

Inventors

DIGEST

THANKFUL FOR JACK LANDER

USPTO Director Nominated
KATHI VIDAL OFFERS
STRONG IP BACKGROUND

It Aims to Squeeze
CELEBRITY INFOMERCIALS
SOLD THE THIGHMASTER

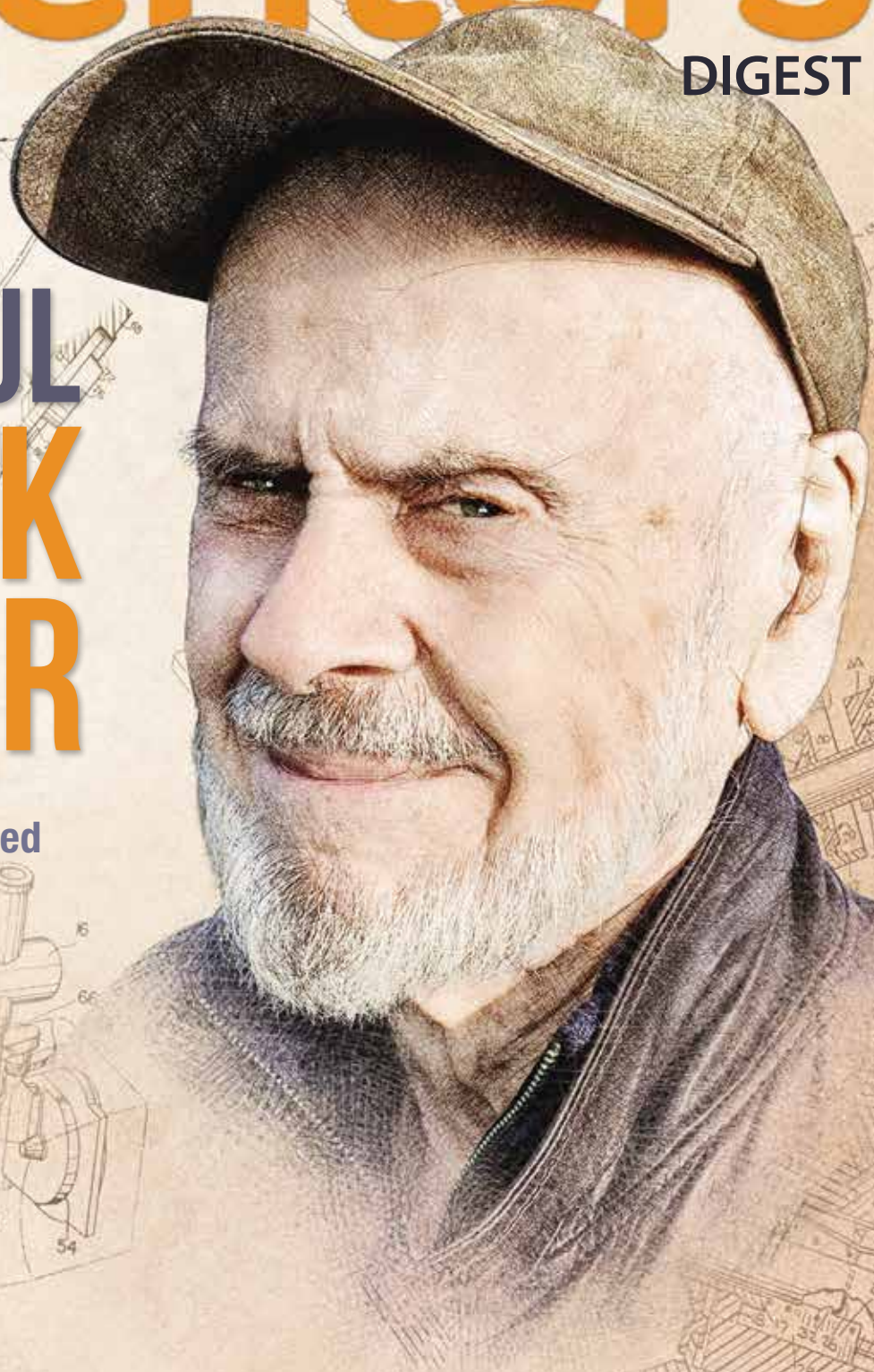


FIG. 3

FIG. 4

\$5.95

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VETERANS

INNOVATION and ENTREPRENEURSHIP



Join us for the 2021 Veterans Innovation and Entrepreneurship Program

Tuesday, November 16, 2 – 4:30 p.m. ET • Online

Are you a veteran and an innovator? Then join us to learn how intellectual property (IP) protection can fuel your success. Attend the USPTO's free, virtual Veterans Innovation and Entrepreneurship Program. Fellow veterans will share their personal experiences and best practices; and expert panels will discuss how to use a wide variety of available helpful resources.

As an attendee, you will learn:

- How successful veteran innovators use patents and trademarks to protect their valuable inventions and brands
- How the USPTO assists independent inventors and entrepreneurs
- What resources are available from agencies such as the Department of Veterans Affairs and the Office of Veterans Business Development of the Small Business Administration

Register early for this special event:

<https://bit.ly/3vD2OaP>

This program is presented by the USPTO through its Office of Innovation Outreach. For more information, please contact **VeteransInnovation@uspto.gov**.

UNITED STATES
PATENT AND TRADEMARK OFFICE



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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

NEWS FLASH

Innovation Champions

2021 Collegiate Inventors Competition honors 5 student teams



Shrish Patel

WINNERS have been announced in the 2021 Collegiate Inventors Competition®, an annual event for students and their advisers.

Finalist teams (six undergraduate and six graduate) of 20 students from 13 colleges and universities in the United States presented their inventions in a virtual format to a panel of judges comprised of National Inventors Hall of Fame® (NIHF) inductees and USPTO officials.

Established in 1990, the Collegiate Inventors Competition is a program of the NIHF that is sponsored by the USPTO and Arrow Electronics. In addition to cash awards, winning teams can meet with a NIHF inductee for mentorship and advice, and receive a USPTO Patent Acceleration Certificate.



Eva Cai

First place (\$10,000), undergraduate: EarFlow, Harvard University. Eva Cai (Samir Mitragotri and Aaron Remenschneider, advisers) devised a drug delivery device that is placed on a patient's eardrum to deliver dexamethasone, a steroid, and ciprofloxacin, an antibiotic, to treat middle ear infections. Placing the device

takes less than five minutes in a doctor's office and does not require general anesthesia.

Graduate: SolarClear, Stony Brook University. Shrish Patel (Alexander Orlov, adviser) provided an improved solar panel cleaning solution at large-scale solar power plants via autonomous waterless cleaning technology that is significantly more effective and efficient than existing technologies.

Runners-up (\$5,000), undergraduate: Augment Health Bladder Management System, Georgia Institute of Technology. Stephen Kalinsky and Jared Meyers (Martin Jacobson, adviser) addressed limited bladder sensation with this noninvasive connection between a catheter and catheter valve that monitors the bladder and tells the user when it is full via their smart device.

Graduate: VirSENSE, University of Illinois at Urbana-Champaign. Maha Alafeef (Dipanjan Pan, adviser) created a rapid test for COVID-19 that users can administer entirely at home. Using an electrochemical biosensor paired with an electrical reader, the test screens for active cases and is more than 98 percent accurate.

Arrow Electronics People's Choice Award (\$2,000): Firebot, University of Texas at Austin. Siddharth Thakur (Roland Fields, adviser) created a thermally insulated, wirelessly controlled, obstacle-climbing robot that locates victims without requiring firefighters to enter burning buildings.

MORE INFORMATION: invent.org/collegiate-inventors

WHAT'S NEXT

TRADEMARK BASICS BOOT CAMP: Modules in this free, eight-part virtual series resume with Module 6 on November 9, with subsequent modules every Tuesday in November and December from 2 to 3:30 p.m. ET. Users can attend any or all specific modules that meet their needs. Module 6 involves responding to an office action.

TO REGISTER: uspto.gov/about-us/events/trademark-basics-boot-camp

IP BASICS AND HELPFUL RESOURCES: The USPTO hosts this virtual session on the first Thursday of each month, covering patents, trademarks, copyrights, and trade secrets. The next session is December 2 from noon to 1:30 p.m. ET.

TO REGISTER: uspto.gov/about-us/events/innovators-and-entrepreneurs-learn-about-ip-basics-and-helpful-resources-8

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

MAGIC MOMENT

Its Time Had Come

Patent for pop-up turkey timer signaled the end of guesswork at Thanksgiving

GEORGE (GOLDIE) KLIOWER applied for and eventually received a historic patent in the 1960s because his inventing group believed turkeys weren't the only ones in potential danger at Thanksgiving.

Determining the cooking temperature at which the bird was safe for human consumption used to involve guesswork. Just because the turkey was warm enough in one part did not mean it was safe for eating. There was also the problem of overcooking.

Kliower, of Fresno, California, addressed this with U.S. Patent No. 3,280,629: Thermally responsive signaling device.

Although the company that is the leading seller of pop-up cooking timers today estimates it sells about 30 million units annually during the Thanksgiving holidays, the device is not universally embraced—and its history is the source of some half-cooked information.

The patent for Kliower's pop-up cooking timer, issued on Oct. 25, 1966, was assigned to Commodity Marketers, Inc. The application was filed in 1963.

Commodity Marketers was a small inventors group that included Kliower, an incessant tinkerer who raised turkeys on the grounds of an abandoned airfield near Fresno. He was also a member of the California Turkey Producers Advisory Board.

Kliower's son, Steve—who as a teenager helped his father test inventions and was named on several patents—was quoted in a blog post by Judythe Guanera of Grover Beach, California:

"Anyone with a background in ranching or farming knows that there are lots of expenses incurred and little capital to cover them, in this case, until the turkeys were sold. Since Thanksgiving was the biggest sales time of the year, the rest of the year money could be as tight as a knot in a shoelace. It was critical for cash-strapped ranchers to be clever in designing tools and other necessities."

Goldie Kliower's inspiration literally came from above—a fire sprinkler system.

The original concept for overhead automatic sprinklers relied on heat from a fire melting a metal alloy plug, which caused water to rain from the pipes above. According to insidescience.org, Kliower wondered whether a similar principle could determine when the temperature inside a turkey reached the right level.

His group's original design was patented in 1961. It features an outer housing that can be inserted into the meatiest part of the bird, an inner rod that pops up, a spring that is placed underneath the rod, and a pin that keeps the spring depressed.

The pin, which could be a metal or wax, is selected to melt at the desired cooking temperature—the same principle as in the overhead sprinkler. This releases the spring and pushes up on the rod, indicating that the turkey is ready to eat.

Guanera wrote that the concept eventually led to 10 separate patents under different names. The company was eventually sold to 3M, which eventually sold its pop-up business to one of the largest producers of the devices, Volk Enterprises.

Foodies and chefs in particular aren't always fans of the timers, preferring thermometers. *Consumer Reports* says some timers can pop before they reach the USDA-recommended safe cooking temperature of 165 degrees Fahrenheit.

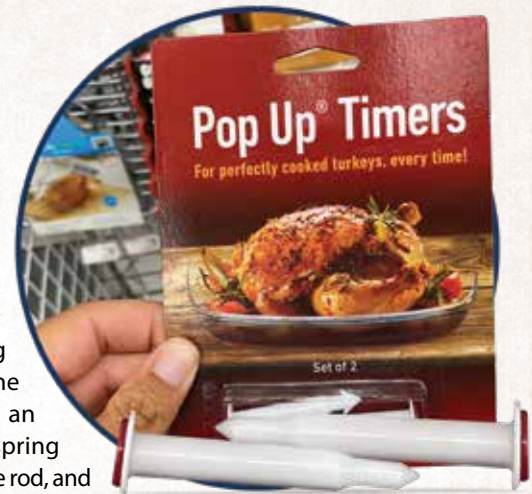
Kliower's legacy has taken another hit in the past 15 years. If you type "Who invented the pop-up turkey timer?" into a major search engine, you will get the name Eugene Beals.

In a 2015 Beals obituary, the *San Francisco Chronicle* reported that he was the inventor of the device. This was despite the fact that Beals had no registered patents and Kliower had several, all relating to the timer. The story quoted Leo Pearlstein, who with Beals and Kliower was part of the original group that brainstormed the timer.

Pearlstein said Kliower came up with the concept based on fire sprinklers, but Beals executed the idea. The story also misidentified Kliower as Goldy Kleaver. Other media, including a *Los Angeles Times* blog post, repeated the misinformation.

When the *Washington Post* featured a story about the pop-up timer in 2015 and contacted Pearlstein, he did not know that Kliower was credited as the inventor until the story's writer told him.

Kliower's passing was not reported in any major publications. But his contributions to happy Thanksgivings return every year.



PTAB Trials

USPTO page breaks down elements of process for protecting patent rights

DEFENDING YOUR PATENT RIGHTS and undermining a patent challenger's arguments that your claims are invalid are goals for Patent Trial and Appeal Board (PTAB) trials, from a patentee's perspective.

