

Inventors

JUNE 2018 Volume 34 Issue 06

DIGEST

10 MILLION PATENTS

Celebrating a U.S. Milestone

10 KEY DATES
in Patent History

10 QUESTIONS WITH
ATTORNEY/INVENTOR

KELLY BAGLA



\$5.95

PREST STANDARD
US POSTAGE PAID
PERMIT 38
FULTON, MO

SAY HELLO TO INNOVATION

At Eventys Partners, we build new products, create new brands and breathe new life into existing ones using an efficient, collaborative approach. We believe there are two ways to grow your business: introduce innovative new products or sell more of the products you already have. Whichever approach fits your needs, we can help you thrive with a proven strategy that delivers quantifiable results.

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Let's Celebrate! The Timing is Great

America and its institutions have often had fortuitous timing amid challenging lows. The Beatles' U.S. arrival on Feb. 7, 1964, 2 1/2 months after the assassination of President John F. Kennedy, was a welcome distraction for many in mourning. Cal Ripken's breaking of Lou Gehrig's "Iron Man" record on Sept. 6, 1995, is often credited with saving Major League Baseball after its collective greed led to the cancellation of the previous year's World Series. And America's first landing on the moon on July 20, 1969, had the country in starry-eyed wonder—a year after the assassinations of Dr. Martin Luther King Jr. and Robert F. Kennedy, as well as the terrifying violence captured on live TV at the Democratic National Convention.

The impending issuance of America's 10 millionth utility patent is also well timed. The country's patent system has been under siege, in the wake of court rulings that have been said to limit or erode patentee rights; trial processes often criticized as favoring deep-pocketed infringers who can wait out and ultimately conquer cash-strapped small inventors; and reports of time-card fraud among patent examiners.

Enter new United States Patent and Trademark Office Director Andrei Iancu, who recently unveiled a new patent design in connection with the milestone. He represents hope for even the most jaded cynics.

Iancu has already done more than parrot the time-worn clichés about the spirit of innovation and preserving the American Dream. He is not running from the notion that the U.S. patent system needs reform.

"Our patent system is at a crossroads," he said at the U.S. Chamber of Commerce's Patent Policy Conference in April. "For more than just a few years, our system has been pushed and pulled, poked and prodded. The cumulative result is a system in which the patent grant is less reliable today than it should be."

Perhaps more important, Iancu noted that "the rhetoric surrounding the patent system has focused relentlessly on certain faults in, or abuses of, the system—instead of the incredible benefits the system brings to our nation."

Those benefits are what we celebrate in this month's *Inventors Digest*. The ideal of the American Dream is still very much alive. In many ways, America is still seen as the standard-bearer for innovation—and rewarding it. The United States still ranked first in this year's U.S. Chamber of Commerce International IP Index, still is among the elite in offering patent protection despite recent falls in those worldwide rankings.

When I've discussed this pending occasion with others, I find myself pausing between the words "ten" and "millionth" to emphasize the sheer gravity of the accomplishment. Commerce Secretary Wilbur Ross recently did the same at the "Unleashing American Innovation Symposium" in Washington. "No other country has ever come close to that number," he said.

So let's take a break from our problems to celebrate what America has accomplished. And here's to good timing.

—Reid
(reid.creager@inventorsdigest.com)

INGENUITY IS AMERICA'S MOST VALUABLE RESOURCE.

DON'T TREAT IT LIKE A CHEAP COMMODITY.

Our strong patent system has kept America the leader in innovation for over 200 years. Efforts to weaken the system will undermine our inventors who rely on patents to protect their intellectual property and fund their research and development. Weaker patents means fewer ideas brought to market, fewer jobs and a weaker economy. We can't maintain our global competitive edge by detouring American innovation.

**SAVE THE
AMERICAN
INVENTOR**

TAKE ACTION AT SAVETHEINVENTOR.COM

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Kelly Bagla, owner of Bagla Law Firm, and her Eardorables; photo by Snap Savvy Strategies



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Focus on the Fun and Fascinating

BRIGHT IDEAS

Final Straw

COLLAPSIBLE, REUSABLE STRAW
kickstarter.com

FinalStraw touts itself as the world's first collapsible, reusable straw—and that using just one of the product regularly can save 584 straws from entering oceans and landfills every year.

The 2.8-oz. device is housed in a small container that fits on your keychain, self-assembles when you pull it out, and is BPA free and dishwasher safe. To clean it while on the go, just use the cleaning squeegee inside the case. Every FinalStraw comes with an information card to be left at restaurants, urging eateries to only give out straws upon request.

There was no firm shipping date as of our production deadline; the product's makers target November for finalizing assembly. The projected retail price is \$30.



“You have to fail. Failure is more important than your success. Fail happily.”—JLIN

NATEDE

IOT INDOOR AIR PURIFIER
clairy.com

NATEDE (nature, technology and design) is a sustainable air purifier, designed and crafted in Italy.

Plants placed in the air purifier metabolize a significantly higher amount of pollutants compared to plants potted in regular vases. The embedded technology allows the air flow system to quickly and quietly recycle air from a plant's soil. Its advanced sensors can read a room's temperature and humidity, eliminate 93 percent of volatile organic compounds and 99 percent of viruses and bacteria. Its photocatalytic filter does not need to be replaced.

NATEDE can connect to other smart home devices, such as Amazon's Alexa, and provides users with health tips. It also features a self-watering system. The future retail price will be 299€ (\$354 U.S.), with an estimated December delivery date for crowdfunding backers.



SleepSmart Pillow

SMART PILLOW
FOR SIDE SLEEPERS

sleepsmartpillows.com

Although more than 60 percent of people sleep on their side, the traditional pillow many not specifically meet their needs. Lying on one's side creates a larger support void than lying on the back; back sleepers' bodies are flat against the mattress surface, causing a much smaller support void. Support voids also vary due to a person's body size and shape, and mattress firmness.

Made for side sleepers, the SleepSmart pillow includes premium, soft materials that are hypoallergenic and 100 percent cotton. The stretchable and breathable AirMesh band around the comfort layer promotes airflow as you sleep. The cloud support system lets you fine-tune your support height with a squeeze; a silent alarm provides wake time; a mobile app provides monitoring and recording for analysis of sleep habits.

The retail price is \$249. Shipping was to begin in December 2017.



Revant Eyewear

LIFETIME-DURABILITY
SUNGLASSES

revantoptics.com

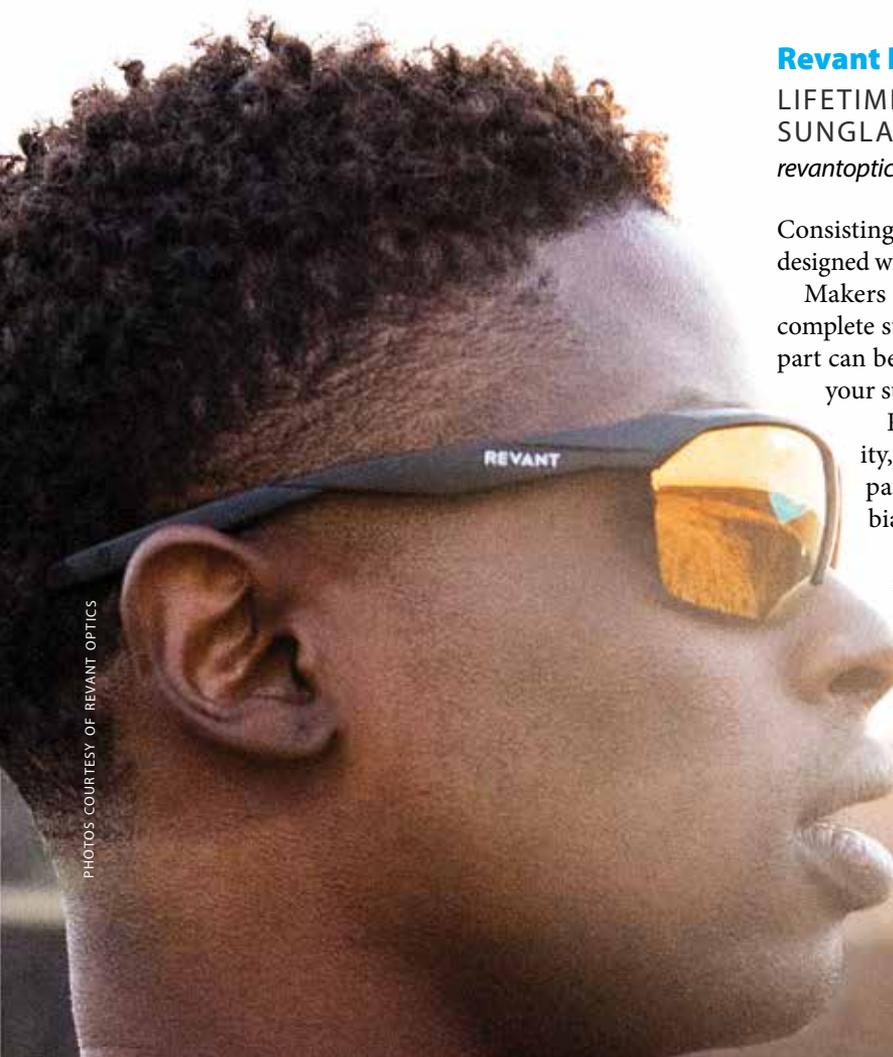


Consisting of three styles of performance sunglasses, Revant is designed with the active wearer in mind. It has a lifetime guarantee.

Makers of the stylish product have an eco-friendly goal: "a complete sunglass system ... with incredible optics, where every part can be revitalized and optimized, extending the lifecycle of your sunglasses from a few good years to forever."

Revant's features include Elite polarized lenses for clarity, and proprietary MaxGrip® temple sleeves and nose pads that are comfortable and made from antimicrobial material.

The sunglasses will retail for \$155-\$175. Shipping is set for this month.



PHOTOS COURTESY OF REVANT OPTICS

First in Disc Flight

FRED MORRISON'S
INVENTIVENESS, SALESMANSHIP
LAUNCHED THE FRISBEE

N EARLIER INCARNATIONS, it was called the Flyin' Cake Pan, the Whirlo-Way, the Flyin-Saucer and the Pluto Platter. We now know it as the Frisbee—the ubiquitous flying disc at picnics, beaches and college campuses that glided past \$100 million in sales a quarter-century ago and spawned Frisbee Golf and Ultimate Frisbee competitions.

The Frisbee's inventor was Walter Frederick Morrison, who was always more of a Fred and was referred to as such. He was 17 when he and his girlfriend Lu Nay began flinging the lid of a popcorn tin back and forth during a 1937 Thanksgiving Day picnic.

Their impromptu creation was so much fun that it triggered Morrison's inventor gene (his father developed an improved car headlight). Fred and his girlfriend began experimenting with other flat apparatus and determined that a tin cake pan flew better. They were flipping it to one another on a Santa Monica, California, beach one day when someone approached them and offered them 25 cents for it.

"That got the wheels turning, because you could buy a cake pan for 5 cents, and if people on the beach were willing to pay a quarter for it, well, there was a business," Morrison told the *Virginian-Pilot* in 2007.

Hawking and improving

Morrison and his girlfriend married in 1939. Their novelty business couldn't be counted on to pay all of the bills; he planned a career as a building inspector in the Los Angeles area before World War II interrupted. While serving with the United States Army

Air Forces and flying P-47 Thunderbolts over Italy, he schooled himself on aeronautics.

Morrison was shot down and held captive for 48 days at Germany's infamous Stalag 13, according to the *London Telegraph*. He survived that ordeal and resumed work on his flying disc invention, leading to the aeronautically improved Whirlo-Way in 1946. With the financial help of Warren Franscioni, another former pilot, the discs were molded into plastic and ultimately sold as the "Flyin-Saucer"—a way to cash in on the fascination with UFOs during that time.

"We worked fairs, demonstrating it," Morrison told the *Virginian-Pilot*. "That's where we learned we could sell these things, because people ate them up."

Further improvements ensued. In 1955, Morrison unveiled the Pluto Platter, incorporating his final



Fred Morrison, shown with a model in a 1967 publicity photo, initially hated the name "Frisbee."

PHOTOS COURTESY OF FLATFLIP.COM

“You could buy a cake pan for 5 cents, and if people on the beach were willing to pay a quarter for it, well, there was a business.” —FRED MORRISON

and ultimate design: flat and round, with a raised central hub that included the names of the planets in raised plastic around the rim. The throwing instructions, molded into the underside, were written by Lu Morrison.

The Pluto Platter’s success brought out the showman in Fred. According to an anecdote reported by the *New York Times* following Morrison’s death in 2010 at age 90, he would tell prospective buyers during demonstrations that the disc was gliding along an invisible wire. To prove it, he offered to sell fairgoers 100 feet of the wire for a dollar—with the Pluto Platter thrown in at no extra charge.

Sale to Wham-O

Morrison had an interested buyer in the Wham-O Corp., a toy and sporting-goods manufacturer based in Emeryville, California. The company bought the rights to the Pluto Platter in 1957 and changed the name to Frisbee a year later, a reference to the fact that Yale students had earlier hurled tins from the Frisbie Pie Company in Connecticut.

Morrison grumbled all the way to the bank. “I thought the name was a horror,” he recalled in an interview with *The Press Enterprise* of Riverside, California, in 2007. He changed his tune later in life upon collecting royalties that reached into the millions of dollars.

He also had the satisfaction of being the disc’s sole primary inventor. Morrison was awarded United States patent No. 183,626 for his “Flying Toy” in 1958. (Ed Headrick, Wham-O’s head of research and development, later added grooves to the top of the Frisbee’s surface, patenting more aerodynamic improvements to the disc that became what it is today.)

