

Inventors

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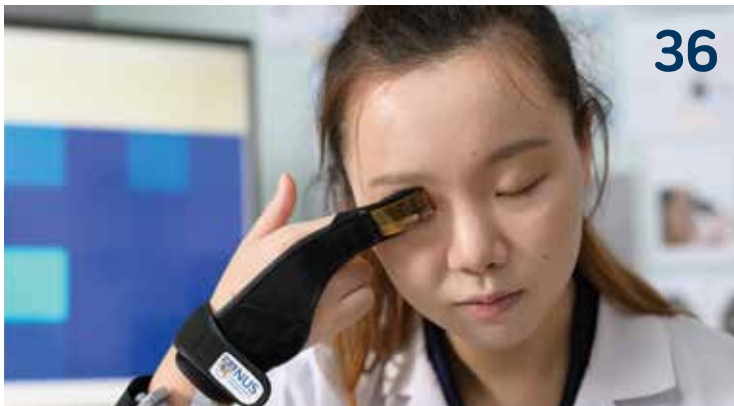


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Our ideas and innovations are precious. Yet Big Tech and other large corporations keep infringing on our patents, acting as Patent Pirates. As inventors, we need to protect each other. It's why we support the STRONGER Patents Act. Tell Congress and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



SaveTheInventor.com

MAGIC MOMENT

Artful Artifacts

Library of Congress collection from the Patent Office reveals a colorful, burgeoning era of consumer culture

Print advertisements such as the one below from 1929 and at right from 1917 received copyright protection from the Patent Office.

THE SLOW, competitive fizz began building when Coca-Cola and then Pepsi were introduced in the last 15 years of the 1800s.

Pepsi made headway with its nickel bottles in the 1920s, but by 1950 Coke had 47 percent

of the carbonated soft drink market to Pepsi's 10 percent. Pepsi hired a former Coke employee as its CEO, and the competition exploded like a shaken soda can: Pepsi was deemed the best soda by U.S. consumers in the 1975 Pepsi Challenge, only to see Coke rebound in the 1980s as the dominant brand and retains that distinction today.

The two soft drink behemoths exemplify the early years of what historians call the “mass consumer culture,” displayed via a

beautiful collection of commercial labels and advertisements at the Library of Congress that came from the then-United States Patent Office.

The USPTO used to register copyrights for commercial materials such as labels and ads from around 1870 to 1940. In addition, labels and advertisements were submitted as specimens with trademark applications to demonstrate that owners were using the trademarks in commerce. Adam Bisno, the USPTO's official historian, explained their appeal as pop culture artifacts and historical significance:

“In the late 19th and early 20th centuries, mass production and the proliferation of media created new modes of shopping and spending. As prices came down and productivity increased, the consumption of goods and services beyond what was absolutely necessary became a pastime of the majority of Americans.



RESOURCE SPOTLIGHT

SAVE ME THE MONEY

Consider these cost-saving measures when filing patent applications

GIVEN INVENTORS' sometimes long road from concept to successful product or idea, worrying about money doesn't have to be an overwhelming part of the journey. The USPTO offers these cost-saving options and resources to help when filing a patent application:

Provisional patent application. A PPA is a legal document filed with the USPTO that establishes an early filing date, at a lower cost than a regular patent filing. It is not an actual patent. It does not

mature into an issued patent unless the applicant files a regular non-provisional patent application within one year.

The PPA also provides the stakeholder's legal ability to use the term “patent pending,” which may have significant marketing advantages.

Reduced filing fees. The USPTO's fee schedule includes a reduced fee for filing certain re-examination or “streamlined” requests. The option was created to make it financially less

burdensome for requesters with limited resources.

The fee for filing an *ex parte* re-examination request will be reduced if the request has 40 or fewer

pages and meets other format requirements. For compliant requests, the filing fees are \$6,000 for a large entity, \$3,000 for a small entity and \$1,500 for a micro entity. Micro entity status is only available to the owner of the patent for which re-examination is being requested, not a third-party requester.

Patent pro bono & Law School Clinic Certification Program. The USPTO's Patent Pro Bono Program is a



“The result was a consumer society built on intricate distinctions among brands (such as Coke and Pepsi) as firms vied for the attention and spending money of the masses.”

Copyright protections coupled with trademark registrations from the Patent Office were one way for firms to protect the creative strategies they devised to capture the gaze and cultivate the trust of increasingly discerning consumers.

In the early 20th century, still more iconic companies got their footing among American consumers. The Big 3 car companies got their start in 1903 (Ford), 1908 (General Motors), and 1925 (Chrysler). In the same era, food staples like Kellogg’s, Pillsbury, and Heinz hit the shelves.

“The collection at the Library of Congress reveals these firms’ advertising efforts in vivid detail,” Bisno notes. “It also reveals the visual universe American consumers encountered in their everyday lives.

“Careful study of the collection will yield new knowledge about the continuities and discontinuities of consumer culture in an era of fast and broad transition. An exhibition of select artifacts from this collection would expose members of the public to the colorful and complex process by which our ancestors built the consumer society we now inhabit.”

nationwide network of independently operated, regional programs that match volunteer patent professionals with financially under-resourced inventors and small businesses to provide patent filing and prosecution legal services.

Another USPTO service for lower-income individuals and small businesses is the Law School Clinic Certification Program (LSCCP), which includes 60 participating law school clinics that provide legal services pro bono to inventors, entrepreneurs, and small businesses.

Both the Patent Pro Bono Program and LSCCP have mandatory income thresholds and other requirements for accepting new clients. To determine whether you may qualify and for other information, go to uspto.gov/PatentProBono and uspto.gov/LawSchoolClinic.

NEWS FLASH

NEW ENERGY FOR INCLUSION

Secretary of Commerce Raimondo chairs Council for Inclusive Innovation

WHEN IT COMES TO building a stronger U.S. IP system, a greater diversity of participants is paramount. Now that mission has a new energy, with a new leader.

“Inclusive” is the key word in the newly branded Council for Inclusive Innovation (CI²). The council—consisting of a who’s who from sectors including the federal government, academia, industry, intellectual property associations and nonprofits—will be chaired by United States Secretary of Commerce Gina Raimondo. The USPTO is an agency of the Department of Commerce.

CI² replaces its predecessor, the National Council for Expanding American Innovation. The inclusive thrust gained important momentum following the USPTO’s 2018 SUCCESS Act study and report, delivered to Congress in December 2019.

The study assessed the participation of women, minorities, veterans, and other underrepresented groups as inventors named on U.S. patents. The report provided recommendations to increase the participation and development of these groups as inventors and entrepreneurs.

Secretary Raimondo pledges to further that quest.

“Together, as a council, it is imperative that we continue working to expand American innovation by tapping into the strength of our nation’s diversity and increasing opportunities for all innovators and entrepreneurs who are creating new technologies, companies, and industries,” she wrote.

“With the most recent data from the U.S. Patent and Trademark Office indicating that only 12.8% of inventors listed on patents granted in a single year are women, and little to no data on the participation of other underrepresented groups, we can all agree that there is much work to be done to build a stronger and more inclusive innovation sector.”

CI² members include Drew Hirshfeld, USPTO commissioner for patents who is temporarily fulfilling the duties of USPTO director; Dr. Wayne I.A. Frederick, president of Howard University; Safra Catz, CEO, Oracle Corporation; Dr. Lonnie Johnson, CEO and founder, Johnson R&D; and many more.

For additional information:
uspto.gov/ExpandingAmericanInnovation



Inside PTAB Hearings

Understanding how to make your best case before the board

WHEN YOU watch a movie or television show with scenes from inside a courtroom, those scenes often feature a hearing with attorneys making arguments in front of a judge.

Though it might not be the first place you would think of, the USPTO also holds hearings. It houses the Patent Trial and Appeal Board (PTAB), which adjudicates certain patent-related legal proceedings.

As mentioned in previous articles, these legal proceedings include *ex parte* appeals (in which an appellant seeks review of a prior rejection of claims in a patent application by a USPTO examiner), and America Invents Act (AIA) trials (in which a petitioner asserts that a patent controlled by a patent owner should not have issued in the first place). In both of these proceedings, parties may request a hearing at the PTAB.

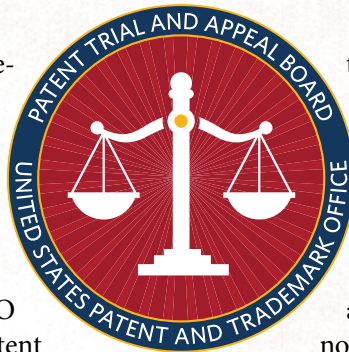
Hearings in *ex parte* appeals and AIA trials share some common features.

- Parties can request a hearing to be held virtually or in person at any one of the USPTO's offices (Alexandria, Virginia; Dallas, Texas; Denver, Colorado; Detroit, Michigan; and San Jose, California). There are no current in-person hearings due to COVID.
- During the hearing, the parties may not present any new evidence or arguments not already present in the record.
- PTAB hearings are viewable to the public, including both virtually and in person. *Ex parte* hearings are audio only. The public cannot view portions of AIA trials that involve confidential information.

Yet, *ex parte* appeals and AIA trials have some unique aspects.

During hearings involving *ex parte* appeals, the patent applicant—called the “appellant” before the PTAB—may choose whether to have a hearing.

If the appellant decides not to have a hearing, the case is referred to as “on-brief.” The PTAB decides the case entirely on written arguments submitted by



the appellant and the examiner (these written briefs are discussed in the previous article on *ex parte* appeals).

But if the appellant opts to have a hearing, the case is referred to as “heard.” The appellant presents live arguments in front of the three judges assigned to the case. The examiner is normally not present at the hearing.

During the appellant's presentation, the PTAB judges will likely ask questions and seek clarification on certain issues. The appellant is usually given 20 minutes to complete his or her presentation. Once a hearing is held, the PTAB issues a decision.

Unlike the appellant in *ex parte* appeals, the parties in AIA trials virtually always request a hearing.

Hearings in AIA trials proceed similarly to those in *ex parte* appeals, with the parties presenting their arguments and the judges asking questions. But unlike in a hearing in an *ex parte* appeal, in which the examiner is usually not present, both the petitioner and patent owner typically are present.

During an AIA trial hearing, the parties take turns presenting their arguments: The petitioner goes first, followed by the patent owner. Both parties are typically given 60 minutes total for their presentations.

The petitioner may reserve a portion of his or her time for rebuttal—a chance to address the patent owner's initial presentation. The patent owner, in turn, may reserve a portion of time for sur-rebuttal—a chance to address the petitioner's rebuttal. Following a hearing, the PTAB issues a decision.

In either situation, these hearings enable parties to present arguments and evidence in front of at least three judges. The hearings give the judges the opportunity to ask questions of the parties to help them decide the cases.

To learn more about hearings at the PTAB, and for information on how to attend a public PTAB hearing, visit the USPTO hearings webpage at uspto.gov/patents/ptab/hearings. For a broader overview on what the PTAB is and what it does, visit uspto.gov/ptab.

TRADING CARD

NO. 27 Luis von Ahn

LUIS VON AHN says his brain teems with multiple ideas every day, all day—and “the vast majority of these are completely idiotic.”

