of outreach for Tech and Hardware, Indiegogo; and Jason Feldman, director of Global Innovation, Amazon. These experts spoke on topics ranging from prototyping and crowdsourcing to branding and licensing.

Inventors and startups with new, innovative products ready to market met with members of the Amazon team, who were looking for inventory to sell on the new Amazon Launchpad site. Inventors still in the idea or prototyping stage pitched their ideas to the Edison Nation team in hopes of landing a licensing deal.

I was a member of the Edison Nation contingent, which split into American Idol-style judging teams composed of at least one member from the various disciplines of industrial design, licensing and engineering. We set up behind dramatic black-clothed tables in rooms that were big enough to host a soccer match and gave inventors seven minutes to explain their ideas.

Giving a pitch is a nerve-wracking experience, and the stakes are high. After two days of listening to numerous pitches, I noticed

**“Giving a pitch is a nerve-wracking experience, and the stakes are high. After two days of listening to numerous pitches, I noticed that all of the inventors had immense passion for their innovations, but some did a much better job of communicating them.”**

— JEREMY LOSAW

that all of the inventors had immense passion for their innovations, but some did a much better job of communicating their ideas. No matter how good an idea is, the chances of getting investors, landing a licensing deal or selling a product at a trade show may hinge on the quality of the pitch. With plenty of practice and a prototype in hand, you can maximize your chances for a positive result. Following are a few pointers to improve your next pitch.

### **Don't Bury the Lead**

By far, the most frustrating mistake made by the inventors was not explaining the product's purpose or function early in the presentation. In many instances, after five minutes, I still had no idea what the product was or what it did, which left little time for discussion.

The Edison Nation team was skilled and kind enough to ask probing questions and extract the idea, but other groups may not be so forgiving. A great way to pitch a mousetrap would be to say, “I became frustrated by mice running through my house, so I designed a device to trap them. It has a wooden base with a spring-loaded gate and a food tray. When the mouse steps on the food tray, the spring releases the gate and it unwinds rapidly, killing the mouse.” You need to quickly and concisely state the problem and your proposed solution as early as possible in the pitch to keep your audience interested.

### **Background Story Is Okay, but in Moderation**

Every product that makes it to market has an interesting story. There are bins full of prototypes, the magical trip to the hardware store that saved the day, and that time “it almost burned down the garage.” The trials and tribulations of the process are what make inventing and product development so much fun. These stories are great for sharing with family or fellow inventors, but they can be a drag on a pitch. Background stories can add flavor and context, but when speaking to someone unfamiliar with the product, the presentation needs to stay at a professional level and be interesting to avoid losing your audience's attention. James Dyson made 5,127 prototypes before he came up with the bagless vacuum cleaner, but you would lose your mind if you had to sit in a room and listen to a story about each one.



Edison Nation's Doug Dolan, Rae McNeil, Carlos Perez and Scott Dromms prepare to hear pitches.

A good background story for the mousetrap might be: “My wife and I like to eat cheese curds while practicing our ballroom dancing at home. One day, a mouse scampered through the living room toward our cheese bowl. My wife freaked out amid the fox-trot and stepped on my toe so hard that I fell over and crashed into the lamp. I had to go to the emergency room and get four stitches in my forehead. After that I knew I had to find a way to get the mice.”

### **Rehearse Your Pitch**

No activity performed well is done without practice, and this goes for pitching a product. One of the best pitches I saw at the event was from a gentleman who came in with an idea for exercise equipment. The product was novel, but the presentation was outstanding. In just four minutes, he talked through the history of the product and its benefits, all while doing 20 different exercises. He was a fit guy, but by the end, he was sweating. More important, the panel had a crystal-clear picture of his concept and asked very few questions. It was obvious he had practiced the routine a number of times, and it helped him communicate his concept. Of course, not everyone has great charisma or a knack with words, but rehearsing your pitch will help you understand your own concept better and give you the confidence to communicate the idea.

### **Prototypes Are Gold**

You could pitch a product to someone who does not speak your language and it would likely go well if you had a prototype to help tell the story. Seeing an idea in three dimensions is immensely helpful in communicating a new innovation. The ideal prototype functions perfectly and looks like a finished product, but much simpler prototypes can be just as compelling. Bringing a prototype, even if it is made from simple household materials such as paper, wood or PVC, shows you have put significant thought into the form and function of the innovation. Be sure to transport the prototype in an opaque package. You don't want to accidentally have a public disclosure. Also, be sure that if the prototype requires a consumable, like water or batteries, you have spares on hand to replenish. ☺



# Patent Quality Is Much Ado About Nothing

WITHOUT BETTER PATENT EXAMINER CONTROLS **BY GENE QUINN**

In October 2010, the United States Patent and Trademark Office announced the adoption of more comprehensive procedures for measuring the quality of patent examination. The new procedures evaluated seven diverse aspects of the examination process to form a more comprehensive composite quality metric. The composite quality metric is designed to reveal the presence of quality issues arising during examination and to aid in identifying their sources so that problems may be remediated through training, and the presence of outstanding quality procedures can be identified and encouraged.

The Patent Office is also pushing a patent quality initiative. “The innovation that is fostered by a strong patent system is a key driver of economic growth and job creation” is how the United States Patent and Trademark Office began the Federal Register Notice announcing the new patent quality initiative in early February 2015. “Quality is two-fold—both internal and external,” Deputy Commissioner for Patent Quality Valencia Martin-Wallace explained during a March 2015 conversation with IPWatchDog. “We want to make sure we are delivering quality to stakeholders...patents that can stand up in the courts.”