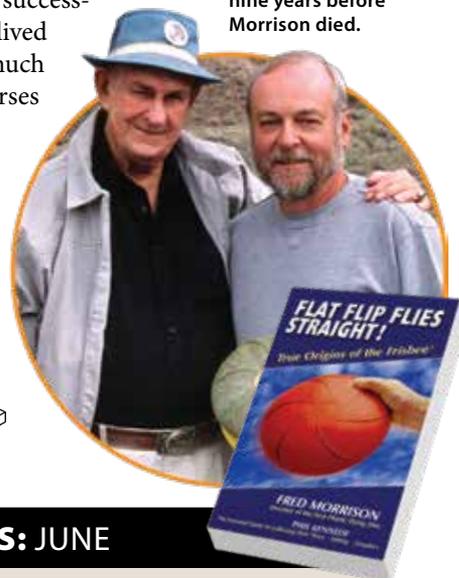
The Frisbee’s fascinating aerodynamics have captured the attention of more than people at backyard, park and beach gatherings. The United States Navy reportedly spent nearly \$400,000 in 1968 to study the behavior of Frisbees in wind tunnels as part of a program to test a prototype flare launcher.

Morrison also invented the Crazy Eight Bowling Ball and the Popsicle Machine—a plastic form that could be filled with juice and frozen—for Wham-O. Neither were nearly as successful as the Frisbee, but Morrison lived well off his royalties and spent much of his later years breeding racehorses and flying airplanes.

Nine years before he died, he co-wrote a book, “Flat Flip Flies Straight! True Origins of the Frisbee,” with Frisbee enthusiast and historian Phil Kennedy. Upon learning of Morrison’s death in 2010, Kennedy released a brief statement that wished his friend “smoooooth flights.”

—Reid Creager

Morrison (left) and Phil Kennedy co-wrote a book on the Frisbee’s origins nine years before Morrison died.



INVENTOR ARCHIVES: JUNE



June 26, 1902: William Lear, best known for inventing the Learjet, was born. He died in 1978 with about 150 patents in his name.

A self-taught engineer who said he worked out his life plan by age 12, his Lear Jet Corp. was the first mass-manufacturer of business jet aircraft in the world. Lear also developed the car radio and the miniature automatic pilot for aircraft.

Lear’s development of the 8-track tape for cars in 1964—an entertainment staple of the 1970s despite drawbacks that included compromised sound quality and frequent entanglement inside the tape decks—is one of his lesser-known creations. With its continuous loop system, the 8-track was identical in many respects to its forerunner, the 4-track tape. The main difference between the two is that in the Stereo-Pak 4-track (1962-1970), the pinch roller is part of the player. In the 8-track (produced as late as 1988), the pinch roller is part of the tape cartridge.

Lear drew great satisfaction from his success in creating a market for private jets, saying: “They said I’d never build it, that if I built it, it wouldn’t fly; that if it flew, I couldn’t sell it. Well I did, and it did, and I could.”

Make Optimum Use of Your Social Media Tools

SERVICES AND APPS CAN SCHEDULE, ENHANCE, ANALYZE POSTS, AND HELP DRIVE SALES **BY ELIZABETH BREEDLOVE**

SETTING UP your social network profiles is one thing; creating high-quality content that resonates with your audience can be quite another. If you've found yourself stuck in a rut with your social media content, certain tools can help improve your social media marketing efforts.

Tools for Enhancing Posts

Canva: This is an easy-to-use graphics tool with preset options for just about every need. These include social media posts for various networks, social media profile headers, Facebook Ads and more.

Whether you use the pre-set templates to design an attractive graphic or build your own from scratch, this web-based tool is great for creating images to include in your social media posts. As a general rule, posts with images perform better across all social networks. Free and paid versions of Canva are available at canva.com.

VSCO: A photo-editing app, VSCO can take your Instagram posts to the next level. Instagram provides the ability to market consumer products and inventions via a layout and overall functionality that make it easy to share your products front and center, building awareness and driving sales.

VSCO helps you develop an aesthetic that jibes with your brand by allowing you to apply pre-set filters over your photos, edit videos and much more. By using the same one or two filters for every photo you post on Instagram, you can develop a look that your followers will instantly recognize and create a beautiful, on-brand Instagram profile. VSCO offers both free and paid versions.

Tools for Scheduling Posts

Native Tools: If you just want to schedule posts on Twitter and Facebook, using the platforms' native tools is a great, easy option.

On Facebook, simply write your post as you normally would. But instead of clicking "Publish," click on the drop-down menu to the right and choose "Schedule."

On Twitter, visit tweetdeck.com to schedule your tweets. As an added bonus, Tweetdeck makes it easy to set up custom dashboards to monitor tweets, notifications, hashtags and more.

Hootsuite and Buffer: These are two similar, commonly used tools for scheduling social posts on some of the most popular platforms.

Hootsuite allows you to schedule posts, monitor topics, curate content, analyze your efforts and much more. It integrates with more than 35 social networks, including Facebook, Twitter, YouTube, LinkedIn and Instagram, and offers a variety of paid and free plans according to your needs.

Buffer also gives you the capabilities to manage your social media using scheduling and analytics. Its other features include an image creator and a browser extension. Buffer works with Twitter, Facebook, LinkedIn, Google+, Pinterest and Instagram.

Note: Although many platforms claim to offer Instagram scheduling capabilities, this is not entirely accurate. Instagram's API does not allow for scheduling posts for personal profiles; most of these platforms simply send a push notification to an app on your phone at the scheduled time, prompting you to publish the post on Instagram. Scheduling is available for business profiles through some platforms, including Hootsuite.

Tools for Driving Sales

Facebook Ads: If you want a cost-effective way to drive traffic to your website or ecommerce store, or to raise awareness about your invention, Facebook Ads is probably your best bet. This platform offers a variety of ad types and placements, giving you flexibility in how you display your content.

Facebook Ads allows you to target your audience, test messaging and much more, all for a low cost. To get the most out of your Facebook Ads, we recommend working with someone highly experienced in pay-per-click (PPC), specifically Facebook Ads, rather than trying to manage them yourself and



Many of the platforms to assist in marketing your invention are easy to use, and free.

potentially waste money. However, the platform is simple to learn, so you can certainly do them yourself if you don't have the budget for a specialist.

Link My Photos: One challenge with Instagram is that you can't include links in photo captions, only in your profile. If you are promoting and selling many different inventions or products, you can link to your homepage in your profile, but this will make it difficult for your followers to find exactly what they are looking for. This is where Link My Photos can help.

Link My Photos connects to your Instagram account and allows you to add links to each photo you post. Just post a link within your Instagram profile to your Link My Photos page. Users can click that link, click on the photo they are interested in, then find a link to that invention, product or webpage.

Tools for Analyzing Posts

Native Platform Analytics: Nearly all social media platforms have built-in analytics functionality. If you are looking for basic information about which posts perform best, when your followers are online, how people are interacting with your posts and whether your basic metrics are increasing, these are great tools.

- To view your analytics in Facebook's Business Manager, click "Insights" at the top of your profile page. You'll find a range of insights and analytics along the left side that you can explore further.
- To view your Twitter account's analytics, visit analytics.twitter.com.

- To view your Instagram analytics, visit your profile in the app and click the graph in the upper right hand corner. Note that this is only available for business profiles.
- To view your LinkedIn analytics, visit your business page and click the analytics dropdown in the top left of the page to choose whether you want to see metrics for visitors, updates or followers.

Paid Analytics Platforms

If you want a more in-depth look at your social media profiles or your competitors', many paid analytics platforms offer just that. With so many options at a wide range of prices, there is truly something for everyone. Most platforms offer a demo or a free trial, giving you a chance to ensure it's the right choice for your invention or business.

If you are interested in learning more about the many paid options for social media analytics and reporting, start by considering which features interest you the most, then use your favorite search engine to find platforms that offer those metrics. 🔍

Elizabeth Breedlove is content marketing manager at Enventys Partners, a product development, crowdfunding and inbound marketing agency. She has helped start-ups and small businesses launch new products and inventions via social media, blogging, email marketing and more.



Negotiating with Vendors

HOW TO UNDERSTAND PURCHASING THROUGH THE EYES OF THE BUYER AND SELLER **BY JACK LANDER**

AT SOME POINT in the development of our inventions, we have to purchase parts or services. The most crucial purchases occur when we are producing a finished product for sale; every two dimes spent needlessly means we have to add a dollar to our selling price if we are going to cover all of our costs and make a reasonable profit.

Even if our intention is to license our patent, we may produce a limited quantity to demonstrate that our invention serves a ready market. It's a lot easier to find a licensee if you can prove your invention is selling.

Several years ago, I started a prototyping and short-production-run business. At its peak, I had 12 employees. I managed it for six years, but the inventor in me itched for greater adventure. When I had an offer I couldn't refuse, I sold Short-run Precision Fabrication and went back to designing tooling and processes for an aerospace manufacturer.

Earlier in my career, I was manager of material for another aerospace producer. The purchasing function was one of my responsibilities. So I'm going to share what I learned about purchasing from the viewpoints of both buyer and seller of production parts and services.

Learn the processes

The buying process begins with negotiating the price. Note that I said negotiating, not haggling.

If you're dealing with an ethical vendor, there shouldn't be any back and forth on the price. But some vendors justify fudging their pricing just a bit. Professional buyers are protected by knowing the most suitable vendors for their needs and being able,

you might say, to play one against the other. These buyers usually solicit three price quotes from three different vendors.

But we little guys don't have validated sources with which we are reasonably comfortable. We are also inexpert in the technologies available for producing the hardware we need. So how do we overcome our lack of knowledge and experience?

First, you must learn about processes and tooling. Many colleges now teach up-to-date manufacturing technology. Visit the bookstore of one near you and ask to see the textbook used for the manufacturing curricula. You may be able to buy a used copy of a very helpful book. Such books aren't cheap, but they're much less expensive than even one mistake of using the wrong process or vendor.

Amazon.com sells two books that I can recommend without having read either. I was able to read the table of contents and a few pages from a representative chapter or two. They appear to be excellent sources for inventors—and at the low prices for a used copy, you can't go wrong by buying both: "Making It: Manufacturing Techniques for Product Design" by Chris Lefteri, \$13 used, \$23 new; and "Manufacturing and Design" by Erik Tempelman and Hugh Shercliff, \$17 used, \$62 new.

You will be guided to the approximately correct process by studying the two books I recommended. However, there are subtle variations of processes, so don't take for granted that you know everything you need at this point.

I urge you to visit potential vendors, discuss your objectives, and always ask, "Is this the right process for the quantity I intend to buy?" Also ask, "Is there a manufacturing process that fits my quantity range better than your process?" You will probably want to

Buying the right book on manufacturing techniques can be much less expensive than even one mistake of using the wrong process or vendor.

"Making It: Manufacturing Techniques for Product Design" by Chris Lefteri, left and "Manufacturing and Design" by Erik Tempelman and Hugh Shercliff, right.





© IR STONE/SHUTTERSTOCK

get by with the smallest quantity with the least total cost per part. And you will often find yourself soliciting a price quote from a vendor whose process is economical for larger quantities than you wish to buy.

Finding vendors for your chosen process requires a patient search. The Thomas Register of American Manufacturers, now known as thomasnet.com, is a good source, but many of its listers don't tell you the city or state where they are located. You can look them up on the internet. Another source is jobshop.com—and, of course, the Yellow Pages if your directory is still available. Also, your library or chamber of commerce may have a list of industries in your area.

In any case, be sure to find out two things for each potential vendor: What manufacturing processes do you specialize in, and what is your preferred manufacturing quantity range? These two questions will disqualify those who want long production runs, and who often discourage short-run people such as inventors who are starting out.

Presenting a good RFQ

Next, armed with your list of potential vendors, begin your solicitation of price quotes. The industry standard form is titled "Request for Quotation," commonly referred to as the RFQ. These items must be on a good RFQ, other than your contact information:

1. Quantities (Optional quantities you may order. Example: 50, 100, 300.)
2. Non-recurring software charge
3. Non-recurring tooling charge
4. Setup charge

The range of quantities for Item 1 is traditional because most vendors have a setup charge—a charge that covers preparing all machines to produce your part, etc.

Item 2 consists of either amending a digital file that you provide, or the vendor creating a file for CNC machines. (CNC means computer numerical control.)

Item 3 consists of tooling that is not a normal part of the vendor's production tooling such as a stamping die-set, plastic injection mold, etc.

Items 2 and 4 are sometimes covered together as NRE, nonrecurring engineering, or some similar phrase. This is a vendor who is being less than open about his or her pricing. You have the right to know the components of any such NRE, etc. Ask to be quoted with the prices spelled out.

Item 4 is normally not spelled out but is "spread" into the price per piece at each quantity level being quoted. If the vendor is willing to quote you a flat price per piece plus the setup charge, you can then buy any quantity that suits you. Let's say that for some reason you are going to make 68 pieces. So why not buy 68 pieces, or maybe 75 in case you have

some fallout in production? This enables you to keep your costs down and not tie up money in parts that you may not use for a year.

When I had my business, I voluntarily quoted setup as a separate item and quoted a flat price per piece at any quantity. Many of my clients were delighted with the arrangement and ordered odd quantities, such as 33 pieces. Well, one fellow likened my setup charge to a “dealer preparation charge,” accusing me of trying to sneak in something that wasn’t justified. He was happier when I spread the same charge into the per-piece price, disguising it so he wouldn’t think of my business as if it were a car dealership.

Most vendors probably won’t want to work with you this way, but it won’t hurt to ask. Also, it tells the vendor that he or she is not working with a naive buyer.

Items 2 and 3 are standard and critical to wise purchasing. I have known vendors to charge non-recurring software in their unit price on second, third and all orders into the future if not called out on doing so.

