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UNITED STATES  
PATENT AND TRADEMARK OFFICE

FEBRUARY 2021 Volume 37 Issue 2

# Inventors

DIGEST

## TOUGH as STEEL

A BRUSH WITH DEATH  
DRIVES COLIN WAYNE

**How a Myth Exploded**

THE CRAZY SAGA  
OF POP ROCKS CANDY

**New Era at USPTO**

IANCU LEAVES WITH AN  
IMPRESSIVE LEGACY



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The United States Patent and Trademark Office (USPTO) invites you to attend these virtual

# Black History Month Events

## Three contemporary Black women inventors:

*Aprille Ericsson, Ayanna Howard, and Arlyne Simon*

**Wednesday, February 10, 2021, noon to 1:30 p.m. ET**



Hear the panelists' firsthand accounts of their amazing career paths and game-changing inventions.

**Learn more and register today at <http://bit.ly/33yN9wu> for this inspiring and informative virtual panel discussion.**

## A focus on business

*Showcasing the successful artistic collaboration between cartoonist and illustrator Liz Montague and Google art director Angelica McKinley*

**Friday, February 12, 2021, noon to 1:15 p.m. ET**



Hear how large scale creative projects are produced, from concept to launch. Get a behind-the-scenes view on the creative process of Montague, a Philadelphia-based artist, and Google's art director McKinley for the first guest artist slide show Google Doodle for Jackie Ormes, a groundbreaking Black cartoonist and activist.

**Register early at <http://bit.ly/3fYF60P> for this free special event.**

# Inventors

## DIGEST

**EDITOR-IN-CHIEF**  
REID CREAGER

**ART DIRECTOR**  
CARRIE BOYD

**CONTRIBUTORS**  
STEVE BRACHMANN  
ELIZABETH BREEDLOVE  
LOUIS CARBONNEAU  
DON DEBELAK  
ALYSON DUTCH  
JACK LANDER  
JEREMY LOSAW  
EILEEN MCDERMOTT  
EDIE TOLCHIN

**GRAPHIC DESIGNER**  
JORGE ZEGARRA

INVENTORS DIGEST LLC

**PUBLISHER**  
LOUIS FOREMAN

**WEBSITE ADMINISTRATOR**  
ELIZABETH BREEDLOVE

**FINANCIAL CONTROLLER**  
DEBBIE MUENCH

**SUBSCRIPTIONS**  
LOURDES RODRIGUEZ

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Ad rates, subscriptions & editorial content:  
520 Elliot Street  
Charlotte, NC 28202  
info@InventorsDigest.com  
www.InventorsDigest.com  
reid.creager@inventorsdigest.com

## 2 Free Invention Ideas? Priceless



Many years ago I was at a stop sign, waiting to turn into a major intersection, when I suddenly got some unwelcome help from behind.

Thump!

The driver behind me rammed into my trunk and pushed me into the intersection. Fortunately, there was no oncoming traffic in the far-right lane I was pushed into, and I recovered quickly to pull onto the shoulder.

I looked in my rearview mirror to ensure the other driver did the same, or I was ready to get his license plate number.

It takes a lot to get me really angry. But as we both got out of our vehicles, I immediately shouted at him: "Were you on your cellphone?"

He denied it, but he would not look me in the eyes.

This happened a little before today's iPhone era, where it is commonplace to look over to the driver next to you and see his or her head looking up and down into their lap. This demonstrates an arrogantly careless disregard for human life. The driver is an accident waiting to happen.

I'm often asked what I would invent if I had the time, the resources and a strong entrepreneurship acumen. So now I give you an idea, free of charge, if you want to develop it. No infringement claim will be forthcoming; no salesman will call.

I want to see a mechanism in every portable phone that disables said phone when it is behind the wheel of a car, or within X inches of it. This should be as standard in all vehicles as a seat belt.

But wait! (Channeling my inner Ron Popeil here.) There's more.

Act now, and you can begin work on my second invention idea with no monetary compensation required: a keyboard on which the caps lock key (on the left side) is not so close to the letter keys.

How many times have you attempted to type an "a" or even a "q," only to learn A FEW MOMENTS LATER THAT YOU ARE TYPING IN ALL CAPS? The caps lock key needs to be moved—preferably to the right side of the keyboard just above the four arrow keys.

I have a ready reply for skeptics who say this change would be too hard after decades of hand-eye memory to the contrary. After all, who ever thought we would be using a device in which many people type only with their thumbs? We learned.

So, take my inventions. Please.

—Reid  
(reid.creager@inventorsdigest.com)







# Give no quarter to Patent Pirates.

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last penny.

Our ideas and innovations are precious. Yet Big Tech and other large corporations keep infringing on our patents, acting as Patent Pirates. As inventors, we need to protect each other. It's why we support the STRONGER Patents Act. Tell Congress and lawmakers to protect American inventors.



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**ON THE COVER**  
Colin Wayne, founder of Redline Steel;  
photo by Per Bernal



## NEWS FLASH

# Innovation's Shining Year

*USPTO services and practices were at forefront amid historic challenges*

**2020 HINDSIGHT** can be valuable, especially after a year many of us would like to forget. However, historic advances in innovation reminded us of invention's essential importance for humankind.

Scientific and technological achievement were front and center in the development of COVID-19 vaccines—begun and completed during the same year in which the pandemic crippled the world. Moderna, one of the companies that developed a vaccine in 2020, said intellectual property including patents and trademarks “will protect and enhance our ability to continue to invest in innovative medicines.”

Teamwork was seldom on such prolific and inspirational display. Masks, ventilators, and testing equipment were among the life-saving devices assembled; companies facilitated teleworking to help keep economies running.

The United States Patent and Trademark Office—the center of all things IP and long a leader in federal government telework—made this transition so



## LOVE AND IP IN BLOOM

**WHAT DO PATENTS** and trademarks have to do with Valentine's Day? We'd love to tell you.

First, some may not know that tens of thousands of plant patents have been granted by the USPTO. These patents cover asexually reproduced plants such as decorative plants and fruit trees (those planted from seeds are not eligible).

The roses you may give or receive on February 14 are likely patented. The common red hybrid tea rose has hundreds of patents.

More than 250 million roses are produced each year for Valentine's Day, according to the Society of American Florists.

So it is fitting that a rose—specifically, Henry Bosenberg's Climbing or Trailing Rose (U.S. Plant Patent USPP1P)—was the first plant patent issued on Aug. 18, 1931. He called his invention “New Dawn.”

Walter E. Lammerts was granted U.S. Plant Patent No. 2,751 in 1967. His variety of hybrid tea rose plant is

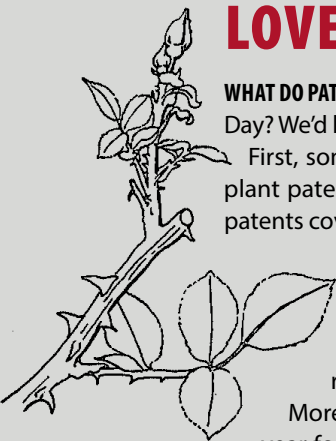
especially suitable for greenhouse growing and known to “recycle its blooming quickly during the winter months, as at Christmas and again for Valentine's Day.”

Valentine's Day isn't just romantic; it's fun.

Think Valentine's, and many instantly think heart-shaped chocolate. U.S. Design Patent No. 344,843, Chocolate Having a Heart Design, by Maria Kestekides-Keadekoglu of Brussels, Belgium, was patented in 1994.

Did you know there is an Official Champagne of Valentine's Day (U.S. Trademark No. 2,250,196)? There was even a registered trademark for Valentine Dust until it was canceled in 2014. The product was described as a “non-consumable, non-toxic novelty confetti item consisting of confetti, oats, glitter, grains, and cinnamon encased in a decorative pouch.”

**CELEBRATE WITH US!** The USPTO has produced an innovative, clever, and funny Valentine's Day video at <https://www.youtube.com/watch?v=EmCh9J-Cm3l>.



U.S. Plant  
Patent  
USPP1P



quickly that in 2020 it examined patent applications faster than the year before.

Speed was so crucial during the worldwide race to a vaccine that the USPTO instituted the **COVID-19 Fast Track Program**, allowing smaller entities to accelerate COVID-related applications at no charge. The USPTO also waived many patent- and trademark-related deadlines for situations in which an applicant could not meet a deadline or make a payment because of the pandemic.

Beyond the pandemic, the USPTO launched two major programs: the **Expanding Innovation hub**, designed to provide information for demystifying the patent process; and the **National Council for Expanding**



**American Innovation**, which seeks to increase participation of women and other underrepresented inventors. (You can view a Federal Register Notice, seeking public input for the NCEAI national strategy, at <https://beta.regulations.gov/document/PTO-P-2020-0057-0001>. The deadline for comments is Feb. 8, 2021.)

Also, the **Trademark Modernization Act of 2020** provides significant relief for trademark owners' efforts to fight trademark fraud. Further, the USPTO's ongoing effort to prevent unauthorized use of IP was marked by the launch of its **anti-counterfeiting campaign** (Go for Real: #GOFORREAL), a collaboration with the National Crime Prevention Council.

Through presentations from experts, **Invention-Con 2020** provided an encouraging and informative display of the importance of IP protection for inventors, makers, and entrepreneurs.

The annual event—all virtual last year—attracted nearly 4,000 people from 45 U.S. states and 28 countries. That was more than three times the number from 2019. Online average viewership reached almost 15,000, nearly six times the amount from the previous year.



#### SAVE THE DATE

**Invention-Con 2021, Aug. 18-20, 2021**



NMTI laureates Joseph DeSimone, Cato Laurencin, and Mark Humayun after the White House medal ceremony.

PHOTO BY JAY PREWACK/USPTO

## YOU CAN HONOR AMERICA'S BEST



*Nomination forms accepted  
for National Medal of Technology  
and Innovation candidates*

**FROM STEVE JOBS TO EBAY TO LOCKHEED MARTIN SKUNK WORKS**, they and their representatives have met the president of the United States at the White House—and accepted America's highest honor for technological achievement and innovation.

The National Medal of Technology and Innovation (NMTI) is accepting nomination forms and letters of support at [www.uspto.gov/nmti](http://www.uspto.gov/nmti). Anyone can send nominations, which are due by **April 30**.

The medal is awarded to individuals, teams (up to four individuals), companies, or divisions of companies for outstanding contributions to the nation's economic, environmental, and social well-being through the development and commercialization of technological products, processes, and concepts, technological innovation; and strengthening the nation's technological workforce.

The award has celebrated the national importance of technological innovation since it was first awarded in 1985. The medal is also meant to inspire future generations to prepare for and pursue technical careers to keep America at the forefront of global technology and economic leadership.

On **February 24** at 2 p.m. ET, NMTI staff will hold a free informational webinar on the award and the nomination process. Nomination guidelines and procedures will be discussed, and audience questions will be answered.

Nominations of candidates from traditionally underrepresented groups are encouraged. Contact Program Manager John Palafoutas at 571-272-9821 or email [nmti@uspto.gov](mailto:nmti@uspto.gov).

## TRADING CARD

**NO. 6**

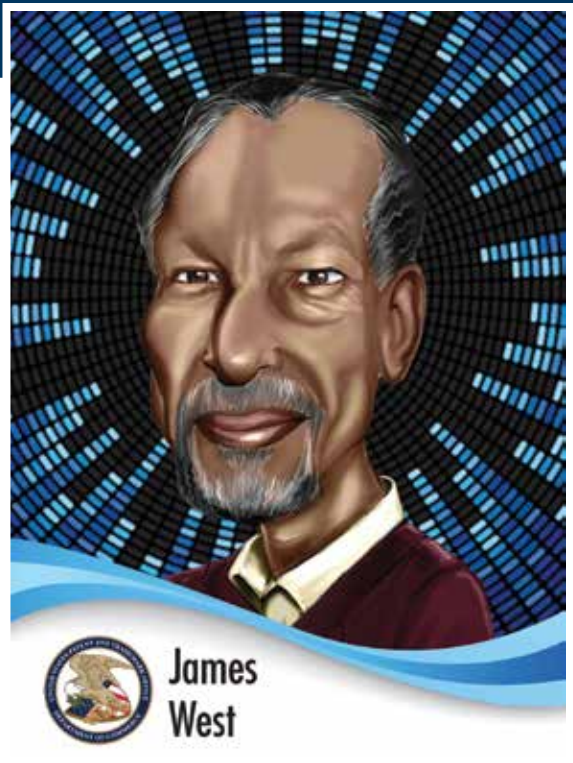
## James West

**HAVE YOU HEARD?** James E. West celebrates a milestone birthday on February 10.

The world hears things a lot better due to the efforts of West, an acoustical science inventor who turns 90 this month. The back of his USPTO inventor card says: "Ninety percent of all microphones produced annually and used in everyday items such as telephones, hearing aids, camcorders, and multimedia computers employ West and Sessler's technology."

