

Inventors

DIGEST

Patenting Primer

DRAFTING CLAIMS
TO MAXIMIZE VALUE

I Want My MTV!

CABLE TV'S ORIGINS
AND EVOLUTION



BUILDING THE BUZZ

ONCE AFRAID OF BEES, TEEN
INNOVATES TO SAVE THEM



\$5.95

POSTAGE PAID
PERMIT NO.
FULTON, MO



Help recognize our nation's top scientists, engineers, and inventors

Nominate an innovator for the nation's highest honor in technological achievement, **The National Medal of Technology and Innovation**, awarded by the president of the United States. Help us highlight the national importance of technological innovation and inspire future generations of American innovators.

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

Anyone can nominate for the National Medal of Technology and Innovation at www.uspto.gov/nmti. Submit your nomination today.

Nominations of candidates from traditionally underrepresented groups are encouraged.



**Nominations are due
by May 20, 2022**

For more information, contact
Linda Hosler, Program Specialist
Phone: 571-272-8514
Email: nmti@uspto.gov

UNITED STATES
PATENT AND TRADEMARK OFFICE

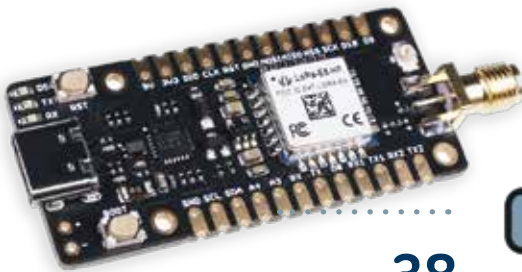


Contents

May 2022 Volume 38 Issue 5



22



38



24



ON THE COVER
Mikaila Ulmer, founder
and CEO of Me & the Bees



Feature

- 28 The Bee's Knees of Business**
Teenager Helps Bees With
Proceeds From Her Lemonade

Inventor Spotlight

- 22 Warming to a Solution**
Dad's Portable Formula Warmer
- 24 Father of Invention**
Vest to Help With Baby Care

Departments

- 6 Your USPTO**
News, Upcoming Events
- 10 Editor's Note**
National Inventors Month
- 11 Everybody's Talking**
USPTO Director Sworn In
- 12 Bright Ideas**
Innovation That Shines
- 14 Time Tested**
Growth of Cable TV
- 18 Lander Zone**
More Than a Sales Pitch
- 20 Social Hour**
Ideas By the Baker's Dozen
- 34 Inventing 101**
Beware the Bruno
- 37 Meant to Invent**
Ugh! Your Product Already Exists!
- 38 Prototyping**
Making LoRa Work for You
- 40 IP Market**
What Makes a Patent Valuable?
- 44 Eye on Washington**
Ignorance: A Sign of the Times
- 46 Inventiveness**
Focus on the Fun and Fascinating



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

MAGIC MOMENT

How Plant Patents Sprouted

1930 law was culmination of evolving U.S. farming and market conditions

LAST MONTH on these pages, we told you about the invention of the umbrella that can be protection from April showers. Now we'll tell you about May flowers—specifically the beginnings of intellectual property

protection for new plants and the emergence of plant patents—to celebrate passage of the U.S. Plant Patent Act of 1930, 92 years ago this month.

People have intentionally bred new varieties of plants for thousands of years, since the dawn of agriculture. As people began to farm for profit, the only IP protection available for new varieties of plants was the trade secret.

By the late 19th century in the United States, you could also protect the brand name referring to the variety—but you couldn't protect the variety itself. Anyone

could reproduce, grow, and sell it.

Historian Stuart Banner wrote: “In an era when farming was a small-scale local activity, and when farmers obtained their own seeds from the previous year's plants, there were no players who stood to gain much from patents in plants or animals, and there was no organized political force capable of backing an effort to change the law.

“Those circumstances changed in the second half of the nineteenth century, as agriculture consolidated, farmers began producing more for the market, and farmers increasingly began to acquire seeds and plants from seed companies rather than generating them on their own.”

Seed companies wanted IP protection for new varieties of plants and began to lobby for it. They also started the discussion in the horticultural press.

By the early 20th century, some horticulturalists and farmers sought legislation allowing plant

patents. Companies that provided plants to farmers organized coalitions of nurseries and trade organizations, which wrote letters to Congress calling for a plant patent act.

According to research by USPTO Historian Adam Bisno, “People argued that experimenting with new varieties of plants was really hard work and should be rewarded.”

But some people worried that patents—which are exclusive rights for the holder—would increase food prices. And how would it be possible to determine whether a plant variety is new? What about the seemingly infinite number of patents that could result from all the adaptations provided by nature?

Congress drafted a bill with the support of many people, including Thomas Edison and the U.S. commissioner of patents. The Plant Patent Act of 1930, signed by President Herbert Hoover on May 23, was a compromise.

The new law satisfied the agriculture lobby by providing some IP protection for new varieties of plants but also satisfied plant patents' detractors by excluding new varieties grown from seeds. The only varieties protected under the law would be plants that were asexually reproduced (by grafting or similar processes, not by fertilized seeds).

Many of the earliest plant patents were for flowers, specifically roses. The first U.S. plant patent was filed by landscape gardener Henry F. Bosenberg on Aug. 6, 1930, and issued on Aug. 18, 1931. The patent abstract describes “improvements in roses of the type known as climbing or trailing roses ...”

In the early 1930s, patent applicants filed duplicate drawings and specifications. The original stayed at the Patent Office; the copy went to the Department of Agriculture for evaluation by experts. An oath accompanied these documents, stating that the plant had been asexually reproduced and that it had not been introduced to the public prior to May 23, 1930.



U.S. Plant Patent No. 2, issued in 1931, is the first plant patent with a color illustration. Frank Spanbauer, a florist from North Kansas City, Missouri, described his flower as exceptionally hardy and pleasant to one's sense of smell.



Program Seeks to Expand IP's Reach

AccessUSPTO to link select national organizations to inventors throughout America

NOT ALL INVENTORS and entrepreneurs understand what intellectual property (IP) is, or its essential role in protecting their rights. So the USPTO has initiated a pilot program to ultimately reach people in locations where IP has not traditionally been maximized.

The goal of AccessUSPTO is to show people throughout America how to secure IP rights such as patents, trademarks, trade secrets, and copyrights in order to expand their businesses.

To achieve this, AccessUSPTO will work with trusted, select national organizations to assess their constituent needs on IP information and deliver a tailored outreach plan that meets those identified needs.

The USPTO continues to explore these organizations. Each organization considered for the pilot should have an emphasis on local communities with members not traditionally versed in IP.

AccessUSPTO will evaluate the organizations through an open dialogue and work with them on creating a tailored outreach plan—including, but not limited to, a variety of subject matter training, educational materials, and an IP starter tool kit. This tool kit includes resources highlighting where individuals can begin in their entrepreneurial journey from a local standpoint, and how to further develop their ideas.

The tailored outreach plan(s) will offer combinations of information best suited for that national organization's member audience, to disseminate to their members through the organizations' preferred means.

With this new program, the USPTO hopes to reach more aspiring entrepreneurs and inventors and empower them with the tools they need to protect their ideas, creations, and brands.

Email questions to **AccessUSPTO@uspto.gov**.

WHAT'S NEXT

Get inspired during the free, online Asian American and Native Hawaiian/Pacific Islander (AANHPI) Innovation and Entrepreneurship Series coming May 17 and 18.

May 17: Successful innovators will share how they map their ways forward from concept to creation and offer hard-earned tips from their journeys. The first guest will be **Gurtej Sandhu**, senior fellow and vice president at Micron Technology and a prolific inventor named on more than 1,300 patents.



May 18: Hear from inventors such as **Mylen Yamamoto Tansingco**, founder and creator of Cropsticks, to learn how they approach, understand and solve challenges — and how intellectual property protection has been key to their work.



TO REGISTER: uspto.gov/about-us/events/asian-american-and-native-hawaiian-pacific-islander-innovation-and-entrepreneurship

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

DOCX update: The USPTO has issued a Federal Register notice delaying the effective date of the non-DOCX surcharge fee from January 1, 2022, to January 1, 2023, giving applicants more time to adjust to filing their patent applications in DOCX format. (DOCX is a more streamlined way to file patent applications.)

Sections in the notice have been updated to reflect the delayed effective date of the surcharge. There is also no longer a connection with Private PAIR.

How Are PTAB Judges Assigned?

Many considerations involved in selections for cases

NEWLY CONFIRMED USPTO Director Kathi Vidal will have many responsibilities. One is the authority to designate panels of at least three administrative patent judges in cases filed with the Patent Trial and Appeal Board (PTAB).

More than 6,000 cases are filed with the PTAB each year, each one decided by a panel of these judges. How these judges are selected for panels is kind of a multi-tiered process.

The director has delegated that authority to designate panels to the chief judge, who has further delegated it to an administrative employee. This employee follows a standard operating procedure—which is available for review by the public—and considers numerous factors in selecting the judges for panels. These factors include conflicts of interest, technology, experience, related cases, and workload.

Among the considerations in empaneling judges:

- **Conflict of interest.** A judge must not be paneled on any case in which the judge has a conflict of interest. Each judge provides a list of conflicts, which are compared, before a judge is assigned to a case.
- **Technology.** A judge is assigned to cases matching their technology expertise—biotechnology/pharma, business methods, chemical, electrical, mechanical, or design.

Each judge indicates a primary technology preference and, where appropriate, additional technology preferences.

- **Experience.** Judges new to a particular type of case are assigned with more experienced judges. Generally, a given panel has at most one new judge assigned. By pairing new judges with experienced judges, the new judges learn how to handle the nuances of each type of case from experienced judges. Because judge attrition is quite low, the vast majority of judges have worked at the PTAB for at least three years and are experienced in all cases types at this point.
- **Related cases.** Judges are typically assigned to related cases to facilitate efficiency and consistency in results. For example, related cases cover *ex parte* appeals involving that same patent as subject to a prior appeal, reexaminations involving the same patent or the same patent owner and similar subject matter, and related families of America Invents Act trial proceedings involving the same patent or the same patent owner. (An *ex parte* appeal is one typically made after receiving a final rejection from an examiner.)
- **Workload.** Judges are assigned to cases to distribute their workloads and avoid having significant decisional writing assignment overlap. That way, judges can focus on one or two decisions at a time.

Even with the care and consideration given to assigning panels, sometimes a panel may need to be changed due to: recusal of a judge upon becoming aware of a conflict and unavailability because of, for example, approved leave, death, illness, reassignment, retirement, or departure from the agency. Additionally, a judge may be reassigned to meet PTAB deadlines.

For more information on judge paneling:
[uspto.gov/patents/ptab/procedures/revisions-standard-operating](https://www.uspto.gov/patents/ptab/procedures/revisions-standard-operating)



TRADING CARD

NO. 9 Ellen Ochoa

VIDEO SHOWS a calm Ellen Ochoa floating, arms outstretched, in a space shuttle—a personal miracle never fathomed when she watched humans’ first landing on the moon in July 1969 as an 11-year-old.

Back then, she never imagined becoming an astronaut. It was strictly a male domain. But oh, what her time travels have yielded in the half-century since.

Ochoa was the first Hispanic female in space, an astronaut on the nine-day Space Shuttle Discovery mission in 1993. She was a

“Invention and innovation ... is a way that people can contribute from all walks of life.” —ELLEN OCHOA

crew member on four space shuttle missions, spending nearly 1,000 hours in space from 1993 to 2002. She was director of NASA’s Johnson Space Center until her retirement in 2018. She received NASA’s highest award—the Distinguished Service Medal—as well as the Presidential Distinguished Rank of the Senior Executive Service, and honorary doctorates from six universities. Six schools have been named after her.

But the owner of a Phi Beta Kappa Bachelor of Science degree in physics, Ph.D. at Stanford University, mother of two sons, and wife of intellectual property attorney Coe Miles is also proud of her three patents.

The patents are a result of her career at NASA, where she once led a research group that worked on optical systems for automated space exploration. The patents are for an optical inspection system, an optical object recognition method, and a method for noise removal in images.

“Getting a patent wasn’t something I’d ever thought about when I first went to graduate school or even ... most of the way through my research,” she told the USPTO in an interview a few years ago. “But we got to a point where I think my main thesis advisor Professor (Joseph W.) Goodman suggested that we talk to our patent and technology office at Stanford. ... It really kind of came up as part of the process.”

She is proof that more people have patent potential than they realize—that there are “so many different ways that invention and innovation are used in our society today, but it is a way that people can contribute from all walks of life.”