Know lingo, and vendor types

Special tooling obviously must be quoted as separate from production parts. A mold, for example, may cost \$50,000. But

some tooling, such as shaped cutters, cams, etc., may be less than \$100, and you want to know this for future purchases—especially if you change vendors.

One of the best tactics for obtaining fair prices is to look professional on paper and speak professionally. Know the language of the trade, which you can learn from the books I recommended. Above all, present a professional RFQ.

One last tip: Vendors generally have one of two philosophies—short runs, possibly including prototypes, and long runs. The long-run fellows tend to be in business to make money, and we often annoy them with our relatively small quantity needs.

The short-run fellows are more like inventors; they like the variety and challenge of lots of small orders. Making money is secondary to having fun in the business they’re in. I know. I was one of them. ☺

Jack Lander, a near legend in the inventing community, has been writing for *Inventors Digest* for 20 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.



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- business transactions
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- and more



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V10 HAS DYSON CUTTING THE CORD

TECH ADVANCEMENTS HAVE CHANGED HOW PEOPLE VACUUM

James Dyson was looking for the next way to disrupt the vacuum industry when a Cyclone hit.

The British inventor, industrial designer and Dyson company founder—who created the bagless vacuum—recently made the historic pronouncement that the company will no longer develop corded vacuums. The impetus was the superior technology and ease of use of the Dyson Cyclone V10, unveiled in March.

The best innovators always want to improve upon previous iterations, but the V10 represents more than a roster of technological advancements over the Dyson V8. Perhaps more important in the latest generation of the company's cord-free technology is "how it changes the way you go about cleaning your home," said Dyson senior design engineer Josh Mutlow.

Mutlow, who spent two years working on the V10, modestly says he "had a bit to do" with the machine's design and development. Among those major enhancements:

- A much lighter, smaller motor—"40 percent less than the previous generations of motor," Mutlow says—albeit with high suction power. The torque drive cleaner head removes 25 percent more dust from carpets when in MAX Suction mode. The DC motor housed within the brush bar shifts torque more efficiently, digging bristles deeper into carpeting to free more dirt. Three different switches on top of the vacuum allow you to choose from different suction modes, based on the kind of mess you need to clean up.
- Mutlow, whose work on the V10 focused on the design of the battery pack, says the efficient seven-cell, nickel-cobalt-aluminum battery has been redeveloped so that it can run for up to 60 minutes from a single charge. The amount of time to charge it has been reduced to 3 ½ hours.
- A 40 percent larger bin than the Dyson V8 Absolute cord-free stick allows you to pick up more material and empty the bin less often.
- The latter process has gotten easier via a feature Dyson calls point-and-shoot bin emptying. It hygienically ejects all dust and debris deep into the bin in one action, so you don't have to touch the dirt. "You just poke the end of the dirt canister into the trash can,



push the red lever and slide the bin away from you. It's like a trombone, or something like that," Mutlow said.

The V10's fully sealed filtration system traps 99.97 percent of particles as small as 0.3 microns, thereby expelling cleaner air. The vacuum quickly changes from a stick to handheld and back again, with just one click.

A Dyson communications specialist amplified how these myriad technological advancements have changed how people clean—because people have told Dyson as much.

"Before cord-free, when you would think about vacuuming, you would take it out of the closet, wind up the cord, then go to the next room, take the cord with you, plug it in again, etc. ... Our owner surveys show that people end up vacuuming more often with cord-free but using less time because it's so easy to take it off the charging jack, use it really quickly, and then you don't have to take it out monthly for that long, deep clean.

"Also, because the V10 has that bigger bin, it's powerful enough to clean the deep messes that your upright would."

The V10 comes in three versions, ranging in price from \$499 to \$699. 📍

[dyson.com/sticks/dyson-cyclone-v10-overview.html](https://www.dyson.com/sticks/dyson-cyclone-v10-overview.html)

Hats off to Twice the Fun

FAMILY'S ENTREPRENEURIAL PASSION LEADS TO BROTHERS' RALLY FLIP CAP **BY EDITH G. TOLCHIN**

MEET IAN AND JORDAN KAY at INPEX 2017 and found them to be pleasant, ambitious young fellows who were eager to speak about their invention, the Rally Flip Cap®. I signed up for their mailing list and was happy to hear that they were recently featured on “Entrepreneur® Elevator Pitch.” Here is their story about a double-billed hat with a hidden flip-up feature.

Edith G. Tolchin (EGT): Ian, please tell us about your backgrounds and how the Rally Flip Cap came about.

Ian Kay (IK): From age 10 we sold candy necklaces, set up lemonade and snow cone stands in our neighborhood, and sold lollipops at local parks. We grew up with an entrepreneurial father who mentored us in business and in life.

I went to Loyola Marymount University and studied fine arts individual studies. My background is in graphic design, branding and online computer arts. Our dad has been sourcing, importing and developing products for over 40 years. Over the years, our dad has helped many people develop and manufacture their products. With our creativity and innovation, along with our father's experience, we decided it was time to create something of our own.

Jordan went to UC Berkeley, where he studied international business with an emphasis on work in the global economy. He also played football and was a placekicker for the California Golden Bears. He graduated in 2009 and went right into the family business (Cisco Sales Corp.) to ensure its survival because my father had to downsize the business by 75 percent. I decided to take a year off from college to work a whole year for free as warehouse manager and helped out where I could.

Through these sacrifices, we knew we were investing in our future and needed to keep the lights on. To this day, neither of us has taken a commission. We both had the burning desire to innovate, and in 2013 the Rally Flip Cap idea came to Jordan.

EGT: What are the cap's features and materials?

IK: Our flip caps look and appear like your average ball cap. We engineered and made sure that when the Rally Flip Cap is not flipped open that you cannot even tell there are two bills.

Ian and Jordan Kay (left to right) appeared on a show on which they had to make a 60-second “elevator pitch.”



“We are stoked to work with other like-minded individuals whose visions align with ours, while continuing to learn and grow our network and relationships.” —IAN KAY



We currently have two SKUs (classic and dry-erase) available on the market but also have a variety of added features that are currently patent pending, which we will be adding to our utility patent. The materials are PP (polypropylene) plastic, microfiber fabric, metal rivets and cotton twill.

EGT: Who created your initial prototype, and what was the route to success?

IK: Our dad’s company, Cisco Sales Corp. (ciscousa.com), created our initial prototype overseas. After opening up the tooling and eight different molds plus research and development, the whole process took a little over three years.

We took a lean start-up approach with the method of building, measuring and learning. We developed our MVP (minimum viable product), did countless testing, received feedback from exhibiting and walking trade shows, and from our customers.

EGT: How many different styles are you featuring, at what pricing?

IK: We currently offer two versions of Rally Flip Caps. Our Classic has a microfiber fabric on the top and bottom bills when flipped open. Our Dry Erase has a microfiber fabric bottom bill with a dry erase surface on the top bill when flipped open. On our website, we have over 20 designs ranging from \$19.99 to \$29.99.

EGT: Have you tried crowdfunding?

IK: Yes, but only recently. From appearing on Season 1 of the new streaming series from Entrepreneur Media, “Entrepreneur Elevator Pitch,” we did a crowdfunding campaign through Indiegogo. Crowdfunding is a cost-effective way to launch a product or idea and receive valuable feedback. It is crucial to receive honest opinions from the public and to create a dialogue of communication back and forth with your target market.

EGT: What about licensing?

IK: We currently have one NCAA license (UC Berkeley, a.k.a. “CAL”), but we are looking to team with the right headwear company that can expand our licensing and distribution.

Because of our IP and manufacturing background, we’ll have the flexibility to work in a variety of ways—from licensing in, licensing out, contract manufacturing and/or taking on custom private label orders for other businesses.

EGT: Tell us about your experience at the 2017 INPEX in Pittsburgh.

IK: It’s always a pleasure to be around creative individuals that have the desire to create and build something bigger than they are. There were many resources (researchers, illustrators, writers and customer service representatives) to help educate inventors who are working on ideas, innovations and new products. We really enjoyed meeting Allan Mamam and Cooper Weiss (Fidget 360 founders), the entrepreneurs who made fidget spinners trend and go viral.

EGT: Tell us about “Entrepreneur Elevator Pitch.” What happened afterwards?

IK: We are unfortunately unable to talk in detail as we are still covered under NDA, but it was an amazing experience!

Watch what happens when a 60-second pitch can make or break a business. The show is digitally streamed over the following channels: YouTube, Apple TV, Android TV, Amazon, Roku, Entrepreneur.com, MSN, Indiegogo and Sprint. The potential audience is over 100 million.

After the segment, my brother and I focused in on creating content and strategically planning our Indiegogo crowdfunding campaign. Simultaneously, we also had to put together our company background,

The Dry Erase Rally Flip Cap includes a dry erase marker with an eraser. If you’ve got a message to share, use the marker and flip up the bill for everyone to see. Return to the original hat by snapping both bills shut.



Students from the UC Rally Committee cheer the home team.

individual background of skill sets (Due Diligence Package) and financial information for our investors.

We've been emailing and have already held a few conference calls with our investors. We are currently getting our plan of action in order.

EGT: Where do you go from here?

IK: We are stoked to work with other like-minded individuals whose visions align with ours, while continuing to learn and grow our network and relationships. We plan on growing in the next couple of years by working with headwear companies to license out and integrate our product into proper distribution pipelines. (We also plan) influencer marketing paired with our IP, expanding our direct-to-consumer model, making private label flip caps, and working with those who have retail and distribution expertise.

We will continue to study our competitors and create content while scaling our marketing campaigns. Since we have a utility patent, we are flexible with how we decide to methodically build our market. Our utility patent expires in 2033, which gives us 15 years to strategically build the market.

EGT: What has been your biggest obstacle in product development?

IK: There have been three: the bill molds; establishing a consistent QC protocol for production and sampling fabrication; and having gone through three different factories.

EGT: Any advice for an aspiring inventor and/or entrepreneur?

IK: Take care of the little things, and the big things take care of themselves. Only you can tell your story. If your idea, business or service matters to you enough, you'll find a way to persevere, learn from your mistakes (because you'll make many and consider it learning capital) and be resourceful.

We love to empower others, and it never gets old seeing people's reactions when we flip our hats. 🧢

Details: RallyFlipCap.com

Books by **Edie Tolchin** (egt@edietolchin.com) include "Fanny on Fire" (fannyonfire.com) and "Secrets of Successful Inventing." She has written for *Inventors Digest* since 2000. Edie has owned EGT Global Trading since 1997, assisting inventors with product safety issues and China manufacturing.



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

1 GET IT MADE

Contact Edie Tolchin – "The Sourcing Lady" (SM) for sourcing, China manufacturing, product safety issues, packaging assistance, quality control, production testing, final shipment inspections, freight arrangements, import services and delivery to your door!

2 GET A WEBSITE!

Contact Ken Robinson – While your order is being manufactured, you need to start working on your WEB PRESENCE! Get people talking about your product on Social Media (Facebook, Twitter, YouTube, Google+), get good search engine placement (SEO)!

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U.S. LOOKS BACK, FORWARD WITH IMPENDING HISTORIC PATENT

BY REID CREAGER

THE UNITED STATES of America was 14 years old. As with any adolescent, there were growing pains, much to learn, and monumental decisions ahead.

1790 America was an economic mess. Causes included a long and expensive Revolutionary War; irresponsible state governments that sapped the wealth of private creditors and had sparked calls to reform the Articles of Confederation; and trade arrangements with other countries that showed the United States to be heavy on imports and light on exports.

That last factor was of particular concern to George Washington, sworn in as the country's first president a year earlier. The United States had gained independence, but often it didn't seem like it. Washington worried about an America that was too reliant on European imports.

The president felt strongly that promoting the fledgling country's sense of innovation was paramount in strengthening its own economy. Although individual states had established certain patent systems, Washington pushed Congress hard to pass legislation—the Patent Act of 1790—that would

standardize the patent process while recognizing and promoting individuals' patent rights.

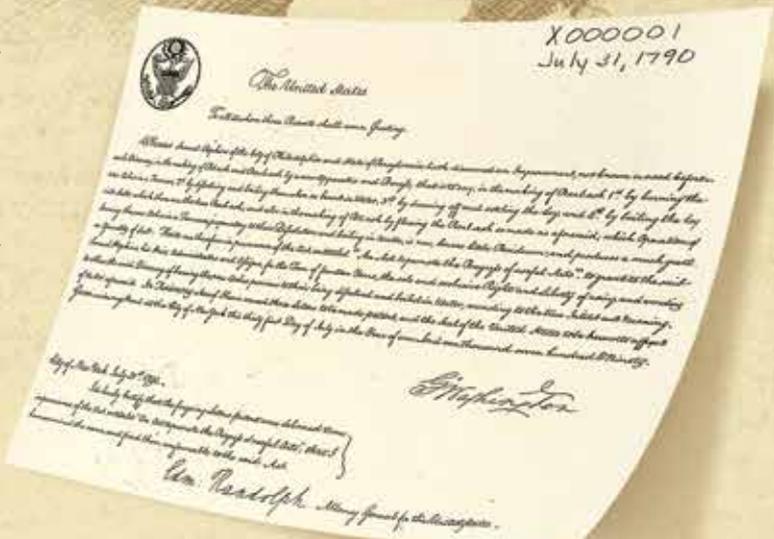
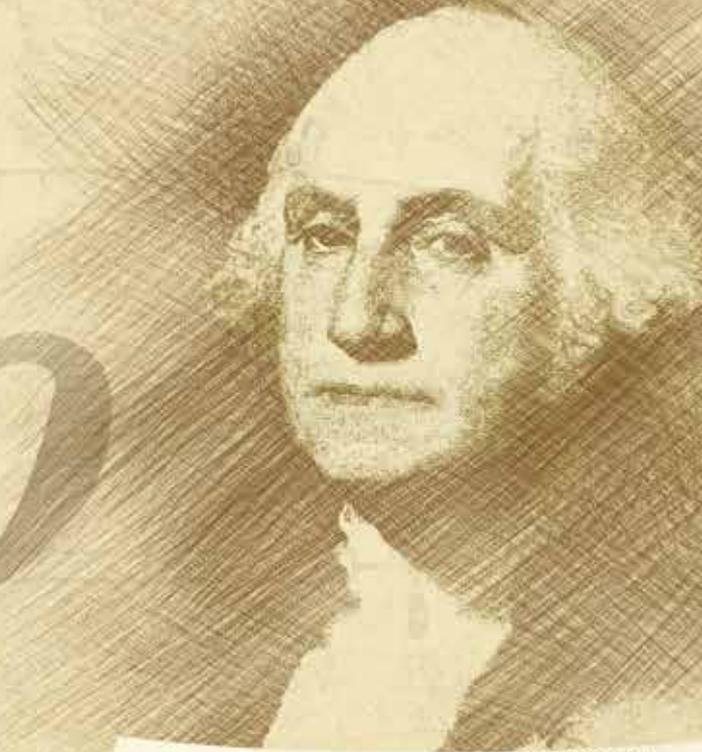
He signed the bill on April 10, laying the foundation for the modern American patent system. Secretary of State Thomas Jefferson unofficially became America's first patent examiner.