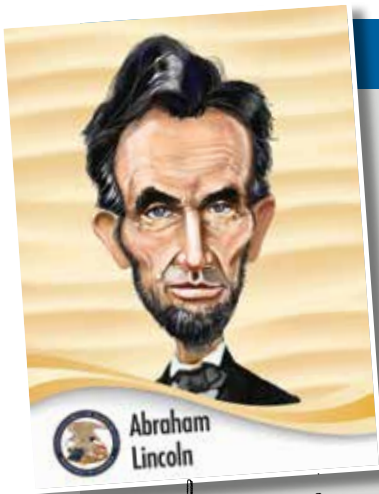
West holds more than 200 U.S. and foreign patents, highlighted by the electret microphone. He and co-inventor Gerhard Sessler developed the electroacoustic transducer and were granted U.S. Patent No. 3,118,022 on Jan. 14, 1964.

The two invented the electret microphone, also called the electric condenser microphone, while working for Nokia Bell Laboratories. Before their invention, condenser microphones required a battery from an external source to power the electromagnetic field needed to convert sound into an electrical signal.



The electret harnessed the electromagnetic field of enough contained electrons to produce the charge needed for the microphone. Electret microphones are lightweight and relatively affordable to produce.

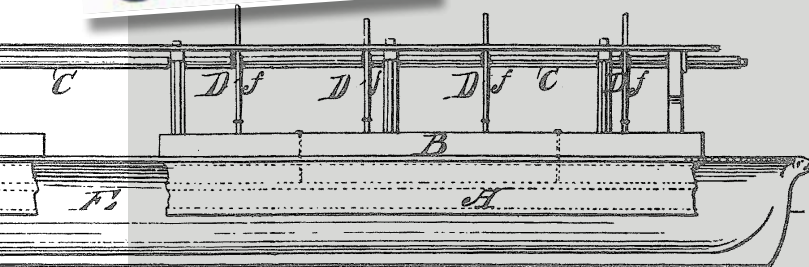
West has been fascinated by electronics since childhood—so much that his story almost ended before it could begin.



## MAGIC MOMENT

**THE ONE AND ONLY**

*On Presidents Day, we remember the only U.S. president to be awarded a patent*



**THE INVENTIVE MIND** of Abraham Lincoln entertained a singular mission: Free the boats.

At least twice, he had been on vessels that ran aground or took on too much water—once when he was a young man hired to help co-pilot flatboats, another time as a congressman when a steamboat got stuck on a sandbar. On both occasions, passengers had to scurry about to move cargo or drain water so the boat could float higher and come free.

Lincoln contemplated an invention that would address these situations. He began working on a miniature wood boat model in Springfield, Illinois, with help from a local engineer.

The Great Emancipator was a natural inventor. He personified creative energy and a passion for solving problems, and was involved in several patent cases while practicing law in Springfield.

According to an article in the March 1924 *Popular Mechanics*, Lincoln hired patent attorney Z.C. Robbins, who said: "One morning he walked into my office with a model of a western steamboat under his arm. After a



When he was 8, he was working on a broken radio and plugged it into a ceiling outlet while standing on the brass footboard of his bed. A bolt of 120 volts of electricity shot through his body, temporarily paralyzing him. His brother knocked him onto the floor to break the shock.

Even as a young adult, West “very definitely disappointed” his parents “when I switched my major from pre-med to physics,” he told the American Institute of Physics.

But he enjoyed a successful and inspirational career—highlighted by four decades at Bell—and influenced generations to come. He was inducted into the National Inventors Hall of Fame in 1999 and in 2006 was awarded the National Medal of Technology and Innovation, America’s highest honor for invention.

West has overcome racial barriers and worked to minimize them, convincing Bell Labs to promote more STEM opportunities for minorities. The company’s corporate research fellowship program recently funded, mentored, and graduated about 600 minority PhDs in three years.

Requests for the trading cards can be sent to [education@uspto.gov](mailto:education@uspto.gov). You can also view them at [uspto.gov/kids](https://uspto.gov/kids).

friendly greeting, he placed it on my desk and proceeded to explain the principles embodied therein.”

Lincoln’s invention provided air chambers that would attach to the sides of a boat. They could be lowered into the water and inflated, lifting the vessel over obstructions.

Robbins filed the patent application on March 10, 1849. Two months later, on May 22, 1849—12 years before becoming president—Lincoln was awarded U.S. Patent No. 6,469 by the then-United States Patent Office for his “Buoying vessels over shoals” concept.

America’s 16th president remains the only one to be granted a U.S. patent—a fitting celebration for this year’s Presidents Day on February 15.

However, his proposed device was never produced. It is speculated that it would not have worked as conceived because of the amount of force needed to lower and fill the air chambers.

Lincoln’s model—some reports say he carved it himself—resides at the Smithsonian in Washington, D.C.

## WHAT’S NEXT

# ACTIVITIES FOR KIDS, WOMEN

*Events are virtual, free, and open to the public.*



**Noche de Ciencias, or Night of Science**, February 23 and 25, is designed to introduce students and families to science and engineering through hands-on activities. It also provides college and career information in science, technology, engineering, and mathematics (STEM) via videos and virtual presentations.

The annual event is hosted by the USPTO and the Society of Hispanic Professional Engineers.

Both the February 23 and 25 event will be from 5:30 to 7:30 p.m. The hands-on activities are designed to help develop problem solving, inventive thinking, and introduce IP concepts—such as invention, patents, and trademarks—to K-12 students.

The USPTO has invited other STEM-focused federal agencies to exhibit and share information about careers in their respective fields.

For questions or information, email [education@uspto.gov](mailto:education@uspto.gov).



The **Women’s Entrepreneurship Symposium (WES)**, March 3, is an annual event focusing on resources and services available to help and support female inventors and entrepreneurs. Women account for more than half of the U.S. workforce but only about 13 percent of inventors named on patents.

WES features a host of expert speakers from various intellectual property realms, including prominent

and successful people in government and education. Recurring themes include the role of women in entrepreneurship, networking, and more.

The event is presented by the Office of Innovation Outreach. For questions or assistance, email [WES@uspto.gov](mailto:WES@uspto.gov).

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## CORRESPONDENCE

*Letters and emails in reaction to new and older **Inventors Digest** stories you read in print or online (responses may be edited for clarity and brevity):*

I loved the December 2020 Editor's Note. As a mother, it resonated with me. It also showed how innovation has helped keep communication alive and families in touch during some very difficult times!

The magazine just gets better and better. —PHYLLIS CLEMENTS



## CONTACT US

### Letters:

*Inventors Digest*  
520 Elliot Street  
Charlotte, NC 28202

### Online:

Via [inventorsdigest.com](https://inventorsdigest.com), comment below the Leave a Reply notation at the bottom of stories. Or, send emails or other inquiries to [info@inventorsdigest.com](mailto:info@inventorsdigest.com).



When **Tracy Chapman** says no, she means no.

The Grammy-winning folk-soul singer is \$450,000 richer after a settlement with rapper **Nicki Minaj**. Chapman had filed a copyright infringement lawsuit in October 2018, claiming Minaj's "Sorry" duet with rapper Nas had sampled her 1988 song "Baby Can I Hold You" without permission.

Minaj's team even asked to use a sample in "Sorry," only to be told "Sorry" by Chapman's team. In fact, reports said the documentation of multiple requests—all rejected—by Minaj and her team helped contribute to the high settlement award announced on January 7.

Last September, Judge Virginia Phillips of the U.S. District Court for the Central District of California ruled that Minaj's work was fair use and did not commit copyright infringement.

Chapman is among some recording artists who are on an unofficial "do not sample" list, indicating they are unlikely to

## 'SORRY' COPYRIGHT DISPUTE ENDS

allow even portions of their music to be re-used in recordings. (The late Prince is also said to be on that list—so naturally you can find many Prince samples by using your favorite search engine.)

"As a songwriter and an independent publisher, I have been known to be protective of my work," Chapman said on [thegrio.com](https://thegrio.com). "I have never authorized the use of my songs for samples or requested a sample. This lawsuit was a last resort."

Ill-advised "leaks" were key to the settlement.

According to [pop.inquirer.net](https://pop.inquirer.net), "Sorry" was meant to be on Minaj's album "Queen," only to be dropped when her representatives could not get clearance from Chapman. But the song was played on a New York radio station, leading Chapman to believe the song was recorded before any attempt to get her permission was made. Then the song was leaked online.

"The lyrics and melody of Chapman's 'Baby Can I Hold You' were strongly apparent in Minaj's unauthorized recording," [pop.inquirer.net](https://pop.inquirer.net) wrote.

Peter W. Ross, Minaj's attorney, said: "We settled for one reason only. It would have cost us more to go to trial."

# BRIGHT IDEAS

## Hitch

COMBINATION  
WATER BOTTLE AND CUP  
[carryhitch.com](http://carryhitch.com)

Hitch's makers say it is the first water bottle with a removable barista-approved cup hidden inside.

Its patent-pending design makes it easy to carry the bottle and cup together. Turn the crossbar on the bottom, and the cup releases from the bottle. Remove the inner bottle for cleaning.

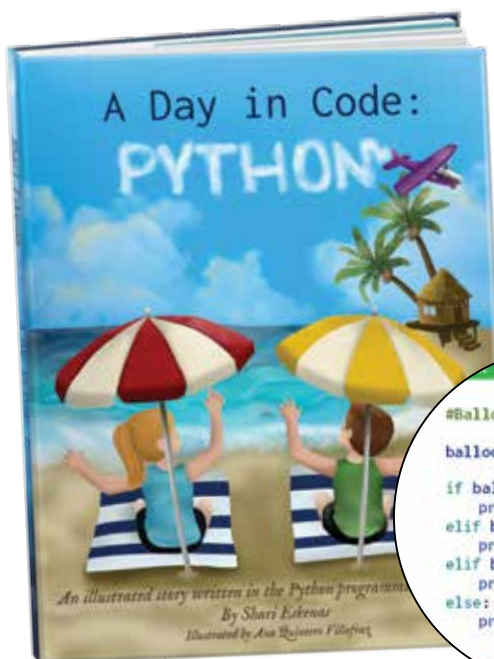
The bottle and cup are each full sized (18oz bottle/12oz cup), double walled, vacuum insulated, stainless steel, leak-proof and BPA free. The stashable slider lid is also leak-proof.

A separate piece protects the top and bottom of the bottle. Hitch will retail for \$69. Pre-ordering is available.



**"New ideas are like babies—beautiful, ugly and not finished yet."**

—MAX MCKEOWN



## "A Day In Code: Python"

PICTURE BOOK WRITTEN IN CODE  
[sundaelectronics.com](http://sundaelectronics.com)

The events of the illustrated book's story—a brother and sister's epic day—are described in Python computer programming to enable kids to learn coding in a fun way.

The book is set up with code pages on the left. These feature a high-level description of an event at the top, a complete Python program in the middle that represents the event, and the code explanation at the bottom. The right page features a full-page illustration depicting the event. Each program can be run on your computer.

Applications include data analysis, AI and machine learning.

"A Day in Code: Python" was the subject of a crowdfunding campaign, but no future retail price was available at this writing.





## GOOVIS Lite

GIANT-SCREEN  
PERSONAL 3D CINEMA

[goovis.net](http://goovis.net)

The makers of GOOVIS Lite emphasize the clarity of images with a 53 PPD (pixel per degree), now the highest number in the industry.

Weighing only 7.5oz, GOOVIS Lite features diopter adjustable lenses with ultra-high-display accuracy of +3D Hyperopia to -8D Myopia to eliminate double vision, bad contrast or any dizziness.

A cooling airflow system and special lens structure facilitate a better wearing and viewing experience without sacrificing the clarity and resolution of displayed images.

GOOVIS Lite will retail for \$749. The package includes a soft headband, HDMI cable with USB, carrying case, lens cleaning cloth and instruction manual. Shipping is scheduled for March.



## POSSIBLE DELAYS

Coronavirus-related factors may result in changing timetables and later shipping dates than companies originally provided.



## FLECTR 360

BIKE WHEEL REFLECTORS  
WITH 360-DEGREE VISIBILITY

[flectr.bike/collections/flectr-360](http://flectr.bike/collections/flectr-360)

Dual-part FLECTR 360 wraps around the bike rim and reflects car headlights from any direction, with an overlapping design that doubles its reflective power.

Easy to mount, the wheel reflectors have no drag, no weight, no dynamic imbalance. The new FLECTR 360 fits oval, round and even sharp-edged bicycle rims from 26 inches and up with a maximum of 32 spokes due to its exceptional elasticity and its special adhesive formula. The current release, the 360 Omni, has significantly increased the elasticity of the reflector.