Given what is at stake for many independent inventors, the notion of going to trial may be daunting. At [uspto.gov/patents/ptab/trials](https://www.uspto.gov/patents/ptab/trials), the USPTO breaks down the trials process into categories to make the subject more understandable.

Among those major topics:

Inter partes review: Inter partes is a Latin phrase that translates to “between the parties.” This is a trial conducted at the board to review the patentability of one or more claims in a patent—only on a ground that could be raised under U.S. Patent Code Sections 102 or 103, and only relating to prior art consisting of patents or printed publications.

Section 102, entitled “Conditions for Patentability,” describes some conditions when a patent should not be granted to an inventor based on the concept of novelty. These conditions generally involve an invention that is already known publicly.

Section 103 involves the premise of non-obviousness. It stipulates that a patentable invention must not have been obvious to a “person having ordinary skill in the art” in view of the appropriate prior art.

Post-grant review: This is a trial proceeding conducted at the board to review patentability of one or more claims in a patent on any ground listed under U.S. Patent code Section 282(b)(2) and (3), which include the grounds available in inter partes reviews, as well as defenses under Sections 112 and 251.

Transitional Program for Covered Business Method Patents (TPCBM):

This covers actions involving financial products or services. Specifically, the America Invents Act describes a covered business method patent as one that “claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service” but not for a “technological” invention.

The TPCBM is a trial conducted at the board to review the patentability of one or more claims in a covered business method patent. TPCBM proceedings generally use the standards and procedures of a post-grant review. This process sunset for new petitions as of September 16, 2020, as the original transitional program was not extended.

A Statistics link on the USPTO's Trials page shows that from October 1, 2020 through August 31, 2021, 93 percent of trial types filed were via inter partes review.

Email questions/suggestions regarding the trials process to PTABIAITrialSuggestions@uspto.gov.

PTAB INVENTOR HOUR WEBINARS:

If you are an inventor or new to PTAB proceedings, you can learn foundational information about ex parte appeals, America Invents Act trials, and PTAB operations at these free webinars. The next two are on November 18 and December 16, both from noon to 1 p.m. ET. Presentation materials and recordings will be posted for these and other previous sessions.

Each episode also features useful information about PTAB statistics, practice tips, and board history. Further, each episode introduces a judge and/or PTAB staff member so you may link names and faces.

To access a webinar, visit [uspto.gov/patents/patent-trial-and-appeal-board/inventor-hour-webinars](https://www.uspto.gov/patents/patent-trial-and-appeal-board/inventor-hour-webinars). Questions in advance or during the webinar are welcome. Email PTABInventorHour@uspto.gov.



TRADING CARD

NO. 25

Hedy Lamarr

“ANY GIRL CAN BE GLAMOROUS,” Hedy Lamarr once said. “All you have to do is stand still and look stupid.”

This was an ironic comment from the legendary 1930s and '40s movie star who some say was the most beautiful woman to ever appear in films. Because Lamarr—who had the rare double honor of having a star on the Hollywood Walk of Fame as well as being posthumously inducted into the National Inventors Hall of Fame—had higher aspirations.

Born Hedwig Eva Maria Kiesler in Vienna, Austria, in 1914, Lamarr left school when she was 15 to become an actress. But she had a passion for inventing. She had an inventing table set up in her house and would tinker between takes during her motion pictures.

Alexandra Dean, director of the 2018 documentary “Bombshell: The Hedy Lamarr Story,” told the “PBS News Hour” that Lamarr had expansive knowledge of chemistry and engineering despite having no formal training in either discipline.

During World War II, Lamarr collaborated with fellow actor/inventor Howard Hughes on some projects. She showed him drawings she had done to help in his quest to create the world’s fastest plane. He provided her with two chemists as she invented a cube that would fizz into a cola when water was added.

But her most famous invention, with composer George Antheil, was a “secret communication system” that manipulated radio frequencies to form an unbreakable code for preventing classified messages from being hacked by enemy personnel. Using a player

piano roll as a model, she came up with the idea of making a radio signal leap from frequency to frequency, a process known as hopping.

Frequency hopping became part of a process known as spread spectrum—used in much of the technology we use today. Many credit Lamarr’s invention for being the impetus for Bluetooth and WiFi.

The iconic U.S. patent, No. 2,292,387, was granted on Aug. 11, 1942—a little more than a year after she filed the patent as H.K. Markey. She was married to Hollywood screenwriter Gene Markey at the time and figured having her married name on the patent would give it more credibility.

The patent was later confiscated because Lamarr was an Austrian immigrant and considered an enemy alien. She never was compensated for her invention, said to be worth about \$30 billion today.

In one of her last interviews—in 1990, 10 years before she died—a 75-year-old Lamarr told *Forbes* writer Fleming Meeks: “The brains of people are more interesting than the looks, I think. ... Maybe I came from a different planet. Who knows?”

“But whatever it is, inventions are easy for me to do.”

Requests for the trading cards can be sent to education@uspto.gov. You can also view them at uspto.gov/kids.



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I'm Here All Month; Please Tip the Waitress

They would like this. They never hesitated to find the lighter side of life, even facing the darkest shadows of death. They might even find this brilliant.

I'm not talking about a group of people; I'm talking about my inventor friend who died recently and is remembered in this issue.

So with the assumed encouragement of They and his equally courageous wife, Nancy, I will pay further tribute with some of the best inventor jokes I have heard and found. The only infringement will be on your patience.

The best invention ever? Window blinds, of course. Otherwise, it would have been curtains for everyone.

Most revolutionary invention ever? The wheel.

A scientist, inventor and engineer are tasked with solving a major world problem. The scientist does the research and makes a discovery that the inventor uses to invent the thing that will solve the problem. The engineer refines the invention until it is ready for operation. Their solution is a huge success and very profitable. Who makes all the money?

The entrepreneur.

My newest invention is making me rich—exploding prayer mats! Prophets are going through the roof.

Did you hear about the invention of the white board? It's remarkable.

The invention of television eliminated famine in Ireland. When the crops fail, the country raises couch potatoes in the living room.

Before the invention of the crowbar, crows had to do their drinking at home.

I made an invention—a belt made from watches—but it was a waist of time.

And fittingly, let's close with a joke that makes you stop and think a little:

What was more important than the invention of the first telephone?
The second telephone.

—Reid

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Inventors

DIGEST

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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):

Protect the Small Inventor

Editor's note: On September 29, Innovation Alliance Executive Director Brian Pomper sent a statement to Inventors Digest regarding the introduction of the Restoring the America Invents Act by U.S. Sens. Patrick Leahy (D-Vermont) and John Cornyn (R-Texas). The following is a condensed version.

"Strong patent rights are critical to incentivizing innovation and promoting job and economic growth in the United States. ... Unfortunately, the Restoring the America Invents Act would take us in the wrong direction. In particular, the Innovation Alliance opposes the changes to the USPTO's Patent Trial and Appeal Board (PTAB) review process proposed in the bill.

"In recent years, USPTO updated the post-grant system at the PTAB in a variety of ways to make it a fairer and more balanced system, and one that we believe more accurately reflects

congressional intent in the America Invents Act. Those updates reinforced that PTAB trials should be a cost-effective alternative to district court litigation, not an additional avenue for challenging patents. ...

"The most frequent users of the PTAB process are the same Big Tech companies that many in Congress believe are already too powerful. We believe this bill would help make them more powerful by giving them additional tools to game the PTAB process to drag out infringement disputes and increase the cost of enforcing valid patents.

"The Innovation Alliance looks forward to working with Senators Leahy and Cornyn to improve this legislation."



Brian Pomper,
executive director
of the Innovation
Alliance

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Via inventorsdigest.com, comment below the Leave a Reply notation at the bottom of stories. Or, send emails or other inquiries to info@inventorsdigest.com.



SONG COPYRIGHT RULING AS RARE AS TRUMP

There's nothing new about songwriters and recording artists objecting to politicians using their music at campaign rallies. It happened to Ronald Reagan. Bob Dole. Barack Obama.

So it's no surprise it also happened to controversy magnet Donald Trump. But it was surprising that the ensuing litigation resulted in a court ruling, given the usual snail's pace of these things.

Of course, there is nothing usual about Trump—who, through his

attorneys, aggressively filed a motion to dismiss in November after musician Eddy Grant sued over the Trump campaign's use last year of his 1983 song "Electric Avenue."

The song appeared in a Twitter video post during the last campaign, with a cartoon version of Joe Biden driving an old-fashioned train car interspersed with his rival's speeches. Twitter removed the video following the copyright claim from Grant.

Trump's attorneys claimed the song was copyright fair use: "The purpose of the Animation is not to disseminate the Song or to supplant sales of the original Song. Here, a reasonable observer would perceive

that the Animation uses the Song for a comedic, political purpose—a different and transformed purpose from that of the original Song."

But U.S. District Court Judge John Koeltl characterized the Twitter post as "wholesale copying of music to accompany a political campaign ad," adding: "While it is true that the animation is partisan political commentary and the song apparently is not, the inquiry does not focus exclusively on the character of the animation; rather, it focuses on the character of the animation's use of Grant's song."

The suit will now probably go to the discovery phase.

—Reid Creager

BRIGHT IDEAS

Mini Pupper

OPEN-SOURCE, ROS ROBOT DOG KIT
mangdang.net

Designed to make robotics learning easier for schools, homeschool families and others, Mini Pupper is a dog-shaped, quadruped robot that can hop, trot and run. It supports 12-DOF, ROS (Robot Operating System) simultaneous localization and mapping (SLAM), navigation and OpenCV AI functions to facilitate experimentation at a much lower price than would normally be expected for such technology.

Mini Pupper can map its environment and learn in real-time from things around, using Lidar or a camera sensor. You can customize the robot's facial animation, mechanical shell and your own algorithms. Guide documents and videos are included.

The research basic kit, scheduled for shipping to early-bird Kickstarter backers this month, will retail for about \$435.



Thumby

TINY PLAYABLE KEYCHAIN
tinycircuits.com

Thumby is a game system the size of your thumb with a bright OLED display.

Features include an operational, four-way D-pad and two gameplay buttons; sturdy plastic case with a built-in rechargeable battery and buzzer; five preloaded retro games that are playable out of the box; multiplayer support via Thumby Link cable; and easy programmability using MicroPython in a web browser to create your own games. It has 2MB total storage.

No retail price has been announced for Thumby, but early-bird Kickstarter backers could get one for \$19. Shipping to those backers was scheduled for this month.



BBalance

SMART BATH MAT

bbalance.io/en

Billed as the world's first smart bathmat, BBalance can scan your weight, balance, posture, and recognizes your footprint. This allows you to monitor your health at home and improve it via coaching integrated in the app.

BBalance automatically recognizes you via a unique footprint ID. Data are locked to your account to stay private.

When weighing yourself on regular scales, the result is sensitive to your balance. BBalance eliminates this inaccuracy and automatically calibrates your balanced weight, relative to your position on the mat/scale.

The BBalance kit, which will retail for \$399, has an April shipping timetable for Indiegogo crowdfunding backers.

"We owe a lot to Thomas Edison. If it wasn't for him, we'd be watching television by candlelight." —MILTON BERLE

POSSIBLE DELAYS

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

Trot Puzzle Slow Feeder

PET FEEDING SYSTEM

trotpets.com

Trot is designed to give pets a fun challenge during eating that naturally slows their eating to make meals easier on their digestion.

The American Kennel Club says fast eating can cause choking and vomiting, as well as serious life-threatening conditions such as bloat, gastric dilatation and volvulus (GDV).

Prevent tips and spills with magnets that secure the bowls to the curbed, spill-proof mat. Micro feet raise the mat just enough to ensure liquid dry quickly. The bowls also work on the floor. They are easily sanitized and dishwasher safe.

The Trot feeding system will retail for \$129. It is to be shipped to Indiegogo crowdfunding backers in January.



It Aims to Squeeze

CELEBRITY INFOMERCIALS AND A SIMPLE DESIGN MADE THE THIGHMASTER AN ENDURING SUCCESS **BY REID CREAGER**

ANNE-MARIE BENNSTRÖM was, by many measures, a genius. But even she would have been challenged to create better exposure for her new invention than this.

In a 1993 interview with the *South Florida Sun Sentinel*, she said she watched the then-recently released Mel Gibson movie, “Forever Young.”

“He’s been frozen for 50 years or something,” she said, “and then he comes to life and you know what the first thing he sees is? Suzanne Somers’ legs and the ThighMaster.”

Key piece: Car springs

Before she became a licensed chiropractor, Bennström noticed a disturbing trend during her internship in physical medicine during the early 1960s. Whenever she treated skiers with leg fractures in her homeland of Sweden, there was no way for the patient to exercise the uninjured leg.

She built a tension mechanism that patients could squeeze between their knees to work the abductor and adductor muscles in their inner and outer thighs. It was made of two boards, a leather strap and some car springs.

Crude? Maybe. Effective? Yes.

She called it the V-Bar. The device, and a spinoff called the V-Toner, were used in therapeutic centers before Bennström was approached about marketing a home version in 1989.