By the 1900s, the United States had become the world's dominant economy; by the 1950s, about half of the world's gross domestic product was being created in America. Many factors played a role in both, but the U.S. patent system was an undeniable gearwheel.

A rolling avalanche

Predictably, the patent system has had its highs and lows in the ensuing 228 years. But despite some trying times—including in recent years—the flow of patent applications to the United States Patent and Trademark Office keeps spiraling. When the 10 millionth U.S. utility patent is issued, likely in June, it will occur a little more than three years after the 9 millionth was issued. It took 121 years for the United States to reach 1 million patents. (The current numbering system did not begin until 1836. An extra 9,500 patents issued between 1790 and 1836.)

0000000



Among other things, the historic occasion is a monument to American ingenuity, humans’ desire to enhance and extend quality of life, the centuries-long impact of the patent office, and Washington’s prescient faith in our ability to make it all work. USPTO Director Andrei Iancu touched on much of this, directly and indirectly, in an address this March.

“It is no accident that all this fantastic innovation, continuously flowing since the founding of our republic, happens here in the United States, where patent rights are written into our Constitution with the explicit goal of promoting human progress.

“With American patents, humans made light, began to fly, enabled instant communication, treated disease and disabilities, and generally, as was said by Thomas Edison, pushed the ‘whole world ahead in its march to the highest civilization.’”

When will it be?

The USPTO has said the 10 millionth patent will issue in summer 2018. Outside observers have narrowed that timeframe considerably.

Noting that the USPTO only issues patents on Tuesdays—and that it currently grants more than 24,000 patents per month—some legal blogs have identified June 19 or 26 as the likely date of the eight-digit milestone.

The staff at IPWatchdog has turned the anticipation into a science. In a May 8 post, the website broke down patent grants into weeks (averaging 5,920 since January this year) in arriving at a June 19 forecast. It also predicted that the historic patent will go to an American company or individual and that it will relate to communications technology—neither of which would be unexpected.

Gene Quinn, a patent attorney and the founder of IPWatchdog who is a regular *Inventors Digest* contributor, commented on the milestone in the context of some court rulings that have been viewed as setbacks to patent holders in the past several years—as well as Iancu’s recent commitment to review proceedings at the embattled Patent Trial and Appeal Board.

“The good news is, patents are issuing. The question one has to wonder about is, how quickly could the U.S. have reached 10 million had it not been for a series of self-inflicted wounds? ... But optimism is high, and hope is real. People really believe that Director Iancu is about to bring meaningful reforms.”

President George Washington signed the first U.S. patent, granted to Samuel Hopkins for improvements in “the making of pot ash and pearl ash.” The length of time between millionth patent milestones has been shorter on every successive occasion.



PHOTO BY JAY PREMACK/USPTO

10 million patents

Looking Like 10 Million Bucks

NEW PATENT COVER DESIGN IS A TRIBUTE TO AMERICA'S HISTORY, INNOVATIVE SPIRIT

Above: Those applauding the March 11 unveiling of the new patent cover included (from left) Bob Metcalfe, co-inventor of Ethernet and a member of the National Inventors Hall of Fame; Andrei Iancu, director of the United States Patent and Trademark Office; Drew Hirshfeld, USPTO commissioner for patents; and Susann Keohane, global research leader for IBM's Aging Initiative.

HISTORIC OCCASIONS call for historic decisions. The design of an issued U.S. utility patent had changed only once in the past 100 years, until the United States Patent and Trademark Office decided to commemorate the upcoming 10 millionth patent with a new design for the patent cover.

USPTO Brand Management and Visual Information Specialist Jeff Isaacs led a team of in-house graphic designers to create the new look, which underwent several iterations. According to a post by tech expert Lance Ulanoff on medium.com, the team rejected 17 designs. Commissioner for Patents Drew Hirshfeld then made the final selection from three potential final designs; medium.com said that not even White House officials saw it beforehand.

There have been fewer than 12 basic designs in the 225-plus-year history of the patent cover. Previous versions featured calligraphy, elaborate engravings and high-quality typesetting. The last new cover design occurred 33 years ago.

Hirshfeld described a new design that “portrays a modern-day flair while reflecting the history of patent covers by taking design cues from 19th and early 20th century patent cover designs, mostly through the use of script typography and graphic ornaments. When our designers and patents team were creating the new cover, we wanted to create a design worthy of the significant importance that the document itself has to inventors, and its significance as a physical representation of American invention and ingenuity.”

Hirshfeld and USPTO Director Andrei Iancu were among those who unveiled the design during a ceremony on March 11 at the South by Southwest festival in Austin, Texas. Also participating in the unveiling



The new patent covers use of 19th-century elements such as script typography and graphic ornaments.

were two Austin residents: Global Research Leader for IBM's Aging Initiative Susann Keohane, who holds 114 patents and is working on IoT solutions for eldercare; and co-Ethernet inventor Bob Metcalfe, a member of the National Inventors Hall of Fame.

Iancu's comments reflected on the many important possible future inventions with which the new cover will be forever linked:

"Our new cover, through design, typography, and printing, is a forward-looking, contemporary take on the significance of what the document represents, with a particular emphasis on the value of a patent and its role in the future of our economic and cultural growth.

"And to reinforce the historical significance of the document and its roots in the founding of the republic, we included, along with 19th century type, some key words from the Constitution's Progress Clause. Just imagine the inventions this new cover will document: new compounds that treat disease, new processes that alleviate thirst and hunger, new machines that take humans to other planets, new devices that can think and create on their own. And, it will document science and technology that we cannot even contemplate today.

"This new cover will document our future."

Ulanoff echoed the promise of that future. "No one knows exactly when (the 10 millionth patent) will be granted or for what product; let's hope it's not a new paper clip or pooper scooper, but all agree that it's a momentous occasion and the perfect place to introduce a new look for this prized document. One that says this idea is yours, you invented it and no one else can copy it or build upon it without your permission." 🍷

The Million Club

HOLDERS OF THE 9 PREVIOUS MILLIONTH MILESTONE PATENTS

1 million: On Aug. 8, 1911—121 years after the Patent Act of 1790—Francis H. Holton of Akron, Ohio, received the first million milestone patent for an improvement to traditional air-filled tires. The application says his invention is intended to take the place of the pneumatic tire currently in use, making tires more durable and puncture resistant.

2 million: Joseph Ledwinka of Philadelphia was issued a patent for "Vehicle Wheel Construction," a pneumatic tire for rail cars, on April 30, 1935. Ledwinka, who immigrated to the United States from Vienna in 1896, developed an improvement whereby tires were mechanically secured to the rim to prevent slippage and movements between the tire and wheels during acceleration and deceleration.

3 million: Kenneth Eldredge of Palo Alto, California, was issued a patent on Sept. 12, 1961, for an Automated Reading System designed to improve the efficiency of data-processing machines. The patent was assigned to General Electric. The system converts human language into machine-readable language.

4 million: On Dec. 28, 1976, Robert Mendenhall of Las Vegas received a patent for a "process for recycling asphalt-aggregate compositions." Two years earlier, his company re-made a one-mile stretch of interstate highway by making use of the same materials used in its first paving—the first time anyone had done it.

5 million: University of Florida researchers Lonnie O. Ingram, Tyrrell Conway and Flavio Alterthum were issued a patent on March 19, 1991, for creating a means to use E. coli bacteria to produce ethanol. The inventors said the new bacteria can convert virtually all kinds of sugars, making it possible to extract fuel from almost anything produced by plants: grass clippings, wheat stalks, cardboard, grocery bags and newspaper.

6 million: Society's reliance on handheld devices was front-and-center when Jeffrey C. Hawkins and Michael Albanese developed a method of synchronizing files between computer systems, such as a desktop and handheld computer. Hawkins and Albanese are listed as the inventors on the Dec. 7, 1999, patent; 3Com Corp. is listed as the original assignee.

7 million: On Feb. 14, 2006, DuPont senior researcher John O'Brien was granted a patent for inventing polysaccharide fibers that mimic the quality of cotton. The invention frees textile manufacturers from relying on the seasonal harvest of cotton plants.

8 million: Robert J. Greenberg, Kelly H. McClure and Arup Roy were issued a patent on Aug. 16, 2011, for a "visual prosthesis" for people who have gone blind due to retinal degeneration. Among the patent's claims are an apparatus that includes a camera, video processing unit and retinal stimulation system, as well as a method for limiting the power consumption of the visual apparatus.

9 million: On April 7, 2015, Matthew Carroll of Jupiter, Florida, was issued a patent for a "windshield washer conditioner" that collects rainwater from a car's windshield and recycles it for cleaning the windshield. He first filed for the patent more than three years earlier.

10 Key Dates in U.S. Patent History

Above: The hat reflects the method used by U.S. female patent pioneer Mary Dixon Kies. It entails weaving straw with silk or thread.

Physician William Thornton was director (and protector) of the patent office during the early 1800s.

THE HARDEST PART of this list, as chosen by *Inventors Digest*, was reluctantly deciding what had to be left off. Much of the highlights lean toward the 18th and 19th centuries, when several significant patent firsts were achieved (the Patent Act of 1790 is covered elsewhere on these pages). The United States Patent and Trademark Office has a more extended list at 10millionpatents.uspto.gov/.

worth at least \$20 million, were exported from the United States. The United States remained the world's leading producer of potash until the 1860s, at which time potash began to be mined from rich natural deposits in Germany.

The Quebec Parliament passed an ordinance to reward Hopkins for his discovery. Legal experts consider this Canada's first patent as well.

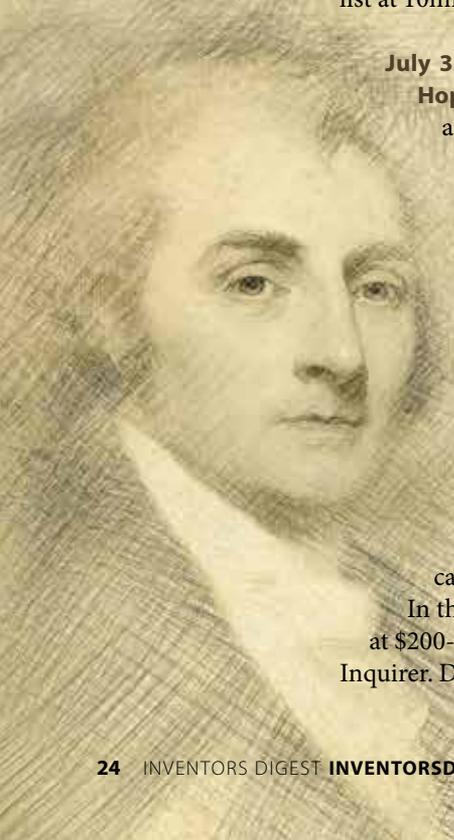
July 31, 1790: Philadelphia Quaker **Samuel Hopkins** received the first U.S. patent, for an improvement "in the making Pot ash and Pearl ash by a new Apparatus and Process." The patent, signed by President George Washington, Attorney General Edmund Randolph and Secretary of State Thomas Jefferson, exists in the collections of the Chicago Historical Society. (Jefferson, Randolph and Secretary of War Henry Knox comprised the first Patent Board after the Patent Act of 1790 was signed.)

Potash, America's first industrial chemical, is an impure form of potassium carbonate, mixed with other potassium salts. In the first 14 years of the patent, potash sold at \$200-\$300 a ton, according to the Philadelphia Inquirer. During this period more than 90,000 tons,

May 5, 1809: **Mary Dixon Kies** was granted a patent for a new method of weaving straw with silk or thread to make hats. Many sources say it was the first U.S. patent ever awarded to a woman.

Kies' innovation was a boon to the economy at a crucial time. President Thomas Jefferson's 1807 trade embargo resulted in U.S. exports dropping from a reported \$108 million in 1807 to \$22 million the next year. Her invention became a fashion fad and powered the growing straw hat industry. The patent was signed by President James Madison in 1809, and she received a letter of appreciation from first lady Dolley Madison.

The patent was destroyed in a fire at the U.S. Patent Office in Washington, D.C., in 1836. The following year, she died and was buried in a pauper's grave in Brooklyn, N.Y. In 1965, a monument was erected in her honor in her native South Killingly, Connecticut. Kies was inducted into the National Inventors Hall of Fame in 2006.