True or not, some of those ideas have changed how we use the internet. The baby-faced computer scientist, educator, and entrepreneur from Guatemala had a profound impact by age 20.

As the world celebrates Computer Science Education Week December 6-12, it can also celebrate von Ahn’s prominent role in improving the security of internet sites, digitizing books through crowdsourcing, and more.

As a child, von Ahn wanted a Nintendo® console. But his mother, struck by his boundless mental energy and potential in computer technology, instead got him a Commodore 64® computer when he was 8. He designed his first functional application at 12.

After moving to the United States, he graduated with a Bachelor of Science in mathematics (Summa Cum Laude) from Duke University in 2000. He was then contacted by Yahoo! as a computer scientist where he, along with his mentor Manuel Blum, developed CAPTCHA—a now-ubiquitous means of determining whether a computer user is a real person.

Yahoo! was being overrun by spammers who needed huge amounts of email accounts from which to send their spam, using automated computer programs to sign up for them. The one-word password reading test for both computers and humans could only be passed by humans, meaning automated spam programs could no longer sign up for Yahoo! accounts.

It is estimated that at least 750 million people around the world have solved at least one CAPTCHA, now used by most major websites. (CAPTCHA stands for Completely Automated Public Turing test to tell Computers and Humans Apart.)

But eventually, von Ahn wanted more than just an internet security innovation. This led to

reCAPTCHA—which, instead of using random letters and words to decipher, uses fragments of old books that need to be digitized but previously could not because of aging of the pages that causes some words to be unrecognizable by the machines.

With reCAPTCHA, millions of people are simultaneously contributing to the process of transcribing books for the internet. In 2009, Google bought the rights to CAPTCHA and reCAPTCHA for somewhere between \$10 million and \$100 million, according to von Ahn.

Now a professor at his alma mater, Carnegie Mellon University, von Ahn received a master’s degree in computer science in 2003 and his Ph.D. in 2005. He also created Duolingo®, the most popular language teaching app in the world. It covers more than 80 different languages.

Von Ahn uses the concept of gaming with a purpose or (GAWP) in Duolingo just as he did in reCAPTCHA; People who practice the different levels must translate several phrases and words that, if correctly placed, are uploaded to the web. This makes an increasing number of internet pages available in all languages.

In 2018, von Ahn was awarded the \$500,000 Lemelson-MIT Prize in honor of his commitment to invention, education, and mentorship.

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



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Judge Will Have More To Say, and I Can't Wait

The more Judge Kathleen O'Malley said, the more I wanted her to retire. Wait! This was a good thing.

A justice on the United States Court of Appeals for the Federal Circuit, O'Malley was a panelist on IPWatchdog's recent webinar "The Good, the Bad, and the Ugly: Outlook for the U.S. Patent System," sponsored by Innovation Alliance and hosted by IPWatchdog founder and President/CEO Gene Quinn.

Judge O'Malley, nominated by President Obama in 2010, will retire in March. In early November, President Biden named Delaware Judge Leonard Stark to replace her.

During the webinar, she said she couldn't comment about certain issues because it may be in conflict with her job duties. But what she did say should have been heard by everyone who has a belief and a stake in inventor rights, especially against infringers.

She said the landmark 2006 Supreme Court ruling in *eBay v. MercExchange* "was a really poorly thought-out decision ... that is shockingly short." SCOTUS's ruling requires district courts to consider a four-part test in deciding whether to grant injunctive relief in patent cases. As a result, "it makes it virtually impossible (for a patent holder) to get a permanent injunction in a patent case. ...

"Why is there any incentive (for a company) to license when at the end of the day, all you would be doing is basically infringing for free for a long period of time and then just paying what you would have had to pay up front as a fair and reasonable license?"

Judge O'Malley said her friends around the world feel the *eBay* decision began America's "slide from pre-eminence as a country who handles IP properly." (Worse, Quinn said any legislative fix to *eBay* is currently "dead on arrival.")

The judge said there are positive signs for patent owners—the effort to broaden the inventor base via programs including STEM, and encouraging more women and minorities to be inventors.

But in the end, "We need a coherent national policy that is designed to ensure we have a robust patent system that protects what I believe should be the private property rights of a patent, and we need to make sure that we don't have branches of government that are working against each other to that end."

Judge O'Malley said she is leaving the bench "partially so I can get my First Amendment rights back ... I want to have a voice." The world needs to hear everything she has to say.

—Reid

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Inventors

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CORRESPONDENCE

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

"Myth: A Patent is a Monopoly"

(April 2017):

It helps if you use the right term for monopoly.

This word doesn't mean guaranteed money. So of course, as well, patents do not mean this.

Monopoly means you prevent others from using it (an invention) to make money. So yes, patents are bad business for economies.—ALAN

Correct. Correct. Incorrect. Incorrect.

A monopoly does not mean guaranteed money; nor does a patent. However, as IPWatchdog founder Gene Quinn's story correctly says: A monopoly is defined as "exclusive control of a commodity or service in a particular market ..." i.e., the only party that is selling said commodity or service. That

is not the same as preventing others from making money—which only happens in a legal monopoly, when a company operates as a monopoly under a government mandate.

Patents are not bad business for economies. They often add legitimacy and interest in a new product or service.

Many venture capitalists won't go near an invention unless it has a patent. In a recent survey, 67 percent of venture-backed startups reported that patents were vital for them in securing investment. —Editor

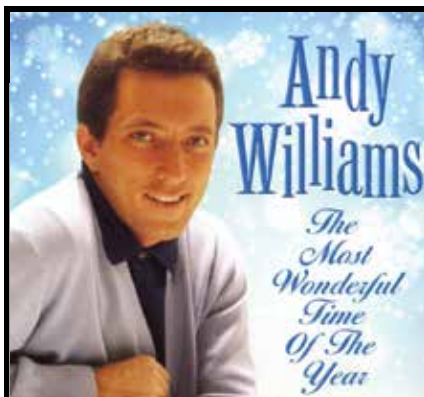
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As the 1963 song says, for many "It's the Most Wonderful Time of the Year." But if you—or even your church—sings, records, streams, or prints songs like "Rudolph the Red-Nosed Reindeer," "Frosty the Snowman" or "Holly Jolly Christmas" (to name a few) without permission, the IP Grinch could muck up more than your holidays.

CHRISTMAS CAROLS WITHOUT PERIL

Many people don't realize that not all Christmas songs, carols and hymns are in the public domain. Some of these tunes, copyrighted and owned by secular music publishers, require licensing or permission.

A few years ago, Ohio State University's University Libraries posted a list of public domain Christmas songs with a brief history of each. On that list:

- "Away in a Manger"
- "Deck the Halls"
- "Jingle Bells"
- "Silent Night"
- "Up on the House Top"
- "Toyland"
- "The Twelve Days of Christmas"
- "We Wish You a Merry Christmas"
- "O Christmas Tree"

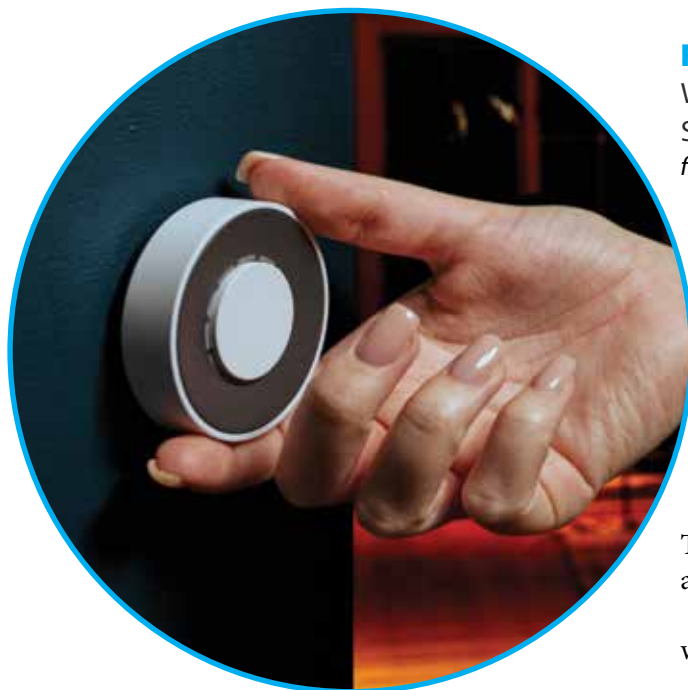
The post says that according to "The Christmas Carol Reader," "Jingle Bells" is the oldest secular Christmas song (1857).

Exzel Music Co. sponsors a "Royalty Free Christmas Music Collection," featuring beautiful classical renditions of songs with more religious overtones. Find it at freemusicpublicdomain.com/royalty-free-christmas-music/

By the way, "It's the Most Wonderful Time of the Year" is apparently not copyrighted, having been used in a lot of advertising and parodies in recent years. Somewhere, Andy Williams is smiling.

See our all-holiday "What Do You Know?" quiz on Page 46.

BRIGHT IDEAS



Flic Twist

WIRELESS DIAL FOR
SMART HOME CONTROL
flic.io

Flic Twist can be used to control smart-enabled home devices such as lights, blinds and audio speakers. Its selector has up to 12 different pre-sets or things to tune.

The device can be mounted almost anywhere with minimum effort. It works on AAA batteries that can last up to two years.

Because it has no microphone, all controls are done by hand. This prevents backers from listening in.

HTTP integrations allow tech-savvy users to utilize Flic Twist to maximum capacity by allowing it to control just about anything that runs an HTTP server.

Flic Twist will retail for 99 euros or approximately \$112, with shipping for crowdfunding Rewards backers set for June.

“Be an innovator, not an imitator.”—AUDREY CARBALLO



IVY Cable

SELF-FOLDING
MAGNETIC CABLE
AND POWER BANK
ivycable.com/pages/ivycable



With magnetic sections and built-in batteries, IVY Cable is an auto-folding charging cable and power bank with an on-board power-storage system. It eliminates cumbersome power banks and tangled cords.

IVY Cable has 3200 mAh capacity but still fits in your pocket. An orange indicator light shows battery status.

Choose from two input types: USB-A or Type-C. Each IVY Cable comes with three adapters: lighting, Type-C and Micro USB. The device is MFi certified.

IVY Cable will retail for \$78. It is to ship to crowdfunding Rewards backers in January.

Eone Switch

ACCESSIBLE TACTILE WATCH

eone-time.com

This inclusively designed magnetic watch allows you to change the watch face using multiple styles to suit your personal preferences for that day. It can be used by sighted, blind or deaf-blind users and features a tactile ring, minute hand and hour hand.

One ball bearing glides around a recessed track on the outer edge of the face, indicating hours, while another circles a track on the top of the face, indicating minutes. Eone timepieces are powered by Swiss Ronda quartz movement and crafted with carefully selected, high-quality materials.

Eone Switch is to be shipped to crowdfunding Rewards backers in February. It has a \$360 retail price.



POSSIBLE DELAYS

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

Pupsule

DOG WASTE PICKUP DEVICE

pupsule.com

Pupsule lets you pick up dog poop with a claw-like device that stores it in a container until you can dispose of it.

To use: Pull out the bag that comes inside the device. Cover the claws with the bag. Then pick up the waste. You can pull the handle as hard or light as you want to regulate how tight the claws shut.