Marketing wiz Joshua Reynolds—who had earlier success with the Mood Ring—gave the product the commercial thrust it needed via infomercials that demonstrated how the ThighMaster could be used while watching TV or doing something else. It could also be used to tone the upper chest and arms. The \$19.95 price seemed worth the risk; three decades later, it’s still around.

(The commercials were so successful that some media outlets, including the *Orange County*

WHAT A LIFE!

Although Anne-Marie Bennström received a design patent for what became the ThighMaster, she wasn’t known as an inventor. She gained fame as one of the early fitness activists in the 1960s, and was so respected for her spiritual beliefs that many healers and psychics throughout the world came to her for advice. Among her challenges, successes and adventures until her death in 2018:

- Born in Stockholm, never knew her father, raised in an orphanage until age 11.
- After coming to the United States in her early 20s, lived in the Guatemalan rainforest for 6 months when she was 23 with no food or money. She said she was bitten by a scorpion and almost raped by men with machetes. She wrote “KAI,” a supernatural love story, based partly on that experience.
- First director of the world-famous Golden Door in Escondido, California, in 1958, the first unisex health spa in the United States.
- Cofounded the Ashram fitness resort in Calabasas, California, in 1974. Clients included Jane Fonda, Shirley MacLaine, Jim Belushi, Mariel Hemingway and Jodie Foster.
- Widow of World War II hero Robert Prescott, AVG “Flying Tiger” pilot, who founded the Flying Tiger Air Cargo Line that later became FedEx.
- Was a bishop in the First Christians’ Essene Church in San Diego, marrying nearly 100 couples in that capacity.
- “Time is an enslavement,” she said. Your age “only represents how many times the sun has moved around the earth.”



The most important marketing achievement of the ThighMaster was choosing actress Suzanne Somers to do the exercises.

Register, falsely trumpet Reynolds as the device's inventor. He is not listed on the design patent that was approved by the United States Patent and Trademark Office on Feb. 1, 1994.)

But time has shown that the most important marketing achievement of the ThighMaster was choosing actress Suzanne Somers to do the exercises.

Butt of jokes? Fine

Doing exercise infomercials was the last thing Somers had in mind when she walked away from “Three’s Company,” a top-rated 1970s sitcom, because of a highly publicized salary dispute. But outside of a couple of lackluster movies and her own cringeworthy attempt at a sitcom, the 1980s were not successful for her.

The axiom that any kind of publicity is good publicity never rang more true.

“I thought it was going to ruin my career,” she told *Closer Weekly* in 2013. “But it did just the opposite. It revived (her career), especially when all the comedians told jokes about it.”

“It sold over 10 million at a time when I couldn’t get a job.”

Not too long ago, Somers—who turned 75 in October—said she still uses the ThighMaster. Her products website features ThighMaster Gold and the Buttmaster.

But we never got to see her roll around on a BodyBall.

A big rubber plastic ball with little spikes designed to aid muscle stimulation and blood flow as the user sits or rolls around on it, the BodyBall was the precursor to the smooth, bigger balls you still see in therapy and rehabilitation centers. Bennström also had the BodyBall promoted on infomercials in the early ’90s.

“We went to Suzanne Somers first, but they didn’t want to do it,” she said. “Said it wasn’t sexy enough for her.” 🍑



PATENT PATHWAY



The V-Bar, later known as the ThighMaster, received U.S. Design Patent No. 343882S as “physical exerciser” on Feb. 1, 1994. Inventors named on this and an earlier hand exerciser patent were Anne-Marie Bennström, Leslie G. Sinclair, George Reynolds and Stephan A. Schwartz.

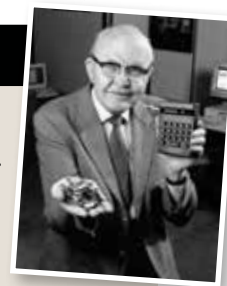


INVENTOR ARCHIVES: NOVEMBER

November 8, 1923: Jack Kilby, who invented the integrated circuit—known as the microchip—was born.

An electrical engineer, Kilby was a new employee at Texas Instruments who was ineligible for the department’s annual two-week vacation in July 1958. He decided to stay in the office and address the problem of a computer having too many separate parts and connections that had to be wired together.

He invented a way to make all the parts from the same material and carve them into one block of material. Kilby received the Nobel Prize in Physics in December 2000 for his part in the invention of the microchip.



Lessons From the Increment

MOST INVENTIONS ARE REALLY INNOVATIONS—EVOLUTIONS FOLLOWING FOUNDATIONAL IDEAS **BY JACK LANDER**

NIKOLA TESLA WAS FURIOUS. Guglielmo Marconi and Karl Ferdinand Braun had won the 1909 Nobel Prize in physics “in recognition of their contributions to the development of wireless telegraphy”—basically, the structure of radio.

Tesla knew that he, himself, was the true inventor of radio. He sued Marconi. The complex physics of radio technology was not yet fully understood, and true expert witnesses were almost nonexistent.

The technical arguments and counterarguments persisted through the courts, and finally in 1943 the U. S. Supreme Court declared Tesla’s U.S. Patent No. 645,576—“System of transmission of electrical energy,” issued in 1900—to be the prevailing patent. Tesla had the superior technology and was the official inventor of radio.

The court didn’t deny that Marconi was the first person to successfully transmit a signal across the ocean. But his apparatus was extremely crude, and its value was mainly to show that electromagnetic radiation of frequencies higher than audio and lower than infrared might form the basis of wireless telegraphy, sought by ships at sea.

My point here, other than an interesting bit of inventing history, is that Tesla’s circuit was an *incremental* invention. It probably would not have occurred if Marconi had not sent that early signal from Newfoundland, Canada, to Cornwall, England. (Likewise, Marconi would not have experimented with radio if it had not been for Heinrich Hertz’s laboratory proof of electromagnetic radiation in 1886.)

I may have mentioned once or twice that I grew up when radio was becoming an essential household item. My father foresaw the future

in radio technology and had gone to school to learn how to repair radios. I soon learned theory and practice from him, and earned my spending money in high school by repairing radios and phonographs.

And for fun, a friend and I built ultrahigh-frequency transmitters and receivers, paranoid that the FCC was listening as we tested them a few blocks apart. (Please don’t tell anyone. I have no idea what the statute of limitation is for unlicensed broadcasting.)

What improvements tell us

So you see, I have great affection for the subject. You may recall the July 2013 *Inventors Digest* article I wrote on the history of radio. It had a sidebar that listed 31 discrete inventions that brought radio from Marconi to Edwin Howard Armstrong, the inventor of FM, a span of 36 years. Think of that: an increment of a bit more than one per year.

The field of printing is another series of incremental improvements, but one that developed slowly over time—from the inventing of moveable type around 1540 until the invention of digital printing in 1991. I counted 30 discrete inventions over that span of 451 years, an average of 15 years per improvement.

Now, let’s apply these facts from radio and printing technology to us as independent inventors.

First, we have the observation that the vast majority of inventions are incremental improvements, not foundational inventions. Even Chester Carlson’s invention of “electrophotography” (the Xerox process), although it didn’t use any wet chemistry, was nevertheless based on the same objectives as film photography. In that sense, radical though it was in 1938, it was an incremental invention.

A second observation is that we can gain satisfaction as inventors by creating improvements on existing technology. We don't need to strive for the originality of a Madame Currie or a Heinrich Hertz. That's not by any means taking the easy path.

It's just that most of us don't have the sponsorship of a university or a megabucks corporation. To be fair, as far as we know, Johannes Gutenberg was self sponsored when he developed moveable type.

A third observation is that for many technologies, because we have a trail of improvements behind us and probably ahead of us, we face a gap—a potential destiny—that will one day be well defined and filled.

Get busy. Someone has to define and fill that gap. It may as well be you.

A fourth observation is that the gap in the spectrum of improvements is an invitation to *define* in words what is needed or desired. The act of defining the need in words—of calling out the shortcomings in the present version—is a stimulus to imagining a concept for the invention being sought.

Imagine Carlson when he tackled inventing a practical office copier. The only practical, quality copier at that time was the Photostat™ machine, which was used sparingly, mainly for copies of legal documents, because of cost. Carlson was thinking he had to eliminate the wet processes, developing, fixing and rinsing, to make a copier that was simple, fast and inexpensive per copy.

Edison, too, was an improvement inventor. Many inventors created laboratory incandescent lamps prior to Edison, but it was he who solved the problem of crowding a long filament into a small space, and fusing the glass of the enclosure to metal wires without the glass cracking upon cooling.

And a fifth observation regarding incremental inventions is that the progression of several improvements makes us aware that at some point improvements will probably stop due to a new technology that radically changes the nature of the original invention.

Who would have imagined fifty years ago that our cars would be powered by batteries? All the



Because we have a trail of improvements behind us and probably ahead of us, we face a gap—a potential destiny—that will one day be well defined and filled.

striving for better fuel economy and less pollution was the progress of many inventions, but they will soon be obsolete.

Another 'Ninth Symphony'? Nein

And so the story goes. Our best inventions are vulnerable to another inventor's invention.

I often think of Neil deGrasse Tyson's statement: "In science, if you don't do it, somebody else will. Whereas in art, if Beethoven didn't compose the 'Ninth Symphony,' no one else before or after is going to compose the 'Ninth Symphony' that he composed; no one else is going to paint 'Starry Night' by van Gogh."

Hmmmm. As I recall, I have several old artist brushes somewhere in the attic. I wonder if Amazon sells oil paint in tubes? 🗋

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.



Got a Website? Get Tracking

HOW TO USE GOOGLE ANALYTICS FOR MONITORING YOUR TRAFFIC AND OVERALL PERFORMANCE **BY ELIZABETH BREEDLOVE**

GOOGL ANALYTICS is a free tool that makes it easy to track and analyze important data about your website. Its robust capabilities make it ideal for measuring statistics that quantify your website's traffic and overall performance.

From simple traffic reports to more complex reports analyzing statistics such as cost per conversion, Google Analytics can be used to measure whatever is most important to you.

Whether you're focusing on social media platforms such as Facebook or Instagram, pouring your marketing dollars into paid ads, or putting all your effort into email marketing, your website is the hub of your online presence and digital marketing.

Google Analytics gives you tools to assess and measure the effectiveness of these efforts, determine what's working and what isn't, and make adjustments to find more success for your business.

Without an analytics tool to quantify your efforts, you're making marketing decisions on a whim and hoping for the best.

Setting it up

Google offers thorough guides for setting up and installing Google Analytics on your website, but here's a brief overview of the steps:

- Visit google.com/analytics to create or sign in to your Analytics account
- Set up a property in Google Analytics for your website
- Set up a reporting view (or views) for your property. Views let you filter your data. For example, you can exclude all traffic coming from your office's IP address, so the data you use to make marketing decisions isn't skewed by your own activity on your site.
- Follow Google's instructions to have a tracking code added to your website.

The Reports Snapshot shows how many users have visited your site per day recently, how they are getting to your site, and more.



If you don't feel comfortable taking these steps yourself, your web developer can help you.

Key report metrics

Google Analytics provides so much data that it can sometimes feel overwhelming to decipher what information matters or where to focus your attention within the platform. But the more comfortable you get with the platform, the more nuanced you can be with what you track and analyze.

Ultimately, it comes down to which metrics matter most for your online marketing goals and, more generally, your business goals.

Basic metrics you'll likely want to track and analyze:

Reports Snapshot. This is the first thing you'll see when you view your property on Google Analytics, so it's a great place to start. You'll see information such as how many users have visited your site per day recently, how they are getting to your site, where users are from geographically, which pages get the most views, and more. This gives a good overview of your site's performance.

Acquisition data. Here, you can uncover valuable insights about how users navigate to your website. The platform shows how many users have visited your site overall in a given period, how many new users have visited your site, how visitors are arriving at your site, and much more.

You can break this down by users (actual site visitors) or sessions (visits to the site). You can compare organic traffic (traffic brought in through a search engine); referral traffic (traffic brought in from a different website); direct traffic (traffic that typed in a page's URL); paid traffic (from online advertising), and other traffic from sources like social media or email marketing campaigns.

This area of Google Analytics helps determine the most effective way to bring new users to your site—or to bring users most likely to convert and buy your invention, sign up for your newsletter, contact you, or take any other action you consider a “conversion.” Tracking

and analyzing this data gives you the information you need to focus your money and efforts where it matters most.

Engagement data. In this portion of the Google Analytics dashboard, you'll see how traffic engages with your website.

You can find data including how long visitors engage with your site; how many views (or other events you set up) occur in a given period; which pages receive the most views; how many conversions you receive, and more.

Beyond the basics

Once you understand the basics of how Google Analytics captures data and what the terms in the dashboard mean, you can move on to building more complex reports that provide detailed snapshots of everything that happens on your website.

If you look to dive deeper into the world of Google Analytics and want a more thorough explanation or tutorial, try Google's Analytics Academy. These online courses are taught by digital analytics experts and cover topics such as Google Analytics for Beginners, Advanced Google Analytics, Google Analytics for Power Users, and more.

Google also offers mini-courses on YouTube. You can take these courses for free at analytics.google.com/analytics/academy/.

If you'd like to take it a step further, upon completion of these courses you can sign up for Google Partners and then take the Google Analytics Individual Qualification to become certified in Google Analytics.

