

Inventors

NOVEMBER 2015 Volume 31 Issue 11

DIGEST

No More Starch

HOW ONE UP-
STANDING IDEA
TOOK SHAPE

Care for the Bear

A NOVEL
APPROACH
TO DIABETES
EDUCATION

Power Shot

THE JIMMY BALL
SCORES BIG

8 TIPS

For Choosing
A Service
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Dream Weaving

JOSEPH SPORN TURNS
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Flying Machines and Cell Phones

I recently vacationed in Italy, a country dripping in history, as well as art, architecture, culture, food, wine—and inventions. From aqueducts to espresso machines, Italians have always had a knack for innovation.

My husband, Jim, and I began our trip in Milan, where we viewed the *Last Supper*, followed by an exhibition of Leonardo da Vinci's *Codice Atlantico* in the Sagrestia Monumentale del Bramante in Santa Maria delle Grazie, where da Vinci painted the *Last Supper*. The *Codex* features the Renaissance master's skills as an engineer, astronomer, botanist, architect, cartographer and inventor, and embraces the intellectual life of da Vinci over a period of more than 40 years. The journals, dating to the 1490s, are the largest single collection of da Vinci's sketches, blueprints and notes known to exist.

Named for the oversized sheets of paper the *Codex* is printed on—which were often used in da Vinci's day for atlases and maps—the pages overflow with da Vinci's neat penmanship and astounding ideas: flying machines, parachutes, robots, revolving bridges and weapons of war. Although many of his ideas were not built or tested at the time, and would not be technologically possible for centuries, da Vinci understood enough about science, art and mankind to know his inventions would be part of the future.

Vinci's *Codex Leicester*, another scientific journal, holds the world record sale price for a manuscript. In 1994, Microsoft founder Bill Gates purchased the *Codex* at a Christie's auction for just under \$31 million.

While many of da Vinci's ideas—airplanes, robots and helicopters—have become a reality, John Rau's article this month, *The Most Useful Inventions of All Time*, concerns a 2013 survey conducted by *Time* magazine. Not one of da Vinci's ideas is included in the top 10. The ubiquitous cell phone—an invention even da Vinci could not have predicted—came in at No. 1. Imagine what another 500 hundred years of innovation might yield.

— Cama McNamara

P.S.: You can read more about da Vinci and his revolutionary ideas in *Time Tested* on page 10.

Dr. Pamela Bird

Aug. 19, 1956-Oct. 8, 2015

An article commemorating the life of aviation respiratory pioneer, inventor and pilot Dr. Forrest Bird was featured in the September issue of *Inventors Digest*. His wife, Dr. Pamela Bird, also an inventor and skilled pilot, was interviewed for the story. Sadly, Pamela Bird was killed in a plane crash October 8, 2015, a little over two months after the death of her husband. The staff of *Inventors Digest* extends condolences to the Birds' family and friends.



**DREAM
SMALL**

**DISCOVER NOTHING
IMAGINE LESS
DO WHAT'S BEEN DONE**

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★
**INSPIRE NO ONE
GIVE UP HOLD BACK**

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★
INVENT NO MORE

**IGNORE
YOUR HEART** | **SHOOT FOR AVERAGE
THINK NEGATIVE
REACH FOR THE GROUND**

IF CONGRESS PASSES LEGISLATION WEAKENING PATENT PROTECTION, THE MESSAGE TO INVENTORS IS, "WHY BOTHER?" SO WHAT INVENTIONS WON'T BE INVENTED? WHICH START-UPS WILL GET KILLED BY FOREIGN COPIERS BEFORE THEY GET STARTED? WHOSE JOBS WILL GET SHIPPED OVERSEAS? VISIT SAVETHEINVENTOR.COM AND TAKE ACTION TO HELP PRESERVE U.S. INNOVATION AND ECONOMIC GROWTH.

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ON THE COVER
Joseph Sporn,
photographed by
Eric Kellen-Garcia

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Bright

Ideas

Compiled by Taryn Walls

Ola

SLEEK SECURITY

olalocks.com

Ola is the world's first keyless and phoneless Bluetooth-enabled fingerprint proof smart lock. The domestic door lock can be opened by a FPC1020 Capacitive Touch Fingerprint Sensor—one of the world's most sensitive print readers—or Bluetooth 4.0 connectivity. Normal fingerprint readers recognize prints by scanning the ridges and valleys, but Ola's FPC1020 Capacitive Touch Fingerprint Sensor utilizes a radio frequency signal to scan the pattern under the skin surface.

Ola can be installed with a Mortise lock case or a cylinder lock. The technology boasts multiple security failsafe features, including a set of backup Panasonic Evolta batteries that last up to seven years (and hold a Guinness world record) and the ability to grant or revoke guest entry privileges. Privileges can be programmed for four different access levels: temporary, which allows access only during a certain time frame; recurring, which can be programmed for multiple days and times; permanent, which allows all-time entry; or master, which holds permanent access and administrative power over guests. The unique QR code included with each Ola lock gives the owner master privileges. Guests can be given entry via a pre-recorded fingerprint or a special Bluetooth 4.0 code.

Ola's casing is made of zinc and aluminum alloys. It runs on DC Input Voltage (4.5-6.5 V) and DC Input Current (100-120 mA), and uses four AA batteries and four AAA backup batteries. Ola can operate in temperatures ranging from -40 degrees Celsius to +50 degrees Celsius.

Ola locks will ship around March 2016.



“Keep your eyes and mind open, and don't ignore something that doesn't come out the way you expect it to. Just keep looking at the world with inventor's eyes.”

— PATSY SHERMAN, INVENTOR OF SCOTCHGARD™



Solar Paper

HARNESS THE SUN

yolkstation.com

The Yolk Electronics Nutrient Solar Paper is the world's thinnest and lightest solar panel. With this technology, you'll never have to worry about a dying phone, tablet, camera or flashlight—or anything that charges with a traditional USB port. Solar Paper operates completely independently of wall outlets; all you need is the sun. Despite its small size, even the Solar Paper with the lowest wattage is efficient; an iPhone will recharge in about 2.5 hours, the same time needed by a wall charger.

Magnets allow users to combine Solar Paper panels to harness extra power for charging larger devices, such as tablets. The magnets are also useful for mounting Solar Paper to metal surfaces.

Solar Paper measures 9 x 19 x 1.1 centimeters, only slightly bigger than a dollar bill. It easily fits in a notebook or jacket pocket. Each panel weighs 2.5 ounces and has a water-resistance level of IP64. Water vapor in the skies won't dampen Solar Paper's efficiency, either. With "auto-comparison technology," Solar Paper will automatically resume charging a device after the clouds pass during an overcast day.

Solar Paper was selected as best of show for the Outdoor Retailer Show in August 2015.



Fretlocks

BORED BY TRADITIONAL CHORDS

fretlocks.com

Musicians understand the value of a capo—a clamp that can be pressed across all the strings of a guitar, banjo or lute on a chosen fret to raise each string a corresponding number of half tones. Fretlocks, on the other hand, captures a single string, creating a musical revolution.

Co-founder Jonny West was inspired to create Fretlocks after experiencing the frustration of needing extra fingers to play the guitar. His invention allows players to create new chords and riffs that were previously impossible, by raising the pitch of a single string.

Fretlocks are handcrafted pieces of metal with three alternating nodules, between which a player traps a string. A peel-away sticker on the back adheres to the guitar neck. The patent-pending Fretlocks are available in thin, medium and thick gauges to match the varying thicknesses of guitar strings.

Fretlocks are produced by an English guitar accessories company of the same name. The product was officially launched in October 2015 at Regent Sounds in London. Preorders for Fretlocks will begin shipping December 2015.



Dot

BRAILLE ON THE GO

fingerson.strikingly.com/

Visually impaired people have been left behind by a surge in technology that is grounded in real-time digital text. South Korean startup company Dot, whose mission is information accessibility for the blind, is tackling this problem. The company's first product, the Dot smartwatch, is a game changer for the visually impaired. The low-cost educational and communication tool can function as a watch, alarm, navigation system, Bluetooth and Braille teacher. The device is iOS and Android compatible.

Dot looks like any other smartwatch until you notice the raised cells on its surface, which allow four Braille letters to be displayed at once. When Dot is connected to a mobile device, the user can receive text messages and other digital communication, such as tweets. The data is sent to the smartwatch by an app specifically programmed for the Braille translation, though Dot can independently tell time.

Dot can even serve as an e-book reader, although this application is not ideal. The device can be calibrated to display new characters at speeds ranging from 1 hertz to 100 hertz, offering those with varied levels of Braille understanding an opportunity to learn and be connected to the world. The battery lasts 10 hours, giving average users five days between charges.

Dot is scheduled to arrive in the United States December 2015.

Million Mile Light

POWERED BY MOTION

millionmilelight.com

The Million Mile Light, which keeps runners safe at night, never needs batteries; it's powered by you. Produced by inventor Tom Lawton's Positively Human company, the Million Mile Light is small, bright, lightweight, ultra sensitive to movement, weather resistant and powered by renewable energy, which makes it ideal for runners of all levels. Simply attach the light to the provided waistband, or arm or leg straps, and go.

The technology is powered by a silent kinetic engine with neodymium rare earth magnets that flash its four very bright LEDs with every step you take. Your running speed and gait don't matter, as long as the magnets feel your motion. Two special lenses concentrate the light, which is visible for 200 meters and at a 120-degree angle. The light is also waterproof.

The Million Mile Light is about the size of a pack of gum and weighs only 36 grams. Its illumination power is 30 LUM, and the battery will last 100,000 hours. The light is built for durability and efficiency, and comes with a five-year manufacturer's warranty.

The Million Mile Light is available through Kickstarter and costs about \$20. Expected delivery is January 2016.



YOUR PATENT CAN BE DESIGNED AROUND

Check to see how yours holds up.



QUANTUM INVENTING
by Stephen Malak

* Book available online, only at
quantuminventing.com



Leonardo da Vinci

Archetypal Renaissance Man

Leonardo da Vinci is renowned for two of the most recognized and celebrated paintings of all time—the *Mona Lisa* and the *Last Supper*—but da Vinci's genius went well beyond the intrigue in the mystery woman's smile or the look of astonishment on the faces of the disciples when Jesus announced one of them would betray him; da Vinci's exceptional intellect was also manifested in his brilliant understanding of science, architecture, mathematics, engineering—and inventing.

Born April 15, 1452, in Vinci, Italy, da Vinci epitomized the definition of a 15th century-Renaissance man. He viewed science and art as complementary disciplines, and formulated his thoughts and ideas based on their confluence. His incessant fascination with the world around him drove da Vinci to embark on a life of empirical study.

A prolific inventor, da Vinci envisioned innovations that would not be technologically possible for centuries. Weapons of war and flying machines were a few of the inventions da Vinci described in his codices—13,000 pages of detailed notes and drawings for future inventors to marvel over. Although da Vinci lived nearly 600 years ago, his groundbreaking ideas continue to influence our world today.

A Student of Art

Born out of wedlock to Piero da Vinci, a wealthy notary, and a peasant woman known as Catherine, da Vinci was raised in his father's home. His illegitimacy made da Vinci ineligible to train as a notary, and at age 14, his father placed him in an apprenticeship with Florentine master painter and sculptor Andrea del Verrocchio. The artist's shop was an ideal training ground for the multi-talented da Vinci, who studied drawing, painting, modeling and sculpting. He also learned the technical skills of drafting, chemistry, metallurgy, metalworking, leather arts, plaster casting and carpentry. By the age of 20, da Vinci had qualified as a master artist in the Guild of Saint Luke, a consortium of artists and doctors of medicine, and established his own workshop.

Between 1482 and 1489, Duke Ludovico il Moro commissioned da Vinci to prepare floats and pageants, design a dome for the Cathedral of Milan, and in 1495, paint the *Last Supper* for the refectory of the Convent of Santa Maria delle Grazie.

In 1502, da Vinci entered the service of Cesare Borgia, son of Pope Alexander VI, as a military architect and engineer. Around that time, da Vinci was commissioned by Francesco del Giocondo to paint a portrait of his wife and what was to become da Vinci's most famous painting—the *Mona Lisa*.

Da Vinci left Italy in 1516, when King Francis I of France offered him the opportunity to serve as his artist and architect. One of da Vinci's last commissions was a mechanical lion that could walk, its chest opening to reveal a bouquet of lilies. Da Vinci died in 1519 at Clos-Lucé, France, at age 67.

Flying Machine

Centuries before the Wright brothers were a blip on the Earth's radar, da Vinci envisioned a flying machine. The Codex Atlanticus includes a plan for a 65-foot flying machine, with a wingspan of 33 feet. The frame was to be made of pine covered in raw silk to create a light but sturdy membrane.

The pilot, who lay face down on a board in the center of the structure, would pedal a crank connected to a rod-and-pulley system to power the wings. The machine also had a hand crank for increased energy output, and a headpiece for steering. As the pilot spun the cranks with his hands and feet, the wings of the machine would flap. Aeronautics experts say that although the machine may have flown once it was in the air, a pilot could never have generated enough power to get the device off the ground.

Helicopter

Though the first helicopter wasn't built until the 1940s, da Vinci sketched a screw-like machine that was the predecessor to the modern version. Also known as the "Helical Air Screw," the machine was designed to compress air to obtain flight, a similar concept that powers helicopters today.

Da Vinci's helicopter measured more than 15 feet in diameter and was made from reed, linen and wire. Four men standing on a central platform turning cranks to rotate the shaft would power the device. Da Vinci's notes and drawings explained exactly how the device would operate: "If this instrument made with a screw be well made—that is to say, made of linen of which the pores are stopped up with starch and be turned swiftly, the said screw will make its spiral in the air and it will rise high."

Parachute

Da Vinci conceived the idea for a parachute almost 300 hundred years before Sebastien Lenormand, who is credited with the invention. Beside his sketch showing a triangular canopy made of linen that covered a wooden frame, da Vinci wrote: "If a man have a tent made of linen of which the apertures have all been stopped up, and it be 12 braccia

(about 23 feet) across and 12 in depth, he will be able to throw himself down from any great height without suffering any injury.” In 2000, daredevil Adrian Nichols constructed a prototype based on da Vinci’s design and took the plunge. Despite skepticism from experts, the parachute worked as intended.

