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NEW YORK TECH VISIONARY TARKAN BASTIYALI

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PRSRT STD U.S.POSTAGE PAID MARCELINE, MO PERMIT #13 A year of inspiring innovators



Read 2023's stories at **www.uspto.gov/journeys** and keep an eye out in 2024 for a new inventor journey each month.

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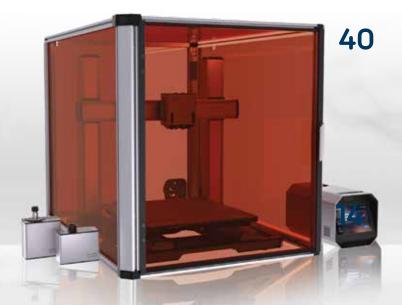
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Photo by Jorg Windau



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Give no quarter to Patent Pirates.

Or they'll take every 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.



SaveTheInventor.com



Visionary Luminaries

Washington hosts recipients of the National Medals of Science, Technology and Innovation, along with National Inventors Hall of Fame inductees

hurricane of vision and accomplishment blew into our nation's capital recently.
On October 24, President Biden awarded the National Medal of Science (NMS) and the National Medal of Technology and Innovation (NMTI) to a number of Americans with exemplary achievements in science, technology, and innovation.

Two days later, the National Inventors Hall of Fame (NIHF) celebrated its 50th anniversary when it honored its 2023 inductees at a black-tie gala at The Anthem in Washington, D.C. The USPTO was a presenting sponsor.

The National Medal of Technology and Innovation is the nation's highest award for technological achievement. It recognizes American innovators whose vision, intellect, creativity, and determination have strengthened America's economy and improved our quality of life.

Established by Congress in 1980 and administered by the USPTO, the first NMTI was presented in 1985.

Those honored by the president represented a diverse field from different walks of life throughout the world.

Among the National Medal of Science recipients, Purdue University professor Gebisa Ejeta is a scientist from rural Ethiopia who won the World Food Prize in 2009 for his work with drought- and parasite-resistant hybrid strains. Belgian-born Myriam Sarachik, who died in 2021, conducted experiments that revealed subtle but fundamental physics in the electronic and magnetic behavior of materials.

U.S.-born Rory Cooper, cover subject for the November 2019 *Inventors Digest*, was among the NMTI recipients. He had a busy week, receiving his NMTI on Tuesday and being inducted into the NIHF on Thursday.

Cooper is director of Rehabilitation Research and Development's Human Engineering Research Laboratory at the University of Pittsburgh, where he oversees and conducts research to support the needs of disabled veterans and other individuals with mobility impairments. HERL holds 25 patents.

Other NMTI recipients: Mary-Dell Chilton, Syngenta Biotechnology, Inc.; John M. Cioffi, Stanford University, ASSIA, Inc.; Ashok Gadgil, University of California, Berkeley, Lawrence Berkeley National Laboratory; Juan E. Gilbert, University of Florida; Charles W. Hull, 3D Systems; Jeong H. Kim, Kiswe Mobile, Inc.; Steven A. Rosenberg, National Cancer Institute; Neil Gilbert Siegel, University of Southern California; James G. Fujimoto and Eric Swanson, Massachusetts Institute of Technology and David Huang, Oregon Health & Science University (team).

For a complete list of 2023 National Inventors Hall of Fame inductees: **invent.org/inductees/new-inductees**

DIRECTOR'S BLOG

Your Creative IP, Your Control

USPTO has many tools and programs for protecting your ideas, products, and services by kathividal

hen I began my tenure as director in the spring of last year, I pledged to strongly advocate for the value of intellectual property and its protection. As we work throughout the world to strengthen the IP ecosystem through new laws, policies, practices and collaborations, I consider it an honor to also be an ambassador for IP, impressing upon those with great ideas—including our youth, women across the globe, and our military—the importance of protecting IP.

Patented inventions are in every common device and product you use every day: your smartphone, car, or even your comb. Indeed, the USPTO just granted the 1 millionth design patent for a comb created by Agustina Huckaby, an inventor and licensed cosmetologist from Fort Worth, Texas.

In fact, many products are covered by multiple patents, including for follow-on innovations that improved the product. One example I like to use is Thomas Edison, whose original light bulb that he submitted to the USPTO in the 1800s is sitting on my desk at our headquarters in Alexandria, Virginia.

When I go into classrooms and ask whether Thomas Edison invented the light bulb, the kids know! They say, "No—he just invented a better filament."

You can also protect your product, service or company with a trademark. Some widely recognized trademarks are the Nike swoosh; the unique stitching on the back pocket of Levi's jeans; and the name and some popular lyrics of Taylor Swift.

Trademarks can even be scents. Scent marks protect a unique smell from being copied by other similar products.

Not only are trademarks important assets, if you decide to launch a business or expand to other areas in the United States, a federal trademark that you can only get from the USPTO will protect you. You can use your trademark to stop copycat products at the borders or have online resellers remove copycat offerings. You can also use your copyright to have copycat material taken down from the internet.

Confused about what type of intellectual property you might need to protect? The USPTO now has an easy-to-use new online tool that lets you figure out what type of IP you have and whether it's protectable by a patent, copyright, trademark, and/or trade secret.

We call it the IP Identifier. It's a very popular tool among those visitors to our website who are new to IP, with more than 100,000 visits to the page since we launched it this year.

Just the submission of your application filing may provide some legal protection in the event someone later tries to claim your idea. And, having a "patent pending" can help you get funding!

Many applicants pursue the help and services of legal counsel. The 84 Patent and Trademark Resource Centers nationwide have lists of attorneys they can refer you to, in addition to providing free expert advice on filing and USPTO processes. And for under-resourced inventors, you may be eligible for free legal help filing an application through our Patent Pro Bono program or Law School Clinic program.

Kathi Vidal is under secretary of commerce for intellectual property and director of the United States Patent and Trademark Office.

For the entire story and relevant links, see **uspto.gov/blog/director/entry/tips-on-taking-control-of1**.



In October, USPTO Director Kathi Vidal (in pink) met with women entrepreneurs at the Madrid home of Julissa Reynoso, U.S. ambassador to Spain and Andorra.

The United States Patent and Trademark Office (USPTO) is responsible solely for the USPTO materials on pages 6-9. Views and opinions expressed in the remainder of *Inventors Digest* are those of the writers and do not necessarily reflect the official view of the USPTO, and USPTO is not responsible for that content. Advertisements in *Inventors Digest*, and any links to external websites or sources outside of the USPTO sponsored content, do not constitute endorsement of the products, services, or sources by the USPTO. USPTO does not have editorial control of the content in the remainder of *Inventors Digest*, including any information found in the advertising and/or external websites and sources using the hyperlinks. USPTO does not own, operate or control any third-party websites or applications and any information those websites collect is not made available, collected on behalf of nor provided specifically to USPTO.

Courageous Service to Safety

Garrett Morgan overcame rampant racism to invent the smoke hood and refine the traffic signal by rebekah oakes

n the early morning hours of July 25, 1916, Garrett Morgan awoke to the incessant ringing of the telephone. On the line was Cleveland's police department. There had been a disaster at the new West Side waterworks, and they needed Morgan's help.

An explosion left a work crew trapped underground, four miles into Lake Erie, buried under

hundreds of feet of mud and debris. Two previous rescue parties had succumbed

to the natural gas filling the tunnel.

Time was quickly running out.

Within the hour, Morgan and his brother Frank reached the entrance to the tunnel with about 20 of Morgan's patented safety hoods.

Morgan donned the fabric smoke hood and led the third rescue party down the tunnel. Thanks to his invention, he and the

other rescuers found eight survivors in a disaster that took 20 lives.

He was awarded medals for bravery from a Cleveland civic association and the International Association of Fire Engineers but was denied the monetary compensation other rescuers received.

Many fire departments placed new orders for the safety hood. Some Southern cities canceled theirs after learning the inventor was Black.

Today, Garrett Morgan is one of the most well-known African-American inventors of the early 20th century. But he faced pervasive and systemic racism in his professional and personal life.

Born around 1877, Morgan grew up in the hamlet of Paris, Kentucky. With only six years of schooling, he moved across the Ohio River to Cincinnati at 14.

He moved to Cleveland in 1895, taking a position sweeping floors at a dry goods factory for \$5 per week. Morgan evolved from wage worker to entrepreneur and business owner within a decade.

He took up a position with the H. Black Company, a major manufacturer of women's suits and cloaks. Morgan designed a belt fastener for sewing machines and sold it for \$150.

Sewing machine improvement also indirectly led to the product that launched his longest-running business venture: the G.A. Morgan Hair Refining Company that targeted African-American consumers.

It was through the garment industry that Morgan met Mary Hasek. The 1900 census listed Mary as a sewer in a tailor shop. Sometime prior to 1908, Garrett and Mary fell in love.

But Mary was white.

According to their granddaughter, Sandra Morgan, his employer gave him an ultimatum: end his relationship with Mary or be fired. He quit, and Mary soon followed suit. After they married, Mary's father petitioned the Catholic bishop and had her excommunicated from the Catholic church. Her siblings had to visit her in secret to maintain a relationship.

In the early 1920s, Morgan was driving with two of his young sons in the car. The Morgans witnessed a collision between an automobile and a horse-drawn cart at an intersection, resulting in a young girl being ejected from the carriage and an injured horse needing to be humanely euthanized in the street.

Morgan turned his attention to preventing incidents like this from happening.

On November 20, 1923, he was granted a patent for his improved traffic signal. Made up of movable arms that could be adjusted with a hand-crank, the signal could be maneuvered into different positions to indicate if traffic (vehicular and pedestrian) should "stop" or "go" from a given direction. It also contained a step in-between, which would stop traffic in all directions, clearing an intersection.

For the entire story, see **uspto.gov/ learning-and-resources/journeys-innovation**.

Garrett Morgan models his safety hood. He received two patents for his "breathing device" in 1914: U.S. Patent Nos. 1,090,936 and 1,113,675.



Patents' Role in Diagnosing COVID-19

Innovation's response 'has been truly impressive,' according to Office of the Chief Economist

recently released Office of the Chief Economist report underscores the importance of innovation in the health field—in this case, during the unprecedented health crisis known as COVID-19.

The October 2023 report said: "This study is part of an emerging body of work that seeks to understand the workings of the innovation system in times of crisis." Its conclusion was that "Looking back from 2023, the innovation response to the crisis has been truly impressive." Specifically:

- New vaccines and therapeutics have lowered morbidity and greatly reduced mortality from COVID-19.
- Innovations in diagnostics allowed for the identification of infected persons outside of health care facilities, enabled disease tracking, and informed preemptive policy responses using the latest epidemiologic data.
- At present, the U.S. Food and Drug Administration lists 34 over-the-counter at-home COVID-19 test kits.

Among the key findings were that small companies and universities led the way in COVID-19 diagnostic public patent filings at the USPTO, with the top-filer being a diagnostic startup company.

Also, about 10.7 percent of all COVID-19 public patent filings show government support, with the National Institutes of Health leading other agencies.

Read the report at uspto.gov/ip-policy/economic-research/publications/reports.

REGIONAL HOMES

Rocky Mountain Regional Office: West Trailblazer

The June 30, 2014, opening of the USPTO Rocky Mountain Regional Office was a milestone event in the agency's storied history.

For the first time in its nearly 200 years of existence, the patent office had a major presence west of the Mississippi River. The RMRO serves nine states: Colorado, Idaho, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming.