Conversely, if you're interested in hiring someone to set up and manage your Google Analytics account, look for someone with a Google Partners badge and a Google Analytics certification to ensure you're getting the best results. 📌

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.



Watershed Moment

DUTCH INVENTOR REALIZED HIS MISSION:

A CONSUMER WATER RECYCLING SYSTEM **BY JEREMY LOSAW**

FOR SOME INVENTORS, the coveted “aha moment” comes in their workshop or garage. Maybe in a store or at work. For Arthur Valkieser, it came while admiring an idyllic region in southeastern France.

“I remember it very well,” he said. “I was looking over Provence, the Mediterranean in the distance. I enjoy my life. And then I thought, ‘Why is nobody doing this?’”

Water—more accurately, clean water—was running through Valkieser’s mind.

A veteran of the media industry, he began as a camera operator before founding a media technology company in the Netherlands that he ran for 20 years until 2002.

While working on his business in the early 2000s, a friend of his was working on water recycling technology. Valkieser involved himself by volunteering his house to test prototypes.

The prototypes never worked well enough to be used by consumers, and the company went into remission. Years later, he was enjoying his retirement

when he got word that the shareholders were liquidating the intellectual property.

It was the moment he found a new purpose.

“Why isn’t there a company that just sees this huge opportunity to help solve this growing water crisis?” he thought during that quiet reflection in France. “Maybe this is my mission in life.”

He moved back to the Netherlands to work on new technology and promised his wife, Sabine, that he would quit at the first sign the effort wasn’t working. It was the beginning of Hydraloop, a water recycling system for consumers.

Conditioning grey water

As the world’s population grows, access to sufficient, clean water becomes increasingly important to maintain good health and hygiene. However, consumers in advanced economies rarely consider their water usage, and there is no readily available solution for recycling grey water for use in other areas of the home.

Roughly the footprint of a washer or dryer, the Hydraloop appliance uses a six-pronged process to condition grey water. It can recycle 95 percent

The Hydraloop appliance uses a six-pronged process to condition grey water. It can recycle 95 percent of shower and bath water and up to 85 percent of the total water used in a home.



“One of the goals was that this has to be a consumer product. It will never sell if you have to get someone over every three minutes to clean it.” —ARTHUR VALKIESER



of shower and bath water and up to 85 percent of the total water used in a home.

The device intakes grey water from different areas of the house and treats it, taking out the sediment and floating debris. An aerobic bioreactor does a final cleanse before it is sterilized with UV light.

The result is clean and safe water that can be used in other areas of the home—such as filling a toilet tank, washing machine or even for outdoor use. Hydraloop is available in Europe, the Middle East, Africa and the United States.

No physical filters

When Valkieser returned to the Netherlands, his mission took a year and a half to come to life.

By the time he began working on it in earnest, there was finally a water recycling standard for the required quality of the recycled water. This gave him a clear target.

Every week, the technology evolved as he worked with a testing lab to understand the sensitivities of the changes in both the equipment and software to the lab test results. He understood that the product had to do a great job of cleaning water while playing well in the home environment.

“One of the design goals I had was not to use physical filters,” Valkieser said. “All other systems use filters. But they have one very huge disadvantage, and it is that they clog. You need maintenance.

“One of the goals was that this has to be a consumer product. It will never sell if you have to get someone over every three minutes to clean it.”

Eventually, the product was capable of creating clean, usable water from grey water. The technology was defined, but he still didn’t have a product.

He built a design team to give it an iconic style. Engineers reworked the DNA of the device to package it into a framework that would fit in the home.

With such potentially impactful technology developed, Valkieser was sure to procure a robust patent portfolio. It helps keep others from copying the hard work that he has put in, which helps when he is looking for investors or working on partnerships.

His ultimate goal is that in 10 years, no building will be completed without a grey water recycling system. Having strong intellectual property helps build partnerships that can bring devices into more households.

Awards, demand pour in

Once the product was completed, Valkieser took the device on the road to show the world.

He went to 26 international fairs and trade shows to showcase Hydraloop—culminating at the 2020 Consumer Electronics Show, where he won four major awards that included Best Innovation and Best of the Best.

Pre-orders were rushing in. He had the enviable problem of having to quickly scale up and find the investment to do it.

Plaudits kept coming, with feature stories in Time and Newsweek and a prominent place in the Netflix documentary “Brave Blue World.”

The technology and his business make sense, so he never had to go back to his wife to say otherwise.

He is working to start manufacturing in countries far afield from his home base in the Netherlands, such as Australia and the United States, so he can further his goal of saving valuable tap water and making homes and offices more sustainable. 🌱

Details: hydraloop.com

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



Adult Building Blocks

FATHER/DAUGHTER TEAM CREATES CORK STRUCTURES AND FURNITURE FOR HOME AND OFFICE **BY EDITH G. TOLCHIN**

MIGUEL REYNOLDS BRANDÃO, of Lisbon, Portugal recently contacted me through LinkedIn, one of the many sites where I've been posting articles for more than 15 years.

Imagine: multipurpose, eco-friendly, grownup Legos for home, office and arenas.

Brandão, a co-inventor with his daughter, Catarina Reynolds Brandão, says, "CORKBRICK is such a simple disruptive concept that it is challenging to explain it." So I accepted the challenge and spoke with him.

Edith G. Tolchin (EGT): Please tell us a little about you and your daughter.

Miguel Reynolds Brandão (MRB): Catarina is my oldest daughter, now 28. She is a beautiful, kind and happy architect with a master's in rehabilitation. She is the mother of Lourenço, my first grandson.

I am a serial entrepreneur, Stanford alumni, strategist, author and mentor. My latest book is "The Sustainable Organisation," a paradigm for a fairer society. Think about sustainability in an age of technological progress.

Essentially, I am just a curious mind enjoying my journey in this world. A proud father of four. A citizen of the world.

EGT: Where did the CORKBRICK idea come from? Why do you consider this to be disruptive?

MRB: The CORKBRICK story started in April 2012 at a Lisbon airport coffee shop, on a trip to Casablanca, with an informal conversation between father (serial entrepreneur) and daughter (future architect) about flexibility in home spaces. We were discussing solutions for open spaces, specifically searching for ideas to create a dynamic guest room in our attic. We needed something simple, scalable, easy to mount and dismount—and most important without the use of tools, glues, or screws!

That was when we first thought of the potential behind a modular construction such as the CORKBRICK concept, and designed the first sketches. Ten days later, already back home from Morocco, we resumed our brainstorming and explored the global market to find that nothing fulfilled our imagination's criteria! There was no concept available with easy modularity and flexibility to build structures and furniture at home for people such as us, who are hopeless at DIY (Do It Yourself).

It is disruptive because it changes the paradigm of space management and play. It empowers anyone to build structures and



CORKBRICK is "a simple, practical, and better solution that stimulates creativity and collaboration among people, in family and work environments." — MIGUEL REYNOLDS BRANDÃO



furniture just with their bare hands. No need for outsourcing, tools or manuals. Besides, CORKBRICK is an example of how to leverage natural resources to create a simple, practical, and better solution that stimulates creativity and collaboration among people, in family and work environments.

Furthermore, CORKBRICK impacts six out of the 17 “United Nations’ Sustainable Development Goals.”

CORKBRICK is more than just a product or a company. It’s a philosophy that embraces the ideals of sustainability and equity in their totality.

EGT: Have either of you invented before?

MRB: Yes. I did mostly software solutions to improve efficiency in strategic management and algorithms. Besides, in the nineties I developed another patent for a teleworking complete workstation.

EGT: Portugal harvests 50 percent of the world’s cork supply. Did this abundance help lead to your invention?

MRB: Surely yes. I have learned about cork’s unique benefits and sustainability since my childhood. Maybe it is in the DNA ...



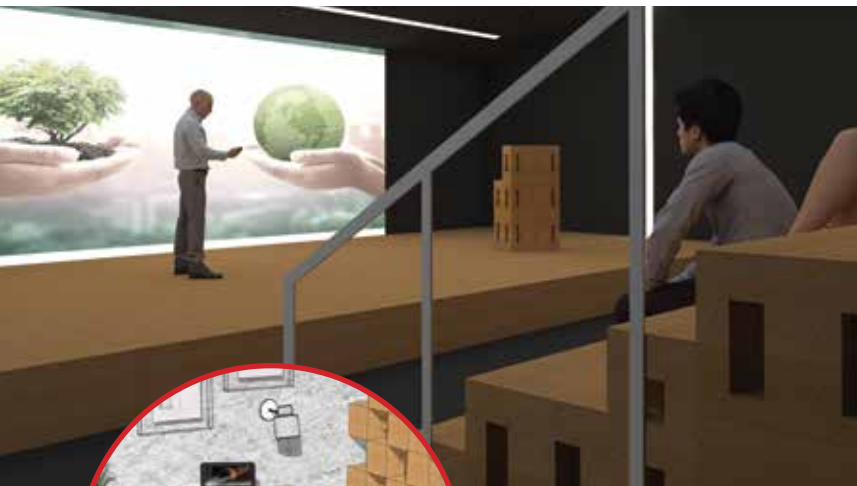
My fifth great-grandfather, Thomas Reynolds, was an early trader of cork in London who, after leaving the Royal Navy where he had fought Napoleon, dedicated his life to creating the first cork global industry. Together with his sons, he bought cork forests in Portugal and Spain and built more than 20 factories to prepare and export cork worldwide through his offices in Lisbon, London, and New York.

They were pioneers, lovers of freedom, entrepreneurs and liberals who fought both Napoleon and the absolutist king of Portugal, D. Miguel. They innovated and prospered with cork and left an outstanding legacy.

EGT: Tell us about your fundraising campaign.

MRB: Our vision is to create an organization where all members are fans, fans of the CORKBRICK concept.

CORKBRICK enables anyone to build structures and furniture with their bare hands.



CORKBRICK's makers say it is a philosophy based on the principles of sustainability and equity.

That is the reason we decided to open the company's equity to individuals—to creative minds. We are looking for people who “vibrate” with the concept and understand the business potential.

Fans bring an extra energy that will empower the company's creativity, flexibility, and endurance regardless of their financial commitment. We have involved 260 fans and investors, spread throughout 30 countries. Among us we have architects, engineers, designers—all creative minds, current or former executives, from organizations like Google, Lego, Cisco, University of London, AxelCapital, Miragon Investments, Maitland (family office), and Fladgate Partnership, to name a few.

Now we are on our fourth raise, heading to 500, on our way to build the first “Fan Owned Company” to create “Sustainable Dynamic Structures and Furniture.” It is thanks to our fans that we will be able to dream bigger and bring CORKBRICK to every household in the world!

EGT: Where are you manufacturing?

MRB: In Andalusia, Spain.

EGT: How many different units are you producing?

MRB: We produce just seven different pieces. With it, people can create their own solutions—thousands of them! Like with Legos.

For now, we propose 55 solutions for home, office and public spaces. But our portfolio will be growing not only by our initiative, but especially

by creators who will profit from their creativity by applying for challenge.corkbrick.com.

CORKBRICK empowers creative minds that cannot face Do It Yourself solutions. It goes beyond the DIY market to reach all those with a passion and enthusiasm to create unique and innovative solutions in their home and office.

We sell a unique, useful, trendy and sustainable product structured on a simple and highly efficient business to the global consumer. We believe it has the potential to become the new Legos for adults with the advantage of being fun and useful (and natural).

EGT: Please describe your patent process.

MRB: We did most of the process by ourselves, starting with the provisional application, then the PCT (Patent Cooperation Treaty) and later the regional/national applications. It was a slow and exhausting process but with a happy conclusion.

EGT: Have you encountered any problems in product development?

MRB: CORKBRICK is a kind of a “Columbus egg” (*Editor's note: i.e., a great idea that seems simple after the fact*), and so is the production line. The major obstacle was to demonstrate that what we envisioned works ... today, everyone believes in it, but we still must do a lot of promotion to explain to people that interior design and architecture might be fun and accessible to anyone.

EGT: Where are you selling?

MRB: Direct. Also, via our website and some special flagship partners that we are selecting worldwide.

EGT: Do you have plans for future products?

MRB: The beauty of the CORKBRICK system is that you produce only seven blocks, but you can offer a new product every day to the market. It's an efficient way to empower people to build their spaces. 🏠

Details: miguelreynolds.com; corkbrick.com

Edith G Tolchin has written for *Inventors Digest* since 2000. She is an editor (opinionatededitor.com/testimonials), writer (edietolchin.com), and has specialized in China manufacturing since 1990 (egtglobaltrading.com).