Despite the talk about patent quality, several months ago it was revealed that one particular patent examiner had fraudulently submitted time sheets claiming pay for more than 700 hours of work not performed. Referred to as “Examiner A” in the report, the examiner in question also received extraordinarily low performance evaluations, including a reprimand for poor quality on nine separate occasions. This leads to a very difficult question for the Patent Office: Why was Examiner A even working as a patent examiner?

While improving patent quality is a fine goal, the episode with Examiner A shows what many in the patent bar know to be true. There are some patent examiners who produce very low quality work, some who struggle to speak and write in English, and others who refuse to give serious and thoughtful consideration until the patent applicant has filed an appeal brief.

These and other hurdles placed in front of applicants do nothing but frustrate the very purpose of having a patent system, which is to recognize and reward innovation. Worse, the public has already received the benefit of the bargain through publication of



the patent application, so in effect, what recalcitrant patent examiners are doing is unilaterally refusing innovators the benefit of their bargain after the value has been provided.

## Patent Examiners Not Equal

While the overwhelming majority of patent examiners take the job very seriously, those who do not are severely damaging the patent system they are supposed to be serving. They are also damaging the reputation of all patent examiners and calling into question the quality produced by the Patent Office. While a minority of patent examiners frustrate the system, the fact that there are any such examiners is unfair to patent applicants and the overwhelming majority of hard working and dedicated examiners.

The situation with Examiner A, however, spotlights the inability of the Patent Office to get rid of patent examiners who are routinely cited for inferior quality and casts doubts on the Patent Office quality initiatives. Until the Patent Office can address obstinate patent examiners and those who continually fail to meet quality expectations, how can the Office truly address the problem?

If the Patent Office cannot fire an examiner for inferior work, how can the Office seriously expect that any of its initiatives will

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## How can the Patent Office realistically put any more burden on applicants and patent practitioners without similarly putting pressure on those examiners who unreasonably and unnecessarily stand in the way of applicants?

do anything to increase quality? How can the Patent Office realistically put any more burden on applicants and patent practitioners without similarly putting pressure on those examiners who unreasonably and unnecessarily stand in the way of applicants?

### Federal Employment Guidelines

Unfortunately, there may be very little the Patent Office can do. The federal government has an outdated civil service system that fails to hire the best employees by only allowing agencies to interview those who score the highest on a written application submitted through USAjobs.gov. Points are given for previous federal work or military experience, regardless of whether it is relevant to the job. Similarly, points are given for minorities and disabilities, again without regard to job suitability. Thus, the perfect applicant for a position, who has never been employed by the federal government, is not a minority or is not disabled, can easily score fewer points than someone without the appropriate background or training for a position.

Although not impossible, firing a federal employee who has worked past his probationary period is extremely difficult. “Very few federal employees—in the hundreds, not the thousands—are ever fired on the basis of poor performance,” said Paul Light, a professor of public service at New York University, in a 2007 article published by *PolitiFact* on the issue. In the same article, Don Kettl, a professor at the University of Pennsylvania, agreed. “The federal civil service is hamstrung by antiquated rules,” he said. “We need to make it easier to fire poor performers.”

Sadly, since 2007, when the issue of removing under-performing federal workers came up during the Obama-McCain presidential campaign, nothing has changed.

Obviously, the Patent Office is but one small piece of the federal government bureaucracy. This means there is little the Patent Office can do, aside from transferring poor employees to menial jobs, which is something that was done many years ago.

It seems silly to talk about patent quality and what the industry needs to do to provide better patent applications, when the Patent Office is unable to manage its own employees. Patent quality is only going to be as strong as the weakest link. The fact that Examiner A was continually reprimanded for poor quality speaks volumes about the safeguards in place to protect patent applicants. For years there has been a disconnect between what senior Patent Office officials want patent examiners to do and what they actually do, and often, the bureaucracy of the federal government gets in the way.

### Disparity in Art Units

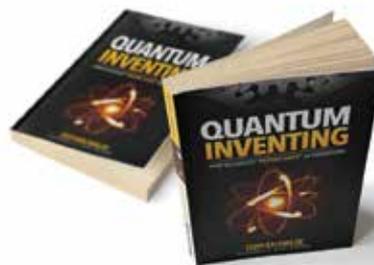
The end goal of any patent application is to obtain a patent, which is true whether applicants find themselves assigned to a patent examiner in an Art Unit that issues over 95 percent of applications received, or whether they are assigned to a patent examiner that issues less than five percent of applications received. Sadly, these figures are not exaggerations. There are Art Units that occupy both ends of the allowance spectrum and evidence on some level that the senior and career management officials at the Patent Office are incapable of getting patent examiners on the same page. For an organization that is largely in the business of examining patent applications, such disparate treatment of patent applications is simply unacceptable.

The deviation in allowance rates is so overwhelming between Art Units in the same technology center that the different treatment patent applicants receive is functionally discriminatory, if not discriminatory in a legal sense. Such disparate treatment by similarly situated patent applicants cannot be what the law is supposed to encourage, or even allow. If the concept of equal protection means anything, it has to at least mean that applicants, some of whom are direct competitors operating in the same or adjacent technology fields, have to be treated the same. ☞

Gene Quinn is a patent attorney, founder of IP-Watchdog.com and a principal lecturer in the top patent bar review course in the nation. Strategic patent consulting, patent application drafting and patent prosecution are his specialties. Quinn also works with independent inventors and start-up businesses in the technology field.