These days, Ochoa embraces her role as a mentor to students. Inspired by her own role model, Sally Ride, she has made more than 300 presentations encouraging females and minorities to pursue technical fields.

“Leadership provides an ability to influence the things that you care most about,” she says.

This year marks the 10th anniversary of the USPTO trading cards. Requests for the cards can be sent to education@uspto.gov. You can also visit them at uspto.gov/kids.



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



A Month to Celebrate, With Much More Ahead

OK, so who's got any ideas about how we should celebrate the silver anniversary of National Inventors Month in 2023?

After all, it should be a celebration of celebrating.

Longtime *Inventors Digest* editor/publisher Joanne Haynes-Rines teamed with the United Inventors Association of the USA and the Academy of Applied Science to establish the first National Inventors month in August 1998. The purpose was to celebrate inventors and their accomplishments, as well as their curiosity, ingenuity and persistence.

Eleven years ago, National Inventors Month was moved to May—allowing it to coincide with the annual National Inventors Hall of Fame ceremony and be better timed for the school year.

Nationaltoday.com has a fun page about National Inventors Month. It includes random, inventor-related information such as:

- The introduction of the first bread-slicing machine
- The Great Exhibition in London
- Origins of the National Inventors Hall of Fame
- How much it costs to patent an idea (although technically, you cannot patent an idea).

The site also lists five fun facts about the origins of inventions, ranging from Game Boy to the Band-Aid. (But another accuracy issue: Regarding Game Boy's history, the site says that in 1966 the Nintendo CEO noticed assembly line worker and future Game Boy inventor Gunpei Yokoi "playing his homemade toy." That toy was not Game Boy but actually an extendable grab arm that became the "Ultra Hand," which saved the company.)

You don't have to invent the next gotta-have product or service to celebrate National Inventors Month. As Nationaltoday.com says, you can support inventors by backing a crowdfunding campaign—or, better still, visiting the National Inventors Hall of Fame Museum in Alexandria, Virginia. The museum is free and open to the public.

Not coincidentally, the NIHF and museum are housed on the main floor of the USPTO campus' James Madison Building. The USPTO and NIHF have partnered since 1973.

... Meaning that next year, while we celebrate the 25th anniversary of National Inventors Month, we will also celebrate the 50th anniversary of the USPTO-NIHF partnership.

So, join us and celebrate our celebration of celebrating!

—Reid

(reid.creager@inventorsdigest.com)

Inventors

DIGEST

EDITOR-IN-CHIEF
REID CREAGER

ART DIRECTOR
CARRIE BOYD

CONTRIBUTORS
ELIZABETH BREEDLOVE
LOUIS CARBONNEAU
ALYSON DUTCH
JACK LANDER
JEREMY LOSAW
APRIL MITCHELL
GENE QUINN
EDIE TOLCHIN

GRAPHIC DESIGNER
JORGE ZEGARRA

INVENTORS DIGEST LLC

PUBLISHER
LOUIS FOREMAN

WEBSITE ADMINISTRATOR
ELIZABETH BREEDLOVE

FINANCIAL CONTROLLER
DEBBIE MUENCH

© 2022 Inventors Digest, LLC. All rights reserved. Inventors Digest, LLC is a North Carolina limited liability company and is the publisher of *Inventors Digest* magazine. INVENTORS DIGEST and INVENTORS' DIGEST are trademarks of Inventors Digest, LLC. Reproduction or distribution of any materials obtained in this publication without written permission is expressly prohibited. The views, claims and opinions expressed in article and advertisements herein are not necessarily those of Inventors Digest, LLC, its employees, agents or directors. This publication and any references to products or services are provided "as is" without any expressed or implied warranty or term of any kind. While effort is made to ensure accuracy in the content of the information presented herein, Inventors Digest, LLC is not responsible for any errors, misprints or misinformation. Any legal information contained herein is not to be construed as legal advice and is provided for entertainment or educational purposes only. Interested parties and inventors seeking legal advice should consult a lawyer.

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

CORRESPONDENCE

Welcoming Kathi Vidal

The Innovation Alliance applauds the U.S. Senate for voting to confirm Kathi Vidal as the next director of the U.S. Patent and Trademark Office.

As a leading patent attorney and intellectual property expert, Ms. Vidal brings the kind of experience we need at the USPTO. We also believe she has the leadership qualities required to be a successful, even-handed USPTO director. We are encouraged by her commitment to work with all stakeholders in the patent system to advance U.S. innovation, as well as her commitment to examine “potential abuses of the IPR process” and to work with Congress to assess “whether further reform is necessary.”

We look forward to working with her to ensure our nation’s patent system continues to serve as a driving force for our economy, supporting American innovation, job creation and global competitiveness.

—BRIAN POMPER,
EXECUTIVE DIRECTOR,
INNOVATION ALLIANCE



PHOTO BY JAY PREMACK/USPTO

Kimberly A. Moore (left), chief judge of the U.S. Court of Appeals for the Federal Circuit, administers the oath of office to new USPTO director Kathi Vidal on April 13. Family friends Alma and Emina Hadzimehmedovic, 4 and 6, hold the Bible.

CONTACT US

Letters:

Inventors Digest
520 Elliot Street
Charlotte, NC 28202

Online:

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.

D.C. TRADEMARK BATTLE BECOMING MONUMENTAL

It’s fitting that trademark disputes are filed in state and federal courts, not civil courts. Sometimes, the verbal huffing and puffing is anything but civil.

In one corner we have Monument Strategies, a bipartisan government affairs firm in Washington, D.C., founded in 2005. Clients include The National ATM Council Inc and leaf tobacco merchant Alliance One International LLC.

In the other corner we have Monument Advocacy, a bipartisan D.C. firm that offers government relations, public affairs, strategic and crisis communications, and digital services. Founded in 2006, the firm has used the name Monument Advocacy since 2019 and Monument Policy Group (MPG) since

its first year. Clients include Amazon and Starbucks.

But are all punches landing above the belt?

On April 8, Monument Advocacy filed suit in U.S. District Court, seeking an order blocking Monument Strategies from taking any steps to force Monument Advocacy to change its name.

The complaint said Monument Strategies was aware of “the Monument Policy Group trademark since at least 2007, yet Strategies failed to challenge or otherwise object to MPG’s use of said trademark.”

In a February email, Monument Strategies founder Jonathan Alexander wrote to Monument Advocacy that “there is too much confusion on

your new name. Advocacy is too much close to ‘strategies.’ Case law is on my side. You’re going to have to change your name.”

If that wasn’t forceful enough, IP Law360 reported that Monument Advocacy claimed Alexander wrote: “I’m a lawyer and I will bleed you.”

Reuters research showed that in 2021, Monument Advocacy recorded about \$10.3 million in U.S. lobbying revenue. Monument Strategies recorded about \$262,000 in revenues for the same period.

Monument Advocacy’s complaint said: “Strategies has not been damaged, and will not in the future be damaged, by MPG’s use of the Monument trademarks.” —Reid Creager

BRIGHT IDEAS

The Elevated Craft

HYBRID COCKTAIL GLASS

elevatedcraft.com

The stainless steel Hybrid Cocktail Glass provides versatility for any drink you choose by letting you craft your own cocktail recipe.

An integrated measuring feature allows you to build a cocktail in your glass while dialing in your pour just the way you like it. Stash a few in the freezer and always have a fresh glass ready. The double-wall vacuum insulation provides maximum temperature control, prevents over-dilution and prevents your hand from getting cold.

The glass is available in stainless steel, black steel or brushed copper.

The Hybrid Cocktail Glass, which will retail for \$60, is to be shipped to crowdfunding backers starting in June.



Tidy Brush

TOILET CLEANING TOOL

kickstarter.com

Tidy Brush features a unique pattern bristle and flexible brush head, distinguishing it from conventional disposable toilet brushes. Its durable, antibacterial, non-stick surface is more conducive to longer use.

Tidy Brush's soft brush head reduces the chance of creating scratches on the glaze that easily turn into a breeding ground for germs.

Holder features include: a tilted, drip-less angle; a durable, stainless-steel handle attached to the holder to prevent dripping; mold-proof ventilation holes; and convenient, two-way storage.

The product has a future retail price of \$44. Shipping for crowdfunding backers is set for July.



STEMpedia

AI ROBOTICS FOR KIDS

thestempedia.com

STEMpedia is intended to make learning playful by enlightening young minds about new-age tech via educational STEM kits.

STEMpedia's augmented graphical programming lets kids learn coding, artificial intelligence, machine learning; to program actions for robots; and make interactive games. It includes PictoBlox, a Scratch blocks-based coding platform with enhanced hardware-interaction capabilities.

An app lets kids wirelessly control robots, voice-command home appliances, exploit the Smartphone's inbuilt sensors, and interact with their creations.

At press time, featured kits on the STEMpedia website ranged in price from \$42 to \$119.



**"Ideas become inventions
become innovations."**

—RICHIE NORTON



CURA

360-DEGREE PLANT CARE

altifarm.com

CURA is intended to address plants' varying light requirements by using multi-channel variable spectrum lights that are enabled by pre-sets on an app, allowing for year-round growing.

Each light incorporates a majority of full-spectrum white LEDs of a certain specification and a secondary full-spectrum white with another, along with specialized reds and blues. Each pre-set is a combination of these wavelengths—with pre-sets available for herbs and greens, flowers and fruits, germination, indoor garden plants and more. You can also make custom pre-sets for each plant and share with others.

CURA has a manufacturer's suggested retail price of \$99. It is scheduled for delivery to crowdfunding backers in December.

Cable



Laid the Groundwork

HOW A MEDIUM THAT BEGAN AS A WAY TO BRING TV TO MORE PEOPLE EXPANDED AND EXPLODED **BY REID CREAGER**

FOR THOSE who ignore the contention that the term “great fight” is an oxymoron, the Sept. 30, 1975 “Thrilla in Manila” between Muhammad Ali and Joe Frazier fit the bill.

The swashbuckling Ali outlasted the knee-buckling Frazier with a technical knockout in what was hailed by many as the greatest boxing match ever. It wasn’t the only history made that night.

Three-year-old cable TV provider Home Box Office became the first television network to continually deliver its service via satellite when it transmitted the bout from Cubao, Philippines. The fight attracted a reported 500,000 pay-for-view buys—a sliver of the record global TV audience of about 1 billion.

Still, John Walson Sr. and Robert J. Tarlton would have been impressed.

2 early visionaries

Three decades after its invention as a way to bring basic television programming to more people, cable TV was making dramatic advances as a premium service despite intermittent U.S. government interference. And five decades after the Ali-Frazier spectacle, cable is the primary provider of digital television, movies and state-of-the-art broadband internet worldwide—although streaming services are spelling a gradual end for traditional cable TV programming.

In 1979, the U.S. Congress and the National Cable Television Association credited the colorful and gritty Walson, of Mahanoy City, Pennsylvania, with inventing cable television in spring 1948. His invention began with networks

in Arkansas, Oregon, and Pennsylvania to improve poor reception of basic, over-the-air television transmissions in hilly or distant locations.

In an interview shown as part of a 2005 Cable Hall of Fame broadcast, Walson said he became interested in cable when he was selling TVs. He would demonstrate their reception by taking people to a mountaintop antenna tower site.

Determining that this was unnecessary extra work, “I therefore decide to bring the television into the community by running a coaxial cable.”

Interest in inventive ways to broadcast TV signals was spiraling in the mid-20th century—so much, in fact, that in 1948 the Federal Communications Commission declared a TV broadcast license freeze to cope with the demand for frequencies. According to encyclopedia.com, only 108 stations were established at the time; no new stations were authorized to begin operation.

Tarlton was undeterred. In 1950, he established one of the first community antenna television (CATV) stations, intended to bring TV into communities that did not have their own channels.

The appliance salesman was from Lansford, Pennsylvania, a community whose signals from Philadelphia-based TV stations were cut off by the Allegheny Mountains. He convinced some friends to invest in his new company, Panther Valley Television, which erected a mountaintop master antenna that received signals from Philadelphia and amplified them. Signals were distributed to subscribing households via coaxial cable.

FCC giveth, taketh away

The FCC licensing freeze was lifted in 1952—a milestone year for the medium.

CATV remained, because interference was still a problem in some communities that did not have stations. Meanwhile, communities that already had stations could get more stations.

Seventy CATV systems were serving close to 14,000 subscribers across the country when the freeze was lifted, per encyclopedia.com. By 1961, there were about 700 cable television systems in America.