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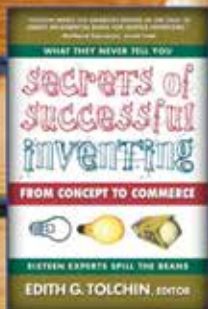
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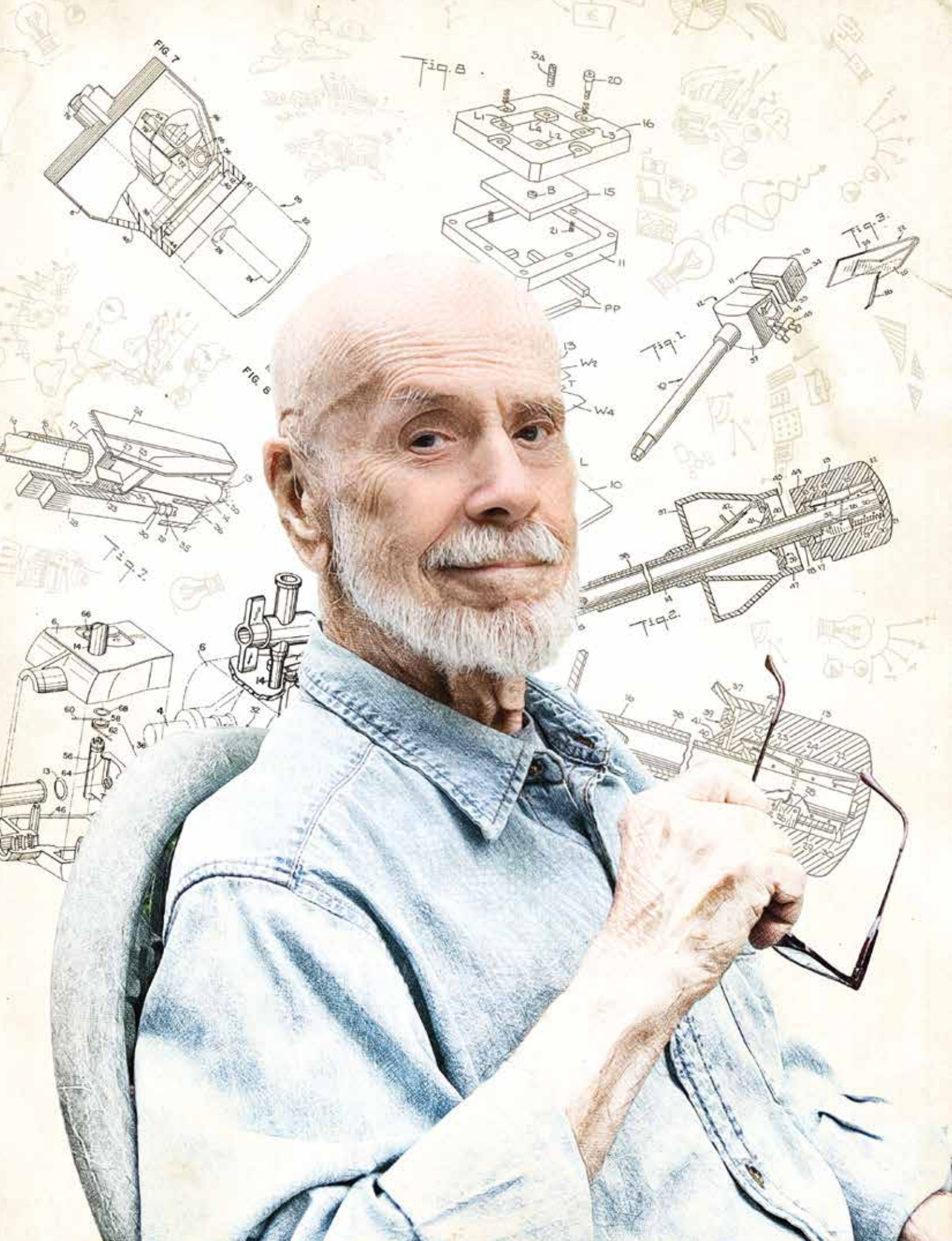
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Inimitable Prototype

THE LONGEST-TENURED WRITER IN *INVENTORS DIGEST* HISTORY,
JACK LANDER HAS DONE IT ALL—WITH MORE AHEAD **BY REID CREAGER**

JACK LANDER and Joanne Hayes-Rines. Now, *there's* a meeting of inventive minds.

It was in 1996 or early 1997; the year isn't important. Lander had already met Hayes-Rines—on her way to a 20-year tenure as editor of *Inventors Digest* and the most influential figure in this magazine's 36-year history—at an inventors conference. He was a big fan of the magazine.

This second time they crossed paths, “I just happened to pass her in a hallway, and I asked her if she would be interested in a column on prototyping—the aspect of inventing I knew the most about at that time. I had founded a small company in California to produce precision metal parts, specializing in small production runs and prototypes, received an offer I couldn't refuse, and sold it.

“She said, ‘Yes, I would be. I just lost one of my writers, and a prototyping column might work well.’”

So began a long friendship between Lander, his wife, Mary, Hayes-Rines and her husband. (Robert Rines was an invention celebrity in his own right who is best known for his efforts to identify and locate the Loch Ness Monster.)

Hayes-Rines, a powerful and relentless advocate for the independent inventor who played an

important role in legislation, sold the magazine to current publisher Louis Foreman in 2007. Lander has been a monthly fixture in *Inventors Digest* since his first column in January/February 1997, having worked for four more editors including this one. He now writes about a wider variety of invention themes.

Late last decade, he passed Hayes-Rines in terms of continuous tenure with *Inventors Digest*—a loyal labor of love that's soon to approach a quarter century. Jack Lander might frown at the very notion, but in many ways he is the face of this magazine.

Inventive from the start

Hayes-Rines was thrilled to learn about a cover story featuring her friend. “I believe I met Jack at the Yankee Invention Convention in Waterbury, Connecticut. His column was a fabulous addition to the magazine, and I learned so much from him.

“His columns and down-to-earth writing style capture his real-world knowledge and hands-on experiences in prototyping concepts and counseling aspiring inventors.

“He's a delightful man with a sense of humor. I can still hear his wonderful laugh.”

Jack Lander's first *Inventors Digest* column was in the January/February 1997 issue, years before the magazine went monthly. He has been granted 13 patents, written several books to help inventors, and provides mentoring services.

Lander is a kind man, a sensitive soul but plain-speaking and tough. The latter is an important quality when you have seen all that Lander has seen, done all that he has done.

Even his first day as a Homo sapien—more than once, he has discussed ancient humans' connection to inventing on these pages—was not without challenge. On March 28, 1930, "I was born in one of Chicago's worst snowstorms, and it wasn't until March 30 that my parents were able to get my birth registered."

Since that day 91 years ago, a life of ideas and successes and frustrations and heartbreak and just enough notoriety has unfolded in a sometimes jagged and random way. For inventors, though, there is seldom a straight line to full success and happiness. And Lander is the epitome of an inventor.

He was "a hands-on fixer of things and creator of mechanical things from the time I was a young boy. When I was 7 or 8, I invented an insert for my mother's old cast-iron frying

U.S. PATENT JACK LANDER

Born:
Chicago

01



02

Residence:
Southbury,
Connecticut



Education:
Northwestern University,
mechanical engineering

03



04

Family: Wife, Mary; grandchildren Amber and Kiersten; great-grandchildren Joel, Emily, Tom, Madeline, Juliet, April and Jesse



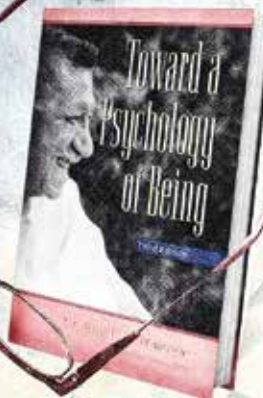
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Hobbies:

Writing and study of prehistory from 2.5 million years ago (the first humans) to 10,000 years ago when hunter-gatherers began farming; studying cell biology, genetics, evolution, psychology, anthropology, and especially the Neanderthals

06

Favorite book:
"Toward a Psychology of Being"
by Abraham Maslow (his hero)



Favorite quote:

"A psychoneurosis must be understood, ultimately, as the suffering of the soul which has not discovered its meaning."
—Carl Jung

07



pan. She had complained that serving from that heavy pan was difficult.

“Well, it wasn’t much of an invention—just a flat metal circle with holes in it for the oil to drain though, plus a handle.”

An engineer’s structure—usually

Beginning with his earliest memories that included farm life in Oceana County, Michigan—where the tiny community of Mears had only a post office, diner and bakery—Lander’s inventing life has been a winding trail and trial of triumph, anticipation, uncertainty and “if onlys.”

He has worked for big corporations where he felt alternately valued and anonymous. He has tinkered and wished and struggled on his own.

His level of mechanical aptitude shocked one of the big companies he worked for when he tested at a 98 percent score—usually the exclusive neighborhood of PhDs. Although he has spent much of his career as an electromechanical engineer, he is also an expert on invention development, manufacturing, marketing and other aspects of his lifelong love. His passion for invention history often seeps through the pages here.

Lander’s 13 patented inventions range from his signature disposable laparoscopic instrument (*see related story*) to an exercise baton with removable internal weights to a hinge arrangement for a garment washing device to a tablet support accessory.

Order, logic and detail are the hallmarks of his inventive thinking. He likes to carefully define a problem, visualize a solution, sketch out concepts, write out plans. But he knows there are no static rules for successful inventions.

He recently recalled the time more than a half-century ago when he walked into an electronics supplier facility and noticed some hand-operated machines for fabricating precision sheet metal products. He thought that might be the foundation of a business for him someday, though he was not ready to start a business at the time.

So he wrote down a plan for owning such a business and forgot about it. But 27 years later, when his employer suddenly had a need for power supply housings, he married that long-ago plan with some uncharacteristic impulsiveness—with deeply satisfying results.

HIS GREATEST HIT



Jack Lander’s best-known patented invention played a leading role in the process of laparoscopy, a minimally invasive surgery that checks for problems in the abdomen or a woman’s reproductive organs. It resulted in the world’s first disposable laparoscopic instrument.

“I was working as a design engineer for U.S. Surgical Corporation when the company acquired the rights to a prototype laparoscopic instrument from a very small company. I was assigned the task of making it look like a USS product—that is, the outer appearance only.

“Out of curiosity, I opened up the instrument to examine the operating mechanism. I deemed it to be dangerous, prone to failure.

“When I encounter something like that, my inventive mind won’t let me rest. So, for about 10 weeks I worked on a better design—one that was reliable, few parts, and inexpensive to produce. I had no assignment nor authority to take on this work, so I made sketches for my lab book and notes on how it worked and put it away without any plan for its future use.

“Several weeks later, the engineering VP came to me in a panic and asked if I knew anything about designing a laparoscopic instrument, and I said I had already done so. I showed him my lab book, and he said, ‘I want a working prototype of this by tomorrow morning.’

“I relayed his message to the machine shop and gave them a copy of my lab book information. They missed their deadline by a few hours but delivered a working prototype to the VP.

“This started a lot of buzz among managers and VPs because I had done ‘original’ work, which was supposed to be done by the research and development department. Its VP was angry that a mere design engineer, not under his bailiwick, had accomplished a workable design.

“So, he assigned his engineers to make an even better design than mine. They came up with a design that used 13 internal parts, whereas mine used only three, and met the criteria I mentioned above.

“The product manager took both designs and had them tested in a pig. Mine prevailed. They didn’t fire me, nor did they congratulate or thank me. That’s life in the big corporation.”





“The ideal inventor is about midway in the spectrum (of inventing and entrepreneurship)—creative, but willing to take on the difficulties of marketing.” —JACK LANDER

Empathy and advice

Even as a nonagenarian, Lander is not defined by his age. It simply makes him more experienced, grateful, and wanting to share his snowballing knowledge.

He is not one to grouse that everything older is better. He is current on trends and the freshest innovation. He is even current on current, having recently wrote a column about AC and DC in which he quoted song and album titles by the Australian rock band of the same name.

From his earliest columns in *Inventors Digest* to books he has written (his latest is “Hire Yourself: The Startup Alternative”) to

his inventing mentoring services, helping others has been an unbreakable thread throughout his life. This is when the humble, gently self-effacing electromechanical engineer opens up like a sports car on a deserted Montana freeway.

All these years later, he still empathizes with inexperienced inventors—who, he says, “are typically naive about the difficult road to invention success.

“And they are usually fuzzy about why they want to invent. Some want only the glory, the plaque on the wall that exhibits the first page of their

patent. Others think it is an easy path to becoming wealthy. We do hear of wealthy inventors, of course. But the failures don’t make the news.

His thoughts about the proper inventing mind-set mirror his logical, orderly tendencies:

“Inventing should be thought of as a spectrum line ranging from pure entrepreneur on the left to pure inventor on the right. First know about yourself this: Are you at heart an entrepreneur who wants to invent in order to have an edge in the marketplace, or are you an inventor who does not gravitate to the marketing demands of the successful invention?

“Pure inventors are lousy marketers. Their main hope is to get a patent and license it. Pure entrepreneurs are lousy inventors. They sometimes come up with something the market needs or will want when it is exposed. They should work with an industrial designer and patent attorney or patent agent to develop their product.

“The ideal inventor is about midway in the spectrum—creative, but willing to take on the difficulties of marketing.

“New inventors don’t realize that successful inventing is not a cakewalk. It’s a lot of steps, a lot of disappointment, and it’s expensive. They are generally so enchanted by their invention that they resist the market assessment that is needed to determine if it is feasible to go ahead.