**YOUR PATENT CAN BE DESIGNED AROUND**  
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**QUANTUM INVENTING**  
by Stephen Malak

\* Book available online, only at  
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# Mark Cuban Is Not a Fan of Software Patents

BY GENE QUINN

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**B**illionaire Mark Cuban denied the fact that he recently threatened to sue Walmart for patent infringement because the company announced plans to sell a popular self-balancing scooter. According to *BuzzFeed*, Cuban had reached an agreement to buy a patent license for the scooter from inventor Shane Chen. In comments on IPWatchdog, Cuban explained that someone, such as a patent troll, would sue Walmart. As it turned out, Chen was the person who sued Walmart for patent infringement.

Regardless of whether Cuban did or did not threaten to bring a patent infringement lawsuit against Walmart, during the interview he unabashedly reiterated his long-standing belief that software patents should not exist. He went so far as to say that he would open up the intellectual property he controls over the self-balancing scooter if software patents were banished.

A dim view of software patents does not make Mark Cuban unique, but his latest foray into the patent debate does provide interesting insights into his arbitrary views on innovation. Cuban seems to believe that innovators are entitled to patent rights as long as the innovations are tangible. When those innovations manifest themselves in the form of intangible software, the underlying innovation is for some reason no longer entitled to patent protection.

To highlight the matter, let's take a look at the patent in which Cuban has an interest: U.S. Patent No. 8,738,278, titled "Two-wheel, self-balancing vehicle with independently movable foot placement sections." The '278 patent has nine total patent claims, one of which

is independent. The other eight either directly or indirectly depend on Claim 1. Claim 1 covers the following invention:

- A two-wheel, self-balancing vehicle device, comprising:
- a first foot placement section and a second foot placement section that are coupled to one another and are independently movable with respect to one another;
- a first wheel associated with the first foot placement section and a second wheel associated with the second foot placement section, the first and second wheels being spaced apart and substantially parallel to one another;
- a first position sensor and a first drive motor configured to drive the first wheel, a second position sensor and a second drive motor configured to drive the second wheel; and *control logic* that drives the first wheel toward self-balancing the first foot placement section in response to position data from the first sensor and that drives the second wheel toward self-balancing the second foot placement section in response to position data from the second foot placement section.

### Control Logic Limitation

Those familiar with patent claims and software might be taken aback by Cuban's strong dislike of software patents when the patent he controls contains a "control logic" limitation. Such a limitation ordinarily smacks of software. Is it really possible that Cuban thinks software patents shouldn't exist but is at the same time comfortable with the '278 patent? While a lot of Cuban's

positions on patents seem explainable based on the philosophy that the problem is with patents owned by others, there is a bit more nuance at play here—nuance that is rather illuminating.

The Detailed Description of the patent in question doesn't spend much time discussing the structural implementation of the control logic, which will be problematic during any enforcement action or subsequent post-grant review of this particular patent. It does seem that the '278 envisions a hardware-based control-logic platform, not a software-based control-logic platform. The patent explains:

The control logic for translating position data to motor drive signals may be centralized or split between the two platform sections. For example, control logic 150 may be electrically connected to sensors 120,140 and to drive motors 117,137, electrical conduits connecting through the connecting shaft 170 between sensor 140, control logic 150 and drive motor 137.

Alternatively, a separate processor/control logic 151 may be provided in the second platform section 130. Logic 151, in this case, would connect directly to sensor 140, drive motor 137 and generate drive signals to motor 137 (and wheel 135) based on data from sensor 140.

Perhaps Cuban is guilty of hating software patents owned by others and loving software patents he controls, but the matter can't end there. Those who hate software patents seem to have no problem when the processes are directed by hardware, but for some inexplicable reason, when the processes are directed by software, the original innovation is transformed into something that is not patentable, and even evil.

## Hardware vs. Software

Surely Cuban has to realize that this self-balancing scooter could accomplish the same exact functionality if the control logic were software based. If Walmart wanted to copy the scooter found in the '278 patent without any fear of patent infringement liability, all the company would have to do is implement the core functionality in a software solution rather than a hardware solution. I wonder if Cuban would feel the patent system failed if such a purposeful and intentional copy could be sold without rights obtained under the '278 patent? That is precisely the problem with glorifying a distinction without a difference. In this case, the design choice can manifest either in hardware or in software, but that doesn't change the reality that the invention in question is a self-balancing scooter.

Can or should a design choice made with respect to the implementation of core processes matter in a patentability context? Of course not. Former Director of the United States Patent and Trademark Office David Kappos recently addressed this very issue in an interview published on IPWatchdog.com. He explained just how artificial the distinction between hardware and software processes are:

“What we're really talking about is algorithms that actually may or may not be implemented in software. It's actually common, and you're seeing it now in the smartphone area. Back when I was an engineer, we saw it in mainframe computers where you'd make an invention and frequently, initially, the software wasn't fast enough to be able to run the algorithm. So the algorithm

would first be built in silicon, really expensive, but you'd wind up then fabbing up chips to be special-purpose chips to run the algorithm. And then later, as the software got faster, the underlying computer systems got faster, and you'd re-implement the same algorithm in software, same algorithm, same invention, but just re-implement it in software. Even later, when the ASIC density got good enough, you'd re-implement again in an application-specific integrated circuit, an ASIC. And so you'd have a little bit of a hybrid, if you will, but more on the hardware side, it's an IC. It's again putting the algorithm in a chip. And so what you'd see by looking at that is that it made no sense to say that an algorithm was patentable if it was implemented in a hardware chip. But the same algorithm implemented in software was unpatentable. It just didn't make sense to say that.

## Design Choices

Microsoft's Chief Patent Counsel Micky Minhas also brought up this point during an interview conducted earlier this year, in which the discussion turned to design choices for implementing an innovation.