Choose from the 360 Omni or 360 Wing design at \$14.90 euros (\$18 U.S.) per set—one reflector for each wheel—or extended packages. Shipping is planned for March at this writing.

# POP Went the Myth

ACCIDENTAL, CONTROVERSIAL CANDY INVENTION DIDN'T KILL ANYBODY—ESPECIALLY NOT LIFE CEREAL'S MIKEY **BY REID CREAGER**

**A**LL WILLIAM A. MITCHELL wanted was to create an instant soft drink.

When the General Foods chemist began his experiments in 1956, even his runaway imagination could not fathom that two decades later he would go on speaking tours to assure parents that his accidental invention—a candy marketed as Pop Rocks—would not hurt or kill their kids.

Or that General Foods would take out a full-page ad in 45 major U.S. publications to verify the product's safety.

Or that the company would deliver about 50,000 reassuring letters to school principals.

Or that the Food and Drug Administration would set up a hotline to keep the public calm.

To better comprehend the depth of this fear, remember that this was before the Internet—where the fuse for misinformation and paranoia can burn and spread in a matter of minutes. This particular rumor had a solid foundation dating to shortly after Pop Rocks was (were?) commercially introduced in 1974.

The furor was exploding like fireworks—or in this case, like fireworks in the mouth.

## Wanted a drink powder

Before General Foods began selling the candy, Mitchell used to include it when he sent holiday cards. “Oh, man!” he told *People* magazine in a 1979 interview. “It snaps, it

fries—you don’t know where it’s coming from!”

Many people of a certain age recall the startling oral tingling and popping after downing a handful of the pebble-like treats, available in an assortment of fruity flavors. Mitchell would have loved to attribute the formula to his science savvy. But it was simple serendipity.

“We were trying to make a carbonated beverage powder that would taste good,” Mitchell told *People*. The goal was a drink powder mixed with water that would become a delicious carbonated beverage. Scientifically speaking, “We wanted to put carbon dioxide directly into a solid,” he said.

But when Mitchell put the powder in his mouth, the carbon dioxide activated when the heat and moisture of saliva dissolved the chunks. The result was snap, crackle and pop on steroids.

Fellow scientists visited his lab and quickly acquired a thirst for the burst. They learned how the concoction—then known as Carbonated Candy—was prepared, as explained in U.S. Patent 3,012,893.

The mixture is heated to 280 degrees Fahrenheit, and carbon dioxide is added under pressure of 600 psi (about half the pressure used in soda). When the mixture cools and the pressure is released, the material hardens and shatters into tiny pieces. Those small fragments are filled with bubbles of carbon dioxide.

## A world of urban legend

Candy that explodes in the mouth? This seemed like the kind of dentist’s nightmare and kid’s dream that youngsters would literally eat up. The candy was patented in 1961.

But a long rain on the fireworks ensued.

According to *People*, General Foods “spent nearly 18 years trying to decide how to market” Pop Rocks. Finally a 1979 TV commercial aired, with the slogan “The Cracklin’s What’s Happenin’”

## PATENT PATHWAY



U.S. Patent No. 3,012,893 was issued to General Foods research chemists William A. Mitchell and Leon T. Kremzner by the then-United States Patent Office on Dec. 12, 1961. The application had been filed by General Foods Corp. on Jan. 6, 1959. The patent is titled “Gasified confection and method of making the same.”





**“It snaps, it fries—  
you don’t know where  
it’s coming from!”**

—WILLIAM A. MITCHELL, ABOUT HIS POP ROCKS

But not much was happenin’ on store shelves. General Foods pulled the product in 1983, partly due to lackluster sales and its relatively short shelf life. Prominent in the fizzle were persistent rumors that a child ate a large quantity of Pop Rocks and washed it down with soda—and died after his stomach swelled with gas and exploded.

It never happened. And although Mitchell claimed the amount of gas in the candy is less than one-tenth the amount in a can of pop, the loud whispers grew.

Urban legend went ape-doddy. It claimed that John Gilchrist, the actor who played Mikey in the iconic 1971 Life cereal commercial, died when his stomach blew up after consuming Pop Rocks and carbonated drinks.

To this day, pop-rocks.com is quick to rebut: “The actor who played little Mikey lives today in a completely unexploded form in NY.”

The public alarm silenced with time. In 2008, Discovery Channel’s “MythBusters” tested the myth using pig stomachs filled with hydrochloric acid to approximate a stomach’s acid. Not enough carbon dioxide was produced by the reaction to cause an explosion.

### Candy still going strong

Pop Rocks, distributed in Atlanta in the United States, remains the world’s leading manufacturer and seller of popping candy. It is now owned and manufactured by Zeta Espacial of Barcelona, Spain, which exports it to most countries.

Mitchell, who spent 35 years with General Foods, died in 2004 at 92. He was the leading inventor behind Jell-O, Tang and Cool Whip, and received 70-plus patents in his career.

But he will always be best known for Pop Rocks, even if the talk of danger always amused him: “The worst thing the rocks could do is make you burp.” 🍷



### VERSATILE FORMULA

The mouth-crackling ingredients in Pop Rocks make for a wide variety of uses, in food and even in cocktails. One popular drink is Jell-O shots with Pop Rocks—ironic, given that the candy’s inventor, William A. Mitchell, is generally considered the inventor of quick-setting Jello-O.

Pop Rocks can even help with science projects. Although the typical science project volcano combines vinegar, baking soda and red food coloring to produce a foaming “eruption,” the Growing a Jeweled Rose website shows you how to add Pop Rocks for a better blast.



### INVENTOR ARCHIVES: FEBRUARY

**February 19, 1878:** Thomas Edison received a patent for the phonograph. It was his favorite invention; he lost most of his hearing as a child.

In Edison’s original version, a piece of tinfoil was wrapped around the phonograph’s cylinder in the middle. When someone shouted a message into the piece on one side of the cylinder while turning the handle, a needle inside the piece would vibrate. The vibrations would go through the needle and make groove into the tinfoil. A needle on the other side could play back what was recorded.

# Think Like Your Subject

SOMETIMES, INVENTION SOLUTIONS REQUIRE US TO GO BEYOND WHAT WE CAN SEE **BY JACK LANDER**

**"OUT OF SIGHT, OUT OF MIND"** is a saying my granny used for scolding me when I forgot something. It has another meaning for inventors.

My wife and I love birds. We have two feeders on our patio, and, since we live in Connecticut, we also have a heated source of water for their drinking.

The bowl is terracotta, a kind of dull orange. That's not a natural color for a source of water, and we found the birds seldom drank from it. But there's another reason: Natural sources of water, such as a stream or pool, often have a ripple pattern produced by the breeze. And we don't have a lot of breeze on our patio.

Well, some bright inventor designed a flea-powered water rippler. It looks like an inverted cup without a handle. Two D-size batteries keep the impeller turning for several months, and

the birds respond. The ripples not only provide a natural appearance to the water surface, their movement attracts attention.

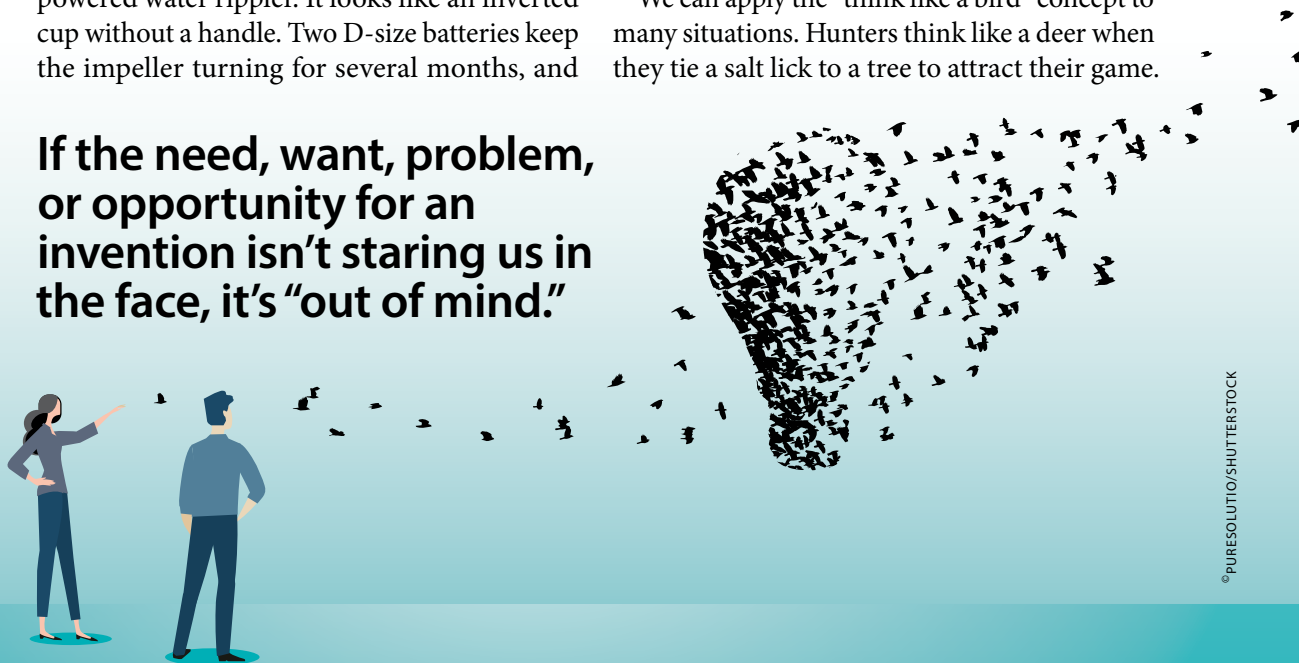
So without the rippler, the bowl is, in effect, out of sight to most birds. And that's a problem we inventors often encounter. If the need, want, problem, or opportunity for an invention isn't staring us in the face, it's "out of mind."

## Think like a ... deer?

It never occurred to me why the birds weren't drinking. (I hate it when Mary comes up with solutions that should have been mine. It's not fair. I'm the inventor.) But I excuse myself because solving the problem requires thinking like a *bird*, not an inventor.

We can apply the "think like a bird" concept to many situations. Hunters think like a deer when they tie a salt lick to a tree to attract their game.

**If the need, want, problem, or opportunity for an invention isn't staring us in the face, it's "out of mind."**



The inventor of the wind sock, used at small airports to indicate wind direction, had to think like a pilot. The inventor of the cell phone mount that fits in the cup holder between the front seats of a car thought like a driver who uses his or her phone or a GPS device frequently, and wants a secure way to hold it.

Granted, most of these cases are obvious, and maybe the thinker is the person with the problem. But in the case of the birds not drinking, we might say the thought process is once removed. It's not our problem, and the person or animal whose problem it is may be too close to it—too familiar with it—to think of a solution.

### Thinking opposite

There's another side to "out of sight, out of mind." The history of flight has at least one case in which the inventor tried to imitate the flapping wing motion of birds as a way to lift off something much heavier than the air. It required Leonardo da Vinci, in the 1480s, to think *unlike* a bird to invent a practical means of heavier-than-air flight.

In 1982, I applied for a job as an engineer for a medical instrument company. I had no prior medical instrument experience, but in order to hopefully impress the interviewer, I proposed what is now called a stent. My objective was to prevent blood clots from the legs reaching the lungs and killing a person, which was not uncommon at that time.

Nothing came of it, but four years later the stent used for clearing arteries was introduced by a company in France. I was thinking like a doctor, but probably too late. I did, however, get the job—and later invented the mechanism for the first disposable laparoscopic surgical instrument.

### Chances we missed

No doubt there are countless examples of both aspects of "out of sight, out of mind" that we will come across as we live new experiences and think of old. Every trade or profession has a need, want, problem or opportunity that has not been filled.

And there's often a time gap between the available technology and its application. Radar has been around since World War II, and we could have applied it to rear-end collision warnings long ago.

Big corporations have inertia. Why didn't they invent the automatic windshield wiper? Robert Kearns, who did not work for any of the auto companies, invented it.

I'm semi-retired nowadays, but I'm now thinking like a bird. I have to, in order to keep up with Mary. 🐦

**Jack Lander**, a near legend in the inventing community, has been writing for *Inventors Digest* for 24 years. His latest book is *Marketing Your Invention—A Complete Guide to Licensing, Producing and Selling Your Invention*. You can reach him at [jack@inventor-mentor.com](mailto:jack@inventor-mentor.com).



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## PART 1 OF 3

# Your Primo Podcasting Primer

HOW TO LAND A SPOT ON A BROADCAST  
FOR MARKETING YOUR INVENTION **BY ELIZABETH BREEDLOVE**

**P**ODCASTING IS NOT what one typically thinks of when considering the term “social media,” but the two are closely related.

