

# Inventors

MARCH 2020 Volume 36 Issue 03

DIGEST



## Bridging the Patent Gap

WOMEN, MINORITIES  
UNDERREPRESENTED

## Reinvented! **'EVERYDAY EDISONS'**

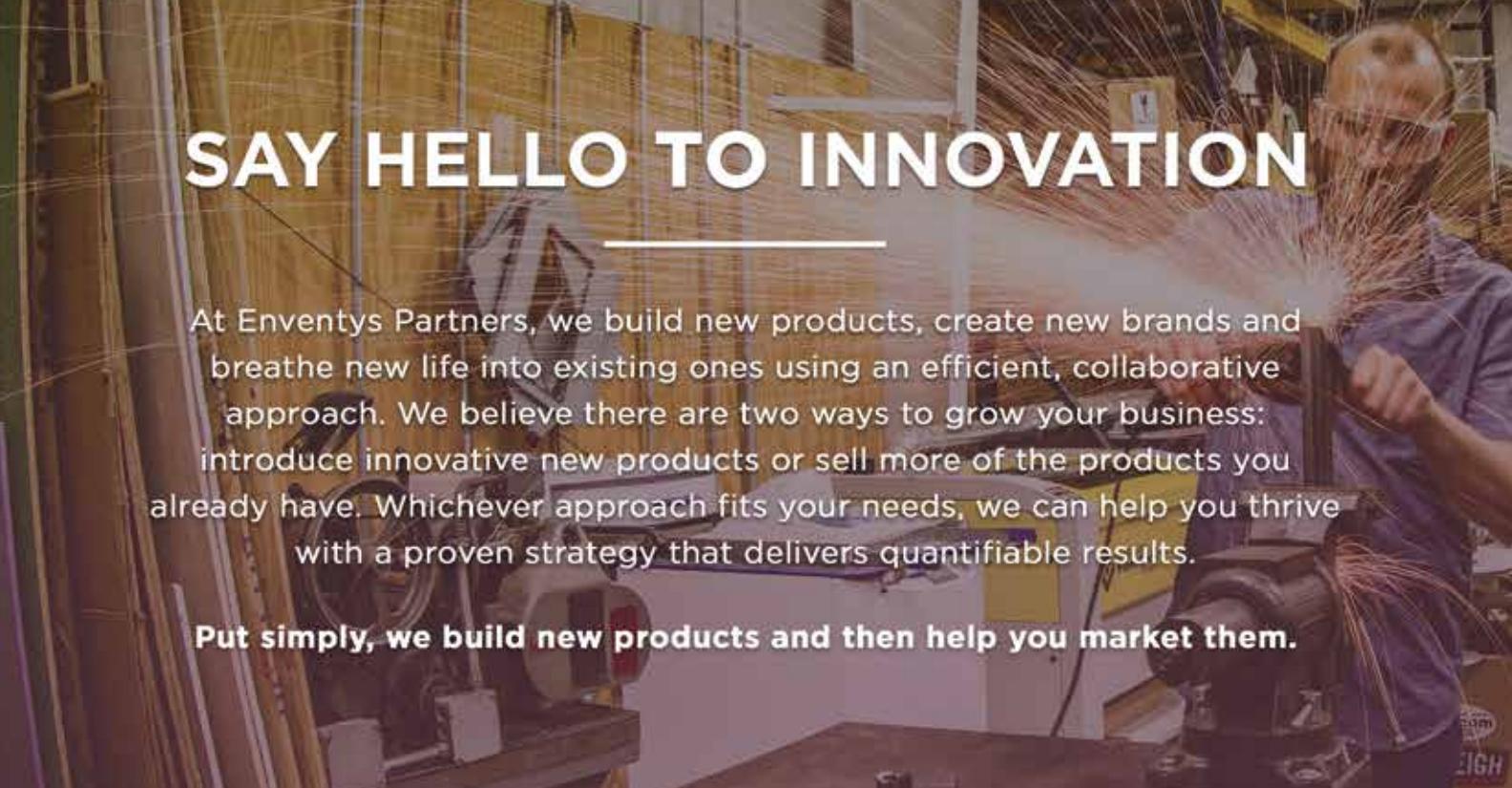
EMMY-WINNING SHOW  
RETURNS ON CRACKLE



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## Women's Day, We've Got You Covered

An essential and historic annual celebration returns this month, with more than a little irony and a lot more relevance in the inventing world.

International Women's Day—celebrated March 8 this year—honors the social, economic, cultural and political achievements of women. According to the event's official website, "The day also marks a call to action for accelerating women's equality."

Few, if any, can legitimately argue against the merits of this occasion. But allow me a Buzzkill Moment in the name of perspective.

For a long time, women have represented about half of the world's population. According to World Bank Group data, as of Jan. 1, 2019 (the most recent information available), 49.6 percent of the population were women.

So shouldn't their accomplishments be a matter of daily course in the world? Shouldn't their equality already be a matter of fact?

Maybe the most surprising information about International Women's Day is that the first one occurred 109 years ago—nine years before women were given the right to vote in the United States. So even in 1911, when general attitudes and expectations involving women were unenlightened at best, there was an understanding that female accomplishment was lacking.

Unfortunately, this fact is still glaringly apparent in inventing and intellectual property.

As you'll learn in the story about gender and minority patent underrepresentation in this month's *Inventors Digest*, the latest data show only 12 percent of inventors awarded U.S. patents are women. It's a stunning statistic, especially in light of the major inroads women have made in other areas in the past half-century.

This magazine is proud to have featured women in prominent inventing roles since its inception, when Adrienne Walker was its first editor in Spring 1985. Joanne Hayes-Rines, who remains *Inventors Digest*'s longest-running editor at 20 years, was the face of this publication and its crusade for the rights of the independent inventor.

At *Inventors Digest*, we don't just write about improving patent diversity for women and minorities. We celebrate and encourage it as one of our prominent missions.

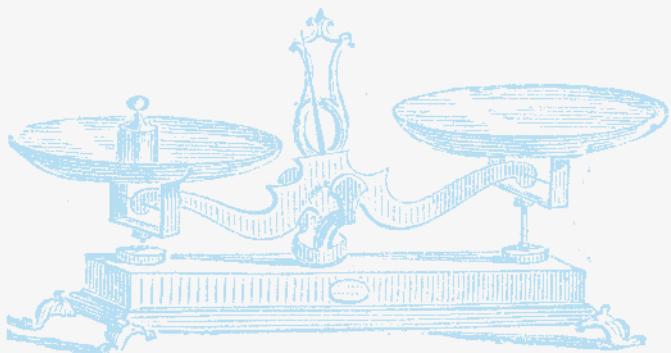
Eleven of the past 22 *ID* covers have featured a woman, a minority, or both. Three of our seven monthly columnists are women. We will stay faithful to this commitment in the spirit of patent accomplishment and protections for everyone.

We don't celebrate women's achievements once a year. We honor and own those achievements in every issue.

—Reid

(reid.creager@inventorsdigest.com)

# American innovation needs to hit the gym



Weakened patent protections have reduced the value of American inventions. To strengthen American innovation, support the STRONGER Patents Act—legislation designed to restore strong Constitutional patent rights, limit unfair patent challenges, and end the diversion of USPTO fees.

Make your voice heard now at  
[SaveTheInventor.com](http://SaveTheInventor.com)

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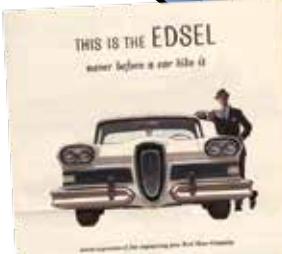


# Contents

March 2020 Volume 36 Issue 03



28



10



20



**ON THE COVER**  
"Everyday Edisons" judges (from left) Kelly Bagla, Louis Foreman, Tiffany Norwood and Chris Ferguson during an inventor pitch; photo by John Merrick