However, as cable services began entering major markets and providing channels from other markets via microwave transmission, a competitive balance issue emerged. Larger newcomers sometimes duplicated the programming of local network affiliates, potentially affecting their ad revenues.

Again, the FCC got involved: New regulations for cable systems that brought in distant signals were established in 1962; by 1966, the FCC had regulatory control over all cable systems and in 1972 initiated comprehensive regulations intended to protect mainstream broadcasters from cable competition.

But America's love affair with television kept cable growth humming. In 1967, Ronald Mandell patented a converter that sat on top of a TV set that expanded on cable's then-limit of 12 channels. It also solved interference problems in the new medium.

Satcom1 and I want my MTV!

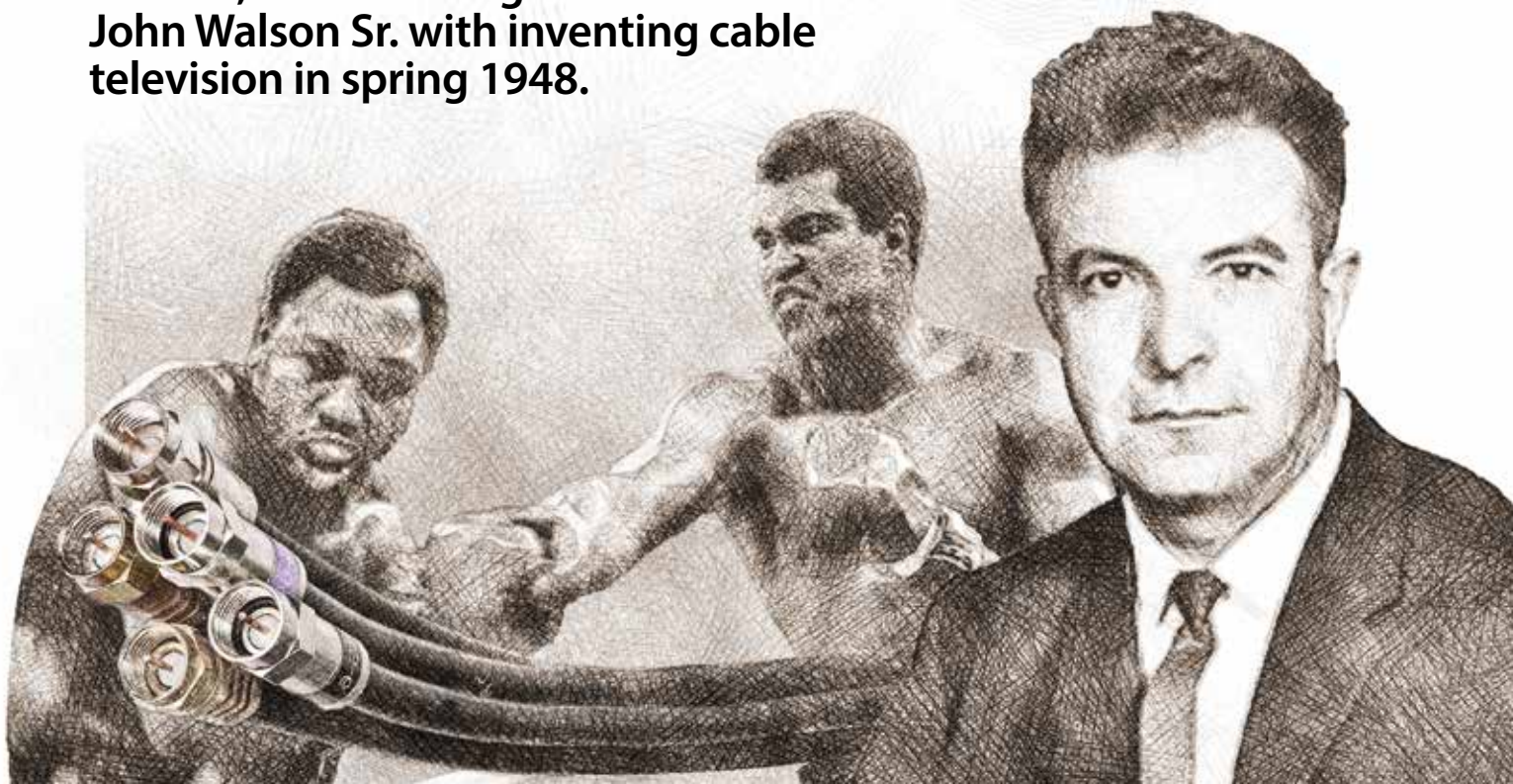
Starting a cable TV system anywhere has always been tremendously expensive, but startup costs were even more daunting when the medium was not proven.

Satcom1 was a major breakthrough in combating this. Built by RCA Astro Electronics and launched in 1975, the communications satellite helped receive and send signals to ground stations on Earth. It was one of the first satellites used by U.S. broadcast networks and cable TV channels used for showing programming over large areas. This helped make cable TV an everyday fact of life around the world.

According to space.com, Satcom1 was launched with the assistance of HBO. By the end of 1977, the clear-signal satellite helped HBO accumulate 1.6 million subscribers. In addition to live sporting events, the network ventured

The "Thrilla in Manila" heavyweight fight between Joe Frazier and Muhammad Ali on Sept. 30, 1975, marked a cable TV milestone that could not have happened were it not for the innovative foresight of TV salesman John Walson Sr.

In 1979, the U.S. Congress credited John Walson Sr. with inventing cable television in spring 1948.



into programming such as exclusive movies that were uninterrupted by commercials.

Then came videocassette recorders and independent stations, further cutting into broadcast network audiences. In the 1980s, CNN, ESPN, MTV, Ted Turner's superstation WTBS and others became established cable television fixtures.

Soon, the U.S. government was encouraging competition between network and cable stations. In 1984, Congress passed the Cable

Communications Policy Act, which gave cable system operators fewer rates and programming regulations. Local communities were given clearer control over cable through the franchise process.

From 1975 to 1987, the number of cable systems tripled and the percentage of U.S. homes with cable jumped from 14 percent to 50 percent, according to encyclopedia.com. By 1988, the five largest multiple system operators serviced more than 40 percent of cable subscribers in America.

Into the '90s

Congress flexed its legislative muscles again in 1992.

In response to cable price increases and with the aim to increase more competition, it opened previously exclusive cable programming to technologies—including wireless cable and new direct satellite broadcasts.

By the end of 1995, 139 cable programming services existed in the United States, in addition to many regional programming networks. By spring 1998, there were 171 national cable video networks.

By then, cable operating companies had the subscribers and resources to invest in superior distribution means—spending a reported \$65 billion between 1996 and 2002 to build higher capacity hybrid networks of fiber optic and coaxial cable. These broadband networks provide multichannel video, two-way voice, high-speed internet access, and high definition and advanced digital video services all on one wire into the home.

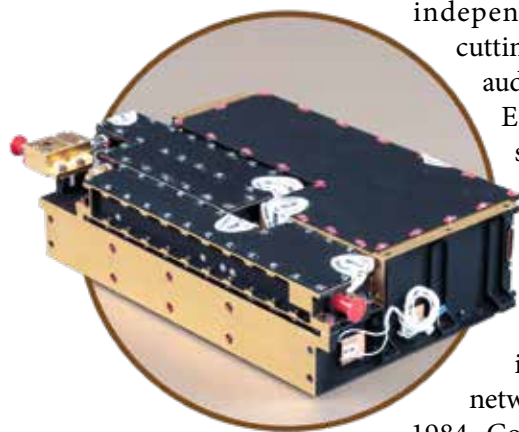
The Telecommunications Act of 1996 promoted even more new competition and greater choice for consumers. By 2000, those choices included video on demand, subscription video on demand, and interactive TV.

Traditional cable dying

In the past decade or so, the introduction of online streaming services has caused many people to cancel their traditional cable TV subscriptions. This “cord-cutting” has resulted in longtime cable operators such as Comcast and Charter adding internet customers to counter these losses.

According to the most recent data, top pay TV companies now have 76.1 million subscribers. However, as Thestreet.com reports: “That’s a number that’s actually worse than it looks, because 7.9 million of those customers subscribe to lower-cost streaming cable bundles through products like Disney’s Hulu Live, Sling TV, and FuboTV.”

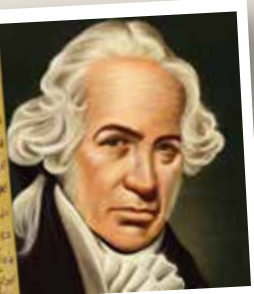
Regardless, cable’s impact on re-inventing television and the telecommunications industry—and now providing instant information and entertainment on the go through a variety of means—is revolutionary and enduring. ☪



Communications satellite Satcom1 helped make cable TV an everyday fact of life around the world.



INVENTOR ARCHIVES: MAY



May 14, 1686: Daniel Gabriel Fahrenheit, who invented the thermometer and temperature scale that bears his name, was born into a family of scientists.

The German physicist produced the alcohol thermometer in 1709 and invented the mercury thermometer in 1714. He invented the temperature scale in 1724.

Fahrenheit taught physics and chemistry at the University of Stockholm from 1720 to 1736, when he died.

GOT **Invention** with Brian Fried **SHOW**

TELL THE WORLD ABOUT YOUR INVENTION



Share your invention story with a ONE-ON-ONE interview. After the show, we distribute your story to all of our networks. The recorded interview is yours to use for pitches, promotions, PR, website and personal social media.

100 POTENTIAL VIEWERS AND LISTENERS MILLION+



coming soon



distributed through
the DB&A Network

**WE INTERVIEW INVENTORS
AT EVERY STAGE**



**SCHEDULE YOUR INTERVIEW ON
GOTINVENTIONSHOW.COM**

Use Code **ID20off** for \$20 OFF your upcoming interview

More Than a Sales Pitch

AMONG OTHER THINGS, THE 'ELEVATOR SPEECH' ACTS AS A KIND OF SELL SHEET **BY JACK LANDER**

CHANCES ARE, you'll never have the opportunity to present your elevator speech—or want to.

Should we really stalk a vice president of marketing, get into an elevator with him or her, and make the pitch?

What if the elevator is packed like a can of sardines?

What if the V.P. gets off on the second floor before you have a chance to cover more than the introduction?

What if your intended listener reacts like you have leprosy, and turns away?

So, why do we call it an elevator speech if it isn't likely to be used in an elevator? It's because that title presents a vivid picture of the urgency necessary to engage a busy stranger and explain the who, what, why, where, when and how of your invention in a minute or two.

Composing a speech with a brief time limit compels you to outline your message in an order that draws in your listener and gradually creates sufficient interest to allow the reader to ask questions, or even invite you to meet and demonstrate your prototype.

A different conversation

The elevator speech has many uses other than a pitch to a prospective licensee or potential partner.

During your venture from patent search to depositing your first royalty check, you will meet many people who may become interested in your invention and to whom you will want to explain it. Even those with a casual interest

should learn its benefits to its ultimate user.

In this sense, your speech is a memorized verbal sell sheet. Your printed sell sheet should supplement your elevator speech, so always have one handy to leave with your latest listener.

Most inventors I have met are not experts in sales, especially when it comes to selling an idea. I am especially impatient and annoyed by the person who thinks that “nature abhors a vacuum” is a motto for conversation. The rule for polite conversation requires an occasional pause to allow for a response, even though your preference would be to continue talking.

But with the elevator speech, we aim for few pauses because we are afraid our point will never be reached and spoken. The listener can always interrupt if he or she feels the comment or question can't wait. And if we have anticipated the kinds of questions that may be asked, having a memorized answer ready enables you to start again from where the interruption took place, and complete your point.

It may be awkward to just start again without a word or two to smooth your entry, especially if you were interrupted in the middle of a sentence. But don't say, “As I was saying,” blah blah blah. That may be heard as the longer sentence, “As I was saying before I was so rudely interrupted,” blah blah blah.

You might simply begin the interrupted sentence again, using somewhat different words. In any case, don't indicate annoyance from the interruption. It has become an accepted habit of busy, impatient people.

Remember the AIDA aid

The format of an elevator speech is essentially that of your sell sheet. You aren't writing a high school journalistic composition, so a complete who, what, why, where, and when is immaterial.

What and why enter in, of course. But your format guide is the sell sheet rule: AIDA (attract attention, arouse interest, create desire, and call to action or show how to acquire). In this case, the photo is absent, as are the bullets. Testimonials are present if needed, but these only appear later in less formal conversation if they help reinforce the demand that should occur when your invention is on the market.