Pupsule stores the poop inside a leak- and smell-proof container that conceals its contents. It picks up from any surface and weighs about as much as the typical smartphone.

One large Pupsule set will retail for \$99. Shipping to crowdfunding Rewards backers is scheduled this month.



Genius on the Danube Delta

ROMANIA PLAYED A KEY ROLE IN MANY REVOLUTIONARY INNOVATION ACHIEVEMENTS **BY REID CREAGER**

ROMANIA—located at the crossroads of central, eastern and southeastern Europe—finds itself at a metaphorical crossroads as well: It's officially considered a developing country that is on the rise economically with a low cost of living, albeit plagued by widespread poverty in addition to political and infrastructure issues.

Given its charming, Old World feel and the fact that it was a Communist country until 1989 with a largely obsolete industrial base, it's ironic that Romania was a significant player in some scientifically sophisticated innovations. These accomplishments, several in the medical field, help fortify its distinction as a developing country.

Here are the crown jewels of innovation from a country that was ruled by a king (Michael) as recently as 1947.

salted water; some impurities were then removed with hydrochloric acid and sodium hydroxide.

Paulescu reportedly published the results four times in a French magazine in 1921.

But according to the site *Insulin to Innovation*, while Paulescu was waiting for approval of his patents, Frederick Banting and Charles Best also isolated insulin at the University of Toronto in the pancreas of dogs and administered it for the first time into a human patient to successfully treat diabetes. Banting and Best were awarded the 1923 Nobel Prize for Physiology and Medicine; many credit them with discovering insulin.

Paulescu's claims of being the first to discover insulin were rejected. One reason could be that many people were loath to recognize a public advocate of fascism and anti-Semitism. His writings contributed to the rise of the fascist Iron Guard movement.

Regardless, insulin is regarded as one of the great medical discoveries ever, saving millions of lives.

Cervical cancer screening test

Invention credit debate continues here.

Georgios Papanikolaou is widely known as the inventor of the Pap smear test, the first widely used screening test for cancer. It is estimated that this screening has prevented hundreds of thousands of cases of cervical cancer in the United States alone.



Nicolae Paulescu
lost out on the
1923 Nobel Prize.

Insulin

Romanian physiologist and politician Nicolae Paulescu is widely credited with this discovery (especially in Romania). He is almost as widely known as the Man Who Could Have Won the Nobel Prize But Didn't.

There are two explanations for this.

Paulescu is said to be the first to publish on the discovery of insulin, which he patented as pancreine because of its role in the pancreas. Pancreine was an extract of bovine pancreas in

According to several published medical reports and journals, Georgios Papanikolaou and Romanian scientist Aurel Babeş discovered the cervical test known as the Pap smear independently and almost simultaneously.



In the late 1910s, while working on sex determination in guinea pigs at Cornell University, Papanikolaou bought a nasal speculum (a device for widening the nostrils for inspection). He used this to examine the vaginas of guinea pigs, collect secretions and spread them on microscope slides. This ultimately led to his first published research on the test for vaginal cancer cells in 1928.

Having a screening test named after him is a strong argument for ownership of the invention. But according to several published medical reports and journals, Papanikolaou and Romanian scientist Aurel Babeş discovered the cervical test known as the Pap smear independently and almost simultaneously, both apparently unaware of the other's discovery.

Babeş' signature contribution to this innovation was a platinum loop used in the test would help determine

whether cancer cells were present. His research was published in 1927. He reportedly was well aware that Papanikolaou received much more attention for the discovery.

To this day, Romania refers to cervical testing as "Méthode Babeş-Papanicolaou," in honor of Babeş.

Anti-aging cream

Anti-aging creams go back more than 2,000 years. Cleopatra is written to have taken baths in donkey milk.

But Ana Aslan, a Romanian biologist and physician, invented an anti-aging cream called Gerovital (the H3 vitamin) in 1952. Its contents include procaine, known for its anti-aging properties; its makers say the formula is scientifically developed to maximize cellular regeneration processes.

John F. Kennedy, Charlie Chaplin and Salvadore Dali were reportedly among her most famous customers.

Gerovital is still available in cream and tablet form. Its makers claim it to be "still the most trusted and most effective GH3 anti-aging therapy available anywhere in the world."

However, the United States Food and Drug Administration bans Gerovital H3 from interstate commerce as an unapproved

Though Ana Aslan's anti-aging cream was never approved by the FDA, it was reportedly used by celebrities including John F. Kennedy.





Petrache Poenaru (above) received a patent for what he called “the endless moveable pen”; the second reaction engine of Alexandru Ciurcu (right) had disastrous results.

drug. Its importation has been prohibited since 1982.

Fountain pen

The elegant fountain pen seems a perfect fit for Romania’s old-time charm.

Petrache Poenaru invented it in 1827—although again, some accounts credit others with the invention. (They include Frenchman M. Bion in 1702 and Azel Stors Lyman in 1848.)

Poenaru received a French patent for what he called “the endless moveable pen,” made from a large swan quill.

According to the site Imperial Transilvania, Poenaru’s pen with ink tank replaced the feathers and pens with metal nib. This ended the problem of scratching the paper and reduced ink leakages.

He also designed the beautiful tri-color Romanian flag.

Reaction engine

Often credited to Romanian inventor/publisher Alexandru Ciurcu and French journalist Just Buisson, this invention was an early predecessor to today’s rocket engine and turbo jet. A reaction engine is defined as one that produces

thrust by expelling reaction mass, per Newton’s third law of motion.

Ciurcu fled Romania after attacking its government and went to Paris. The engine developed by him and his co-inventor, which utilized rocket propulsion, was briefly used to power a boat during a demonstration in August 1886.

Four months later, Ciurcu and Buisson were testing a new second engine when it exploded. Buisson and an assistant were killed.

Ciurcu reportedly survived by swimming ashore. He was charged with murder but found not guilty. ☹



INVENTOR ARCHIVES: DECEMBER



December 19, 1871: Mark Twain was granted the first of his three patents for suspenders, even though he hated them because he found them uncomfortable.

Twain (real name Samuel Clemens) held one of the first suspender-related patents in America. U.S. Patent No. 121,992 described an “improvement in adjustable and detachable straps for garments”—a button-on, adjustable strap that could be used to tighten garments.

“The advantages of such an adjustable and detachable elastic strap are so obvious that they need no explanation,” the patent says.

Eventually, Twain’s invention was used not only for shirts but for underpants and women’s corsets.

2021 IPOEF INVENTOR OF THE YEAR

4 SCIENTISTS HONORED FOR WORK IN
DEVELOPING COVID-19 VACCINES



Katalin Karikó



Uğur Şahin



Özlem Türeci



Drew Weissman

In the context of U.S. pandemic history, vaccines for COVID-19 came very quickly. But behind the scenes, this technology was being developed over several decades.

Scientists Katalin Karikó, Uğur Şahin, Özlem Türeci and Drew Weissman all have long experience working with the mRNA technology used in COVID vaccines. Their roles in the overall positive results of these vaccines resulted in their being honored with the 48th International Property Owners Education Foundation Inventor of the Year Award.

The innovators are two pairs of teammates who have long worked together on mRNA technology. Many scientists believe that unlike DNA, mRNA does not threaten the recipient cell's genomic integrity because it cannot integrate into the chromosome and interrupt resident genes or do other mutational damage.

Şahin and Türeci, who are husband and wife, founded the German company BioNTech. They teamed with Pfizer to develop the first vaccine.

Türeci said in a television interview last year that the company began testing its technology via clinical cancer trials of patients in 2012.

"When the pandemic hit, we had already treated more than 400 cancer patients with mRNA vaccines, including highly personalized ones where each patient would get their unique composition on demand produced of an individualized cancer vaccine. This was the foundation on which we could build and pivot toward COVID-19 vaccine development."

Like other scientists and biochemists, they had knowledge of mRNA for decades. Dr. Karikó learned about it while in graduate school in the 1970s, when Messenger RNA—a newly discovered molecule—was found to have a genetic script that carried DNA instructions to each cell's protein-making machinery.

When Dr. Weissman arrived at the University of Pennsylvania in 1997 (following a fellowship under the supervision of Dr. Anthony Fauci), he and Dr. Karikó began collaborating on using mRNA as the basis for a vaccine. The team had been working with RNA for virtually their entire careers.

Then COVID hit in early 2020. Their technology is licensed to both Pfizer/BioNTech and Moderna.

Earlier this year, the two researchers were also honored with the Lasker clinical medical research award, informally known as America's Nobel Prize.

"It is an honor to award these four individuals with the Inventor of the Year award," IPO Director Jessica Landacre said. "Their dedication to mRNA development has changed the world and impacted the lives of so many during this pandemic." 📧

The IPOEF will sit down with the innovators in a virtual fireside chat during the awards celebration on December 7. Submit questions to be answered by the four by emailing foundation@ipo.org.

Inventor as **Fixer**

MAKING YOUR OWN REPAIRS CAN TEACH YOU ABOUT INVENTING—AND SAVE YOU MONEY **BY JACK LANDER**

I T WAS MY TURN to make breakfast. I popped two slices of Dave's bread into our toaster, pushed down the lever, and it refused to latch and start the heating.

I tried again, pressing harder. It wouldn't cooperate.

No toast that morning. Mary, my wife, said, "It's time for a new toaster." I reluctantly agreed, and searched Amazon. Surprise! Our \$25 toaster we bought five years ago (Mary says 10) still sells for \$25.

Somehow, I resisted. It wasn't the 25 bucks. A voice in my head insisted I fix it.

I turned it upside down on the counter. Out poured enough crumbs to feed our chipmunks and house finches for at least a week. I loosened the front panel and peered inside. Aha! A small circuit board. That might be the culprit.

But I was looking for the latching mechanism, which is no longer mechanical. It consists of an electromagnet and a piece of steel in the interior part of the lever. I cleaned the magnetic surfaces, reassembled—and voila, it latched and heated.

I've been a fixer since I was 9 or 10, and an inventor for nearly that long. The two often fit together.

The mind that solves needs, wants and annoyances is analytical, and should be able to fix many of the household items that most of us own. The exception may be the inventor who comes across a problem in his or her work and devises a novel tool or procedure to solve it.

Such inventions are often successful because they save time and money. But the invention may be a one-time occurrence for the inventor.

The more typical inventor is thinking broadly about problems, not just those that pop up while working.

Opportunities are all around—waiting for us to grasp them, define them clearly and invent solutions. Repairing is a kind of finishing school that not only reveals an occasional invention

opportunity but also provides satisfaction when we are successful. And did I mention it saves money?

Ice on the coils? Not cool

A few months ago, our refrigerator wasn't cooling properly. Maybe it was a leak in the sealed refrigerant system. That sounds like a new refrigerator.

Ugh!

But it could be something simple. I could start by taking off the aluminum panel in the back of the freezer compartment.

Wow. Solid ice on the coils. That suggests the defrost cycle isn't doing its thing. That further suggests that somewhere there is a timer that programs the defrosting. (It seems like I'm tackling something above my pay grade. I should call a repair service.)

But hey, the knob that adjusts the main compartment temperature is right there in front of me. Maybe the timer is in there.

No visible screws. A mirror shows a hole in the bottom of the housing, and there is a hex-head screw in the hole. Fortunately, I own a set of nut drivers. I take out the screw and the housing drops down but stays attached at the back.