8

## Features

### 24 Inspiration Reinvented

Emmy Award-winning 'Everyday Edisons' Returns

### 28 Gaping Gap

Qualcomm Leads Effort On Patent Equality for Women and Minorities

### 32 Trademark Basics

Primer From Michelson 20MM

## Inventor Spotlight

### 20 Tech May Grow on You

Gardening Innovation at CES

## Departments

### 7 Everybody's Talking

Conversation Pieces

### 8 Bright Ideas

Innovation That Shines

### 10 Time Tested

Tops of the Flops

### 14 Lander Zone

The Gizorninplatt

### 16 Launching Pad

O, Yes: Operations

### 18 Social Hour

Going Ecommerce

### 34 Prototyping

Using Found Materials

### 36 Inventing 101

Going International

### 38 IP Market

Trending Up

### 42 Eye on Washington

Who's Bullish, Bearish  
On the 2020 Patent Market

### 46 Inventiveness

Focus on the Fun and Fascinating

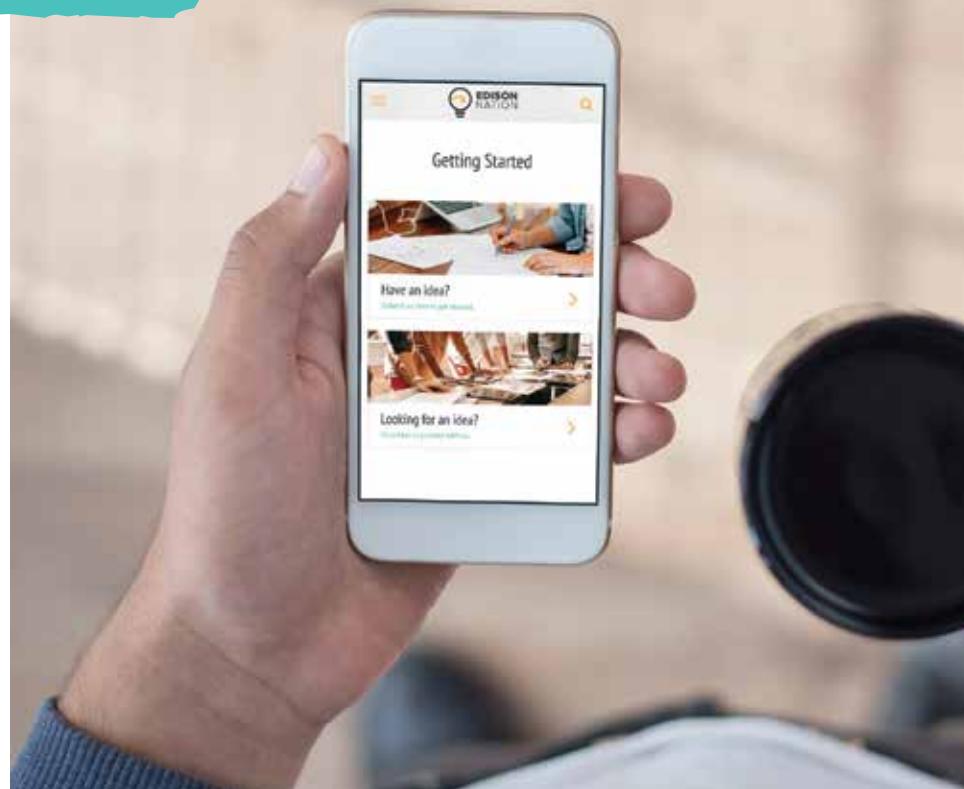
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*Letters and emails in reaction to new and older Inventors Digest stories you read in print or online (responses may be edited for clarity and brevity):*

"*Making Instagram Work for You*" (February 2019):

Elizabeth (Breedlove), these are some great tactics for anyone looking to get the most out of Instagram. Thanks so much for the mention!

—LINK MY PHOTOS



"*Driverless Cars: This Much, We Know*" (May 2019):

You did well to draw a line between sooner or later, although I would be partial towards later! Reason being, the term autonomous itself has become misleading. A lot of consumers will need to know the concept of "hands at wheels at all times" in this scenario, which should be more pronounced by manufacturers.

As I read in a January 2020 blog by Grand View Research titled "Self-Driving Cars and Trucks Market: 'Knight Rider' Comes to Life," for every step forward in terms of technology, there has been a massive step back in terms of mishaps.

—ANANT SINGH

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## MORE BUZZ ABOUT 'COFFEE' SUIT

A little more than three months after Jerry Seinfeld won a copyright lawsuit over who came up with the idea for his "Comedians in Cars Getting Coffee" series, the comedian was back in court urging the United States Court of Appeals for the Second Circuit to uphold the ruling.

Based on the explanation for that decision by U.S. District Judge Alison J. Nathan last September 30, it would seem plaintiff and director Christian Charles might be driving aimlessly. The reason is a three-year statute of limitations for filing a copyright civil lawsuit.

Charles was the director of "Comedian," a 2002 documentary starring Seinfeld in which Charles filmed Seinfeld and a friend on a cross-country trip. According to *Variety*, Charles alleged in his suit that he later pitched Seinfeld an idea for a show in which he and a friend drove around.

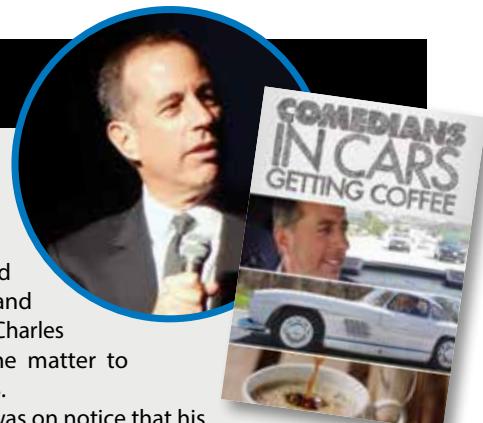
But the publication said the idea sat idle until 2011, when Seinfeld began developing "Comedians in Cars Getting Coffee." Charles worked on the project, but the two disagreed whether he would be paid to direct episodes on a work-for-hire basis, as Seinfeld wanted, or whether he would be given ownership, as Charles wanted. "The relationship fell apart in 2012, and Charles had no further involvement in the show," *Variety* reported.

Although Charles reportedly communicated with Seinfeld in 2017 around the time the series signed a deal with Netflix and moved from Crackle, Charles did not first take the matter to court until early 2018.

"Because Charles was on notice that his ownership claim had been repudiated since at least 2012, his infringement claim is time-barred," Nathan wrote. "His joint authorship claim is also time-barred for the same reasons."

"Today's victory is a complete vindication," Seinfeld attorney Orin Snyder said. "Jerry created 'Comedians in Cars,' and this lawsuit was nothing but a money grab seeking to capitalize on the success of the show. We are pleased that the court saw through the noise and dismissed the case."

Peter Skolnik, an attorney representing Charles, said in a statement to Reuters that "We are, of course, disappointed." He accused Seinfeld of "egregious, shabby conduct."



# BRIGHT IDEAS

## T2 Iso-Trainer

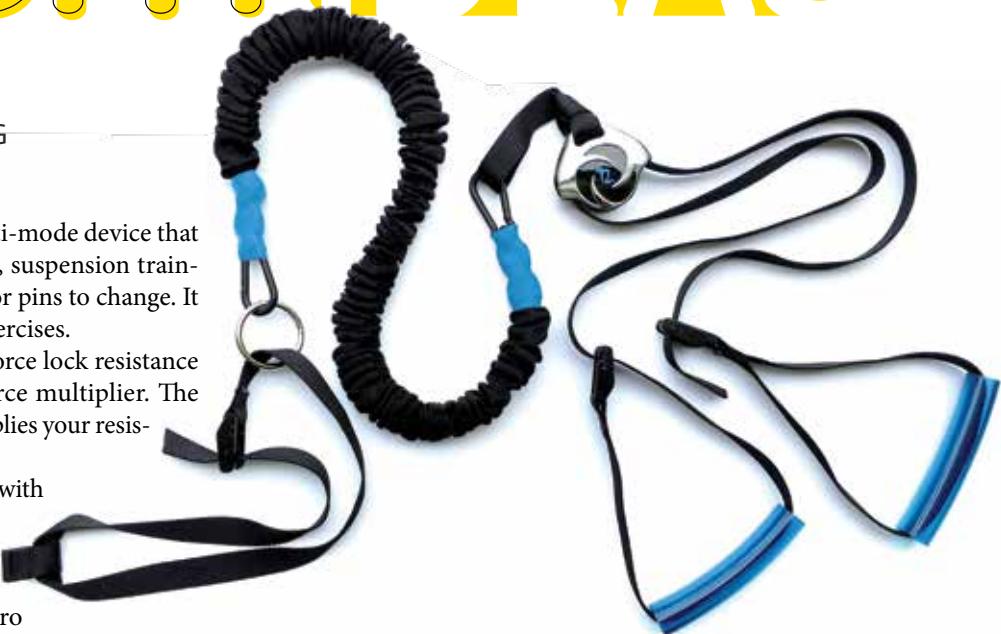
PORTABLE FITNESS TRAINING

[producthype.co/t2-iso-trainer](http://producthype.co/t2-iso-trainer)

The T2 is a portable, on-demand, multi-mode device that replaces free weights, cable machines, suspension trainers and more—with no plates, bands or pins to change. It allows you to perform hundreds of exercises.

The core of the device is patented force lock resistance housing that is not a pulley but a force multiplier. The housing has no moving parts but multiplies your resistive effort to increase results.

The T2 Iso-Trainer plus the gym app with basic access has a planned retail price of \$200. The Pro Package 1 with an app that has premium unrestricted access will sell for about \$230, the Pro Package 2 for \$250. Shipping for Rewards backers starts in April.



**"All invention and progress comes from finding a link between two ideas that have never met."**

—THEODORE ZELDIN



## Cove

MODERN DESIGN

LITTER BOX

[tuftandpaw.com](http://tuftandpaw.com)

Built by designers, engineers and cat behaviorists, Cove is an alternative to the traditional unattractive litter box.

The box is made with a thick, slightly textured, double-walled matte plastic. It comes with an integrated scoop, dustpan and hand-brush that fit into an accessible top compartment.

Unlike many litter boxes, Cove's shape is simple and open with no unnecessary bends or hard-to-get-to corners. This makes it easy to clean.

Box dimensions are 22-by-16-by-6 inches, which works for all but very large cats.

Cove has a manufacturer's suggested retail price of \$149. Shipping for Rewards backers starts in July.



## MarsCat

BIONIC CAT, HOME ROBOT

[elephantrobotics.com/en/mars-en](http://elephantrobotics.com/en/mars-en)

Billed as the world's first robotic pet cat, MarsCat is fully autonomous with no extra instruction needed to control its movements.

The robot is fully responsive and has sensitive interactions. It can feel your touch, hear your voice, see your face and play with toys. With 16 servo motors, MarsCat walks, runs, sleeps, sits, stretches, bites nails, kneads and even buries litter without producing any waste.

Each MarsCat is unique—its eyes, body and personality. Its personality will change according to the way you pet it. With quad-core Raspberry PI, you can program it and give it many possibilities.