It is the USPTO's second regional office; the first was opened in Detroit in 2012.

The Rocky Mountain office is located in downtown Denver in the Byron G. Rogers Federal Building, which has an interesting history of its own: It was completed in 1965 and, as a courthouse of the United States District Court for the District of Colorado, was the site of the criminal case against bomber Timothy McVeigh. The building was listed on the National Register of Historic Places in 2016.

As with other regional offices, the Patent Trial and Appeal Board conducts proceedings at the RMRO. For public access to a PTAB hearing, either virtual or in person, submit a request to

PTABHearings@uspto.gov at least three days before the hearing.

Molly Kocialski has been director of the USPTO's Rocky Mountain Regional Office since January 2016. She brings more than 20 years of intellectual property experience to the USPTO.



WHAT'S NEXT

PATENT EXAMINER: A DAY IN THE LIFE: Learn about the challenging and rewarding career of a USPTO patent examiner at the webinar "A day in the life of a USPTO patent examiner," on December 11 from noon to 1 p.m. ET.

Becoming a patent examiner provides the opportunity to work from home nationwide with a flexible schedule, and become part of a community that leads America toward breakthroughs in innovation.

In addition to learning about the position, you can meet with the USPTO team and hear about the tremendous benefits and why employees love to work there. You do not need to register for this event.

This opportunity is open to all U.S. citizens. For more information, contact **recruitment@uspto.gov**.

Visit **uspto.gov/events** for many other opportunities to attend free virtual events and/or training.

TIME's Invention List A Sign of the Times



One of the most compelling reads that appears every late October or early November is *TIME* magazine's list of best inventions for the year. It's one of the most compelling ironies, too.

Like *Inventors Digest*—which will enter its 40th year in January—*TIME* (100 years old in 2023) is a survivor in an era when so many print magazines have been guillotined by the permanent digital revolution. The fact that this old-guard publication's list of current and futuristic innovation is so celebrated and culturally relevant is a victory for the enduring impact of the printed page, which dates to Johannes Gutenberg's printing press in the 1400s.

As a person who likes to research things, my mind wanders beyond the hottest innovation honored by *TIME* and travels to where time is taking us. And I find that as is often the case, we can look forward by looking back.

Each year, TIME breaks down its honored inventions into categories ranging from accessibility to wellness. The changing number of inventions in these categories can be telling.

As recently as 2019, the list had no entries in artificial intelligence, green energy, or robotics. This year showed 14 AI entries, 12 in green energy, and seven in robotics.

Granted, TIME's list now is for the 200 best inventions, compared to 100 four years ago. But the acceleration of noteworthy inventions in these three fields is no less revealing.

AI and robotics have already yielded benefits that make our lives easier and even safer. Yet they are a legitimate concern for people who cite the increasing depersonalization of society and overreliance on technology that is often flawed or rife with human complications—including threats to intellectual property rights.

Many claim green energy is mostly a political issue. *Inventors Digest* is not here to weigh in on that.

That said, when reading about 2023 concepts such as clean heat and mobile solar power, it's hard not to see their potential value (as well as the coolness factor).

Regardless of what one might think of them, AI, robotics and green energy aren't going away. Hopefully, everyone can agree that innovation in these spaces can present value and the chance to accomplish a lot for the greater good.

That's what inventing is all about—going back to Gutenberg's time and beyond.

> —Reid (reid.creager@inventorsdigest.com)

Inventors

EDITOR-IN-CHIEF REID CREAGER

ART DIRECTOR CARRIE BOYD

CONTRIBUTORS BRUCE BERMAN ELIZABETH BREEDLOVE

LOUIS CARBONNEAU JACK LANDER JEREMY LOSAW CHINWE OHANELE WILLIAM SEIDEL **EDIE TOLCHIN**

GRAPHIC DESIGNER JORGE ZEGARRA

INVENTORS DIGEST LLC

PUBLISHER LOUIS FOREMAN

WEBSITE ADMINISTRATOR **ELIZABETH BREEDLOVE**

FINANCIAL CONTROLLER DEBBIE MUENCH

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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):

USPTO Trading Card No. 12: Elijah McCoy

(February 2022):

I would like to make a suggestion. In the article, Elijah is referred to as an African-American.

As Elijah was born in New Hamburg, Ontario, Canada, I would suggest that he be referred to as a Canadian, or if you wish, an African-Canadian.

Thank you for considering my request. -GRANT MILES, London, Ontario, Canada

Thanks, Grant. Actually, referring to Elijah McCoy as an African-American is not incorrect. Nor is it incorrect to refer to him as an African-Canadian.

Though he was born in Canada (virtually all major sources, including the National Inventors Hall of Fame, list his birthplace as Colchester,

Ontario), he and his family moved to Michigan when he was 3. The inventor of the steam engine lubricator apprenticed in Scotland as a teen and spent much of his life in the United

States. He died in Michigan in 1929. Historians routinely refer to him as an American engineer.

So, both Canadians and American can proudly call him their own! —Editor



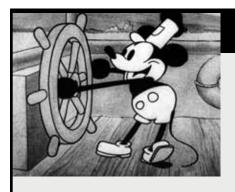
CONTACT US

Letters:

Inventors Digest 520 Elliot Street Charlotte, NC 28202

Online:

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When the 12-foot-in-diameter Times Square Ball in New York City finishes its descent to usher in 2024, creators and innovators will officially have wider accessibility to formerly copyrighted works involving Mickey Mouse, Minnie Mouse, Winnie the Pooh ...

... And Tigger, too! January 1 is Public Domain Day. That's the date when copyrights to certain works expire (usually

A RUN ON MICKEY MOUSE T-SHIRTS?

70 years after the death of the last known author or creator). Once in the public domain, these works are freely accessible to everyone to build on, revise, add them to new works, or use for new publications without permission.

The first version of Mickey and Minnie appeared in theaters in "Steamboat Willie" and "The Gallopin' Gaucho") in 1928. Pooh and Tigger made their debut in "The House on Pooh Corner," by A.A. Milne, in 1924.

Per the Copyright Term Extension Act, books published in 1928, movies released in 1928, and other works published in 1928 enter the public domain in 2024. Sound recordings published in 1923 enter the public domain.

Among the works entering the public domain in the United States are "Lady Chatterley's Lover" by D.H. Lawrence and "An American in Paris" by George Gershwin. Recordings include "Yes! We Have No Bananas," by Billy Jones and "Toot, Toot Tootsie (Goo' Bye!)," by Al Jolson.

The earliest mentions of Public Domain Day, going back about 20 years, are attributed to U.S. professor, attorney and political activist Lawrence Lessig. He is committed to the relaxation of laws supporting copyright and trademarks issues regarding technology. Lessig founded the nonprofit organization Creative Commons with the goal of making creative works available for others to build upon and share legally.

BRIGHTIDEA

NuwaPen

AI-POWERED BALLPOINT PEN nuwapen.com/en-us

NuwaPen digitizes and organizes your handwriting. Write, draw and scribble on any paper using regular ink, freeing you from the constraints of special paper notes.

NuwaPen can sync all your notes across all your devices. It connects you with over 100 apps and platforms.

Featuring an ergonomic design, its AI-powered technology provides two hours of continuous writing and recharges in 15 minutes. It allows for precise strokes that can easily be transformed into typed text.

The package—which includes the pen, charging case, UBS-C to USB-C Cable, tweezer for the refill, and camera cleaning tool—will retail for €329 (\$357), with shipping to crowdfunding backers set for March.



Shargeek 170

PRISM-DESIGNED POWER BANK WITH STRONG CHARGING sharge.com

Design-inspired by Pink Floyd's "Dark Side of the Moon," this charger stands out with a transparent prism silhouette, and power with 170-watt maximum output and 140-watt maximum input recharging up to 50 percent within 20 minutes.

Pass-through charging helps power your devices while being recharged. The massive 24,000mAh capacity keeps devices on anytime, anywhere.

Shargeek 170 features a smart display for a visible and controllable charging experience. It's packed with two USB-C and one USB-A ports for three-device fast charging at once. Even when all ports are in use, you still get up to 65 watts of fast charging from either USB-C port.

Shargeek 170 will retail for about \$195.

MOTION ZERO

MEDITATION AID motionzero.it

On its Kickstarter page, the makers of this meditation device make a surprising declaration: "You do not need to buy the MOTION ZERO."

The makers' stated goal is to get more people to experience the benefits of meditation—in this case, via an egg that spins on a platform to encourage focus. The user places the metal egg on the glass, and it starts spinning. After a little while, it stands up on its own.

This is where the user concentrates on the egg, the reflection, the movement, the pattern it moves, and how the light plays over the surface.

MOTION ZERO will retail for \$249, and is to be shipped to crowdfunding backers in April.



— PETER DRUCKER



STYLISH BOOK LIGHT NOW USABLE IN GAMING bowioliaht.com

Bowio's unique design ensures even and optimal lighting across every page, balancing contrast and minimizing glare. It also features touch-controlled brightness.

The 2.0 has a richer color palette, an intuitive color-matching dial, and the touch of premium leathers—all wrapped in a sleeker, lighter form. It's powered by upgraded electronics.

This version also includes Bowio GameLight. Specifically designed for game masters, it fits seamlessly with both carton and wooden screens to set a mood.

The standard Bowie 2.0 will retail for about \$75, starting with the vegan leather version. Shipping for crowdfunding backers is to begin in July.



Buss Stop

THE TRADITION OF KISSING UNDER THE MISTLETOE, ROOTED IN ANCIENT HISTORY, EVOLVES AND DEVOLVES BY REID CREAGER

MESSY JOB. But somebody had to do it.

Searching the most famous under-themistletoe kisses in movie and TV was, well,
a lot like kissing your sister. The ones that came
up most often were two teenagers clumsily and
publicly practicing their French in a 2015 "Meet
the Coopers" Christmas movie, and Catwoman
going yuckingly housecat on a pinned-down
Batman during an overly violent scene in 1992's
"Batman Returns."

If you associate mistletoe with tender romance, neither of these makes a lick of sense. Maybe better to try a Hallmark Christmas movie, even though the stories always follow a similar script. And even though the Sweetness Factor exceeds that of your basic candy cane.

Frigg comes up big

Our Time Tested Christmas gift to you is a story in which the inventor is not in dispute.

Of course, nature—which has no intellectual property rights as of this writing—invented mistletoe. It's a rough-leaved, parasitic plant that

grows on apple, oak and other broadleaf trees, presenting white glutinous berries in winter. (Scientific name: obligate hemiparasitic plants in the order Santalales.)

For centuries and dating all the way to the Celtic Druids, mistletoe has been associated with fertility and health. Its ties to romance are as compelling as love.

According to ancient Norse mythology, when the god Odin's son Baldur was prophesied to die, his mother Frigg (goddess of love) went to all the animals and plants of the natural world to get an oath that they would not harm him.

But Frigg did not consult with mistletoe, so the god Loki made an arrow from the plant and saw that it was used to kill Baldur. The tears Frigg cried over her son became the berries that can be found on mistletoe, which she decreed would never again be used as a weapon.

Another version of the myth says the gods were able to resurrect Baldur from the dead. Frigg then declared mistletoe a symbol of love and vowed to plant a kiss on all those who passed beneath it.

Friggin' awesome. But when did this all become a part of Christmas?