Scuba Gear

Da Vinci’s imagination worked as well under water as it did in the air. While commissioned in Venice, da Vinci designed scuba gear for sneak attacks on enemy ships. The leather diving suit was equipped with a bag-like mask that covered the diver’s head. Attached to the mask around the nose area were two cane tubes that led to a cork diving bell floating on the surface.

Air was provided through an opening in the tubes to the diver below. The mask also featured a valve-operated balloon that could be inflated or deflated to allow the diver to easily surface or sink. Additionally, the suit incorporated a pouch for urination.

Barreled Organ

The barreled organ is generally regarded as the basis for the modern day machine gun—a weapon that didn’t develop for commercial use until the 19th century. The term “organ” refers to rows of cannon barrels, which resemble organ pipes. Featuring 33 small-caliber connected guns, the canons were divided into three rows of 11 guns each, all connected to a single revolving platform to which large wheels were attached. Before battle, the guns would be loaded, and when needed, the first row of 11 would be fired. The platform would be rotated to aim the next row of canons. The idea was that while one set of canons was being fired, another set would be cooling and the third set would be loaded, allowing soldiers to repeatedly fire without interruption.

Self-Propelled Cart

Many consider da Vinci’s self-propelled cart to be the world’s first robot. Designed for theatrical use, the cart was powered by coiled springs, and featured steering and brake capabilities. When the brake was released, the cart would move forward. The steering was programmable to go either straight or at pre-set angles.

Da Vinci’s cart design was so ahead of its time that it baffled scholars for centuries. In 2006, however, Italy’s Institute and Museum of the History of Science in Florence built a working model based on the original design, and the cart worked. Some experts noted the similarities between da Vinci’s design and the Mars Land Rover.

Robotic Knight

Da Vinci used pulleys, weights and gears—three components crucial to many of his automated inventions—to create the robotic knight, which was designed for a pageant. The knight consisted of a suit of armor filled with gears and wheels connected to a sophisticated pulley and cable system. Through these mechanisms, the knight was capable of independent motion: sitting down, standing up, moving its head and lifting its visor.

Although a complete drawing of da Vinci’s robotic knight has never been recovered, fragments were scattered throughout his notebooks. Using several different drawings as blueprints, roboticist Mark Rosheim, in 2002, built a prototype of the robotic knight, which was able to walk and wave. Rosheim also used da Vinci’s designs as inspiration for robots he developed for NASA 🤖

—Cama McNamara

November 6, 1928

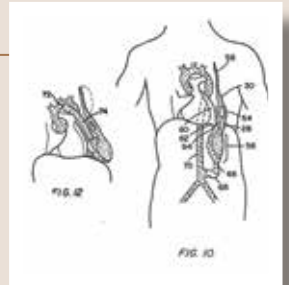


U.S. Patent No. 1,690,133 was granted to **Colonel Jacob Schick** for the first electric, or dry, razor. Inspired by weaponry Schick saw while serving in the U.S. army, the razor’s head consisted of cutters that went back and forth in a repeating motion, much like a repeating rifle. Schick continued to file patent improvements to the electric razor through 1936.

November 13, 1979

U.S. Patent No. 4,173,796 was granted to **Robert Jarvik** for an artificial heart. Despite advances in artificial hearts, less than two thousand have been implanted.

The procedure is generally used as a bridge until a donor heart can be secured.

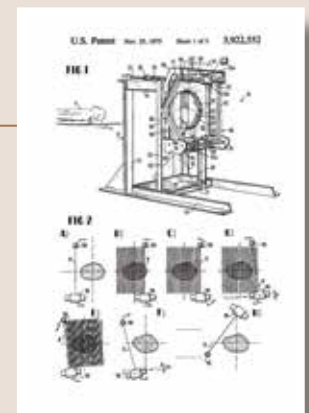
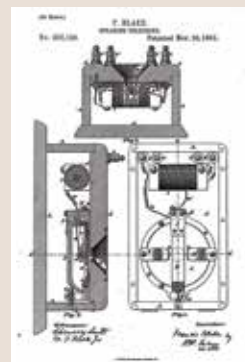


November 14, 1899

U.S. Patent No. 637,197 was granted to **Emile Berliner** for the gramophone, or phonograph, record.

November 25, 1975

Robert S. Ledley was granted U.S. Patent No. 3,922,522 for diagnostic X-ray systems, also known as the first CAT (computed axial tomography) scan. Many of the CT scanners used in hospitals today are based on Ledley’s design.



November 29, 1881

Francis Blake was granted U.S. Patent No. 250,126 for the speaking-telephone. In 1877, Blake had invented a carbon microphone for use in the telephone, shortly after Thomas Edison invented a microphone that also used carbon contacts. The competition between Alexander Bell, who had started his telephone company in 1876, and Edison, was intense. Users could hear well with Bell’s telephone, but the phones didn’t project words clearly or loudly. Bell hired Blake to work with Emile Berliner, who had also invented a carbon microphone, and used the men’s combined technology to improve his telephone.

The Most Useful Inventions of All Time

Does Your Idea Make the Mark? **BY JOHN G. RAU**

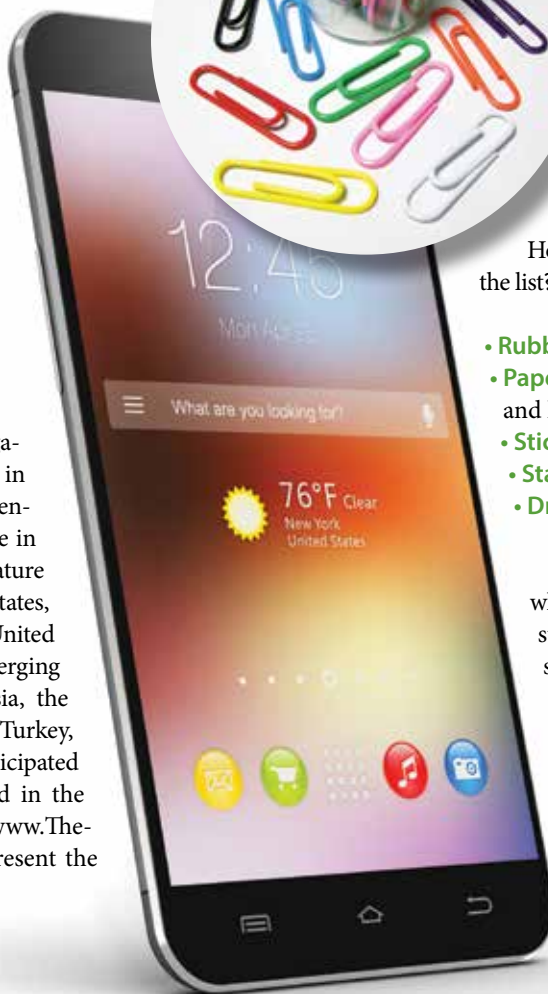
When the United States Patent and Trademark Office receives your utility patent application, your invention must pass three criteria in order to be patent eligible:

1. Your claim must be new or novel.
2. Your product or invention must be useful.
3. Your invention must be judged to be nonobvious, which means it would not naturally have been made by a practitioner in its field.

Title 35 of the United States Code is very specific about these requirements. There has been considerable debate and legal questioning about the term “nonobvious,” but patent law also specifies that the subject matter must be “useful.” Specifically, an invention must be capable of being used in some type of industry.

The Survey Says

A survey was conducted by *Time* magazine in conjunction with Qualcomm in 2013 to identify the most useful inventions of all time. Ten thousand people in 17 countries—specifically seven mature markets (South Korea, the United States, Germany, Sweden, Australia, the United Kingdom and Singapore) and 10 emerging markets (South Africa, Kenya, Russia, the United Arab Emirates, China, Brazil, Turkey, India, Mexico and Indonesia)—participated in the survey. The results, published in the November 14, 2013 issue of *Time* (www.TheTimeInventionPoll/TIME.com), represent the top 96 percent of responses:



Cell phone	71%
TV remote	3.7%
Disposable diaper	5.2%
Cruise control	3.7%
Alarm clock	4.2%
Rice cooker	2.9%
Velcro	3.9%
Blow dryer	1.1%

These are interesting results to say the least, but the global message was that nothing beats the cell phone, which is probably not surprising considering recent surveys show that the average person uses his/her cell phone 1,500 times per week.

Obvious Omissions

What about the following inventions? Think about how often we use them without so much as a thought. How could they have been omitted from the list?

- **Rubber bands:** invented 1845.
- **Paper clips:** invented first in Germany, and later, 1901, in the United States.
- **Sticky (Scotch®) tape:** invented 1930.
- **Stapler:** invented 1866.
- **Drinking straws:** invented 1888.

And then there is the shopping bag, which was invented in 1912 by grocery store owner Walter Deubner, who observed that his customers' purchases were limited by what they could conveniently carry out the door. In typical inventor fashion, he saw a problem and devised a way to help customers make more purchases at one time, adding to his bottom line. His solution, the Deubner Shopping Bag, consisted of

a paper bag with a cord running through it for strength. He sold it for five cents, patented his product and within three years was selling over a million shopping bags per year.

Challenges to Today's Inventors

The challenge that current inventors face is not only coming up with an idea, but one that will lead to a product that proves to be useful. Characteristics and features that demonstrate “usefulness” include:

- **Performance.** Your new product should offer improved performance relative to competing products: bigger, faster, more efficient, etc.
- **Customization.** Your product should be more flexible than existing competing products, with the ability to be designed for specific customer needs.
- **Get the job done better.** Your product should enhance a customer's productivity, such as saving time or labor.
- **Superior design or usability.** Your invention should offer multiple features and perhaps be life-enhancing.
- **Reduce risk.** Your invention should have improved safety features over the products in its field.

Generally speaking, the best way to demonstrate usefulness is to build a prototype that will enable you to demonstrate the design and functionality of your invention in presentations to potential manufacturers, licensing candidates or potential investors. Illustrating applicable characteristics and features as cited above will enable you to not only provide “proof of concept” but also provide credible evidence that your invention offers benefits that appeal to potential consumers.

Depending on your invention, your prototype may be expensive to produce. If that is the case, an option would be to make a virtual prototype. Computer programs can simulate inventions in 3D to determine that an invention does indeed work. You may even want to consider a video or CD animation of your invention in action.

Remember, to be commercially viable, your invention must solve a real problem and ideally solve it in a unique way. Comedian Sid Caesar put things in perspective when he said, “The guy who invented the first wheel was an idiot. The guy who invented the other three, he was a genius.” Perhaps, it's what you do with your invention idea that makes it useful. 📞

The Time Survey

FURTHER INVENTION RESULTS

The 2013 survey conducted by *Time* magazine, in conjunction with Qualcomm, contained questions that focused on a variety of factors: fostering cultures of inventiveness, attributes of inventors, barriers to invention, the economic power of patents and the importance of the role that various institutions play in facilitating inventions. Selected results from United States participants showed that:

- **62%** thought inventors were unique and talented individuals.
- **38%** thought anyone could be an inventor.
- **25%** thought inventiveness was mostly inherited.
- **75%** thought inventiveness was something that could be learned.
- **78%** thought inventors were respected in today's society.
- **57%** thought inventions drove economic growth.
- **43%** believed economic factors drove the development of new ideas and inventions.
- **82%** thought that if they invented something, they would file for a patent to protect their invention.

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.





DEALING WITH INDECENCY

Four Strategies for Confronting Efficient Infringement **BY JACK LANDER**



TOPP_YINGRIMM/ISTOCK/THINKSTOCK

In the October issue of *Inventors Digest*, I wrote of the possibility of partnering with an entrepreneur as the means of avoiding what appears to be a growing trend of companies, especially large corporations, to willfully infringe patents. You may recall the term “efficient infringement,” which means that the cost of the consequences that arise from infringement are less than the cost of royalties paid out over the remaining life of a patent. Apparently, decency is no longer meaningful to many companies; the bottom line is all that matters. We’ve known this intuitively, but when a term like “efficient infringement” becomes a slogan, it may be time to rethink our approach to profiting from inventing. Consider the following four strategies:

1 Attempt to prevent or repeal legislation that works against patent protection.

Right now, H.R. 9: Innovation Act, which was introduced in February 2015, is at the top of this list. If H.R. 9 passes as it now stands, the respect for patents will diminish and infringement will become much more common—especially where small companies

and independent inventors are concerned. This is the clause that gives independent inventors nightmares: *Requires courts to award prevailing parties reasonable fees and other expenses incurred in connection with such actions, unless: (1) the position and conduct of the non-prevailing party was reasonably justified in law and fact; or (2) special circumstances, such as severe economic hardship to a named inventor, make an award unjust.*

You can learn about the bill and its current status by Googling “bill HR 9,” which takes you directly to H.R. 9 on the congress.gov website.

According to the bill, if an inventor sues a patent infringer and loses, the burden is on the inventor to show that he or she was “reasonably justified” and that paying the infringer for his legal costs, and maybe his airfare, hotels, meals and car rental, etc. involved in his defense, is a *severe economic hardship*. Can you defend your position against a legal team that digs deeply for prior art in all of its forms and presents a potentially convincing story that your patent never should have issued? Do you really trust the court to make the right decisions about your severe economic hardship?

Independent inventors generally lack the resources brought to the court by the infringing company. This means finding an affordable lawyer who may not necessarily be the best patent litigator. And here's another shocker: According to multiple sources, the chances of winning a suit, even with the resources, is only about one in three:

- 24.4 percent, according to the American Intellectual Property Law Association.
- 25 percent, according to LegalMetric.
- 40 percent, according to the Court of Appeals for the Federal Circuit.

Perhaps we should revise the "efficient infringement" term and call it "inefficient defense." And remember, you are paying your lawyer and covering other costs. Unless you've invented an improved replacement for the Xerox® photocopying process, you aren't likely to get a lawyer to take your case on contingency.