Sure enough, there's a little white thing a bit larger than a deck of cards. It unplugs. It has a clear window through which I see gears. I went to the Whirlpool website, looked up the timer for my model, and there it was, the timer I had in my hand.

I ordered it. It arrived. I installed it, and the problem was fixed. I forgot to say that I had put a large pot of nearly boiling water in the freezer compartment, and waited a couple of hours for the ice on the cooling coils to melt.

Don't be intimidated

Now, I'll share with you one great secret for fixing complicated things: It is simply having the courage to try.

Appliances are logical. And even when they have scary circuit boards, if the boards unplug, you don't have to understand how they work. Accept that some genius figured that out for you. Just replace it.

Some time ago, we decided to buy a large flat-screen TV to replace the old picture-tube model. It was fine for a couple of years, and one day it refused to light up. It seemed to me that the power-supply module must be at fault.

It came apart easily. I traced the AC power cord directly to what must be the power module. I had a voltmeter and found that the output of the module was zero.

I ordered one, installed it, and it worked. No ice to fool with that time.

The same thing happened again to our smaller flat-screen. This time I had that smug bearing of an expert and repaired it in record time. It appears that power supplies are the Achilles' heel of TVs.

I haven't mentioned that you can get plenty of help on YouTube. The models shown may not look exactly like yours, but the principles are usually helpful.

Be careful about advice from people who are not experts. Read several of them before you tackle a repair.

A license to spend?

Will fixing things make you a better inventor? I won't guarantee that.

But the more we know about how products are made and how they work, the more confident we become about inventing. And the more we know about trends in design, the better we can perceive future opportunities.

I'm thinking about the electromagnetic latch in my toaster. Years ago, the mechanical latch depended on heating a bimetal lever that got hot from the internal heat, bent, and released the latch. The toast popped up.

Under most conditions the heating and operating of the bimetal was approximately the same each time the toaster was used. But if you attempted to toast again soon after use, the bimetal was still warm and released the latch sooner, resulting in a lighter toasting.



The more we know about how products are made and how they work, the more confident we become about inventing.

The electromagnetic latching in my toaster was immune to the internal heating. It was timed electronically by the circuit board and provided consistent timing regardless of how soon you toasted again. I hope the inventor patented it and made some money.

As I said, another advantage to being an inventor/fixer is the money you save.

You can look your spouse in the eye when you tell him or her that you're going to spend \$700 on a patent search, pointing out the \$1,100 you saved by not buying a new refrigerator. It worked for me. 🍷

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.





Make Influencers Work for You

HOW TO FIND THE RIGHT ONE, CHOOSE THE BEST COLLABORATION, AND GET YOUR BEST DEAL **BY ELIZABETH BREEDLOVE**

IN RECENT YEARS, brands big and small have begun to rely heavily on influencer marketing to promote their businesses or inventions, reach new people in their target audience, and boost sales.

Influencer marketing is a form of social media marketing that relies on the promotion of products or brands by someone with a large or niche following on a social platform who is seen as an expert in their field, niche, category or industry, or as someone with social influence. In other words, an influencer is someone who influences his or her social following to make a purchase or take some other action.

While perhaps the first thing you think of when you hear the term “influencer” is a celebrity or someone with similar social clout and a massive following online, that’s not always the case.

Influencers can range from the person with a small but very devoted niche following to mega-influencers with more than a million followers. And bigger followings don’t always mean better results, as we’ll discuss later.

Influencers provide value to their followers by providing helpful content such as tutorials, product reviews, educational materials and more. For brands, they are an important marketing partner.

Because they are seen as trustworthy experts, if they tell their followers how much they love your company or product, their followers are more likely to purchase your product or engage with your brand as well.

Finding influencers

There is more than one way to begin your influencer search, and many of these methods are paid. Influencing is a lucrative industry, and many influencers work with agencies who manage their collaborations and partnerships.

Additionally, a variety of tools and other software can be used to find and analyze influencers. However, as inventors are often on a tight budget, I’ve outlined some of the best free ways to begin your influencer search.

An easy place to start is looking for brand mentions. Who is already posting about your brand, product or invention?

These people are familiar with you, likely have an organic interest in you, and will almost certainly be able to promote you in a way that seems genuine and not contrived.

Among other ways to find and identify influencers:

- Search for users using hashtags relevant to your invention. Remember, though, that many users use hashtags, so using them doesn't automatically make them a good influencer. You still need to vet potential influencers.
- Search for users mentioning or tagging your competitor's products, or other products in your vertical. You probably won't want to poach a competitor's influencer, but you may be able to find influencers who would be a good fit this way.
- Some industries find luck working with influencers on YouTube. You can search keywords related to your product or industry on YouTube in search of relevant influencers.
- Post a call for influencers on your website and your own social channels. Encourage people who may be a good fit to apply to be a brand partner.

Influencer partnerships

Brand engagements can look vastly different from brand to brand and influencer to influencer. Some of the most common types of collaborations:

Product seeding is when a brand sends a gift or PR package to an influencer in hopes he or she will share it with his or her audience. Presentation is important here; you can't just send a product in a recycled Amazon box.

Instead, consider the entire unboxing experience. Use branded packaging inside and out, and consider including a handwritten note. Create an entire experience around your product.

Sponsored content is any type of content for which you pay. This content can be created by the influencer or by the brand, though often it's more expensive to have the influencer create it. Sponsored content often includes discount

codes that the influencer's followers can use to get the product at a lower cost.

Giveaways are when a brand partners with an influencer to give away one (or more) of the influencer's products. The influencer makes a post, including instructions on how audience members can enter to win. Typically, this includes following both your accounts and the influencer's, liking the post, or something similar.

Brand takeovers are when the influencer "takes over" the brand's social media account(s) for the day. This form of cross-promotion is enticing to both parties because it brings followers from the influencer to the brand and vice-versa.

Brand ambassadors is the term for when influencers form long-term relationships with the brand. If you choose to bring on influencers as your brand ambassadors, they'll promote you repeatedly over time.

Negotiating pricing

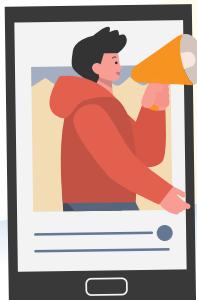
Once you decide what types of content you'd like to work with influencers on, you'll need to think about and negotiate pricing. Influencers tend to use several different pricing models.

Cost per engagement is when brands pay per engagement (likes, comments, etc.) on a piece of content. A *flat rate* is when the brand pays a set fee for the whole campaign, or a price for post. *Pay-per-click* is exactly what it sounds like—when the brand pays the influencer for each click to his or her website. *Pay-per-conversion* is a typical commission structure in which the influencer makes a percentage of each sale he or she facilitates.

Many times, influencers prefer to operate on a hybrid model—charging a flat rate per post as well as a commission, for example. Regardless of what method you choose, you'll want to set up referral links and/or coupons to track sales and measure your ROI, which brings us to ...

Estimating your ROI

Before you begin working with an influencer, do some simple calculations to estimate your ROI



An influencer does not have to be a celebrity, or someone with similar social clout and a massive following online.



(return on investment) and make sure a partnership is a good investment.

Consider:

- How many views does the influencer get per piece of content, on average?
- Of those views, how many tend to click through to a website?
- What is your site's conversion rate?
- How much is your average sale?

Using these numbers, you can estimate how much you'll make in sales from the engagement. Based on the price, you can determine whether it's a good place to spend your marketing dollars.

Working with a mega-influencer won't always get you the best ROI. You may be able to pay a smaller influencer with a more engaged audience less money for a better ROI.

Either way, if you do choose to engage with an influencer, be sure you are tracking everything so you know whether you're getting a good ROI. 📊

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.



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Early Investments

LET THESE 3 STAGES BE YOUR GUIDE AS YOUR INVENTION IDEA BLOSSOMS **BY DON DEBELAK**

YOU CAN finalize your invention concept, create a prototype, execute a patent strategy and make initial contacts in your market during the stage of early investments. Often inventors like to fund these steps alone, but I believe it's worthwhile to get people on your team early.

Early evaluation: This step typically involves a preliminary patent search, some initial market analysis, verification of the idea's premise and possibly attending trade shows to see other products and meet industry people.

Before you start, consider a provisional patent application to give you patent-pending status. Although many inventors submit PPAs themselves, you will probably be better off with a patent professional. It is better to have patent-pending status than to ask people to sign nondisclosure agreements.

Also before you start attending events, you should prepare brochures with contact information.

This stage is typically self-funded. Your goal is to evaluate your idea, determine whether it has potential, and gather information to create a presentation for potential investors about your idea and its potential in the market.

The costs for this stage usually run less than \$1,000 and can be funded by savings, credit cards or the sale of personal property.

Feeling out the market: Further investigate market potential by attending industry events and association meetings, as well as subscribing to industry literature. Use the presentation you prepared in the early evaluation stage to explain your product to industry contacts and potential investors.

This is a great stage to take on your first investors.

You may not need them yet—this stage often costs less than \$2,500—but if you line up three investors to each give \$500, you will have some

funds to help you and three more people interested in your success and possibly more inclined to invest later.

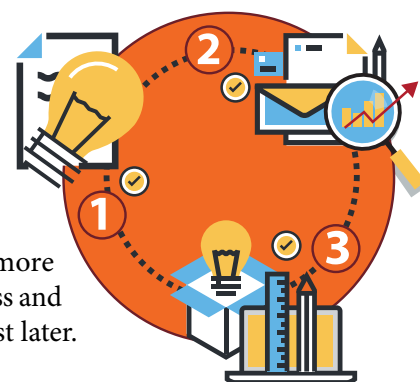
Models, prototypes and patents: Once you are confident that your product has a chance to sell, make a quality prototype to both verify that your product will actually work as you envision it and to prepare for the next stages of your product's introduction.

If your product works well as you envisioned, it is time to implement your patent strategy. Make sure your product is right before applying for a patent; otherwise, any changes you make could take your product outside of your patent protection.

With your quality prototype, also create packaging and another brochure using the product's picture. With these tools, you can attempt to land a licensing, private-label or join-venture agreement.

This stage can be expensive. Patents alone can cost from \$5,000 and up. But if you are looking into starting your own company, this stage is not expensive compared to setting up manufacturing.

If you have brought on some investors, you should approach them about investing in this again. Another possible source of funding for prototypes is from manufacturers. If you have met some manufacturing contacts in the previous step, you can sometimes set up a deal with them to have their in-house engineering staff produce the prototype in return for you using them as a contract manufacturer when you start production. 📧



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



Meeting in the Middle

360-DEGREE VIDEOCONFERENCING DEVICE SUPPORTS
STRONGER WORKPLACE COLLABORATION **BY JEREMY LOSAW**

RAPHAËL BRINER was becoming intimately familiar with feeling distant. The founder and CEO of social media company Hyper-week, he frequently videoconferenced with teams between Brussels and Geneva and was not getting the collaboration and performance he wanted from them.

“I was always feeling distant. I was feeling I was having a leadership problem, but in fact I had a technical problem,” he recalls.

Briner left that business before the pandemic but anticipated that businesses will have to adopt hybrid working as employees get used to work from home.