Irving: Of pluck and peril

The practice of kissing under the mistletoe as part of celebrating the holidays dates to the 1700s, though no one seems sure exactly when. Some reports say the practice began among English servants (always innovating for better job perks).

In the musical comedy "Two to One," first performed at the Theatre Royal in the Haymarket, London in 1784, the verses read:

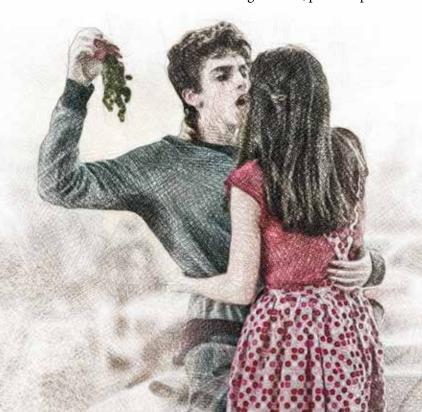
What all the men, Jem, John, and Joe, cry,

"What good luck has sent ye?" And kiss beneath the mistletoe,

The girl not turn'd of twenty."

In the 1800s, Victorian Era writers Charles Dickens and Washington Irving made mention of kissing under the mistletoe.

An enduring symbol of love, mistletoe is actually a parasite that steals water from trees. In this scene from the "Meet the Coopers" Christmas movie, two teenagers steal a less-thaninnocent kiss.



Irving, often credited with importing Christmas traditions to the United States, wrote about kissing under the mistletoe in his short story "Christmas Eve" (1819), part of his "Old Christmas" collection. He references "the mistletoe, with its white berries, hung up, to the imminent peril of all the pretty housemaids."

In a footnote, Irving explained:

"The mistletoe is still hung up in farm houses and kitchens at Christmas; and the young men have the privilege of kissing the girls under it, plucking each time a berry from the bush. When the berries are all plucked, the privilege ceases."

A tone of respect and privilege sure has a more romantic and traditional ring to it than the primitive facefests cited above.

That said: Tradition long said that if a girl or woman is caught under the mistletoe, she cannot refuse a kiss.

Some traditions are wonderful. Some traditions are not. ©

INVENTOR ARCHIVES: DECEMBER

December 16, 1935: The movie "A Tale of Two Cities" was copyright registered.

The film, based on a novel by Charles Dickens that was published in book form in 1859, starred Ronald Colman and Elizabeth Allan.

Dickens borrowed from Thomas Carlyle's history, "The French Revolution," for his story of London and revolutionary Paris.

The book is well known for its run-on opening sentence that begins, "It was the best of times, it was the worst of times ..." It is also known for the main character's last speech, in which he says about sacrificing his life for anoth-

er's: "It is a far, far better thing that I do, than I have ever done; it is a far, far better rest that I go to, than I have ever known."

The movie was immediately well received by the public and media. It was nominated for the Academy Award for Best Picture and Best Film Editing.

Its release date was December 27, 1935.

Endorsed by Barbara Corcoran of The Corcoran Group and "Shark Tank"...



"... A gift to anyone who's ever had a winning idea..." Read the compelling stories of 27 esteemed, hard-working women inventors and service providers, (many of whom have appeared on "Shark Tank"). All have navigated through obstacles to reach success and have worked hard to change the stats for women patent holders, currently at only about 13 percent of all patents. **HEAR US ROAR!**

Available for purchase at Amazon (https://tinyurl.com/334ntc3w), Barnes & Noble, edietolchin.com, and at squareonepublishers.com.



Edith G. Tolchin (photo by Amy Goldstein Photography)

Edith G. Tolchin knows inventors!

Edie has interviewed over 100 inventors for her longtime column in *Inventors Digest* (www.edietolchin.com/portfolio). She has held a prestigious U.S. customs broker license since 2002. She has written five books, including the best-selling Secrets of Successful Inventing (2015), and Fanny on Fire, a recent finalist in the Foreword Reviews INDIE Book Awards.



(ad designed by ioshwallace.com)

Designing for a Patent

HEED THESE 5 MAIN PRINCIPLES, WITH YOUR PROSPECTIVE LICENSEE'S PREFERENCES ALSO IN MIND BY JACK LANDER

THE FIVE MOST IMPORTANT PRINCIPLES OF INVENTION DESIGN:

- Keep it simple.
- Make it inexpensive to manufacture.
- Make sure it isn't already patented.
- Make sure you know about similar products from the past.
- Make sure there is a market for it.

Simplicity

If your design has six parts in an assembly and another inventor can achieve the same result as yours with only five parts, that inventor can patent his or her design even though it uses the same five parts as yours. So, strive to minimize the number of parts that achieve your objective.

Simplicity has the advantage in the marketing of a patent.

A patent for a complicated invention is often frustratingly difficult to understand, especially to a non-engineer who is part of the marketing team. It will usually pay to create step-by-step illustrations that explain the operation of your invention rather than leaving the non-engineers to try to create the operation in their heads from the patent drawings.

Also, be aware that each discrete component requires at least one special tool, such as a mold or die-set, to produce. Such tools are expensive, and the total cost to "tool up" may scare the financial people—if not the marketing people employed by your prospective licensee.

Expense

Other than the investment in tooling, the cost of assembly is a major consideration in your licensee's profitability calculation.

We may imagine that in this age of artificial intelligence and robots that assembly will be easy to engineer, and of negligible cost. Probably not.

Each component that is not symmetrical has to be flawlessly oriented in order to achieve perfect positioning of all components during assembly. And the final assembly machine, if indeed it can be designed and built, may cost hundreds of thousands of dollars.

Furthermore, the time required for the design and construction will delay entry into the market—possibly a major concern if a competitor is already on the market with its product.

Patenting

Most of us hate this part of the invention process, I suspect. I think it was easier for me to quit smoking than to perform a thorough patent search before I started my prototype, and I was so sure that my invention was novel and non-obvious.

That is immature.

Not only is it futile to proceed with designing and prototyping before being assured that your design is not already patented, but by studying the patented designs that precede your invention you may invent a different configuration than you first imagined—and thereby achieve the novelty that is required.

If money is not a limiting concern, you may wish to pay your patent attorney or patent agent to provide a search and patentability opinion as an initial step. The advantage is that a professional searcher will usually do a better job of searching than we can do ourselves.

However, a Google patent self-search is well worth the time. You may find your invention or something like it, and you will learn better ways to define your invention for the purpose of more searching.

A positive search result from Google patents may disclose a patent that is identical to your invention, in which case you can hire a patent attorney or patent agent to evaluate the discovery. In other words, a second opinion will either verify your opinion or show you where you erred in your interpretation.

A negative patent search—that is, finding nothing like your invention—is not reliable.

A negative search—that is, finding nothing like your invention—is not reliable. It is easy to miss similar or identical patents due to your description being different than the one used by the United States Patent and Trademark Office.

Products from the past

Not all prior art is patented. No doubt, thousands of items have been manufactured before the Patent Office opened in 1790. Also, many items of manufacture simply avoided patenting due to cost, time delay, and superior production and marketing capability of the invention source.

A search for products that were marketed without patent protection may be less tedious than a patent search.

I just searched Google.com for "early can openers" and found several pictures of can openers dating to 1858. And one of the latest inventions, the "Kitchen Mama," also appears.

I've had two of these hand-held electric openers so far. I had some problems with the first model a couple years ago but like it so well that I gambled on the shortcomings being corrected and was pleased to find they had been.

The point is that the Google search is a great place to learn about products of yesteryear as well as patented products.

The market

I'm reminded of the grocer who had the top shelves of his shop lined with boxes of salt. A customer, noticing the overabundance of salt, said to the grocer, "You must sell an awful lot of salt."

The grocer replied, "No, I sell very little salt; but that wholesale fellow who comes in here ... can he sell salt!"

Remember, you don't want to find a product that does what yours does lining the top shelves



of stores that sell it. Excessive inventory is likely to be due to the stocking of several brands. Why would you want to compete?

But if there is no stock of a product that does what yours does, that's usually also bad news; it means there is no demand.

It may also mean that you are the originator of a product that has great potential demand that is awaiting your invention. Be careful if you believe that is the case, because you'll have to sell your licensing prospect on the gamble that a market exists.

That means market research, either yours or your prospect's. Ideally, you should accomplish the market research so that it is part of your sales pitch.

Consider: Google has an interesting account of 25 products that were launched and failed by several well-known companies. Among them: Google Glass; Amazon's "Fire Phone"; Samsung's tablet phone, and Apple's U2 iPod.

The Goldilocks goal

Creating is the easy part of successful inventing. In order to license your patent, however, you must be aware of your prospective licensee's concerns about simplicity, cost to produce, broad patent protection and assurance that there is a "Goldilocks" market—not so big that it is already well covered, but not so small that it isn't appealing.

I never told you that inventing was easy, did I? €

Jack Lander, a near legend in the inventing community, has been writing for Inventors Digest for nearly a quarter-century. His latest book is "Hire Yourself: The Startup Alternative." You can reach him at jack@ Inventor-mentor.com.



Tips for Creating Reels? Really

POPULAR INSTAGRAM CONTENT TYPE IS A CRUCIAL TOOL FOR RAISING YOUR BRAND'S AWARENESS BY ELIZABETH BREEDLOVE

■ INCE INSTAGRAM introduced Reels in August 2020, the content type has soared to become one of the most popular mediums on the app. The app's algorithm favors video content—and with over 2 billion monthly active users on the platform, there's no reason not to tap into Reels to raise brand awareness, grow your brand's audience and, ultimately, sell more of your products.

However, although the Reels editor built into the app is pretty simple to use once you get started, creating Reels that help you reach your goals goes beyond editing together a professional-looking video. It involves the careful curation of visual, audio and text content edited together to tell a compelling story.

If you hope to incorporate more Reels into your Instagram strategy in 2024, here is how to get started.

Building your content library. Visual content and videos are the backbone of any highperforming Instagram Reel, so maintaining a catalog of video footage to use in your Reels is crucial. Of course, many of your reels will require specific footage, but more generic B-roll footage is also needed. Having it on hand can speed up your creation process.

Start by batch-producing B-roll footage. Compile a collection of 5-20-second clips related to your business. This can include clips of your team collaborating and working together, closeup shots of someone typing or performing other daily tasks, a variety of angles of your product, shots of someone using your product, or scenes from your office.

Include a variety of scenery, shots and angles so that you have many options to choose from when it comes time to create a Reel. Additionally, as you are filming, keep the composition of Instagram Reels in mind; you'll most likely want the subject in the center of the frame, with room for text at the top and a caption at the bottom.

Keep your footage organized in albums or folders so that you can easily find it when you need to edit together B-roll footage with other more specific clips for a Reel.

Adding audio and text. Once you have a library of video content to use, you can begin to piece together audio and text into a high-performing Reel.

You can incorporate several different types of audio into your Reel. Instagram has a Trending Audio section of its sound library—a great place to start if you are looking for inspiration, because it features the top 50 audio tracks with a sharp rise in Reel usage over the last few days.

Using these clips is a great way to tap into what's popular, not to mention the fact that the algorithm features Reels using these clips. This means more eyes on your content.

If you don't find something that works in this list, Instagram has a large selection of other songs and clips you can use, including a royalty-free sound collection to help you avoid copyright issues.

Voiceovers, also a great option, can even be placed over popular songs at a low volume. This is an excellent tactic for creating evergreen Reels, because it allows your content to stand on its own without jumping on the latest trend.