Relax just a little. Knowledgeable people are on our side. Patent attorney and *Inventors Digest* contributing writer Gene Quinn is an outspoken crusader for the rights of inventors and for fairness in the law. Randy Landreneau, a Florida inventor, has called on House members to expunge the unfair provisions of this bill. And Louis Foreman, publisher of *Inventors Digest*, has also gone to Washington to work against H.R. 9.

You can do your part by contacting your district representative and pleading the case for independent inventors. Go to: www.house.gov, scroll down a couple of inches, and enter your zip code (preferably, zip + four; House districts don't always correspond to the first five zip numbers.) Your representatives will pop up instantly. Send a letter to the representative, care of U.S. House of Representatives, Washington, D.C., 20515. Letters, even if hand written, are generally more effective than email. But you can easily find your representative's email by typing his or her full name in the appropriate space, plus the word "email."

2 Deal only with companies that still respect patents and independent inventors.

H.R. 9 will eventually come up for a vote. If it passes, our most practical immediate strategy is to deal only with companies that still respect patents and independent inventors, and have the resources to fight an infringer. But how do we know which companies have these capabilities?

First, check out your prospect's website. It may invite new product submissions. This is a good sign. But don't ever submit an idea for which you have not completed the filing of at least a provisional patent application.

You can also contact the company and ask for information for submitting new product ideas. If the company is receptive to new product proposals, it will have a written policy and a form that the submitter must sign that relinquishes all rights except those

granted by the patent. A company of any substantial size that doesn't have such a written policy for inventors is not likely to be receptive to submissions; therefore it would be dangerous to submit, even if you have your patent in your hand. And, I've known companies to curtly say they don't accept any ideas or inventions from the outside, period. Many companies don't answer at all—"efficient ignoring."

Another way to research patent-respecting is on Google. Type "patent infringement" and a company's name to find current cases or news stories that may suggest that the company is being sued for infringement.

3 Partner with an entrepreneur who will agree to respect your patent.

By structuring the partnership agreement so that any and all disputes will be settled by arbitration, you can avoid a detrimental attack directly on your patent. I have not tested this, so be sure to consult with and engage a lawyer with business-agreement experience to write your partnership agreement.

If your only, or most promising, licensee prospect is a small- to medium-size company, and H.R. 9 has been enacted with its "loser pays" clause, you most likely will find that your patent is correspondingly less valuable due to the higher chance of it being infringed. You may, for example, have to settle for a two percent royalty rather than the five percent royalty you might have commanded from a patent system that is generally honored by prospective licensees.

4 Proceed without a patent.

This may seem like a radical alternative, but it has merit in many cases. I'll cover this approach in the next issue.

H.R. 9 will eventually come up for a vote. If it passes, our most practical immediate strategy is to deal only with companies that still respect patents and independent inventors, and have the resources to fight an infringer.

Words of Warning

The intellectual property of the music industry has been irreparably damaged by the ease with which recorded material can be copied without payment, or even counterfeited and marketed. To some extent, the same is happening with printed materials, mainly books. Don't let this happen to your patent rights. Our patent system has enabled America to lead the world in technological development. Let's not disable it in ways that weaken protection for independent inventors. Be sure to contact your representative and ask him or her to vote against the toxic section of H.R. 9. ☹

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.



Power SHOT

Jimmy Elder Scores Big with the Jimmy Ball

BY JEREMY LOSAW

Success in soccer, known as the “beautiful game,” is all about preparation. Preparation also helped Jimmy Elder, the owner of Soccer Innovations, find a niche in the soccer world. A former professional player with a passion for the youth soccer community, Elder’s company specializes in innovative and cutting-edge soccer equipment for coaches and players. Elder made his power shot when he developed his namesake Jimmy Ball to help youth players advance their ball-striking skills. The Jimmy Ball’s patent-pending design, inspired by training aids used at large European clubs, has garnered plaudits from around the world.

The story of the Jimmy Ball began in Germany, where, as a child, Elder visited his grandparents. His grandfather often took him to matches at the professional soccer club Bayern Munich. Elder’s love of the game eventually led to a professional soccer career in the United States. After Elder retired from the Houston Dynamos and became involved with youth soccer, he returned to Germany for coaching inspiration. At the Bayern Munich facility, Elder met with legendary player and manager Franz Beckenbauer before spending time with the club’s youth director. The director showed Elder one of the team’s training aids—a ball that hung from a string around a player’s neck to keep the ball close to his feet. “I thought ‘That is cool. I’ve never seen one of those before.’ So I tried to hunt that ball down to introduce it to the U.S. market, but I couldn’t find them anywhere,” recalls Elder.

Breakaway

Elder thought about the idea for years. Similar products came on the market, but they required the player to hold the string with his hands, which forces the player into an unnatural body position. Elder could not copy the German design because he would not sell a product that wrapped around a player’s neck.

One day, he was experimenting with a corded ball in his warehouse and wrapped the cords around his arms. He realized that he could control the ball and keep it from flying away without having to hold it. He had finally found the solution.

Former professional soccer player, Jimmy Elder, uses the Jimmy Ball to help train the the next generation of soccer players.





The Jimmy Ball improves timing, touch, foot movement, balance and concentration in soccer players of all ages.

"I went into the office where my wife was and told her, 'I got the next big one right here,'" says Elder. He kept playing with his new prototype and soon moved the cords from his arms to his shoulders, which made it much more comfortable and allowed for natural striking of the ball.

Once the product's main features were fleshed out, Elder filed a provisional patent before market testing the ball. He hired an attorney for his utility patent filings, but in doing so learned that it is much less expensive to independently file provisional patents with online tools. Elder believes that patents are important to keep his ideas safe and help Soccer Innovations stay competitive. Although some of his patents have been breached, he has been able to stop the infringers with his intellectual property protection. Elder also likes the new first-to-file patent system, because Soccer Innovations is small and nimble, and the system gives him an advantage over bigger groups.

Crossing the Goal Line

The Jimmy Ball went through 10 to 15 iterations before Elder settled the final specifications. He tried different cord materials and balls to find the right formula. Bungee cords didn't work because the elasticity caused the ball to fly back at players too quickly, which tested reactions rather than technique. Instead, non-elastic cord became a key product feature. Elder also evaluated different materials for the ball, including foam, but settled on a standard synthetic soccer ball. "We probably tested every which way to do it known to man," says Elder.

Product sourcing was the next big hurdle. While he had experience getting products manufactured in China, Elder knew from attending sporting goods conventions that Pakistan was the largest producer of hand-stitched balls in the world. It was at one of these conventions that he found the Jimmy Ball's future manufacturer. Since the product was not identical to a regular soccer ball, there were production issues. The cords on the first batch arrived smelling like oil and were sewn incorrectly, so Elder had to hire people to re-stitch the product before he could sell it. However, subsequent shipments met expectations.

Since its launch in 2009, the Jimmy Ball has received rave reviews. The technique-training ball improves timing, touch, foot movement, balance and concentration. When Elder rolled



the product out at youth soccer tournaments, kids flocked to his booth.

He has also received endorsements from professional soccer players, including Kenny Cooper Jr., striker for Major League Soccer team Montreal Impact. Initially, Cooper agreed to promote the Jimmy Ball, but after trying it, he became a believer, too. After just one night of training with the ball, at his next practice, Cooper scored a goal with the outside of his foot, a move not typically in his repertoire. Elder has also received endorsements from professionals in England and Germany, and is selling his invention as far away as Australia. What Elder discovered on that return trip to Germany was the inspiration for a product that is helping train the next generation of the world's soccer players. 🏆

Jeremy Losaw is a freelance writer and engineering manager for Enventys. He was the 1994 Searles Middle School Geography Bee Champion. He blogs at blog.edisonnation.com/category/prototyping/.





Hannah Chung and Aaron Horowitz with their invention, Jerry the Bear, an interactive learning tool for children diagnosed with type 1 diabetes.

Care for the Bear

A Novel Approach to Diabetes Education

BY JEREMY LOSAW

The pace of innovation in medicine and medical practices is relentless. The technology moves so quickly that it is often difficult for caregivers to explain the treatments behind the path to wellness. Hannah Chung, Aaron Horowitz and the Sproutel team have proven that healthcare innovation goes well beyond the parameters of surgical centers, laboratories and prescription drugs; innovation can also take the shape of a huggable stuffed animal—Jerry the Bear.

Developed to teach children newly diagnosed with type 1 diabetes how to manage the disease, Jerry has had a positive impact on the hearts and minds of the smallest of patients. Through Jerry, Chung and Horowitz are bridging the communication gap between medical practitioners and the most impressionable of patients, giving children with a serious health issue a greater understanding of their condition and the methods necessary to control or treat it.

Caregiving Reversed

Jerry the Bear started out as a sketch on a Post-it® Note, but has evolved into a cuddly teddy bear that educates children and promotes “empathy and understanding, ultimately empowering them to take an active role in their diabetes care.” Children can “feed” Jerry one of 10 food cards, and the carbohydrate grams passed over his mouth are calculated on a touch screen on Jerry’s stomach to teach children correct food choices. Children can also squeeze one of Jerry’s fingers to measure blood-sugar levels, which are also indicated on the touch screen. When the sugar levels get out of range, the insulin pen can be touched to one of the injection sites on the bear’s body to adjust the blood-sugar level. This allows the patient to become the care provider and teaches how eating healthy foods can help manage the disease.

The idea for Jerry the Bear was born from a passion to help families deal with diabetes. Daily injections and the consequences of long-term health issues were part of both Chung and Horowitz’s lives. Chung’s grandfather died of hypoglycemia, and her father was diagnosed with type 2 diabetes. Horowitz grew up with human growth hormone deficiency and needed frequent injections as part of his treatment.

“The prototype was anything but pretty. The eyes were hacked out of a Ferbie. It was made from rock-hard modeling foam, and the head was nailed to its chest—but it served the purpose.” — AARON HOROWITZ

Chung and Horowitz met while working on mechanical engineering degrees at Northwestern University. They were members of a student group called Design for America, which helps solve social issues through informed design. One of the first challenges posed by DFA in 2009 was how to make lives better for people living with diabetes. During the design challenge, while Chung and Horowitz were interviewing families with diabetic children, they noticed that children were caring for their stuffed animals as if they had diabetes, too. “They were using the stuffed animals that were already in their lives to act through and put themselves in the role of caregiver...to understand their disease. We thought, ‘Can we bring this behavior that already exists...and make it educational?’” recalls Horowitz.

Engineering Jerry

Despite being engineering students, neither Chung nor Horowitz had experience with robotics. Driven by necessity, they took an independent study course one semester with the goal of building the first working prototype in 10 weeks. “The prototype was anything but pretty,” says Horowitz. “The eyes were hacked out of a Ferbie. It was made from rock-hard modeling foam, and the head was nailed to its chest—but it served the purpose.”

The team tested the concept with a diabetic child living in a Chicago suburb. The child was not thrilled by the aesthetics of

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President Barack Obama meets with Hannah Chung and Aaron Horowitz as he hosts top innovators and startup founders from across the country for the first White House Demo Day on Aug. 4, 2015.

Even Jerry the Bear enjoys a good party.



the prototype, but his excitement gave Chung and Horowitz the spark to continue prototyping and refining the bear.

Jerry went through at least 29 different prototypes, including refinements to the size, interface, sensors and shape of the smile, before the bear was released. There were also over 100 smaller component-level prototypes to help calculate the electronics. The original prototypes were created with an Arduino microcontroller and modeling foam. As the product became more refined, the team moved to custom PCBs with a touch-screen interface and 3D-printed parts. Chung and Horowitz performed user intercepts throughout the development process to help converge toward product specifications that users requested.

Developing a curriculum around the bear was a major task. Chung and Horowitz decided to develop an animated story-based curriculum, which was reviewed by parent groups and healthcare professionals. The major plot line is that Jerry is training for the All Star Games and has to eat healthy foods to perform his best. Twenty-one challenge-based storybooks come with the bear. The child must complete tasks at the end of each book to unlock the next story.

Patents and Production

The Sproutel team has utility and design patents pending for the technology and Jerry's appearance. Early in the prototyping process, they worked with a professor to file the provisional patent. They were then taken under the wing of a local law firm that filed the non-provisional applications pro-bono. The team feels that having intellectual property protection has helped to prove their expertise in the field and get investors on board to fund the product.

Four different manufacturers helped produce the first run of bears. "Everyone said we had to go overseas, so we got on a plane and went to China," says Horowitz. Mentors helped

set up meetings with manufacturing groups, but Chung and Horowitz soon realized that the factories' minimum-order quantities were out of reach. Despite their low MOQ needs, the two were able to find an electronics group that agreed to work with them.

When Chung and Horowitz returned to the United States, they still needed a supplier for the plush and the electronic housing and accessories. They were only able to find two plush manufacturers left in the United States—one in North Carolina and another in Arizona. The North Carolina facility only sewed jumbo-size animals, but the Arizona facility had the equipment to do the job. The team engaged Protolabs in Minnesota to make the short-run injection molding tooling and the parts for the housings, while another domestic injection molding group was sourced to make the food coins.

After four years of hard work, Jerry the Bear launched in 2013. Chung and Horowitz sold 500 units in the first two years, which accounted for four percent of children newly diagnosed with diabetes in 2014. Many of the sales were garnered through word-of-mouth and Internet marketing, but sales were also enhanced through a partnership with Context Media Inc., which provides patient education programs for waiting room televisions. Positive sales growth and plaudits from parents and healthcare professionals helped Chung and Horowitz secure additional funding from angel investors to add two more people to the team. While Jerry is their first character and the central figure of the storybooks, the team has plans to create other products based on the other characters in the series.

The Sproutel team is also working on expansion packs to deal with other conditions such as asthma and food allergies. They also hope to use the platform to help all children learn the core values of health, wellness and the positive effects of nutritious food choices on their bodies and minds. 🐻



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THE TOP 10 REASONS YOUR Startup Needs Patents

BY DAVID PRIDHAM AND BRAD SHEAFE

The patent system has gotten a pretty poor reputation of late, especially among startup businesses that have been targeted by patent trolls hoping to extort a quick settlement from them. But entrepreneurs would be well-served to remember that even if the occasional troll can game the system to harm a vulnerable young company, patents themselves are often quite valuable—if not critical—to a startup's success.