“Invention is easy. Marketing is not.”

Meant to mentor

Good inventing is a rare mixture of practicality and creativity, which Lander understands innately. Others are not so equipped.

Although Lander has been writing for *Inventors Digest* since 1997, his monthly articles were not called Lander Zone until the April 2008 issue. His new book continues his lifelong commitment to help other inventors.



“The biggest hurdle is the lack of dissemination of practical knowledge about the whole process of inventing. The schools are big on teaching art—even encouraging students to draw and paint. But the creative art of inventing is overlooked.

“This leaves the art of inventing to be taught by mentors, courses in night school, and the field’s only magazine, *Inventors Digest*. These three are not enough. Perhaps a legitimate correspondence course would work.

“The problem of not having easily accessible learning is that it leaves the field open to scam operators who sell essentially worthless services to naive inventors, build up their hopes, and rob them of their money.”

These gaps and issues motivated Lander to action. For the past 20 years, much of his time is devoted to mentoring and speaking; in August, he was invited by the United States Patent and Trademark Office to be a featured speaker at its annual Invention-Con event.

The gradual role of mentor was an organic expansion for him.

“As I became further acquainted with *Inventors Digest*, I could see the great need for marketing advice. I was teaching a night school class on the subject, and as I learned more about the needs of aspiring inventors, I decided to expand my column to include more than prototyping.”

Around 2001, he decided to offer his services to inventors via mail, or even in person for those who wanted one-on-one consulting.

“I was also inspired by the need for an honest service at an affordable price. I offered a no-hassle, money-back guarantee of my work and only five times over 20 years was I asked for money back. Two of these were due to my mistaken understanding of the invention.”

He treasures friendships that have resulted. “Some have come back to me after several years and told me of their success—others to ask a question, which I always answered without charge.”

THANKFUL TO MARY, TOO

For a long time, Jack Lander’s humility almost prevented this cover story.

His wife, Mary, had something to say about that. Here is the email he sent to the editor about his change of heart.

Hi Reid,
First, I want you to know that I read your editorials, and I thank you for the kind words in the current issue.

Sorry it has taken me a while to think about being on the cover of *Inventors Digest*. I’ve been inclined to decline.

I talked it over with Mary, and it looks like I’m out-voted three to one. She used the old “Think about your grandchildren and great grandchildren” talk. Almost had me in tears. (Actually, I have seven great grandchildren, and am in tears every time I’m reminded.)

Reluctantly,
Jack



More to come

Lander still looks wistfully into an inviting horizon. He may occasionally turn around and look behind, but he prefers that in the context of happy memories and growth.

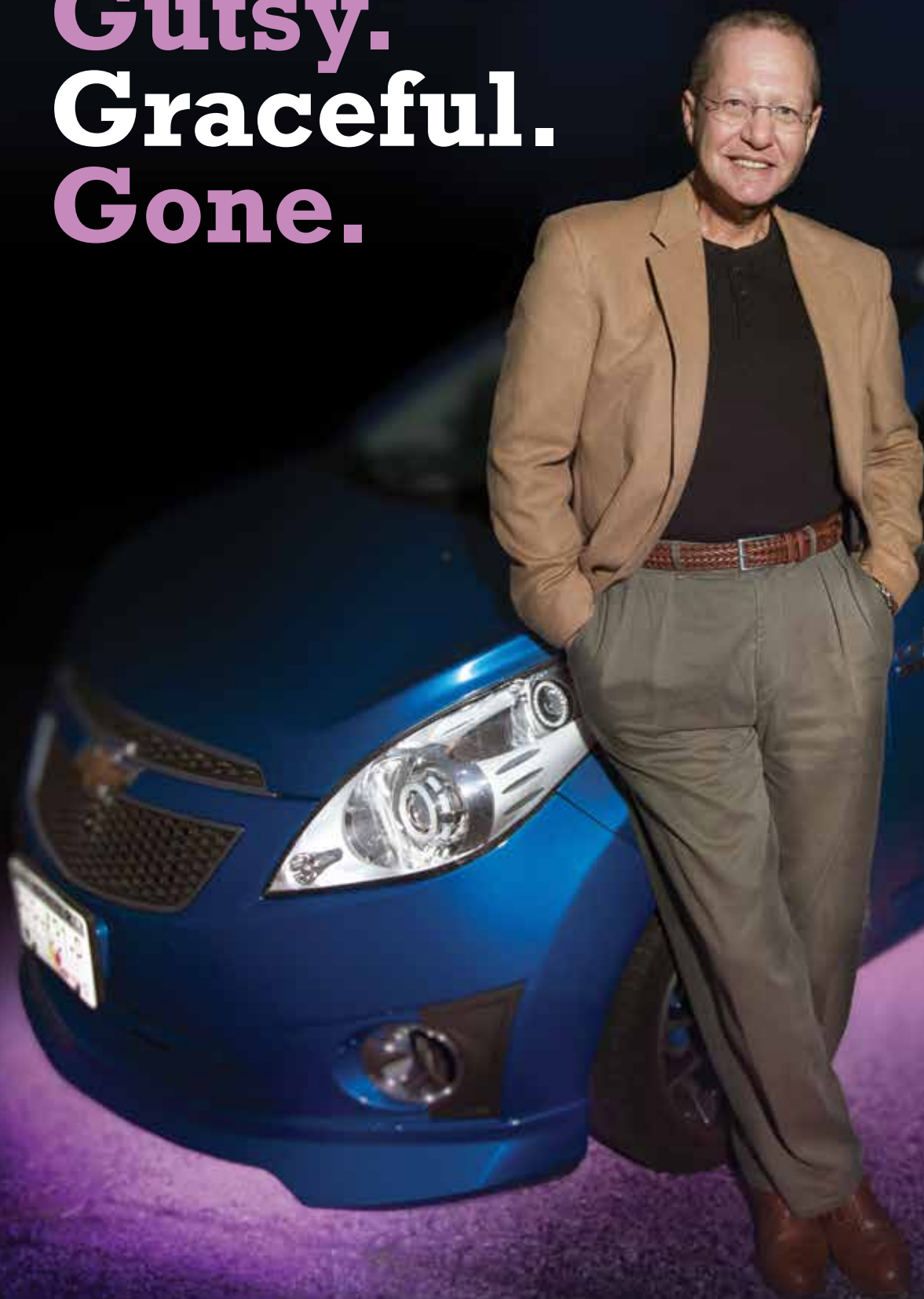
He lost both of his sons, Peter and then Jeffrey, in their 60s—a devastatingly painful experience that can never fully leave him. But his quiet strength, emboldened by his wife, keeps his mind and hopes running.

He does not dwell on precious joys that will not happen, nor the next great invention that did not happen.

“I made plenty of mistakes, but it has all turned out well,” he said. “I’m not rich, but we are comfortable. Mary is the best wife a man could have.

“I’m a lucky, happy person with no wants or needs other than what I already have. I plan to live past 100, so let’s count on another cover with me as an older man when I get there.” 🍷

Gifted.
Gutsy.
Graceful.
Gone.



MY FRIEND had just created a memorable moment for me during our phone conversation, but I didn't tell him. He would have been embarrassed.

They—the most intelligent person I have ever known—told me I had done something “brilliant.” I don't remember what I did. It doesn't matter. What mattered was that for the first time in my life, an authentic genius had called me brilliant.

I never asked They if he knew he was a genius; I suspected he did. He was always fixated on the next “what if,” the next “why not,” with hyper-technical schematics pinballing inside his head waiting to be unleashed via a torrent of detailed notes—some of which he shared with me.

And now I am left to ponder the fact that he is gone, deeply grateful for having known him but wishing more people had.

Name of fame

Genius in a vacuum is impressive. Genius with heart, courage, humor and character is impossible to forget.

I met him through email in September 2016, when he inquired about the availability of an *Inventors Digest* issue from 1986. (Long gone.) After a few emails and a phone conversation, it was a no-brainer that this brain had to be the subject of a story in this magazine. I wrote it for the December 2016 issue.

Originally, I thought the main “hook” for the story was how he walked into a Taney County,

Missouri, courtroom in 2004 and changed his name from Andrew Wilson to They.

“My intention was to just play a little bit,” he said in the 2016 story. “They do this; they are to blame for that.’ Somebody has to take responsibility. ...

“Three days after I had done this legally, I was looking at my homepage and saw the headline about my name change on CNN's website. The AP picked up on it, and from there it went ballistic.

GENIUS
INVENTOR
THEY LEFT
HIS MARK ON
AN EDITOR—
AND ON
THE WORLD

It was everywhere. ...Dozens of radio stations around the world called to do interviews, and the online forums were everywhere.”

Many of these media outlets—if not all of them—missed the bigger story.

Chaos and courage

This particular little media outlet was always close to his heart, which is why he sought that 1986 issue in which he had been mentioned.

“What you have brought back to my forefront is something I cannot put a price on, simply

because of what it represents and what it's going to represent,” he said. “*Inventors Digest*, back in the day, brought me a pulse that set my course for the rest of my life. It gave my work validity, which has always been the only important thing for me.

“I'm revitalized one more time.”

His life was a series of revitalizations, many of them painful. Maybe some other media might have mentioned his 14 patents—including ground-effects lighting underneath vehicles that has been popular since the late 1980s—but They's story is one of relentless determination in the face of cruelty, isolation and major health challenges.

Because his father was a traveling minister, the family moved a lot. He said his father was bigoted and beat him often. He wasn't close to his four older brothers.

“I wasn't part of anybody else's world. ... I had no supervision, no guidance”—which in retrospect he viewed as a blessing.

“So here's this little scientific-minded kid, out exploring. When I was 10, 12 years old, I would go out hunting for two or three days at a time by myself. ... I did all these things and satisfied my curiosity.

“That's my toolbox I've brought to everything that gives me an understanding of the world around me. Everything mechanical, I instantly understand it.”

He had more than 30 surgeries. Several were associated with cancer; two years of chemotherapy and radiation led to heart problems that plagued him much of

his adult life. He recalled 11 heart catheterizations, three heart stents, one aortic stent, and procedures involving his gall bladder, lymph nodes, feet, arms and legs.

While undergoing chemo, he put a tourniquet around his scalp to limit blood flow—figuring that because the chemicals were short-lived, restricting scalp exposure could reduce hair loss.

“I didn’t lose my hair, except where the tourniquet didn’t cover. I heard later that doing that and using icepacks and cooling has become a mainstay in chemo treatment. That was a proud moment.”

Ideas to the end

He never focused on his health problems until the end of his life—spoke of them like getting an oil change for the car. He had too many things to think about and do.

His cyclone of recent ideas and comprehensive planning ranged from a Bluetooth monitor for infants to help eliminate Sudden Infant Death Syndrome; break-away clothing that would prevent people from being entangled in heavy machinery; and a fire-suppression apparatus.

His goal was not to get rich from these ideas, not even to patent them: “These things ... can save lives and injury, and that’s my focus—not the corporations and the insurance companies, but the actual people on the ground who benefit from it.”

When he asked my opinion about the validity of his ideas, I was beyond flattered. He was so grateful for my input that he surprised me by mailing an art piece he created. He was a fine

painter, jewelry maker, and taught himself how to play the piano.

“I’ve had enough encounters in my life to have a total appreciation for every single day and every single moment that I have,” he said in 2016. “I have been nearly dead or dead for three minutes at a time. If you’re able to walk away from that, you have a unique appreciation for this.”

He was always fixated on the next “what if,” the next “why not,” with hyper-technical schematics pinballing inside his head waiting to be unleashed via a torrent of detailed notes.

He could not walk away from this last health challenge. He was diagnosed with lung cancer in mid-2021 and died in a Galveston, Texas, hospital on October 16. But even in his last email to me, he wrote:

My work has been pretty much on hold, but my exposure to this new medical entity has spawned a few ideas and inventions related to this field of interest ... something to be expected. At least that program still functions :)

The 3 happiest years

We’ve saved the happiest part of the story for last.

Three years ago, They met Nancy Saint-Paul. She was immediately taken by his intelligence, kindness, talents and strength; she has many of the same attributes.

After 57 years of mostly discovery and loneliness, the last three were his happiest.

When Nancy called to inform me of They’s death, her voice was steady and calm. She even laughed a couple times. Just as her husband would have, it was she who spent more time comforting me than the other way around.

She sent me the last photo taken of They, a few days before he died. He was lying in bed tapping on his phone, his cat Molly by his side.

“Full name: Molly Gras,” Nancy wrote. “He adopted a fat cat during Mardi Gras (another veiled joke; please cheer up).”

A few days later, she added a note about his end-of-life arrangements. “His first choice was taxidermy and when I asked if he wanted me to place him in the gazebo, he said, ‘What? I can’t come inside? You’re locking me out?’ His second choice was full Norse burial, complete with flames.”

His ashes were to be scattered at sea, per his wishes.