Podcasting is a key part of any holistic digital marketing strategy for inventors or anyone in the business of selling—not to mention that there is something inherently social about the sort of connection a podcaster makes with his audience, particularly compared to other content mediums. There is something more intimate about hearing someone’s voice.

So why is podcasting a good medium for someone trying to launch or market a product?

Digital media consumption, including podcast listenership, continues to increase. Statista says that in 2020, 55 percent of Americans had listened to a podcast at some point. Spotify reported that 22 percent of monthly active users listened to podcasts on their platform in the third quarter of 2020, up from almost 14 percent in the third quarter of 2019.

In other words, podcasts provide another venue for you and your invention to get in front of a new, targeted audience.

Below you’ll find what you need to know about landing a spot on a podcast, along with some considerations if you’re thinking of starting your own podcast.

Part 2 on this subject next month will discuss how to start a podcast related to your business. The following

month, I’ll show how an innovator used social media to launch a podcast service for kids.

## Finding relevant podcasts

To begin, identify podcasts for which you would be a great fit. Go to your podcast platform of choice, such as Apple Podcasts or Spotify, and browse through the top podcasts in any categories relevant to you.

Once you have a solid list, move on to Google. Search phrases such as “top podcasts about [subject]” or “podcasts for [audience].” Add your Google findings to your master list.

After you’ve built a list, you can begin to curate it and prioritize podcasts to target. Take the time to research past episodes to see what types of topics are covered in depth, and look at the format.

Your goal is to identify podcasts that are related to what you would like to talk about, that your target audience likely listens to, and that have a format that suits you. For example, if a podcast is only the host talking to the audience and there are never any guests, it’s not a podcast you’ll want to pitch.

## Pitching yourself

Once you’ve narrowed down a list of target podcasts, you can start emailing the host or producers of each podcast to pitch yourself. Any time you pitch yourself or your company, keep



**Podcasts provide another venue for you and your invention to get in front of a new, targeted audience.**

the focus on how you can help the publication and add value for their audience.

Podcasters in particular look for guests with valuable content that they can share, and/or someone who already has an audience and a presence online in hopes that the guest will encourage their audience to listen to the podcast, growing the podcast's listenership.

When crafting your pitch, it may be helpful to start with the subject line. Make your topic or content the subject. Summarize your story or content but be clear and concise.

Begin your pitch by quickly introducing yourself. Explain who you are and what makes you a valuable, credible guest, but don't focus too much of your pitch on this. Remember that your goal with the pitch is to tell how you can provide value for the podcast, not to focus on yourself or what you can get out of the interview.

After introducing yourself, you can begin talking about what you can offer the podcast. Show that you've listened to it before and are familiar with what the podcast is about and its format, then mention some topic ideas you have or what you'd like to talk about.

### Preparing as a guest

Once you have an interview scheduled with a podcaster, it's time to get yourself ready.

First, prepare for the actual content of the podcast. Don't go in blindly. Listen to a few episodes ahead of time, if you haven't already, so you know what to expect. Additionally, write down any talking points you'd like to cover during your interview.

Make sure you are technologically prepared for the conversation, as it will almost certainly be done remotely. Ask the host how he or she typically handles interviews—via Skype, Zoom, a phone call or something else. Ask if there are any instructions for you, such as whether you should record the conversation from your end as well.

Once you know what technology you'll use, do a test run. Make sure you have a quiet room reserved for the call, then test your recording equipment and any software you'll use to run the call or record it.



### Steps after the podcast

First and foremost, follow up with the host to express your gratitude. Podcasting is a great way to network and form valuable connections, so don't let the opportunity go to waste.

Then, share, share, share! Blast out a link to your podcast episode anywhere you can: Facebook, LinkedIn, Instagram, Twitter and even to your email list.

Not only does sharing the episode show goodwill to the host, it provides an avenue for potential customers to connect with you on a deeper level by hearing your story told in your own voice. It gets your audience into your sales funnel.

Finally, look for your audience to grow and your sales to increase. If you have Google Analytics set up on your website, you should be able to track traffic coming to your site from the podcaster's site.

If you want to track podcast traffic even more closely, you can offer a coupon code exclusively to the podcast listeners and track when and how often the code is used. Just make sure to clear this with the host before your interview.

Happy podcasting! 🎧

**Elizabeth Breedlove** is a freelance marketing consultant and copywriter. She has helped start-ups and small businesses launch new products and inventions via social media, blogging, email marketing and more.



# Burro of Organization

VERSATILE TRAY SIMPLIFIES CARRYING GARDEN AND CONSTRUCTION TOOLS **BY EDITH G. TOLCHIN**

**H**ERE'S A NEW PRODUCT I noticed on "Shark Tank." Yard and construction workers can benefit from Little Burros, a versatile invention that saves you steps by organizing your tools and gadgets on your wheelbarrow.

**Edith G. Tolchin (EGT):** What is your background that led to this invention?

**Bob Thorsen (BT):** I've owned a construction business, Thorsen Construction, in the Virginia, Maryland and D.C. area for over 40 years. During that time, I have used tools and bought tools repeatedly. I am always observing which tools were the best, most helpful and quality made. It wasn't until working with my wife in the yard that I thought of the Little Burros.

Sudie kept asking me to run back and forth to grab her tools. It was exhausting! At one point she even raked up her cellphone into a leaf bag, so we had to call her cell phone to determine which leaf bag it was in. I thought of the idea to make a tray that sits on top of her wheelbarrow to hold everything she needs.

I went to the garage and built it out of cardboard and duct tape. After showing it to the kids, we realized it solved a lot of problems for a lot of people and that it would be helpful in the yard.

We found a design and engineer team, the Bolt Group, and

a plastic factory in Niles, Ohio. It was, honestly, a dream team. We showed the 3D-printed prototype at the National Hardware Show in Las Vegas and it won the Retailers' Choice Award out of 11,000 products. That was the last push and boast of confidence we needed to get it into production.

**EGT:** What is the difference in the two styles featured on your website—The Original Little Burro, and the Burro Buddy?

**BT:** The Original Little Burro was the very first concept. It's a garden tray that sits on top of your 4-, 5-, 6-, and 7-cubic-foot wheelbarrows, organizing all your tools. It holds a drink, two long-handle tools, two short-handle tools, a flat of flowers, a water-resistant compartment for your cellphone, a spot for a 5-gallon bucket, and even a spot to hold your lumber so you could use it as a saw horse.

We won several awards, including Bronze in the International Design Awards, and knew we should take it into production. After selling a good amount, we were able to hear customers' and store buyers' feedback.

A lot of people were asking for a simplified version to carry the long-handle tools, short-handle tools, cellphone and drinks. So we decided to make the Burro Buddy. It takes up less of a footprint over the top of the wheelbarrow, allowing you to maximize loading it up while still providing the basic organization features of The Original Little Burro.



**"We have a very strong patent protection. You could have a billion-dollar product, but if it's not protected, it's pretty much worthless to you."**—BOB THORSEN





**EGT: How did you get on “Shark Tank”?**

**BT:** We can’t share too much, other than what you saw! But I will say it was an extraordinary experience. For the past seven years, people have been telling us, “Hey! You should go on ‘Shark Tank’! So it was fun to actually see it through.

When we originally applied, my daughter, Becca, spearheaded it. She passed away a short time later, so it was significant for me and my daughter Mollie to see it through and finish what we all started.

We were offered two royalty deals but turned them down. We went in asking for equity and knew we weren’t going to be persuaded otherwise. No deal is better than a bad deal!

**EGT: Prior to “Shark Tank,” did you try any crowdfunding?**

**BT:** No, we are self-funded. We knew if we brought on outside investors it would only work if they were very strategic partners. We were hoping that would have been one of the Sharks, but not at the cost of a royalty deal.

**EGT: Are your inventions patented?**

**BT:** Yes! We took this aspect of the business very seriously and did not encounter any problems during the process. We have a very strong patent

protection. You could have a billion-dollar product, but if it’s not protected, it’s pretty much worthless to you.

**EGT: Where are you manufacturing?**

**BT:** We are manufacturing them in Niles, Ohio. China never really was an option for us; we donate a portion of all our sales to “A21” to battle human trafficking, and we’ve been aware of the labor trafficking for a while. We knew the only way we could really guarantee our products were free of labor trafficking was by making them at a factory in the United States.

**EGT: Who handles your quality control?**

**BT:** We trust our factory here in the States to handle the quality control, which was also one of the benefits with manufacturing in the United States. You get to know the people behind the factory and can give feedback if there is something you are not happy with. However, we ultimately are the last party to ship them out, so we double-check their work.

**EGT: Who handles your PR?**

**BT:** My daughter, Mollie. She’s our chief operations officer, so she wears many hats. I will also

When Bob Thorsen grew tired of going back and forth to retrieve yard tools and other items, he invented The Original Little Burro tray (inset) and later the Burro Buddy.

add that we are fortunate to have gotten a great deal of organic press. We have awesome customers who have helped spread the word.

**EGT: Do you have any new products in development, or lined up for launch?**

**BT:** Yes! Our goal was always to have a line of quality, helpful, innovative products. We want to make tools that help solve problems and can help save people time and energy.

We currently have the concept for our third product, but COVID-19 put a little bit of a dent in our plans for a target release. It is a product we've been really excited about. We can't tell you much yet, but we think the world would love it.

**EGT: Have you faced any obstacles in developing The Original Little Burro or the Burro Buddy?**

**BT:** Many! What inventor or startup hasn't? We have been in business for seven years now, so we've seen our fair share of obstacles personally, and as a company.

Every one of them just made us work harder. Half the battle is sticking through the obstacles and not seeing them as a roadblock but a hurdle to just jump over.

**EGT: Any advice on developing an invention?**

**BT:** Everyone has great ideas, but not everyone has the drive and work ethic to see it through. Being an inventor isn't thinking of something; it's making something.

Remember these words when developing a product: "It will take you longer than expected and cost more than you planned." 🐼

*Details: [littleburros.com](http://littleburros.com), [info@littleburros.com](mailto:info@littleburros.com)*

Books by **Edie Tolchin** ([egt@edietolchin.com](mailto:egt@edietolchin.com)) include "Fanny on Fire" ([fannyonfire.com](http://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"

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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!

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[EGT@egtglobaltrading.com](mailto:EGT@egtglobaltrading.com)

P.O. Box 5660 - Hillsborough, NJ 08844

845-321-2362

### 2 GET A WEBSITE!

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# Cooler Heads Prevail

MAN'S AIR-CONDITIONED HARDHATS PROVIDE COMFORT AND MAY HELP ENSURE SAFETY **BY JEREMY LOSAW**

**S**TEVE FEHER has always been about literally keeping his cool, and has made a career of it. So his idea on a sizzling Hawaii day years ago was almost inevitable.

"It was so hot that I didn't want to go riding on my motorcycle," he said. "I was like, 'Wait a minute. I'll just put a seat cooler on my motorcycle helmet.'"

"Of course that is just the basic idea, and from there you work out the details."

With the success of deploying his cooling technology into a motorcycle helmet, Feher adapted it to other helmet designs over the years.

Construction helmets are a natural fit. There has been little innovation in the category, it is a huge market, and mistakes from heat-fatigued workers can be financially and medically costly.

So, Feher used a similar layout to develop a prototype of the AC Hardhat. The device was to debut at the all-virtual 2021 Consumer Electronics Show, where he hoped to license it to a helmet manufacturer to deliver to the masses.

The AC Hardhat looks just like a traditional hardhat but has a protrusion in the back that houses a thermoelectric generator (TEG).

Sometimes called a Peltier device, TEGs are an electronic mechanism that creates a temperature differential between its upper and lower surfaces when provided a given voltage. Combined with a fan, the AC Hardhat moves cool air through special cushioning in the helmet and to the scalp.

The hardhat is powered by an external lithium battery that provides 2 hours' run time. The helmet itself weighs just 11 oz. and the whole system with the battery weighs just over 1 lb., making it nimble enough for use on construction sites.

## Blanket beginnings

The AC Hardhat is the latest in a long line of TEG-based technologies Feher has brought to market in more than 30 years in the personal cooling industry. He has 29 patents listed on Justia Patents.

His journey to create these devices started from a desire to sleep comfortably in his Hawaii apartment.

"I was living in a historic house, and the owner of the house didn't want air conditioners on the outside of the house," he said. "He said it would spoil the aesthetics of it. So I invented and designed the air-conditioned blanket."

The blanket, made from TEGs, worked well at the start of the night. But it had problems when getting bunched up from movement. However, after the technology was patented in 1988, Feher was able to license it to a medical company for hospital environments to keep patients cool during surgery.