Always script your voiceover ahead of time to avoid rambling, and ensure that it's the right length for your video clip. Try to do it all in one take to make editing easier and eliminate the need to piece together clips.

Keep in mind that you can record voiceovers directly into the Instagram app using the



Having more generic B-roll footage on hand can speed up your creation process.

Edit tab when you create a reel. Use an external microphone to do this for a cleaner, more professional sound.

Whichever audio you decide to use, make sure that the B-roll fits the audio and creates a consistent mood throughout the Reel.

Then, it's time to consider the text.

At minimum, you'll need an opening hook to grab your audience's attention. Think of this hook as a short headline, ideally consisting of one sentence with a few keywords. It should be clear and concise, provide context, and entice the viewer to watch the whole clip.

Depending on the style of your Reel, you can add additional text to include a few key points throughout your Reel, or you can simply expand on your hook further in the caption.

As you edit your Reel and add text, make sure it's easy to read on the video. It should contrast with the background and use a legible font with an easy-to-read size.

Other best practices. Although there are many great video editing tools and sometimes they may be necessary, it's best to create your Reels in Instagram whenever you can so you don't have to worry about compressing file sizes, losing quality, or having parts of your video cut off due to the platform's dimension constraints. Keeping everything within the app ensures that

your audio and video is fully compatible with Instagram.

As you plan your Reels, review your Instagram Insights to see what performs well. Repurpose as much as you can. For example, if you've put together a piece of content that has performed well or resonated with your audience, use some of the text in your Reel.

If you want to maximize the efficacy of your account and get the most out of using Reels to promote your business, aim to post new ones a few times a week. This is difficult, if not impossible, for many inventors and solopreneurs, but even one Reel a month can create a big impact. You may find it easier to create and post several at once, and you can schedule them up to 75 days in advance under Advanced Settings.

With a great plan in place for how you'll use Instagram Reels and some strategic thought placed into how you record and edit together audio, video, and text, you'll be ready to move into 2024 with a renewed excitement for growing your brand on Instagram.

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.



Second Time's a Charm

2 WOMEN INVENT PROGRAMMABLE ACCESSORY TO TEACH GIRLS TECHNOLOGY THROUGH CODING BY JEREMY LOSAW

HEIR MISSION is to increase diversity in STEM and technology, especially for women. So it's fitting that a programmable, wearable accessory to teach girls and kids how to code was invented by two women—one from Hungary, one from Romania—who met while attending NYU Abu Dhabi in the United Arab Emirates.

Dora Palfi and Beatrice Ionascu were working together in university when they founded a student interest group to address tech inclusion for women.

"We believe that tech is our future," Palfi said. "And so, if women are not equally involved with tech, they don't have any chance to shape the future."

Their product, imagiCharm, can be worn as a charm or used as a key chain. Its matrix of 64 LEDs in the product can be coded with the app to create unique images and animations.

Paired with the imagi mobile game, imagiCharm has more than 70 educational partners in more than 90 countries.

The concept is to use an artful approach to allow kids to express themselves creatively and celebrate their uniqueness through

the outlet of coding. The app is free to download from app stores; the starter kit is available on the company website and from other online retailers.

Early concept scrapped

Palfi eventually pursued a master's degree in Human Computer Interaction and Design in Sweden. She used that opportunity to research ways to make it fun for girls and young women to code.

"The main takeaways were that it was important to essentially introduce coding through creativity," said Palfi, CEO and cofounder of imagiLabs, an all-female-founded, Stockholm-based startup that seeks to bridge the gender divide in coding. "And also, if it's kind of personalized or linked to self-expression, that's very engaging. The community aspect is important, too."

Using the insights gained from the study, Palfi and Ionascu began working to make a product to support these elements.

Their first concept was to make a programmable phone case. They built some prototypes of the concept, but packing the circuit and

LEDs into a phone case proved to be too bulky; it was also challenging to make different sizes for different and ever-evolving phones.

ImagiCharm is meant to provide young girls the confidence to show off their creative and coding skills. "We believe that tech is our future. And so, if women are not equally involved with tech, they don't have any chance to shape the future."

—DORA PALFI

Then, while working with a couple of girls in their study, they hit on the concept of a programable, Tamagotchi-type device. They morphed the platform into a cubic shape, which became the DNA of what imagiCharm became.

These first devices used maker hardware and were made with 3D-printed cases. Palfi and Ionascu then used them for some coding workshops. They were a big hit, so they started the company and pushed toward making a marketready device.

Kickstarter boost

imagiCharm was launched on Kickstarter in 2018. imagiCharm Cofounder and Chief Technical Officer Ionascu led the team to tighten the design, making it thinner, and designed it to have a custom PCB.

The team was rewarded with a successfully funded campaign that raised SEK 588,505 (Swedish Krona, about \$55,000 in U.S. dollars), with 624 backers. This gave them the funding to conduct the initial manufacturing run and deliver the first batch to backers.

Palfi opted not to file for utility patents on the product, instead opting to secure trademarks for the brand. She feels that the hardware is an enabler—that it is the app and software that make the product come to life.

After the Kickstarter campaign, it was full speed ahead to manufacture the product.

Through their involvement in the Hardware Club venture capital group, they were able to get recommendations for factories that would be a good fit for imagiCharm. They made a short list and went to China to visit them, eventually selecting a group that was already



Due to the great design work and using a reputable manufacturing company, very few of the devices have issues in the field—which is always a worry for hardware startups.

Beatrice Ionascu (left) and Dora Palfi met while attending NYU Abu Dhabi in the **United Arab Emirates.**

A big-picture vision

The women's original vision was for the product to be used only by consumers. Now that imagiCharm is used in schools as part of STEM curriculum, its value and societal relevance grows.

Eventually, teachers started buying and experimenting with the product and became interested in using it in their classrooms. Because it is such a friendly and inviting product, it is a hit for teachers to teach STEM and coding when they may not have any experience with it themselves. To support this vertical, Palfi and Ionascu created the imagiEdu platform with lessons and tools for educators.

They are continually making improvements to the software, with a second version of the hardware on the drawing board. They are also exploring ways to incorporate AI learning into the product to keep it tech forward, and have some line extensions being developed that will be announced soon.

Details: imagilabs.com

Jeremy Losaw is the engineering director at Enventys Partners, leading product development programs from napkin sketch to production. He also runs innovation training sessions all over the world: wearewily.com/international



Where Trust is a Must

WOMAN'S GLOBAL BABY RENTAL GEAR BRAND CONTINUES A LONG STRING OF STARTUP SUCCESSES BY EDITH G. TOLCHIN

ANY OF my interviews are with inventors who have appeared on "Shark Tank," and who have negotiated deals with at least one of the "Sharks." Here's an interesting story especially for me, because I'm always scouting useful products for my grandson, Josh.

BabyQuip, a major global baby gear rental brand, is a company that appeared on the show but did not negotiate a deal. Here's the story from Santa Fe's Fran Maier.

Edith G. Tolchin (EGT): I understand you and your son, Joe Maier, are running BabyQuip. Please tell us a little about yourselves.

Fran Maier (FM): I'm thrilled to be working with my son! When our co-founder and tech lead decided to leave BabyQuip in late 2017 (which we founded in May 2016), I immediately reached out to Joe. At the time he was working on technology projects for Accenture and was interested in making a change, so the timing worked out well.

Our platform has improved dramatically since then, with new interfaces for our affiliates and cleaning business, mobile apps, and more.

I'm a serial entrepreneur and super founder, with over 25 years of experience pioneering category-disrupting, business-to-customer and

business-to-business internet businesses. I am also known for breaking bound-

aries as a Latina business leader.

Previous career highlights include establishing the first membership business model at Match.com, which drove \$3 million in revenue and attracted over 500,000 subscribers, and raising more than \$30 million in venture funding as founder of the privacy compliance tech company TRUSTe (now TrustArc). As a founding member of Kmart Corporation and Softbank's former joint venture, BlueLight.com, I drew 4 million subscribers to the Internet service in less than nine months.

Since launching BabyQuip, I've made gamechanging contributions to both the family travel industry and "gig economy" model (short-term contracts and freelancers) with its breakthrough platform. This gives traveling families access to high-quality baby equipment rentals through proprietary technology and an independent contractor community called Quality Providers.

Under my leadership, BabyQuip serves over 1,300 markets and maintains a network of independent gig economy entrepreneurs in the thousands. To date, I have raised over \$8.5 million in seed funding for BabyQuip. In 2022, BabyQuip's GMV (gross merchandise value) nearly doubled from 2021 and grew its QP network by over 60 percent.

EGT: How did the business model for BabyQuip come about?

FM: When I came across a mom earning good money with a baby gear rental business she was running out of her home in Santa Fe (my hometown and where I live now), it immediately clicked for me. Like most parents, I remember



"We made it easy for families to book and rent gear from our Quality Providers, solving a big problem and also offering a chance for entrepreneurs to earn a flexible income."

—FRAN MAIER



how difficult it was to travel with my sons when they were small.

Trudging through crowded airports with small children and all the necessary equipment to have a safe and comfortable experience at your destination is almost impossible. At the same time, parents know that gear and toys that help children sleep well at night and stay happily engaged during the day can be a game-changer for a family vacation.

With BabyQuip, we made it easy for families to book and rent gear from our Quality Providers, solving a big problem and also offering a chance for entrepreneurs to earn a flexible income.

EGT: Have either you or your son ever "invented" anything before?

FM: BabyQuip is my fifth startup. My first was Match.com in late 1994; I was cofounder and first general manager.

Of course, we pioneered the entire category of online dating. At the time, the internet was in its infancy and we were inventing all kinds of things "on the go."

In many ways, BabyQuip reminds me of Match: early-stage marketplace, pioneering a new category, and building a brand based on trust and safety.

Joe worked at a couple of startups before Accenture, so he was familiar with the focus on problem solving that they require.

EGT: What kind of market is this for renting baby products, and do you have any competitors?

FM: This is a huge market! In North America alone, we estimate there are approximately 30 million families traveling with children under 6 years old every year. Globally, we think the market is close to a whopping \$7.8 billion.

We have a few competitors, but in the last two years we have really pulled away from the competition. Some of the regional competitors who have been around for many years are way behind on technology and can't provide a seamless rental experience and don't keep up with child product safety standards—which is unfortunate.

EGT: How are your Quality Providers hired and trained?

FM: We carefully interview, train and background check each Quality Provider. They also go through BabyQuip school, where they learn about our cleanliness and safety guidelines, what they can and can't rent, how to register for recall alerts, expectations for working with The goal of BabyQuip is to make it easy for families to book and rent baby gear from Quality Providers, who get a chance to earn a flexible income.

customers and best practices for succeeding. They also must pass a series of quizzes.

We monitor all customer reviews so we can quickly and easily tell if we have a quality problem with a certain provider. Luckily, this doesn't happen very often.

EGT: Is there, for example, a cut-off point for how many times each product can be re-used?

FM: Since car seats expire, they have a specific date when they can no longer be used. Usually, they expire after seven to 10 years, depending on the brand. BabyQuip and our quality providers take cleanliness and safety very seriously, so whenever a piece of gear is showing signs of wear and tear, the items are pulled out of inventory.

EGT: Do you keep active with Consumer Product Safety Commission's recalls (cpsc.gov)?

FM: Yes, we stay very active and up to date

with that. BabyQuip executives are signed up to receive immediate recall alerts.