**Gene Quinn:** What many people not familiar with software don't seem to understand is that whether an innovation is expressed in software or hardware is a design choice. But if it is designed in hardware, we don't have a patent eligibility issue, whereas if it is designed as a software solution, there is a significant hurdle to patentability.

**Micky Minhas:** Yes. In the debate, we often hear people talk about what is the right level of protection for software patents. And I think what gets lost sometimes is that how a given company or any inventor decides to embody an invention, whether in a software product or in a hardware product, is often nothing more than a design choice. Whether an innovation is embodied in software or hardware feels like it should be irrelevant to whether or not it's patentable. The law should be agnostic as to whether it's embodied in software or hardware. We should let the debate be whether or not this invented concept is worthy of patent protection, whether it be on subject matter, or 102 or 103 grounds.

Minhas went on to take issue with critics who sometimes claim that implementation choices are arbitrary themselves. “It's optimized for whatever that product is,” Minhas explained. “The determination of whether or not that underlying compression algorithm is worthy of patent protection should be completely independent of whether it is implemented in hardware or software.”

There is no reason to be afraid of software. Similarly, there is no legitimate reason to create an arbitrary patentability distinction that exalts tangible processing at the expense of intangible processing. Such a distinction without a difference turns the focus away from whether there is an innovation present, which is antithetical to the very purpose of the patent system.

In the year 2015, there is something enormously out of touch with driving old-fashioned technical prejudice into an innovation discussion. Those who think hardware and software processing are meaningfully different are fooling themselves and standing in the way of innovative advances like so many previous generations who were afraid to technologically evolve. 🐶



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## Blurred Lines

### UNDERSTANDING OBVIOUSNESS BY GENE QUINN

**D**etermining what is obvious and, therefore not patentable, is a difficult matter. One of the most frustrating things I do as a patent attorney is advise inventors on whether their invention is obvious. It is frustrating, not because of any failing or lack of knowledge on the part of the inventor, but because the legal determination of whether an invention is obvious seems completely subjective and, sometimes, arbitrary.

The problem with obviousness is that it is so unevenly applied. In some areas of technology, nothing ever seems to be obvious; in others virtually everything seems to be obvious. This requires a patent attorney or patent agent to have familiarity with how patent examiners interpret the law of obviousness in a particular innovative area. You might suspect that it is more difficult to describe low-tech gadgets as

non-obvious and easier to describe high-tech inventions as non-obvious. That frequently isn't the case, which leads to even greater frustration for inventors.

If Irving Inventor could get a patent on that simple kitchen gadget, how is it possible that a complex software program that didn't exist before could be considered obvious? That is a good question, and one, in my opinion, without a satisfactory answer. There is little that seems fair when you compare the way obviousness is interpreted by different Art Units at the Patent Office, which suggests that obviousness has much to do with the way Supervisory Patent Examiners view the inquiry. SPEs have different philosophical views of the patent system, which is one reason you get such disparate treatment of applicants. Regardless of the reason, what seems clear is that the law of obviousness has more to do

with the personal perceptions of the decision maker than any enlightened or guiding principle.

#### **Obviousness Key to Patentability**

The issue of obviousness is where the rubber meets the road when it comes to patentability. It has always been difficult to explain the law of obviousness. Since the United States Supreme Court issued its decision in *KSR v. Teleflex* in 2007, it has become even more difficult to provide a simple, coherent articulation of the law of obviousness that is intellectually satisfying. That is in no small part due to the fact that the determination about whether an invention is obvious is now completely subjective.

An examination of Federal Circuit cases reveals there is a lot of reasoning that justifies a conclusion already formed. The

state of obviousness law allows a decision maker to make a determination about obviousness that seems appropriate from a subjective standpoint, and then weave the “reasoning” backwards to justify the conclusion already reached.

The way this once was prevented was with the teaching, suggestion or motivation test. If there was no teaching, suggestion or motivation to combine references, the invention could not be obvious, period. The Supreme Court thought that test was too permissive and led to patents that should clearly never have issued.

The question inventors want to know is whether they will likely be able to obtain a patent. There is no point wasting good money chasing a patent that will never issue. Application of the law of obviousness seems to suggest that, when in doubt, an invention will be considered obvious. Therefore, it becomes essential to identify all of the possible differences between the invention and the prior art, both from a functional and structural standpoint.

This article is a first step in the journey to a greater comprehension of the law of obviousness. Before we can understand the peculiar nuances that have turned obviousness determinations into purely subjective inquiry, we need to start at the beginning.

### **Novelty vs. Obviousness**

There are primarily two questions that must be answered in assessing whether an invention is patentable. First, is the invention new (i.e., novel) compared with the prior art? Second, is the invention non-obvious in light of the prior art? We engage in this two-fold inquiry to determine what, if anything, can reasonably be expected to be obtained in terms of patent claim scope.

The question about whether or not there is any single reference that is exactly identical to the invention being evaluated is merely a threshold inquiry. If a prior art reference is found that discloses all the elements of the invention, the inquiry ends because no patent can be obtained. If no single prior art reference identically describes each and every aspect of the invention, this novelty hurdle has been cleared. It is not at all uncommon for an invention to clear the novelty hurdle, or at least be capable of clearing the novelty hurdle because,

with the addition of enough characteristics and limitations, eventually the invention will not be identical to the prior art.

Even if the invention is not identical to the prior art, it is possible to be denied a patent because the invention is obvious. This is where many inventors become mystified. The only time I get complaints after I do a patent search and offer an opinion is when I tell inventors that I don't think their invention is patentable, or that it may be patentable but the resulting claims will be quite narrow, perhaps so narrow that the patent claims will not be commercially viable. This opinion is almost always reached due to obviousness concerns. It is difficult for inventors to hear they have an idea that is not identical to the prior art and also be told that their invention is likely not patentable because it will be determined to be obvious.