Existing video conferencing systems for meeting rooms helps remote employees, but it is not an ideal solution. There are problems with video and sound quality; eye contact is reduced or non-existent; and often people have bad posture while hunched over a screen.

Frequent videoconferencing has also led to an issue for team members in the office, who tend to take their laptops into private rooms and isolate themselves as if they were at home. Briner says this does little to foster collaboration.

“Workplace managers are like, ‘Oh, my God. Why come to HQ if people are going to isolate themselves?’” Briner says.

In May 2020, observing the impact of COVID-19 on remote

work, he designed KOH for a unique use case: telepresence.

KOH is a 360-degree video conferencing device that supports high-quality collaboration for the hybrid workplace. Its circular design features a full-circumference wraparound screen that displays everyone working remotely, putting them at the center of the meeting and encouraging more natural conversations. This puts remote workers on an equal footing with physical participants in meeting rooms, stand-ups and training.

KOH has four cameras at 90-degree intervals around the device to show the in-office team, and high-definition audio for optimum sound quality. It supports all major video conferencing tools, including MS Teams, Webex, Google Meet and Zoom. The device will be available in the second quarter of 2022.

Mockups and production

Before taking on any of the technical challenges with developing an electronic device, Briner wanted to make sure the cylindrical screen concept would work in an office.

He and his design team took a stepwise approach to KOH’s development, making a 3D-printed mockup of the device with faces printed on it as a concept model to see whether the faces were clearly seen at 2 meters away.



“Workplace managers are like, ‘Oh, my God. Why come to HQ if people are going to isolate themselves?’” —RAPHAËL BRINER

Once that was proven, they found a flex display to test the content—validating the cameras, positioning and angles, and verifying that the distortion on the edges of the view of the screen was not distracting.

The device was equipped with high-power computing and graphics modules to process and cast the four high-resolution streams.

Once the layout and design of the device was locked in, his team focused on ramping up production.

Although many electronic devices are made in low-cost facilities in Asia, he opted to do it in his native Switzerland despite some of the highest labor rates in the world.

“We don’t have a miniaturization challenge. The device itself is quite big enough to put in all of the components without any kind of stress. The cost to do the production was nothing in comparison with the cost of the components. Moreover, we can go farther on quality and security tests.”

The assembly is fairly straightforward, so they can start assembly lines anywhere in the world (with priority given to the USA). This allows them to make devices close to the end user and keep logistics costs low.

Official launch in February

Because KOH is in the final stages of refinement before a true mass-production run, it has only been soft launched to date. The product will be officially launched at the Integrated Systems Europe show in Barcelona in February.

Briner admits that the \$7,999 price may deter startups and smaller companies from using it, so he is focusing his marketing efforts on mid-to-large-size companies. These firms typically have large teams and a strong value proposition for a solution that allows for highly collaborative meetings.

He is confident that KOH will provide a greater depth of interaction for these teams and allow them to transition and work effectively in the hybrid work paradigm. 📺

Details: getkoh.com

Below: KOH brings participants up close and personal to encourage a more interactive conference experience.

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/.



Cubes Idea Heats Up

FOOD-GRADE SILICONE TRAY ALLOWS FOR FREEZING OF FOOD IN PORTIONED AMOUNTS **BY EDITH G. TOLCHIN**

THIS DECEPTIVELY simple invention, by Jake and Michelle Sendowski of Los Angeles, has many practical uses for foodies and time-strapped parents. Souper Cubes® is great for freezing baby foods, or for batches of soups or stews that can be easily thawed and/or microwaved into a quick meal.

Edith G. Tolchin (EGT): What are your backgrounds that led to this invention?

Michelle Sendowski (MS): Jacob has a Ph.D. in electrical engineering and previously worked in Silicon Valley. I am finishing my Ph.D. in higher education and previously worked in high schools and colleges. Back in 2017, we had a conversation about making and freezing stock that highlighted the need for something like Souper Cubes to solve what we felt was a problem in food storage.

EGT: How do Souper Cubes work?

MS: Souper Cubes are a large, steel-reinforced, food-grade silicone freezing tray that includes fill lines to allow the user to freeze food in measured, portioned amounts. To use, after cooking your food, add it into the compartments of the tray up to the desired fill line, pop on the lid, and place in the freezer.

Once it's frozen, you can leave the food in the tray for storage, or simply press on the bottom of each compartment in the tray to release the frozen cube of food. It's that easy! They clean up easily in the dishwasher and can even be used for baking because they are oven safe up to 415 degrees F.

EGT: Tell us about your "aha!" moment.

MS: We did a lot of thinking about the design initially, what elements were a must for us (e.g., the steel wire reinforcement in the rim) and



“We didn’t have a big budget to make multiple molds. So, for the one-cup tray we went with our instinct on the design. It was a hit.” —MICHELLE SENDOWSKI



Michelle and Jake Sendowski's Souper Cubes was called "the hero product" of the season on "Shark Tank."

what were not. We also spent time thinking about how the tray would fit in the freezer and the dimensions of the cubes.

We didn't have a big budget to make multiple molds. So, for the one-cup tray we went with our instinct on the design. It was a hit. We never expected this product to be more than a fun side project.

EGT: Did you land a deal on "Shark Tank"?

MS: The "Shark Tank" experience was fantastic for us! We had a lot of fun pitching to the Sharks and a great conversation about the business and product line that we have built.

To come away from the "Tank" with an investment deal from fellow inventor Lori Greiner was a dream come true. We couldn't have asked for a better partner to join our team. It also meant so much to see all the support and enthusiasm from our community of customers.

(Editor's note: Greiner called Souper Cubes "the hero product I have seen this season thus far" and offered \$400,000 for 5 percent equity. The couple accepted.)

EGT: Have sales increased since "Shark Tank"?

MS: "Shark Tank" had a profound impact on sales. The amount of exposure your product and brand get in front of such a large audience is massive.

EGT: Please share your experience in manufacturing a food-grade item overseas. Have you done safety testing to be sure no dangerous chemicals are used in the components?

MS: Any manufacturing requires a lot of trust and good relationships with your manufacturing partners.

Our third founder in the business, Sasan, has many years of experience in manufacturing and

sourcing. Because Sasan lives near our factories, he's able to visit them multiple times per week to check in on the production and form relationships with the factory owners and managers. We have visited the factories ourselves and met with the owners, managers, and workers who make our products.

The quality of the products that we make and sell are of the utmost importance to us. We shared videos of our factory trip to our Instagram account to show our customers and followers where and how their Souper Cubes are made.

We have our products regularly tested by a third-party agency to make sure that they exceed the USFDA standards for food contact safety, and that they also meet the California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act) standards.

EGT: Do you have a patent for Souper Cubes?

MS: We utilized the services of a patent lawyer to first run a patent analysis search for us to help us better understand if we could patent the trays, and whether we'd need to file a design or utility patent. From there, they went ahead and submitted the patent application on our behalf.

EGT: Where are you selling?

MS: We sell on soupercubes.com, Amazon, and through a variety of retail partners (including Williams Sonoma, Sur la Table and Dillards).

EGT: What problems, if any, have you had in developing this invention?

MS: Development of the invention itself hasn't presented many problems in itself, as it's pretty simple. But making a real business based on the product has presented all sorts of

challenges—for example, forecasting demand and maintaining enough inventory.

We've run out of stock a good number of times, but we are getting better. More recently, due to COVID-19, delays in shipping have also made it more difficult to accurately predict the amount of time it takes to bring our goods to the USA and ultimately to the customers.

EGT: Any new products on the horizon?

MS: Yes! We will be releasing a ceramic baking dish designed to bake our two-cup cubes in the oven—perfect for dishes like casseroles, shepherd's pie and fruit crisps.

EGT: What guidance can you provide for inventors based on your experiences?

MS: Act as if your invention will be a success from the beginning. Get all your legal, financial and other documents in order so that you can protect your invention. Think about the market




you are solving a problem for and try to anticipate their other needs and interests to help guide your journey to market. 📌

Details: hello@soupercubes.com

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





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This Will Be a **Big Deal**

N.C. INVENTOR TO COMPETE ON NATIONAL SHOW IN DECEMBER

SHAWN MOYE and his sports-training product won't be on "Shark Tank"—at least, not for now. But hey. One national TV show at a time.

Moye was online earlier this year looking for the application to submit his E-Sports Trainer to "Shark Tank" when he noticed a new show called "America's Big Deal" was looking for inventors. He was selected as a participant and said he will showcase his patented invention—featured in the June 2021 *Inventors Digest*—December 9 at 9 p.m. Eastern Time on the USA Network.

"America's Big Deal" is a live shopping competition series produced by renowned inventor and entrepreneur Joy Mangano, who invented the Miracle Mop.

"I've been blessed with an opportunity of a lifetime," said Moye, whose Moye Group is based in Huntersville, N.C. "I need everyone to watch the show and buy my product.

"The more viewers plus sales gets me closer to establishing a partnership with Macy's, HSN, QVC, Lowe's and more. The inventor with the most sales by the end of the live show takes home the victory!"

Sherrill Mosee, a mother and former electrical engineer from Philadelphia, won \$100,000 on the show's premiere in October.

The E-Sports Trainer is ergonomically designed to help the user develop the correct muscle memory to maintain proper form when learning how to play a sport. The device uses advanced technology to monitor, track, and correct your performance in real time.

Currently the trainer is for basketball, but more sports versions are coming.

Moye said he went through four rounds of filming to get to the show. He was heartened by the reviews his product received.

"There was the initial submission tape, a few Zoom calls, and then a flight out to New

Jersey for a daylong, face-to-face interview with the production team," he said. "It was a surreal experience!

"What was interesting about the filming was all the amazing feedback about my product from the producers. I loved hearing, 'I wish I had this growing up' and 'Sports training is expensive, so this is a great option.'"

"All my hard work, the late nights and long days all paid off. I felt justified."

A new version of the E-Sports Trainer was going to be released in October—until the opportunity to be on the show came along.

"So now it will be released on December 9, when my episode airs. I have more being manufactured as we speak ... I also have a special offer when I pitch my product to the world, so it would behoove you to tune in to hear what it is. It is going to be great!"

Moye advises inventors looking for TV exposure to "proactively look around and search the web, especially while the current season is being aired. Shows are always looking for the next season, so get your applications in as often and as early as possible." 📺

—Reid Creager

Shawn Moye, inventor of the E-Sports Trainer, learned about "America's Big Deal" while looking up an application to be on another entrepreneurial national TV show.





WE MEET AGAIN

IN-PERSON TRADE
SHOWS ARE
BACK—WITH NEW
ENERGY, NEW
HOPE AND NEW
COVID RULES

BY REID CREAGER

EIGHTY PERCENT OF LIFE IS SHOWING UP.”

Regardless of who coined the adage, it’s right on the money for trade shows. In an attempt to maintain as much normalcy as possible during the height of COVID-19, these events went all-virtual in 2020 and most of 2021.

But the excitement and intangible benefits of face-to-face connections are a big part of what makes trade shows fully successful.

So when the National Hardware Show returned in-person at the Las Vegas Convention Center for its 75th-edition event October 21-23, the relief and anticipation were palpable. It was one of the first major trade shows to return to normal business.

The NHS, which added a year-round, digital component in 2021, attracted 690 exhibitors (including 259 new exhibitors), 225 featured products and 97 inventors. Notable exhibitors included Stanley, Black & Decker, MTD, Traeger, Ukiah, Flex Seal and Costco.