MarsCat has a manufacturer's suggested retail price of \$1,300. Shipping for Rewards backers begins in July.



© ELEPHANT ROBOTICS



## GripDockIt

WIRELESS CHARGER

USED WITH POPSOCKETS

[producthype.co/griplockit/](http://producthype.co/griplockit/)

GripDockIt can be used at home or on the go, without having to remove the PopSocket on the back of your phone.

It comes in two versions: a desktop charger and a car charger. The desktop version can be used on any flat surface; the car charger, which simultaneously holds or mounts any phone while charging it wirelessly, comes with attachment options to mount the phone for easy charging.

If the user doesn't have a PopSocket, the GripDockIt desktop charger works like any other wireless charger. The desktop charger also has a light that indicates when charging is taking place.

GripDockIt's planned retail price is \$62, with shipping for crowdfunding Rewards backers in December.

# Tops of the Flops

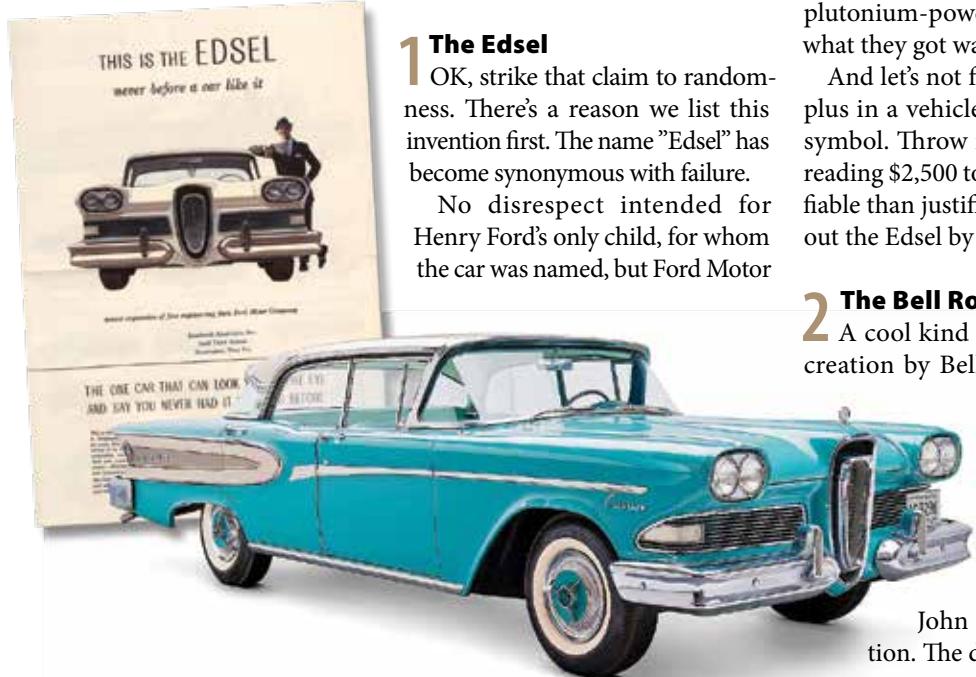
HOW FAULTY CONCEPTS AND BAD TIMING LED TO THESE 10 MAJOR INVENTION FAILURES **BY REID CREAGER**

**"I HAVE NOT FAILED,"** Thomas Edison said. "I've just found 10,000 ways that won't work." And he wasn't exaggerating.

If the prospect or reality of failure is too much for an inventor, he or she should take up another pursuit. The anticipation of failure and having a healthy attitude about it are essential traits for anyone trying to bring a new idea or product to the masses.

However, it's true that some inventing failures get added notoriety—whether due to their unconventional nature, excess hype, or number of dollars invested. Among the more notable ones of recent vintage, in no particular order:

The 1958 Edsel was an imperfect storm of bad planning, timing and aesthetics.



## 1 The Edsel

OK, strike that claim to randomness. There's a reason we list this invention first. The name "Edsel" has become synonymous with failure.

No disrespect intended for Henry Ford's only child, for whom the car was named, but Ford Motor

Co. executives known as the "Whiz Kids" could have chosen a more exciting name. The car raced downhill from there.

Various automotive history sources cite a litany of reasons for the Edsel's failure: With so many execs working on developing and promoting the car, the project had no direction. Production problems caused problems with dealers. A recession around the time of the car's Sept. 4, 1957, launch was classic bad timing.

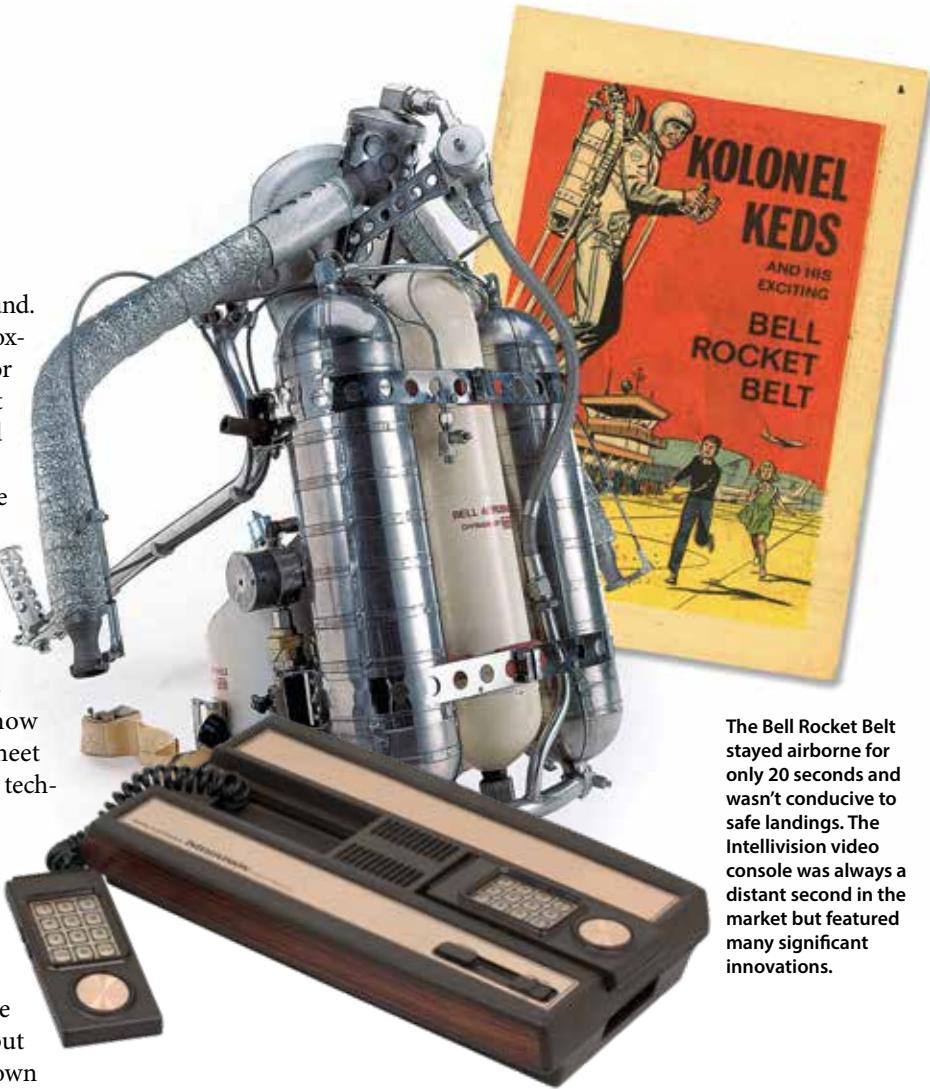
The 1958 Edsel made *Time* magazine's list of the 50 Worst Cars of All Time. It said the car was "the first victim of Madison Avenue hyper-hype. Ford's marketing mavens had led the public to expect some plutonium-powered, pancake-making wondercar; what they got was a Mercury."

And let's not forget the butt-ugly factor—never a plus in a vehicle that was supposed to be a status symbol. Throw in the then-pricey window sticker reading \$2,500 to \$3,800 that most found more certifiable than justifiable, and Ford was happy to throw out the Edsel by the end of 1959.

## 2 The Bell Rocket Belt

A cool kind of U.S. Army-Meets-“The Jetsons” creation by Bell Aerosystems in the early 1960s, this low-power, rocket-propulsion device could carry a person over 29.6-feet-high obstacles and reach speeds of 6 mph to 9 mph.

For a short while, the military was so high on the rocket pack's potential that it gave President John F. Kennedy a personal demonstration. The device was patented in 1962.



The Bell Rocket Belt stayed airborne for only 20 seconds and wasn't conducive to safe landings. The Intellivision video console was always a distant second in the market but featured many significant innovations.

But figuratively, it never got off the ground. Two major problems: The hydrogen peroxide-fueled pack only stayed airborne for about 20 seconds and 393 feet. The rocket belt also was not conducive to controlled landings, posing a huge safety risk.

But remember what we said about the importance of failure in inventing? National Air and Space Museum curator Thomas Lassman told *Smithsonian* magazine that the Bell Rocket Belt experiment has much historic value "because it illustrates so clearly a technological dead end and shows us how technological enthusiasm can fail to meet expectations. Such failures are frequent in technological innovation."

### 3 Intellivision

A video console released in 1979 to compete with the Atari 2600, Intellivision was always a distant second to a rival that many remember as the market standard. Mattel's product all but bankrupted the iconic company best known for the Barbie doll as Intellivision went into freefall in 1983.