While we do educate our Quality Providers to sign up for alerts as well, we always communicate these with every Quality Provider. We also have technology to identify any recalled items in our database and can easily remove the listing in one click for immediate attention. It's pretty great.



EGT: Are you only renting in the USA for now, or are you providing any overseas markets?

FM: We have been providing baby gear rentals in the U.S. since 2016 and Canada since 2019. In 2022, we launched into Mexico, the Caribbean, Australia and New Zealand. So far in 2023, we have expanded to serve cities in Spain, Ireland and England—and we will be launching in more European countries soon.

EGT: Please share your "Shark Tank" experience.

FM: It was a personal goal to appear on "Shark Tank," and it was even more special because I was able to appear with my son (March 6, 2020). We were able to showcase that we are a family business helping other families.

Our episode has been re-aired a few times, so we continue to see the benefits of brand awareness and increased site visits. While we didn't reach a deal, it was an incredible experience. I wrote a blog post (bit.ly/babyquipsharktank), highlighting the experience.

EGT: Is this business model patented, or do you own any IP for this business?

FM: We have filed for trademark protection for our brand, logo and tagline in most of the countries in which we operate.

EGT: What's next for BabyQuip?

FM: This year, we are focused on scaling our business even further in the U.S. and internationally—specifically in Mexico, the Caribbean, Australia, and western Europe.

We recently launched a new party rental service that supports families with all their baby and kids' party rental needs, ranging from entertainment-focused gear like soft play zones, ball pits and lawn games to essential equipment such as kids' tables and chairs, high chairs and diaperchanging stations. We are expanding into other rental categories, like pet, outdoor, mobility, etc.

I'm also thrilled to share that we just announced a crowdfunding campaign on StartEngine. Our goal is to raise money that will see us through the next year and to profitability.

EGT: Any words of wisdom for inventors seeking to create a similar business?

FM: Marketplaces are challenging because you have to build both supply and demand and get the "flywheel" going. The key to success is deeply understanding your target market and the problem you're solving. €

Details: fran@babyquip.com

Edith G. Tolchin has written for Inventors Digest since 2000 (edietolchin.com/ portfolio). She is the author of several books, including "Secrets of Successful Women Inventors" (https://a.co/d/fAGIvZJ) and "Secrets of Successful Inventing" (https://a.co/d/8dafJd6).



COLLEGIATE INVENTORS WINNERS

2 DIAGNOSTIC TOOLS FEATURED IN 2023 CLASS

couple of diagnostic tools—one that is an alternative to Pap smears, the other that can detect the formation of a cerebral aneurysm-won first prize in the 2023 Collegiate Inventors Competition.

Finalist teams (five undergraduate and five graduate), consisting of 22 students from eight colleges and universities across the United States, presented their inventions to a panel of judges composed of the most influential inventors and innovation experts in the nation—National Inventors Hall of Fame inductees and officials at the United States Patent and Trademark Office, co-sponsor of the event.

Winners (\$10,000 prize): The Georgia Institute of Technology team of Netra Gandhi, Rhea Prem, Ethan Damiani and Girish Hari (adviser: Wendy Cocke) won in the undergraduate category for FADpad. The diagnostic tool known as the Papanicolaou test, or Pap smear, is often uncomfortable and regarded as an invasion of privacy. FADpad is an at-home menstrual blood screening tool that allows users to collect their personal health information safely, comfortably and privately.

In the graduate category, Adi Mittal (advisers: Robert M. Friedlander, Kamil Nowicki) also won for the Cerebral Aneurysm Test (CAT-7). The first simple, whole bloodbased diagnostic test to detect the formation of a cerebral aneurysm, it is noninvasive, less expensive than traditional methods, more accurate, safer and able to be used earlier in the care process.

Runners-up (\$5,000 prize):

In the undergraduate category, Sneha Batheja, Ria Jha, Charlie Almoney and Arijit **Nukala** (adviser: Brijen Joshi) of Johns Hopkins University won for the Bronchosleeve. The easy-to-insert, flexible yet sturdy device can be used in one-lung ventilation (OLV), a procedure that provides surgeons

with access to organs obstructed by an inflated lung. Current OLV devices have a 40 percent failure rate and a high probability of causing postoperative complications.

In the graduate category, Amir Nasajpour (adviser: Paul S. Weiss) of Entropic Biosciences Inc., University of California, Los Angeles, won for a bioinspired rapid sample preparation kit that assembles cells into functional tissue. The technology can be employed to develop an array of tissue types from numerous cell sources.

Daniel Collins of Duke University (adviser: Peter Nguyen) won the Arrow Electronics People's Choice Award and \$2,000 prize for Nucleo Tide, a molecular diagnostic platform that uses CRISPR-based biosensors to rapidly identify marine pathogens and harmful algal blooms. •

Winning inventors (from left, front row): Netra Gandhi, Rhea Prem, Sneha Batheja, Ria Jha; (from left, back row) Girish Hari, Adi Mittal, Daniel Collins, Ethan Damiani, Arijit Nukala, Amir Nasajpour. Not pictured: Charlie Almoney.

For more information on the competition, see invent.org/collegiate-inventors.



NACCE CONFERENCE EMPOWERS STUDENT ENTREPRENEURS WITH HANDS-ON EDUCATION ABOUT IP BY CHINWE OHANELE

HERECENT National Association of Community College Entrepreneurship conference held in Nashville was nothing short of an exhilarating blend of innovation, inspiration and invaluable networking.

As a critical convener within the entrepreneurship ecosystem in higher education, NACCE's annual conference brings together educators, nonprofits and philanthropies—all dedicated to empowering student entrepreneurs. Continuing a near-decade-long relationship with the organization, The Michelson Institute for Intellectual Property's participation in this influential gathering marked a significant milestone in the journey to embed intellectual property education and knowledge in educational institutions nationwide.

The conference featured a jam session room, a space where participants could express themselves and tap into their inner musician.

Following the beat

This year's conference theme, "The Beat of Collaboration," perfectly encapsulated the spirit of innovation and creativity that defines entrepreneurship. Event organizers went above and beyond to curate an experience that provided valuable insights and learning opportunities, as well as celebrating the artistic dimensions of entrepreneurial endeavors.

One highlight was the presence of a poet capable of weaving words into poetry based on any given word in a matter of minutes.

This artistic performance served as a poignant reminder of the boundless creativity that lies

within each entrepreneur, waiting to be unleashed. Moreover, for Michelson IP, it was a reminder of how quickly intellectual property is created in our digital world. It presented a sense of urgency to our mission to ensure entrepreneurs are equipped with the information needed to protect and control the fruits of their creative labor.

The conference also featured a jam session room, a space where participants could express themselves and tap into their inner musician. This unique addition to the conference's agenda underscored the importance of embracing our creative instincts, fostering a sense of community and shared expression among the attendees.

By allowing amateur and professional musicians to explore together, we were all inspired to see the power of collaboration in creativity, and certainly in entrepreneurship.

Nashville, with its rich musical heritage and bustling creative scene, provided the perfect backdrop for a conference centered around entrepreneurship—especially the kind that encourages the artpreneur. The city's vibrant energy and spirit of innovation permeated through the conference, infusing each session, workshop, and networking opportunity with a sense of possibility.

Mutual mission

Michelson IP's mission to ensure accessible intellectual property education aligns seamlessly with NACCE's commitment to fostering entrepreneurship within community colleges—so much so, that we partnered with it at the beginning of our initiative.

Over the years, this association has emerged as one of Michelson IP's most invaluable allies, playing a crucial role in integrating our curriculum into hundreds of institutions across the nation. The conference provided Michelson IP with an unparalleled platform to share our resources, best practices, and the tangible impact of our programs. We were honored to present alongside one of our esteemed educators in residence: Diane Sabato of Springfield Technical Community College (STCC).

The program, launched in partnership with NACCE, was intended to encourage educators around the country to take Michelson IP materials and integrate them into their courses—the hope being that by integrating the materials, we would have viable use cases for future educators looking to augment their programs with IP materials.

STCC, a minority-serving institution led by Sabato and John Diffley, was a recipient of a grant to implement Michelson IP materials.

This simply required them to update their syllabi, slide presentations, and perhaps create some teaching tools that other educators would be able to use. Instead, Sabato's team used the Michelson Institute's grant as an impetus to transform the educational landscape in their community.

By partnering with local IP attorneys and community organizations, hosting webinars and integrating the material in various courses, Sabato's team made the program shine. She shared her program's learnings that the successful integration of the program shows the power of collaboration, innovation and a shared vision for empowering the next generation of entrepreneurs.



The NACCE conference is renowned for its ability to bring together like-minded individuals, organizations and educators from across the nation, fostering a strong sense of community and collaboration. It was a privilege to be a part of this dynamic gathering.

With appreciation for the unwavering support of the NACCE community, we look forward to continuing our journey together by empowering educators who are inspiring the next generation of creative entrepreneurs.

The journey is filled with potential. Together, we are poised to make a lasting impact on intellectual property education nationwide. €

The Michelson Institute for Intellectual Property provides no-cost IP educational resources to empower budding inventors and entrepreneurs. Michelson IP is an initiative of the Michelson 20MM Foundation, which focuses on a range of issues, including digital equity, smart justice, and open educational resources. It operates with support from Alya and Dr. Gary K. Michelson, members of The Giving Pledge. To access more resources, please visit MichelsonlP.com.

Diane Sabato of Springfield (Mass.) Technical Community College, who co-leads the minority-serving institution, was a presenter for the program.

THE MICHELSON INSTITUTE FOR INTELLECTUAL PROPERTY





Inventing From Strength

CULTURED AND ENERGIZED BY HARD KNOCKS, TARKAN BASTIYALI INNOVATES HIS WAY INTO THE NEW YORK SPOTLIGHT

E'S HAD A MOUNTAIN OF CHALLENGES. NOW HE'S TOP OF THE HEAP.

In his conversations with *Inventors Digest*, Tarkan Bastiyali exuded a quiet, professional confidence—certainly not the kind of fast-talking, egocentric bravado one might expect from an accomplished and highly visible entrepreneur in arguably the world's most competitive business arena.

There was an unmistakably dignified self-assurance, fueled by stunning accomplishment. This is rooted in perseverance through a neurological condition called Tourette's syndrome and the bullying he endured in middle and high school. It's rooted in ultimately excelling in academics despite a guidance counselor who doubted his prospects for college. It's rooted in his daily battle with tinnitus.

From these roots blossomed a relentlessly active and creative mind that invents, designs and builds with a pounding determination to change the world for the better.

Unique opportunities

Bastivali is proud to be a product of unusually diverse environments.

His homemaker mother was born in Germany. His father, Dr. Burhanettin Bastiyali—born on the island of Rhodes, now part of Greece—sought refuge in Turkey after World War II and introduced Turkish Raki to Germany, where he met his wife.

An entrepreneur, his father also ventured into importing construction machines from the United States and exporting them to Turkey. In 1980, when he came to America, he and his brother bought a building on New York's Fifth Avenue.

Tarkan Bastiyali was born in Düsseldorf, Germany. He grew up mostly in New York but, because of his parents' backgrounds, was able to see other parts of the world early in his life.

Tarkan Bastiyali's innovative vision includes (opposite page) the Smart Sanitizer, a kiosk that sanitizes your phone and hands and has a screen that provides advertising opportunities; overseeing the glamorous transformation of the storied 267 Fifth Avenue building; and the Moving 3D Hologram Ad (below).