Despite lingering hesitations connected to COVID, the show reported 36 percent of attendees were first-time visitors.

“We are grateful for all exhibitors, attendees, staff and media who made this show possible and successful,” said Beth Casson, the National Hardware Show’s event leader. “Despite a smaller footprint, we made important investments this year to ensure NHS remains the top destination for industry members to make meaningful connections and celebrate successes for years to come.”

CES? YES

Shows like the NHS set the stage for one of the most widely celebrated and covered trade shows in the world—the Consumer Electronics Show in Las Vegas. Like the National Hardware Show, CES was all-virtual in 2021 as COVID restrictions were in full force around the world.

The 2022, January 3-7 at the Mandalay Bay Convention Center in Las Vegas, is arguably the





**If you want to be seen,
many say the Consumer
Electronics Show in Las
Vegas is *the* show.**

CES®

world's biggest showcase of new technology. It will feature more than 1,600 companies displaying and demonstrating the latest innovation in digital health, food tech, automotive tech, NFTs, gaming, smart home and more. Google, GM and Warner Media will be among the high-profile exhibitors.

All attendees and exhibitors must provide proof of COVID vaccination. CES will use CLEAR to administer proof of vaccination for U.S.-based attendees. CLEAR's free mobile app and Health Pass feature connect a user's identity to his or her COVID-19 vaccination status.

The show has initiated many health protocols for the 2022 event; its website includes a full page detailing those actions. For more, go to ces.tech/Logistics/Health-Protocols.aspx.

Even though C1ES is invitation only, it bulges with attendees, exhibitors and media. "The floor is buzzing with activity from show open to close, with exhibitors barely getting a chance to grab lunch. They are guaranteed to go back to the hotel room with a sore throat from the endless pitching," says Enventys Partners engineering director Jeremy Losaw.

"The camaraderie between the exhibitors is also great to experience. Everyone is willing to help lend a hand or equipment to fix prototypes, or share a water or beer at the close of the show."

TOP 10

Here are the 10 biggest U.S. trade shows based on attendance, according to Corporate Display Specialties. Although the list is heavy on cars, these shows typically feature the latest in cutting-edge design and innovation.

- | | |
|---|--|
| 1. New York International Auto Show | 7. Philadelphia International Auto Show |
| 2. Washington Auto Show | 8. Automotive Aftermarket Products Expo (AAPEX) |
| 3. North American International Auto Show (NAIAS) | 9. International Consumer Electronics Show (CES) |
| 4. Airventure Oshkosh | 10. Miami International Boat Show |
| 5. Dallas Auto Show | |
| 6. National Farm Machinery Show | |



TIPS OF THE TRADES

FROM REGULAR *INVENTORS DIGEST* CONTRIBUTORS

Losaw says CES is the “must-attend show of the year for anyone in the consumer product industry. It is where the bleeding edge technology (tech that is so new, sometimes it has not even been fully tested) comes to showcase their best and brightest, and where startups can mingle with the biggest companies on the planet.”

If you want to be seen, many say CES is *the* trade show.

“The media exposure you get is second to none, with countless media groups on hand to unearth the gems of the show. It is a great PR opportunity if you are about to launch a crowd-funding campaign,” Losaw says.

“The feedback from showgoers is invaluable and can help guide decisions on the product’s feature set. You get a chance to speak to potential licensees or manufacturers who can help take the program to the next level, and you just never know who you are going to meet who can transform the trajectory of your company.”

Losaw’s first CES was in 2017. Since then, he has brought six different startups to showcase

Edie Tolchin

Make sure you bring:

Your prototype. Show attendees are not shy about giving their opinions on the features of new products. I have found that CAD drawings and/or videos are not as effective as prototypes, but they can be a useful supplement.

Sell-sheet. This is your sales pitch on a single sheet of paper. This and any other handout should look at aesthetically pleasing as possible. (Editor’s note: See Jack Lander’s sell-sheet primer in the December 2016 issue of *Inventors Digest*.)

Packaging samples. A big part of a product’s appeal is how it will look on a store shelf. Give your prospective buyers an idea by providing these.

- Participate in seminars and panel evaluations before the show floor opens. You can get ideas on aspects of developing, publicizing, marketing and selling your idea.
- Strive to make your booth unique—even considering a fun gimmick that would go well with your invention.
- Walk the show floor for an hour or so while your assistant watches your booth, so you can get ideas on how to better exhibit your invention.
- Evening, after-show functions can sometimes be the best networking opportunities. Many on hand will be more relaxed and less inhibited about providing information and opinions about your invention than they might otherwise be.





The PGA Merchandise Show, National Hardware Show and Consumer Electronics Show have returned to an in-person format.

their products. No. 7 will be in January.

His favorite area of the show is the renowned Eureka Park, a hub for startups. “The most innovative products and concepts are found here,” he says.

At Eureka Park in the Venetian Expo (formerly the Sands Expo), each startup company and some university projects are given the same 10-by-10-foot-size booths arranged in long rows on the show floor. Losaw says the uniform-size booths “democratize” the space so all exhibitors are on the same footing, regardless of financial backing.

Caution still prevails

Despite CES’s numerous health protocols, not every trade show is following suit in a world where vaccination is still optional in many places—though increasingly mandated.

Another major invitation-only event to occur in January, the PGA Merchandise Show, announced on October 25 that the 2022 event will be held in person January 25-28 at the Orange County Convention Center and Orange County National Golf Center and

KA-CHING!

Longtime inventor and *Inventors Digest* columnist Jack Lander fondly recalls one of his trade show experiences.

“I had just self-published my book, ‘How to Finance Your Invention.’ My hope was to find a traditional publisher.

“I looked over the program for the American Booksellers Association and found two publishers that might be interested, Nolo and Ten Speed Press. I attended the show at McCormick Place in Chicago, visited the Nolo and Ten Speed booths, talked with the acquisitions editors, and left each a copy of my new book.

“I waited patiently by my phone for about two weeks and phoned Nolo to determine if they were interested.

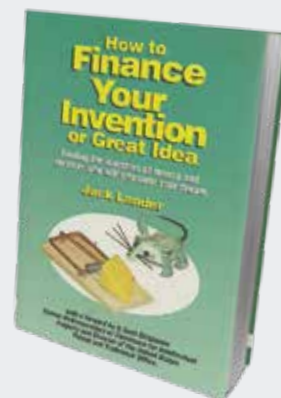
“Oh, yes, we want your book.’ And shortly thereafter, I received a check for several thousand dollars. The book sold out its first printing, but Nolo decided against a second printing.

“A few days after Nolo’s call, Ten Speed Press called to say they wanted it.”

Lander could have ended his trade show tales here, but balance and realism dictated otherwise.

“My next trade show adventure was a secure head-mounting invention for persons who sleep with a nasal cannula (a device used to deliver supplemental oxygen or increased airflow to a person needing respiratory help). Again, I easily connected with a VP of marketing and began negotiations at the company’s headquarters. The deal eventually fell through for reasons I never discovered.

“But it is the connecting that counts. You can’t win them all.”





TIPS OF THE TRADES

FROM REGULAR *INVENTORS DIGEST* CONTRIBUTORS



Don Debelak

Many trade shows allow you to attend if you tell them you are considering being an exhibitor the following year. Inventors should walk around the show and meet other people who have smaller booths; many will be inventors who can tell you about how they were able to start sales, and you can also meet many manufacturers' reps who might represent your product.

Ask the person or people at the booth if they are company employees or manufacturer's representatives. If they are company employees, ask if they use representatives. If so, ask if the company posts a list on its website. Sometimes even if the company doesn't, the person will tell you how to obtain the list of their reps.

If the person isn't busy, tell him or her you have a new product idea you hope to exhibit in the next year. If the person is a rep, ask if he or she would look at your product when it becomes available. Tell the person you might like to sell your product through that company and see if he or she might be interested in reviewing the product when it is available.

- I've found it turns off people if an inventor asks a company whether it is interested in licensing an idea. Maybe this is because companies have heard this many times, and most of those inventors seldom deliver a saleable product—or they try to get a license with just an idea and not a worked-out product or prototype. It is better to just say you might be looking for a marketing partner.
- If people aren't busy, see if they will talk about any of the products that might be competitive to yours. Also, ask about what other new products have been introduced in the market recently, and how they were marketed. Get the name of the small companies that have successfully introduced new products and be sure to visit their booths.
- The best times to "work the floor" are the few hours after the show opens and the last two hours of the day. Typically, booths aren't very busy then.
- Usually, shows have tables for six to 10 people by the food venues. People come and sit there and eat their lunch or have a break. If you just sit at a table and wait for others to join you, you'll have a chance to meet people and ask about tips for launching your product. I've often received as much information at the lunch tables as I have by working the floor.

Lodge in Orlando, Florida. The show's website (pga.com) listed no vaccination requirements as the December *Inventors Digest* went to publication. Virtual show content, available on demand, will be offered.

PGA President of America Jim Richerson expects that like the National Hardware Show, decreased attendance is expected because some people still won't travel.

Uncertainty about travel—and, consequently, holding in-person events—continues around the world.

Eventseye.com, which lists scheduled worldwide trade shows and associated events in 2022, consisted of 10,423 events as of November 13. Of that total, 3,974 were scheduled in the late-year months of September, October and November—38 percent of all events.

This runs counter to the usual trend of most shows being scheduled for the mid-year months and is an indication that show organizers are still hedging their bets.

For a comprehensive list of trade shows—from the Consumer Electronics Show to the 2022 Dakota Farm Show—visit eventsinamerica.com/events/trade-shows/2022, which at this writing had more than 1,900 entries. 📍

INTERNATIONAL JAMES DYSON AWARD

3 WINNERS NAMED FOR THE FIRST TIME;
INVENTIONS ADDRESS
GLAUCOMA, PLASTIC WASTE,
STABBING VICTIMS

With a record number of 2021 International James Dyson Award entries considered by the award's namesake, he decided three wasn't a crowd. It was a necessity.

Dyson chose three global winners for the first time in the history of the award, each receiving \$40,000 in prize money to support the next stages of their inventions.

"I enjoy seeing the enthusiasm with which young people tackle the world's problems using good design, engineering and science," he said. "So promising were this year's entries that we've awarded a third prize, focused on medical invention.

"Commercializing an idea is very hard. I hope that the awareness that the award drives, as well as the financial support it provides, will give these ideas a springboard to success."

The three winners:



HOPES (*International Award category*)

National University of Singapore students Kelu Yu, Si Li and David Lee created this wearable, biomedical device for pain-free, at-home eye pressure testing that opens access to glaucoma testing.

The device was inspired after Yu's father was diagnosed with glaucoma. While witnessing his discomfort and multiple hospital visits, she realized there is a global need for a less invasive and more accessible method for Intraocular Pressure (IOP) monitoring.

HOPES (Home eye Pressure E-skin Sensor) is powered by patent-pending sensor technology and artificial intelligence. The device is convenient for users to frequently self-monitor IOP.

After creating a profile in the app, the user wears the HOPES glove with the sensor placed at the fingertip, pressing this against the center of the eyelid. The fingertip employs a unique sensor architecture that captures dynamic pressure information of the user's eye with sub-millisecond precision. The captured signals are processed by machine-learning algorithms to continuously and accurately compute users' IOP.