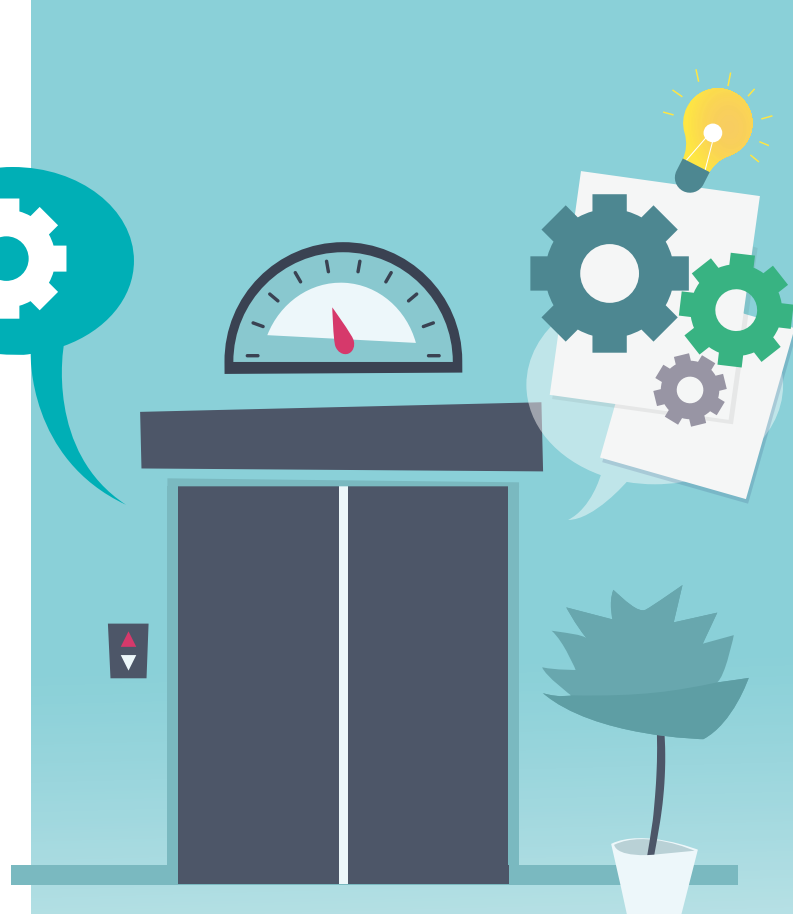
So, the format of the elevator speech is essentially that of the sell sheet but absent the photo, bullets and testimonials. It consists of the tagline, bullet points (without the bullets) and narrative, all rewritten to sound more conversational.

For example, if the tagline is, "Wash your car cleaner in five minutes with amazing Wonder-Sponge," rewrite it something like this: "Wonder-Sponge is an invention for washing cars quicker and cleaner. It uses less soap and less water. It does this because it is made from a unique combination of two different materials." Then, recite your bullet points.

Insert a brief courtesy pause here. Answer questions, if any, using information from your narrative. If there are no questions, proceed to tell your narrative, which is almost word for word the narrative from your sell sheet. (The Wonder-Sponge sell sheet is in the March 2022 *Inventors Digest*.)

The purpose of the narrative is to provide important details for which you don't have space in your bullet points. For Wonder-Sponge, you should emphasize the novel combination of microfiber cloth with terry cloth, and how the two together clean better than either one alone. You might even use the word "synergistic," if you dare.

Your sell sheet and your elevator speech are foundational documents for your invention.



Your printed sell sheet should supplement your elevator speech, so always have one handy to leave with your latest listener.

Your sell sheet is the basis for your elevator speech, and is the more important of the two.

You should start a first draft as soon as you imagine your invention, and improve it as you advance through the stages of development. If you can't "sell" your spouse or close friends on your invention's ultimate success, perhaps you should reconsider going forward with it.

In any event, the elevator speech enables you to state your case flawlessly. If an opportunity appears when you least expect it, you'll be ready for a ride to the penthouse. 🏢

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.



PART 1

Ideas by the Baker's Dozen

13 WAYS TO KEEP YOUR INVENTION-RELATED SOCIAL MEDIA CONTENT FRESH AND INTERACTIVE **BY ELIZABETH BREEDLOVE**

Part 1 of a multi-part series providing ideas for content on social media platforms.

ONE OF the most challenging parts of a social media manager's job is something that may initially seem pretty simple: creating new content. At some point you could find yourself unable to come up with fresh content ideas.

Content must be interesting, informative and engaging. It must capture your followers' attention and inspire them to do something, but it shouldn't be too lengthy or overly complicated.

Video is ideal, though images and text have their place. But how do you stick to these best practices when you're struggling to think of a new topic?

This is written with you in mind. If you're stuck on what to post on Facebook, Instagram or any other social media channel, browse through the list below to get inspired.

1 Promote your website. Sending traffic to your website is never a bad idea! Come up with some short, clever text to send traffic to a landing page that encourages conversions—whether you're trying to get your followers to sign up for your newsletter, buy a product or something else entirely.

2 Tell a story. Whether you use text, images, video or a combination of all, social media is built for storytelling. Use your platforms to tell great stories that your followers will connect with and provide further insight into your invention, company and mission.

3 Post videos. Instagram and Facebook are prioritizing video over other types of content, TikTok is a video-only platform, and video is

often preferred on other social networks as well. When in doubt, publish video content.

4 Share new or limited-time offers and special deals. If you have special promotions running on your inventions or products, social media is the perfect place to share them! Include a link to purchase, and if a coupon code is needed for the deal, make that clear as well.

5 Offer behind-the-scenes looks. An easy way to build trust between you and your followers is to get them an inside look at your company. Look for opportunities to post stories, pictures or videos about your team, your products, your invention process or anything else that gives a peek behind the curtain.

6 Share tutorials and how-tos. Even if your product seems easy to use, it's never a bad idea to post tutorials or how-to videos. For one, products typically seem simpler to the inventor than anyone else. But even if it is an easy product, a short, simplified version of a "how-to" is a great way to highlight how much your product can benefit your followers. For example, if you've invented a new way to mix protein powder with water, your how-to post may be as simple as something like "Pour, shake, drink," with an accompanying graphic. Aim for content like this that makes it easy for your followers to envision themselves using your product.

7 Post industry news. If you follow your industry's news closely, you can always post it to your social media platforms. This is a great way to position yourself as an expert in your field and show that you keep up with industry trends.



Engagement with your posts is a key part of using the algorithm to get more followers and have more people viewing your posts.

8 Share job openings. Where better to find new employees than among those already interested in your business or product? Post your job listings to social and encourage your followers to apply or pass along the listing to someone they know who might be interested.

9 Start a series or create themed posts. A series can be any group of posts with a common theme. It doesn't need to be something complicated: You could do a Fun Friday series where you ask fun questions for your followers to answer every Friday; a How I Built It series detailing your invention process with one post a week; a series counting down to a special event. Creating a series gives you a framework as you come up with new content for posts.

10 Ask open-ended questions. Engagement with your posts is a key part of using the algorithm to get more followers and have more people viewing your posts. When you ask a question and encourage your followers to respond to you, your engagement will increase as they reply to you or leave comments.

11 Promote upcoming events. If you have events coming up—a big sale, a live stream, a special business anniversary, a product launch, a networking event—your social networks are a great place to promote and publicize them. You can even ask your followers to share your posts to help spread the word.

12 Go live. Live streams are a great way to connect with your audience in real time. For example, you can go live at events, host live virtual events, show live demos or give a behind-the-scenes tour. Social networks are set up to allow for comments when you're live streaming, which is useful because you can get feedback from people watching the stream and interact with them directly right on the spot. This will increase your trustworthiness as you build a more personal relationship with your audience.

13 Host Q&As or AMAs (Ask Me Anything). Opening yourself for questions about your business or product is another easy way to build a connection with your audience. You can ask followers to submit questions ahead of time and either film yourself answering them or use the questions to create a series of posts, or you can go live and answer questions as they are submitted. Either way, your loyal followers will enjoy getting to know you and your company a bit better.

Stay tuned for more post ideas to help you create fresh, new content! 📱

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.



Warming to a Solution

DAD'S INVENTION SEEKS TO REDUCE TEARS OF BABIES—AND PARENTS—AT FEEDING TIME **BY JEREMY LOSAW**

TONY SOURIS had enough. After his wife had her second baby, the couple struggled anew with getting formula warmed in time for feedings—before both baby and parents were ready to cry.

So he reached for a beer can.

It's not what you think. Souris actually used an empty can of brew to help solve the formula-warming problem, earning a place in creative Dad innovation history.

The eventual result was the Keddle, a portable formula warmer that gets the job done in as little as 2-4 minutes. It features a 9 oz. stainless steel vessel with lithium-powered heaters.

Keddle can warm up to eight bottles on a full charge. It has 11 different temperature settings to customize for each baby, and can be used for warming breast milk bags without removal of the milk from the bags. The device also tracks feeding times for parents.

Unlike many baby products, Keddle has utility for parents once the baby has grown out of bottle feeding. It can be used for warming hot drinks such as coffee and tea.

Cali calamity

Souris first had the idea for a portable formula warmer after a long night on vacation with his first child. He took a trip to California with his wife and daughter—and forgot to bring the bottle warmer.

Drawing the ire of his wife, he hastily improvised a solution.

“It didn’t feel like it was going to be a big deal until about 2 o’clock in the morning,” said the Phoenix-based founder of BisbeeBaby in 2019. “We actually used a Keurig machine, where we cycled through about 15 minutes of water until it got hot enough.”

After that episode, he searched the market for a commercially available portable formula

Tony Souris and his wife, Breana, demonstrated their product -- which can warm baby formula in 2-4 minutes -- at the PregoExpo in New York.



“[It went from the] back of the napkin, to let’s find out what I have in my kitchen and a few things off Mouser [Electronics], all the way to getting some more complicated \$1,000 prototypes going.” —TONY SOURIS



warmer. Nothing out there met his need, and there was no innovation in this space.

Souris has a background in electrical engineering and was a professional in the supply chain management, so he decided to build his own.

“I had baby number two, and a similar problem came up. I decided that this was my calling, as there was really no solution for it.”

Can do

Here’s where the beer can comes in.

Souris built the first prototype himself. He cut the can in half,

found some flexible heating elements and wrapped them around it. He added batteries and was ready to test.

The prototype worked like a charm; he still has it as a memento of where it all began.

Souris hired a design firm in San Francisco to make the product real. It took the DNA from the crude prototype and made it into a fully designed and manufacturable product.

“[It went from the] back of the napkin, to let’s find out what I have in my kitchen and a few things off Mouser [Electronics], all the way to getting some more complicated \$1,000 prototypes going,” he said.

Manufacturing and reach

The Keddle is patent pending, but Souris is not sure how much having IP for the product will help him or his company. He said it would be difficult to fund litigation to stop infringers, and there has already been a competitor that has come into the market.

But the Keddle has a much faster warming time—a competitive advantage. He feels his best protection is to keep building his brand

and keep innovating to stay a step ahead of the competition.

The product’s manufacturing is in transition.

Being an electronic device, its components are made in China. However, instead of importing finished goods, Souris is bringing in all the components and doing the final assembly at his home.

He admits this is unsustainable, but there are a few finicky parts of the assembly. Once he can codify those steps, he wants to find a Chinese supplier that can do the assembly at high volume.

Souris is also focusing on ramping up marketing efforts. He has a full slate of trade show dates on the 2022 calendar, which started at the Consumer Electronics Show in January, and will continue with more child product trade shows.

A primary goal of this outreach is to make connections with moms and the new mom community. Mothers tend to trust products recommended by other moms, so getting the product in the hands of parents and making these connections is crucial to drive sales.

Longer term, Souris plans to expand his capability to collect and leverage the data from the device to improve it and create additional revenue streams. 📊

Details: bisbeebaby.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/.



A Father of Invention

DAD'S MULTIPURPOSE VEST AIDS IN CARING FOR BABIES

BY EDITH G. TOLCHIN

THERE ARE so many new baby products that were invented for or designed by women. I've certainly interviewed many female inventors over the years.

My wish was to give equal time to dad inventors. Wish granted! Here's a new product that was recently featured on Joy Mangano's "America's Big Deal" national TV show.

The Daddy-Caddy keeps a number of baby items "close to the vest" and protects the wearer from anything that comes out of a baby's nose, mouth, or anywhere else.

Edith G. Tolchin (EGT): According to your website daddy-caddy.com, Daddy-Caddy was originally conceived in 1998 with the birth of your first child. How has the development of this product evolved, and why did it take so long to develop?