August 25, 1814: During the burning of Washington, physician **William Thornton** persuaded British troops to spare the patent office because its documents contained so much useful knowledge for mankind.

Americans had already evacuated the city—and President James Madison and his wife, Dolley, had left the White House—so aside from a few snipers in some of the buildings on Capitol Hill, the British advance was basically unopposed.

Per americanheritage.com: “One of the first Americans to venture back into the stricken city was Dr. Thornton, head of the Patent Office. He had heard that the building was to be burned, and rode in from Georgetown early in the morning of the 25th (of August). He found a Major Waters in charge of a guard at Blodgett’s Hotel, the building housing the patent models, and asked not only for permission to remove his personal property, but also made a plea for preservation of the entire building. Waters agreed to take the plea to his superior.”

Strong winds that swept through Washington (some historians said they were tornadoes and hurricanes) helped end the British onslaught.

March 3, 1821: **Thomas Jennings** became the first African-American to receive a U.S. patent, No. 3,306x, for “dry scouring” (a forerunner to dry cleaning).

Jennings—a free man who was a New York clothier and tailor—became very wealthy and used most of his money to support abolitionist activities in the Northeast. In 1831, he became the assistant secretary for the First Annual Convention of the People of Color, in Philadelphia.

Jennings was inducted into the National Inventors Hall of Fame in 2015.

July 4, 1836: The landmark **Patent Act of 1836** went into effect, essentially streamlining and tightening rules for patents. The USPTO website says the act completely rewrote U.S. patent law. Among its impacts:

- The act called for examining patent applications before issuing a patent, the second time this was done in world history (the only other time was in the United States from 1790 to 1793, per the Patent Act of 1790). To this point, patents were issued on all applications, even if they were direct copies of earlier patents. In the event of a lawsuit, a patent’s validity would be determined through the courts.
- An existing patent’s term could be extended an additional seven years, making the maximum term 21 years. (This provision changed in 1891, replaced with one 17-year term.)



- Miniature models of inventions (prototypes) were now required when applying for a patent.
- The office hired professional patent examiners for the first time. Charles M. Keller, who helped Sen. John Ruggles write the 1836 act, was named the first official patent examiner.
- A library of prior art was established to assist in examinations.

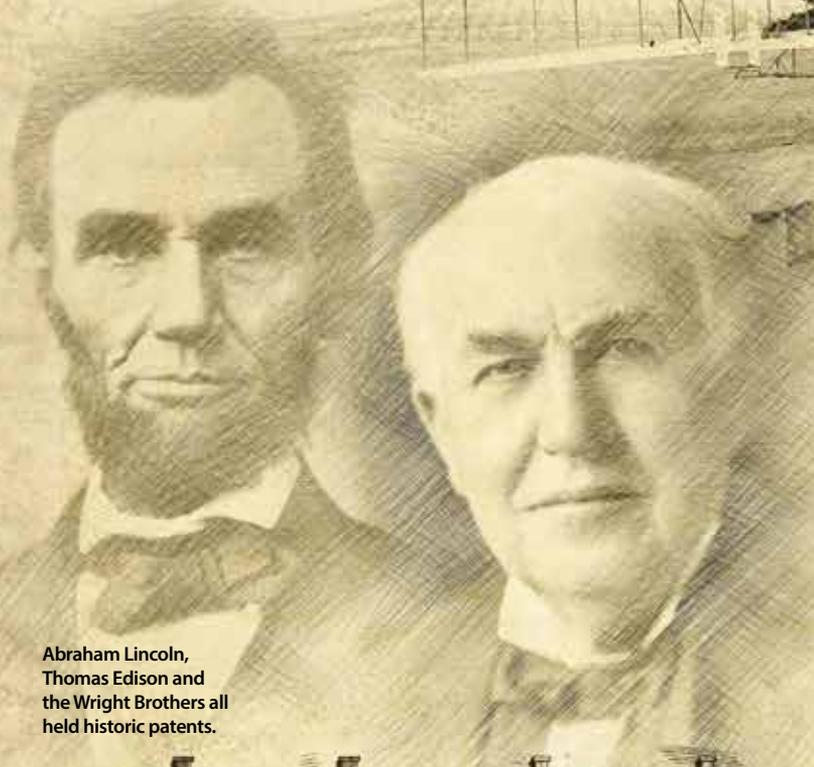
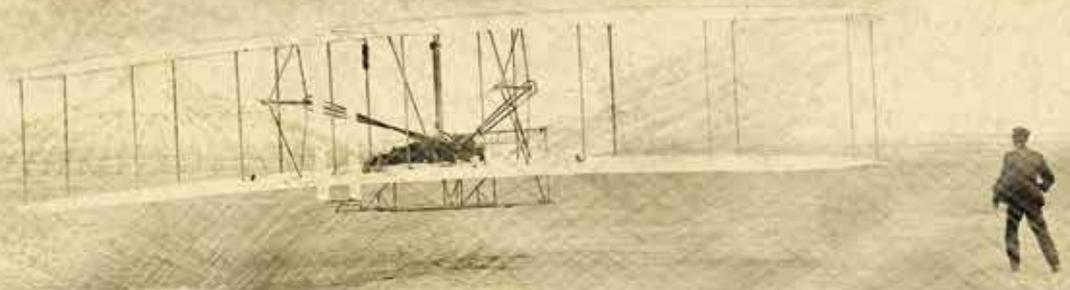
May 22, 1849: **Abraham Lincoln** received U.S. patent No. 6,469 for a “Manner of Buoying Vessels”—making him the first and only U.S. president to hold a patent.

According to abrahamlincolnonline.org, Lincoln began work on his invention a year earlier after his boat was stranded on a sandbar as he returned to Illinois. Lincoln created a scale model of his invention—a replica of which is on display at the Smithsonian—and hired an attorney to apply for the patent.

Lincoln’s law partner, William Herndon, said: “Occasionally he would bring the model in the office, and while whittling on it would descant on its merits and the revolution it was destined to work in steamboat navigation. Although I regarded the thing as impracticable I said nothing, probably out of respect for Lincoln’s well-known reputation as a boatman.”

January 27, 1880: **Thomas Edison** was issued U.S. patent No. 223,898 for an “Electric Lamp”—a historic occasion in that the holder of 1,093 U.S. patents considered this his most satisfying invention, and that it is why many incorrectly refer to him as the inventor of the light bulb. Streetlights had existed for years before Edison’s creation, which was the first commercially viable light bulb.

The 1814 burning of Washington was so severe and Americans so outnumbered that President James Madison and first lady Dolley Madison evacuated the White House. But patent director William Thornton rode in and convinced the British to spare the patent office.



Abraham Lincoln, Thomas Edison and the Wright Brothers all held historic patents.

Edison's innovation followed the principles of his incandescent lamp that led to the universal domestic use of electric light. The patent describes an electric lamp using "a carbon filament or strip coiled and connected to platina contact wires."

May 22, 1906: Wilbur and Orville Wright were issued U.S. patent No. 821,393 for a "Flying-Machine," which revolutionized travel forever. They are widely credited with inventing and building the world's first flyable airplane and making the first controlled, powered and sustained heavier-than-air human flight on December 17, 1903.

Their patent came with challenges. The Wrights fought hard to protect it, suing foreign and domestic aviators and companies, and U.S. aviation pioneer Glenn Curtiss, in an attempt to collect licensing fees. The battle lasted for years.

August 11, 1942: Austrian-born actress Hedy Lamarr and composer **George Antheil** patented a technique of hopping radio signals from frequency to frequency to help radio-controlled torpedoes evade detection and jamming. Patent No. 2,292,387 helped lay the groundwork for the development of advanced wireless communications that dominate 21st-century culture.

Legend has it that Lamarr and Antheil came up with their idea during a dinner party. The term of the patent expired without either profiting from the invention.

September 16, 2011: The Leahy-Smith America Invents Act was signed into law by President Barack Obama. The legislation's most immediate impact was changing U.S. patent law from a "first-to-invent" to a "first-inventor-to-file" system, as is the case with most other countries.

The AIA also created the Patent Trial and Appeal Board, a tribunal that decides issues of patentability. The PTAB has been controversial, with many rulings and processes that have come under fire. New USPTO director Andrei Iancu said recently that he will review current PTAB operations. 🗣️

Which patent events do you think are most important? Join the conversation at inventorsdigest.com.



Fire!

The U.S. Patent Office (renamed the United States Patent and Trademark Office in 1975) has been the scene of multiple fires throughout its history, the worst of which were:

December 15, 1836: In the blaze at Washington's Blodgett's Hotel (above), the building temporarily housing the Patent Office, all of the approximately 10,000 patent documents from 1790 to 1836 and some patent models were destroyed. According to the U.S. Patent Office, only 2,845 patents were restored. These patents were given a new number beginning with the letter X.

September 24, 1877: Headlines in the next day's New York Times reported a "great destruction of models; one half of the Interior Department buildings destroyed; 20,000 rejected and 65,000 to 80,000 patented models burned."



Another Y2K Scare? Patently Absurd

The 10 millionth U.S. patent will largely be a celebratory event, but it has warranted a lot of preparation at the United States Patent and Trademark Office. Especially its IT department.

For the first time in more than 100 years—and for the first time in the computer era, of course—the patent office will issue patents with eight digits. The situation could be likened, somewhat, to the end of the 20th century and the Y2K scare—when old software code had to be upgraded so that software systems throughout the world would function properly when the year 2000 arrived.

(When computer engineers began working on complex computer programs in the 1960s and 1970s, they used two-digit codes to represent the year. The first two digits were left out, mainly to save on costly storage space. So changes had to be made before the turn of the millennium, or software would recognize “00” as 1900 instead of 2000.)

Police around the world secured emergency bunkers. People predicted airplanes would fall from the sky. The staff at *Time* magazine set up a generator-powered “war room” in the basement of the Time & Life Building, filled with computers and equipment ready to produce the magazine in case of a catastrophe.

But the proper adjustments were made; the buildup was much ado about zeroes. The USPTO is similarly prepared, to the point that there is virtually no public concern.

Deborah J. Reynolds, acting director of the USPTO’s Office of Patent Training who also supported the Patent Number Expansion project, responded to an *Inventors Digest* query on the subject:

“The USPTO has been modernizing its complex array of IT systems with a holistic end to end next gen methodology. We started with a Patents End to End overhaul in 2011 and given many of our systems used for examination were in place already, this modernization effort needed to include a patent number expansion as we quickly approached our 10 Millionth Patent.

“The major effort not only included our new modern systems but also within of many smaller legacy systems still used for functions, such as tracking, processing and ultimately publishing patents in fact just over 50 such systems. This required tightly organized team and leadership to ensure effectively that we identified all such systems, testing, development, retesting and finally deploying.

“We are proudly now ready to issue the 10 Millionth Patent along with a brand new cover design. We are ready for even more digits our ever-expanding patent numbers to keep pace with our Nation’s innovators.”

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QUESTIONS WITH ATTORNEY/INVENTOR KELLY

Bagla

BUSINESS
LAWYER
CUSTOMIZES
SOLUTIONS
FOR
INVENTORS

Kelly Bagla knows all of the best lawyer jokes—and isn't shy about telling them. Although she loves her profession and has great respect for it, the personable and articulate owner of Bagla Law Firm, APC in the greater San Diego area understands why some people may be wary of working with an attorney. This includes inventors.

The self-described “Queen of Business Law” has experienced the inventing process as both an inventor and an attorney, having enjoyed success with her “Eardorables” plush toys and eventually appearing on the TV show “The Toy Box.” Born and raised in England, she wanted to be a lawyer since she was a child. She moved to California right after college to pursue the American Dream.

Her first job out of school was working for Baker McKenzie, which at the time was the largest international law firm in the world. From there, her career has thrived as an attorney, inventor, entrepreneur and author (among other pursuits). *Inventors Digest* editor Reid Creager spoke with her to learn more, particularly her passion for helping inventors.

How did what you learn at Baker McKenzie prepare you for your own firm, and for helping inventors?

Working for the largest international law firm in the world and learning from some of the brilliant legal minds definitely allowed me not only to become a top attorney well versed in the law, but particularly well versed in many areas of legal specialty. As businesses become more specialized in catering to customers' needs, the law has followed suit.

Today, having one's own law firm frequently requires having knowledge of the law that is both global and local.

How are your services different than at the bigger law firms?

Hiring a large law firm is ideal for some people and brings a certain amount of prestige, but the brutal truth is that it is also very easy for clients to get lost in the shuffle. Many start-ups need extra time, hand holding and customization of their specialized legal needs to walk them through various complex matters, which is nearly nonexistent in the large law



San Diego-based Kelly Bagla has written “Go Legal Yourself,” which discusses legal and business strategies for entrepreneurs, and “Go Own Yourself,” to be available on Amazon in June.

firms. And larger firms typically bill at an hourly rate.

When I opened my law firm, I knew I wanted to run a different kind of firm. I love being creative and supporting my clients, especially inventors, because inventing requires thinking outside the box—and being a fellow inventor, that’s what I’m particularly good at.

I love the inventive process of creating customized solutions for my clients. I also wanted to make legal services affordable, so unlike many larger firms, I charge flat rates instead of high hourly rates that can get very costly—particularly when the majority of inventors are working on very limited budgets.

Give an anecdotal example of how your knowledge and expertise helped protect a client.

An inventor approached me at one of my speaking events and asked what could be done if his partner was not contributing anymore. Not only was the partner not contributing to the company, the partner’s name was on the patent.