Bastiyali's run of high-tech inventions began just six years ago. In 2005, he opened the Midtown Loft and Terrace, which has become a premier and highly sought destination for celebrations by people from around the world.

"I had the opportunity to visit my relatives in Germany and Turkey every summer," he said. "These trips allowed me to forge lasting connections and create cherished memories across different cultures."

The life lessons and physical benefits of playing sports also were prominent in his upbringing—particularly baseball, tennis and basketball, the latter his favorite and which he still plays several times a week.

"This diverse mix of experiences, challenges and family background has shaped me," he said.

"They instilled in me a deep appreciation for different cultures, resilience in the face of adversity, and a passion for both academics and sports."

Tinnitus trigger

Bastiyaliinventions.com provides details and videos of eight hightech invention triumphs.

(He was also in charge of directing all the

videos.) The array of patented innovation—which yields benefits ranging from improved driving safety to more exposure to advertisers to improved sanitation—is especially impressive, given the fact that it has all happened in the past six years.

Consistent with a life full of overcoming obstacles, it all started when Bastiyali was faced with a painful situation and innovated to solve the problem.

The tinnitus that befell him in 2012, after an international flight, produced a stubborn, tea kettle sound in his right ear. Five years later, he conceived the idea of streaming nature sounds via a Bluetooth earpiece just so he could get through the day.

After that success, he was unstoppable.

"I have a real passion for inventing, and it comes naturally to me," he said. "Once I filed for my first patent, I was on a roll."

That 2017 invention was the SmartSafe Cabinet, also known as the Smartphone Storage Locker—where retail customers can store their

"I have a real passion for inventing, and it comes naturally to me."

smartphones in an assigned slot in the locker. There, their phones will be charged, secured and disinfected with UV lighting.

The locker can also be useful in school and workplace environments.

Students will lock away their phones in assigned slots so they are not a distraction in the classroom. A few minutes before the school break ends, the locker will send a text warning that the phone will be deactivated unless it's returned to the locker. Locking the phone away can also increase productivity in an office setting.

Starting a revolution

The first Bastiyali invention featured on the website, the Moving 3D Hologram Ad, has a 21st-century "wow" factor that helps make it one of his proudest accomplishments. It is billed as "a revolutionary advertising concept to build a new street-level digital media network."

A 3D hologram ad is displayed on top of moving objects, such as taxis, rideshares, ferries, trains and flying taxis in the future. The ad will be displayed with an LED hologram fan that Bastiyali calls "the most realistic 3D hologram advertising experience on the market."

By scanning a hologram QR code placed on the roof of the taxi, pedestrians can access information about the company. An interactive screen in the back seat will allow passengers to add special effects to the hologram ad and share it on social media.

The invention that "holds a special place" for Bastiyali is the SmartSafe "smart start system," which prevents a vehicle from starting while the driver's devices—such as the Smartphone, Apple Watch and Smart glasses—are unsecured in the car's center console.

As with the SmartSafe Cabinet, the SmartSafe console is equipped with UV lighting to disinfect the devices. It also has an EMS battery to prevent radiation.

For navigation, the driver can use Apple Play or Android Auto. The center console is also equipped with a transmitter that can sync with the driver's innovative home systems and automatically trigger lighting profiles or open the

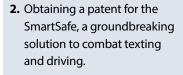


The Moving 3D Hologram Ad, a potential fit with many major corporations, is one of Bastiyali's most exciting concepts.

FROM THE HOME OFFICE **IN NEW YORK CITY:** Tarkan Bastiyali's Top 3 List

His most satisfying accomplishments:

1. The successful transformation of his family-owned building into a textile showroom boutique building. "Hosting events for Fortune 500 companies has been a great fulfillment for me."



3. Obtaining a patent for the hologram over the taxi and flying taxi, which garnered recognition from his followers. "I am particularly proud of securing a deal with a taxi company for my patented hologram-over-the-taxi invention, a noteworthy milestone in my professional life."





garage door when the car arrives in the driveway. (More information: smartsafe.net.)

The SmartSafe's purpose is to "prevent texting and driving, ultimately saving lives. The significance of this invention cannot be overstated, as even saving one life makes it all worthwhile. My passion for this idea is unwavering, and I am dedicated to its success."

Bastiyali has developed a cutting-edge SmartSafe prototype, which is installed in a Canadian electric car from Mutualism (mia-netpeople.com/mutualism). This vehicle boasts a range of state-of-the-art technologies and will be unveiled at the renowned Consumer Electronics Show in Las Vegas in January.

Smart sanitizing

During the COVID-19 pandemic in 2020, Bastiyali was approached by a tenant who brought a sanitizing machine from Turkey with limited features. Recognizing the opportunity to enhance and introduce it to the U.S.

market, he took on the project and made significant improvements to the machine, ultimately naming it the Smart Sanitizer and obtaining trademark approval.

Driven by his vision for innovation, he had plans to develop an accompanying app that would send text reminders to establishments when the sanitizer liquid was running low. This feature was particularly valuable, as many automatic wall sanitizer machines often run empty. Additionally, the app would enable users to download coupons onto the machine by taking a picture or scanning a QR code, eliminating the need for paper coupons that often go to waste.

Recognizing the importance of design, Bastiyali applied for a design patent for a sanitizer machine that featured a hologram overlay and slots on both sides, catering to high-traffic areas. He established marketing partnerships for the Smart Sanitizer, including collaborations with the National Hot Rod Association Justin Ashley race team, NASCAR, and Indy teams.

SmartSafe—a "smart start system" that prevents a vehicle from starting while the driver's devices, such as the Smartphone, Apple Watch, and Smart glasses, are unsecured in the car's center console—will be featured in a Tesla car.



LEGACY BUILDING, AND BUILDING A LEGACY

Whether as an inventor, entrepreneur or venue owner, Tarkan Bastiyali has always been able to see what many others cannot. Even when it's right in front of them.

When, just out of New York University, he took over the family-owned 267 Fifth Avenue building (267fifthave.com) in 2000, the public saw a storied building in serious need of renovation. Bastiyali saw a proud gem with a history dating to 1913 that awaited another chance to sparkle.

He wasted no time overseeing a complete interior face-lift. He replaced the carpet on each floor with beautiful maple flooring imported from Canada; revamped the lobby to create a more modern and inviting space; repointed all the bricks on the exterior, and more.

Before long, he had a unique textile boutique building that has been featured several times in *Home Textiles Today*. Special features include the top two floors that can be used for private parties, a dedicated private elevator and lobby for textile tenants during the two market weeks in March and September, and fabulous views of other city landmarks.

The building is now 95 percent occupied—a major feat in a post-COVID world of remote work and empty commercial buildings.

"Textile tenants have been particularly beneficial for me as a landlord," Bastiyali said. "They only visit twice a year for two weeks to meet with buyers, and since they pay annually, it's a great deal for any landlord.

"The textile industry still requires in-person fabric showcases. It took me about seven years to transform the building into a textile-focused hub, and I take great pride in this accomplishment."

In 2005, he opened the Midtown Loft and Terrace (midtownloft.com). Its two top floors host events for many Fortune 500 companies, as well as weddings, bar and bat mitzvahs and "Sweet Sixteens." The Midtown Loft has also been featured on TV's "The Apprentice" and movies such as "The Girl on the Train."

"I am incredibly proud to share that the Midtown Loft and Terrace has been honored with the WeddingWire Bridal Choice Award for 12 consecutive years," he said. "This prestigious recognition solidifies our reputation as one of the most reputable venues in New York City and a globally recognized destination for weddings."

He has also helped many charity organizations by offering the use of the venue as a donation. The event space has hosted many corporate and wedding clients from the United Kingdom.

Bastiyali had a unique retractable enclosed roof installed on the Terrace in 2015 and built a modern lobby with a private elevator opening onto the Terrace. The Loft and Terrace can now be rented out separately.

His sister, Yasemin, and his father play crucial roles as partners in sharing his visions and all the essential details involved. "As for me, I have always pursued my passion for innovation and take pleasure in generating fresh ideas. Exploring creative solutions brings me immense joy."

So does leaving his mark in an increasing number of fields: "real estate, event management, production—and now, with my inventions, the boating, hotel, automotive, and air taxi industries.

"Exploring multiple fields brings me great joy

as it adds excitement and variety to my life. I am

constantly driven to push boundaries and make a positive impact across various industries."

deficial

DECEMBER 2023 INVENTORS DIGEST 33



TARKAN BASTIYALI

OCCUPATION: Real estate/venue owner, production company owner, inventor/ entrepreneur

BORN: Düsseldorf, Germany

HOME: New York City

EDUCATION:

BA in History, New York University, 2000

TOP AWARDS: Top Wedding Couples Choice Award 12 years in a row; 2019 DWHA Entrepreneur of the Year Award; 2019 Marquis Who's Who in America

FAVORITE BOOK: "Al Superpowers China, Silicon Valley, and the New World Order," by Kai- Fu Lee

PERSONAL: Daughter Aryanna, 13; son Adryan, 11

HOBBIES: Basketball, tennis, baseball, boating, hiking, traveling

CAI-FU LEE

YANKEES, OR METS? GIANTS, **OR JETS?** Mets fan and Giants fan

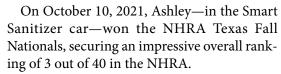
FAVORITE TV SHOW:

"Shark Tank"

MOST INSPIRATIONAL PERSON: Nikola Tesla

FAVORITE QUOTE:

"The most important product of a creative mind is an invention. Its ultimate aim is the rule of mind over nature and the use of its forces for the needs of mankind."—Tesla



Bastiyali's impressive inventions range from Reserve My Lounger and Mooring to the Air Taxi Pod. However, his most recent patented concept takes cleanliness to a new level: the Seat Sanitizer.

When a commuter closes the passenger door, the seat automatically rotates and undergoes a sanitization, disinfection and drying process for the next passenger. He is actively seeking investment for this idea.

Pushing patent power

The company website prominently displays patent information and status for each invention—including click-on looks at the actual utility and design patents. The Moving 3D Hologram Ad displays flags of the 24 countries where it is patented. Its U.S. patent, granted in 2020 when Bastiyali Inventions was launched, remains one of his greatest professional thrills.

The site is an uncommon exhibition of patents' power and detail. Bastiyali wouldn't have it any other way—and not just for the obvious reasons.

"Owning a patent comes with the possibility of someone infringing upon it—which, in turn, presents an opportunity to license the patent from the infringer," he said. "Owning a patent is undoubtedly gratifying, as it signifies a significant accomplishment.

"With a patent in hand, the potential for growth and success is boundless. The journey ahead holds endless possibilities, and securing a licensing deal becomes the ultimate goal for any inventor."

When asked about the most important lessons he has learned as an inventor, the protection of intellectual property is A-Number One.

Bastiyali is grateful that he "gained a profound understanding of the significance of seeking worldwide protection. This not only adds value to the patent but also safeguards the idea beyond the borders of the United States.

"It is crucial to engage a trustworthy attorney, especially when dealing with multiple patents. They play a vital role in managing important deadlines, such as the PCT (Patent Cooperation Treaty), and reminding you about patent maintenance fees that require payment.

"Another valuable lesson I learned is that a working prototype is necessary to obtain a license. However, since many inventors cannot afford to invest in one, I recommend partnering with a company such as Pitchbook to connect you with investors who can help build a working prototype.