Dr. Curtis Breville (CB): I absolutely conceived of the idea when my oldest, Abigail, was born in 1998. I just didn't act on it.

In fall 2003, when learning my second, Olivia, was on her way, I began to design something I thought was simple and functional. My wife's grandmother is a retired seamstress and helped me with creating a pattern. After a handful of prototypes, I sent them to a garment manufacturer in southern Missouri and had 700 made.

It was sweatshirt material, one sided, with five pockets. I had grey, brick red, and black.

The current version is more plush, reversible, has over twice as many features, and is more attractive. I put a shoulder loop on it for less bulkiness in the pockets (for a burp cloth or towel) and added elastic and a strap to keep it close to the wearer's body when they lean over (Version 1 swung out and twisted).

EGT: What is your background?

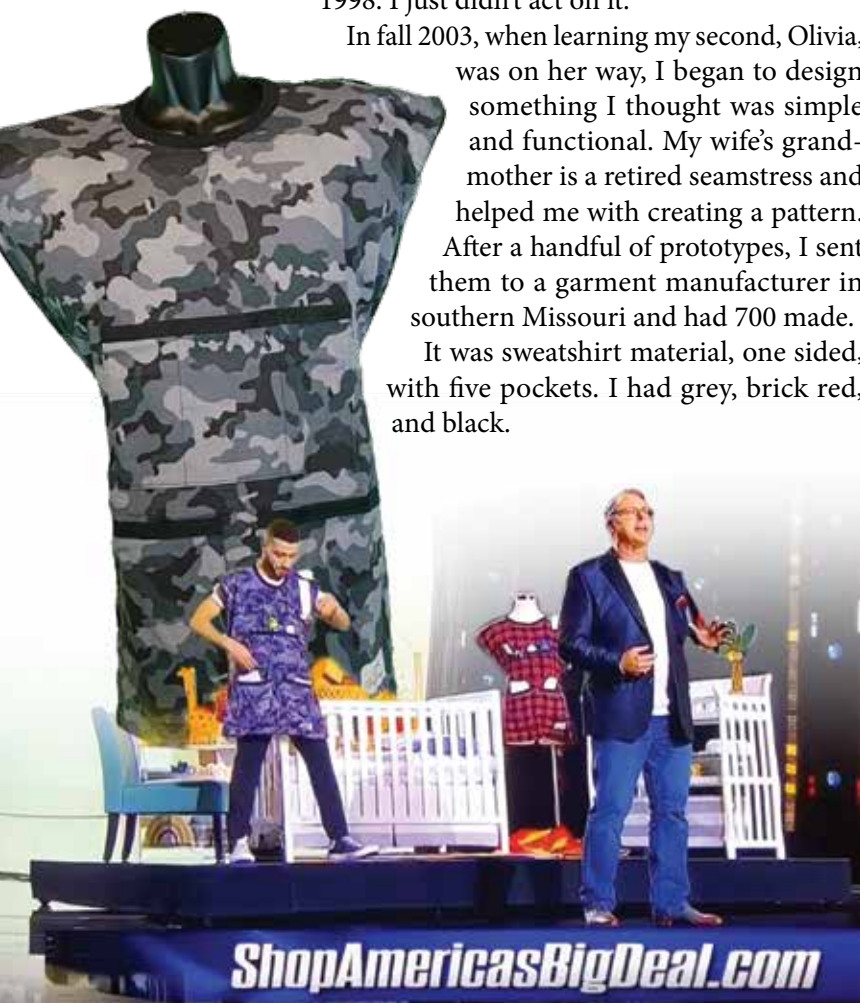
CB: I was raised in a household with a physically challenged father (paraplegic due to a virus that caused brain damage in the area that controls the movement of the legs). Taking care of my dad was just part of life; I was always trying to think of ways to make it easier for him to be more independent and less reliant on others to live.

I was the black sheep of my siblings when it came to school and grades. I was an embarrassment to the family. I learn by doing, not just sitting and listening.

My first passion was psychology. I really wanted to do something where my knowledge and words could positively affect people's lives. I got talked out of that because the idea of me getting a Ph.D. was so foreign to my family's expectations of me.

I took the route of being in IT, got accepted to college and graduated with my undergrad in only 2.5 years, entering the business and IT world as my career.

Despite that, I needed fulfillment for my soul. I actively got involved in organizations to reach people: civil rights, domestic violence, animal rights, children's hospital, leadership development for kids, and helping people with special challenges to be identified for their gifts that often come from our body's adaptation (like people who are missing an arm generally have greater dexterity in their one hand than most people have with two). I started two women's leadership speaker panels to bring female role models to students to inspire them.



"I was the black sheep of my siblings when it came to school and grades. I was an embarrassment to the family. I learn by doing, not just sitting and listening."

—DR. CURTIS BREVILLE



Wanting to have every advantage available to me to help improve my chances of success in my endeavors, I was accepted in 2012 into a Doctor of Management in Organizational Leadership program and spent the next 6.5 years taking classes and residencies before successfully defending my dissertation in July 2018.

I love developing a culture of celebration, positive communication, acceptance, equality and equity. I am the first in my family to have a doctorate, and I'm also a member of Mensa. I feel like I put that black sheep label to bed.

EGT: What are the unique features of the Daddy-Caddy? Anyone can use it, right?

CB: It holds everything the wearer could need to care for a baby. It's super comfortable for both the wearer and the baby to be held against. It keeps everything in hands' reach and protects the wearer from anything that comes out of their baby's nose, mouth, or anywhere else.

Who else could benefit? Moms can, absolutely! Grandparents, aunts, uncles, godparents, nannies, babysitters ... it makes caring for a baby a little easier for anybody.

EGT: What is the product made of?

CB: Daddy-Caddy is made from top-quality fleece for the solid side and uber-soft flannel on the other side.

EGT: Please share your experience in obtaining your patent or trademark.

CB: A challenge! I previously spent 1.5 years using a trademark company that didn't help one bit, other than secure my effort to go after it—as it is currently "Trademark Pending."

EGT: How did you qualify for "America's Big Deal," and how did it work out for you?

CB: Every person I have been in contact with has been tremendously positive and supportive. They know their jobs well, and I'm just amazed by each.

A dear friend from the Kansas City area was cleaning her closet and saw one of Joy's products she bought and wanted to know what Joy was up to. She found the application for the show and emailed me a link to it.

I followed the instructions, submitted everything asked, and a few days later received a phone call for an audition.

EGT: Are you selling anywhere else, or do you have an exclusive with Joy Mangano?

CB: I sell on my website. There is no exclusive with anybody, but the purchase price is best when buying from the show's site when they are available.

EGT: Have you invented anything else?

CB: Not to this extent of creating a business around it and having it manufactured, marketed, and sold. I designed something made to allow physically challenged people to enjoy being on a golf course. I still think of that and hope to make something of it someday.

EGT: Are you manufacturing overseas?

CB: I was, and the international logistics have been a nightmare for meeting hard deadlines. I've since found a new domestic option.

EGT: Because it is a product that comes in contact with children younger than 12, has it been third-party tested to CPSIA (Consumer Product Safety Improvement Act) standards?

CB: The materials I choose have been certified

safe and are the same material as many baby products. When I can guarantee CPSIA standards, I do.

EGT: What have you learned about product development?

CB: It's not rocket science, but it includes a learning curve. Logistics is a major factor that needs to be understood to turn something from a single or handful of items to fulfilling national demands. I am far from having this mastered but get more proficient every day.

EGT: Do you have any new products in development

CB: Yes. A specific product for moms to wear that supports breastfeeding is in the works.

EGT: Any advice for novice inventors?

CB: Find and foster strong relationships. Surround yourself with people who have experience and believe in yourself or your product. Be prepared for change and roll with it.

Understand that most people don't have your same vision, and that is OK. Read and soak in as much advice from those who have launched products before. Document EVERYTHING. Time flies, and remembering exactly when and why you did something two, three or four years ago just isn't feasible.


Things will cost more than you think. Plan ahead, and secure resources just in case a new opportunity requires some upfront costs, or a change causes a redo that requires financial backing.

Spammers guaranteeing you everything ("We'll sell out your product in 24 hours") will find you and haunt your inbox. Get recommendations from successful inventors. 📧

Details: curtis@daddy-caddy.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).





The Opinionated Editor

Edith G. Tolchin

Editor • Copywriter • Journalist • Author

Helping you to say it **WRITE!**

www.opinionatededitor.com
editor@opinionatededitor.com
@QueenWrites
845-321-2362



PRODUCT DISCOVERY

Most products fail because inventors don't do the work at the "fuzzy end" of the product development process. In other words, they rush to make prototypes and even manufacture their products without knowing what is out there and what customers really need.

Our Product Discovery process helps reduce the risk of failure by validating your idea with real customers before you invest substantial time or money.

Great company to work with. LA NPDT is very responsive and very, very reliable. Super talented and hard-working people. Would definitely recommend.

Annabel Wolman
INVENTOR

WITH PRODUCT DISCOVERY, YOU GET:

- Up to 4 hours of consultations and brainstorming with our internationally recognized New Product Development Professional-certified experts, also trained in marketing
- Prior art and competition analysis from our market research specialists
- Product sketches for a pre-CAD visual representation
- A detailed scope of work for further development
- The Realizr notebook, our proprietary tool for product development



TO SAVE \$500

ON OUR PRODUCT DISCOVERY, CALL AND MENTION INVENTORS DIGEST.

318 200 0526

Learn more about the
PRODUCT DISCOVERY

lanpdt.com



The Bee's Knees of Business

17-YEAR-OLD PRODIGY MIKAILA ULMER
MAKES LEMONADE OUT OF STINGING FEARS

BY ALYSON DUTCH

HOW DOES a 4-year-old react to parents who insist she must earn the money to buy the toy she wants?

In the case of now-17-year-old Mikaila Ulmer, it spurred her to become one of America's youngest and most delightful entrepreneurs.

The tough love she experienced forced her to literally make lemonade out of what could have been a sour situation. Today, she and her family are selling about 2 million bottles of Me & the Bees Lemonade annually, with that figure projected to double this year; the product has more than 4,000 distribution points; and the company is listed on the Inc. 5000 list, awarded for its 317 percent year-over-year growth from 2018 to 2020.

Stinging back

Mikaila buzzed into the beverage industry because she was stung by a bee. Two, in fact.

Her parents, on a mission to create self-assured kids, encouraged her to learn about bees instead of fearing them. Soon after, Mikaila set up a lemonade stand in her native Austin, Texas,

neighborhood, using her great grandmother's flaxseed lemonade recipe but replacing some of the sugar with honey.

By that time, the pint-size businesswoman had gained enough empathy for the insects that she donated proceeds to a local beekeeper to help fund the plight of bees. The insects' precious pollinating citizenry has decreased by 30 percent in Texas alone.

Mikaila had wind under her wings—the equivalent of ardent stage parents behind her who put together the dream. One of her brothers serves on the marketing side as the company's No. 1 salesperson.

The family makes it work while Mikaila attends school full time. She describes her long days as starting with school, followed by dinner, then homework. Often, the business conversation does not begin until 11 p.m.

Sharp, precocious and particularly eloquent, she said, "I don't consider myself gifted. All the kids in school are doing amazing things.

"I'm there to support my friends—but I am living two different lives."

Mikaila Ulmer was 4 when she began her lemonade business.

Thirteen years later, she is CEO of a lemonade company that is on the Inc. 5000 list and created a foundation to help stem the decreasing bee population.

PHOTOS COURTESY OF ME & THE BEES



MIKAILA ULMER *Bee Fearless: DREAM LIKE A KID* putnam

MIKAILA ULMER *Bee Fearless: DREAM LIKE A KID* putnam

MIKAILA ULMER *Bee Fearless: DREAM LIKE A KID* putnam

Me & the Bees has been a family production ever since the family was renting production kitchens to make 10 cases a week. "There's always help back at the hive," Mikaila says.

Among the amazing things she has done: met former President Barack Obama three times; spoke on the Assembly Floor of the United Nations; and was chosen to speak about the gender gap at the World Economic Forum in Davos, Switzerland, alongside musician and Officer of the British Empire Dr. Annie Lennox, the former prime ministers of Australia and New Zealand, and others.

(Near the end of Obama's second term, he said: "I will be back on the job market, so I hope she is hiring.")

Mikaila is pun-happy and expertly media trained. She describes the interdependent culture she and her family have built at the company: "There's always help back at the hive."

Rock-solid foundation

In the business's fledgling stages, the family used rented production kitchens, churning out 10 cases a week of Mikaila's honey-kissed elixir.