Here, in fact, are the top 10 reasons why your startup needs patents.



1 Patents facilitate venture capital investment.

According to *The Role of Patents in Venture Capital Financing*, a study by Haussler, Harhoff and Muller, “Patents are a signal of quality that facilitates access to financing and helps startups overcome the liabilities of newness.” This finding was confirmed by the 2008 Berkeley study *Patenting by Entrepreneurs: An Empirical Study*, which found that 67 percent of venture-backed startups reported that patents had been vital in securing investment. While 40 percent of all startups held patents, 80 percent of those receiving venture capital investment owned patents.

2 Patents can help a startup defend itself against attacks by incumbent rivals.

Shortly after intelligent home products startup Nest introduced its first product—a “smart” thermostat—it was hit by a patent infringement suit from incumbent industry giant Honeywell. In the words of one analyst, Honeywell used its patent arsenal to try to “run the upstart competitors out of town simply by exhausting them and their limited resources.”

But Nest was prepared. It had already begun patenting its innovative products (and eventually would own several hundred patents and patent applications). But it also acquired 60 third-party patents relating to its product line from patent aggregator Intellectual Ventures, which helped buttress its intellectual property position.

The lawsuit is still pending. But if Honeywell's goal was to litigate its upstart rival out of business, Nest's patents have made that impossible. Nest's patents were also a key factor in the company's eventual acquisition by Google, as you'll see in reason No. 7.

3 Patents can help a startup stop the theft of its innovations by larger rivals.

Nowadays, Amazon decries patent litigation. But what Amazon doesn't mention is that only 23 days after it obtained a patent in 1999 for its “one-click” online purchase system, it filed a patent infringement suit against then-larger competitor Barnes and Noble over the latter's use of a similar “one-click” purchase system. The judge granted an injunction ordering Barnes and Noble to stop using Amazon's “one-click,” giving Amazon the edge in online book retailing.

4 Patents can ensure a startup's freedom to operate.

Google is another industry heavyweight that complains about patents. But as a startup in 1998, Google deemed its seminal PageRank patent No. 6,285,999 so vital it filed for the patent before it had a business plan, venture funding or even a domain name—and then paid Stanford University \$336 million in shares to exclusively license it. Without that patent, said one analyst, “Google would have been trampled by copycat search engine offerings from Yahoo, Microsoft and other big players who once dominated the market.”

5 Patents can help a startup rapidly increase its market share.

Carles Puente, a 2014 finalist in the European Inventor Awards, invented a mobile phone antenna based on the principles of fractal geometry, which allowed it to be much smaller. If it wasn't for Puente, we'd still be carrying around cellphones as big as shoes.

But his Spanish startup, Fractus S.A., couldn't possibly manufacture enough fractal-based antennas for the 1.5 billion smartphones sold each year. Thanks to its patents, however, Fractus was able to license its technology to 90 percent of the world's smartphone makers.

"Patents were very important to us," says Puente, "not only in protecting our innovative technology but also in expanding our market share."

6 Patents can help startups form joint ventures and R&D partnerships.

According to a 2014 National Science Foundation-backed study, 49 percent of manufacturing and service firms used inventions obtained from external sources to develop their most important new products and services. In 14 percent of these cases, the source was a startup. In many cases, the patents on those startups' inventions served as the legal scaffolding around which joint ventures and R&D partnerships were constructed.

7 Patents can increase the chances that a startup will be acquired.

We have already discussed Nest's use of patents to defend itself against bullying by a larger rival. But the company's intellectual property also was a major factor in Google's acquisition of Nest in 2014 for \$3.2 billion in cash. As an article in *USA Today* reported, Bernstein Research analyst Carlos Kirjner advised investors, "We believe Google would not have purchased the company if it did not have substantial and valuable intellectual property."

8 Patents can help a startup get ready for an IPO.

Even a tech giant as powerful as Facebook felt the need, when preparing for its IPO in April of 2012, to shell out \$550 million to buy 650 former AOL patents owned by Microsoft. That was in addition to the 750 patents Facebook had bought a month earlier from IBM.

The purchases were partly a response to Yahoo's then-pending patent suit against Facebook. But experts say Facebook's larger objective was to reduce investor concerns over Facebook's legal risk in advance of its IPO, as well as to protect itself

from further litigation down the road, given that patents are increasingly the weapons of tech company competition.

Twitter made a similar patent purchase from IBM shortly after its IPO.

9 Startups with IP achieve greater long-term success than startups without IP.

In their 2015 study *Patents, Innovation, and Performance of Venture-Capital-Backed IPOs*, Cao, Jiang and Ritter found that "patents strongly and positively predict the long-run performance of VC-backed IPOs." Indeed, "VC-backed IPOs with patents substantially outperform other VC-backed IPOs. The same holds true even for non-VC-backed IPOs."

Or as Cockburn and Wagner simply put it in their 2007 study *Patents and the Survival of Internet-Related IPOs*, "Firms without patent protection are much less likely to survive."

Even a tech giant as powerful as Facebook felt the need, when preparing for its IPO in April of 2012, to shell out \$550 million to buy 650 former AOL patents owned by Microsoft. That was in addition to the 750 patents Facebook had bought a month earlier from IBM.

10 Patents can help a startup launch a billion-dollar empire.

As IPfolio CEO Rupert Mayer observed recently, patents have helped at least 10 major startups launch billion-dollar empires. These include Dropbox's network folder synchronization patent, Zynga's asynchronous challenge gaming patent, Square's patented system and method for decoding swipe card signals, GoPro's patented harness system for attaching a camera to a user, and of course Google's breathtakingly valuable original PageRank patent.

These are only 10 examples of how intellectual property can help a young startup company build a successful growth business. ☞

David Pridham and Brad Sheafe are CEO and chief intellectual property officer, respectively, of the patent advisory and optimization firm Dominion Harbor Group. This article originally appeared in *Forbes* and was reprinted by permission from the authors.

DREAM WEAVING

How One Inventor Turns Moving Mental Pictures Into Marketable Products **BY CARISSA D. LAMKAHOUAN**



IT'S SAID THAT NEW YORK CITY IS FOR DREAMERS. THAT'S JUST FINE FOR INVENTOR AND NATIVE NEW YORKER JOSEPH SPORN, WHOSE WORK IS, QUITE LITERALLY, THE STUFF OF HIS DREAMS.

For more than 25 years, Sporn has taken those dreams—the moving parts in his head as he calls them—and brought them to life. More than two decades of trusting his instincts and embracing innovation has resulted in over 20 published patents and a host of products sold both domestically and overseas.

Year after year, his sales figures rank in the millions, and he shows no signs of slowing, at least, not according to his dreams. In fact, one of his latest inventions followed true to form—the idea came to him while he slept.

“In my dream, I actually saw the product, but there was nothing inside its moving parts,” Sporn says. “It was only when I got up that I realized what it was.”

Immediately upon waking, he moved to his workspace and set himself to task. The result? The Perfect You Bra, which allows the wearer to enhance or minimize her cleavage by adjusting the

straps. As to how or why the idea developed, Sporn admitted he has no idea. His only explanation? He dreamed it and then was compelled to create it. “Inventing is a calling for me; just something I have to do,” he says.

Nevertheless, the bra, like many of his other inventions, has proved marketable and is set to hit store shelves early next year.

This has been the method to Sporn's madness for years. “You know how some people talk about how great things happen when all the stars are aligned? That's how it is for me,” he says, adding that something resonates inside him and tells him that what he's seeing in his head is right. “I literally see my invention and then I make it.”

Throughout his career, those instincts have rarely proved wrong, beginning with the idea for his first invention, the Sporn Non-Pull Dog Harness. He secured a patent in 1989 and sold the harness throughout the 1990s before establishing The Sporn





Joseph Sporn came up with the idea for the revolutionary Sporn Non-Pull Dog Harness while walking dogs in New York.

"I went to the trade show and took a dog with me, did demonstrations, and I let people test it out themselves. We had a line of customers waiting to make a purchase order, and from there the word spread like wildfire." — JOSEPH SPORN

The Sporn Halter is part of a growing product line.



PHOTO BY JEREMY LOSAW

Company, Inc. in 1999. After finding success with the harness, he stayed the course, developing a variety of products for dogs and their owners, many of which can be purchased at major retailers such as WalMart, PetSmart and Petco.

A Knack for Innovation

But it seems the tides have turned, at least for now, as Sporn is preparing to launch not only the Perfect You Bra but another invention geared toward the human set—the Swim Assist training harness. He came up with the idea for the product, which aids in swim instruction, while he was teaching his son to navigate the family swimming pool. The lesson wasn't going so well, as Sporn struggled with his son's anxiety and fear of the water.

After several failed attempts to make the boy feel secure by holding him beneath his belly, Sporn felt defeated. In frustration, he grasped his son's bathing suit waistband and lifted him up. The fledgling swimmer came out of the water and locked eyes with his dad, the fear gone from his eyes as he sensed the support of his father's grip. Sporn says he instantly knew he'd found a better way to teach his son how to swim.

Sporn says he's always possessed a knack for having ideas that appeal to other people, even if they don't know they need it. "I remember from early childhood being copied all the time. I'd get a

new pair of sneakers and then all my friends would get the same ones," he says. "I've always had an eye for what other people might like, but that they wouldn't necessarily notice themselves. So with my business, if I think of something that I believe can be useful, I'll just keep working at it until I make it."

Sporn says this element—usefulness—is essential to his process when he aims to invent and potentially market a product. He insists aspiring inventors and entrepreneurs must create goods that solve problems or enhance people's lives if they hope to build a viable business.

Harnessing Ideas

Despite his own success, Sporn calls himself an accidental entrepreneur. Earning his keep as a dog walker in New York City in the late 1980s, he developed the dog harness when he was walking a large German Shepherd and the leash became tangled behind the animal's front legs. It halted the dog, and in that moment Sporn realized not only was he able to control him easily with the leash in that position, but he could do so in a way that didn't put pressure on the dog's throat. It was a humane way of handling the animal.

That spark of discovery was a revolution for Sporn, and he wasted no time fanning it into a flame. He built a prototype and, relying on a strong hunch that his product was better than anything

else on the market, began crafting plans to mass produce, market and distribute it.

However, he knew he needed capital, so he turned to his father, New York attorney Samuel Sporn for a loan. The elder Sporn saw the merit in his son's idea and liked the look of the prototype, which the younger Sporn managed to piece together using ingenuity, experimentation and a secondhand sewing machine he picked up in Chinatown. Samuel Sporn also could see how the harness effectively controlled dogs in a more comfortable way than traditional harnesses.

"This was a totally radical concept; it changed the whole idea of dog harnesses," Sporn says. "It was also very beneficial because it lets anyone easily control a dog."

Impressed, Samuel Sporn resolved to invest in the harness and loaned his son \$60,000 in start-up funds. Fortified with the means to finance his dream, Sporn put the money toward the harness's design fee and his first purchase order. He says it was slow going at first, particularly when it came to finding manufacturing companies willing to take a chance on an unknown inventor, but his father's investment made the difference.

"In the beginning you're the new kid in school, and if you don't have a sales reputation, factory owners are reluctant to work with you. You need a line of credit or something to give them a guarantee," Sporn says. "After you're in with the retailers, they realize you're a player."

Despite his inexperience and lack of ties to any major retailers, Sporn eventually convinced a California-based company to produce 1,000 units of the harness, but it came at a steep price and a test of his patience. The factory fees were wildly overpriced, costing him nearly double the price he would have paid to an Asian company. The exaggerated manufacturing fees didn't equal a quick turnaround on output, either. Sporn says the wait time to receive product samples was long and taxing.

Trade Show Tips

But as the saying goes, good things come to those who wait, and Sporn was no exception. He worked diligently for about three years, focusing only on producing and moving as many harnesses as he could. His goals were simply to repay his father and to pull enough profit to reinvest in and expand his operation. That meant hawking his wares at trade shows, which he said were critical to his early success. After researching which ones would be the best fit, he packed up his products and set off with plans to showcase his harness to as many potential buyers as possible.

The move proved to be the right one.

"I went to the trade show and took a dog with me, did demonstrations, and I let people test it out themselves," Sporn says. "We had a line of customers waiting to make a purchase order, and from there the word spread like wildfire. In my first show I sold \$30,000 worth of harnesses."

Sporn says the secret to trade shows is the brutal honesty and all-or-nothing feedback businesspeople and entrepreneurs can receive regarding the effectiveness and desirability of their products. "If the public warms to what you're selling, they can be very kind and accepting, but brace yourself for swift rejection if your product fails to impress," he says.

Yet, when all the compliments and criticisms have been thrown your way, Sporn says a product's worth ultimately comes down to units sold. "The truth is that when people take out their wallets and pay, then you know you have something great," he says. "But the only way you're going to know that is if you put the product out there and take a risk."



Joseph Sporn has embraced innovation, resulting in over 20 published patents and millions of dollars in sales.

Business Expansion

After his trade-show triumph, Sporn was willing to take more risks and dream even bigger. He'd had his first taste of financial success and earned enough to repay his father and reinvest in his product. But he needed a plan for expansion and long-term growth, which meant focusing on the nuts and bolts of building a business. It was then that he and long-time business partner and The Sporn Company Vice President Richard Goodrum began to plot the company's future course. Sporn was primed and ready

to move manufacturing overseas.

His expansion began during the 1990s, a time before Web surfing became a national pastime, making identifying foreign companies to work with a bit more difficult than it is today. However, he and Goodrum managed to make it work. "We were able to locate factories using manufacturer sourcing websites like Global Sources and Alibaba," Goodrum says.

After years of paying bloated manufacturing costs to their domestic provider, Goodrum says he and Sporn were eager to increase profits by finding ways to slash production costs. To that end, they sent a harness to more than 40 different factories and requested each make one unit to their exact specifications. When they had the finished products in hand, they scrutinized each one, measuring and comparing the quality of the harnesses while factoring in cost and the factories' professionalism.