But unlike some of the failures on this list, the console was an innovation with many special features. In fact, the words "console game system" and "legacy" may seem mutually exclusive, but they were the subject of an Intellivision case history by Stanford University student Jeffrey Tam.

According to Tam, Intellivision had more memory, more powerful graphics and a built-in operating system that made it a "catalyst" in the industry. It was the first 16-bit game console, two generations before it became the industry standard. Aided by an aggressive marketing campaign, "Major League Baseball," the series of baseball games that Intellivision created in 1979-83, was deemed clearly superior to Atari's "Homerun."

Market oversaturation was a key factor in the demise of Intellivision and ultimately Atari consoles as well—not to mention inevitable tech improvements that led to other gaming formats. In 1984, NTV Corp. bought Intellivision's rights from Mattel and made its own version of the product, the INTV System III.

### 4 McDonald's Arch Deluxe

This 1996 burger was food for naught.

Apparently willing to ignore the basic premise of a multi-billion-dollar business built on inexpensive sandwiches, McDonald's spent an estimated \$300 million on research, production and marketing on an upscale product it marketed as "The burger with the grown-up taste."

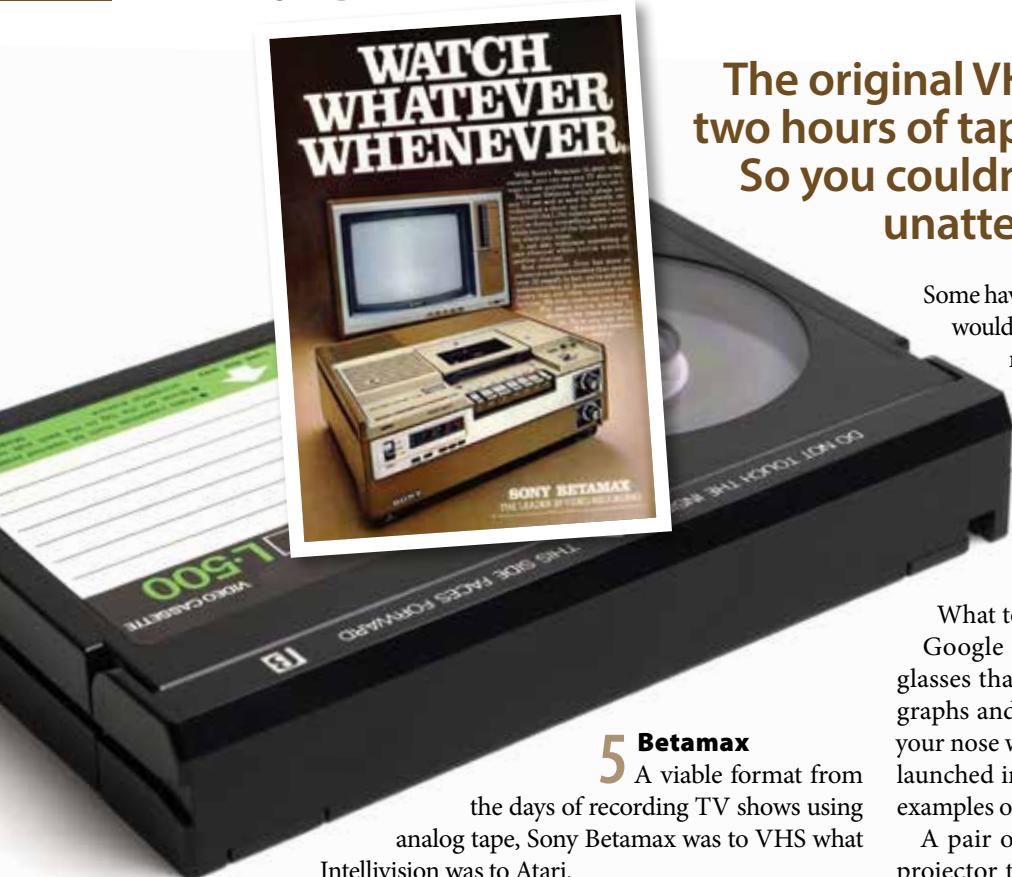
But customers have never come to Mickey D's for a culinary experience. They come for convenience and the burgers that have been the company's staples since its founding in 1940.

They also come for simplicity, as Dave Miller noted in a November 2001 *Brand Week* article: "McDonald's is not cognitive, it is reflexive. We treasure not having to think about it. It just 'is.'"

So the Arch Deluxe—also burdened with even higher caloric content than the restaurant's old standbys—was discontinued within a few years.

Too bad the company didn't come up with this brainstorm 11 years earlier. You could have ordered an Arch Deluxe with a New Coke.

## TIME TESTED



### 5 Betamax

A viable format from the days of recording TV shows using analog tape, Sony Betamax was to VHS what Intellivision was to Atari.

Yet unlike upstart Intellivision vs. Atari, Betamax actually preceded VHS. At one point, it had 100 percent of the market after its May 1975 launch.

It has been said that Betamax was overtaken in the market because RCA-owned VHS (launched in America in August 1977) offered a bigger choice of hardware at a lower cost; the tapes were cheaper and more easily available; and that there were a lot more VHS movies to rent. The movies factor is key here.

The original VHS could record up to two hours of tape, Betamax only one. So you couldn't record a full movie unattended using Betamax—a major deficiency. Recording times eventually increased for both formats, but VHS still held the edge in that category and surpassed Beta in the market after about a decade.

Google Glass—augmented reality glasses that could access the internet, take photos and film videos—posed safety and privacy issues.

**The original VHS could record up to two hours of tape, Betamax only one. So you couldn't record a full movie unattended using Betamax.**

Some have contended that Betamax failed because it would not agree to license to pornography companies. But its demise was due to a simple lack of convenience and availability.

Although Betamax recorders were not discontinued until 2002, their obituary had been written decades earlier.

### 6 Google Glass

A computer monitor for your face!

What took them so long?

Google Glass—lightweight augmented reality glasses that could access the internet, take photographs and film short snippets from the bridge of your nose with just a touch or your voice—officially launched in 2013 as one of the most blatant recent examples of technology that wasn't well thought out.

A pair of this experimental technology with a projector that sits in front of one eye retailed for \$1,500. Even before Google Glass was made available to the public, the *New York Times* wrote:

"The glasses-like device ... has been pre-emptively banned by a Seattle bar. Large parts of Las Vegas will not welcome wearers. West Virginia legislators tried to make it illegal to use the gadget ... while driving."

That pesky safety and privacy stuff can be a bear, can't it? Google Glass was discontinued in January 2015.

Google hasn't totally given up on the idea, though. Last year it unveiled Google Glass Enterprise Edition 2, a new model catered specifically to business uses by supporting mobile device management.

### 7 Nintendo 1995 Virtual Boy

For starters, the video game behemoth should have been honest with the name of the product. The first three-dimensional stereo immersive 32-bit video game system wasn't virtual reality; it was 3D.

The system used a pair of oscillating mirrors to turn a single line of LED pixels into a 3D projection, made of red pixels against a black background. The headset had to be attached to its stand in order to protect Nintendo from liability issues of users moving around while they played the game. This could cause back discomfort.

There were also reports of eye strain and a company warning that kids 7 and younger shouldn't play Virtual Boy, because eyesight is still developing at that age and

playing it could result in a lazy eye. Nintendo also warned about headaches, nausea and dizziness.

But the big-picture reason for the most spectacular game console failure in Nintendo's history was that the company was reportedly more preoccupied with its impending Nintendo 64 system. So Virtual Boy was slightly rushed to the public, contributing to its somewhat unfinished state.

The system originally retailed for \$177.99. By the following May, Nintendo dropped the price to \$99 in a last-ditch effort to generate interest. The system was discontinued by July, less than a year after its debut, with only 22 games released.

## 8 Olestra

What's a little cramps, gas and loose bowels in the name of better nutrition? Apparently, a lot.

It sure sounded promising when the Food and Drug Administration approved olestra as a food additive in January 1996: zero calories, zero grams of cholesterol and zero grams of fat.

Butter, shortening, cooking oil and more were on their way to being minimized or eliminated in kitchens around the world, right? Fat chance.

Olestra was found to negate the body's ability to absorb essential vitamins. And those aforementioned uncomfortable side effects were not imaginary. The website WebMD is among those that have warned about potential problems.

Nonetheless, the FDA has kept olestra as a legal food additive. It has been used as a fat substitute in the preparation of traditionally high-fat foods, including potato chips.

## 9 CueCat

Hey, at least the cutesy handheld barcode reader ranked high on *Time*'s list of the 50 worst inventions (No. 5; the Segway was No. 1).

CueCat's purpose was to direct its user to a web page containing information without having to enter a URL—although simply typing a link would seem just as easy. It connected to computers using the PS/2

keyboard port and USB, and communicated to desktop CRQ software running on Windows 32-bit and Mac OS 9 operating systems.

Millions of CueCats were given away free to internet users starting in 2000 by the now-defunct Digital Convergence Corp., with codes printed in *Wired* and *Business Week* in an effort to get traction for the product.

The *Wall Street Journal* reported that \$185 million was invested in CueCat. Reporter Walter Mossberg wrote: "In order to scan in codes from magazines and newspapers, you have to be reading them in front of your PC. That's unnatural and ridiculous." The device "fails miserably."

By the end of 2001, codes could no longer be generated for the device or scanned with it.