"By entrusting these responsibilities to a

Especially relevant post-COVID, some of Bastiyali's inventions focus on hygiene. Below, clockwise: Justin Ashley Racing is a marketing partner for the Smart Sanitizer, which works through an app; the Reserve My Mooring Buoy system allows boaters to reserve a spot at their desired bays in advance; the Air Taxi Pod is a revolutionary way for commuters to land and take off from busy metropolitan cities; the Seat Sanitizer, meant for public transportation, features a mechanism in which the seat automatically rotates and is sanitized, disinfected, and dried for the next passenger.



The Invisible Influencer

HIDDEN PERSUADERS ARE A TIME-TESTED STRATEGY OF ADVERTISERS, STORES, POLITICIANS BY WILLIAM SEIDEL

ARKETING IS filled with hidden persuaders, which are the secrets of consumer influence. These invisible tactics are enormously effective.

Hidden persuaders are the subtle and subconscious (subliminal) and conscious (supraliminal) techniques employed to encourage consumers to buy products, adopt certain behaviors and form favorable opinions.

The main goal of marketing is to influence consumers' purchase decisions. The finesse of all messaging is targeted to persuade and influence buyer decisions.

New products, unplanned purchases and impulse purchases are heavily influenced by factors outside of our conscious awareness.

Shocking revelations

In 1957, journalist Vance Packard wrote "The Hidden Persuaders." It quickly became a New York Times bestseller.

The book shocked the public, exposing consumer motivational research and psychological techniques used by advertisers and politicians to manipulate and induce desire for products and candidates. A leading psychologist and the "father of motivational research," Ernest Dichter, took it further with the advertising industry.

Advertising agencies were quick to publicly condemn Packard's and Dichter's assertions of exploiting the subconscious. Ironically, behind the public view, these agencies were quick to take advantage of the hidden persuaders to influence consumer behavior.

The subconscious mind represents at least 90 percent of total brain function. When it comes to processing information, the subconscious is more powerful than the conscious mind.

The best marketing is that which you do not recognize as marketing.

Hard to enforce

Subliminal advertising occurs without consumers knowing it and is banned in many countries. However, it is not illegal in the United States and is not protected by the First Amendment.

The U.S. Federal Communications Commission can revoke the license of any company that uses subliminal advertising in broadcasts. Despite this, it is an advantage that companies use whenever they can.

For example, audio and visual subliminal messages are regularly used in songs, films and ads to persuade, enhance and reinforce their message. Something as simple as increasing the volume for ads can subliminally influence the listener.

The FCC has been receiving complaints about loud commercials since the 1960s. Though it is subtle, it is also subconsciously influencing you to "buy my product and vote for me."

In 2010, Congress approved legislation to quiet excessively loud television commercials through the Commercial Advertisement Loudness Mitigation (CALM) Act. It requires the reduction of the decibel

level of regular programming, but it becomes impossible to enforce for streaming, radio, cable and many forms that are not regulated.

Getting supraliminal

A European study of liquor stores analyzed how music influenced wine sales.

When researchers played French music, they found that French wine substantially outsold German wine. When they switched to German music, buyers were more likely to purchase the German wines.

These messages are in our face, but we do not recognize the influence and the behavior manipulation.

Supraliminal is stimulus that is seen or heard but not consciously perceived. An ad shows what

The subconscious mind represents at least 90 percent of total brain function. When it comes to processing information, the subconscious is more powerful than the conscious mind.



it is promoting, but a supraliminal strategy touches the subconscious mind and adds meaning.

FedEx uses the negative space between the 'E' and the 'X' to show an advancing arrow. Created by Landor Associates in 1994, it received more than 40 design awards. But more important, it represents speed and following the arrow.

Amazon's logo is a supraliminal message because it uses an obvious and direct tactic of getting a more profound message. The arrow connecting A to Z lets customers know they sell everything from A to Z; the arrowed smile infers it will be a happy experience and make you smile. It is also friendly.

Hidden store strategies

Where the product is located in a store is critical to the manufacturer and reseller. There is a direct correlation between placement and sales.

Is it at eye level (best), bottom shelf (not good) or the wrong aisle (very bad)?

Studies show that 70 percent to 90 percent of people automatically turn right when entering a store. This means the right-hand wall is what shoppers see first, and the prime location. In many stores, the best-selling products are to the right and also cross-merchandised for repeat exposure and increased sales.

In a supermarket, staples such as milk, eggs, coffee and often sale items are at the very back of the store and spread out so you must walk through the entire store to get to the most purchased products.

Impulse products such as candy, magazines and mints are at the checkout lane—where you wait, read the headlines and are tempted by the candy.

A whiff of temptation

Scent marketing is a type of sensory marketing targeting a shopper's sense of smell.

Scents are chosen to match the merchandise. The sense of smell influences our mood and creates a pleasant place to stay longer, shop longer and purchase more. The reason it is so powerful is, our sense of smell ties to our emotions and memory more than our other senses.

Think about the aroma of coffee when you enter a Starbucks. This is an "Ambient Scent." It is reported the company adds the coffee scent to the ventilation system. The smell of freshbrewed coffee at a gas station increases coffee sales 300 percent.

The strategic use of ambient scents is inexpensive and a powerful way to positively influence behavior. It is approaching a billion-dollar industry and proven highly effective in casinos, hotels, cruise lines and retail operations.

The lure of emojis

Emoticons or emojis are a secondary communication about content interpretation. They add personality to flat text, create closer relationships and add positive effects of good feelings. There are also negative and angry emojis.

With more than 10 billion emojis used every day, they have become the first language born of the digital world. In 2015, the Oxford Dictionary awarded the emoji or "face with tears of joy" the "Word of the Year."

The important point is that emojis have a hidden meaning in plain sight—which is why they are supraliminal influencers. They enrich communications, convey an alternative meaning

THINK MARKETING



and have become shorthand for things hard to describe in text.

Humor in text can be misinterpreted, but not with emojis.

Neuromarketing

Neuromarketing is an emerging field, scanning brains using magnetic resonance imaging (MRI). This reveals the subconscious reasons for consumer behav-

ior and decisions—the purpose being to predict how and why consumers make decisions.

Neuromarketing uses MRI mapping to learn customer preferences. Psychologists can see increased and decreased activity in different parts of the brain, which explains the subconscious response.

In a Coca-Cola and Pepsi taste test, consumers' brains were mapped. Based on taste only, the scans revealed brain activity in the ventromedial prefrontal cortex, which is the reward system and predicts preferences.

When viewing a Coke logo while tasting Coke, more activity was at more locations in the brain associated with emotion and memory. This was not the same for Pepsi.

Use it if you can

Knowing how to use subliminal messages in copywriting, advertising, packaging, signs, branding and even your logo can add meaning to your message. Repetition can make a message stick. It works!

Short of mapping your customers' brain, you need to know who they are, how to reach them and the message to which they will respond. After all, this is all about customer response.

William Seidel is an author, educator, entrepreneur, innovator, and a courtapproved expert witness on marketing innovation. In his career and as the owner of America Invents, he has developed, licensed, and marketed billions of dollars of products.







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HOW WE DO IT







Industrial Design



Engineering & Prototyping



Manufacturing



Sourcing



Market Research



Crowdfunding (Kickstarter)



Digital Advertising & Marketing



Social Media Marketing



Public Relations

We've helped bring more than 2,500 products to market. Is yours next?



Four We Adore

THESE LATEST HIGH-TECH TOOLS CAN ELEVATE YOUR PROTOTYPING EFFORTS IN 2024 AND BEYOND BY JEREMY LOSAW

ITH THE holidays here again, it is a lovely time to kick back and reflect on the breakthroughs and nadirs of our proto-

Each project and year bring its own set of wins, losses, frustrations and serendipity. No matter how your development programs evolved during the year, the lessons learned will either help propel your current product concept toward the market or be the catalyst for a new and better idea.

In either case, it is also a good time to evaluate your prototyping capabilities and see what you could add to your shop to facilitate your next breakthrough. The following are my four favorite new products for the holiday season that will help accelerate your inventing in 2024.

Raspberry Pi 5

The long-serving, single-board computer solution got a facelift in 2023 and is primed to be the brains behind your next hardware projects.

Three years since the release of the Pi 4, the Pi 5 has a suite of upgrades that make it the most

> The team at Raspberry Pi designed its own processor for the Version 5 release that boasts a 2.4GHz quadcore CPU. This added horsepower will allow it to run machine learning and

powerful yet and worth the wait.

AI programs without breaking a sweat.

With two different RAM options of 4GB for about \$60 and the 8GB retailing for \$80, it will not break the bank. This must-have for intelligent IoT products is available at online retailers such as SparkFun and pishop.us.

Bambu Lab 3D printers

The best new desktop 3D printers of the past two years are from Bambu Lab. The Austin, Texas-based firm has a suite of 3D printers that are perfect for the casual or hardcore inventor's garage.

The A1 mini, Bambu's least-expensive version, features four-color filament printing in a 180mm cube build envelope. It will fit on any inventor's desk and is available for pre-order for less than \$500.

The X1-Carbon, on the higher end of the company's line, also has a four-spools creel but can print functional parts with carbon fiber-reinforced nylon or PET (polyethylene terephthalate) for applications that require ultimate strength and durability.

I have heard from friends in the NASCAR community that the parts made from the

carbon material from this printer can be bolted directly to NASCAR race cars and run in full competition.

This is a supreme achievement for a printer that costs less than \$1,500 (bambu lab.com/en).



The best new desktop 3D printers of the past two years are from Bambu Lab.

Particle Photon 2

Here is the perfect solution to add low-cost muscle to your IoT products. Particle offers IoT platform as a service, and for over a decade has been offering hardware and software for developers to quickly create robust IoT products and solutions.

Released this year, the Photon 2 is its latest WiFi development board that boasts professional specs at an affordable price. It also has support for Bluetooth 5.3 and a monstrous 3GB of RAM.

Combined with its new, high-speed processor, it allows machine learning algorithms to run seamlessly at the edge. This means devices can react faster to the application they are monitoring and controlling.

The Photon 2 is easy to program with Particles Web IDE, or with the more fully featured Particle Workbench. Devices are available for \$17.95 from Particle.io, which also offers an Edge ML (machine learning) kit that includes a suite of sensors to experiment with for \$59.



Snapmaker Artisan 3-in-1 3D printer

What makes a 3D printer even better? When it can also be used as a laser cutter and desktop mill.

This is not necessarily a new concept in desktop manufacturing, but Snapmaker has executed it on a new level. The

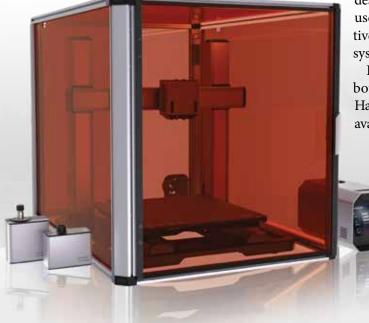
enclosed build volume is a monstrous 400mm cubed—big enough to print a compact car wheel.

The 3D printer features dual printing heads for multi-material printing and can run up to 300C to run tough materials, such as carbon-reinforced filaments. It also has auto-leveling and zoned heating to save time and energy on print jobs.

When not 3D printing, the quick-change head on the gantry easily switches out for a laser or mill head. The laser head is 10 watts, which can cut Paulownia hardwood at a depth of 8mm and engrave on a variety of woods and plastics. The mill head can run at 18,000 RPM to mow through hardwoods or plastics for parts to be machined.