**The more differences the better. It is better if the prior art is missing elements. It is best if the combination of elements that makes up the invention produce a synergy that leads to something unexpected.**

### **Pieces, Parts and Functionality**

It is essential to understand what makes the invention unique when approaching an obviousness determination. It is also necessary to start to envision the arguments that can be made to distinguish the invention over the totality of the prior art. This is required because, when patent examiners deal with issues of obviousness, they look at a variety of references and pull one element from one reference and another element of the invention from another reference.

Ultimately, patent examiners will determine if they can find all the pieces, parts

and functionality of the invention in the prior art as a whole, and conclude that a combination of the prior art references discloses your invention. This is a bit of an oversimplification because, on some level, all inventions are composed of known pieces, parts and functionality. The true inquiry is to determine whether the combination of the pieces, parts and functionality found within the applicable technology field of the invention would be considered to be within the “common sense” of one of skill in the art, such that the invention is merely a trivial rearrangement of what is already known to exist.

What is and is not “common sense” makes an objective inquiry extremely difficult. The Patent Office has attempted to interpret *KSR* in a way that focuses on predictability of results and expectations of success. With the test focusing on “common sense,” a lot is left to the decision maker in the subjective realm.

One highly effective way to combat an obviousness rejection is to point out that not all of the pieces, parts and functionality that compose an invention can be found within the relevant prior art. Even this is no guarantee that a patent examiner or reviewing judge must find that the invention is non-obvious. Nevertheless, it is a good place to start.

### **Establishing Uniqueness**

The way I approach obviousness is to identify the closest references and work to articulate what is unique in an invention, searching for a core uniqueness that exists so that a unique invention can be articulated. We focus on anything not shown in the prior art, both from a structural and functional level. The more differences the better. It is better if the prior art is missing elements. It is best if the combination of elements that makes up the invention produce a synergy that leads to something unexpected.

From a purely legalistic standpoint, an invention is *legally obvious*, and therefore not patentable, if it would have been obvious to a person of ordinary skill at the time the patent application is filed. In the past, this critical time for determining obviousness occurred at the time the invention was made, but since the United

States became a first-to-file system, the critical time for determining obviousness is no longer at the time of conception, but rather at the time of filing.

The framework used for determining obviousness is stated in *Graham v. John Deere Co.* While *KSR* is the most recent articulation of obviousness from the Supreme Court, it did not disturb the underlying *Graham* inquiry. Thus, every obviousness determination must first start with the *Graham* factors as the analytical tools. *KSR* is overlaid into the inquiry to provide the reasoning for reaching a particular decision based on consideration of the *Graham* factors.

### The *Graham* Factors

Obviousness is a question of law based on underlying factual inquiries. The factual inquiries—the *Graham* factors—that compose the initial obviousness inquiry are as follows:

**1 Determining the scope and content of the prior art.** In determining the scope and content of the prior art, it is necessary to achieve a thorough understanding of the invention to comprehend what the inventor has invented. The scope of the claimed invention will be determined by giving the patent claims submitted the broadest reasonable interpretation consistent with the overall articulation of the invention.

**2 Ascertaining the differences between the claimed invention and the prior art.** Ascertaining the differences between the claimed invention and the prior art requires interpreting the claim language and considering both the invention and the prior art as a whole.

**3 Resolving the level of ordinary skill in the pertinent art.** The person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention. It is necessary to determine who this hypothetical person is, because the law requires that the invention, not the law (35 USC 103), seeks to determine whether “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.” This hypothetical person of ordinary skill in the art is central to the inquiry.

Factors that may be considered in determining the level of ordinary skill in the art include (1) type of problems encountered in the art; (2) prior art solutions to those problems; (3) rapidity with which innovations are made; (4) sophistication of the technology; and (5) educational level of active workers in the field. In a given case, every factor may not be present, and one or more factors may predominate.

A person of ordinary skill in the art is

What makes a long-felt, well-documented need so powerful is that the invention has never existed, even as the industry has searched for solutions.

also a person of ordinary creativity, not an automaton. In many cases, a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.

**4 Secondary considerations of non-obviousness.** In addition to the aforementioned factual inquiries, evidence that is sometimes referred to as “secondary considerations” or “objective indicia of non-obviousness,” must be considered. Essentially, secondary considerations are reality checks on the determination reached through the first three factual inquiries. In other words, the invention may appear on paper to be obvious, but if reality does not match theory, the invention can be established as being non-obvious.

Evidence of secondary considerations may include proof of commercial success, long-felt but unsolved needs, failure of others, copying by the industry and unexpected results. If you are paying attention, you will notice that I mentioned “unexpected results.” This is an important linchpin because unexpected results come up as a secondary consideration, and whether the combination of elements produces a predicted result or outcome plays a central role in the post-*KSR* obviousness determination.

It is important to understand that not all secondary considerations are created equally. For example, there are many possible reasons why a particular product may enjoy commercial success, such as a great marketing campaign or superior access to distribution channels. In those situations, the invention is not responsible for the commercial success; there are contributing factors. In order for commercial success to be useful, something needs to tie it to the innovation.

One particularly strong secondary consideration is a long-felt but unresolved need. If there has been a well documented need or desire in an industry that has gone unanswered or unmet, how is it intellectually honest to say that a resulting solution is obvious? It wouldn't be at all intellectually honest. That is why a long-felt, well-documented need that becomes met is excellent evidence to demonstrate that an invention is non-obvious.