What has the partner contributed toward the patent? I asked. The inventor said he thought he had to add the partner to the patent because the partner

gave the inventor some money to start the patent process, and that was it. Big red flags went up everywhere. The invention was the sole work of the inventor, who worked for years to get the patent. Putting someone else’s name on the patent who contributed nothing toward it is like giving away half your life savings.

The inventor did not know that there were other ways to secure funding for his invention. After some long talks and negotiations with the partner, we finally resolved the matter whereby the partner gave up all of his rights and interests to the invention.

You’re a published author, among other accomplishments. What prompted you to write “Go Legal Yourself”?

Being an inventor myself, I love helping start-ups, particularly inventors. There is so much misleading information out there about how to do things correctly that many business people tend to rely on to their detriment, and that information usually ends up hurting those not specifically familiar with the intricacies of the law. I thought it was time to set the record straight.

The book is a simple-to-read guide that demystifies and explains the complicated process of starting, growing, managing and eventually selling a business...which is really what successful inventors do. And the book provides the explanatory structure that many business people need to support that, and that so many inventors with engineering-like minds can appreciate and apply to help them continue to advance and fully achieve their goals.

Eardorables looks like a fun product with some staying power. What have been your biggest successes and challenges with this?

Not in a million years did I think I was eventually going to invent my own product. But you can see what happens when an attorney gets bored! I decided to invent a line of plush toys called Eardorables because I thought it would simply be fun to create a product with big ears to hold each young person's most important treasures.

Even though I'm an attorney, it took me five years to get my invention on the market, but now I can proudly say that my Eardorables are being made by the world's largest toymaker—Mattel. Like most inventors, I had no idea where to start and like many inventors, I faced many of the same challenges. I started with a basic idea, made some samples, and registered an initial patent. I then chased every conceivable opportunity, not realizing until late in the game that I was actually starting to hemorrhage money in support of my endeavor.

The number one challenge inventors face is not having enough money, as well as not knowing how they want to bring their invention to market. Through the process of facing these challenges, however, I noticed that there were no systems in place that helped make the entire process clearer and easier for me. So I set about creating my own series of systems, refused to allow myself to get

distracted, followed my guidelines, and finally got my Eardorables to market.

My firm now helps inventors navigate the very same process by putting practical, easy-to-follow systems in place—which, though it may have initial costs, helps inventors save tremendous money in the long run by avoiding some of the real-world pitfalls and challenges I faced even with my legal expertise.

“Many start-ups need extra time, hand holding and customization of their specialized legal needs to walk them through various complex matters, which is nearly nonexistent in the large law firms.” —KELLY BAGLA

Tell us about your experience on “The Toy Box,” where your Eardorables had some early success.

“The Toy Box” is the ultimate toy competition television series, providing talented designers with the chance of a lifetime to bring their toy concept to life. I decided to apply to the show, and within an hour I received a phone call from one of the producers. After we spoke a few times, the producers selected me to be on Season 2.

It felt surreal being on set and watching the judges actually playing with my

own invention. It was at that moment that it really hit me that I was in the middle of an incredible break, as most of America would see my Eardorables when the show aired. A feeling of overwhelming joy took over as I knew then that it was finally my time to shine. It's the same feeling any inventor can relate to upon getting their big break.

There were three toys that made the final cut: the first the judges' pick, the second the hosts' pick, and the third Mattel and Toys 'R' Us pick. And I was lucky enough at the end of the program to find myself in category three, when both Mattel and Toys 'R' Us picked my Eardorables!

In which aspects of business law do you find inventors are most deficient in terms of knowledge, and how can this create problems for them?

As a business law attorney, I find that many inventors continue to experience the same challenges over and over because they simply don't know what they don't know. And they also don't have a skilled advocate to teach them what they do need to know who can stand behind them on their journey to success. Here are some examples of where I've found inventors have consistently lacked having the right knowledge and support to succeed:

- Not having the right contracts in place with the people who are helping them with their invention. Inventors work too long and too hard to allow someone else to take credit for their ideas.
- Not trademarking an applicable name and simultaneously obtaining the identical domain name for an invention to create a consistent and cohesive “brand identity,” through which their invention can become known. It is not only the invention that an inventor has to be mindful of, but it's all the other things that go along with it that give the invention its intrinsic value. Knowledgeable

business people and investors are more inclined to look at your invention if you provide a complete package of assets that are attached to and belong with the invention.

- Not knowing if you want to manufacture or license your invention. Being clear about how to determine that and then establish this fact can wind up saving the average inventor many thousands of dollars—often more.



It took Kelly Bagla five years to get her Eardorables on the market.

What is the biggest challenge facing American inventors today?

There frequently is a tremendous amount of trial and error—not only with regard to the first step, which is the process of inventing something, but then in the manufacturing process, the legal process, the distribution process, the marketing process, the promotional process, and so on. In fact, these processes are merely systems that must consistently interoperate with one another. Putting a clear, organizational guideline in place with benchmarks, timelines, and execution strategies and accountability systems can help make one's inventive journey infinitely easier. Here are some of the most important basics I encourage inventors to think about:

- Since not all inventions are the same, it's important to understand that not all attorneys are the same, either. Picking an attorney who specializes in and understands your inventive area and has the specialized experience is vital to the success of your obtaining a patent on your invention.
- The whole inventing process can be very costly. Truly understanding and accurately estimating what you will need from the very outset to get your invention launched can prevent you from wasting a boat load of money. Do your homework and make

sure you know exactly what will be involved with taking your idea from inception to market.

- Assuming you are going to need investment money, set yourself up as a corporation early on so you have something more tangible than just an "idea" to offer qualified investors. Since you only get one chance with a serious investor, make sure you fulfill their initial expectations by at least acting and behaving like a serious inventor—and business person. It's also important to be mindful of the legal pitfalls that could get you in trouble and what they look like, so you can address various investors' initial concerns that are likely to be considerable.
- The biggest tip I can share is, "no man is an island." Remember that your invention, if successful, will eventually become your business. As such, everyone in business eventually needs a team to which to delegate various facets, because no one can do everything themselves. Be sure to surround yourself with professionals who can help guide you and with whom you feel confident you can trust and consistently rely on. I cover this topic in more detail in my book, "Go Legal Yourself."

With everything you have accomplished in your varied career, is there a single honor or accomplishment of which you are most proud? Why?

My latest accomplishment is the one I think I'm most proud of: starting my second business, called Go Legal Yourself LLC.

I have always been passionate about helping entrepreneurs become successful, and now I'm proud to have created the proper legal tools and "kits" being offered at an affordable price so that entrepreneurs, and particularly inventors, no longer have to worry about the high cost of legally protecting their invention and eventually their personal assets.

In keeping with my passion to help entrepreneurs, I would be remiss if I didn't mention that my second book, "Go Own Yourself," will be available on Amazon in June. It provides powerful tools to help you unleash your greatness, because we were all born to do great things.

What inspired you to be an advocate for inventors?

I have had the pleasure of representing many inventors through the years but never really understood why they had to go through so much to achieve success—that is, until I became an inventor myself. After witnessing my clients' struggles time and time again, I finally decided to not only become an adviser but a true advocate for them and be there for them every step of the way.

Inventing is a hard job, but getting one's invention to market can be even harder. It is always nice when you have someone who understands the process and can help shorten that process, as well as make life a little easier. That's why I got into the latest branch of the law that I'm now in. I have to say it's very gratifying. In fact, I'm loving every minute of it! 🍷

Tech and Ideas Happily Collide

COLLISION CONFERENCE SHOWCASES LATEST IN INDUSTRY, INFLUENTIAL LEADERS **BY JEREMY LOSAW**

THE COLLISION CONFERENCE is anything but the negative connotation that the name implies. It is an annual tech conference that brings together disparate industries and attendees to share, learn and discuss new trends and how they affect society.

Despite being a tech conference, it tends to fly under the radar in the product development community—dwarfed by the large national trade shows such as CES (the Consumer Electronics Show) and the Housewares Show. It was not on my 2018 travel calendar at the start of the year.

However, I happened to be in New Orleans after finishing my trip on the road trip hack-a-thon called StartupBus and decided to pop in and find out what draws the massive and influential crowd to the conference each year.

Collision is more than a show-and-tell of the latest apps, software and artificial intelligence. It is an inclusive conference that showcases thought leaders and cutting-edge technology from industries that include automotive, connected technologies, retail, marketing,

and even music with a goal of sharing knowledge, forming new communities and breaking down silos. The 2018 edition welcomed 25,000 attendees representing more than 5,600 companies from over 120 countries—a melting pot of epic proportions.

Big-name speakers, firms

The conference was born from a tech conference in Europe called Web Summit, the first of which was in Dublin in 2009. The original concept was to focus on issues related to the internet and technology. (Web Summit continues annually, with Portugal the host this fall.) Web Summit spun off an American version of the conference in Las Vegas in 2014, which

became Collision. Over time it took on a more wide-ranging program than just web and tech.

This year's conference featured a massive slate of influential speakers. Former Vice President Al Gore was the keynote speaker, reminding attendees that “For anybody who doubts that we have the will to change, just remember that the will to change is itself a renewable resource.” He was joined by leaders from companies including Walmart, Lyft, Vimeo, Tinder and many more.

I had two primary goals for the convention. I wanted to make some connections with emerging start-ups to see if the team at Enventys Partners could help them with development or marketing needs, and to take in as many speakers and workshops as possible to learn about emerging tech.

One of the great things about Collision is its late start time. Conference goers are encouraged to form deeper connections at the nightly events, so organizers make sure that the schedule supports late nights. I rolled into the conference around 9:30 a.m., headed to the media village for some tea and Wi-Fi, and hit the floor. After talking with a few start-ups, I took a break to go watch my daughter star as a toucan in her first-grade rainforest play via FaceTime. Then it was back to business.

The start-up companies were all given small booths constructed from raw plywood, built out into neat rows. They were categorized into alpha or beta, with alphas being newer/pre-revenue and betas further along. The start-ups were in diverse industries, making it very interesting to chat with each one to hear about their product and story.

For example, my friend Robert Blacklidge was there with his company, Course Align, a data platform to help higher education tune its curriculum to the job market in the same area as a textile start-up. The other interesting part about the start-up area is that the booths get turned over each day, so attendees are greeted with new faces and opportunities daily.



Robert Blacklidge, founder of Course Align, talks with a show goer.



Collision represents industries such as automotive, connected technologies, retail, marketing, and even music with a goal of sharing knowledge, forming new communities and breaking down silos.

Great off-site networking

The highlights of the conference were the speakers and tech talks. With multiple stages and conference areas, it is impossible to hit all of the talks. Fortunately, most of the speakers were on stage for just 20 minutes, so you could drop in and out easily. I watched Graeme Hackland from Williams F1 talk about technology at the pinnacle of motorsport, dropped in on a presentation about eSports, and heard a talk from transgender athlete Chris Mosier. I also had just enough time to take in two workshops at the Amazon Web Services booth: one about machine learning techniques, another on how to build chat bots.

Although the activities on the conference floor are great, a prime benefit of going to Collision is the after-hours networking. The conference opened with a pub crawl around Bourbon Street the night before the show, followed by events on subsequent nights

in the warehouse district, Frenchmen Street, and a show closing happy hour at Fulton Alley. I met a number of media colleagues, start-up founders and investors away from the convention center.

New Orleans proved to be a great host for Collision—but just as Al Gore discussed change in his opening remarks, Collision itself is preparing for a big change. The show announced that the conference will move to Toronto for 2019. Although there will be no jazz music or beignets, the word-class Canadian city will be a great venue for next year's event. 🍷

Graeme Hackland from Williams F1 discussed technology at the pinnacle of motorsports.

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



Success Goes Beyond Dollars

A STRONG INNOVATION COMPONENT IS CRUCIAL TO AN INVENTION'S VALUE **BY JOHN G. RAU**

HOW DO YOU MEASURE INVENTION SUCCESS? Obvious indicators are that people are buying your product and as the inventor you are now making lots of money from your invention; you are able to retire as a wealthy person; you travel the world, pay off your house and student loans, etc. But other than generating revenue, there are more subtle ways to measure success—in the context of what you have to do to make your invention succeed. Some examples:

- It has been commercialized—that is, manufactured and being sold in the marketplace.
- One or more companies may have been created to manufacture, distribute and sell the new product, with the additional benefit of job creation.
- The product may have been “bundled” or integrated into a more complete product or service with potential “spin-off” opportunities.
- It has “value creation,” referred to by Christopher Hawker in his February 2014 *Entrepreneur* blog article as having “higher-value density” in the sense that winning products deliver more bang for the buck.
- It addresses a gap in the market and offers a better solution to solving a customer problem and, as a result, the marketplace of target customers now recognizes this and accepts your new product as better than anything else.

Know the differences

When attempting to measure invention success, a key factor or invention attribute is the extent of innovation—because an invention will not generally be successful without it. Tom Grady, business consultant and regular contributor to PBS MediaShift Idea Lab and the Huffington Post, offers the following definitions in his 2012 blog entitled “The Difference Between Invention and Innovation.”

Invention can be defined as the creation of a product or introduction of a process for the first time. On the other hand, Grady (correctly) says that innovation occurs if someone improves on or makes a significant contribution to an existing product, process or service.

He cites the microprocessor as an example. Someone invented it, but by itself it was nothing more than another piece on the circuit board. It's what was done with that piece—the hundreds of thousands of products, processes and services that evolved from the invention of the microprocessor—that required innovation.

Joshua Schuler, former executive director of the Lemelson-MIT Program, was quoted several years ago as saying that “Invention, at its core, is a technology-based product addressing a problem. Innovation is building the systems and scale to commercialize an invention. If you have an invention that isn't scalable, it sits on the shelf. But there are no innovations without an underlying invention!” The two must be linked for success.