Her father led the operations; Mom drove her around to retailers in the Austin area, where she sampled the product to customers.

Dad Theo Ulmer, who is chief operations officer for Me & the Bees, said the company's operational details were founded on creating optimal efficiency and consistency.

"We needed to find sources that could provide reliable quality and cost-effective ingredients. Once we had a solid formulation and recipe, we identified a co-packer that led to packaging partnerships and bulk purchasing opportunities.

"Being a small company, we enthusiastically negotiated fees for logistics and warehousing. As the business grew, so did our needs for fulfillment, production and customizing labeling for different geographies, laws and larger retailer needs.

"We eventually grew into brand-dedicated facilities, so we had every chance to grow and scale."

Money swarming

Understandably, consumers were dazzled by the little girl: "Once I told them that I created this, they'd buy it right away."

Her first customer was Eastside Pies Pizza. Within the first year, the local Whole Foods Market (the headquarters of which happen to be in Austin) followed.

In-house publicists at the supergrocer took notice of the young entrepreneur and guided the family to their first outside funding. A \$10,000 influx from the Whole Foods Local Producer Loan Program—a low-interest lend—was created to give local producers a "hand up instead of handout." In a brilliant on-brand marketing move, Whole Foods also guided Mikaila to teach workshops where she talked to kids about bees in schools.

With Mikaila's irresistible story front and center, looking for capital was not something this company had to do. It came to them.





More money came in the form of investment funds from a group of NFL player investors. All of it was poured back into the company to support added distribution, which next landed the brand in Wegman's and into the national supply chain for Whole Foods Market.

Mikaila explained the company's growth pattern.

"National exposure alone didn't make people care. But for those who heard our story, it made them want and demand it of their retailers. Our customers have grown from those who love our history and mission."

A key element of that mission is the company's creation of the Healthy Hive Foundation. Me & the Bees invests a portion of profits from

the sale of lemonade to organizations fighting to save bees with education, research, protection, and to inspire social entrepreneurship in others.

Mikaila says the "Save a Bee" element is "a constant, and it sets us apart as a purpose-based brand."

Dreams put to action

Resplendent in a sunny yellow sweater behind an iconic lemonade stand, Mikaila was featured in a national TV commercial for Target and named one of *Time* magazine's Top 30 Most Influential Teens.

"The 'Save a Bee' element is a constant, and it sets us apart as a purpose-based brand."

—MIKAILA ULMER



Last year, Mikaila and Jitters Espresso & Spirits founder DeWayne Steagall of Austin, Texas, teamed to make a summertime drink with lemonade and lavender syrup.

At the time of this interview, she was packing her suitcase to fly to Los Angeles to visit the University of Southern California and the Claremont Colleges. She's also entertaining possibilities at Yale, Duke, Emory University and Spelman College, among others.

For now, excitement in her voice is palpable while talking about building robots, taking apart remote cars, 3D printing, dissecting brains, learning about neuroscience and "oooooh, incubating my own flora!" Mikaila even started a sign language club in her school, intensely interested in how to use it to communicate.

She is focused on opportunity, as opposed to the limitations that adults learn while making

mistakes in their lives. She calls it "dreaming like a kid."

Her book has the same call to action.

She wrote it at 15 in order to share her exciting journey, love of social responsibility and entrepreneurship. "Bee Fearless: Dream Like a Kid" serves as guidance for young readers interested in pursuing their own venture.

Mikaila's inspiration for the book: "I want to instill the bee-lief that young people can achieve their dreams."

Measuring milestones

She said the inspirational aspects of being an entrepreneur are crucial to the basics of building a company. She speaks about this for other corporations and to her age peers.

Mikaila considers the evolution of the company in terms of peak experience milestones—as opposed to decisions that might have been made to be a brand, private label or on-premise beverage company.

She recalls the company's first purchase order system as an important growth milestone.





“The inventor part of me enjoys the ideation stage of the process—dream-scaping concepts for products and offerings. But to bring these ideas to life, we need the infrastructure, project management, tools, and the managerial skills to help ensure long-term success.”

Another milestone was appearing on “Shark Tank”—Season 6, Week 22 in 2015. Despite the show’s typical deals—low in capital and excruciatingly high in equity position, making for high-drama television—Mikaila and her family agreed to Shark Daymon John’s offer of \$60,000 and 25 percent of the business.

She was 9.

They instantly took a liking to each other, attending the 2017 NRF Foundation Gala in New York City. Mikaila remains in close mentorship contact with John, with whom she re-connected at the renowned South by Southwest (SXSW) media festival this March.

manufacturing, procurement and logistics. We have scaled to a point where we can accommodate customers at 2,500 points of distribution nationally.

“We have implemented systems for production planning, logistics, scheduling and fulfillment. Our team is relatively small, but by utilizing collaborative tools such as Microsoft Teams and well-thought-out processes, we can ‘punch well above our weight class,’ as my dad would say. With all this in place, we are buzzing with efficiency.”

Asked what she envisions for herself 25 years from now, she does not hesitate: “at the helm of another invention that does good.” 🐝

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.



Extended efficiencies

Thirteen years into the company, Mikaila said, “We’ve built out a team who now oversee

MIKAILA ULMER

Favorite invention:

The internet

Home: Austin, Texas

Nickname: Miki

Favorite animated show:

“Demon Slayer”

Astrological sign: Libra

Favorite book: “Dune,”
by Frank Herbert

Favorite movie:

“Black Panther”

Hobbies: Rock climbing,
caving, roller blading,
learning languages, reading





Beware the Bruno

WATCH FOR INDUSTRY PREDATORS; FOLLOW THESE TIPS FOR RESEARCH CONNECTED TO YOUR INVENTION **BY EDITH G. TOLCHIN**

I'D LIKE TO SHARE my many years of experience in the inventing industry with readers who care to heed.

I began a career in import/export in the 1970s, started working with inventors in 1990, and became a licensed U.S. Customs broker shortly thereafter. I have spoken to inventor groups across the country about developing inventions in China and began contributing articles to *Inventors Digest* in the early 2000s. Please believe me when I say that I've seen the good, the bad *and* the ugly of this industry.

Though examples of the good are apparent with the development of cellphones, 3D printing, drones and GPS, here's an example of the bad and the ugly.

There's a person I'll call "Bruno" who attempts to reinvent himself every few years at the expense of naïve inventors.

About 15 years ago, he contacted me for advice on sourcing one's invention in China. Although I clearly quoted my terms *in writing*, I donated many hours of free advice to his advantage.

A few years and a few minor successes later, Bruno decided to call himself an "expert" and start his series of fly-by-night internet companies—advertising, like many industry predators, "We Help Inventors." That business model is often to take precious bucks from clients and simply introduce them to industry

pro-subscribers—also for a fee from the pro—hoping the industry pros might help the client.

Win-win for Bruno: There was never any follow through and, more often than not, the inventor-clients rarely benefited from said transactions. (Ever wonder why inventor services companies advertise on late-night TV? Airtime is considerably cheaper.)

A few months later, when Bruno accumulated enough bucks to promote his next shady enterprise, the original enterprise would simply disappear from social media, with URLs put on hold. You get the picture. Bruno repeated this M.O. every few years, leaving many disgruntled inventors—as well as peeved service providers.

The only winner here, clearly, was Bruno.

Beginner suggestions

My advice here is, you have created an amazing invention, so *please* do the research. There is no easy way to develop your product unless you win the lottery or somehow jump through the hoops to get on "Shark Tank," which is no easy feat! (Most inventor TV shows require strong sales.)

Some recommendations:

- Define which industry or group of people might benefit from your invention. Fitness? Medical? Children's entertainment? Be clear. Inventors always love their "babies," but they may not be practical.

- Locate inventor-related internet groups on social media. There are many that do not charge. Facebook has dozens.
- Determine your competitors. Decide how you want to develop your product. Do you want to license your invention, or do you want to manufacture (costly!) and sell on your own—thereby controlling your new business (risky!)?
- Join an inventor club in your state. With the recent pandemic, many meet virtually. You will learn a lot! Networking is priceless.
- This is a huge one. Become best friends with Dr. Google. I employ her dozens of times, every day, for everything. If you learn of a potential partner, or inventor service firm, be logical and ask Dr. Google about everything thereto related. Who's at the helm? Which product categories do they work with? Who are successful inventors they have helped?
- Also consult with Dr. Google for similar patents.
- Another essential tip is to do a background check of this potential business partner or service provider. Does he or she have a criminal record or questionable background? Intelius.com is one such firm. Another is whitepages.com/background-checks. Is 20 bucks a lot to spend to avoid losing thousands?
- Do not sign any contracts without having your trusted attorney review it. Do not ask Cousin Seymour to take a glance, unless Cousin Seymour is a successful inventor—and even he might miss a minor detail that could make or break your ability to become a supplier to, say, Walmart.
- Avoid Brunos!

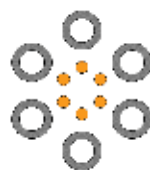
Nowadays, I rarely manufacture in China (for many reasons, including increased import tariffs and recent international logistics challenges). And because I am semi-retired, I have more time to devote to writing, which I love much more than importing.

However, I still keep a sharp eye focused on this industry with which I've been affiliated for over 30 years. Scammers are predictable. They create fancy websites for little cash outlay and promise the world.

Please don't be that naïve inventor. Take time to do the research. Feel free to contact me at edietolchin.com.

Now, back to the good, the bad and the ugly: Steer clear of the dark-Stetsoned villains. Stay with the verifiable, white-hatted good guys (and in this case, I'm not referring to cyber security). *Caveat emptor*, yada, yada, yada! ☺

Your invention. Our expertise.™



BITWORKS
PATENT AGENCY

Learn more at www.bitworks.tech



Since 1985, **Inventors Digest** has been solely devoted to all aspects of the inventing business. Other national magazines merely touch on invention and innovation in their efforts to reach more general readerships and advertisers. Advertise with *Inventors Digest* to reach our defined audience.

Inventors
DIGEST

For more information, see our website
or email us at info@inventorsdigest.com.

HELLO, INNOVATION

We're Enventys Partners, your one-stop partner for building new products, creating new brands and breathing life into existing ones. Our efficient, collaborative approach helps you grow your business by creating and introducing innovative new products or selling more of the ones you already have.

Simply put, we bring products to life.

HOW WE DO IT



Product Development



Industrial Design



Engineering & Prototyping



Manufacturing



Sourcing



Market Research



Crowdfunding



Digital Advertising
& Marketing



Content Marketing



Public Relations

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

For more information and to view samples of our work, enventyspartners.com



Ugh! Your Product Already Exists

BUT THIS DREADED DISCOVERY DOESN'T HAVE TO BE THE END OF YOUR IDEA **BY APRIL MITCHELL**

FOR MANY INVENTORS, it's a painful refrain. Now you have to decide how you will face the music.

You have a brilliant idea for a product that you think should be on the market. You have never seen anything like it. You've talked to your family and friends about it; they also think it is a wonderful idea. It solves a problem, is a mass-market product and could sell for a great price.

But before you get ahead of yourself, you must conduct in-depth research on prior art—i.e., any evidence that your invention is already known. I have often come up with an idea I was excited about, only to do a little research and find the product already existed.

Do early research first

Research is extremely important in the earlier stages of product development. You should look for and know about any product that is similar to yours and tries to solve the same problem as your product, as well as problems that are similar to the ones you are trying to solve.

If you are a regular reader of *Inventors Digest*, you have seen tutorials involving how to do this research.

Use a variety of key words when conducting an online search. Click on “images” so you can see any related images using those key words instead of only links to these products. I highly recommend visiting stores in person to see what is new and if there are any competing products available.

Conduct a patent search on the USPTO website to see if there are any patents for your product. Remember: Most patents for products never make it to the retail space, so there can easily be a patent out there for the exact product you want to create and bring to market.

Some people also hire a patent attorney for these searches.

Take a sad song ...

Back to the dreaded moment of finding “your” idea on the market when doing your research.

There are two ways you can look at this:

- You are on the right track. Enough people have found the problem big enough for there to be a product on the market to help with it.
- Oh, no. Someone else already made my product!

I choose Option 1: Take a sad song, and make it better. What matters now is what we do with this new information.

I want to determine how that product is selling, and whether there are improvements that can be made.

Reading the product reviews is a great place to start. See how people are enjoying and reacting to the product, as well as whether there is anything they would change or add to it.

Is there something lacking in the product? Is it working as intended? What can be improved?

By examining these questions, your market research can help determine how to make “your” idea even better.