The evidence of secondary considerations may be included in the specification as filed, accompany the application on filing or be provided to the patent examiner at some other point during the prosecution, which is probably the most common way to submit such evidence.

It is worth noting that, simply because an invention has never existed, does not mean it would be considered non-obvious. What makes a long-felt, well-documented need so powerful is that the invention has never existed, even as the industry has searched for solutions. The key is not that it hasn't existed, but that the invention hasn't existed despite efforts to find a solution. 📦



# A Fear of Trade Secret Trolls Is Completely Unfounded

BY GENE QUINN



VALERIY KACHAEV/ISTOCK.COM/THINKSTOCK

In early October 2015, Sens. Orrin Hatch, R. Utah, and Chris Coons, D. Del., came together on the Senate floor to urge passage of their bipartisan Defend Trade Secrets Act of 2015. The senators noted that the legislation has robust industry support and is ready to advance through the Senate Judiciary Committee and, ultimately, the Senate.

The Senate bill is co-sponsored by Sens. Jeff Flake, R. Ariz., Dick Durbin, D. Ill., Thom Tillis, R. N.C., Tammy Baldwin, D. Wis., Roy Blunt, R. Miss., Mike Crapom, R. Idaho, and James Risch, R. Idaho. Reps. Doug Collins, R. Ga., and Jerrold Nadler, D. N.Y., have introduced companion trade secret legislation in the House of Representatives. Little serious opposition to these bills, which would create a long overdue uniform federal regime for trade secret protection, has surfaced, but that does not mean there is no opposition.

**There has never been a shred of evidence that a trade secret troll model exists.**

Several law professors are stoking fears by tapping into the public sentiment against patent trolls. These professors claim that, if enacted, federal trade secret legislation will lead to a rise of trade secret trolls, which they argue would damage the system.

### **Worry Based on Fear, Not Fact**

No one likes trolls, but the worry about trade secret trolls is based on fears—not fact. You simply cannot commoditize trade secret litigation in the same way patent trolls commoditize patent litigation.

There is a long history of trade secret protection at the state level in the United States, but there has never been a shred of evidence that a trade secret troll model exists. Without evidence of a trade secret troll problem in various states, there is no credible reason to suspect that a federal law would give rise to such a problem on the national level. All a federal trade secret regime would do is allow for jurisdiction to attach in a federal forum. The lack of evidence of a problem in any state does nothing more than tap into existing public angst over the issue of abusive patent litigation in order to derail the legislation.

Moreover, the very nature of a trade secret dispute would not allow for the commoditization of abusive litigation. “All trade secret claims require fault. This is not something you can do as a mass market business,” says

*(Continued on page 43)*



# Will the Supreme Court Bring Balance Back to the Patent Market? BY GENE QUINN



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In late October, the United States Supreme Court accepted certiorari in two patent cases, which were consolidated by the Court for consideration. These two cases, *Halo Electronics, Inc. v. Pulse Electronics, Inc.* (14-1513) and *Stryker Corporation v. Zimmer, Inc.* (14-1520), will force the Court to dive headfirst into one of the thorniest political patent issues of our time—enhanced damages for willful patent infringement.

The statute in question, 35 U.S.C. §284, states that the district court judge “may increase the damages up to three times the amount found or assessed.” Simple and straight forward enough, but over the years, the United States Court of Appeals for the Federal Circuit has issued rulings that make it virtually impossible for a victorious patent owner to receive enhanced damages. The rigid structure of the enhanced damages test has effectively removed the permissive and discretionary language of the statute, which states that the district court judge “may increase the damages.”

In the Supreme Court’s recent decisions in *Highmark Inc. v. Allcare Health Management Systems, Inc.*, 134 S. Ct. 1744 (2014), and *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014), the Court, interpreting 35 U.S.C. § 285,

found that there was no textual support in the statute to impose an onerous, rigid test for the awarding of attorneys’ fees to a prevailing party in a patent infringement lawsuit. Most notably, the Supreme Court explained that the Federal Circuit misinterpreted a key ruling of the Supreme Court when it created the test that would result in attorneys’ fees never being awarded. That exact misinterpretation is at the heart of Federal Circuit case law relating to the awarding of enhanced damages to a victorious patent owner. Therefore, it seems certain that the Supreme Court will overrule the Federal Circuit and give district courts discretion to award enhanced damages when appropriate.

Why the Federal Circuit refused the opportunity to sit *en banc* and correct this matter without need for further Supreme Court consideration is curious to say the least. The handwriting couldn’t have been any clearer after the Supreme Court’s decisions in *Octane Fitness* and *Highmark*; yet the Federal Circuit continued to apply the same faulty interpretations and misunderstandings of law that it had prior to those Supreme Court decisions. It is surprising that the Federal Circuit would be so obstinate in the face of a clearly correct decision, since it seems pathologically fearful

of refining Supreme Court precedent relative to patent eligibility. Even when there is no way the Supreme Court could have ever intended its broad patent-eligibility pronouncements about horribly written claims to apply to truly innovative technologies, the Federal Circuit has blindly followed the literal overstatements, as if there were some greater good in taking sweeping statements out of context.

## Supreme Court Unpredictable

Even with what appear to be open-and-shut cases, it is difficult, if not impossible, to predict how the Supreme Court will rule. The fact that the Supreme Court accepts a case, when patent matters are handled only by the Federal Circuit, suggests there are serious doubts about how the Federal Circuit has ruled, even before full briefing and oral arguments. Furthermore, the Supreme Court hasn’t typically taken Federal Circuit cases to congratulate the court on its brilliant understanding of patent law. While the Federal Circuit is affirmed from time to time, the odds are generally in favor of a verdict reversal. In cases in which the Supreme Court has to create a distinction without a meaningful difference, such as *Octane Fitness* and *Highmark*, the odds of a reversal go way up.