Innovation realities

In his July/August 2011 blog at iveybusinessjournal.com, Roger More, retired professor of marketing at the Richard Ivey School of Business in Canada, discussed the management realities of innovation. He made these observations about building innovation into an invented product:

- Individual product and services innovations seldom add any value in isolation. They must be integrated and physically “bundled” with a wide range of other physical and process technologies to be applied.
- A huge range of internal and external factors affect the success and failure of any innovation. Innovations can have interesting and positive characteristics in and of themselves, but in a real competitive situation there are hundreds, if not thousands, of internal and external factors—many outside the control of the invention development team—that will affect the success or failure of an innovation.
- What this means is that any innovation, if it is to be successful, must have huge advantages and offer competitive differentiation against the existing and competing “bundled” customer solutions in existence.



“Invention, at its core, is a technology-based product addressing a problem. Innovation is building the systems and scale to commercialize an invention.”

—JOSHUA SCHULER, FORMER EXECUTIVE DIRECTOR, LEMELSON-MIT PROGRAM

He went on to add:

- At the real level of market competition (where innovations ultimately have to make their impact) and in specific product/service/market segments, every competitive and market situation is largely unique. There are no simple or general solutions. A particular innovation might be successful in one market, in one segment, in one geography, and fail miserably in another.
- Every competitive strategy, marketing strategy and innovation has the possibility of failure. At best, innovation is partly a “crapshoot” with no way to predict success.

More also offers an interesting perspective regarding the best metric for assessing invention success. He says in his blog that “the only thing that matters is whether an innovation creates wealth and the only

metric for determining that wealth is net cash flow.

“If an innovation is pumping real positive net cash flow over time, all of the other assorted financial metrics will be just fine! If it is losing cash flow, then the other metrics don’t matter.”

Yes, generating revenue is a key indicator of success. On the other hand, in order for an invention to be successful, it must have innovation embedded in its development, and its target customers need to recognize this. Without some form of innovation, an invention is unlikely to be very successful. ☑

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.





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Overall, it's a Brighter Horizon

SOME RECENT DECISIONS, NEW GUIDELINES SUGGEST A RETURN TO STRONG PATENT RIGHTS **BY LOUIS CARBONNEAU**

LAST MONTH, I commented about some recent cases for the U.S. Court of Appeals for the Federal District that seemed to open the first chink in the *Alice* armor. As a refresher, the Supreme Court's 2014 ruling in *Alice Corp. v. CLS Bank International* is the one that—along with its progeny from lower courts—viscerated most software patents and many other categories of inventions on the premise that they merely reflect “abstract ideas.” However, these recent cases open the door for trial by jury, removing judgment by summary motion and giving deprived patent owners their date in court.

Enter Andrei Iancu, newly appointed director of the United States Patent and Trademark Office, who wasted no time attacking this pivotal issue head-on. In his first (and highly anticipated) public speech at the U.S. Chamber of Commerce on April 11, he left no doubt that he thought the pendulum had swung too far against patent owners and that his priority going forward was to “1. create a new pro-innovation, pro-IP dialogue, and 2. increase the reliability of the patent grant.”

But Director Iancu wasn't done there. Not long afterward, when testifying before Congress, he made no bones that the Patent Trial and Appeal Board is also ripe for reform. (This situation presumably remains, even after the Supreme Court's recent ruling in *Oil States v. Greene's Energy Group* that upheld the constitutionality of inter partes review—the right to reconsider and cancel an issued patent.) Some statements he made in front of the Senate Committee:

“We are reviewing (PTAB proceedings) carefully to ensure that the agency's approach to these critical proceedings is consistent with the intent of the AIA (2011 America Invents Act) and the overall goal of ensuring predictable, high-quality patent rights. We are currently studying, among other things, the institution decision, claim construction, the amendment process, composition of judging panels, the conduct of hearings and the variety of standard operating procedures.”





Expect to see an uptick in patent valuations. A weakening of the impacts of the 2014 *Alice* ruling and the Patent Trial and Appeal Board will help restore confidence in the patent system and in the value of patents themselves.

Wow! Anything is on the table, it would appear. And here is another statement pertaining to software inventions that should cause many supporters to rejoice. When asked whether algorithms were mathematical representations of laws of nature, Iancu said: “You’re getting right to the heart of the issue. This is one place where I believe courts have gone off the initial intent. There are human-made algorithms, human-made algorithms that are the result of human ingenuity that are not set from time immemorial and that are not absolutes; they depend on human choices. Those are very different from E=mc² and they are very different from the Pythagorean theorem, for example.”

Last but not least, under the new director’s impetus, in mid-April the USPTO made public new guidelines for examiners’ use when handling Article 101 (“abstract idea”) rejections. These guidelines put a much heavier burden on patent office examiners when wanting to rule on the issue, whereas that burden sat squarely on the inventor in recent years.

If you combine this new guideline with the recent case law on *Alice* and other recent court decisions making the routine finding of obviousness from the PTAB a lot more difficult going forward, this looks like the first major and substantive changes that we have witnessed in the past few years that trend toward reinforcing patent rights in the United States!

As such, expect to see an uptick in patent valuations during the next few months, since most of the current values are a direct reflection of the relative uncertainty regarding patent validity as a result of *Alice* and the PTAB practice. A weakening of these two forces will only help restore confidence in the patent system and in the value of patents themselves.

BUYERS AND SELLERS

On April 10, the USPTO made public an assignment of more than 400 patent assets from **Intellectual Ventures LLC** to **Vista Peak Ventures, LLC**, an affiliate of Dominion Harbor Enterprises, LLC. This transfer appears to be part of a larger transaction announced by Dominion in February, involving more than 1,200 U.S. and foreign LCD patents originating with NEC.



I’LL SEE YOU IN COURT

The **Oracle v. Google** saga continues as the federal circuit reversed the district court’s decision, sending the parties on their way to a third trial. This time, the appellate court disagreed with the trial court’s finding that Google’s use of the JAVA APIs constituted fair use. Oracle is seeking a payout of several billions of dollars. ...

Snapchat is again in hot water, accused of infringing six messaging technology patents belonging to **Blackberry**. This is the second significant suit for Blackberry, which went after Facebook earlier this year for similar infringement.



Despite some negative reaction to the *Oil States* decision—some were hoping for a dismantling of the PTAB—other recent events have undoubtedly given cause for patent inventors and holders to feel pretty good for the first time in a long time about where the arrows are pointing. We can only hope that companies that practice those patents will see the writing on the wall and revert to a more rational way of approaching licensing discussions, other than the usual “Sue me” that has become their signature response.

Winners and losers
The eight-year legal battle that plagued **Apple** and **VirnetX** has finally ended. Apple was ordered to pay more than \$500 million in damages to VirnetX over Facetime and iMessage patents. However, VirnetX, a non-practicing entity (holder of a patent for a product or process with no intention of developing it), may want to wait on the champagne. The case is likely to go to appeal. ...

Alice struck again as **Nike**, **Fitbit** and **GoPro**, to name a few, won a lawsuit at the district court level on the basis that the alleged patent infringer relied on abstract ideas and not inventive concepts. ... **Yamaha** won its battle against inventor **Ira Pazandeh** concerning alleged infringement of a loudspeaker patent. The federal circuit court maintained the non-infringement judgment for Yamaha and additionally awarded attorney fees to the Japanese manufacturer. ...

Ugg, the cozy-boots shoemaker, was awarded \$5.2 million from a jury to make up for damages for a design patent

infringement claim. The jury found that **Romeo and Juliette Inc.** had infringed a three-side-buttons design patent by Ugg and was required to attribute \$3.1 million dollars of profits associated with those sales. ...

Funai Corp., a Japanese company that markets television for Sanyo, won its case against **Maxon LLC**. Maxon accused Sanyo's smart TVs of infringing methods of controlling entertainment subscriptions. The unanimous three-judge panel, at the appellate court, found that the patents asserted abstract ideas and therefore were invalidated.

Handshakes

Speaking of **Facebook**, April was a rough month for the social media giant. If the privacy breach wasn't bad enough, in order to focus on Mark Zuckerberg's Supreme Court hearing, the company settled its trade secrets case against **Bladeroom** for \$365 million.

It's always nice to see companies playing nicely in the figurative sandbox. In that spirit, **TiVo** and **Mediacom** agreed to expand and extend their licensing agreement. Both parties seem to complement each other, as one recognizes the innovations produced by its counterpart as being of value for its customer's entertainment experience. ...

Kyocera, a pioneer in mobile telecommunications devices, closed a multi-year patent licensing deal with **InterDigital**. Although details of the agreement remain secret, it appears that the deal comprises a worldwide, non-exclusive, royalty-bearing license on terminal unit products. ... **BlackBird** and

Capital One settled their lawsuit about three patents that relate to "methods for securely authorizing online transactions." ... While in mediation, **AT&T** and **Bascom Internet Services Inc.** decided to settle the alleged infringement case related to internet filtering. ☺

Louis Carbonneau is the founder & CEO of Tangible IP, a leading IP strategic advisory and patent brokerage firm, with more than 2,500 patents sold. He is also an attorney who has been voted as one of the world's leading IP strategists for the past seven years. He writes a regular column read by more than 12,000 IP professionals.



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AROUND THE WORLD

Asia: In a landmark decision, the Beijing IP Court ordered a permanent injunction for the first time in history against Sony. The court determined that Sony had infringed a Standard Essential Patent (SEP) related to wireless connectivity (WAPI) held by Iwncomm. The court discussed the limitations of FRAND (fair, reasonable, and non-discriminatory) licensing terms as a defense, the SEP injunctions threshold, and the damages calculation for past infringement. ...

The United States and Japan joined forces in a complaint against China in front of the World Trade Organization. Japan is also seeking remedies against China's alleged theft of intellectual property and the Chinese government's purported discriminatory treatment of foreign patent holders. China retaliated with yet another tariff of its own.

The Chinese government has released new Patent Transfer Guidelines in hopes of securing a transparent business environment between Chinese and foreign companies/investors. The government is set only to review two categories of IP transfers:

technology restricted for exports and international acquisitions of Chinese enterprises.

I recently addressed the impact of new technologies such as cryptocurrencies and blockchain technology in the IP realm. As previously discussed, many U.S. companies have shown serious interest in acquiring IP rights in this field, particularly with blockchain technology. However, Chinese companies took note and in 2017 filed roughly half of all blockchain patent applications.

Europe: The demand for European patents hit an all-time high in 2017—up 3.9 percent, according to the European Patent Office. Rankings for the most active EP filers based on country of origin show the United States back on top in 2017 after what we assume was a slump caused by U.S. patent legislation in 2013.

Close on the heels of the United States were Germany, Japan and China. The EPO attributes the growth to the agency's "sustained effort to boost (patent) quality and (the EPO's) efficiency." Does the United States have something else to learn from the EU?



Reviews Upheld in Oil States Verdict

LONG-AWAITED SCOTUS RULING, SAS DECISION LIKELY TO HAVE WIDESPREAD IMPACTS

BY STEVE BRACHMANN AND RENÉE C. QUINN



THE U.S. SUPREME COURT voted 7-2 to uphold the constitutionality of inter partes review proceedings (a trial held before the Patent Trial and Appeal Board in which private parties can challenge previously issued patent claims) in *Oil States Energy Services, LLC v. Greene’s Energy Group, LLC*.

In the highly anticipated April 24 decision, SCOTUS applied the public rights doctrine to the government’s grant of a patent—finding that patent validity trials need not take place in an Article III court—nor do they violate the Seventh Amendment, which ensures a person’s right to a jury trial. The majority opinion was authored by Justice Clarence Thomas. Justice Neil Gorsuch penned a dissent to which Chief Justice John Roberts concurred.

The high court rendered another impactful decision that day when it reversed the U.S. Court of Appeals for the Federal Circuit in *SAS Institute Inc. v. Iancu*. SCOTUS determined in a 5-4 vote that when the PTAB agrees to review the validity of a patent through the IPR process, it is required by its authorizing statute to decide the patentability of all claims challenged by the petitioner instead of only some.

Oil States background

Justice Thomas’ majority opinion began by noting that Congress has authorized administrative processes at the U.S. Patent and Trademark Office to reconsider and cancel patent claims decades before the enactment of the Leahy-Smith America Invents Act of 2011, the law that created IPRs and other validity

trials at the PTAB. Notably, Congress created ex parte reexamination proceedings (ones in which all parties need not be present) in 1980, and the court noted that those proceedings continue today. Congress further created inter partes reexamination in 1999, though those proceedings were phased out with the enactment of the AIA.

The majority opinion cited various statutory elements of the AIA regarding various aspects of IPR proceedings—including preliminary responses by the patent owner, the USPTO director’s determination of the reasonable likelihood that a petitioner will prevail before instituting an IPR, and post-institution activity such as oral hearings before the PTAB and the claim amendment process.

The decision also gave a brief history of the case between Oil States and Greene’s Energy Group. This included Oil States’ original patent suit against Greene’s in 2012, Greene’s petition for IPR proceedings on the patent near the end of discovery in the district court case, and the Supreme Court’s grant of writ to take up Oil States’ appeal from the PTAB after the federal circuit summarily affirmed the PTAB’s decision in light of that court’s decision in *MCM Portfolio LLC v. Hewlett-Packard Company*.

“Inter partes review falls squarely within the public rights doctrine,” Justice Thomas wrote. The Supreme Court found that it has long recognized the grant of a patent as a matter involving public rights, citing the court’s 1899 decision in *United States v. Duell*. Citing SCOTUS’ 1871 decision in *Seymour v. Osborne*, the court found that patents are “public franchises” granted by the government. Further, the granting of patents occurs through the executive branch under statute laid out by the legislative branch without requiring judicial interpretation, and thus the determination to issue a patent grant “need not be adjudicated by an Article III court.”