Once Goodrum and Sporn narrowed their options to three suppliers, they traveled overseas to see the manufacturing operations first hand. After evaluating those experiences, they decided to work with companies in Indonesia and China.

With mass production secured, it was time to introduce the harness on a wider scale. For Sporn, that meant inking contracts with national retailers. While working a trade show in 1999, luck was on his side when he spotted Phil Francis, the now-former CEO of PetSmart. Sporn didn't have a meeting with the man, but he had an idea to get his attention. Francis was giving a speech and when he finished, Sporn took a chance and, using a dog leash, managed to literally wrangle face time with the executive. Sporn wasted no time seizing the moment to give Francis a harness demonstration using a dog he'd smuggled into the show.

"I knew it was aggressive, but to get your products out there you have to get creative and do whatever it takes," he says. "In the end it was nothing but fun."

Going with his gut worked in Sporn's favor. Rather than being put off by the abrupt introduction and forced meeting, Francis was impressed. A year later, the Sporn Non-Pull Dog Harness debuted on PetSmart shelves. Afterward, Sporn capitalized on that first marketing coup, gaining notice from, and eventual distribution deals, with Walmart and Petco.

Packaging Priorities

Of course, Sporn's product was his golden ticket; the right product is essential to any entrepreneur's success. However, there are several other factors to consider beyond the invention. Packaging, for one. When it came to how his products would be displayed, Sporn wasn't leaving the design decisions to outsiders. Instead, he formed his own in-house team, figuring those most familiar with the ins and outs of the product's development process would be experts regarding how it should be packaged and presented to the buying public.

"It's accepted in the retail business that the average customer gives you about a half a second of their attention in the store, so your packaging has to make an impact, and it has to do it fast," he says.

To ensure he and his team are making the right calls, Sporn often turns to online surveys, a useful tool to gauge the public's reaction to his products' packaging. He says he's continuously amazed at how even subtle changes in package design can make a big impact and widely skew someone's impression. In Sporn's business, those reactions are integral to his success, and he says he is happy to put the public's critiques to work for him if it keeps him on top.

"On the Internet you'll really get the truth from people, really blunt and honest responses. They'll even tell you your product is

crap if that's how they see it," he says. "Right now I'm number one in the world in pull-control harnesses, but I know I could be yesterday's news in a second. Success can be fleeting."

Minimizing Risk

Luckily for Sporn, he's never short on ideas. The consummate daydreamer says his visions and dreams for new inventions are on a near-constant loop in his head, and once he envisions them, they simply have to come out. However, he also knows that great products are not enough to ensure continued success, especially in the

notoriously fickle retail industry.

To stay relevant and to keep his products moving off the shelves, Sporn stresses the importance of developing and maintaining strong business partnerships.

"You have to understand that each relationship is different. Knowing people's needs is as important as having the right product," he says. It's also important for his partners to know he'll take care of them. "You have to nurture those you have relationships with as if they were a part of your own family," he says.

Above all, Sporn's protected his reputation by ensuring his integrity is never in question. He makes sure his product shipments are always on time, and he

takes care to deal honestly with those who help keep his business humming. "Never lie, cheat or steal in business," Sporn advises.

That trust and integrity extends to Sporn's customers, as well. His company offers lifetime guarantees on all its products, a move which boosts Sporn's brand and inspires consumer loyalty.

But despite all the toil and effort, pretty packaging and cost-effective manufacturing deals, business ventures are and always will remain a risk. Samuel Sporn bet on his son, dreaming his boy would make good on his goals. "When it comes to your kids, you keep your fingers crossed and you only hope for the best for them," he says.

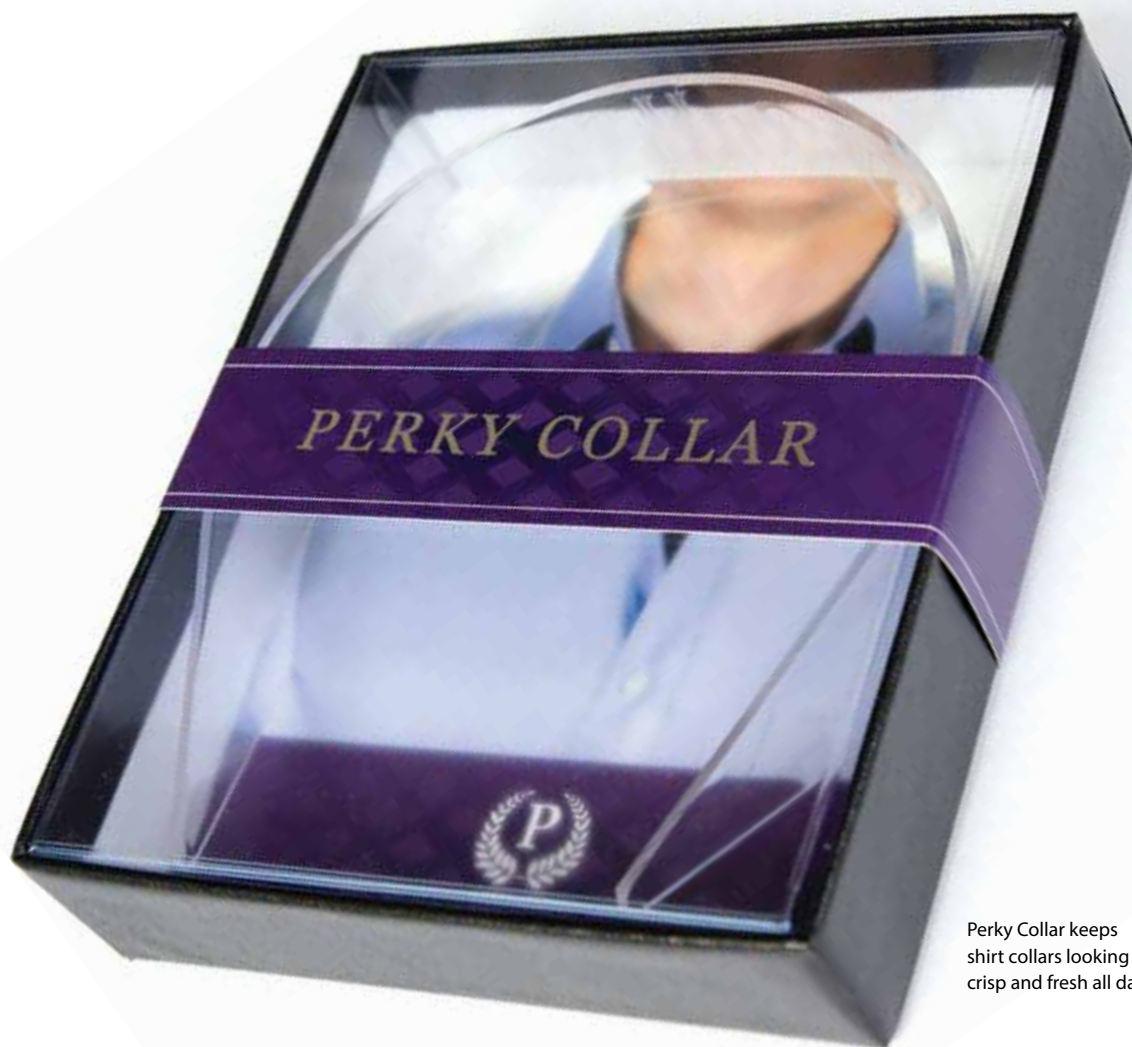
Judging by Joseph Sporn's career so far, it seems Samuel Sporn's dreams, like his son's, have all come true. 🐾



The Swim Assist training harness helps relieve anxiety and fear in novice swim students.



Carissa D. Lamkahouan is a Houston, Texas-based journalist. For nearly 20 years she's covered art, education, business, health and religion. She also blogged about her one-year stint living abroad in Marrakech, Morocco.



Perky Collar keeps shirt collars looking crisp and fresh all day.

No More Starch

How One Upstanding Idea Took Shape

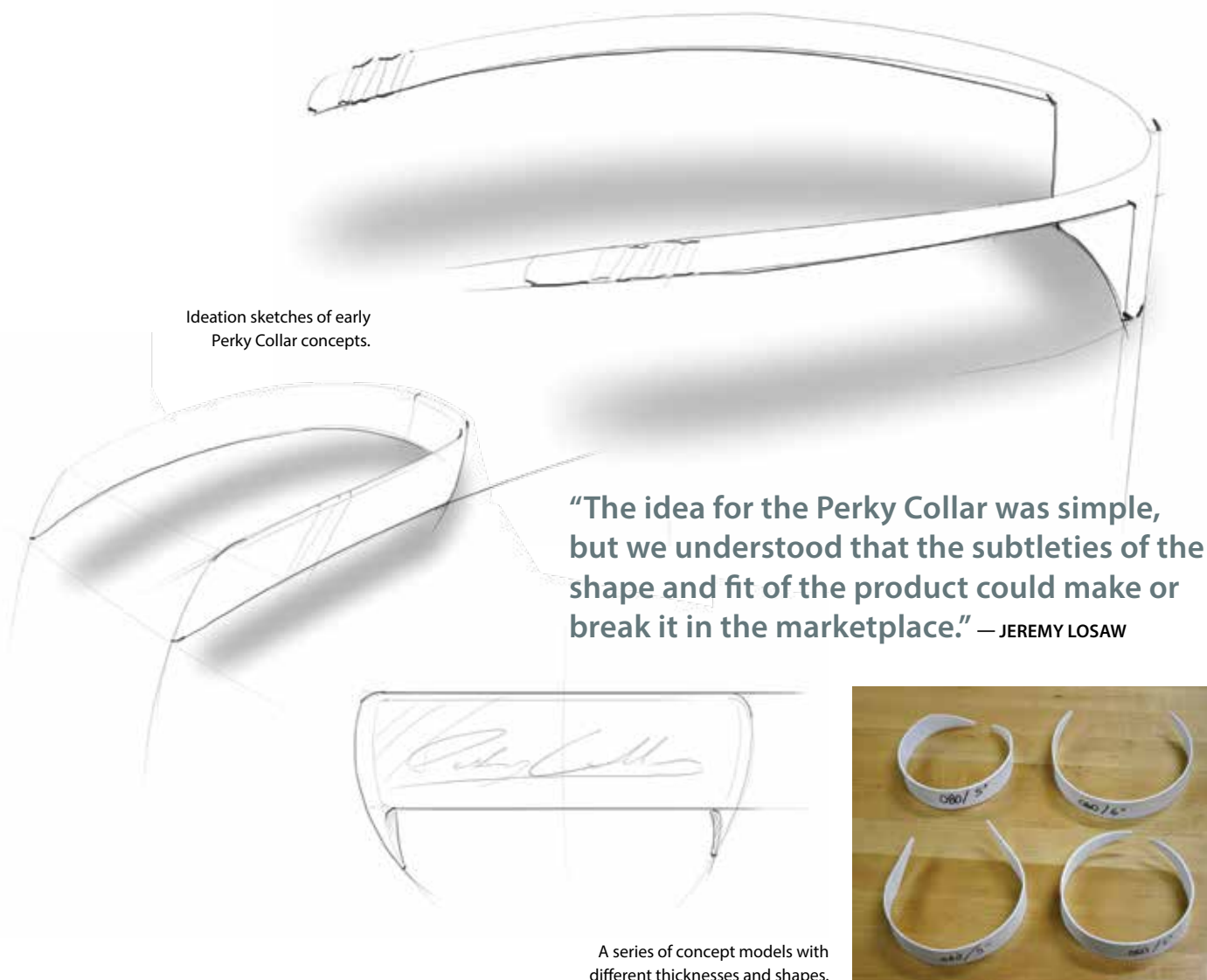
BY JEREMY LOSAW

Everyone wants to look his or her best with minimum effort, which makes clothing and clothing care ripe for innovation. David Frankel came up with the idea for the Perky Collar because the collars of his dress shirts drooped when he wasn't wearing a tie. His invention keeps shirt collars looking crisp and fresh all day.

Frankel is an experienced entrepreneur but a first-time inventor. His first business after college graduation was a family portrait photo studio. The father of six children is also a soccer enthusiast and founder of the 3V3 Academy, a soccer school with six locations in the greater Charlotte, N.C., area.

Frankel was getting dressed for a business meeting when he had the lightening bolt moment that triggered the Perky Collar. He had planned to wear a dress shirt without a tie but noticed that the collar kept sagging under his blazer, which did not convey the professional appearance he sought. On a whim, Frankel decided to tuck one of his daughter's stiff plastic headbands under his collar. The headband did the trick, lifting the collar and keeping it sharp all day.

The headband was a good start, but Frankel knew it would be tough to sell headbands to style-conscious men. Knowing that he did not have the experience to develop the idea on his own, in March 2014,



Ideation sketches of early Perky Collar concepts.

“The idea for the Perky Collar was simple, but we understood that the subtleties of the shape and fit of the product could make or break it in the marketplace.” — JEREMY LOSAW

A series of concept models with different thicknesses and shapes.

Frankel approached Charlotte-based product-development firm Enventys to help with the task.

One week after coming up with the idea, Frankel took a box of his daughter's headbands along when he met with the design team at Enventys. I was the chief engineer on the project. The idea for the Perky Collar was simple, but we understood that the subtleties of the shape and fit of the product could make or break it in the marketplace.

Perky Collar Takes Shape

The first step in the design process was ideation. Since the concept was relatively simple, the team tried to think of ways to add to or enhance the product's value. One thought was to make it adjustable, so

the design team sketched concepts with sliders and locking mechanisms to ensure the collar would fit many neck sizes.

The other big question was the shape of the band. The product had to be completely hidden under the collar, so the team created concepts that had thin arms to reduce the visible footprint of the product. We also considered removing material from strategic areas to cut down on the plastic volume while maintaining stiffness.