Despite the way it looks, how the matter of enhanced patent damages will play at the Supreme Court is a mystery. Patent damages generally, and enhanced damages specifically, are political powder kegs because so many corporations are users of technology. These technology-using—or usurping—corporations would rather not have to worry about the consequences of infringing patents. This has caused the so-called infringer lobby to put a premium on the issue of damages, specifically advocating positions that would minimize patent damages. The infringer lobby has done an excellent job of weakening patent rights and impairing the enforceability of patents over the last decade, both in

the federal courts and on Capitol Hill. The Supreme Court has mentioned the patent troll problem several times—without the issue being before the Court or either party accused of being a troll.

Over the last decade, it has been exceptionally difficult for a victorious patent owner to obtain a permanent injunction; it has become easier for challengers to demonstrate that patent claims are obvious; it has become easier to challenge patent claims in a one-sided proceeding at the Patent Office that swings heavily in favor of the challenger; and some of the most important innovations technology companies work on today are no longer patent eligible. As important as this has been to the infringer lobby, many view as sacrosanct the rulings that make obtaining enhanced damages virtually impossible. This means the heavy guns will come out.

### Patent Reform Hangs in the Balance

We can expect numerous amicus filings and closed-door meetings to attempt to get the government to support the Federal Circuit's restrictive view of enhanced patent damages. If all else fails, there will be a renewed push to include patent damages reform in any reform package that moves in Congress. Adding patent damages to the patent reform equation should effectively kill any hopes of reform for the foreseeable future. With the future of patent reform hanging in the balance, a lot will be riding on convincing the Supreme Court not to give district court judges discretion.

Over time, the law rarely stays in a happy medium, or equilibrium status. Instead, the law swings, sometimes quickly and violently, between recognizing strong patent rights and enforceability, to substantially weakening the system and making patents far less valuable and enforceable. We are currently at or near the high point of the swing toward a patent system that has become rather suddenly, and staggeringly, anti-patent.

There are very modest signs that the swing back toward the middle has begun, but the Supreme Court, in considering the *Halo Electronics* and *Stryker Corporation* cases, should instantly change the patent industry, at least if it decides as it did in two similar cases—*Octane Fitness* and *Highmark*—which are less than two years old.

### Triple Damages Awards

A ruling by the Supreme Court that district courts have discretion to award up to triple damages will send shockwaves through the entire patent industry. For the last decade, infringing companies have made a

**Infringers' attorneys, who now so arrogantly explain that their job is nothing more than ignoring patent owners, will do so only at great risk.**

business of ignoring patent rights. These companies have become so confident that they will not be punished for infringing that their attorneys proclaim they simply “circular file” all licensing inquiries or infringement notices received. The best alternative to a negotiated resolution for infringers is to force the patent owner to fight a long and expensive battle that will be difficult, if not impossible, to win. No injunction can be obtained, even if the patent owner wins. This means many patent owners have no real remedy for patent infringement under the current system.

“We used to have, for the most part in this country, what I'll call an honor system, where companies that were using

technologies patented by others willingly took licenses without being forced by court orders to do so,” former Federal Circuit Chief Judge Paul Michel explained in April. “The honor system now is largely gone.”

The landscape has so significantly shifted over the last decade in favor of infringers that there are virtually no arms-length negotiations, which means that the law and the legal system have failed. When expensive and unpredictable litigation is the only option, the law becomes so one-sided that private resolution cannot happen. The prospect of triple damages would instantly change the profit potential and force infringers to the bargaining table, an occurrence that would lead to a far more functional system.

If the Supreme Court opens up a real possibility that enhanced damages could be obtained, giving the district court discretion and making the ultimate decision difficult to challenge on appeal, that would quickly and dramatically even the playing field between infringer and patent owner. The risk of being hit with triple damages would be too great. Infringers' attorneys, who now so arrogantly explain that their job is nothing more than ignoring patent owners, will do so only at great risk. Such a ruling would truly open up the private marketplace, rather than force all disputes into litigation. The Supreme Court could bring sanity back to the patent market while staying philosophically true to the belief that there should be few rigid tests, and district courts should be given the ability to exercise broad discretion when the statute grants such discretion.

As crazy as it sounds, the Supreme Court seems well positioned to fix the errors of the Federal Circuit. At the same time the Justices hand the Federal Circuit another embarrassing reversal, the Supreme Court will also take a critical first step toward restoring a functioning patent marketplace built on relationships and arms-length negotiations. ☛



# Five Ways Patent Litigation Abuse Is Being Solved—Without Legislation

BY JEFFREY BIRCHAK

**W**hile Congress debates controversial patent legislation that weakens United States patent rights, other branches of government have already solved many of the narrow problems that arise from abusive patent litigation—without harming legitimate patent owners. The overly broad patent bills pending in Congress will hurt innovators by taking away incentives to invent and fund new technologies, make it easier to copy United States innovations and diminish American leadership in the global innovation economy. Meanwhile, the Supreme Court, the lower federal courts, the Judicial Conference of the United States, the Federal Trade Commission and the state governments are all working to reduce abusive litigation while preserving inventors’ rights to enforce their patents—without new legislation. And their work is paying off.

**1 More weak patents are being invalidated than ever before.** Since the Supreme Court’s June 2014 *Alice v. CLS Bank* case, which held that “abstract” ideas implemented by computer cannot be patented, over 70 percent of all patents challenged in court under *Alice* have been invalidated. In fact, more patents have been invalidated in the past year than in the previous five years combined. Just this month, a federal judge in the Eastern District of Texas—the district that hears by far the most patent cases in the country—relied on *Alice* to dismiss 168 cases concerning a single patent, instantly ending nearly 10 percent of all patent cases filed in that court this year.