The AC blanket's development provided revenue and kick-started his journey developing

## PATENT PATHWAY



Patent No. US6954944B2, "Air Conditioned Helmet Apparatus" patented on Oct. 18, 2005, has this abstract description: A helmet includes a thermoelectric heat pump mounted onto a rear surface of the helmet shell for delivering temperature conditioned air to the interior of the helmet shell. A multi-layer structure on the helmet shell interior distributes conditioned air across the scalp and directly onto the face. An optional scoop directs ambient air to the heat pump.

solid-state cooling devices for other applications. "I just really kinda went whole hog into applying thermoelectrics into all of these different issues."

He applied the same principles to pillow-cases, mattresses and even car seats, creating a powerful patent portfolio that he used to lock in licensing deals. The car seat version was licensed to major car manufacturers, including Ford and General Motors, and used widely for climate-controlled seating.

### Weight, sound challenges

The first prototypes of the motorcycle helmet worked well, but there were challenges.

Feher used similar TEGs in the helmet as he used in other applications, so he had plenty of power. However, he had to keep the weight down to keep strain off the neck and get good air flow through the tight confines of the helmet.

He was able to put a connector on the helmet to use 12V power from the battery of the motorcycle. He found a spongy but open spacer material that allowed the helmet to provide comfortable cushioning yet open air channels to duct air to the head.

The helmet environment also created an acoustic challenge.

"The helmet acts as sort of an amplifier. So you put any kind of motorized thing on a full-faced motorcycle helmet, and it's like being inside of a theater where the sound is," he said.

To combat any odd harmonics, the manufacturer of the helmets used high-tech, double-balanced motor assemblies to keep stray vibrations and noise to a minimum.

### IP and further adaptations

Feher's strategy is to develop and license his technology, so patents are a key part of the playbook. Intellectual property is the key asset he needs to help generate revenue. His AC Helmet, a precursor to his current invention, was patented on Oct. 18, 2005.



**Construction helmets are a natural fit. There has been little innovation in the category, it is a huge market, and mistakes from heat-fatigued workers can be financially and medically costly.**

He focuses on filing utility and design patents in the United States and Europe, using patent attorneys with whom he has longstanding relationships to help with the filings.

Because he has intellectual property around such broadly-used devices, he has had issues with infringement. However, he has extreme depth of knowledge in his space and strong IP. He has always been able to fight off imposter products.

The undisputed king of personal cooling, Feher continues to work on integrating TEG technology into other impactful head-cooling applications that can be licensed and made into useful products. 🧊

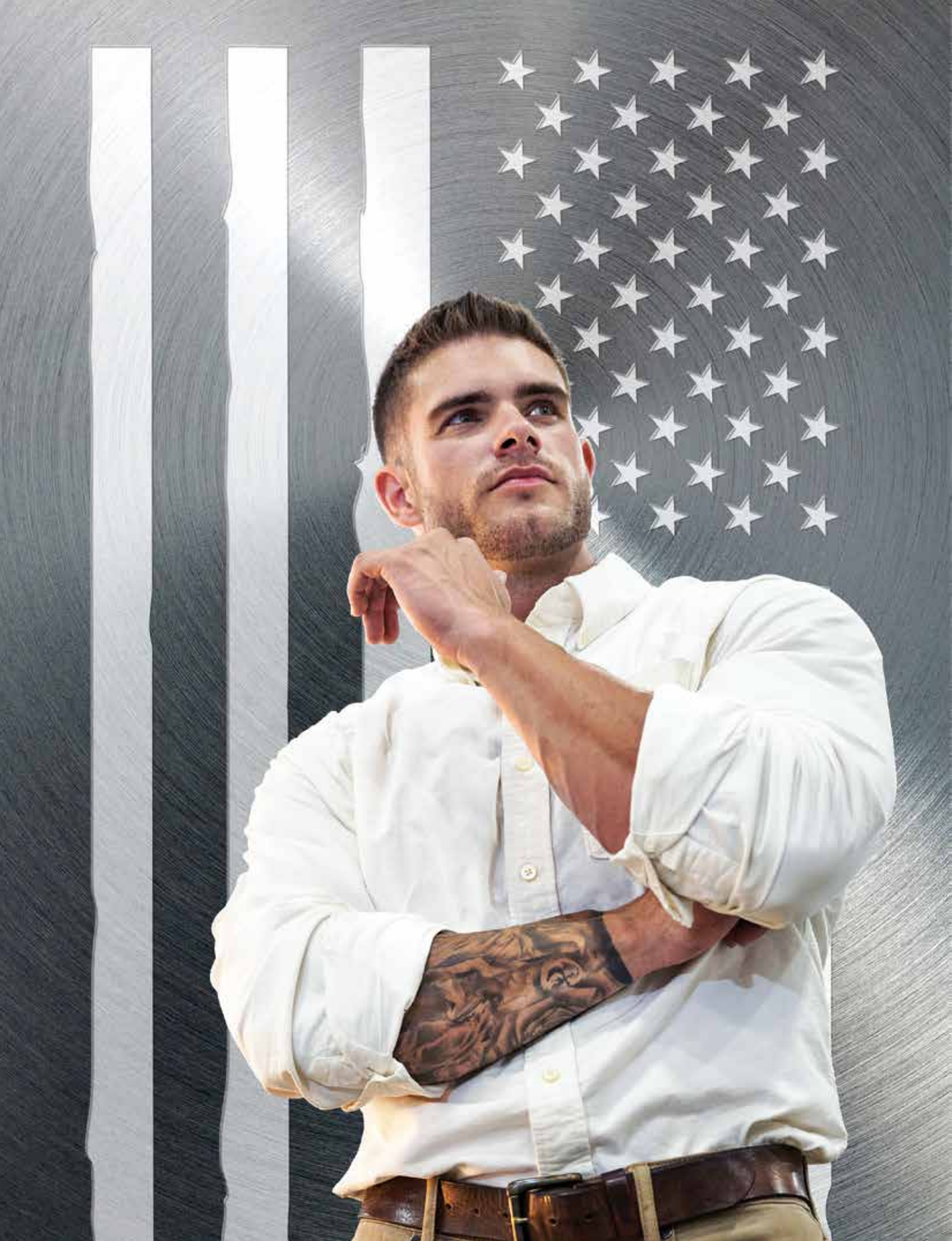
Steve Feher's AC Hardhat is the result of more than 30 years in the personal cooling industry.

Details: [feherhelmets.com](http://feherhelmets.com), [feherresearch.com](http://feherresearch.com)

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









# STEEL WILL

ARMY VETERAN CREDITS CORE VALUES IN HELPING  
TO BUILD A \$100 MILLION HOME DÉCOR BUSINESS **BY REID CREAGER**

**C**OLIN WAYNE'S memory of May 3, 2012, is in vividly clear contrast to the hanging veil of hazy smoke captured on a grainy video that day.

"I was working out in the gym on base—in the Paktika Province—in Afghanistan when a 107mm rocket exploded three feet away from me," he told *Inventors Digest*. "Between the ensuing gunfire and my eventual rescue, I was initially in such utter shock by the explosion that I couldn't really feel any pain nor process what had just transpired."

The explosion left the staff sergeant with a lumbar contusion in his back, permanent tinnitus in his left ear, and injuries to his arms, stomach, and right leg from shrapnel wounds. He suffered severe nerve and brain damage.

Wayne was medically evacuated twice before returning home to undergo rehabilitation and complete an arduous six months of physical therapy.

## Values carry over

Even at 22, the strapping Huntsville, Alabama, native showed no fear in the face of major challenges. He already had his share.

Wayne dropped out of school at 16. The military was in his blood; his grandparents served. So had his older brother. On Sept. 26, 2006, he officially joined the U.S. Army a month after turning 17.

His decision had nothing to do with having the Army help pay for college or a lack of other options. He viewed service to his country as crucial to his development as a person.

Today, Wayne ticks off just some of the core values from the military that were instrumental in his personal and professional growth as the founder of a \$100 million home décor/wall art company called Redline Steel—the fourth-fastest-growing manufacturing company in America: Integrity. Selfless service. Loyalty. Duty. Honor. Perseverance.

He served with distinction in all three of his tours: Operation Bright Star in Cairo, Egypt, in 2008; Operation Iraqi Freedom, 2009-10; and Operation Enduring Freedom in Afghanistan in 2012.

Danger was omnipresent, especially during his last two tours. Wayne smiles and shrugs about that now: "I've always done better under pressure."

He began his military career as a military police officer and worked his way up the ladder,

Army veteran Colin Wayne has emerged from a near-fatal 2012 rocket explosion in Afghanistan to founding Redline Steel, which he started from scratch in 2016.

eventually getting pinned as staff sergeant and becoming the youngest in the brigade to earn the honor.

### **Blasted, saved in the gym**

Wayne has recounted the events of May 3, 2012, to numerous media outlets with unwavering clarity and big-picture optimism.

“When you can look death in the face, you can appreciate life much more,” he said—although he still feels like he has Post-Traumatic Stress Disorder at times.

He finds particular irony in the fact that he was working out in a gym at the time of the explosion, and that his workout regimen ultimately helped land him a lucrative career as a fitness model. “The gym almost killed me, but it also saved my life.”

Although he played many sports while growing up, Wayne was small. When he enlisted in 2006, he weighed 145 lbs. His long desire to be bigger and stronger grew with the physical demands of the military, and he began working out regularly in 2009.

Less than 18 months after his near-fatal injuries in Afghanistan, Wayne landed his first magazine cover on *Ironman Australia*.

He ended up on more than 50 magazine covers worldwide—making \$30,000 to \$40,000 a month—before scratching the itch to start his own business.

### **Meeting of destiny**

That new chapter began with a chance meeting and an unwelcome plot twist at the end—an ending that Wayne turned into a beginning through determination and hard work.

“I started out as a customer after coming across a local business that manufactured steel art when searching for a customized baseball gift for my son Carsyn’s birthday,” he said. “When I initially reached out to inquire about current lead times and availability, I was told 8 to 10 weeks due to the holidays.

“However, 15 minutes later, the owner reached back out to me and said he had no idea it was Colin Wayne and that he could get my order completed that same week, ending the conversation by stating, ‘I would love to be at your level one day.’”

Wayne eventually contacted the owner and requested a consulting meeting. After about a

Wayne holds one of his company's wall decor pieces while reviewing an order. A high school dropout, he is immersed in all aspects of the business and “humanizing the brand” on camera.



month, he sent an official proposal offer to become a partner, “to which we verbally came to terms.

“However, on the day we were supposed to sign all the legal documents with the attorneys, he got cold feet and backed out entirely. Although I was frustrated with his decision, I told him I completely understood his decision, but that I would proceed ahead on my own and rather than becoming business partners we would become direct competitors.

“Without any equipment, nor a building or a background in manufacturing, the very next

day I purchased my first CNC plasma machine (a system in which a machine carries a plasma torch that can move that torch in a path directed by a computer) and the rest is history!”

### ‘Ridiculous’ beginnings

When talking with Wayne, it’s immediately clear that he didn’t drop out of high school due to a lack of intelligence. He discusses complex personal growth and business concepts with ease—he’s a proponent of the positive-energy Law of Manifestation—and spews out numeric

**As a fitness model, Wayne appeared on more than 50 magazine covers worldwide—making \$30,000 to \$40,000 a month.**



## COLIN WAYNE

**Occupation:** Founder, owner, CEO of Redline Steel

**Born:** Huntsville, Alabama

**Home:** Huntsville, Alabama

**Family:** Wife Breanna, children Carsyn, Brelin and Brinley

**Education:** High school dropout at 16

**Hobbies:** Family time

**Most inspirational person:** Mark Cuban

**Favorite book:** “Good to Great,” by Jim Collins

**Favorite movie:** Anything with Adam Sandler or Jim Carrey

**Favorite quote:** “Lead from the front.”



### Awards/Honors:

**2017**—American Red Cross Humanitarian Leadership of Excellence Award

**2018**—Combat Veterans Motorcycle Association “Vets Helping Vets” Sponsorship Appreciation Award

**2019**—State of Alabama representative for “Made in America Week” hosted by the Trump Administration at the White House

**2019, 2020**—Alabama Gov. (Kay Ivey) Commendation Award



**2020**—“Inc 5,000” List (Ranked: 110)

**2017, 2020** - Huntsville Police Dept. Certificate of Appreciation

**2020**—Retailer of the Year Award presented by the Huntsville/Madison County Chamber of Commerce







**Colin Wayne served in Egypt, Iraq and Afghanistan. "I've always done better under pressure," he said.**



business targets and accomplishments like a computer.

So it may not surprise you that when he started his business on Jan. 6, 2016, he basically did it on his own. He built the early foundation with the help of YouTube videos.