Data are transmitted via Bluetooth to paired devices or uploaded to the Cloud to be accessed remotely by clinicians. The app prompts users with easy-to-read measurement history and direct links to health care systems, allowing them to seek medical help to minimize future symptoms.

The team plans to collaborate with clinicians at the National University Hospital to collect and analyze patients' eye pressure data for training the device's machine-learning mode.

“Commercializing an idea is very hard. I hope that the awareness that the award drives, as well as the financial support it provides, will give these ideas a springboard to success.” —JAMES DYSON



Plastic Scanner (*Sustainability Award category*)

This low-cost, handheld device to identify plastic for recycling was invented by Jerry de Vos from Delft University of Technology in The Netherlands.

When held against plastic, Plastic Scanner tells the user which materials it's made from, using infrared light to detect plastic components. The scanner is also fully open-source hardware, so anyone can assemble the breakout board and embed the electronics into a handheld device.

Open source welcomes feedback and improvements from experts. The project will continuously improve as more people recycle plastic around the world.

De Vos gathered a team of friends specializing in embedded systems and machine learning to support his creation of new prototypes and pilot the scanner in both industry and low-resource contexts. Long term, his goal is to make the project sustain itself with DIY versions of the scanner while enriching open-source documentation to make it easier for others to get involved.

REACT (*Medical Award category*)

Joseph Bentley from Loughborough University in Leicestershire, England, invented this device (Rapid Emergency Actuating Tamponade) to reduce catastrophic blood loss from a knife wound.

Current advice for treating stab wounds is to never remove the knife object from the wound if it is still in place, because the object is applying internal pressure to the wound site while filling the cavity

and preventing internal bleeding. Bentley's concept is based on the same principle: The implantable medical-grade silicone balloon tamponade would be inserted into the wound tract by a first responder.

The actuator device is connected to the tamponade valve, and the user selects the wound location on the device interface. Squeezing the trigger on the actuator starts the automated inflation sequence, and the tamponade is inflated to a defined pressure based on the wound location in an attempt to stem the bleeding. 📌



THE JAMES DYSON AWARD, which attracted more than 2,000 entries worldwide this year, has now given over \$1 million in prize money to more than 250 inventions from young engineers and scientists in 28 countries around the world.

Candidates enter through an online application form via the James Dyson Award website (jamesdysonaward.org). Entries open again on March 16, 2022.

Entrants should concisely explain what their invention is, how it works, and their development process. The best entries solve a real problem, are clearly explained, show iterative development, provide evidence of physical prototyping, and have supporting imagery and a video.

Working With Wood

YOUR PRIMER ON THE DIFFERENT VARIETIES, AND HOW TO FORM THEM INTO PROTOTYPES **BY JEREMY LOSAW**

WOOD IS AN UNDERRATED prototyping material that is ubiquitous in the building industry. It doesn't often show up in consumer goods, but it is a great material for building prototypes of all kinds.

Wood is easy to find, is relatively cheap, and can be cut and formed quickly and easily. The tools to cut and shape are inexpensive and accessible to even the most novice prototypers.

Here is a look at the different types of wood and the techniques to make them into prototypes.

Types

There are three main categories of wood—soft, hard and engineered.

Soft woods come from needle-bearing trees like pine and are often used for structural shapes including 2-by-4s.

Hard woods are processed from deciduous, leaf-bearing trees like maple. They are often used for furniture or decorative applications.

Engineered woods are products like plywood, particle board and OSB (oriented strand board). These products are manufactured using wood pieces and other ingredients to yield boards with useful properties such as water resistance or directional stiffness. They can also

be made into large panels that would be difficult or impossible to find in nature.

For most prototyping applications, soft wood and engineered wood are the right choice. They are most common to find in big-box stores and come in standard sizes. They tend to be less expensive than hard wood.

You rarely need the attractive grain patterns for which hard

woods are known. The exception is that some hardwoods, like birch, are used to make plywood panels that are particularly good for laser cutting.

Ways to Cut Wood

Saw. This is the easiest way to process wood. There are many different types of saws, all useful in different situations.

For rough and quick prototyping of pieces with a small cross-section, a hand saw and miter box work just fine. It takes just a minute or so to cut through a 2-by-4, and the miter box allows you to get square and relatively precise angle cuts.

When you need more horsepower, the table saw is the first step up. They are great for ripping long pieces or rough cutting blanks and work very quickly.

Jigsaws are not as powerful, but they are useful for cutting more intricate shapes. Their thinner blades allow you to maneuver the saw around curves and tight shapes.

No matter which saw you use, note that the shapes you cut from them will not be accurate to 1/1000 of an inch, so you need to design and plan for a wider tolerance than you would for machined metal parts.

Lathe/mill. These machine tools are great options to make parts from wood. A classic use case is to turn spindles on a lathe that can be used for decorative railings and balustrades.

However, any round shape, small or large, can be made on a lathe. It is ideal to have a lathe that is designed for wood turning, as well as a suite of cutting tools.

Mills can be used to make wood parts too. Endmills make short work of cutting through wood; they allow for precise cutting of different shapes and hole locations.

The natural grain on the pine 2-by-4 contrasts the puzzled-together tapestry of the OSB.



The three main categories of wood are soft, hard and engineered.

Note that because wood is absorbent, you should clean and lubricate the mill thoroughly after cutting to avoid starving the machine of lubrication.

CNC (computer-controlled) lathes and mills are also great for cutting wood if you have access to them and can make the work even easier.

Laser cutter. This is my favorite tool to prototype with wood. The laser head is computer controlled and can cut intricate shapes.

Depending on the power of the laser, it can only cut through about 1/8"-1/4" thick pieces of wood—but this is a perfect thickness for making prototypes of consumer goods that are typically the size of a microwave or smaller.

An added bonus is that lasers can engrave, so you can add aesthetic flair to the pieces.

Waterjet. Water and wood do not typically get along very well, but they do when it comes to water jetting.

A waterjet machine is a special type of CNC machine that uses high-pressure water and abrasive to cut through raw material. Generally used for metals and plastics, they work great on wood, too.

Thick pieces of plywood or OSB can be cut into intricate shapes that are designed in CAD, and it only takes a few minutes to rip through them. The wood is in contact with the narrow jet of water for only a small amount of time so there is little risk of deformation or warping.

The parts just need to be left to dry for a few hours after they are cut before using them. This technique allows for wood shapes to be cut quickly with high accuracy.

Router. This is a great and easy way to create wood shapes. Hand-operated and table-mounted

routers are typically used to put a decorative edge on wood, or to add channels in the surface.

They can be used to cut shapes, but depending on the thickness of wood, you may have to make multiple passes. This makes it difficult to get repeatable accuracy.

CNC routers do a much better job. They are computer controlled, and the motors move the router through the wood to create the shapes that you want based from your CAD files.

There are also computer-aided routers that have the best features of handheld and CNC routers.

The Shaper Origin is a handheld router that uses machine vision to make accurate cuts. It uses a series of stickers that look like dominoes to know where it is on the part; the user traces the shape on the screen on top of the router to make the cut. If you go off path, it compensates to keep the cut path accurate—and if you go very far off path, it retracts the bit to keep from damaging the part. This allows you to cut parts in a remote place without a full shop setup.

3D printer. Yes, you can 3D print with wood.

There are 3D printer filaments made up of PLA plastic mixed with wood fibers. Although this is not 100 percent wood, it gives 3D prints a feel and a smell that reasonably replicates wood.

The filament can be a bit temperamental to use, as it is a composite material that is more delicate and more prone to breakage than pure plastic filament.

Wood filament comes in different varieties. You can print in bamboo, walnut, pine, cedar and more to yield parts with different-colored wood tones and fragrances. 🌲



This U.S. map was waterjet cut from the lid of a used whisky barrel. The waterjet blasted through the more than 1-inch-thick wood and created a smell of vanilla and whisky.



Fiction Becoming Fate?

RECENT BILLS INDICATE AN IMPROVED ENVIRONMENT FOR
PATENT RIGHTS MAY BE SHORT-LIVED **BY LOUIS CARBONNEAU**

RECENTLY WATCHED “The Billion Dollar Code,” a four-episode fictionalized series based on a true story.

The series recounted the lawsuit brought forth by a small German startup (Art+Com) in 2014 against Google for infringing its patent. This patent was the foundation of its Terravision software and, a decade later, Google’s ubiquitous Google Earth.

I won’t spoil the story by revealing how it ends, but it’s worth watching.

At some point, I couldn’t help but cringe when the actor portraying the Google German attorney meets with the two young cofounders and tells them flatly: “It is not because the USPTO granted you a patent that it makes it valid.”

Sometimes, fiction is in lock step with reality.

Which brings us to our *new* reality. We are starting to see more clearly the imprint that the (not so) new Biden Administration is leaving on the intellectual property world. If you are a patent owner, it is far from encouraging.

There have been a series of legislative moves reminiscent of the environment that prevailed under the Obama Administration, culminating with the announcement that a Silicon Valley veteran patent litigator—whose past clients apparently include Apple and Microsoft among others—has been nominated by Biden to be the next USPTO director.

Was rebalancing temporary?

Remember the America Invents Act? That law, voted in by President Obama on Sept. 16, 2011, has been responsible for global heartburn ever since.

Many have long forgotten that the real name of the law was the Leahy-Smith America Invents

Act, for its two main co-sponsors: Senators Patrick Leahy (D) and Lamar Smith (R).

Leahy and Smith were, respectively, the chairman and ranking member of the powerful U.S. Senate Judiciary Committee that oversees IP-related matters (there were seven other co-sponsors, to be accurate).

Under the Trump administration between 2016 and 2020, the roles were reversed in terms of party affiliation. Sen. Thom Tillis (R-N.C.) became the committee chairman, while his Democratic colleague Chris Coons of Delaware became the ranking member.

During their tenure, we saw several draft bills (none of which ever passed, given the highly partisan nature of Congress), that were largely favorable to patentees’ rights and offered an array of proposed changes in an attempt to rebalance the current system. These ranged from small tweaks to fundamental repositioning.

The point is, they all trended in the same direction and offered a shield against further disequilibrium in the patent system that most observers agree tends to overwhelmingly favor those challenging patent rights to the detriment of those who hold such rights. Sens. Coons and Tillis were refreshingly aligned and nonpartisan in taking a similar public stance on numerous occasions in favor of inventors’ rights.

Furthermore, a changing of the guard at the USPTO directorship in 2017—as usually takes place with any new administration—brought a new sheriff to town. Director Andrei Iancu imposed a definite pro-patentee twist to his administration, especially at the Patent Trial and Appeal Board level (although many still claim the changes were more cosmetic than substantive overall).



If you are a patent owner, the Pride in Patent Ownership Act and the Restoring America Invents Act are far from encouraging.

Under Director Iancu's tenure, the USPTO modified its guidelines involving the burden of proof in an inter partes review (IPR) to achieve more consistency with the same test used in front of courts. (*Editor's note:* IPR is a procedure for challenging the validity of a U.S. patent before the USPTO.)

The USPTO enacted new prosecution guidelines toward patentable subject matter that clearly helped inventors—that is, until the United States Court of Appeals for the Federal Circuit decided to go in a completely different direction.