If you can make the product better, do so. If it is selling like hot cakes as is, move on to your next idea. There is always another idea! 🍷



April Mitchell of 4A's Creations, LLC is an inventor in the toys, games, party and housewares industries. She is a two-time patented inventor, product licensing expert and coach, and has been featured in several books and publications such as *Forbes* and *Entrepreneur*.



PART 2 OF 2

Making LoRa Work for You

A LOOK INSIDE THE WIRELESS SOLUTION,
AND HOW TO PROTOTYPE WITH IT **BY JEREMY LOSAW**

THE FIRST I heard of LoRa (long-range) technology was in its use for a conservation application.

A black rhino sanctuary in Mkomazi, Tanzania, sought to curb the poaching of this endangered species. The sanctuary needed a way to track the population and enhance security in areas the rhinos frequented.

The solution would require a long range, require little power, and be secure against hackers. LoRa was the perfect technology.

The deployed Smart Parks system uses a network of LoRaWAN towers installed at strategic areas of the park; the rhino population has been fitted with LoRaWAN trackers small enough to be installed directly into their horns.

This provided accurate triangulation and a solution that is nearly impossible to hack into by poachers. Rhino population in the park

increased and even required an expansion of the Smart Parks infrastructure.

This story proved the power of LoRa as a viable wireless solution in a harsh environment with a high-stakes outcome. In this second part of our series on LoRa technology, I will show how LoRa networks are structured and how to prototype with them.

LoRa vs. LoRaWAN

LoRa is the core wireless technology that transmits data in the sub-gigahertz frequency range, using the characteristic chirping technique for which it is known. LoRa operates in open frequency bands in the regulated frequency spectrum. The frequency band is different in different regions of the world.

LoRa operates at 915 MHz in North America, 868MHz in Europe, and 433 MHz in Asia. If you're developing solutions that will be deployed in multiple countries, keep this in mind.

LoRaWAN is the communication protocol that allows LoRa-enabled devices to communicate with each other. It provides the common format to allow data transfer between end devices and gateways, and provides network security.

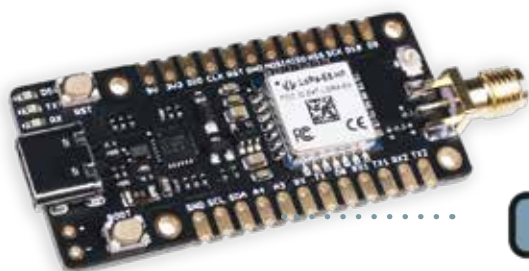
Think of it like LEGO bricks: The plastic they're made of is the LoRa, and the studded shape that allows them to connect together is the LoRaWAN.

Network architecture

A typical LoRa network consists of three parts: the end node, the gateway and the cloud.

The end node is what is collecting or using the data. This can be a sensor reading data or an

A typical LoRa network consists of three parts: the end node, the gateway and the cloud.



actuator or indicator that changes state based on the data it receives (LED, buzzer, motor, etc.).

A gateway transfers data between the end node and the cloud. It has both LoRa technology to communicate with end nodes and tech that transmits signals to the cloud, such as ethernet or cellular. LoRa data cannot get to the web without a gateway. Unfortunately, smartphones won't work because LoRa radios are not natively inside of smartphones.

The cloud provides visualization for the data and/or a dashboard to interact with end nodes. The most common cloud service available for LoRaWAN is The Things Network, but data can also be pushed to other cloud services like AWS (Amazon), Google Cloud, or Microsoft Azure.

Setup for prototyping

LoRa nodes can be set up in many different ways, depending on the requirements of the application or prototype.

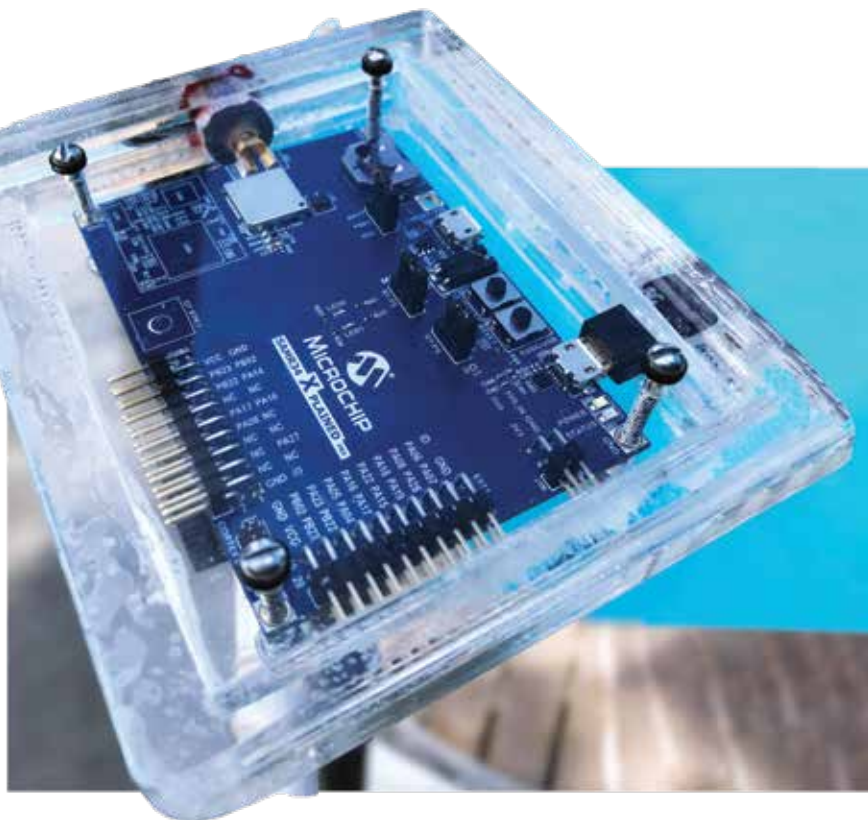
The simplest way is to have two LoRa-enabled devices that talk to each other and do not report data to the cloud. One device reports data from afar, and the other device receives it and displays it on a screen or connected computer.

For example, one device can be wired to a temperature sensor and report its data back to the master. This type of setup eliminates the complication of the cloud so you can try out LoRa while investing the least amount of time.

Though LoRa developer boards are more expensive than WiFi and Bluetooth dev boards, they are still within the budget for most garage inventors. The Heltec point-to-point LoRa boards are available in packs of two for less than \$60; a similar setup from Adafruit or Arduino costs less than \$100.

Obviously, it gets a little more fun and slightly more complicated to add cloud connectivity.

To do this, you have to purchase or build your own gateway to the cloud. A number of LoRaWAN gateways can be purchased from online retailers.



The price of these ranges from \$100 and up. However, these commercially available options will generally be easier to set up, with instructions and support to get up and running faster. Be sure you pick a gateway that has a backhaul that is useful for your application. LoRa gateways can use ethernet, cellular, or WiFi to push data to the cloud.

If you have the chops to go the maker route, you can build your own.

There are a number of tutorials about how to use a Raspberry Pi as a LoRa gateway, by either using a LoRa hat or by wiring up a LoRa device directly. Adafruit has a bespoke hat with an OLED (organic light-emitting diode) that works with a Raspberry Pi Zero (a tiny, single-board computer), an easy way to get started.

You can also use an ESP32-based gateway to port data to your WiFi network. SparkFun has a one-channel gateway that does just that.

A key to any setup is the spreading factor—a setting that is unique to LoRa and is indicative of the speed of the chirps.

LoRa uses six different spreading factors dubbed SF7 to SF12. The lower the spreading factor, the faster the chirps and the higher the data transmission rate. Tuning the spreading factor is a key parameter in a successful LoRa deployment. 📡

This prototype is using the point-to-point LoRa communication and not the networking layer LoRaWAN that would take the data to the cloud.



What Makes a Patent Valuable?

WHETHER OWNING OR HOLDING, DRAFT CLAIMS WITH YOUR COMPETITIVE ADVANTAGE IN MIND **BY LOUIS CARBONNEAU**

IN THE PATENT world recently, there has been a shift to quality over quantity. Only “near-perfect” assets now sell.

Although valuations per patent are generally down from 2-3 years ago, they remain relatively stable relative to historical levels when it comes to “high quality” patents.

Which begs the obvious question: What makes a patent valuable?

And its natural corollary: How can I make my current patents and patent applications more valuable?

Obviously, there’s more than one school of thought to be considered. What holds true today may rapidly change, based on new case law or regulation.

However, we at Tangible IP believe the secondary market still provides the best reflection of valuations. All buyers will turn to their subject-matter experts to both review the merits of the portfolio, along with appropriate valuation to justify their investment every time they acquire a new portfolio.

After brokering over 5,000 patents in the last decade warranting communication with hundreds of buyers, we have a pretty good idea as to what the market wants and values!

When patents are offered for sale or for a license, there are two main criteria a buyer will consider: 1) The assets on offer will provide defensive rights to one company should another company sue them (i.e. assertion value on competitors), and/or 2) The assets are practiced by companies within the industry with recoupable damages.

Regardless of how you slice the apple, patents are nothing more than assertion rights reflected

in a government-issued title, which can be passed to others via a sale or partitioned out via a license.

And remember, these suggestions also hold true when it comes to enforcing one own’s patents. Given this, here are a few well-honed approaches that help drive their value:

Draft with assertion in mind, not protection.

A patent is primarily a negative right: the right to exclude others from practicing your invention. Therefore, if all a patent does is “teach” your invention (i.e., identify a market need and describes your particular solution) to the public and mostly overlaps with the product you sell or will sell, you just wasted a lot of money that could have been better invested elsewhere.

Every patent should be drafted (especially the claims) with the anticipation that competitors will want to replicate, improve upon or design around your solution, either now or 15 years from now. Your patent is thus intended to make their efforts more difficult, more expensive and/or less effective.

This is how you support innovation that maintains your initial competitive advantage.

If you only protect against basic cloning, it will be very easy for others to avoid infringement by adding or removing a single non-essential element. This is where an internal exercise of “designing around” your own patent is useful to anticipate what a competitor might do and broaden the protection accordingly.

This exercise costs virtually nothing—and sadly, very few inventors do this in a deliberate manner. It is much better for you to “stress-test”



“Design around” your patent to anticipate what a competitor might do and broaden the protection accordingly.

the strength of your own patent before compelling a competitor to do so.

Consider how the claim terms are supported in the specification and might be interpreted by an administrative judge at the Patent Trial and Appeal Board, or in district courts years down the road.

Build a family. Although foreign patents are becoming increasingly more valuable, U.S. assets still account (in most cases) for at least 75 percent of a portfolio value—because this is where the largest damage awards are available. And the U.S. system is unique, as one can file continuations (and Continuations in Part, or CIPs) that take advantage of 20/20 hindsight in many cases while still allowing the inventor to benefit from the earlier filing date of the initial application.

A very detailed specification (the part of your patent that describes the invention) is critical. The specification serves as the canvas for future claim sets that can continue to evolve as a result of new case law, or can better map onto competitors’ products as they come to market.

This is a unique advantage that many applicants fail to seize upon; they seem content to receive their initial patent and neglect to file a

continuation, which keeps the family alive. This is also a pet peeve for most buyers. Many will pass on a portfolio that can no longer evolve.

In practice, this means that once a patent has been allowed, a diligent review of the application specification and drawings should be conducted, in view of the prosecution history, to determine if it is worth pursuing a continuation application. Though some entities with greater financial resources may have a policy to keep at least one family member alive, smaller companies generally may need to be more judicious with the monetary expenditures.

In addition to keeping prosecution open, it is generally advantageous to have continued prosecution available in an assertion (or licensing) context.

Draft targeted claims. Many, if not most, patent prosecutors are taught to draft broad claims. In some cases, this is combined with vague claims, often using language that is not explicitly supported in the specification.

Broad and vague is still broad and vague. So although such patents may have some value, they are unlikely to be an assertion or licensing driver, particularly in today’s market.



The most valuable claims are often those that are carefully targeted to clearly map to a particular product or process, and often include relatively narrow claim elements by intent. The downside of broad claims is that they are the easiest to invalidate, and they are especially easy targets for invalidity challenges based on prior art.

A targeted, narrower claim is more difficult to invalidate. In particular, such narrowing elements should be a point of patentability distinction, rather than merely claiming some well-known feature that could be easily invalidated through a combination obviousness rejection.

Submit a lot of prior art. Currently, close to 80 percent of U.S. patents that are challenged with the USPTO end up being held invalid because of some prior art that wasn't in front of the examiners when they reviewed the application.