## 10 Ford Pinto and the AVE Mizar

The smallest American Ford vehicle since 1907, unveiled in 1971, was right down there with the Edsel as one of the company's least-distinguished efforts. A series of deadly fires resulting from rear-end collisions stigmatized the Pinto forever, even though the model continued through 1980 and its overall safety record was reportedly comparable to other subcompact models.

Fires resulting from rear-end Pinto collisions spawned a number of lawsuits and much-debated, often sensationalized data relating to the crashes. GM and Chrysler have since had their own fuel tank issues, but the Pinto has a reputation that won't go away.

As if the model didn't have enough perception problems, two men, Henry Smolinski and Harold Blake, invented a flying Ford Pinto that they called the AVE Mizar. It could fly up to 12,000 feet at speeds reaching 130 mph.

On Sept. 11, 1973, during a test flight at Camarillo, California, the right wing strut detached from the Pinto (after doing the same in an earlier test run). Smolinski and Blake both died in the crash. ☠

## INVENTOR ARCHIVES: MARCH

**March 13, 1944:** Abbott and Costello's iconic baseball routine "Who's On First?" was copyrighted.

Bud Abbott and Lou Costello performed it many times, including several times for President Franklin Delano Roosevelt. Writing credits are unknown.

In 1999, *Time* magazine named "Who's On First?" the best comedy sketch of the 20th century.

Abbott and Costello's heirs filed a 2015 copyright infringement lawsuit when the sketch was used for more than a minute in the play "Hand to God." A New York court rejected the claims, ruling the usage was for a limited purpose.



# About the Gizorninplatt

THE FRUITS AND FRUSTRATIONS

OF THE SPONTANEOUS INVENTION

BY JACK LANDER

**EUREKA!** I just came up with the greatest idea.” That’s the thought of the typical person who has stumbled upon what he or she believes to be an invention. This kind of invention is what I call spontaneous. It had not been anticipated.

The other kind of invention is on purpose. The inventor has spent time studying the needs of a field and zeros in on a gap that hasn’t been filled.

Both types of invention are a challenge, but I believe the on-purpose invention has the better chance of maturing into a marketable product or service.

I’ll cover the on-purpose invention next month. For now, let’s look at the challenges faced by the spontaneous inventor.

## Ingenuity, canned

First, it’s unlikely that you are the first person to invent a gizorninplatt.

I got this word from an old recording of Bob Newhart’s. He told of a day in the life of a monitor who was phoning his boss about the progress of an infinite number of monkeys attempting to type the works of Shakespeare.

His phone call began: “I think we may have something here, Bob. It reads, ‘To be or not to be, that is the gizorninplatt ...’”

Humor aside, most problems, irritations, needs, etc., involve a stumbling block that typically is not unique. Suppose my wife, Mary, hurts her finger trying to pry up the ring tab on a can of soup. I immediately grab paper and pencil, and sketch a prying tool that grips the ring and enables the user to easily peel back the lid.

The problem is that several million cans of soup, cat food, green beans, etc., with ring-tab lids are opened each week. I had assumed that no user ever discovered you need the leathery skin and finger

strength of a 500-lb. gorilla to get the peel started. And there must be at least 10,000 cooks who have thought about a tool for that purpose.

But in my wisdom, I had done something about it. I invented the gizorninplatt, a can opener that made no sense because one that was superior to mine was already on the market. You can find it on Amazon.

I risk my reputation if I tell you that I wasted about a hundred bucks making a prototype of such a tool, only to find that it was listed on Amazon. I bought one, and it performs flawlessly. But making the same mistakes as a typical inventor is one way I learn enough to write this column.

## Not always needed

Spontaneous inventing sometimes may be productive because we’ve discovered a need in “real time.”

For example, a tradesman invents a tool for one of his tasks. Tools are one of the more successful inventions, because they save time or improve quality. And if I had been aware of the need for a tool to open soup cans when the ring-tab lid had first come on the market, it may have been my patent or my product if I had been inclined to produce and market it, or both.

But spontaneity can also result in a solution in search of a problem. Sometimes, we come up with inventions that we like—inventions that fascinate us—rather than inventions that are truly needed. We invent an alternative way of achieving a solution that is already available and find that our solution is merely different rather than superior.

Sometimes we find the problem we stumble across is something that truly appears to be needed but actually is not.

Thomas Edison’s first patented invention (U.S. Patent No. 90,646) was a machine that enabled



## Sometimes we find the problem we stumble across is something that truly appears to be needed but actually is not.

members of Congress to transmit their votes for tallying by the flip of a switch. The machine greatly reduced the time that was taken to collect the votes by roll call.

But the device was rejected because congressmen didn't want a fast vote. They used the drawn-out process to argue the pros and cons of the law and negotiate with their fellow voters, hopefully to change their votes. And if we've been watching TV lately, we have seen that the same slow roll-call method of Edison's time is still in use.

### Against all odds

The successful inventor recognizes that any one spontaneous invention is not likely to make it to the market. The main reasons:

- We're either too early or too late with our invention. (Like my ring-tab can opener. Way too late.)
- It's already on the market.
- It's been patented.
- I don't have the money to pursue prototyping and patenting.
- My wife (or husband) may divorce me if I spend \$10,000 on a patent.

Inventing on your own, and depending on spontaneity, is appealing. But many a lone inventor goes

to his or her grave without ever having received a royalty check. It's darn hard to be original.

So, the way to outwit the odds is to accept them and aim to invent for the long haul. If you come up with two or three ideas every year from now on, one day you'll find one that you can pursue all the way to the market. And that will compensate for all of those gizorninplatts you had to toss in the recycling bin.

Here's what Jeff Bezos, founder of Amazon and said to be the richest man in modern history, has to say on this:

"I don't think that you can invent on behalf of customers unless you're willing to think long term, because a lot of invention doesn't work. If you're going to invent, it means you're going to experiment, and if you're going to experiment, you're going to fail, and if you're going to fail, you have to think long term."

It works for him. ☺

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





# O, Yes: Operations

ALL THINGS CONSIDERED THAT INVOLVE THE STRUCTURE OF YOUR INVENTION'S BUSINESS

BY ALYSON DUTCH

**I**N A CONCEPT I introduced in last month's Launching Pad debut, every business and product is comprised of three parts: product (P), operations (O) and marketing (M). These are the only requirements needed to turn an invention into a business that makes enough money to pay the mortgage and put your kids through college.

I call it the POM Principle—the three pillars needed to create (and sustain) any business. This is a simplified “go-to-market strategy” for any business or product in any industry. You need only the willingness to follow the recipe's instructions.

Last month, we talked about “P” (product) and what's needed to bring a product out of a concept and into form. This month, we'll talk about operations—the structure that makes a business go.

## Main components

Because the operational components are different for every business, we'll discuss the basic ones that every business needs in order to, well, be a business. Some products are services; others are hard goods; others are apps. This applies to all.

One of the most important operational considerations is money. You may have already found the capital to create your product, but now you need the cash to support the running of your business—and even more dough to find customers to buy your product (more on the “M” of marketing next month).

Choosing a distribution method for your product is next, a key operational setup that determines how it is sold. The choice is based on your end customers; where do they buy what you have to sell?

For example, if you have an app product, will you sell it through the App Store or Google Play? Will you put product on a retail shelf somewhere? Will it be at a grocery or markets such as convenience, discount or luxury retailers, maybe duty free in airports? Is your product an original equipment manufacturer part that must be sold to manufacturers? Will you sell something online? Through wholesalers?

How you set up your distribution will then help you determine who will sell it. You might hire a sales team or add your product to a rep's catalogue. You may choose to sell it through an online affiliate referral program.

# Choosing a distribution method for your product is a key operational setup that determines how it is sold.

And speaking of “affiliates,” don’t get stuck in jargon. Today, “affiliate marketing” is seen as an online method in which unique links are provided to those who send site traffic, and in return a commission is paid. However, an affiliate is any network of people through which you can sell something.

Japanese ecommerce and online retailing company Rakuten and CJ Affiliate (formerly Commission Junction) have plenty of online affiliate options. You might find a network marketing organization like Amway as a distribution point.

I read recently that an entrepreneur started her business using flight attendants who needed extra cash and could take meetings in their off time in cities throughout the country. How brilliant is that?

## Building efficient systems

The next important operational aspect is systems.

As an entrepreneur, you are likely what I call a chef/cook/bottlewasher—which means you’re wearing a lot of hats. As you hatched your product into being, no doubt you discovered there are some things you do repeatedly. Now it’s time to create systems that do those things without you and the same, every time, flawlessly.

With my company, some of our most pivotal systems required an autoresponder/database to capture customers and sell to them. Another system was something old-fashioned; we call it the “Everything You Need to Know Memo.”

This document outlines for our event exhibitors all that’s needed to load in to our venue, where to send their exhibits, what to say to visitors, where to stay, how to park, what’s needed to pitch their product to the influencers they’ll meet at our events—even what to wear. Best yet, this memo is automated in an email every time someone is tagged as a customer.

And don’t waste your precious start-up money on hiring a bookkeeper; get QuickBooks for your accounting. It’s a miraculous and cost-effective accounting system.

Regarding income, here’s an important system. Have you thought about how you will accept money? Will you need a merchant account to take credit cards? Will you use Paypal or Apple Pay? Will you incorporate or be an LLC?

You will need a branding system for the colors, fonts and style in which you communicate so that

customers recognize you. If you are a service business like us, you will need systems for emails, structures for proposals, ways that you onboard a client, as well as routine service and accountability methods.

Other operational considerations include manufacturing, legal and hiring/firing.