The beauty of the Artisan is how elegantly it is designed, and the attention to detail and user experience. The software is intuitive and easy to use, and the mechanical systems are also easy to use.

> It is not hard to see why Artisan received both a Red Dot award and a Tom's Hardware Editor's Choice. The Artisan is available for \$2,999 at snapmaker.com. €





A Recent Mixed Bag

NEWS DEVELOPMENTS SHOW GOOD AND BAD INDICATORS FOR U.S. PATENT OWNERS BY LOUIS CARBONNEAU

FTER attending and speaking at the latest IP Watchdog Live 2023 in Dulles, Virginia, our team is back at work and closing on several transactions.

True to form, the pace generally accelerates in the fourth quarter. While we continue to see significant interest from buyers in the new portfolios Tangible IP brings to market, the current legal environment adds additional hurdles for those seeking the "perfect patent"—so there has been good and bad news for patent owners of late. Examples of this will follow.

I remind you that we track everything that is going on in this world. For those who need their regular dose of news, follow me on LinkedIn or X, where I post almost daily about some of the most newsworthy events.

Startups, don't overlook IP

We often hear startup executives, or their investors, claim IP protection is highly irrelevant. Why pay for protection that no one will let you enforce?

It is true that if you look at the situation in the United States only, this has become a legitimate question. In Europe, however, things are different.

A recent study by the European Patent Office shows that startups applying for patents and/ or trademarks during their initial seed or early growth stages are up to 10.2 times more likely to secure funding from investors.

What's more, the ownership of European patents and EU trademarks is associated with an even higher advantage, with a rate of securing earlystage funding exceeding five times that of those with only national intellectual property rights.

The UPC strikes again

I have commented in my last two columns about the early fits and starts of the new Unitary Patent Court (UPC), and that it was finally picking up steam with large players bringing their complaints before one of its divisions. It was only a matter of time before we saw the real litmus test for this new tribunal—i.e., the issuance of injunctions against infringers.

The Rubicon was crossed in October, when the local division in Munich granted its first

A European Patent Office study shows startups applying for IP during their initial seed or early growth stages are up to 10.2 times more likely to secure funding from investors.



provisional injunction against NanoString, which is now prohibited from selling its infringing products in 17 European countries.

The fact that the plaintiff here (10x Genomics) is a U.S.-based company that took its case to Europe is Exhibit No. 1 that the patent epicenter has shifted to Europe. Others have pointed to an earlier decision to the same effect issued in June, but which did not get as much publicity.

(Editor's note: On June 22 of this year, the UPC local division of Düsseldorf, Germany, issued a preliminary injunction in a dispute between myStromer AG, the proprietor of European Patent No. 2,546,134, and RevoltZycling AG, the alleged infringer.)

And the verdict is ...

One of the five factors I track closely pertains to patent verdicts, which are a good barometer of how healthy the patent enforcement system works.

Of the 17 patent verdicts reported in the third quarter, roughly 60 percent favored patent owners. One that stood out was the \$339 million verdict U.S.-based Touchstream technologies won against Google.

Despite these results, patent lawsuits in the United States are projected to be down by 14 percent this year compared to 2022. This results in part from a significant decrease in new filings from serial litigant IP Edge and, to some degree, from Cedar Lane.

The western and eastern districts of Texas are still the two most popular venues for plaintiffs, with close to 1,000 cases filed this year. The district of Delaware is a distant third.

Strange bedfellows

It is rare that we see traditional non-practicing entities (NPEs) and operating companies join forces. (Editor's note: An NPE is an entity that has an interest in or ownership of IP rights but is not actually producing products related to this IP, nor engaging in any research and development of the IP.) Yet, it happened twice recently.

First, Chinese behemoth Huawei joined Sisvel's cellular IoT patent pool in late September. The agreement reinforces the relationship the pair have already established and is another demonstration

U.S. PATENT LEGISLATION UPDATE

Last June, U.S. Sens. Christopher Coons (D-Delaware) and Thom Tillis (R-North Carolina) refiled the Patent Eligibility Restoration Act (PERA) in a bipartisan move aimed at bypassing all the jurisprudence laid by the U.S. Supreme Court since 2014—and ending the uncertainty this has created over what qualifies as patentable subject matter under the Patent Act.

Not much has occurred since. We have witnessed the usual pundits expressing their views in support of or against the proposed legislation.

In September, John Lee, chief counsel for intellectual property for the U.S. House of Representatives Committee on the Judiciary, told those who are skeptical of the chances for PERA to move forward that a House version of the bill is likely to be introduced soon. Of course, this was right before the House became speaker-less.

Now that it has elected a new speaker, it will be interesting to see which bills come to the floor for a vote.

John Lee In parallel, the Promoting and Respecting **Economically Vital American Innovation Leadership** Act of 2023 already has a House version that would significantly overhaul Patent Trial and Appeal Board practices. However, Lee said the bill is still in the early stages and he doesn't expect too much action on it anytime soon.

of the power of such programs to offer transaction efficiency, as well as pricing transparency.

This makes the Chinese telecommunication company one of 25 manufacturers to join since the pool launched in 2022. Huawei is also part of Sisvel's Wi-Fi 6 pool.

Also, InterDigital and Sony's joint venture, Convida Wireless, announced that it will be led by Matteo Sabattini, and that it will license its M2M connectivity technologies to cloud and edge services companies, and telco providers for its IoT platforms. ♥

Louis Carbonneau is the founder and CEO of Tangible IP, a leading patent brokerage and strategic intellectual property firm. He has brokered the sale or license of 4,500-plus patents since 2011. He is also an attorney and adjunct professor who has been voted one of the world's leading IP strategists.



Dangerous Words

MISLEADING, INACCURATE TERMS SUCH AS 'PATENT TROLL'
LET BAD ACTORS CONTROL THE IP NARRATIVE BY BRUCE BERMAN

All Eye on Washington stories originally appeared at IPWatchdog.com.

WORDS CAN have profound impact. The term "patent troll," coined by an Intel litigator, has done incalculable damage. First use is attributed to Peter Detkin, who is said to have deployed it in 2001 to belittle plaintiffs in a patent case involving the chipmaker.

Shortly after its appearance, Detkin emerged as what some in the tech world would consider a bad actor. He cofounded Intellectual Ventures, a company that raised \$5.5 billion to acquire more than 40,000 patents and applications for sale, license or enforcement.

The IP community needs to be more vigilant about preventing parties of interest and the media from controlling the IP narrative.

Conveying behavior they wish to depict as dubious is part of a larger financial strategy, and language is an integral part of it. Patent trolls have come to be seen as invention owners gone amuck. Demonizing individuals or entities that are unable to commercialize their inventions, or

simply choose not to, is simply a tactic designed to mitigate licensing costs.

Unfortunately, it is a dangerous one. "Patent troll" as a term that is widely accepted is our own fault. Those affected include small-to-medium-size businesses, universities, research institutions and especially independent inventors.

The T-word has been used to negatively predispose the public, lawmakers and the courts to patent licensing. The term has contributed significantly to making tech licensing arduous, if not impossible, costing businesses and investors billions of dollars, and creating an impediment to innovation and jobs that has yet to be fully measured.

"Patent troll" has served to demean those who wish to license, no matter how fair or appropriate the circumstances. The name may be of somewhat less consequence to the legal community, where posturing of this nature is often a part of litigation. In the world of elected representatives, the courts and public opinion, however, you could say memeification is ninetenths of the law.



Suing is rarely a goal

Possibly worse is another label many believe was coined by Colleen Chien, former professor at Santa Clara School of Law: patent assertion entity (PAE).

This suggests that any entity or person that does not practice the inventions it owns who attempts to license them are in the litigation business. The implication is that PAEs are established expressly to enforce their rights through litigation.

Although it is true that many patent owners are left no option but to sue, it is rarely their intention. They sue because it is the only way infringers take them seriously. The refusal of those who are practicing their inventions to negotiate in good faith leaves licensors with little choice.

Patent litigation is expensive, time consuming and risky. It rarely represents the best return on investment. If licensors have any hope of prevailing, they must first identify and thoroughly vet exceptional patents whose claims are compellingly clear and convincing.

Licensors resort to lawsuits because infringers today refuse to even discuss a deal. When confronted with a licensing request, the attitude of many potential defendants in the tech world is "So, sue me. [Your chance of collecting is miniscule. First, you need to get by the Patent Trial and Appeal Board at least once. If you succeed, my company has more litigation capital than you can imagine]."

This approach may benefit shareholder value. It does nothing to support innovation, businesses or jobs.

It is questionably ethical, although most shareholders do not realize it. Corporations are increasingly mindful of diversity and inclusion, as they should be, and for the need for businesses to champion an eco-friendly environment.

Why not extend the same respect to innovation rights and inventors? \odot

Bruce Berman is CEO of Brody Berman Associates, a management consulting and strategic communications firm he founded in 1988. He has supported 200-plus IP-focused businesses, portfolios and executives, as well as law firms and their clients.



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Best wishes, Jack Lander

INVENTIVENESS

IoT Corner

Open-source hardware company Raspberry Pi is now shipping the latest version of its single-board computer, the Raspberry Pi 5.

Four years since the last reboot, the latest spec runs on a custom-designed quad core CPU for speeds that far exceed previous models and is more suited to modern cryptography and machine learning applications.

Two different RAM versions (8GB and 4GB) are available. With native WiFi and Bluetooth on board, the Pi5 promises to be a favorite for makers and industrial applications requiring a heavy dose of computing power for IoT projects. —Jeremy Losaw



Serial inventor and entrepreneur Neha **Shukla** was 15 when COVID-19 hit in 2020 and she developed SixFeetApart, a wearable social-distancing device contained in a hat that uses ultrasonic technology. She then created the PA Homeless Guide app, to fight homelessness through policy change in her home state of Pennsylvania. Neha

is also chair of the World Economic Forum's Generation Al Youth Council, and the bestselling author of "Innovation for Everyone: Solving Real-World Problems with STEM."



What IS That?

Finally. Revenge for piano-playing, Beethovenloving Schroeder from "Peanuts." Every year since December 9, 1965, on "A Charlie Brown Christmas," he's had to hear Lucy ask: "How can you say someone is great who's never had his picture on bubblegum cards?"We proudly present you with 2009 Topps Allen & Ginter's No. 83. Good grief!

Get Busy!

Inventive students in Grades K-12 can apply to participate in Student Ideas for a Better America, by the National Museum of Education. See nmoe.org/ student-ideas-better-americatm.

WHAT DO YOU KNOW?

True or false: A fire extinguishing system specifically designed for Christmas trees has a U.S. patent.

Which reportedly uncopyrighted holiday song was written first—"I Have a Little Dreidl," or "Jingle Bells"?

When did 25 Days of Christmas become a trademark? B) 1950 C) 1981 D) 2002

True or false: The iconic Irvin Berlin song "White Christmas," first sung by Bing Crosby on Christmas Day 1941, was not copyrighted as a public song until Crosby sang it in the 1954 musical of the same name.

The Advent calendar tradition was started by Gerhard Land of Germany in what year? C) 1903 A) 1697 B) 1803 D) 1952

1. True. U.S. Patent No. 7,963,343, issued on June 21, 2011. 2. "I Have a Little Dreidl," 1927; "Jingle Bells," 1857. 3. D. 4. False. It was registered on May 6, 1942. (Linda Emmett, Berlin's daughter, said her father wrote the song in 1938 or 1939. Other sources say 1937; still others 1940.) 5. C.

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