Therefore, an issued patent in which the applicant submitted significant prior art to distinguish its invention is much more likely to sustain challenges downstream and therefore will be perceived by most buyers as being more robust—and therefore more valuable.

At the same time, don't submit volumes of prior art references based on techniques such as keyword searches. Every reference that is submitted should be relevant.

When reviewing prior art, you are not limited to other patents; on the contrary, look for existing and past commercial products and explain how your invention is better.

(Many patent firms still discourage their clients from conducting a prior art search—on the rationale that the examiner is paid to do this and there is no point incurring those costs internally. Consider that obtaining a patent in the United States generally costs over \$20,000 (including all government fees), and maintaining it through its entire life can add tens of thousands of dollars. Add to this that defending a challenge through an inter partes review now costs from \$250,000 to \$500,000. Do you really want to invest that much money on such a speculative title when you could probably de-risk this operation significantly by investing \$1-2K in a good patentability assessment prior to filing? Do the math!)

Avoid “paper” patents. The vast majority of patents in circulation will never be produced commercially. Many studies show that only 10 percent of patents are actually practiced by their owners.

Although evidence of commercial sales always helps when valuing patents, this by itself is not fatal, as the inventor has no obligation to bring the invention to market under patent laws worldwide. What is not so good, though, is when the patent remains a general idea and there is no attempt to prototype and refine the invention.

Judges and juries don't like to reward people who simply came up with an idea, filed a patent application and moved on to the next project. They and the market place a lot more value on inventions that were refined further and where the original inventors had a real reduction to practice.

De-risk significantly by investing \$1-2K in a good patentability assessment prior to filing.



Also, prototyping almost always leads to additional inventions and patents—which makes for a larger and more valuable portfolio due to a higher and stronger cost or performance barrier to others who choose to work around your patents.

Confirm easy detectability. There are probably hundreds of thousands of patents that are being infringed every day, yet these patents are worthless. Why?

In short, if you cannot demonstrate that someone is practicing all elements of an issued claim, you have no case to assert your patent. This is the situation with a good number of patents describing manufacturing processes, cloud-related inventions, etc., when the infringing acts happen “under the hood” and there is no way to legally access the missing information.

Furthermore, recent case law has raised the threshold for what needs to be proven in the initial pleading. And the days when you would file a general allegation of infringement and find what you needed through subsequent discovery are gone.

In most cases, the plaintiff won’t make it past summary judgment. Worse yet, there is a far greater potential for sanctions and fee-shifting in cases where the plaintiff had insufficient evidence of infringement at the pleadings stage.

Therefore, most patents for which demonstrating infringement is impossible, difficult and/or really expensive (e.g., in the semiconductor space) have little commercial value. So always ask yourself how you can write claims that make evidence of use clear while a product is sitting in a box, or through visual inspection of the product, or by covering functionality likely to be described in sales or user literature.

Conclusion

Securing strong patents generally doesn’t cost more than obtaining bad ones. The key to building a valuable patent portfolio that can later be monetized relies in the approach taken from the first day a first provisional application is drafted, through steps taken during prosecution, and many tactical decisions made well after the patent issues. 📌

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



It's not going to invent itself.



VenturSource
Product Development • Licensing • Marketing
Prototyping • Production Sourcing
FOR OVER 30 YEARS
DAVID A. FUSSELL, IPO, President
404.915.7975 • dafussell@gmail.com • ventursource.com

Adjustable-height, over-the-door hook everyone can **REACH!**



STANDARD HEIGHT

Right Height™

Now available online through
Richards Homewares at
Amazon, Lowe's, Wayfair,
Bed Bath & Beyond, and QVC.

April Mitchell
4A's Creations, LLC
PRODUCT DEVELOPER FOR HIRE
april@4ascreations.com



Ignorance: A Sign of *The Times*

MISINFORMED OP-ED PIECE BLAMES PATENT ISSUES
ON FORMER USPTO DIRECTOR IANCU **BY GENE QUINN**

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

THE *NEW YORK TIMES* Editorial Board wrote a recent op-ed charging that the U.S. Patent and Trademark Office has “devolved into a backwater office that large corporations game, politicians ignore and average citizens are wholly excluded from.”

The piece calls for an overhaul of the U.S. patent system, and for new USPTO Director Kathi Vidal and Congress to “seize the opportunity ... to modernize and fortify the patent system.” It includes input from Priti Krishtel of the Initiative for Medicines, Access and Knowledge (I-MAK)—which recently has been the subject of scrutiny by pro-patent lawmakers like Sen. Thom Tillis (R-N.C.)—and Charles Duan, who has testified to Congress that patents deter genetic research and “bully and suppress true innovators.”

Missing is any context, input, acknowledgement, or comment from patients who owe their lives to patented drugs, therapies and vaccines—or anyone who disagrees with the piece.

The piece claims that Andrei Iancu returning to his firm on a part-time basis is some conflict of interest.

Omitted truths

One inconvenient truth ignored by the Editorial Board is the fact that 95 percent of the essential medicines identified by the World Health Organization are off patent. That means these essential medicines are available practically for free, and for all time, courtesy of the patent system.

The piece references claims from Congress about the number of patents covering the top U.S. drugs, which rely on I-MAK’s contested data. The article cites a recent investigation by the House Oversight Committee, which links to a report that leans heavily on I-MAK’s figures.

Though I-MAK has responded to allegations that its data is faulty, Tillis and others have been dissatisfied with its response, noting that it failed to disclose its data as requested and “instead largely repeated the same explanations it employs in its reports.” The *New York Times* piece does not mention the debate, but it does rely on the faulty data as if it is credible.

5 dubious suggestions

The piece ultimately recommends that Vidal/Congress take five steps to “improve” the patent system.

One of the recommendations is to “eliminate potential conflicts of interest.” But rather than point to where there are objective conflicts of

interest—like at the Patent Trial and Appeal Board, where administrative patent judges tasked with stripping vested property rights from innovators astonishingly have no judicial code of conduct—the Editorial Board bizarrely points to former USPTO Director Andrei Iancu.

The piece claims that Iancu returning to his firm on a part-time basis is some conflict of interest. Of course, that Iancu returned to his firm on a part-time basis and that the lion's share of his professional activities are devoted to his work at the Center for Strategic & International Studies, a Washington, D.C.-based think tank, is left out.

The other four recommendations that would “improve” the patent system:

- **“Enforce existing standards.”** The op-ed charges that the USPTO presently grants too many patents that are not truly novel and non-obvious and that the Office should provide more time for examiners to review patents, as well as limit the number of times applicants can resubmit rejected applications.
- **“Improve the process for challenging bad patents.”** The piece claims that reforms made under former Director Andrei Iancu made it too easy to deny PTAB appeals “for purely bureaucratic reasons”—i.e., the *NHK-Fintiv* discretionary denial framework.
- **“Collaborate with other agencies.”** The *Times* says the disconnect between the USPTO and

agencies like the Food and Drug Administration causes problems because applicants will say one thing to the FDA and another to the USPTO based on the different standards they must meet for each agency.

- **“Let the public participate.”** The USPTO should appoint public representatives to the Patent Public Advisory Committee (the letter notes that “six of the committee’s nine members are attorneys who represent commercial clients or private interests”); create a public advocate service and improve public outreach.

These recommendations range from bad to just plain stupid.

If the patent office is going to collaborate with other agencies, like the FDA, does that mean the FDA is going to collaborate with the patent office? Using this “logic,” the patent office and its experts should have a seat at the table when determining whether to approve drugs.

Somehow, I don’t think that will make sense to the *New York Times*, and I doubt it sees the hypocrisy. ☹

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.



Classifieds

COPYWRITING AND EDITING SERVICES

Words sell your invention. Let’s get the text for your product’s packaging and website perfect!

Contact Edith G. Tolchin: (845) 321-2362,
opinionatededitor.com/testimonials, editor@opinionatededitor.com.

PATENT SERVICES

Affordable patent services for independent inventors and small businesses. Provisional applications from \$800. Utility applications from \$2,500. Free consultations and quotations. Ted Masters & Associates, Inc.

5121 Spicewood Dr. • Charlotte, NC 28227
(704) 545-0037 (voice only) or www.patentapplications.net

NEED A MENTOR?

Whether your concern is how to get started, what to do next, sources for services, or whom to trust, I will guide you. I have helped thousands of inventors with my written advice, including more than nineteen years as a columnist for *Inventors Digest* magazine. And now I will work directly with you by phone, e-mail, or regular mail. No big up-front fees. My signed confidentiality agreement is a standard part of our working relationship. For details, see my web page:

www.inventor-mentor.com

Best wishes, Jack Lander

IoT Corner

Hardware manufacturer Seeed Studio announced the launch of its new IoT platform, “IoT Into the Wild.”

The platform leverages LoRaWAN long-range technology to provide developers the ability to sense and control devices, potentially from miles away.



The initial release of hardware includes a LoRaWAN gateway and a suite of ruggedized sensors that are set up and controlled by the accompanying app.

The sensors have a 10-year battery life, 10k transmission distance, and an IP66 rating that makes them suitable for monitoring in harsh conditions. The system, scheduled for public availability in the second quarter this year, will help increase adoption of LoRa worldwide. —*Jeremy Losaw*

Wunderkinds

Eighty-one young inventors were honored with awards at the 36th Northern New England Invention Convention in April. The convention, run by the Robert H. Rines Young Inventors’ Program at the University of New Hampshire in Durham, hosted 130 students in a hybrid event. Forty 40 volunteers from academic and STEM professional fields supported the competition as judges. Winners advanced to the Invention Convention U.S. Nationals from May 31 to June 3 at The Henry Ford in Dearborn, Michigan.



What IS that?

Want a novel way to teach kids how to save money? (Or a stinging reminder of a former love?) The **Cat Stealing Money Bank** says “Hello,” takes your coin, and then says “Thank you.” Disclaimers: Won’t take dollar bills. Reviews often said the machine broke early and new batteries did not help. See? Just like a former love.

3 Number of patents granted to **Lawrence Welk**, who hosted an iconic TV show from 1951 to 1982. His design patents were for an accordion-shaped ashtray, an accordion-themed lunch box and a Welk-themed menu card with a rooster singing “authorized to serve the famous Lawrence Welk.”

WHAT DO YOU KNOW?

1 True or false: Getting approval after a trademark filing can typically take more than a year.

2 Which famous inventor had only three patents?

- A) Thomas Jefferson
- B) Benjamin Franklin
- C) George Washington Carver
- D) Leonardo da Vinci

3 True or false: The number of patents granted by the USPTO in 2021 was fewer than in 2020.

4 In which century was the first known fire extinguisher patented—1700s, 1800s, or 1900s?

5 This celebrity has/had a patent for the “Dynamic Microphone Support Apparatus”:

- A) Paula Abdul
- B) Chuck Berry
- C) Rod Stewart
- D) George Thorogood



ANSWERS: 1. True. “Applicants should expect, at a minimum, that they will be waiting for at least a year between the time an application is filed and when registration is granted,” according to law firm williamsmullen.com. 2. C. 3. True; 327,798, down nearly 7 percent from 2020. 4. The first recorded fire extinguisher was patented in England in 1723, by chemist Ambrose Godfrey. 5. A.

DON'T MISS A SINGLE ISSUE!

Whether you just came up with a great idea or are trying to get your invention to market, **Inventors Digest** is for you. Each month we cover the topics that take the mystery out of the invention process. From ideation to prototyping, and patent claims to product licensing, you'll find articles that pertain to your situation. Plus, **Inventors Digest** features inventor pros and novices, covering their stories of success and disappointment. Fill out the subscription form below to join the inventor community.



☐ 1 YEAR \$42.00 U.S. ☐ 2 YEARS \$78.00 U.S.

Make sure to enclose payment and send to
INVENTORS DIGEST 520 Elliot St., Suite 200
Charlotte, NC 28202

Inventors DIGEST

ORDER ONLINE NOW
WWW.INVENTORSDIGEST.COM

TO PLACE NEW ORDERS OR RENEW SUBSCRIPTIONS BY
MAIL FILL OUT CARD, OR CALL 1-800-838-8808 OR EMAIL
US AT INFO@INVENTORSDIGEST.COM.

NAME (please print)


ADDRESS

CITY/STATE/ZIP

E-MAIL

PHONE

referral code/referring subscriber (if applicable)



MORE INVENTORS MORE PROBLEMS SOLVED

Increasing the number of women, people of color, low-income individuals, people with disabilities, and veterans who invent and patent will lead to more diverse ideas and a stronger innovation ecosystem.

Learn how we can create a brighter future at InventTogether.org

 INVENT_TOGETHER