Concept Models

The next step was to make concept models of the most promising designs. Many of the concepts were single pieces of plastic, so it didn't take long to make various iterations of the product. We made

simple flat-pattern models in SolidWorks CAD software and cut them from white styrene plastic on the Epilog Laser cutter. To manipulate the curved shape, we used a heat gun to form the flat patterns around a steel tube.

The team tested different shapes, thicknesses, adjustment methods and curve diameters. We made approximately 20 different models but found that most of the cutout shapes were too flimsy to keep the collar looking sharp. The best configuration proved to be a full-width band that tapered to a rounded point toward the ends of the arms. We determined the material could only be .060 inches thick before it made the collar look chunky. A five-inch diameter provided the best balance of support and a clean look.



A 3D-printed model of the final Perky Collar design.

Thickness and Materials

Frankel agreed with most of our recommendations. He liked the simpler one-piece version and the five-inch diameter. He thought that .060 inches was too stiff, but that .040 inches was too thin, so we split the difference and made it .050 inches thick.

Frankel was also keen to try a variety of colors and materials. We made additional prototypes in polycarbonate, Kydex and mirrored styrene. In the end, Frankel liked the transparent version of the product best. I encouraged him to choose polycarbonate due to its impact resistance.

In February 2015, the Perky Collar patent filing was completed, just as we were finalizing the design. I created the CAD model of the product in its final shape, with the new logo imprinted on the surface. One final 3D-printed model was created on a stereolithography machine to verify the CAD and the product's appearance. Frankel was able to use the model to generate buzz for Perky Collar, while I worked on getting the product sourced.

Tooling and Production

Frankel wanted to keep the production of the Perky Collar in the United States if possible. I engaged a few groups domestically and abroad. We found that the price for parts from United States vendors was competitive, but the tooling costs were more than double. The product first had to be

injection molded as a flat pattern and then heated and bent into its final shape. In the end, we decided to make a 5,000-unit run with a trusted vendor in China.

In May, we received the T1 samples, the first samples off of the tooling. Although they were good, the tool needed additional polishing and there were staining issues at the injection site. The T2 samples, which arrived a few weeks later, were ideal. We instructed the factory to further polish the tool, and placed the order. This past July, 5,000 Perky Collars were delivered to the United States.

Graphics and Packaging

Despite having the product, Frankel had not figured out the packaging. He tried to design it while we were sourcing Perky Collar, but after struggling with getting the look he sought, Frankel asked the Enventys designers for help. Team members redesigned the logo, sourced a deluxe box, developed an instructional graphic, and made a "before and after" comparison photo for the packaging. The boxes were manufactured in New Jersey, and the labels and remaining graphics were printed in Charlotte. The result is a classy package suitable for high-end retail.

The back of the Perky Collar packaging.

Even Simple Products Take Work

The development of the Perky Collar is proof that even the simplest of products require time and attention to detail to be successful. The Perky Collar is a single-part product with no design dependencies, but it still required multiple prototypes and iterations to determine the design parameters to make it function properly and look professional. After a year of hard work developing the product, success is on the horizon for David Frankel and Perky Collar. 📦

Visit www.perkycollar.com for information.



May the Best Service Provider Win

Eight Pointers for Novice Inventors **BY EDITH G. TOLCHIN**



ROBUART//ISTOCK/THINKSTOCK

As an inventor, sooner or later you'll need to hire an industry service provider. Depending on which phase of product development you've reached, you may need help with packaging design, engineering, patents, licensing, refining of a prototype, customs information, import duties classification or even creating a catchy slogan.

Most service providers are experts at a particular skill. As an inventor, engaging a service provider or consultant may ultimately be your key to success and happiness. Following are eight pointers for novice inventors that should prove helpful in selecting a reputable and conscientious service provider as you venture into entrepreneurship. Be proactive and hire wisely.

1 Make sure your service provider has a policy that clearly spells out information requests and response time (24 hours, two days, one week). If, for example, the service provider is relying on the client to approve photos from an overseas factory, the client must know that he cannot be remiss in response. If a factory is going to close for a holiday, the project could be delayed. This important stipulation in a contract can mean the difference between a timely project launch and a delay of up to a year for a season-specific launch.

2 Ask for references; then check them.

Your prospective service provider may list brilliant, effusive testimonials on a website, but how do you know they are true? Ask for several recent references, and call or email them. Ask about their inventions and the degree to which the service provider helped develop them. Was the provider prompt? Did he communicate clearly? Did the job come in over budget? You'll have an advantage if the prospective consultant gives you references that have inventions in the same or similar category as yours, which can be a clear indication he has the experience to get the job done.

3 Your consultant should prescreen subcontractors.

More than likely your consultant will have to work with someone else on your job. I sometimes coordinate three subcontractors at the same time when developing new products. I may be working with a Consumer Product Safety Commission's accredited laboratory to assess product safety issues—always *before* it's manufactured—while a logo is being designed by one firm and packaging by another.

Let's say, for example, that your consultant hears from his trade association that Joe Smith

would be the best legal professional to help you protect your new product. Fortunately, there is a two-week delay while you are gathering information. Next, your consultant hears that Joe Smith has been arrested for absconding with client escrow funds. You—and your service provider—were, in this case, fortunate for the delay, but next time do not settle for subcontractor referrals. See No. 2 and check references thoroughly. The grapevine can get tangled.

4 Make sure your service provider's fees are clear.

The more information supplied in a service contract, the better. Determine the following: Is there a retainer charge? What is the hourly rate once the retainer is exhausted? Is there a quotation for services? Who is responsible for unanticipated expenses such as postage or supplies? One of the worst things that can happen to a service provider is to have to engage a collection agency when a client won't pay because, "You didn't tell me I'd have to pay shipping charges."

5 Don't work with the copy cats; look for the unique.

Although imitation may be the sheerest form of flattery, shop all competitors. Attend monthly meetings of inventor groups in your state. Walk the floor at inventor- and industry-specific

trade shows. Network and ask for recommendations. Many service providers, who have spent good money for a booth, will try to woo you. Take time to speak with them, and look for intelligence and creativity. There are thousands of licensing agents and patent attorneys. What makes someone stand out?

6 Bigger isn't always better. You see her face all over the Internet: Facebook, Twitter, "free" webinars, e-advertisements of appearances at inventor fairs. That only proves the service provider knows how to promote herself. Make a list of questions to ask before you hire; consultants do not come cheaply. Sometimes the dark horse is the best person for the job. As the old saying goes: "The proof is in the pudding." Again, see No. 2 and check references.

7 Honesty is the best policy. Always insist your prospective service provider schedule an initial consultation with you to discuss expectations. Does he charge for this consultation, or will he provide it free of charge? I used to provide complimentary

consultations of up to one hour, which I considered to be adequate time to understand a new project. It got out of hand when I thought I had landed the job and the prospective client continued to email endless questions. During the initial consultation, make sure the service provider is willing to appease apprehensions and doesn't promise what he is not sure he can deliver.

8 Humanity and common decency go a long way. Even consultants hire consultants. Though she is busy, my attorney is concise, but she is also courteous. My web designer says "please" and "thank you" in all his emails. In today's electronic communications, etiquette still prevails. ☎

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.



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A False Patent Reform Narrative

THE INNOVATION ACT IS NOT ABOUT SMALL BUSINESSES **BY GENE QUINN**

Let's not mince words: If enacted, the **Innovation Act would be a disaster**. Yet, we continually hear from members of Congress and their staff, as well as giant companies pushing for weaker patents, that the goal of the bill is to keep small business owners from getting sued for using pieces of equipment they purchased. This tired line does nothing but misrepresent the contents of the bill. It is also insulting to the countless small businesses and startups that rely on the patent system to give them a fighting chance when competing with large, well-funded companies that control the entire marketplace—from channels of distribution to industry standard-setting bodies.

However, saying the Innovation Act will do nothing more than save small business doesn't make it true. If enacted, the Innovation Act would dramatically and negatively affect the incentive to invest in innovation. The Act would, among other things, make investors liable in the event a patent infringement case is lost, which would cause critical early stage funding of innovation to completely dry up. In the process, the U.S. innovation-based economy would suffer.

Overseas, particularly in China, industry insiders are confused as to why America would flush its patent system down the drain. Foreigners who observe our patent debates smell a rat, convinced there is something lurking that they don't understand, because Americans would never destroy their own patent system. Right?

Not so fast. The forces that want more reform have thoroughly convinced their political supporters that the remedy is to make it even more difficult to enforce patents and raise capital. To accomplish these goals, the Innovation Act has been cloaked in a misleading narrative. The spurious claim that the Innovation Act is about protecting small businesses is a perfect example.

If the goal is to insulate small businesses from charges of patent infringement, why not write that into the bill so the problem is addressed? If the Innovation Act gets passed as written, small businesses could still be sued for patent infringement.

Define "Small Business"

If Congress wants to insulate small businesses from patent infringement lawsuits, why don't they start by defining how small

a business must be in order to be exempt from patent infringement litigation? Would it be 50 employees, as the Affordable Care Act defines a small business, or 500 employees, as the Small Business Administration does? Congress won't dare go down that path because to do so would upset too many constituencies, and for what? By keeping the issue of patent reform alive, it can continually collect campaign cash from lobbyists and special interest groups desperate to enact their own vision for America. Keeping the patent system on the brink is a win-win for Congress. If patent reform stalls, it won't have to vote on an issue that will upset some constituencies who could lose big. Complacency, however, is not the solution. We learned with the America Invents Act that bad legislation can eventually pass.

The truth is, to have any chance of passing the Innovation Act, Congress must engage in flag waving, and hope no one notices. The small businesses that Congress claims it wants to protect are simply political pawns in a much larger chess game. The people funding the effort to enact further patent reform are not small businesses owners; they are the executives of Google, Cisco, J.C. Penney and other corporate giants. The push for reform is being driven—not by a deep-rooted concern for the plight of American small businesses—but by interests important to these giant corporations.

Congress claims it is going to help small businesses (whatever that means and whoever they are), but to do so, it has decided it must push forward legislation that will destroy innovative startups. Aren't those startups small businesses, too? Aren't those innovation-based startups the ones our leaders say need to succeed because they create good, high-paying tech jobs with medical benefits?

Corporate Giants Shielded

Some small businesses are being sued for infringing patent rights because the giant corporations that sold them the infringing device are engaging in a game of efficient infringement, daring patent owners to sue them, ignoring all attempts to engage in legitimate arm's-length negotiations, and leaving patent owners with no choice. This very problem that Congress says it is attempting to solve is a problem that it and the courts specifically and consciously created. If Congress wants to exempt small business owners and individuals from patent infringement lawsuits, fine, but it simply can't be done with a patent system so weakened that the true infringers—giant corporations—are effectively insulated from liability.

Rather than pushing platitudes, one radical idea would be to solve the problem. Patent rights have eroded over the last 10 years, leaving all the power in the hands of those who use the innovations of others. Strengthening patent rights would equalize power between the innovator and the entity that seeks to use the innovation, which would lead to arm's-length negotiations between the parties and dramatically reduce litigation.

Why would anyone pursue thousands of small businesses in patent litigation if they can fairly negotiate with several large entities instead? Without a system that incentivizes arm's-length negotiations, patent owners will be forced to fight in court rather than do business in a boardroom. That is as inefficient as it is stupid. Unfortunately, there isn't enough money in Washington, D.C., to achieve sensible patent reform.

If Congress wants to insulate small businesses from patent infringement lawsuits, why don't they start by defining how small a business must be in order to be exempt from patent infringement litigation?

Tilted Playing Field

Increasingly weakening patent rights obviously hasn't worked; large tech companies continue to complain about the same problems year after year. Despite getting what they asked from Congress and the courts, tech companies are incapable of competing in the marketplace without Congress continually tilting the playing field in their favor. Small businesses and startups are overwhelmingly responsible for innovation in this country; yet, as patent laws continue to make it more difficult for innovators, we can only expect less innovation. For an innovation-based economy, that sounds like a disaster waiting to happen.

If Congress really wants to help small businesses and shield them from abusive tactics, it should focus on the TROL Act or the STRONG Patents Act, which address the problem associated with fraudulent and misleading demand letters. That is unlikely to happen, however, because the push for patent reform is not about finding solutions to problems; it is about diminishing the value of patents and eradicating patent infringement lawsuits whether they have merit or not. ☹

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 startup businesses in the technology field.





Fat Cats Have the Patent System Perpetually on the Brink

BY GENE QUINN

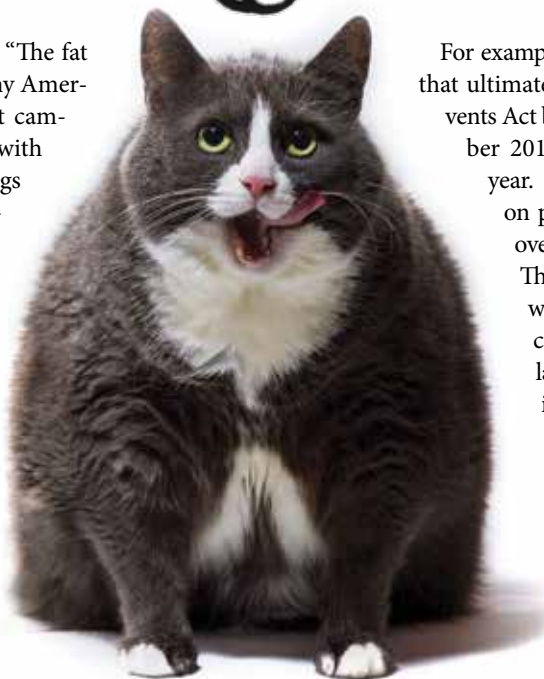
According to the *New York Times*: “The fat cats came to symbolize what many Americans regard as a deeply corrupt campaign finance system riddled with loopholes.” Fat cats not only enjoy the trappings of power, but as the result of generous campaign contributions, they have access to politicians the average person could never obtain, enabling them to influence policy, laws and regulations.

The fat cats in the patent industry are giant tech companies that believe they will be better off with substantially weakened patent rights. They already control the marketplace, so why do they need a government grant of exclusivity? As naive as this short-term thinking is, these fat cats continually push Congress and the courts in ways that keep the patent system teetering on the brink.