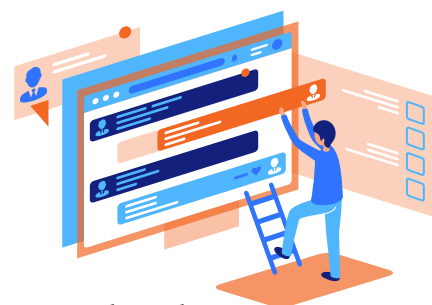
The Artist Formerly Known As Andrew Wilson was special, different. But like so many inventors, at his core was an insatiable appetite for discovery, helping others, and even a little validation.

In those beautifully human ways, They was us. They is us.

—Reid Creager

Foray Into Forums

THESE ONLINE SELLER COMMUNITIES CAN KEEP YOU CURRENT ON TRICKS AND TRENDS **BY DON DEBELAK**



THE MANY INVENTORS and new product developers selling their products on the internet can get a lot help via online forums and discussion groups of people selling online.

These online groups are crucial in online selling, where what works and doesn't work can change every three to six months.

These forums and communities have posts from people successfully navigating these changes, and their posts are always current. Most of these forums allow questions, but first check past questions; your question may have already been asked.

Amazon Seller Central

sellercentral.amazon.com/forums

Amazon sellers can go here to ask questions and find answers. Forums you can find there: Global Selling, Amazon Pay, Sponsored Products, Product Listing Feedback.

Warrior Forum

warriorforum.com

This is one of the oldest online forums on all things marketing, eCommerce and entrepreneurship. Forums include pay-per-click/search engine marketing, social media marketing, offline marketing and mobile marketing.

Shopify Community

community.shopify.com/c/shopify-community/ct-p/en?profile.language=en

A must for store owners. Some threads of postings include information for eCommerce marketing, drop shipping, crowdfunding and manufacturing.

Web Retailer

webretailer.com

This is a free community for businesses that sell through online marketplaces such as eBay and Amazon, with over 12,000 members globally. The site helps users find the best software for

their needs, discuss the latest issues and trends, build their knowledge of the industry, and learn to become more effective sellers.

Web Retailer Forum members receive a weekly newsletter covering the latest eCommerce news, discussions and reviews, and profiles of innovative new software.

Digital Point

forums.digitalpoint.com/forums/social-networks.118/

Digital Point, with its Social Networks Forum, is probably my favorite. It gives unique information on digital marketing and has an excellent social media section. Popular topics range from using Instagram for business and tutorials on Facebook marketing.

Tamebay

Tamebay.com

Tamebay is one of the best Amazon seller blogs.

These are all seller forums. But don't overlook forums that may be focused on users.

Forums that help buyers include Amazon Customer Reviews, Angie's List, Choice, Trustpilot and TestFreaks. These may include customer comments, including features customers want but aren't getting.

Try an internet search for user groups that could include your target customers in any of these forums: Usenet, discussion groups, chat rooms, Facebook groups, internet forums and message boards. ☛

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



Some Tips About That Tipping Point

SUCCESSFUL INVENTIONS ARE LESS ABOUT THE PRODUCT, MORE ABOUT THE PEOPLE BEHIND THEM **BY ALYSON DUTCH**

I F YOU HAVE created a small business for yourself, it is likely that between the hard work you're putting in and maybe even working a job for someone else, you're wondering when that tipping point will happen. You may even be fantasizing about overnight success.

Maybe you're studying manifestation techniques, watching "The Secret" movie repeatedly or furiously creating vision boards with cut-out photos of the things you want to manifest. I've done that.

When I started my company, I didn't know anything about business. But I did know how to put myself in the right mind-set to create something. I remember taking my bank statement and replacing the numbers with cushy bunches of numerals and keeping it on my desk to look at every day.

I remember the first time I deposited a check for my new business and saw \$4,000 on the ATM screen. It was more money than I'd ever seen in my bank account. I walked away with a big smile thinking, "Wow, I really did that."

Action paralysis

Twenty-five years later, I work with entrepreneurs every day, helping them bring their products to market. It still thrills me to have the honor to do this. As such, I intimately understand the fears of an entrepreneur, the challenges, the questions—and the next steps that are necessary to get to where they want to go.

One of the qualities I see most often in entrepreneurs is directionless thinking when it comes to marketing. Most have an inspiration for a product/service, they create it, then wander around when it comes to finding their customers and getting them to buy it.

I blame those news stories and dazzling MasterClass ads on Instagram in which success stories are told, as if that happens to everyone. There is a reason that is a "news" story and someone is selling a class about it: It's because it's wildly unusual and rare.

Of all the new products I've seen in my career, it has only been about 5 percent who have succeeded and stuck around—and a smaller percentage who sold it and made money.

So, how does this success happen?

Will there be a moment when luck smiles on you and customers are knocking down your door to buy your product? When will it be your time? Is there really such a thing as a lucky break?

Creating luck

Malcolm Gladwell wrote a book called "The Tipping Point," in which he describes a certain time where a want becomes a need on a mass scale and then it takes on a life of its own. How do you make that happen, especially with a limited budget?

The truth is, some of us are indeed lucky types, but it's not luck. It's a relentless, unquenchable, unstoppable combination of positivity, desire to learn and adaptability that *creates* luck.

This may sound airy fairy, but good energy brings more good energy. A dour attitude and fear attract more ickiness. This is why surrounding yourself with others who are better, faster, smarter, more successful is not only important but critical for your success.

You've got to be willing to let go of the nervous Nellies, doubting Thomases, naysayers, down-on-their-luck types and only face the sun. It's OK if you change out your people for



I live by this tenet: Education will not. Privilege will not. Experience will not. Tenacity will.

new people; that might even be your family.

Some of us have to work much harder to create what we want. Why this happens is a longer and more involved conversation, but there is one necessary thing—which, by the way is always the same for anyone to gain success. It works every time—no matter how lucky, cursed, wealthy or wise you are.

Over the years, I've worked with many great products, each of which could have become hugely successful. No matter what kind of business, they were all products with tremendous potential. Some succeed. Most fail.

Why? It's the people, never the product.

The 2 main triggers

Ask any venture capitalist, any incubator, and they'll parrot that right back at you. So often, money people come across great products and they back out because the creator is so in love with the product, yet unaware of how incapable he or she is about running a business, that they blow the deal.

It was these failures that inspired me to "The PR Handbook for Entrepreneurs" and "The POM Principle." After getting thousands of calls from excited entrepreneurs with great ideas who just wanted to get their product to market, I thought, "Why don't I just share what I know to teach them to do it themselves?"

Making dreams into reality seems daunting, but it (always) starts with two things:

1. Unrelenting focus on a grand, and very specific, vision.

2. Moving your feet in the direction of what you want to create.

Of course, a healthy dose of tenacity and fearlessness helps.

I live by this tenet: Education will not. Privilege will not. Experience will not. Tenacity will.

I was hosting some friends at dinner recently. The conversation turned to manifestation. One of my guests was really into it. The other was a skeptic. An interesting conversation ensued that I want to share, because it's most likely another aha! you need to know about getting over that hump and getting your lucky break.

As living, breathing beings, we are manifesting machines. We create ideas, products, relationships, good and bad experiences. Very little of what is outside of you influences your reality.

If you doubt this statement, I'm telling you now: Please don't read any further, hang up your ideas of becoming an entrepreneur, and go find a job.

The entrepreneurs who really win are the ones who fearlessly pursue their ideas, and quickly.

Until next time, keep dreaming and moving your feet. 📌

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



Marketing Your Prototype

THESE STAGES ARE OFTEN USED TO FUND COSTS FOR BUILDING THE PHYSICAL BASIS OF YOUR INVENTION **BY JEREMY LOSAW**

PROTOTYPING is necessary to move a product from concept to production. But where are you going to get the money to do it?

Although many inventors can self-fund their projects to some degree, there is often a moment when costs associated with the next step are too big a leap and additional funds are required.

Then, some sort of marketing activity is required to secure investment, or an injection of cash—whether via private investment from friends, family or investors, or presales through the web or crowdfunding.

Different types of marketing activities require different levels of prototypes; some do not require any. Here are some typical stages in the marketing journey for a product and how refined of a prototype is required.

Different types of marketing activities require different levels of prototypes; some do not require any.

Website

Setting up a website is often the first step and one of the easiest things to do in the marketing journey. It is a great way to easily share the concept to get feedback on the product, can be used for pre-sales, and helps support the rest of the marketing plan. It can be set up quickly, requires anything from no prototype at all to a full working prototype, and can evolve with the development.

In the early stages of the product's journey, you may still be working out the kinks of the technology and not have an aesthetically pleasing prototype. In this case, you can find an

industrial designer or graphic artist to come up with renderings of what the product may look like so that you can get investors or potential partners excited.

As the product progresses, renderings can be replaced by images of aesthetic prototypes. When the product is launched and available for sale, e-commerce can be added to the site with images and video of the factory-made product.

Crowdfunding

In the past decade, it has become increasingly common for inventors to use crowdfunding to both validate the product concept and fund the journey to production.

The two main players are Kickstarter and Indiegogo. Their requirements for prototypes are slightly different.

To launch a physical product or gadget on Kickstarter, you must show a working prototype that achieves the functionality you state in your campaign materials. If not, you risk having the product unapproved or pulled midway through the campaign.

It is common and above board to have the main video of the product with the “hero shots” and great music to be spoofed in some way. Perhaps the WiFi in the product was not fully functional in certain shots, and you hard-coded LEDs to turn on at certain times. No problem.

However, Kickstarter requires you to submit an unedited video (which can be shot on a smartphone) of the product demonstrating functionality before it will be approved for launch. It also specifically calls out that no renderings of any kind be used in the campaign, and all images should be of real prototypes—either in the product's current form, or iteratively along the way.



The image for Artifact Technologies' NFT keychain, made while prototyping was ongoing, is a rendering of what the product will be.



Indiegogo does not require a prototype for physical product or hardware projects, but it highly encourages them. In this case, you can use renderings of the product and claim functionality that is not yet developed.

Indiegogo still reserves the right to cancel campaigns and refund backers before the end of the campaign if the product features are too magical relative to what is shown working. So no matter what the specific requirements are for either platform, the best way to make a splash in crowdfunding is to show beautiful, working prototypes.

Trade show

As the impact of the pandemic lessens somewhat, trade shows are starting to come back. They will continue to be a great place to showcase new products.

The level of finish of a prototype brought to a trade show is variable and depends on the needs of the program at the time.

For purely physical products that have no electronics, it is prudent to have fully working prototypes to show. This is crucial to convince show-goers that the product and its claims of efficacy are real.

There is a little more leeway for electronic prototypes. They often have wireless technology that can be slowed and hampered in a congested environment with lots of smartphones, so it can be difficult to demonstrate product features that require a strong wireless connection and access

to the cloud. Big electronic trade shows such as the Consumer Electronics Show even offer wired ethernet connections to booths to help with this.

Savvy show-goers are savvy enough to know that the show itself is rarely representative of the intended environment, so they understand if the features are not demonstrable there.

Pitch deck

This is crucial for getting investment from angel investors or venture capital groups. The pitch deck includes not only information about the current state of development but information about the financial projections, history of the company and the timeline to get to market.

There is no hard-and-fast rule about how developed a prototype needs to be for a pitch deck, but it likely needs to be in proportion to the ask.

For example, you may be able to get away with product renderings and rough prototypes if you are doing a local pitch competition with a small cash prize. However, if you are looking for a Series A round of funding from a group of seasoned investors, you must have strong support from your prototype to justify your valuation and the level of funding you want.

Experienced investors insist on live prototype demonstrations and request information on the cost of goods to produce the product. This requires well-developed and nearly market-ready prototypes. 📌



What is Patent Eligible?

PUBLIC COMMENTS IN USPTO STUDY SHOW
A WIDE RANGE OF OPINIONS **BY STEVE BRACHMANN**

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

OCTOBER 15 marked the final day of the public comment period for the U.S. Patent and Trademark Office's patent eligibility jurisprudence study. By the close of the comment period, 43 public comments were submitted from entities with vastly different viewpoints on the U.S. patent system.

Public comments will be used to determine how the current state of Section 101 patent eligibility case law affects investment in U.S. innovation. (*Editor's note:* Section 101 says an invention is patent eligible in broad terms—if it is a “new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.”)

Many comments raised dire concerns about the uncertain nature of Section 101 eligibility and how that uncertainty has been affecting R&D activities across the nation.

The USPTO first announced the patent eligibility jurisprudence study in July. But the study originated in a letter sent this March to Drew Hirshfeld—temporarily performing the functions and duties of the director of the USPTO—by a bipartisan group of senators asking the agency to request and analyze public comments on Section 101 patent eligibility law.

Legislative reforms to Section 101 have stalled in recent years, but results of the study are expected to help Congress consider appropriate action on patent eligibility issues. “I’m sure the USPTO’s study will be a valuable contribution to

the conversation, and I would expect it to highlight the need for reform,” said Nicholas Matich of U.S. trial firm McKool Smith.

Bad sign for diagnostics

A comment submitted by A. Sasha Hoyt, a law student at Washington and Lee University School of Law, offered draft findings from an empirical study on venture capital investment into disease diagnostic technologies.