Because IPR proceedings involve the same basic matter as the grant of a patent, “it, too, falls on the public-rights side of the line,” the Supreme Court found. In IPRs, the PTAB considers the same statutory requirements that the USPTO originally considered in granting the patent. Although IPRs occur after the

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“These two cases highlight the critical importance of Director Iancu’s recent statements that the USPTO needs to make changes to how the PTAB conducts and institutes post-grant reviews.”

—FORMER USPTO DEPUTY DIRECTOR RUSS SILFER



issue of a patent, the court found that didn’t create a distinction from the USPTO’s determination of a patent’s validity before granting a patent.

Reaction on both rulings

Todd Dickinson, a partner with Polsinelli and a former director of the USPTO, said that in many ways “the ‘money’ quote in the decision is: ‘We emphasize the narrowness of our holding,’ taking pains to note that they’re not deciding the validity of all aspects of the process, nor due process or retroactivity, leaving open the possibility of additional lines of defense for patent holders.

“In dissent, Justice Gorsuch (with the chief justice), also reviews the history but concludes that the IPR process is unconstitutional, with a ringing endorsement of the need for stability in the patent right ... and a deep skepticism of political influence on agency judicial independence.

“While the majority clearly authorizes the continuation of the IPR process, its effects beyond the general status quo may be limited. One possible result may be more stays from the district courts, now that its legitimacy is clarified, letting the PTO do even more of the heavy invalidity lifting.”

Dickinson said that of the two April 24 rulings, *SAS v. Iancu* “may have the more lasting impact for change.”

In that case (formerly *SAS v. Matal*; Joseph Matal was USPTO interim director before Andrei Iancu was appointed), petitioner SAS sought inter partes review of a software patent owned by ComplementSoft and alleged that all 16 claims in the patent were unpatentable. The then-USPTO director concluded that SAS would probably prevail on at least one of the challenged claims, so IPR was warranted. However, Matal instituted review on only nine of the 16 challenged claims, denying review on the remaining claims. The question was whether the USPTO must decide the patentability of every challenged claim in a petition for IPR.

Dickinson explained: “In his 5-4 opinion, Justice Gorsuch in *SAS* (as in his dissent in *Oil States*) dismisses the PTO’s interpretation of the AIA on so-called “partial institutions” as contrary to the statute, and clearly suggests that a majority of the Court

is not wild about the abuses they’re hearing about the PTO IPR rulemaking process. ...

“Given this, I would expect PTO Director Iancu’s recently announced intention to review and likely change PTAB processes, coupled with things like Sen. Coons’ STRONGER Patents Act, to be where the focus of the debate shifts even more than it has.”

Russ Silfer, a principal at Schwegman Lundberg & Woessner and the former USPTO deputy director, wasn’t surprised by either verdict.

“There is no doubt that the court’s holdings in *Oil States* and *SAS* will be analyzed in-depth over the next few months,” he said. “For me, the court’s decisions were generally as expected. I was not looking for the court to provide a silver bullet to help inventors.

“I anticipated that AIA trials would be held constitutional; however, I thought the court could have ruled that pre-AIA issued patents would be treated differently. The court declined to address that issue, stating, ‘*Oil States* does not challenge the retroactive application of inter partes review, even though that procedure was not in place when its patent issued.’ ...

“For me, the holdings of these two cases highlight the critical importance of Director Iancu’s recent statements that the USPTO needs to make changes to how the PTAB conducts and institutes post-grant reviews.”

USPTO press secretary Paul Fucito said: “The USPTO is carefully considering the Supreme Court’s decisions and determining their impact on various proceedings at the PTAB.”

Steve Brachmann is a freelance writer located in Buffalo, N.Y., and is a consistent contributor to the intellectual property law blog IPWatchdog. He has also covered local government in the Western New York region for The Buffalo News and The Hamburg Sun.



Renée C. Quinn is the chief operating officer of IPWatchdog, Inc. She holds a Masters of Business Administration in e-commerce with expertise in marketing and brand development. She is an author for IPWatchdog.com, public speaker and corporate educator.





Ruling Ends All Doubt: Patents Are Not Property Rights

WHY WOULD INVENTORS SPEND BIG MONEY ON A GOVERNMENT FRANCHISE THAT CAN BE STRIPPED? BY GENE QUINN



IN THE UNITED STATES Supreme Court's ruling in *Oil States v. Greene's Energy*—which upheld the constitutionality of post-grant challenges to issued patents at the Patent Trial and Appeal Board of the United States Patent and Trademark Office—SCOTUS attempted to leave open the faint possibility that it was not closing the possibility that patents could be property rights.

But the truth is, the Supreme Court's decision effectively ends the discussion. Patents are not property rights and will not be property rights until Congress overrules *Oil States*.

Inexplicably, the Trump Administration argued that patents are a government franchise, which is what the Supreme Court ruled. Justice Clarence Thomas, writing for the majority, said that all inter partes review involves is "reconsideration of the Government's decision to grant a public franchise." Thus, patents are not property rights despite what the statute says to the contrary, and despite what the Supreme Court has previously ruled to the contrary.

The importance of patents being just a public franchise cannot be overstated. If patents are public rights that can be challenged at any time and revoked, that necessarily means they are not property, regardless of how the Supreme Court attempts to limit this ruling. Property rights vest and title quiets in property. Without vesting and quieted title, fundamental attributes for all property, patents are nothing more than the government franchise the Supreme Court says they are, and the Trump Administration argued they are.

In his dissent, Justice Neil Gorsuch explained that innovators with something new can spend up to \$30,000 and two years to obtain a patent. His recognition of the time and investment is honorable, but his estimates are off by orders of magnitude. For some simple inventions \$20,000 to \$30,000 may suffice, but even for simple inventions, two years is rather quick. For anything of substance—and certainly anything that qualifies as disruptive or paradigm shifting—it will take closer to a decade and usually longer to obtain patent protection.

Given that patents are no longer property, it is hard to believe innovators will spend many tens of thousands, and frequently hundreds of thousands of dollars and up to a decade, fighting the patent office to get a government franchise that can be stripped at will. At least in America.

Although there has been much optimism due to the arrival of USPTO Director Andrei Iancu and his recent speeches signaling he understands the U.S. patent system must move along a different path, it is impossible to think that one man will be able to correct the collective mistakes of 535 elected members of Congress and 9 Ivy League-educated jurists who seem convinced that forfeiting America's patent system is somehow what the Constitution demands. His job just became much more difficult—and all the more important.

Thankfully for innovators, China and Europe seem ready, willing and able to pick up the slack. Still, it is sad to see America forfeit our high-tech and innovation advantage. And for what? Because a small handful of technology users didn't want to pay licensing fees to innovators and instead wanted to use innovations they didn't create for free? Truly disheartening. ☹️

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



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Ross Urges an Update of Tech Transfer Laws

COMMERCE SECRETARY'S GOAL: GREATER COMMERCIALIZATION **BY GENE QUINN**



PEOPLE IN THE INDUSTRY who are supportive of strong patent rights have been treated to recent speeches from USPTO Director Andrei Iancu, saying all the right things about the patent system. But it is hard to imagine anything more significant than Commerce Secretary Wilbur Ross simply showing up at the “Unleashing American Innovation Symposium” in Washington, D.C.

Ross sang the praises of university technology transfer, speaking at the April 19 event where there was heavy representation from those who believe in the power of a strong patent system. It seems safe to actually speak of strong patent rights, licensing and the great economic promise of technology transfer in the open.

The tone in Washington is decidedly different these past several months. It feels as if something big is about to happen, there is optimism, and the Trump Administration does not seem to be playing down hopes. If anything, they are raising the bar high.

The well-attended program sponsored by the National Institute of Standards and Technology is a part of the Lab to Market initiative, which Congress funded to increase the economic impact of federally funded research by accelerating transfer of new technologies from federal laboratories to the commercial marketplace. The day’s theme was increasing the return on investment associated with federal investment in research and development.

More specifically, there was much discussion about how universities have succeeded in licensing university developed technologies, thanks to the

Bayh-Dole Act, and how updated legislation is necessary in order to remove barriers that make the same successes difficult for federal laboratories.

Lopsided math cited

Ross explained that the main question to be answered is “how best to maximize the impact of our \$150 billion annual federal investment in research and development,” calling that “a top priority for the Administration.”

“Universities seem to be doing far better than the federal labs and can teach us a thing or two,” Ross said. “And we hope they actually will during the course of today’s sessions. Recent studies have shown that federally funded university research is about five times more likely to result in a licensed patent technology, and about seven times more likely to result in an active patent license. Universities received \$1.87 billion in licensing revenue from their innovations in 2014. By comparison, the total amount of royalties received from the licensing of government inventions was only \$194 million in 2014, the latest year for which data are available. In that year, universities received \$66 1/2 billion for R & D while federal labs received \$42 billion.

“Now if you do the math, universities received just over 50 percent of the R&D funding but licensed nearly 10 times the value of technology. One would imagine that the gap has widened even further, as university activity has exploded, generating \$2.96 billion in licensing income from their inventions in 2016.

“Now obviously, R&D in a given year is not what resulted in royalty income in

that year because of leads and lags. But the pattern has persisted long enough, and the math is so lopsided that it seems to me that there is a message in it.”

That sounds like a man ready to move, someone who has made up his mind and is ready to act. And if we know anything about Ross, we know he is not afraid to take action. We also know that his relationship with President Trump goes back decades and is very close.

Powerful influence

What will Ross do? Well, he gave an unequivocal endorsement of Bayh-Dole specifically. He also said that laws need to be updated to address business and technology realities of today, and to enable more companies to license federally funded technologies and take advantage of federally funded research in order to launch high-tech start-ups, create jobs, and grow the economy.

“Our practices, policies, regulations and laws all need to be updated to assure that technology transfer commercialization in the large-scale production and manufacture of innovative technologies occurs within the U.S.,” Ross said. “We must address growing trade imbalances by producing in America the innovative products that the rest of the world needs to buy.”

If Ross sees innovation and the licensing of patent rights as the key to realizing his vision to address trade imbalances, the patent system could snap back more quickly than anyone might have otherwise predicted—at least, if the Executive Branch has anything to say about it. 🐾

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IoT Corner

Google recently announced the release of **Android Things 1.0**. The new IoT development platform comes with the promise that every Android Things-based product will get three years of OS updates, direct from Google, for free.

The platform is designed to help bring more connected devices online with enhanced security. The system is compatible with developer boards like the Raspberry Pi and NXP Pico, and will allow the coding of audio and video—as well as the use of Google’s machine-learning platform, TensorFlow. The platform will also allow periodic over-the-air updates to enhance security for connected devices, a constant barrier to IoT adoption in many environments.

Starter development kits to explore Android Things 1.0 will be available for \$35-\$90 from electronics retailers such as Pimoroni and Adafruit. —*Jeremy Losaw*



Wunderkids

Eight-year-old **Nikaya Baranwal** of Clifton Park, New York, created a chain-reaction course built from repurposed materials such as plastic blocks, wood and a train set to win the 2018 Camp Invention Mighty Minds Contest. Campers were asked

to create a video explaining what they learned at Camp Invention—a program sponsored by the National Inventors Hall of Fame—and how Hall inductees inspired them. She has also been inspired by her father, who she said built a new technology for airplane engines. “We work on science projects and cool things!” she said. She wants to be an engineer because she “would like to build something that will make the world a better place to live.”



© BEARD KING

What IS that?

The **Beard Bib**, by Beard King, is pretty much self-explanatory. After attaching to any mirror with suction cups, the bib catches facial hair/beard trimmings and features easy flap shoot disposal, whatever that is. Also included is a self-packing pouch for use when traveling—just in case you want to save a little time for hotel housekeeping? Its trademarked catchphrase is “Fear the Beard, Not the Mess.”

150,525

The number of **independent inventors in California** as of 2015 (the latest data available), giving the state the No. 1 U.S. ranking. Partly due to California’s large population and the presence of Silicon Valley, it far outdistanced second-place Florida (47,206).

WHAT DO YOU KNOW?

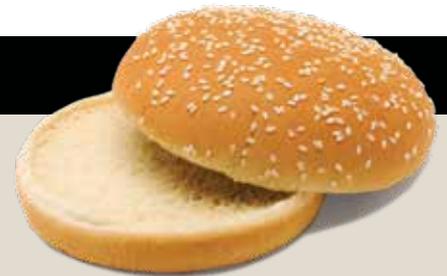
1 The wide range of copyrighted material owned by Paul McCartney’s MPL Publishing includes music from:
A) Carl Perkins
B) Meredith Wilson (“The Music Man”)
C) Buddy Holly
D) All of the above

2 **True or false:** Thomas Edison said the version of the light bulb he invented—not the first-ever bulb but the first to provide practical and affordable home illumination—was his “crowning triumph.”

3 Which was invented first, the hamburger or the hot dog?

4 **True or false:** Women have won 48 Nobel Prizes, men 844.

5 Computer engineer Ray Tomlinson sent the first email in which year?
A) 1965 **B)** 1971
C) 1975 **D)** 1982



ANSWERS: 1. D. 2. True. Edison told a reporter, “You can readily see that this piece of carbon will last an ordinary life-time” and that the bulb “gives out one of the most brilliant lights which the world has ever seen.” 3. The identity of the hamburger’s inventor is disputed, but most reports date it to the late 1880s. The hot dog’s origins predate the discovery of America in 1492. Many reports say that the first hot dog was sold by a German immigrant out of a food cart in New York in the 1860s. 4. True. Many women made major discoveries that were credited to men, or they were discouraged from inventive or scientific work. 5. B.

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