Despite the overwhelming evidence that a strong patent system fosters higher levels of innovation, Congress continues to debate the weakening of patent rights. In a world where K Street lobbyists and special interest groups dominate the agenda, such irrational treatment of an issue seems as certain as death and taxes. Who could have predicted that these fat cats would advocate the destruction of the patent system, when they themselves have literally spent billions of dollars acquiring patent portfolios?

Patent Reform Stalled

Thankfully, patent reform efforts seem to have stalled for now. If patent reform doesn't move forward, it won't be due to a dramatic awakening in Congress or a sudden issue-oriented enlightenment; it will languish as the result of the inability of major corporations to agree on what needs to be done, which is historically the major cause of patent reform stumbling.



For example, during the legislative debates that ultimately resulted in the America Invents Act being signed into law in September 2011, patent reform stalled every year. Congress does not like to take on patent reform unless there is an overwhelming industry consensus. The issue is not one that resonates with voters, so why risk alienating constituencies that may be needed later for a reelection bid? Indeed, it was not until the biotechnology/pharmaceutical community and much of the high-tech sector supported the AIA that reform was actually achieved.

Today, the pharmaceutical and biotechnology industries are demanding that their patents not be challengeable in post-grant review, particularly in an *inter partes* review proceeding. This unrealistic demand threatens patent reform efforts, not any particular desire to thoughtfully determine what might actually lead to a better patent system. The reality seems to be that without an IPR carve out for biotechnology and pharmaceutical patents, bio/pharma will not jump on board and support patent reform. Without bio/pharma support, patent reform will die, and the patent system will be safe for the time being.

Post-Grant Challenges

But if post-grant challenges to bad patents are such important parts of ensuring patent quality, which is what we have been told repeatedly over the last few years, why should any particular class or category of patents be exempt? If IPR is about killing bad patents, the process should be unbiased. What this bio/pharma demand exposes is the simple truth—most everyone is in favor of

IPR as long as their own patents are not challenged. Ironically, the biotechnology and pharmaceutical industries didn't have a problem with IPR being used to kill patents when they thought it unlikely anyone would ever challenge one of their patents.

While IPR and other forms of post-grant review were ill conceived from the start, there is no intellectually honest way to argue that they should be unable to challenge certain categories of patents. The claim that Hatch-Waxman is a better vehicle to take care of bad pharmaceutical patents is laughably ridiculous. All Hatch-Waxman does is guarantee the survival of patents, preventing generics from entering the market.

These new post-grant administrative trials are the result of the America Invents Act, which was dragged across the finish line as the result of heavy lobbying by the pharmaceutical industry. Now the pharmaceutical industry wants a carve out for themselves. It is self-serving and hypocritical to ask for a carve out applicable only for biotechnology and pharmaceutical patents. The pharmaceutical industry shouldn't have supported post-grant review in the first place, and if it wants a fix, it should be lobbying for an end to the entire post-grant review process.

Kyle Bass Petitions Denied

This bio/pharma demand for an IPR carve out has surfaced because of the IPR petitions filed by hedge fund billionaire Kyle Bass, who is challenging pharmaceutical patents and shorting the stock of the companies owning the challenged patents. The Patent Trial and Appeal Board has so far denied all of the Bass IPR petitions, albeit in what might be very generously characterized as result-driven decisions. Whether the PTAB can and will continue to provide cover for the industry remains to be seen.

The first two decisions were questionable, and the third decision was indefensible. If the PTAB doesn't institute at least some of the Bass IPR petitions, it will be hard to believe the fix isn't in, which would only further damage the integrity of the system.

We are barely four years into the AIA regime that ushered in wholesale changes to patent laws, so why are we discussing additional patent reform at all? We are talking about it because there are a few companies that have spent tens of millions of dollars lobbying Congress on this patent issue, which is a tremendous amount of money for what has historically been a legal backwater issue. For better or worse, patents are no longer in the legal or political backwater. A recent article published on IPWatchdog.com suggested a possible link between campaign contributions and conservative Republicans voting for the Innovation Act, which is the House version of patent reform. The revelations are terrible. Is it really possible that votes could be so easily influenced by a \$1,000-a-plate Washington breakfast? Do the merits of legislation mean nothing?

Lobbyists and Special Interest Groups

Given how seemingly easy it is to influence important decisions, it is no wonder that political outsiders like Donald Trump, Carly Fiorina and Bernie Sanders are doing so well as they attempt to convince voters that they should be the next president. The country seems fed up with both Republicans and Democrats. While it can be difficult to accomplish change given the way the Constitution divides power, people are correctly noticing that nothing ever seems to change. New faces appear in Washington every so often, but it remains business as usual. Even casual observers must recognize that our system seems to be for sale to the highest bidder. K Street lobbyists and special interest groups get the policies their clients pay for, regardless of whether they are in the nation's best interest.

The stark reality of how government operates leaves us with a patent system that will be perpetually on the brink. Giant corporations have become effectively insulated from any consequences associated with stealing patented innovations, yet they continually want more and more help from Congress—help that they dress up and roll out as “reform.” Even if they fail this time, these companies will return, with more lobbyists portraying innovators as inherently evil.

Politics is a game that seems better played by K Street lobbyists and special interest groups that prefer a weaker patent system. Congress has given them practically everything they have wanted with respect to the patent system, but they keep coming back for more. Lobbyists and special interest groups always say that what they are asking for “this time” will solve the problem—and that without the fix there will be dire consequences. Yet, the problems they complain about never go away, and the dire consequences seem to happen anyway.

It has become abundantly clear that some well-funded giant corporations want to dismantle the patent system brick by brick. Congress has so far been complicit, albeit likely unwittingly. This is not to excuse Congress, but when persuasive people have access and provide the means to get reelected (i.e., campaign cash), what do you expect? In a system where money is king and the next election is just around the corner, how can we expect elected officials to exercise independent judgment, at least relative to issues that will not drive voters to the ballot box?

Rather than recognize the critical role patents play in the innovation ecosystem and in the U.S. economy, the patent system will remain teetering on the brink unless and until Congress comes to its collective senses. Although it seems unlikely that Congress will pass devastating patent reform this year, we know that the K Street lobbyists and special interest groups will be back. Resistance will become futile if those who support a strong patent system aren't vigilant and don't significantly ramp up their own lobbying efforts. 🐾

The fat cats in the patent industry are giant tech companies that believe they will be better off with substantially weakened patent rights.

**COASE
THEOREM**

The theory that law should maximize certainty and minimize transaction costs to facilitate an efficient, arm's-length negotiation of rights.

According to Nobel Laureate Ronald Coase, poorly defined property rights and/or obstacles to bargaining lead to an inefficient marketplace.

Fixing the Patent System Requires a Return to Strong Patent Rights BY GENE QUINN

The patent system our government has created over the last decade incentivizes stealing patent rights rather than engaging in arm's-length negotiation. This directly opposes the fundamental principles embedded throughout American law, which is supposed to be certain, stable and understandable. According to the original purposes of these laws, by minimizing externalities and keeping transaction costs low, bargaining of rights will ensue, leading to an efficient outcome.

The theory that law should maximize certainty and minimize transaction costs to facilitate an efficient, arm's-length negotiation of rights is called the Coase theorem. The theorem is attributed to Nobel Laureate Ronald Coase, who would not approve of the mess the government

has made of the United States patent system over the last decade. Statutory modifications and case-law shifts have created sweeping changes to the underlying property right grant, as well as the overall desirability of obtaining patent protection. This has driven innovations underground as trade secrets and made it even more difficult (if not impossible) for individuals and startups to monetize innovation. In the future, this will lead to less risk taking because funding will increasingly dry up, which means less innovation—the exact opposite of what politicians espouse.

According to Coase, poorly defined property rights and/or obstacles to bargaining lead to an inefficient marketplace. Look no further than the current state of the U.S. patent system for proof. Given that

all branches of government—legislative, executive and judicial—have embarked on a decade-long, top-to-bottom restructuring of the patent system, it is no mystery that the patent system in America is inefficient and private. Arm's-length bargaining between innovators and innovation users no longer takes place. Patents are weaker, less capable of being enforced, and much more likely to be successfully challenged.

Ticket to File

The entire government has essentially thrown out the old patent system that was responsible for revolutionary innovations and replaced it with a system that rewards copyists who ignore innovators and infringe patents without concern or consequence. “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. "The honor system now is largely gone. ... So in the environment where the honor system is gone, what really is a patent? It's a ticket to file a lawsuit."

Ignoring patent rights is called efficient infringement. It is efficient because patent rights are weak, and it costs so much to enforce them that they are easy to invalidate. Why would a reasonable businessperson do anything other than force patent owners to sue? Those engaging in efficient infringement know that at least some, if not many, innovators will not pursue them for infringing because of the cost and political climate, which is inhospitable to innovators.

Unfortunately, with no real prospects at a fair, reasonable and arm's-length negotiation, innovators have little recourse other than to sue. So non-existent is the market for fair, arm's-length negotiations that without bringing a lawsuit, those who use or steal the innovations of others simply refuse to deal. Patent owners are forced to either engage in high-risk, costly patent litigation or watch as large entities make mountains of money going to market with innovations they pioneered. This can't be what our Founding Fathers envisioned; it certainly wasn't what President George Washington envisioned when he became America's first patent licensee.

What Went Wrong?

Why has the Supreme Court declared war on software, biotechnology-related innovations and medical diagnostics? Why has the Patent Office tolerated patent examiners who don't show up for work and refuse to issue patents? Why has Congress created burdensome administrative procedures that make it easier for challengers to kill patent rights without the benefit of a trial in federal court? Why does Congress continue to seek reforms that will weaken the patent system and make it increasingly impossible for those who innovate to find enough incentives to make innovation worthwhile?

Congress, the Obama Administration and the courts have been misled and no

longer see it is self-evident that patent protection incentivizes innovation and creates jobs. Changing patent law in ways that make it nearly impossible for inventors and startup companies to pursue innovation will have a substantial negative impact on job creation and the economy. As a result of misguided patent reform and bad judicial decisions, a primary foundation of the great American economic engine is unnecessarily crumbling.

Over the past decade, the patent system has been turned on its head, and patent rights have eroded each year. Once celebrated, inventors are now vilified. A crafty narrative has emerged.

There is a mistaken belief that our national innovation ecosystem is somehow fostered by a regime whereby patent and other intellectual property rights are ignored. Of course, to argue that patents get

"The honor system now is largely gone. ... So in the environment where the honor system is gone, what really is a patent? It's a ticket to file a lawsuit."

— FORMER FEDERAL CIRCUIT
CHIEF JUDGE PAUL MICHEL

in the way of innovation is absurd. There is no evidence that can withstand even first-level scrutiny that suggests patents inhibit innovation. Indeed, if patents got in the way of innovation you would expect countries without a functioning patent system, or weak patent rights, to flourish. The exact opposite takes place.

Where there are few or no patent rights, there is little or no innovation, and little or no functioning economy. Such a reality is hardly surprising given the cost of innovation. It makes absolutely no business sense to invest in innovating if another can simply take your research and development without consequence. "At the end of the day, if you do not own the exclusive rights to the problems you are solving you are going to get copied at an astronomical rate," explains Jay Walker, a prolific inventor and

the founder of Priceline.com. "If we can't own the solution to the problem, the last thing I want to do is invest in the solution."

Free Riders

Without patent rights, the free-rider problem is very real. Free riders will always succeed ahead of the pioneer because free riders can charge less; they didn't have to invest in order to innovate. With few exceptions, large corporations do not innovate; they take innovation from others. Sometimes they take innovation legally by acquiring startup companies, but increasingly, given the patent climate in the United States, large corporations simply ignore patent rights: They are bigger than the companies that innovate, and have access to streams of commerce.

What can a small innovative company or independent inventor do when a large corporation steals innovations from them? Nothing. Unless this problem is fixed soon, there will be less innovation to steal because individuals and small startups won't be able to get funding, which means they won't be able to innovate. Making it harder for individuals and startups will lead to less innovation because large companies, with only a few exceptions, simply do not innovate.

What Is Innovation?

The false narrative that patents harm innovation is grounded on an erroneous definition of innovation. In reality, innovation is doing something new. But through great effort, and as the result of winning the semantics battle, giant corporations have convinced lawmakers that innovation is not about doing something that has never been done before. Instead, these copyists argue that innovation is about whether they themselves are able to sell a product that they previously had not manufactured or sold. The fact that the product is new to them does not mean the product exhibits even a smidgeon of innovation. In fact, in many cases these allegedly new products are nearly identical to other products in the marketplace. Simply stated: It is not innovative to offer something that already exists. This self-evident truth has been lost on, or blatantly ignored by, legislators and judges.

(Continued on page 43)



Patent Trial and Appeal Board Denies Another Kyle Bass IPR Petition

BY GENE QUINN

The Patent Trial and Appeal Board of the United States Patent and Trademark Office has refused another *inter partes* review petition filed by hedge fund billionaire Kyle Bass. The Coalition for Affordable Drugs, the entity backed by Bass, sought to challenge U.S. Patent No. 8,399,514, which is owned by Biogen MA. The claimed invention in the '514 patent is a method of treating multiple sclerosis.

The prior art relied upon in the IPR petition included a description of a randomized placebo-controlled Phase II trial of a novel oral agent in patients with relapsing-remitting multiple sclerosis. The petitioner argued that the description of this Phase II trial, which made reference to the use of fumaric acid esters, rendered the method claims of the '514 patent obvious.

Four Reasons for Denial

The PTAB refused to rely on the description of the Phase II trial as prior art in the institution denial decision for four reasons:

1. The PTAB said that the full pilot study had not been made of record, which apparently also meant that the Kappos reference, the description of the pilot study Bass submitted to the USPTO that explains the Phase 2 FDA clinical trial, was somehow not prior art. This reasoning, provided in two short sentences, is extremely troubling. Clearly, the publication of a description of the pilot study would in and of itself be a publication that could be relied upon, even if the entirety of the report were not available. Not considering a published description to be prior art flies in the face of volumes of Federal Circuit Court decisions on the definition of "publication." The Kappos reference was a publication and



to pretend that something described in that publication is not prior art is unbefitting the dignity of the Board.