His factory began at a modest 5,000 square feet, scaled just three months later to 10,000.

"I remember powder coating out of a home-made kitchen oven," he said in a promotional video. "We powder-coated hot-rolled sheets of steel together. We had a door where we literally pushed it up against it, and installation all along the outside. It looked horrible.

"With 24-inch parts, we had to lift it out, flip the piece, put it back in the oven, and it would be done baking—in about three hours. It was ridiculous."

But the company stayed loyal to its mission and a product it knew had demand. Redline Steel filled its 100,000th order a little over a year after opening.

Now the warehouse has more than 110,000 square feet. The company has 100 employees and more than 1 million customers.

### **Consistent methodologies**

Innovative, high-quality product is the core of

the company's success. Wayne is not ashamed to say that he gets a lot of innovation inspiration from customers: "We're not afraid to ask them what they want to see."

The product, much of it wall décor, is elegant yet whimsical; strong yet sensitive; and always with positive messages. Patriotic themes abound.

The company continues its robust growth—"with no patents at the moment, but a couple different trademarks," Wayne says—via consistent, traditional, progressive and integrity-driven processes:

- Humanizing the brand, "getting in front of the camera."
- Remaining highly visible: "We spent 13 million in the last three years on Facebook ads, and are now getting into influencer play."
- Creative marketing that includes 2dollartuesday.com, in which a new product starting at \$2, made from high-quality American steel, is offered each Tuesday. "When we do a text message, we can have 10,000 to 12,000 people live within a couple minutes."
- Always watching metrics—"getting comfortable with being uncomfortable."
- Striving for extreme goals to always be reaching higher. "We want to be a billion-dollar business."

In just five years, Redline Steel's warehouse has swelled to 110,000 square feet.

- A 100 percent American-made company, using 100 percent American-made steel and materials. “We don’t outsource anything.”

Because Redline Steel is a direct-to-customer-driven e-commerce business, the COVID-19 pandemic has not been a significant factor. “We thrived as a business” in 2020, Wayne said, “allowing us to avoid lay-offs while additionally hiring dozens of full-time employees and helping to stimulate our local economy in Huntsville.”

### A lesson and a message

Even the occasional failure is seen as a growth opportunity. In 2018, a vital machine went down at the factory, leading to many customers not getting Christmas gifts on time.

Reaction was strong and sometimes severe, resulting in bad press and even coverage from a local TV station.

“I’m upset with myself because we didn’t get this out,” Wayne said in the TV interview. “We made a promise to these customers. I wasn’t able to deliver. ... This is a massive learning lesson for us at Redline.”

Wayne hired more people and extended hours to combat the issue, even emailing customers in advance to let them know their orders would not be arriving on time and offering them refunds.

“I looked like the Grinch,” he said later. But his mantra remains: “I want my failures and painful moments to fuel me, not beat me.”

That experience underscores Wayne’s message for prospective inventors about positivity and perseverance.

“Anyone can have a multi-million-dollar idea, but without the proper planning, execution, self-confidence and a relentless drive, you’ll be stuck at the idea stage,” he said. “The biggest deterrent in achieving your full potential is your own inner critic.

“Don’t be discouraged if your plan gets declined or denied. Continue to be persistent and don’t settle based on someone else’s opinion. Your drive and persistence is key in avoiding complacency.”



### THE SOFTER SIDE OF STEEL

When COVID-19 first hit the United States early last year, the first response of many businesses was to cut back. Redline Steel’s first response was to give back.

The company began a campaign to thank frontline workers in the medical field, first responders, and law enforcement across the country by designing and sending steel wall décor as a free gift from its online store. By the end of the initiative, “we donated nearly \$5 million in product across the country, which helped jump-start our biggest year in revenue and company growth,” Colin Wayne said.

Redline Steel gifted more than \$2 million worth of product—more than 300,000 items in all—to first responders and essential workers across the country. The 17 different products included new additions designed specifically for each profession.

Giving back, locally and nationally, has been synonymous for the company throughout its 5-year existence.

Early on, it donated \$50,000 in products to the Huntsville Police Department and \$25,000 to the American Red Cross. Redline Steel has also given back to Alabama farmers, veterans groups, schoolteachers, and truckers. In 2017, it donated thousands of dollars to the American Red Cross and other disaster-relief organizations to benefit victims of Hurricane Harvey.

Wayne has a particular soft spot for the Olivia Hope Foundation, which raises awareness for different kinds of cancers.

“Our partnership last year with the Olivia Hope Foundation was particularly special for myself and my family, given our niece Melody’s battle with cancer,” he said.

“It’s one thing to hear or read about the benefits and resources organizations such as the Olivia Hope Foundation provide, but physically seeing the impact and value that this amazing foundation had on my family was rather touching and helped guide our family through such an emotional journey.”

Wayne capped 2020 by joining actress Shenae Grimes-Beech (shown above) to surprise shoppers at a Franklin, Tennessee, Pottery Barn and buying their holiday gifts. They paid for their blankets, mugs, pictures, Christmas-themed decor and other items—about \$25,000 worth, according to *People* magazine.

# Working With a Vendor

PREPARING A DETAILED LIST OF EXPECTATIONS CAN HELP ENSURE A SALEABLE FINAL PRODUCT **BY DON DEBELAK**

**I**NVENTORS have to negotiate more than price with their vendors. They must clarify deliverables and timelines, and set quality and performance standards.

I recommend inventors prepare a simple list of what they expect (expectation list) from their vendors on a variety of points, have the vendors agree to those points, and then use that list when discussing progress with the vendor. An added benefit of this approach is that it makes it clear when you need to approve a vendor action.

When starting with a vendor, break down the list into three phases:

## Phase 1

DELIVERABLE	TIMELINE
Projected price for prototype	1 week
Preliminary prototype design for approval	3 weeks
Initial prototype for approval	6 weeks
Preliminary packaging design for approval	6 weeks
Material selection approval	7 weeks
Projected manufacturing price	7 weeks

Inventors have a tendency to skip over the details in Phase 1 because they have a definite view of what they want, and they expect the people they are dealing with to understand their vision. That is seldom the case.

Also, Phase 1 is the time to see gauge your relationship with the vendor. Be firm about what you want. If it doesn't go well, you might want to change vendors.

## Phase 2

DELIVERABLE	TIMELINE
Molds and fixtures delivery	2-26 weeks
Inspection criteria molds and fixtures	2 weeks
Final package approval	2 weeks
Final prototype approval	3 weeks
Inspection checklist approval	4 weeks



The quality control checklist covering when the product will be inspected and by what criteria—and at what steps—is crucial. You should iron this out in advance.

Ask to be present at the first production run. There will be issues. Take pictures of flaws to include on the quality control checklist for which defects are not acceptable.

I know this seems like a lot of hassle. But your customers will send your product back to you, and never order again, if it is not perfect.

## Phase 3

DELIVERABLE	TIMELINE
Delivery after receipt of order	10 weeks
First article inspection after receipt of order	7 weeks
First packaged product inspection after receipt of order	8 weeks
Down payment due date after receipt of order	5 weeks
Product inspection report review before shipment	8 weeks
Invoice on balance due	10 weeks

The dates and deliverables schedule here will change for every product, with some items deleted and others added. Your manufacturer will also probably want to negotiate each of these items. ☛

**Don Debelak** is the founder of One Stop Invention Shop, which offers marketing and patenting assistance to inventors. He is also the author of several marketing books, including Entrepreneur magazine's *Bringing Your Product to Market*. Debelak can be reached at (612) 414-4118 or [dondebelak34@msn.com](mailto:dondebelak34@msn.com).





# Want to Sell to Stores?

## ASK YOURSELF 5 QUESTIONS

**D**o you dream of seeing your invention sold at brick-and-mortar stores such as Target or Walmart? Then start your sell-to-stores journey today.

Once you are in the store where you want your product to be, ask and answer these questions:

- 1. Where would this item fit in the store?** Get familiar with the aisle where you think your invention will be sold. How would it fit? Is the aisle mostly shelves, or pegs with product hanging? Considering your current design size and shape, can your invention physically fit and be sold in the aisle? How deep and high are the shelves?
- 2. Is this item priced right for this type of store?** Is it in the ballpark of what other items are selling for in that aisle? Is your pricing higher, lower, or the same as like items? If you're higher priced, make sure customers would easily value and justify the cost difference.
- 3. What product packages stand out from the rest?** Look at the product packaging. Which items jump off the shelf, and which ones fade to the back? Now picture your item on the shelf. How does your packaging compare? Are the graphics impactful? Is your key selling point easy to see?

**4. Who is the key competitor in the aisle?** Pick up that competitive product, check it out on all sides. Take pictures. You will need to know how to sell against this competitor in your buyer meetings. Think about how your item is different. Why should the buyer make room for you?

**5. Is there another place in the store where the item would fit?** You should find a space in the store where your item could fit, even if there is nothing like it in the aisle. If it doesn't belong in an obvious category that has signage (such as health and beauty aids, electronics, housewares), is it a seasonal or impulse buy or something else? You must determine your category to get started; every buyer is in charge of a specific section in the store.

Visiting the store gives you a realistic view of where and how your product could be sold. This is a huge first step in your journey of successful selling to stores.

*Consumer Goods Growth Strategist Cathy Parks, creator of the PARKS Method, helped Barbie become a billion-dollar mega-brand and now helps inventors and emerging brands successfully sell to retail stores.*

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# Putting Lice on Ice

WHEN DESICCATION DEVICE NEEDED TECHNICAL UPGRADES, CHARLOTTE DEVELOPMENT TEAM HAD THE ANSWERS

BY JEREMY LOSAW

**U**NTIL SHEILA FASSLER came to Enventys Partners looking for help with the Flosonix lice desiccation device, I had no idea how prevalent and how much of a problem head lice infestations can be.

The effects can be more serious than embarrassment and fear. The small, blood-sucking insects nest in the scalp and suck blood from the host human, causing itching that can lead to sores and scabs. When lice eggs are laid at the base of hair follicles, the sticky egg sacks can glue hair together and make it nearly impossible to comb.

Over-the-counter treatments at drugstores often provide only a temporary slowdown to lice and fail to eradicate them. So a small case of lice can easily slide into months of infestation.

Sheila and her team at Pediatric Hair Solutions—like Enventys Partners, based in Charlotte—own a number of lice clinics in the Southeast and have developed a two-step solution that has been proven to kill both active adult lice and their eggs.

The treatment starts with the Flosonix pretreatment solution, a non-toxic liquid applied to the scalp that suffocates and kills lice by clogging their respiratory system. Then patients come into the lice clinic, where technicians administer a 40-minute treatment with the Flosonix device that blows controlled-temperature warm air onto the scalp to dry out the lice eggs, causing them to crack and die.

## Identifying deficiencies

The Flosonix team came to Enventys Partners with a lice desiccation (extreme drying) device that was capable of successful treatments, albeit with a few nagging issues.

The device was controlled with an Arduino, which had trouble operating for long periods in the heated environment and would periodically lose its programming. Because the air

temperature at the output of the hose is crucial to the efficacy of the device, the team wanted tighter control of air temperature at the output for more consistent treatments.

The user interface needed an upgrade from the mechanical dial it was designed with; the team also wanted the head to be more ergonomic for technicians. Another goal was to give the blower a brushless motor to cut down on particulates and maintenance..

## Complete redesign

Because most of the issues were related to the electronic system, the device was completely redesigned from the ground up.

We replaced the Arduino with a Particle Photon WiFi-enabled controller, which gave Flosonix IoT capability. This allowed us to send performance data to a database to monitor its health and the ability to update the firmware remotely.

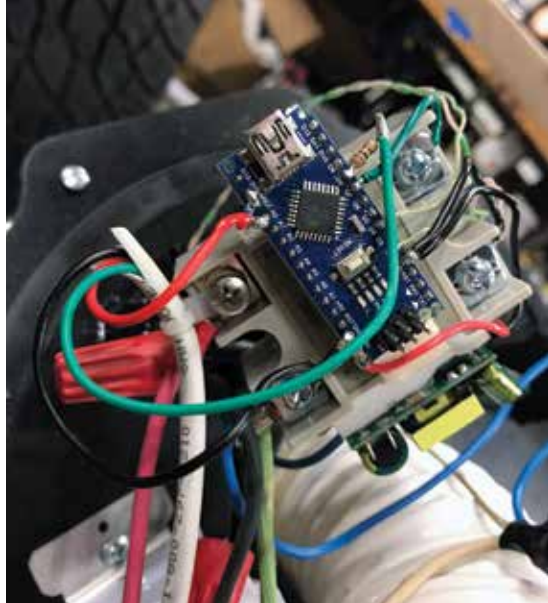
A new control circuit was designed for the brushless motor to allow for tighter temperature control of the air, and we added a touchscreen interface. The mechanical systems were also given a boost.