Last but not least, the USPTO took the position not to initiate IPR petitions when the same issue is already in front of a court of law that is likely to adjudicate before the PTAB itself can (aka the NHK-Fintiv Rule).

These combined actions made a lot of sense to whomever supports a balanced system and gave many patent owners back their perennial “day in court,” as they are entitled under the U.S. Constitution.

Ominous Bill No. 1

But Senator Leahy now has his gavel back. He also apparently still listens to the same lobbyists that were mostly supportive of his signature law 10 years ago. As such, we recently saw not one, but two draft bills regarding patent rights that despite their rather surgical scope and procedural nature reflect the Biden Administration's slant on IP matters.

The first bill introduced is the Pride in Patent Ownership Act. Its main premise, which I am paraphrasing at best, is a little hard to believe.

It goes like this: “If you obtain or acquire a patent, you should be proud of it—so proud that you want to tell the whole world; hence, you should have no problems registering it. In the meantime, you should not be entitled to treble damages (a statute that allows a court to triple the amount of the actual/compensatory damages to be awarded to a prevailing plaintiff) against an infringer.”

I am not joking.

The talking points advanced to support the bill raise a few good arguments in favor of transparency because companies acquiring patents are infamous for dragging their feet in assignment recordation, which prevents the new owner from being identified in the USPTO assignment database. Unfortunately, the bill is completely one-sided.

A much bigger problem these days often stems from the impossibility to uncover who is the “real party of interest” behind a validity challenge to a patent before the PTAB. You would think that these two issues could be addressed at the same time, as arguably two faces of the same coin.

However, the exclusion of any transparency for the “party of interest” strongly suggests that whoever drafted the proposed bill aligns with the same people benefiting from the lack of transparency at the PTAB level and are perhaps annoyed



You can see the fingerprints of Big Tech all over this bill. Ironically, the proposed bill leaves the next USPTO director as the ultimate referee of whether an IPR petition should be instituted.

that others are taking advantage of a similar loophole elsewhere.

I've brokered the sale of enough patents (closing in on 5,000 at last count) to know that even if you make recording compulsory within a timely manner for patents that change hands, which I am all for, a buyer needs only to set up a new LLC in some exotic country and use that special purpose vehicle to acquire and maintain title until it needs to do something with the patents.

Many are already doing this. Meanwhile, the proposed bill would add another hurdle and additional costs to small patent owners—many of whom will not know about this extra requirement and will then be deprived from all the legal tools available to deter infringers from willfully practicing their patents. Please, someone tell me how this makes the U.S. patent system better or fairer.

Ominous Bill No. 2

The second proposed bill is even less subtle, and you have to be in the trenches of the patent system to grasp its potential impact.

Introduced rather pompously as the Restoring America Invents Act, it essentially aims at legislatively reversing the NHK-Fintiv Rule referred to above. That rule gave patent owners a breather and limited the potential for inconsistent rulings on patent validity matters between the PTAB and the courts.

À qui profite le crime? (Who benefits from the crime?), as we say in French.

Clearly, those benefiting from this proposed reversal (which appears to fly in the face of the USPTO rule-making authority) would be the same ones who were using the PTAB serially to kill issued patents before the jury could hear the same case—until Director Iancu changed the rule.

You can see the fingerprints of Big Tech all over this bill. Ironically, the proposed bill leaves the next USPTO director as the ultimate referee of whether an IPR petition should be instituted.

Scrutinized sheriff

Which brings us to our last point. The White House announced on October 26 that President Biden nominated Kathi Vidal as the next USPTO commissioner.

Vidal is a seasoned patent litigator practicing in Silicon Valley and managing partner of Winston & Strawn's Silicon Valley office, where she has been since 2017. Before that, she served with Fish & Richardson for 20 years as global director of litigation. She has represented both patent owners and defendants accused of infringement.

The fact that she was once recommended as a potential candidate for the U.S. Court of Appeals for the Federal Circuit by Judge Paul Michel, a definite advocate of strong patent rights, is reassuring. Her technical credentials are also stellar, with degrees in mathematical physics, programming and electrical engineering. She would be only the second woman in 200 years to lead the USPTO, after Michelle Lee. So on paper, she appears perfect for the job.

Nonetheless, industry pundits have reacted in different ways to her nomination.

Though many support her with no reservations, others are worried that she has represented many large technology companies for the last two decades, companies very active through their lobbyists at diluting patent rights.

Assuming she is confirmed, only time will tell how this plays out. But what is clear is that the next USPTO sheriff in town will carry a very big gun. ☛

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



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Insider Reactions to Vidal

IP EXPERTS CAUTIOUSLY OPTIMISTIC ABOUT HER NOMINATION AS USPTO DIRECTOR **BY EILEEN MCDERMOTT**

FOLLOWING THE October 26 announcement of Kathi Vidal as President Joe Biden's nominee to lead the U.S. Patent and Trademark Office, IP professionals largely expressed their congratulations and support based on her strong credentials. However, many acknowledged the hard road she has ahead—first before the Senate Judiciary Committee and, assuming she is confirmed, tackling the many challenges facing the USPTO.

Paul Michel, *retired chief judge, U.S. Court of Appeals for the Federal Circuit*

Top IP litigator Kathi Vidal surely has excellent credentials, considerable maturity, some leadership experience and ample technical expertise. She displays superior intellect and vast energy to juggle many diverse tasks.

“Her challenge will be whether she can resist the inevitable political pressures from various quarters and lead free of any past allegiances.”

—PAUL MICHEL

Although she has no experience leading a large business or government organization, she may well make a fine director. She has the necessary background to do so. But her challenge will be whether she can resist the inevitable political pressures from various quarters and lead free of any past allegiances.

For the sake of our nation and its innovation economy, let's hope she can—and does. I wish her well.

Aziz Burgy, *Axinn*

If confirmed, Vidal will inherit a USPTO grappling with several patent issues including, among other things, patent eligibility, director review following *Arthrex Inc. v. Smith & Nephew, Inc.*, and discretionary denial of petitions. She undoubtedly has the qualifications to lead the agency going forward, but many stakeholders will be curious to see whether her leadership will result in a patentee- or challenger-friendly regime.

Liren Chen, *InterDigital*

At a time when so much work is being done to increase diversity in the patent system, we welcome the fact that, if confirmed, Kathi Vidal would be only the second woman to head the PTO in a permanent capacity.

Jeff Hardin, *inventor*

I congratulate Kathi Vidal and am pleased with her nomination for USPTO director. Her unparalleled background carries a particular fitness for today's USPTO issues.

With a decade of data revealing negative effects of the Patent Trial and Appeal Board against small businesses, her pushing to bring balance at the PTAB would be a delight, as was sought by former leadership.

Finally, although many have given up on the courts correcting the judicially-created patent eligibility conundrum, Ms. Vidal's recent firsthand experience with Section 101 should provide a catalyst to help Congress cross the finish line with clarity.

Nicholas Matich, *McKool Smith*

The America Invents Act moved a lot of power from the courts to the USPTO, power that, after

Arthrex, now rests primarily in the hands of the director. This makes the president's nomination for USPTO director more consequential than it might have been viewed to be in the past.

Ms. Vidal will undoubtedly face a lot of questioning from the Judiciary Committee during her confirmation process, and how she answers may hold clues for what direction she intends on taking the USPTO in the future. How does she intend on exercising the director's new *Arthrex* review authority? What changes (if any) would she like to see at the PTAB? What does she think about the state of subject matter eligibility?

Scott McKeown, *Ropes & Gray*

Selecting a litigator that plays both sides of the patent system is a way to appease the powerful lobbies on either side of the issue. Of course, former director Iancu fit that mold and proved to be quite pro-patent.

Given that the former administration's pro-patent changes to PTAB practice remain in force, albeit subject to litigation and pending legislation that will preclude many of them (i.e. Restoring the America Invents Act), the director position may become more of a PTAB stewardship for the remainder of Biden's term. That is, I would not expect the next director to champion and significant changes to PTAB practice—one way or the other—given the current landscape.

Of course, there are numerous agency issues outside of the PTAB that may require more of

an activist approach, such as fraudulent trademark registrations, AI inventorship issues, and continued outreach to underserved communities. I suspect the next director to focus on these types of issues.

Russ Slifer, *Black Hills IP; Schwegman, Lundberg & Woesner; and former deputy director, USPTO*

Heading an agency of this size is far more difficult than most people realize. I know that the past directors and deputy directors are available to help her in the transition following a confirmation.

There is no question that the U.S. patent system has been under constant attack for the last decade and the USPTO examiners know that many people, including senators, routinely criticize their work product as "poor quality."

I know from experience, however, that the agency has thousands of skilled and dedicated employees who believe in the value of patents to promote U.S. innovation. They deserve a leader who passionately lives, breathes and demonstrates the same beliefs. 🍷

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



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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:

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Best wishes, Jack Lander

IoT Corner

Cruise operator **Royal Caribbean** has developed a custom IoT wristband for use by guests.

The device, expected to be launched on all 24 of the line's ships, is intended to give guests a better and safer experience onboard. It can be used as a door key and payment method. It will also provide a more convenient way for the ship's crew to send mass communication to passengers.

Data from the device can be used to do contact tracing for COVID-19 exposures, and will allow the cruise line to understand guests' movements on the ship. The company worked with Tracesafe from Vancouver to develop the invention. —*Jeremy Losaw*

Wunderkinds

Vinisha Umashankar, 15, was a finalist at the Duke of Cambridge's The Earthshot Prize 2021 for her solar-powered ironing cart. Her goal is to replace air-polluting charcoal clothes presses used by street vendors in her homeland India. "Iron-Max" can power an



iron for six hours from five hours of sunshine. Vinisha gave a powerful speech as she addressed world leaders at the COP26 climate change conference in Glasgow. She told them: "When we invite you to join us, we will lead even if you don't."



What IS that?

Even though these **chicken leg socks** are advertised as a women's novelty item, men are entitled to be just as crazy. Or if you just want to make your legs look thinner.

\$400-600K

Estimated royalties that Paul McCartney makes every year for the song "**Wonderful Christmastime**"—which *alearned.com* says "is widely regarded as the worst song he ever recorded." Copyright your songs? Yeah, yeah, yeah!

WHAT DO YOU KNOW?

1 True or false: The dreidl game was invented for Hanukkah hundreds of years ago.

2 In which century was the concept of the Christmas tree invented?

A) 1500s B) 1700s C) 1800s D) 1900s

3 True or false: The first candy canes were straight, not hook shaped.

4 The Smithsonian says the first set of Christmas lights, invented by Thomas Edison's partner Edward Johnson, was in:

A) 1860 B) 1882
C) 1895 D) 1922

5 True or false: Because the term "Merry Christmas" has several federal trademarks, you can't legally wear a shirt with those words.



ANSWERS: 1. False. The dreidl—its date of origin disputed by scholars—initially had nothing to do with Hanukkah. 2. A. Legend has it that German professor Martin Luther, the religious reformer, was walking through a pine forest near his home in 1536 when he saw thousands of stars shining among the branches of the trees. He then set up a candle-lit fir tree (dangerous!) in his house. 3. True. 4. B. 5. False. Use is permitted because the slogan is not associated with a particular business.

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