## The people part

People are a huge part of the operations, so putting together an organizational chart with matching job descriptions will puzzle it all together.

Another operational consideration is how you plan to work your team. Offices are going out of style but sometimes very necessary for certain kinds of businesses. If you are making hard goods, you may need warehousing. You have decisions to make about whether you use shared warehousing or buy your own building.

For teams, inspiring leadership is the driving force whether you’re physically together or not, so you should think about how you’ll handle meetings and manage benchmarks.

Have you thought about the culture you want to create? You could have a culture like Virgin that’s youthful and risk-taking, or you could have a buttoned-down, service-oriented culture like the Ritz Carlton. You may wish to have dogs in the office like Chipotle Mexican Grill does or enforce a “no pantyhose zone,” like we do in our sunny and creative Malibu office.

Operations may seem like a boring subject, but I’m hoping that the above outlines why this is the stuff that separates the top companies from the bottom ones.

The companies that skyrocket are the ones that have been planned out and then execute toward a specific goal. They measure along the way with metrics so that progress is measurable. Think like an MBA (even if you’re not one)!

And if this has opened a can of worms that just brings more questions, I’m happy to help. ☺

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



# Going Ecommerce

8 STEPS FOR BUILDING A GREAT SITE

TO PROMOTE YOUR INVENTION

BY ELIZABETH BREEDLOVE

**D**O YOU have an ecommerce site to promote and sell your business? If not, why not?

If it's because you're intimidated by the creation process or you think you can't do it yourself, think again.

Although there is something to be said for working with a web development agency or marketing agency for more complicated websites, if you need a simple website to begin showing off your invention you can definitely do it yourself. These eight steps can help you do it!

## 1 Determine your needs.

Think carefully about what your website needs to accomplish. This is crucial before you get started, to ensure that everything you do to build your website is working toward a cohesive goal. Ask yourself:

- What is your goal?
- What is your budget?
- What functionality do you need?
- What do you like about your competitors' websites?
- Do you have a logo already, or will you need someone to create one?
- Do you have images you can use on your site, or will you need to hire a photographer?
- What types of content will you need on your website? What pages?
- Are there any third-party applications that must be integrated?
- What information will you need to have on the home page?
- How many SKUs will you need to list?
- How comfortable are you with coding a website? Are you interested in a drag-and-drop or templated option, or something a bit more custom?
- What do you want the payment or checkout process to look like?

## 2 Choose and buy a domain.

If you already have a brand name, that's going to be your best bet for a domain. If your brand name is already taken, you'll have to get creative.

Your domain registrar, such as GoDaddy, will likely suggest some other options for you to choose

from that are available. Make sure whatever you choose is easy to remember, easy to type and easy to understand.

## 3 Pick an ecommerce platform.

Now you can begin to compare content management systems, website builders and ecommerce platforms.

If you feel comfortable coding a website and you want complete flexibility, you'll probably want to combine a content management system, such as Wordpress, with an ecommerce platform such as WooCommerce. If you're less comfortable with web development, you may want to choose an ecommerce platform and website builder such as Squarespace or Shopify.

Ultimately, there is no universal best choice. It comes down to what you're trying to accomplish with your website, which platform meets those needs, and which platform you feel most comfortable using to build a beautiful and functional website.

## 4 Wireframe your site.

It's time to nail down what pages you need on your site and what those pages will look like.

Wireframing your site refers to building the basic skeleton of your website. How you go about this depends on how you like to keep things organized—but to start, make a list of every page you'll need on your site. Don't forget about the basics such as the homepage, About page, Contact page and any product listings.

After you've made a list of every page you need, start thinking about how these pages will be organized. Which pages will you list on the main site navigation? Which pages will be sub-pages? Are any pages going to be landing pages that aren't linked anywhere in the navigation?

Once you've determined what pages you need and how they'll be organized, think about your page layouts. You can do this by hand with a paper and pencil, you can use a design software, or you can start building the page within the platform you've chosen. Whichever you choose, your goal is to have a basic layout of each page on your site so that you know which images and copy you need to gather or create.

## **5 Write your copy and product listings.**

By this point, you should have a good idea of what types of content you need on your site. Now it's time to create the content. As you're writing this copy, keep basic SEO copywriting best practices in mind:

- Before you begin writing each page, identify the most important keywords to include and incorporate them into the title, headings and body copy.
- Use proper heading and subheading tags to organize each page into clear, easy-to-skim sections. Paragraphs should be short and scannable whenever possible.
- Include internal links where possible, and external links if applicable.
- Include a call to action. Tell site visitors what you want them to do on your site—whether it's to fill out a form, buy your invention or something else.

## **6 Design and build your site.**

This step is typically straightforward, but if you run into any problems you can almost always find an answer with a well-known search engine. Many website-building platforms also have great customer support, with agents who are more than willing to help you solve any issue you encounter.

Once you have the site built, you can start adding your images and copy. You'll also need to create product listings and set up each aspect of your checkout process.

This setup is different for every platform, but the platform should walk you through everything you need to do to create an easy way for customers to purchase your invention. Many ecommerce platforms also include features to help you manage order fulfillment, or they integrate with third-party fulfillment platforms.

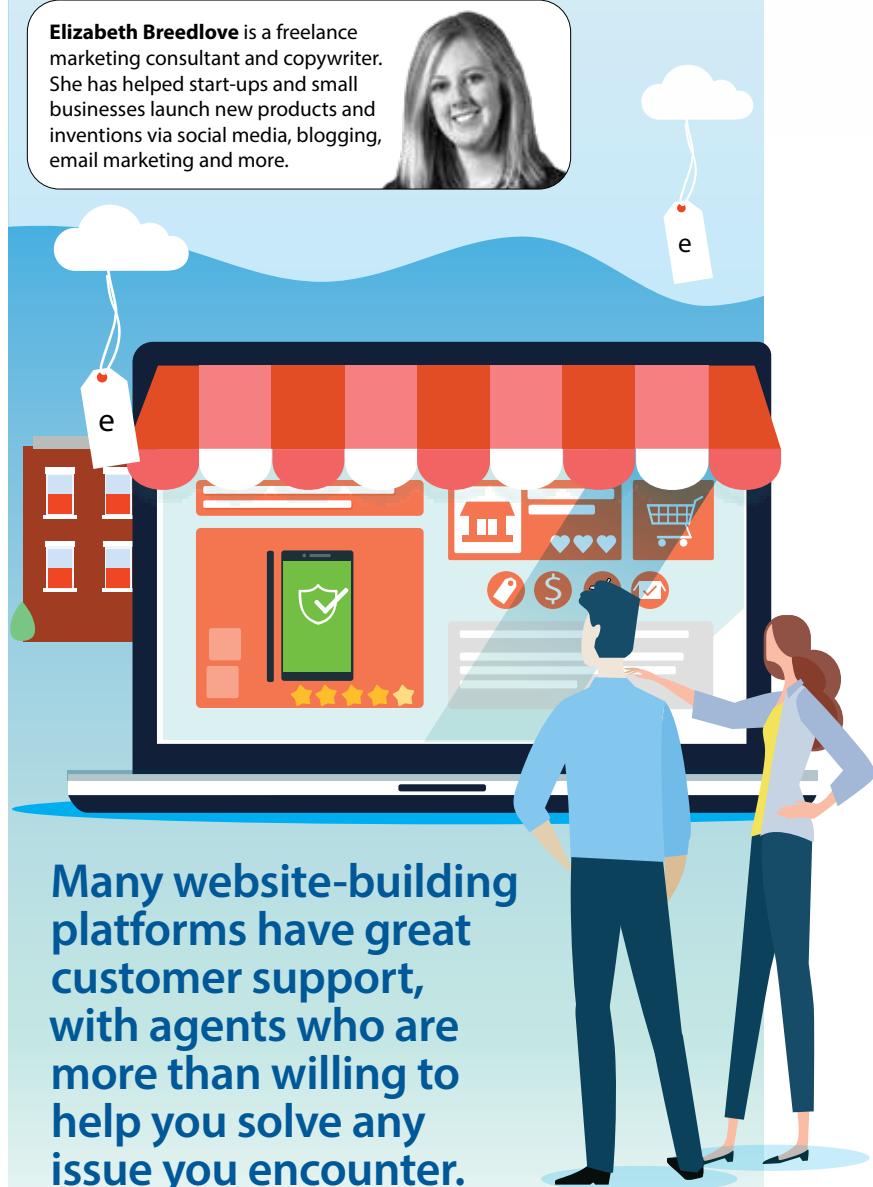
## **7 Double- and triple-check everything.**

By this point, your site probably feels done. However, before you launch it, it's important to confirm that everything looks and works perfectly. Review every page, test every button, complete multiple test transactions and then check it all again. Then, have someone else look at it. Make sure you feel confident that everything is ready before you launch.

## **8 Launch!**

Follow the platform's instructions to connect your site to the domain you purchased. Once everything is set up smoothly, share it with the world! Post about your new site on your social media platforms, tell your friends and family, send out an email blast and use any other channel you can to drive traffic—and hopefully, sales—to your new site. ☺

**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.



**Many website-building platforms have great customer support, with agents who are more than willing to help you solve any issue you encounter.**

# Tech That May Grow on You

3 INVENTORS UNVEIL PRODUCTS FOR GARDENERS AT CONSUMER ELECTRONICS SHOW **BY JEREMY LOSAW**

**P**LANT GROWERS may seem like a docile crowd, but they are often looking for an edge.

Whether growers of tomatoes, roses or azaleas, some plant lovers want their results to be bigger, brighter, or more exotic than that of their friends—and invest in any product that may help their goal. Gardeners usually turn to a special potting mix or fertilizer to get the most from their crop of choice, but now there are many electronic devices that can help grow plants better.