The form factor of the device stayed the same, but we designed a new head to distribute air more evenly to the scalp. We also made the hose and tips more ergonomic and easier to install.

Once the design was complete, 10 of the new spec units were built and distributed to clinics in the Carolinas, New York, and Indiana for testing.

After a year of field-testing the first 10 units, the team made a series of final design refinements before manufacturing.

A key issue was the weight of the unit. The initial device bodies were made from a large PVC tube that was thick and heavy. The body was redesigned to be a series of bent aluminum parts that were much lighter but still rigid.



**Because most of the issues were related to the electronic system, the device was completely redesigned from the ground up.**

The circuit was modified to have additional diagnostics and backup sensors to add more robustness in the field. The firmware was modified to allow over-the-air updates to the touchscreen. We also added a simple app to allow users to change the WiFi credentials on the Particle Photon inside the device.

After changes were verified with a final round of prototypes, the new Flosonix was ready for production.

### Production success

The production of the Flosonix device is done at the Enventys Partners facility. The units were purposely designed for low-volume production, as the initial manufacturing quantities would be in the hundreds for the relatively large devices.

For this reason, many of the plastic parts were designed for 3D printing, including parts in the high-heat areas adjacent to the heater. Because these parts needed to be tough, heat resistant, highly aesthetic and sterilizable, it was a big

challenge to find appropriate additive manufacturing equipment and materials.

Fortunately, Enventys Partners was able to team with Origin 3D printers for the job. Two of Origin's "One" 3D printers were installed in the Flosonix manufacturing area; they run for more than 20 hours per day, using specially formulated materials from Henkel.

The printed parts were mated up to the rest of the mechanical and electrical sub-assemblies. The final assembly of the device was done in a secure area, with each device enduring more than an hour of rigorous quality-control testing to ensure proper performance before being shipped to end customers.

Flosonix units are now distributed to lice clinics around the country. Users are effusive about how easy the device is to use and its effectiveness.

The firmware that controls the device continues to be fine-tuned, with periodic updates pushed to devices in the field. A cellular-connected version is due to launch this year. 📶

**Top left: The original Arduino microcontroller was replaced with a Particle Photon and all new circuitry.**

**Bottom left: A new head was designed to distribute air more evenly to the scalp.**

**Above: The improved Flosonix has gotten positive reviews.**



# For Free Traffic, PR Tops SEO

TRADITIONAL MARKETING IS STILL THE BEST WAY TO MAKE CUSTOMERS AWARE OF YOUR INVENTION **BY ALYSON DUTCH**

**EVERY INTERNET MARKETER** I've met is staunchly defensive of direct result marketing methodologies as the only way to sell a product.

Yes, more than 60 percent of products can be found online, but that's not the marketplace for all things. E-commerce has not replaced how we become aware of inventions or products.

Whether you're selling online, in a brick-and-mortar environment, a bodega in New York City or a kiosk in India, you still need to get customers to know about you before you can sell to them.

For e-commerce, search engine optimization (SEO) is necessary to get traffic to your store. (Editor's note: SEO is the process of making web pages attractive to search engines, most notably Google. The better a website's SEO, the likelier someone will come across the website when searching for information on the Internet.)

But I'm going to tell you why public relations is more effective.

## Proven approach

In 1991, when the first Internet bubble was growing, I attended one of the first swanky Internet networking organization parties for a large networking organization in Los Angeles. Everyone had a business idea, and selling it online was so novel that money was being thrown at non-revenue-generating business models.

Being the entrepreneur I am, I saw an opportunity: How were these products going to market themselves? At the time, entrepreneurs were so over the moon about e-commerce, they naturally thought if they were selling online, they had to market online. This could not have been further from reality.

I was not sure at first that PR would be well received by this group. However, within an hour of being there, I came up with my own technology and called it Marketing Bridge. It was meant to teach online businesses how to integrate traditional methods into their marketing mix and vice versa.

My pitch about the value of Marketing Bridge: "If you are selling tickets online to bus and train riders, you might think about buying ads on bus underground station benches (instead of just online)."

Soon after, I accepted an invitation from e-marketing guru Eben Pagan to talk about PR to his Guru Mastermind group of 500 who had flown to Los Angeles from all over the world. I practically pulled out my hair figuring how I could connect the non-measurable, awareness-centric value of PR for this audience of hardcore e-marketers.

During the three-day workshop I incessantly texted my e-marketing mentor, Chance Barnett, with requests for encouragement. I needed ideas on how to make this direct marketing/PR connection.

Finally, he said: "Listen, what you do is the only way I know that you can get third-party endorsement to millions of people in just one magazine, newspaper article or TV/radio show. No affiliate marketing program or pay-per-click program does that. So, go get 'em!"

I exhaled, sat back, and realized he was right.

## Non-SEO impacts

I decided would just talk about what I know: PR is hands-down the most cost-effective traffic generation tool.

Press clips my company has generated garnered from 350 percent to 156,000 percent return on





## PR is hands-down the most cost-effective traffic generation tool.

investment—and reached millions of eyeballs for clients including Mrs. Fields cookies, a no-snoring product endorsed by Shaquille O’Neal, and virtually every invention startup you can imagine. That’s pure PR value.

Every website in the world must have marketing to get people there! Not marketing to attract your customer is like having a party and forgetting to send invitations.

Did you know the *Los Angeles Times* is the largest metropolitan daily newspaper in America with a daily readership of 1.4 million; 2.5 million on Sunday; more than 22 million unique latimes.com visitors monthly; and a combined print and online local weekly audience of 4.1 million?

As for magazines, the largest readership of any is AARP (American Association of Retired Persons) with a whopping 35 million. These traditional print publications pose great PR opportunities.

### PR’s trust factor

Here’s the clincher: Did you know that when a reporter gives his or her opinion about something in editorial, it’s free?

By contrast, the cost of SEO services vary, depending on what’s needed. In 2020, the average SEO project cost between \$1,000 and \$2,000 a month based on the scope.

A one-off project could range from \$5,000 to \$10,000; hourly rates for SEO consultants charge between \$80 and \$200 an hour. And because the competition is stiff, this is a cost a company must spend consistently throughout its lifetime.

The beauty of PR is that when a reporter writes an article or reports a story on air, your invention or product is getting treasured “third-party endorsement.” This, next to a “word-of-mouth” recommendation, is the most influential marketing you can get.

Think of all the products Oprah has deemed her favorite. What do you think happened to their traffic?

Many customers today know the difference between an ad and editorial. They know that an advertiser buys space and has the freedom to say just about anything. The trust factor that once existed in the advertising world is no longer.

Internet marketing is all about building trust between a seller and customer. It’s about getting into a customer’s head and finding a way to solve his or her problem. This makes PR an even more stellar approach.

I’m not suggesting you ignore the e-marketing basics of looking for rankings, obtaining affiliate relationships or pay-per-click advertising. You have to do that, or your website will wander aimlessly in Internet space.

What I am suggesting is that you find something newsworthy about your product and get it reported about in magazines, newspapers, radio and TV that is read/seen/heard by your target customer. 📌

**Alyson Dutch** has been a leading consumer packaged goods launch specialist for 30 years. She operates Malibu-based Brown + Dutch Public Relations and Consumer Product Events, and is a widely published author.





# Big Tech: Back to the Future?

UNDER NEW U.S. ADMINISTRATION, COMPANIES POISED TO RENEW PUSH FOR CONTROL IN PATENT MATTER

BY LOUIS CARBONNEAU

**I F YOU ARE LIKE ME**, you probably couldn't wait to turn the page on a year that historians will forever reference as the mother of all "annus horribilis."

It appears a few others were also looking forward to 2021— including the large tech companies mostly based in Silicon Valley and Seattle—albeit for different reasons. With a change in administration, large tech companies are pushing hard to re-create the same conditions they enjoyed before the Trump Administration.

## Efforts underway

In a recent column, I was cautiously optimistic about market conditions for patents remaining strong despite what was an apparent change in the U.S. administration. We will see the onboarding of a new United States Patent and Trademark Office director to succeed Andrei Iancu.

For those who are new to the dynamics of this ecosystem, the person named as director at the USPTO can be a force of good (or evil) for patent owners. It is clear that Big Tech, which has been biding its time for the last few years, is gearing up to reassert more influence over patent practices.

We recently saw what may foreshadow future efforts by tech companies to reclaim some of the lost turf: They lobbied to bury in the monstrously complex, 5,500-plus-page U.S. spending bill some provisions that would reinstate the right to challenge Covered Business

Methods patents at the Patent Trial and Appeal Board—a recourse that just sunset last September after doing substantial damage for several years to patent owners who owned assets falling under that category.

The CBM only affects a small subset of patents. But the fact that tech companies felt emboldened to publicly push to revive a recourse that had served them so well is telling us they feel things will be different in a Biden Administration.

In 2020, several of them also sued the USPTO directly to challenge its internal directive allowing for inter partes review to be set aside if a similar case is already before the court and is likely to be heard within the year. In short, the gloves are off!

## Bad practices, assumptions

The irony behind the latest effort is that the whole narrative for operating companies to devalue patents and make challenging their validity easier is predicated on the false premise that most patent litigation is driven by Non-Practicing Entities (NPEs).

NPEs contribute nothing to society, as they do not procure any goods or services other than asserting patents for inventions they did not even make.

Yes, offering a vehicle to aggrieved inventors facing much better-funded infringers and who could not otherwise receive a fair compensation for their innovative contributions should





## We will see the onboarding of a new United States Patent and Trademark Office director to succeed Andrei Iancu.

normally qualify as a “service,” the same way public defenders represent people who cannot otherwise afford legal representation. However, and more important, the sole factual argument behind this narrative—that NPEs drive most patent lawsuits—is not even accurate, as a recent report from defensive aggregator RPX shows (and RPX actually counts most large tech companies as members).

This RPX study, dating to 2005, demonstrates that patent litigation directly initiated by operating companies (as opposed to NPEs) has hovered most years between 40 percent and 50 percent of all patent-related lawsuits.

Operating companies also sell their patents directly to NPEs and let them assert. This model—called privateering, in which you let others do your “dirty work”—has accounted for another 40 percent to 50 percent of all cases in years past, leaving a meager 15 percent on average of truly NPE-initiated cases.

So the next time you hear “patent trolls” are a scourge and are responsible for most of today’s world problems, please refer your interlocutor to those statistics.

### Inventing a narrative

Nonetheless, as the recent U.S. elections showed, you can allege almost anything these days. If you repeat it enough times, people may start believing it.

This is how the “troll” narrative initially left the realm of fringe theories and when supported by enough lobbying dollars gradually became mainstream. It had recently faded, confronted by the reality of facts and a counter-narrative led by inventor groups.

But Big Tech is back at it and feels it has a better environment with the changing of the guard in the White House. It will be interesting to see in the next few months whether Big Tech is able to retain its footing and go back to its future. 🚗

**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.





# Iancu Says Goodbye

OUTGOING USPTO DIRECTOR URGES LAWMAKERS, INSTITUTIONS TO CONTINUE 'AMERICAN INNOVATION RENAISSANCE'

BY EILEEN MCDERMOTT

*All Eye on Washington stories initially appeared on IPWatchdog.com.*

**O**NE DAY before Joe Biden was to be inaugurated as the 46th U.S. president, U.S. Patent and Trademark Office Director Andrei Iancu confirmed he is leaving his position.

In remarks made at the United States Chamber of Commerce Global Innovation Policy Center event, Iancu recalled his successful efforts to clarify examination guidelines on patent eligibility and to balance post-grant proceedings. "In light of our many carefully calibrated reforms, Senator [Thom] Tillis recently said that the PTAB [Patent Trial and Appeal Board] is no longer a death squad for patents. It is indeed a new day at the PTAB."

Although many would not agree, it is generally accepted that Iancu's administration has been a boon for patents and the IP community will be sad to see him go.



## A call to keep momentum

Iancu also said that 2021 will be "one of the most consequential years" for the USPTO, in part because of the need to draft regulations to implement the Trademark Modernization Act that was passed in late

December. Additionally, there has been a 69 percent increase in trademark filings this fiscal year to date.

Add to those challenges the continued effects of the pandemic and the need to fast-track COVID-19-related inventions, and Iancu said: "It will be one of the most consequential years for intellectual property in general."

He continued:

"As we assess the important balance between protecting intellectual property and access to vital technologies, we must always insist on evidence-based policies.

"Vaccines and other pandemic-related technologies are not alone in the increased pace of innovation. We are truly at the dawn of a new American innovation renaissance across the board: artificial intelligence, unmanned vehicles, genetics, personalized medicine, 5G, quantum computing, and so much more."