2. The PTAB took issue with the fact that the pilot study tested a therapeutically effective amount of fumaric acid esters. Without fully describing its reasoning, the Board explained that public use is not prior art available in an IPR. It is true that a petitioner may request to cancel as unpatentable one or more claims of a patent only on the basis of prior art consisting of patents or printed publications (See 35 U.S.C. 331(b).), but the pilot study was not merely a use; the description contained in the Kappos reference was a written publication. In fact, the Board quoted from Kappos in the denial decision. In part, Kappos reads: "An

open-label pilot study demonstrated that a product containing a mixture of fumaric acid esters significantly reduced the number and volume of gadolinium-enhancing (Gd+) lesions in patients with RRMS." I am hard pressed to understand how such a description constitutes nothing more than prior use that could not be used to support an IPR petition. The Board is simply wrong on this point.

3. In cursory fashion, the PTAB wrote that "a description of 'fumaric acid ester' may or may not be a description of DMF. There are fumaric acid esters other than DMF which have been described as potentially useful for treating multiple sclerosis." Putting aside the documented evidence provided by the petitioner that established it has long been known that multiple sclerosis can be treated with DMF, this reasoning seems to completely undercut the first two rationales offered by the Board.

In the preceding paragraphs of the institution denial decision, Kappos was summarily dismissed by the Board. Under the first rationale it was dismissed because the entirety of the study wasn't provided; in the second, it was dismissed because the written description constituted nothing more than prior use. Put aside for a moment that neither of those conclusions make any sense under any reading of U.S. patent law, which is problematic in its own right. What is really bizarre is that under the third rationale, Kappos is now characterized as constituting "a description." It seems the Board wanted to have its cake and eat it, too. Kappos cannot merely be about prior use if the Board itself is relying on the description, which it has to realize is in writing because

members are reading it. Clearly the description of the Phase II pilot study is and should have been considered prior art.

4. As startling as the dubious reasoning provided in the first three rationales for ignoring Kappos, the one that really wins the prize is the fourth rationale. The Board wrote: “Perhaps, most important, is that Kappos tells one skilled in the art that there was a pilot study and that a Phase II study will be undertaken to evaluate efficacy of BG00012 *inter alia* for treatment of MS. The nature of the pilot study is not apparent. Petitioner has not established the precise nature of the study and whether researchers were determining a therapeutically effective amount. The Pilot Study is not a description that DMF is useful for treating MS; rather, at best it is a “hope” that DMF will turn out to be useful for treating MS. A hope may or may not come true and does not establish that DMF is useful for treating MS.”

Reasoning Is Wrong

There is so much wrong with this reasoning, it is hard to know exactly where to begin. In the written portion of Kappos quoted by the Board, the reference explains: “This Phase II study was designed to evaluate the efficacy of three doses of BG00012 on brain lesion activity as measured by magnetic resonance imaging in patients with RRMS.” Clearly, the “precise nature of the study” was aimed to determine which of the three tested doses worked best, if at all. Therefore, the Board is factually wrong to say that there is no evidence proving whether researchers were determining a therapeutically effective amount. Furthermore, according to the Food and Drug Administration, the focus of a Phase II trial is specifically to determine efficacy. It seems horribly disingenuous for the Board to have reached the conclusion it did.

This fourth rationale is also troubling because of how poorly the Board understands the purpose of clinical trials, stating that clinical trials are about a hope that may or may not come true, as if that has any relevance whatsoever on whether the

Kappos reference is prior art. In this situation, the Kappos reference was being used as part of an obviousness challenge. If a Phase II trial is testing the efficacy of treatment, this must mean that someone—including FDA regulators—believed there was a reasonable expectation for success, which is the *sin quo non* of obviousness.

The Board tries to dance around the central issue regarding clinical testing by saying that “prior to completion and evaluation of Phase II, one skilled in the art would not necessarily understand from Kappos that DMF is useful for treating MS.” Such a statement cannot be legally true given the Supreme Court’s decision in *KSR v. Teleflex*.

If the Board is going to institute IPR trials only in the most egregious cases, fine, but this IPR institution denial decision has numerous logical and legal flaws.

Obvious to Try

Since 2007, an obvious-to-try rejection has been a valid obviousness rejection. It seems absurd that it wouldn’t have been at the very least obvious to try, if not obvious in fact, to use DMF for treating MS based on favorable Phase I testing and all of the underlying laboratory tests that obviously indicated some reason to believe it would have been desirable. If it hadn’t been desirable to pursue, why did the FDA let the clinical trials go forward? The quantum of proof to move forward with clinical trials is much higher than any required proof to establish obviousness, which should clearly have meant that Phase II testing was much more than sufficient to be used as prior art in an obviousness rejection. Clearly someone skilled

in FDA processes and clinical trials would have thought it obvious to try DMF for treating multiple sclerosis after having read the description in the Kappos reference.

Inexplicably, the Board comes to the end of its analysis of the Kappos reference by saying: “Petitioner has bottomed its case on a publication describing potential FDA Phase I and II testing. ...” Throughout the decision, the Board continues to be preoccupied by the fact that there was no final report submitted relating to the Phase II testing. Again and again, the fact that the full report is not present allows the Board to discredit the description in the Kappos reference as perhaps pertaining to something that never happened. But again, that wouldn’t be relevant.

Even if the Phase II testing had never occurred, that wouldn’t change the fact that the Kappos reference suggested the use of fumaric acid esters to be useful in treating patients with multiple sclerosis. Not only would it have been obvious to try, but there was also a published suggestion that trying would produce positive results. The Board really needs to brush up on *KSR* rationales.

Conclusion

Inter partes review has been used in unequal ways against patent owners and should not have been conceived. If the Board is going to institute IPR trials only in the most egregious cases, fine, but this IPR institution denial decision has numerous logical and legal flaws. Clearly, the description of the Phase II clinical trial was a publication that could have been used as prior art in an IPR proceeding. The petitioner submitted journals going back years, all teaching DMF as a means to treat multiple sclerosis. Thus, I have to wonder whether this decision has more to do with Kyle Bass than with the law.

Given that IPR institution decisions are not appealable, there will never be a check on the egregious mistakes made by the Board in this situation. I continue to believe that it is unconstitutional to have an agency decision insulated from judicial review, and this decision by the Board should be the poster child for why judicial review is absolutely essential. ☞



Patent Policy Is Too Important for Subterfuge and Academic Folly

BY GENE QUINN

Universities have become major sources of innovation for local and regional economic development. The latest survey of fiscal 2013 activity conducted by the Association of University Technology Managers found that 818 startup companies were formed to commercialize university research, and 5,198 licenses were granted to new businesses. Since 1980, more than 10,000 startup companies have been established to develop and market academic research, with 4,206 startups still operating at the end of fiscal 2013.

There is no doubt that the Bayh-Dole Act has been an enormous success. The legislation was passed with the purpose of moving university research into the private sector to benefit society. Prior to the Bayh-Dole Act, little, if any, university research was commercialized because of the Byzantine process of obtaining a license. This meant that a great number of revolutionary discoveries and innovations were wasting away, helping no one. Thanks to the Bayh-Dole Act that changed.

Patent critics say that Bayh-Dole has been a dismal failure. For example, according to the Congressional Research Office, the Bayh-Dole Act is believed to be a failure because it has been too successful. On this point, Wendy H. Schacht, author of the aforementioned Congressional Research Service report, writes: “The successes of the Bayh-Dole Act and the visibility of the results of its implementation have generated certain concerns, many of which are associated with the role of the university in research, as well as biomedical and biotechnology R&D, particularly as related to the availability and cost of pharmaceuticals.”

The Paradox of Bayh-Dole

Let that sink in for a minute. The Bayh-Dole Act has been so objectively successful that critics are concerned? The same critics who claim there is no evidence that



Former Sens. Birch Bayh and Bob Dole, authors of the Bayh-Dole Act, in Washington D.C., on July 22, 1985.

“It is only through commercialization, a function of the business sector, that a significant stimulus to economic growth occurs.”

— THE CONGRESSIONAL RESEARCH SERVICE

Bayh-Dole has succeeded at all are voicing concerns because the legislation has been so successful. You can’t have it both ways. Bayh-Dole cannot paradoxically be a failure because it has been so successful. By any fair and rational review of the facts, Bayh-Dole has been remarkably successful. The Congressional Research Service admits that “the Bayh-Dole Act has been seen as particularly successful in meeting its objectives.” Indeed, not only have there been thousands of new high-tech companies formed, which create good jobs, but also numerous groundbreaking innovations have been commercialized.

An example of Bayh-Dole’s success is in the medical field. Research conducted at U.S. universities since 1980 found there have been at least 153 new vaccines or drugs approved by the Food and Drug Administration. According to an article published in the *New England Journal of Medicine*, “More than half of these drugs have been used in the treatment or prevention

of cancer or infectious diseases.” The article goes on to note that “virtually all the important, innovative vaccines that have been introduced during the past 25 years have been created by [public-sector research institutions].”

Furthermore, the public and private partnerships formed between universities and the private sector have enormously contributed to the U.S. economy. According to one study, between 1996 and 2010, university and nonprofit institution patent licensing contributed \$836 billion in U.S. gross industry output, with an impact of \$388 billion on U.S. gross domestic product.

Correlation vs. Causation

Yet, some question whether this remarkable success, none of which happened prior to Bayh-Dole, can actually be attributed to the Act. The familiar yet annoying refrain goes like this: Correlation is not causation. Some of the most intellectually dishonest

critics take things several steps further, saying there is no way to know whether Bayh-Dole caused the tremendous explosion in innovation coming from U.S. universities. They then conclude the lack of proof means there is no evidence to support that Bayh-Dole or university patenting has had any positive impact.

After summarily ignoring volumes of evidence, these critics then conclude there is no evidence to support the proposition that Bayh-Dole has been anything other than a drag on innovation. They propose to back the regime that was in place prior to the enactment of Bayh-Dole. Of course, turning the clock back to 1979 cannot be considered a serious proposal. We know nothing happened from an innovation standpoint prior to the passage of the Bayh-Dole Act; before universities were patent owners, the marketplace was a barren wasteland.

The Congressional Research Service aptly sums up everything in one sentence. “It is only through commercialization, a function of the business sector, that a significant stimulus to economic growth occurs.” This is precisely why patents are an essential component behind the overwhelming success of Bayh-Dole.

If you cannot own the innovation, why would you invest in the innovation? You wouldn’t, which means the innovations society desires the most simply won’t happen. For better or worse, innovating in the 21st

We know nothing happened from an innovation standpoint prior to the passage of the Bayh-Dole Act; before universities were patent owners, the marketplace was a barren wasteland.

century costs a lot of money, and without the possibility to recoup investment and a reasonable rate of return, the business sector can’t and won’t become involved.

Commercialization Research

While universities are very good at making basic scientific discoveries and engaging in early stage feasibility research, they are simply not equipped to do commercialization research. It is a fantasy of epic proportions for Bayh-Dole critics to claim that because the federal government pays for the research, the people own the innovations. Anyone who makes that argument fundamentally misunderstands university research. At best, the federal government pays for the scientific breakthrough, which could take years or even decades to mature

into a commercialized product. That is exactly why public-private partnerships are so critical, and exactly what the Bayh-Dole Act was meant to foster.

According to the Congressional Research Service, “Actual experience and cited studies suggest that companies that do not control the results of their investments—either through ownership of patent title, exclusive license or pricing decisions—tend to be less likely to engage in related R&D.” This is hardly surprising if you take time to think about it. If a company cannot own title to the innovation, it simply cannot afford to engage in the commercialization research necessary. If the private sector invested in research and development without an interest in ownership, it would be worse off than the free riders that follow: A free rider wouldn’t have to recoup the cost of the R&D and could, and would, undersell the commercial innovator.

Despite all of the scientific and economic evidence that objectively demonstrates the success of the Bayh-Dole Act, the attacks, which come from academics, will continue. At a time when many university graduates have racked up crushing debt, academics are more interested in engaging in intellectual absurdity than teaching students. If teaching were the top priority, students would be better off and academics wouldn’t have enough time to dismantle a system that works. ☞

Fixing the Patent System (*cont. from page 39*)

Patents fulfill their role when they are strong and require those who seek to take a product or service to market to either reward the original innovator or to engineer around the patent. When patents are weak there is no incentive to engineer around them, and likewise no incentive to deal with the original innovator. Thus, a weak patent system guarantees lethargic, nearly static levels of innovation. If we want innovation to leap forward rather than crawl at a snail’s pace, a functioning patent system that provides strong patent rights is absolutely required.

America’s Innovative Success

Despite what the critics argue, there is no historical evidence to prove that weak

patent rights lead to greater innovation. Absent even a scintilla of evidence that weak patent rights foster innovation, those advocating for a weakening of the patent system and the patent grant should be forced to carry a heavy burden. Instead, many policy makers and judges, particularly Supreme Court Judges, seem to place the burden on innovators as if the patent system has had nothing to do with America’s innovative successes.

Samuel Clemens, better known as Mark Twain, was an inventor and patent owner. Twain believed strongly in the importance of a strong patent system. In his book *A Connecticut Yankee in King Arthur’s Court*, Hank Morgan, the Connecticut Yankee, said “...the very first official

thing I did in my administration—and it was on the very first day of it too—was to start a patent office; for I knew that a country without a patent office and good patent laws was just a crab and couldn’t travel any way but sideways and backwards.” There is historical precedent to back up what Twain writes.

In his first State of the Union speech, President George Washington implored Congress to enact patent laws, which it did as the third Act of Congress. Abraham Lincoln also recognized the importance of a strong patent system, saying that the U.S. patent system was one of the three greatest innovations of all time. If you disagree with Washington, Lincoln and Twain, shouldn’t your assertions be viewed suspiciously? ☞

INVENTOR GROUPS

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