Manuel Caceras displays his smart watering Riego system.

At this year's Consumer Electronics Show, held each January in Las Vegas, three start-up companies debuted products that are sure to be the next must-have kit for casual and serious plant lovers.

## Smart watering

Riego is a smart watering device for indoor plants that was invented by doctor and plant lover Manuel Caceras.

Riego, which means "watering" in Spanish, provides nourishing water for up to five indoor plants. The main component of the patented system is a smart watering tank that holds about 2.5 gallons of water; the pump inside it can automatically water your plants via its smartphone app.

The system also has a sensor that can be placed in a planter to measure the moisture, light, temperature and humidity of the plant's surroundings. It reports this data to the app for growers to see the real-time conditions of their growing area. The system will retail for about \$150 when it starts shipping in 2021.

Caceras and his wife, Maria, started work on the Riego device in 2014 in their hometown of Charleston, West Virginia.

They had a greenhouse, as well as a number of indoor plants. The couple set up an automatic irrigation system to handle watering their greenhouse and wondered why nothing was on the market for indoor plants.

Manuel found a submersible pump and created the first prototype of the device. Shortly thereafter, he contacted Charlotte product development firm Enventys Partners to help continue the development. The company's industrial design and engineering team helped develop the ecosystem, added IoT capability, and built the prototype that debuted at CES.

"I wanted to create a device that was intuitive and worked really well for the indoor gardener," Manuel Caceras said. "So many people kill plants because they do not pay attention to their watering schedule. The Riego is great for amateur and experienced growers, as it takes the guesswork out of plant care."

Riego launches on Kickstarter in March and will ship in early 2021.





### **Lighting the way**

Sherpa Light is designed to provide optimum light for all stages of plant growth. The light is a tunable, full-spectrum LED plant light that is being developed by Dr. Choa Mun Yun from Daejon, South Korea.

The light uses a common blue LED for the light source and features a layer of quantum film that converts blue to other wavelengths, depending on the needs of the plant and the quality of available light. Sherpa can be used as the only light source for light gardens. Combined with the Sherpa Eye light sensor, it can also be used as supplementary light for greenhouses or other grow spaces.

The concept behind Sherpa Light is to optimize the light being provided to plants, which experience different intensity and quality of light throughout their growth cycle.

For example, a strawberry takes about 6 weeks from when its seeds are sown in the late winter/early spring to when it flowers and fruits. The sun has a completely different day length and light quality profile at the beginning of a strawberry's life than when it starts fruiting. Sherpa Light can read what the plant is getting for light and add what is missing that it needs.

"This kind of function can reduce the energy (of the light output) for maximum growth, and we can

enhance the ingredient or the specific content of the plant," says Dr Choa. This allows better and faster growth, altering the compounds being formed inside the plant to make the fruits taste better.

The Sherpa Light, which won a CES 2020 Innovation Award, is still in the research stage of development. The first units will be available for commercial growers within a couple of years, with the consumer version about five years out.

### **Speaking to us**

Lua is based on the fact that plants are in a different kingdom of living beings than humans, and they would be much easier to take care of if they could tell us how they are feeling.

Vivien Muller, an Industrial designer from Luxembourg, felt the same way and developed the Lua smart planter to give plants a way to speak our language.

The Lua is a planter with sensors for light, moisture and temperature and an LCD screen that shows face animations to communicate to the grower how the plant is doing. When the plant has enough light, water and the right temperature, the screen shows a happy face.

The faces change if the conditions are outside of the optimum range. For example, the face grows

**Dr. Choa Mun Yun (right) and his business partner Derek Laan show a prototype of the Sherpa Light, designed to provide optimum light for all stages of plant growth.**



Vivien Muller's  
Lua planter  
features sensors  
that communicate  
progress via LCD  
screen animations.

fangs and looks like a vampire when it is not receiving sufficient light.

This invention was based on a personified home monitor device called the Ulo that Muller had brought to market. The Ulo had a face like an owl, with expressive eyes to create a more human

connection between the device user and monitoring device. The idea of deeper connection was carried forward with the Lua planter.

"The main idea is to create a layer of emotion on top of technology, another new way to interact with devices," Muller says. "The planter seems like the best way to transform something that you cannot understand (the plant's needs) ... and translate that into something that is easy to understand."

Lua, which completed a successful Indiegogo campaign last year, is available for pre-order for \$110 through the same platform. Devices ship in the first quarter of 2020. ☀

**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/.



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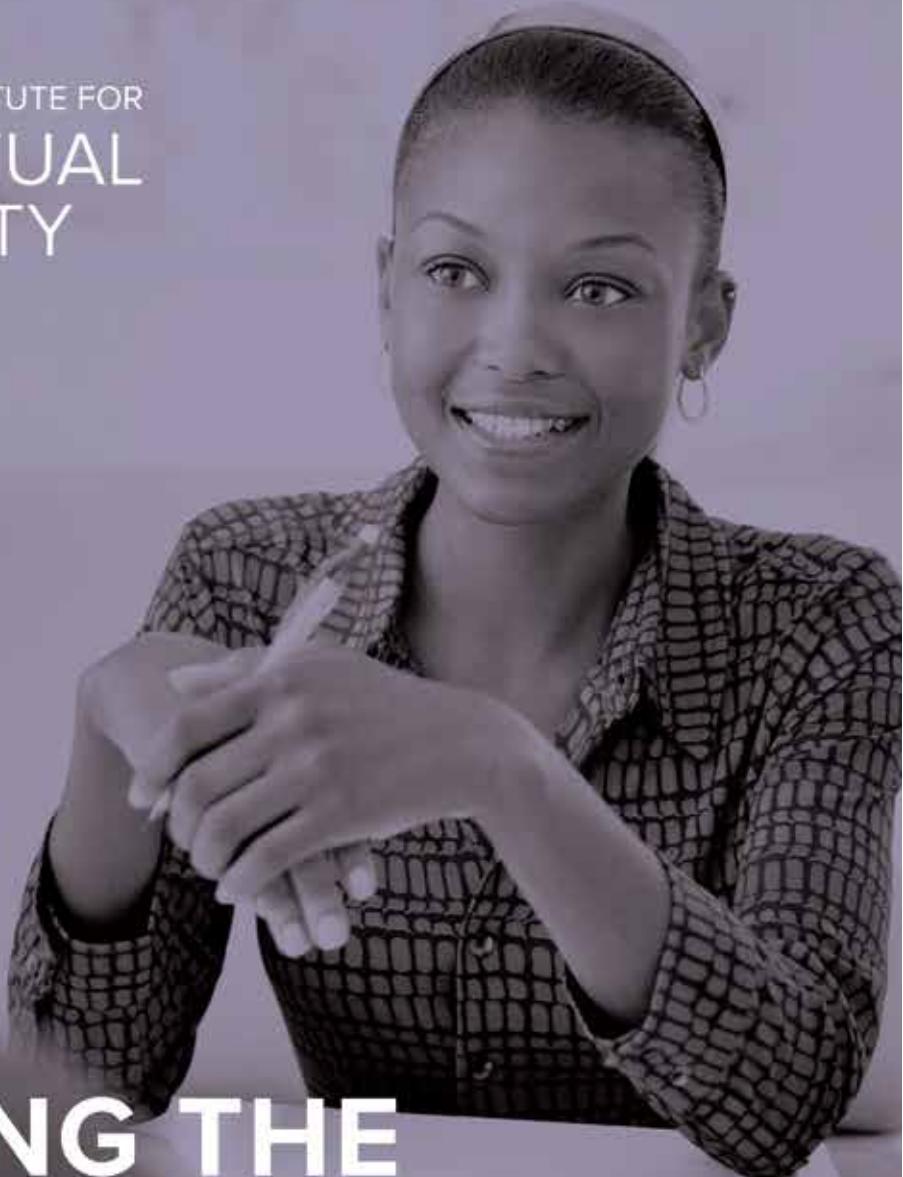


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# everyday EDISONS



# Inspiration Reinvented

REVAMPED 'EVERYDAY EDISONS' REALITY TV SERIES PREMIERES ON CRACKLE THIS MONTH

BY REID CREAGER

**T**HE EMMY AWARD-WINNING original inventor pitch program is back—with new inventors, new judges and a new format.

"Everyday Edisons," an Edison Nation TV series that features real inventors and their ideas, will premiere exclusively on free streaming platform Crackle beginning in March. In eight new episodes, four judges will advise and encourage 24 new inventors seeking to change the world with their ideas.

Bringing back the series with a theme of "Ordinary People, Extraordinary Ideas" are Chris Ferguson, CEO of Edison Nation; Michael Cable, original series producer and winner of 23 Emmy Awards—including one for Outstanding Educational/Informational Program for "Everyday Edisons"—and Louis Foreman, CEO of Enventys Partners and original show co-creator.

The pioneer of all inventing reality shows with its original four-year run that began in 2006, the show changes its format in this incarnation.

Every episode features three inventors, each of whom has been coached by "Everyday Edisons" mentors (including 2019 Professional Bowlers Association Player of the Year Jason Belmonte) to refine their pitch before presenting their idea to a four-person panel of experts. Three experts comprise the panel every week—Ferguson, Foreman and Kelly Bagla, CEO of Go Legal Yourself. Guest judges include Lily Winnail, CEO and founder of Padalily; inventor and Inventor Coach Brian Fried; Tiffany Norwood, global speaker and inventor; Fred Cary, cofounder of IdeaPros; and Howie Busch, founder of DudeRobe.