The rule changes will also make it harder to abuse the discovery process...by making the party that is requesting documents or information pay the costs of getting the information.

**2 Courts are making abusive litigants pay—quadrupling fee shifting since last April.** Federal courts have always been able to make the loser pay in “exceptional cases,” but last April, the Supreme Court decided two cases—*Octane Fitness v. Icon Health* and *Highmark v. Allcare Health Management*—that made it much easier to make losers pay for the winning party’s lawyers in abusive cases. In the year before these two cases, courts awarded attorney fees in just 13 percent of patent cases. In the year since, courts have nearly quadrupled fee awards, making the loser pay in 50 percent of all cases.



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### 3 Patent litigation rules that make it harder to sue are changing

**December 2015.** Federal court rules have made it easy to file a patent suit—until now. The Judicial Conference and the Supreme Court have adopted rule changes that bring pleading standards for patent cases in line with other federal cases, making it harder to get into court. These changes will automatically begin this month—without legislation.

### 4 ... And to make it harder to abuse lawsuits.

The rule changes will also make it harder to abuse the discovery process—often the most burdensome and expensive part of a lawsuit—by making the party that is requesting documents or information pay the costs of getting the information. That party will only be able to request information that is “proportional” to the needs of the case. This will help stop abusive litigants from burying their opponents in paperwork just to force an unfair settlement.

### 5 The Federal Trade Commission and the states are fighting abusive patent demand letters.

The FTC and states are aggressively combating abusive patent demand letters to protect small businesses and consumers. For example, last year the FTC and the New York attorney general announced settlements with MPHJ Technology Investments, LLC that stopped it from sending deceptive letters concerning its patents.

What are the results of this work? New patent cases dropped 18 percent from 2013 to 2014, and in the first half of 2015, the number of plaintiffs filing patent cases neared its lowest level in years—and legislation had nothing to do with it. *Alice* and *Octane Fitness* are only one year old, and the changes take effect December 2015. Congress should focus on protecting innovative enterprises, not doubling down on controversial legislation that would hurt innovators and our economy. ☛



Jeffrey Birchak is associate general counsel and vice president of intellectual property at Fallbrook Technologies.

### A Fear of Trade Secret Trolls Is Completely Unfounded (cont. from page 37)

Jim Pooley, author of a well-known treatise on trade secrets, as well as the recently published book *Secrets: Managing Information Assets in the Age of Cyberspionage*.

Speaking on October 14, 2015 during an LES webinar on the pending trade secret legislation, Pooley went on to say, “Trade secret claims just do not work that way.”

#### Patents vs. Trade Secrets

Let’s peel back the layers even further and explore the differences between patents and trade secrets, after which it will be clear that there is absolutely no legitimate reason to worry about trade secret trolls.

Under current patent laws, innovators are granted rights to a claimed invention. Those rights are against the world. That means that once a right is given to an inno-

these individuals and small companies have no real way to know whether they have infringed. Bad actors use judicial inefficiencies and scare tactics to force small payments from numerous people and companies they don’t know and have had no relationship with.

It is also critical to understand that trade secrets do not protect information in and of itself. If I create valuable information and keep it secret, then I own a trade secret. If you create the same valuable information and keep it secret, you likewise have a trade secret. My trade secret rights cannot prevent you from doing anything on your own. A trade secret, properly preserved, protects the owner of the secret information from misappropriation (i.e., taking of the information)

*“You cannot sue someone unless they have stolen the information from you or they were a party to a confidential relationship.” — JIM POOLEY*

erator in a patent, that innovator can prevent others from making, using, selling, offering for sale or importing his invention. These rights attach regardless of whether the alleged infringer knows about the patent or the infringement is unintentional. Patent infringement is a strict liability offense; it requires no fault, nor a previous relationship or tie between the parties. The heart of the patent troll model is that anyone could knowingly or unknowingly infringe a patent. The same is not true of trade secrets.

Unlike patents, trade secrets do not provide a right against the world. Trade secrets protect valuable business information that is not generally known. This doesn’t mean that trade secrets cannot be known by anyone, but rather that all those who know of the secret information have a legal obligation to maintain the information as confidential. Therefore, trade secret actions are, by their very nature, between parties that have some kind of business relationship, operate within the same industry or have some nexus.

The patent troll model has thrived by threatening many thousands of individuals and companies with patent infringement and then preying on the fact that

through improper means. “You cannot sue someone unless they have stolen the information from you or they were a party to a confidential relationship,” Pooley explains. “That personal relationship that is required means that it is simply not possible to build a troll business.”

#### Trade Secret Misappropriation

The pending legislation specifically states that reverse engineering and independent derivation are not legally actionable as a trade secret misappropriation. That means in order to be liable for trade secret misappropriation, there must be improper behavior based on a relationship or nexus with the party claiming ownership of the trade secret. The proposed legislation specifically requires misappropriation of the trade secret by improper means (i.e., theft, bribery, espionage). Therefore, a fear of widespread litigation and the rise of trade secret trolls is not only wholly unfounded, but fundamentally misunderstands the very nature of a trade secret dispute.

A trade secret is a very different kind of right. You simply can’t use a trade secret in the same way that patent trolls have used patents to pursue people. ☛

# INVENTOR GROUPS

*Inventors Digest* only publishes the names and contacts of inventor groups certified with the United Inventors Association. To have your group listed, visit [www.uiausa.org](http://www.uiausa.org) and become a UIA member.

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