Using VC investment data collected from PwC Money Tree, Hoyt analyzed changes in VC funding from 2006 to 2010 and then from 2013 to 2017, excluding the intervening years between the U.S. Supreme Court decisions in *Bilski v. Kappos* and *Mayo Collaborative Services v. Prometheus Laboratories*.

Hoyt's key finding is that during the four-year period following the Supreme Court's *Mayo* decision, VC investments in disease diagnostics technologies were \$9.3 billion less than those investments would have been without *Mayo* (a ruling which held that a claimed diagnostic method was an unpatentable law of nature).

Although VC investment totals in diagnostic technologies have generally increased since *Mayo*, that increase has been lower than VC investment in other industries during the period analyzed. Hoyt concludes that confusing, inconsistent interpretations of Section 101 following *Mayo* reduced incentives to invest in medical diagnostics R&D, which should lead to Congressional action to restore patent eligibility for diagnostics.



Results of the study are expected to help Congress consider appropriate action on patent eligibility issues.

IBM criticizes ‘uncertainty’

“Collaborative research and development in the information technology ecosystem thrives when there are clear rules of the road,” reads IBM’s comment. “Uncertainty—like we have with patent eligibility—undermines productivity.”

IBM, the top recipient of U.S. patent grants each year for nearly three decades, notes that without reform of Section 101 to reduce uncertainty, the R&D giant may direct its research into areas where patent eligibility is clearer. Uncertainty causes issues during patent prosecution—as USPTO patent examiners often have issues applying Section 101 jurisprudence—and during litigation in federal courts, where infringers can raise numerous Section 101 invalidity arguments that reduce the incentive to efficiently resolve disputes.

Section 101 uncertainty is most concerning in several growing areas of computer innovation—including quantum computing and artificial intelligence. According to IBM, Section 101 is biased against these areas of computer-related innovation “because abstraction is a foundational characteristic of computer science.”

For example, AI inventions, which mimic the functions of the human mind, are often developed as models through iterative training processes such that there is often no objective line between how those models operate and the results they achieve. As a result, IBM argues that it’s difficult to adequately claim an AI invention in a patent application without focusing the patent claim on the desired result.

Since the Supreme Court’s 2014 decision in *Alice Corp. v. CLS Bank*—a major blow to software patents—IBM notes that it has had what it called “a high percentage” of U.S. patent applications abandoned for patent eligibility issues with counterpart applications in other countries that reached patent status, although IBM noted that its sample size was small.

Innovation Alliance also addressed the uncertainty:

“Because the application of *Alice* is so fraught with uncertainty and unpredictability, a cloud of uncertainty hangs over these patents, threatening incentives to innovate in this key technology area.”



Backing the status quo

One of the supporters of the current state of patent eligibility jurisprudence is GPS tracking solution provider EasyTracGPS, which voiced concerns about extortion attempts from so-called “patent trolls” that could threaten its business success. EasyTracGPS claims that preventing patenting of abstract ideas has benefited software- and technology-based industries, although the company provides no statistics to substantiate that claim.

From its perspective, EasyTracGPS notes that it has been able to spend less on legal fees thanks to current abstract idea jurisprudence, and Unified Patents’ litigation analytics portal shows that EasyTracGPS was named a defendant in just one infringement suit.

But EasyTracGPS’ business model doesn’t seem to rely on patents at all: a search of the USPTO patent full-text database shows zero patents or patent applications assigned to EasyTracGPS.

1,100 eligibility motions

Dominion Harbor, an IP consulting firm whose business model does rely on patents, says in its comments that current subject matter eligibility jurisprudence has turned many situations that

should be routine commercial patent licensing transactions into unnecessary and costly patent litigation. Many more infringers are turning to Section 101 challenges.

Data provided by Dominion Harbor shows that while Section 101 challenges in motions to dismiss were rare before *Alice*, more than 1,100 such motions have been filed by defendants in U.S. district court through the end of 2021 (estimated based on year-to-date totals).

Google: What problem?

Comments from Big Tech stalwart Google were unsurprisingly bullish on the current state of patent eligibility jurisprudence. The company cites several studies on investment data and patent application filing activities to argue that innovation in both AI and quantum computing are currently very healthy.

What *Alice* provided, Google argues, was a “forcing function” that pushes patent applicants to include more detail in patent applications, especially regarding the technological solution covered by the patent. ☞

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



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Vidal to Lead USPTO?

PATENT LITIGATOR NOMINATED BY BIDEN TO BECOME
NEXT PATENT OFFICE DIRECTOR **BY GENE QUINN**



KATHI VIDAL was nominated by President Joe Biden on October 26 to be the next under secretary for intellectual property and director of the U.S. Patent and Trademark Office at the Department of Commerce.

Her official appointment to the post is pending confirmation by the U.S. House and Senate. Vidal would replace Commissioner for Patents Drew Hirshfeld, who has been performing those duties on an interim basis.

Though most IP stakeholders agree Vidal is a strong and capable candidate, some have expressed concern about her ties to Silicon Valley and a potential return to Michelle Lee-era politics at the USPTO.

Vidal is the managing partner of Winston & Strawn's Silicon Valley office, where she has been since 2017, and served with Fish & Richardson for 20 years before that as global head of litigation and on the firm's management committee. She was part of the team that represented The Chamberlain Group in its fight at the United States Court of Appeals for the Federal Circuit and subsequent petition to the Supreme Court to get its patent for a garage door opener recognized as patent eligible.

She also argued and won the *SAP America, Inc. v. InvestPic* case for SAP at the federal circuit, in which the court held that InvestPic's patent claims at issue were patent ineligible as abstract because "[t]heir subject is nothing but a series of mathematical calculations based on selected information and the presentation of the results of those calculations."

Thus, her positions as an attorney while advocating for clients are on both sides of the patent eligibility issue.

Her background

Vidal meets the Biden Administration's preference for gender diversity, and as a litigator she would bring experience on perhaps the most contentious issue facing the next director: the Patent Trial and Appeal Board.

Vidal represents high-tech, medical device, consumer product and financial companies.

Her background is in mathematical physics and programming, and she has bachelor's and master's degrees in electrical engineering. She worked for five years as a systems and software design engineer with

General Electric (which later became Lockheed Martin), graduated from the Edison Engineering Program there, and according to Winston & Strawn "designed one of the first leading-edge expert systems (neural networks, fuzzy logic, expert systems) for fault diagnostics in aircraft."

Prominent name in IP

Vidal's name came up before in IP vacancy discussions. Paul Michel, retired federal circuit chief judge, mentioned her as someone who would be "ideal" for the next judge pick.

An endorsement from Judge Michel for a lifetime appointment to the federal circuit likely carried great weight with many senators and industry stakeholders.

She also has been a leader on diversity issues, which is known to be a priority of the Biden Administration. She clearly has a strong IP background and intimate knowledge of some of the most pressing IP issues.

Early reaction

Innovation Alliance Executive Director Brian Pomper issued this written statement:

"The Innovation Alliance congratulates Kathi Vidal on her nomination to be Director of the USPTO. Ms. Vidal's private sector work in patent law, particularly in the area of high-tech, and her efforts to promote gender and racial diversity in the legal profession are both notable and welcome."

Not there yet

Given that negotiations are deadlocked among far-left and moderate Democrats over the Biden domestic agenda, it seems virtually certain it will be February or March 2022 before any action is taken to confirm Vidal's nomination. 🗳️

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





Bizarro!

HOW ELSE TO EXPLAIN THE FEDERAL CIRCUIT'S RESENTMENT OF JUDGE ALBRIGHT? **BY GENE QUINN**

EVEN WITH the many reasons to question the continued viability of the U.S. Court of Appeals for the Federal Circuit, the court's continued use of mandamus is very troubling.

Much of the time, it seems the federal circuit is using this extraordinary remedy—a judicial writ issued as a command to an inferior court—to control the docket of Judge Alan Albright of the Western District of Texas, ordering him to transfer cases. Reading these decisions is becoming nauseating.

The resentment of the federal circuit toward Judge Albright is palpable. The appeals court ignores first principles and well-established law in an attempt to move patent cases from the forum selected by the patent owner plaintiff to a forum decidedly in favor of the defendants.



Judge Alan Albright of the Western District of Texas is repeatedly ordered to transfer his cases from forums selected by the patent owner plaintiff to one that favors defendants.

A forgotten standard

We live in a bizarro world where motions to dismiss are commonplace—a ridiculous thought that would have earned most of us a failing grade in civil procedure had we uttered such nonsense while in law school. But now we also live in a world where the plaintiff's choice of forum is overruled by an appellate court second-guessing a district court if it believes there is a more convenient forum for the defendant.

The volumes of law relating to the plaintiff being the one to choose the forum, and transfers being appropriate only when the transferee venue is *clearly* more convenient, be damned. The standard of review is also a casualty—and increasingly, so is the credibility of the federal circuit.

As Judge Michael J. Linn attempted to explain to the federal circuit several years ago, the standard for a writ of mandamus is purposefully high

and does not give the reviewing court license to substitute its own judgment for that of the district court. Quite to the contrary, the federal circuit—like all appellate courts—is supposed to give substantial deference to the district court.

“A district court generally enjoys broad discretion in making the transfer determination,” the federal circuit properly explained this year in *In Re: Juniper Networks, Inc.* But even a casual observer can conclude that the federal circuit is giving no deference when reviewing mandamus requests from Judge Albright's decisions on motions to transfer.

Judge Linn further explained in his dissent in 2013's *In re Google, Inc.* that when the district court judge considers all relevant factors and comes to a determination it is not for the reviewing court to reweigh the factors differently. The federal circuit has ruled that the standard for ordering mandamus requires the petitioner “to establish that the district court's decision amounted to a failure to meaningfully consider the merits of the transfer motion.”

In re Barnes & Noble, Inc. (2014) shows that Judge Albright meaningfully considers the merits; the federal circuit just disagrees.

It's about ideology

Anyone familiar with how Judge Albright runs his courtroom would conclude that the most convenient forum for all parties would be the Western District of Texas. He makes it easy for attorneys, parties and witnesses to attend, and he also makes his trials and hearings publicly available over Zoom.

The attempt to transfer cases out of the Western District of Texas has nothing to do with convenience; it has everything to do with ideology. Patent owners get a fair opportunity with Judge Albright, and the federal circuit seems to want to prevent that wherever possible. ☞

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IoT Corner

Low-cost, single-board computer manufacturer **Raspberry Pi** announced the close of a \$45 million funding round in September, bringing its valuation to \$500 million.

The ubiquitous Raspberry Pi single-board computer, in its fourth generation, starts at \$35. Its easy-to-use Linux operating system and strong community makes it a hit with the maker community. Raspberry Pi products have had strong growth in use in industrial IoT applications, and as the backbone of computers for students homeschooled during the COVID lockdown.

The company plans to use the funding injection to expand its product line and improve its supply chain to help meet demand.

—Jeremy Losaw



Wunderkinds

Fourteen-year-old **Sarah Park** of Jacksonville, Florida, won the 2021 3M Young Scientist Challenge, a U.S. middle school science competition. Sarah created Spark Care+, which personalizes music therapy treatment for mental health improvement using artificial intelligence, skin response and

photoplethysmography. She won a \$25,000 cash prize, the title of “America’s Top Young Scientist,” and a special destination trip. SparkCare+ is an affordable, portable therapy made up of a communication with the participant, and a mechanism that uses deep neural networks to select therapeutic music.



What IS that?

This taco belle is modeling the Gilbins Plush Ultra-Soft Fleece Snuggle-in Sleeping Bag Blanket for Lounging on the Couch. Dip not included.

5 Number of separate copyright infringement lawsuits over the lyrics to Taylor Swift’s hit “Shake it Off.” Her attorneys have shaken off all five suits.

WHAT DO YOU KNOW?

1 The inventor credited with creating the pain-fighting formula for Bayer aspirin came from which country?

- A) Norway B) Germany
- C) Italy D) Poland

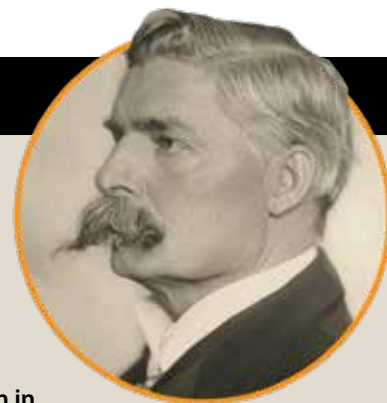
2 **True or false:** You don’t need a working prototype to patent an invention.

3 **Which was invented first:** Venetian blinds, or the coffee cup?

4 **True or false:** Dr. Adolf Gaston Eugen Fick, who invented the contact lens, first tested them on rabbits.

5 What does BuzzFeed say is the most important invention in modern music?

- A) The MP3 revolution B) Electric guitar
- C) Phonograph D) Digital mixing desks



ANSWERS: 1.B. Felix Hoffmann patented the formula in 1900. He also was the first to synthesize heroin. 2. True, though in most cases it is highly recommended and necessary. 3. The first patents for Venetian blinds were taken out by Gowin Knight in England in 1760. The first coffee mugs were used during the Neolithic period (3900 B.C.–1700 B.C.). 4. True. 5.C.

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