Iancu urged courts, the next presidential administration, Congress and stakeholders to support and protect that renaissance. He said the courts or Congress must fix the current problems with patent eligibility law, stakeholders must be vocal in demanding change, and the new administration must not roll back the progress made at the USPTO.

"Will we, for example, continue a balanced approach to post-grant proceedings at the PTAB?

"And will we continue the work of the National Council for Expanding American Innovation? For the United States to maintain its leading edge, we need all hands on deck. Innovation should not belong to a select few.

"To the contrary, innovation can be the great equalizer, where anyone with the willingness to work hard and take risks can have the opportunity to make something new and potentially change the world."

**"For the United States to maintain its leading edge, we need all hands on deck. Innovation should not belong to a select few."** —ANDREI IANCU

In his USPTO Director's Forum blog post, Iancu also said it is important to continue telling the stories of inventors—another initiative he led through the USPTO Speaker Series, the Patent 10 Million and the Journeys of Innovation series.

### **Tillis: Iancu a 'gold standard'**

Speaking at the same GIPC event, U.S. Sen. Thom Tillis (R-N.C.) said Iancu—whose term began Feb. 5, 2018—“has done more than perhaps any single person in the last decade to strengthen and restore integrity to our intellectual property system.”

He added that Iancu's policies restored the United States' place as leader in the innovation economy and that he represents the gold standard that any future director must adhere to.”

Tillis also welcomed Sen. Chris Coons (D-Delaware) as the next chairman of the Senate Intellectual Property Subcommittee, succeeding Tillis. He said Coons has an “ambitious agenda” that includes tackling Chinese intellectual property theft, counterfeits, and improvements at the USPTO and PTAB. Tillis will now serve as ranking member of the subcommittee.

Tillis went on in his remarks to lament the U.S. patent eligibility situation, saying it is “in shambles.”

“The fact that we have courts saying a garage door opener is an ‘abstract idea’ and that innovative diagnostic tests are just ‘laws of nature’ is bewildering. If we don't provide greater clarity and consistency in this area of law, America is going to lose the 21st-century innovation race.”

The senator said reforming eligibility law would be one of his top priorities this Congress, “and I will use every opportunity I have—from the president-elect's USPTO nomination to amicus briefs before the Supreme Court—to achieve that goal.”

Tillis added that he *will* continue his efforts to reform copyright law: “I will pass a new digital copyright law by the end of my second term.” 🐶

**Eileen McDermott** is editor-in-chief at IPWatchdog.com. A veteran IP and legal journalist, Eileen has held editorial and managerial positions at several publications and industry organizations since she entered the field more than a decade ago.



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# Patent Applications Grew in 2020

IFI CLAIMS DATA SHOW INCREASE AT USPTO DESPITE MASSIVE DISRUPTIONS CAUSED BY COVID-19 **BY STEVE BRACHMANN**

**P**ATENT APPLICATION filing activity increased slightly in the United States during 2020, despite the upheaval caused by the COVID-19 pandemic.

That is the finding in a study released January 12 by patent database provider IFI Claims Patent Services, which also published its Top 50 U.S. patent grant recipient list for 2020 and its Global 250 list of top owners of active patent assets worldwide.

## IBM streak reaches 28

An IFI Claims trends and insights page shows that the U.S. Patent and Trademark Office received 413,176 patent applications during 2020. That was a 5 percent increase over the 394,349 patent applications filed at the USPTO during 2019.

Despite the increase in patents filed, patent grants by the USPTO decreased by less than 1 percent—down to 352,013 issued patents during 2020. However, that's only a slight reduction from the record number of patents issued in 2019 (354,428 issued patents) and the largest total for any single year excluding 2019.

The Top 50 list includes many of the usual companies among top patent filing organizations including International Business Machines (IBM), which took the No. 1 spot among all firms receiving U.S. patents for the 28th year in a row.

IBM received 9,130 patent grants in 2020, nearly 3,000 more than second-place Samsung Electronics. IBM said its 2020 patents mainly covered cloud and hybrid cloud tech (3,000 issued patents), artificial intelligence tech (2,300) and data security tech (1,400). The top

five companies and their patent totals are shown in the graphic below.

Each of the top five patent recipients showed a decrease in patent grants year-over-year. Canon suffered the largest decline at 9 percent.

By contrast, each company ranked sixth through ninth had greater numbers of issued patents during 2020: Taiwan Semiconductor Manufacturing Co. (TSMC), up 22 percent to 2,833 issued patents; LG Electronics, up 1 percent to 2,831; Apple, up 12 percent to 2,791; and Huawei, up 14 percent to 2,761.

The companies with the greatest percentage increases were 24th-ranked Kia Motors, up 44 percent to 1,323 issued patents, and 32nd-ranked Sharp Corp., up 27 percent to 1,042.

Though these patent issuance numbers are seemingly robust given the state of the world economy and many research and development activities during the COVID-19 pandemic, IFI Claims CEO Mike Baycroft said it would take some time before the true impact of COVID-19 on global R&D activities could be measured in terms of impacts to patent filings.

"U.S. applications are published 18 months after they're originally filed," Baycroft said, "and most of the recent patent application growth predates the pandemic." The true impacts of COVID-19 on patent filing applications might therefore become clearer in late 2021 or perhaps even beyond.

## Patent eligibility factors?

IFI Claims also offers a survey of the 10 fastest-growing areas of technology. That is led by computer systems based on biological models, which experienced a compound annual growth rate (CAGR) of 67.28 percent between 2016 and 2020.

This area, which covers an array of artificial

## MOST PATENTS IN 2020

**IBM**—9,130  
**Samsung Electronics**—6,415  
**Canon**—3,225  
**Microsoft**—2,905  
**Intel**—2,867

intelligence and neural network technologies, was led by IBM with 2,789 patent applications during the five-year period. Next were Google (1,451), Samsung Electronics (1,253), Intel (1,102) and Microsoft (1,044).

Of course, the patent eligibility framework in the United States has posed a threat to patent applications in the AI and bioinformatics sectors. Although these technologies can unlock incredible advances for our society, the application of the preemption test in patent eligibility doctrine can eliminate patent eligibility for many of these inventions because they achieve results for which there are no alternatives.

Patent eligibility issues are likely much less of a threat to the second-fastest growing technology sector, electrical smoking devices (55.08 percent CAGR from 2016 to 2020).

Philip Morris maintained a sizable lead during the five-year study period, filing 1,688 patent applications in this sector—more than twice the amount filed by second-place Altria (701). Next were RAI Strategic Holdings (658), Nicoventures Holding (483) and British American Tobacco (474).

The third-fastest growing tech sector in terms of patent application growth was angiosperms, or new flowering plants.

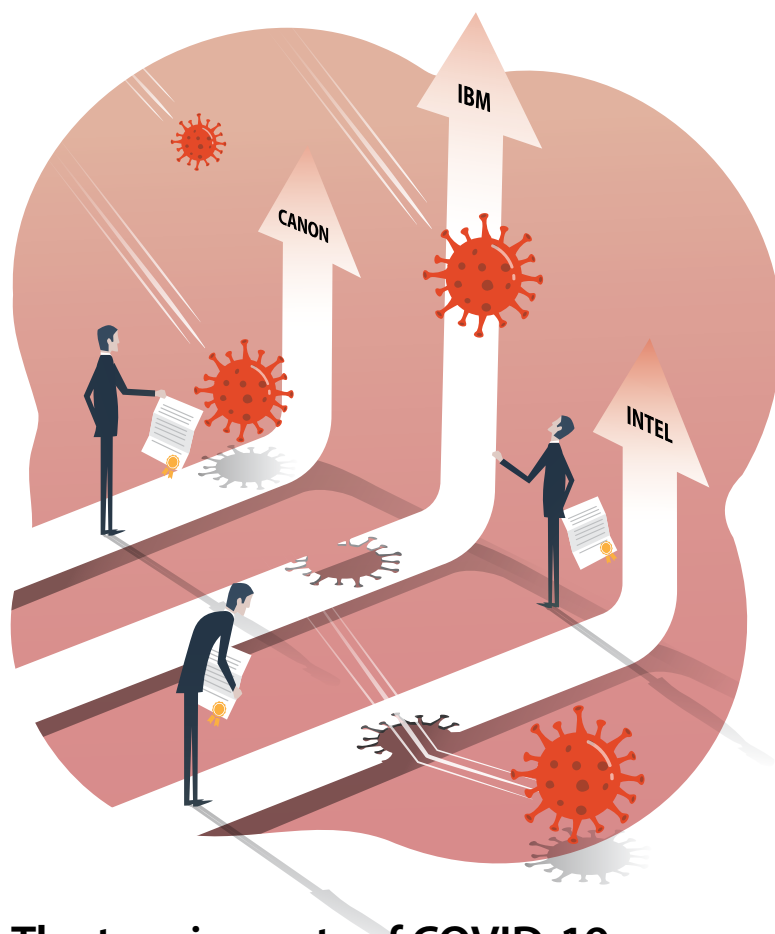
Baycroft said this is a fascinating area. “It always surprises me to see sectors which may be covered by much smaller patent portfolios, but there’s clearly a lot of activity going on,” he said.

Leaders in the angiosperm space included Monsanto (1,359 patent applications), Pioneer Hi Bred Industries (905), Seminis Vegetable Seeds (485), Syngenta (392) and Duemmen Group (298).

### Global 250 highlights

IFI Claims’ Top 250 Global list reports that although IBM is the clear leader in number of patent application filings and issued patents, Samsung Electronics has a massive lead in terms of ownership of current active patent assets worldwide.

Unlike the Top 50 list, which looks at the name of the assignee at the time of a patent’s



**The true impacts of COVID-19 on patent filing applications might become clearer in late 2021 or perhaps even beyond.**

issuance, the Global 250 list looks at which company actually owns the patent and also aggregates subsidiary patent holdings within the parent company. That’s why Samsung is a perennial runner-up to IBM in the Top 50 listings yet tops the Global 250 list with twice as many active patent families (80,577 to 38,541).

IBM’s active patent family ownership has been reduced over the years by major deals, such as the 2014 sale of the company’s chip business to GlobalFoundries. ☎

**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.



## IoT Corner

Google announced that Jan. 5, 2022, will be the shutdown date of Android Things Dashboard.

The tech giant developed Android Things to be a de-featured version of the Android phone operating system that would be more suitable for quick and easy deployments of IoT projects. But the project failed to gain traction.

Google effectively ceased support for it in 2019 but had until recently been reticent to provide an official closing date. The company was to stop accepting new devices to the platform on Jan. 5, 2021. It will allow existing deployments to continue for another year before pulling the plug on the database. —*Jeremy Losaw*



## Wunderkinds

**Suman Mulumudi** was a high school student when he created Steth IO, a device that turns a smartphone into a stethoscope. He designed an iPhone case using a 3D printer. The device uses a diaphragm to collect sounds and sends them to a microphone, allowing the phone to act as a stethoscope. An application on the phone allows patients to send recordings to their doctor. He cofounded his company seven years ago and is now also a research engineer for Facebook.



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## What IS that?

The **I Heart Guts Tonsil Plush—You're Swell** is a comfort for kids who are afraid of a tonsillectomy. It's one of 40-plus different toys from I Heart Guts Original Plush Organs. The iheartguts website features such notables as the I Heart Guts Brain Plush—All You Need is Lobe, and the Bladder Plush—Don't Stop Relievin'.

**141** The number of patents Thomas Edison had for storage batteries—about 13 percent of his total of 1,093 patents. Not surprisingly, electric light and power (389 patents, 35 percent) was his dominant category.

## WHAT DO YOU KNOW?

**1** In the 2020 biopic "Tesla," which 1985 pop hit does the main character sing even though he died in 1943?

- A) "Money for Nothing"
- B) "Everybody Wants to Rule the World"
- C) "Take On Me"
- D) "We Are the World"

**2** **True or false:** Businesses automatically own all intellectual property created by their employees and contractors.

**3** Which invention came first—the mini-cassette or the 8-track tape?

**4** Young Ben Franklin used which pseudonym when writing essays for the *New England Courant*?

- A) Frank Benjamin
- B) Curt Alden
- C) Silence Dogood
- D) Gallant Watching

**5** **True or false:** The NFL has held the Super Bowl trademark since 1969.

**ANSWERS:** 1.B. Actor Ethan Hawke delivered the bizarre, off-key version of the Tears for Fears classic. 2. False—unless the employee or vendor contract explicitly says so. 3. Mini-cassette, 1967; 8-track, 1964. 4.C. The essays made fun of Boston society. 5. True. The league's first two title games in 1967 and 1968 were called the AFL-NFL World Championship Game. The term "Super Bowl" was not officially used until the 1969 game, now retroactively called Super Bowl III.



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