One winner is announced at the end of each episode to become an Everyday Edison. He or she will win \$5,000 and a chance to utilize the full

resources of Edison Nation to bring his or her product to market—which has been Edison Nation's mission for inventors since its founding in 2008.

This season will showcase various products ranging from oral care products for individuals with disabilities to innovate new shovels, blow dryer accessories, three-dimensional playing cards, customizable blankets and more.

Edison Nation has been opening a series of new product searches to make its services available to more innovators. By submitting ideas to those searches, innovators will be considered to compete on the next season of "Everyday Edisons."

## Nurturing, not cutthroat

Although the show has a competitive aspect, it isn't "Shark Tank." In fact, the original version of "Everyday Edisons" preceded the ABC hit show by three years.

Ferguson, one of the show's weekly judges, says, "Our series stands alone among inventor-centric programming because we're not about being cutthroat. We're about inspiring, educating, and helping inventors create the best possible product.

"Everyday Edisons" is more than an inventor competition; it's a resource for the innovator community that provides invaluable insider knowledge to both its participants and its viewing audience.

"Edison Nation is gearing up several initiatives that provide greater mentorship and educational opportunities to our innovator community, and 'Everyday Edisons' is a big part of that. Nobody has been more committed to supporting the inventor community in a fair and meaningful way than Edison Nation."

**"Everyday Edisons"** judges for Season 5 include (from left) Lily Winnail, CEO and founder of Padalily; inventor and Inventor Coach Brian Fried; Edison Nation CEO Chris Ferguson; inventor and Go Legal Yourself CEO Kelly Bagla, and Enventys Partners CEO Louis Foreman.



## WATCH ON CRACKLE

For an update on the show's official release date, connect to @WatchEverydayEdisons socials.

The show's website is [everydayedisons.com](http://everydayedisons.com).

Crackle is a streaming service that provides a free alternative for binge-watchers who love to catch up on TV shows and movies. Crackle is a Chicken Soup for the Soul Entertainment company.

Viewers can see Season 4 of "Everyday Edisons," which then appeared on PBS, on Crackle.

An inventor makes his pitch in front of weekly judges (from left) Chris Ferguson, Kelly Bagla and Louis Foreman, with guest judge Howie Busch.

When co-creating the original show, Foreman said the mission "was not to humiliate people or throw anyone off an island."

"We wanted to inspire inventors to follow through with their great ideas. But most important, we wanted to educate them on the process, to prevent people from becoming victims. That is still the mission today."

### Origins of a return

Cable, the producer who also was in charge of finding distribution for the new show, says Ferguson was the driving force behind the show's return.

"It began last year. He, myself and Louis Foreman got together and Chris wanted to bring it back. The show has such a halo effect around it, even after all these years.

"He thought it could be a real boon for the Edison Nation community and all the things that Chris and his group were excited about—bringing a great service to the community and bringing new eyeballs."

Another factor was the excitement of bringing back the show "in a time when the media landscape has totally changed. This was really exciting.

"When we did the show starting in 2006, Facebook was just a place to see what your high school girlfriend looked like. Twitter was Ashton Kutcher and a couple other people. Amazon was still selling books and toasters. Netflix was still delivering DVDs to your mailbox.

"It was just a different time."

### New setup

The new show—technically, Season 5—is set up and executed differently. The first time around, Cable says, "We did these massive casting calls where we had thousands of people lining up at convention centers. Plus, we wanted to show the whole product development process, from a figurative sketch on a napkin to being a product on a store shelf.

"This go-around, we have a group of inventors who are hand-selected through Edison Nation. This time we wanted products that were further along but not finished, to educate them and encourage inventors with the possibility of Edison Nation's help to be a launch pad for the product."

The first incarnation of the show had 13 episodes per season. "To see the happy ending, you had to watch 13 episodes," Cable says. "But the attention span of the viewer is very short. Now, each episode is self-contained."

Foreman says that is a nod to how viewing patterns change: "With the reboot, we have to re-innovate the show, much like products have to re-innovate themselves."

"People are not as interested in a 13-week appointment. They want quicker, smaller, bite-size pieces and

they may want it in a different format. Instead of sitting on a couch and watching it, they might want to watch it on their tablet or mobile device."

### A dream panel of experts

Cable is "over the moon" about the expertise level of the panel members and how well they interact, which will be obvious to viewers. One of the weekly panelists, San Diego-based attorney and inventor Kelly Bagla, shares that enthusiasm.

"As a practicing attorney, I am frequently introduced to new inventions from hopeful inventors seeking ways to get their products on the market," she says. "I, too, am one of those inventors—who invented a line of plush animal toys called 'Eardorables'."

"I have been down that road that many inventors experience, and it's hard. To be able to help such fellow inventors with their inventions from the creation process to the legal protection process to the market process has become my passion, and keeping within the same spirit, I am honored to be a part of 'Everyday Edisons.'

Howie Busch, a well-known mentor for "Shark Tank" alumni, said of his guest judging experience: "Being a judge on 'Everyday Edisons' as an inventor, product developer and entrepreneur was, for me, a lot like being a kid in the candy store. I loved every minute of it."

Lily Winnail, another guest judge, enjoyed being able to encourage inventors.

"I was so impressed with the ideas, and I truly felt each one was already a winner for the simple fact that they pursued their idea beyond just a thought. They put their thought into action. I wish I could have chosen all three!"

"America is alive and well, and what we built our country on is at the heart of this show."

### 'You root for them'

Cable says that encouragement is what "Everyday Edisons" is all about.

The TV news veteran's 23 Emmys come in categories including writing, editing, photography, documentaries, breaking news, feature news, live reporting and investigative reporting. Cable has been nominated for five more Emmys this year; during his interview for this story, he was on his way to getting fitted for a tuxedo for the Midsouth Regional Emmy Awards in Nashville.

His work emphasis has always been on evocative storytelling that reaches people on a human level. Being executive producer for "Everyday Edisons" poses a different challenge for him because "there is

## 'EVERYDAY EDISONS' PRODUCT LINE

Edison Nation is launching a "Made by Everyday Edisons" product line comprised of original concepts inspired by the Emmy award-winning show.

The inaugural line includes a variety of products, ranging from kitchen gadgets to pet supplies, that offer everyday solutions in major product markets. Each item will be co-branded with its own unique logo memorializing the inventor.

The "Made by Everyday Edisons" line will be distributed through the Edison Nation omnichannel sales network, including Amazon.



**"We wanted to educate inventors on the process, to prevent people from becoming victims."**

—LOUIS FOREMAN, ENVENTYS PARTNERS CEO

very little writing. You're capturing the action."

But it's still about people and their stories.

"It's always been my thing to tell the backstories and humanize the main subject—in this case, the inventor. You really get to know these people in their struggles. You feel for them. You root for them."

Guest panelist Tiffany Norwood—who raised \$670 million to fund WorldSpace, the first global digital satellite radio start-up—said the show gives the world a peek into "the future of delight and awe."

"As Thomas Edison once said: 'If we did all the things we are capable of, we would literally astound ourselves.' That pretty much sums up 'Everyday Edisons.' It gives people the opportunity to astonish themselves." ☀



## WANT TO APPLY?

Go to [edisonnation.com](http://edisonnation.com), where Edison Nation has opened innovation searches specifically for "Everyday Edisons" consideration. You can sign up there.

Current categories are pet innovation; hardware and tools; health, wellness and beauty; kitchen tools and gadgets; kids products; home organization and storage; and fitness products.

Join Edison Nation's email list and connect to its social network to stay current on the latest developments.

# GAPING GAP

MUCH WORK AHEAD IN HELPING MORE WOMEN AND MINORITIES GET PATENTS

BY REID CREAGER

## TWELVE PERCENT.

**T**hat's the ratio of inventors awarded United States patents in 2016 who are women, according to a February 2019 report by the United States Patent and Trademark Office. So more than half of the country's population is dramatically underrepresented in a process that is inextricably linked to prosperity, opportunity, achievement and America's economic standing in the world.

This could be the most important statistic in inventing—even in the realm of intellectual property. And another report by the USPTO, released last October, confirms we don't have enough information about this to know why.

The USPTO and Congress are working to improve opportunities for innovation and access to the patent system by women and minorities, but there is much work to be done. Companies' and others' voices are beginning to assume a prominent role in uncovering solutions that will prevent so much innovative talent from being left behind.

## Closing the gaps

To find the best solutions, there is an urgent need to ask the right questions.

That impetus began with the SUCCESS (Study of Underrepresented Classes Chasing Engineering and Science Success) Act, a bill passed in 2018 that directed the USPTO to study and report to Congress on the number of patents applied to and obtained by women,

minorities and veterans; and by small businesses owned by those groups. The USPTO transmitted its findings to Congress last October 31.

The most impactful takeaways:

- A review of literature and data sources found there is a limited amount of publicly available information regarding the participation rates of women, minorities, and veterans in the patent system.
- The bulk of the existing literature focuses on women, with a very small number of studies focused on minorities, and only some qualitative historical information on U.S. veteran inventor-patentees.
- Overall, there is a need for additional information to determine the participation rates of women, minorities, and veterans in the patent system.

The gaping patent gender/minority gap is enabled by holes in the collection of data. Laurie Self, Qualcomm's senior vice president and counsel of government affairs, says that during the patent application process, the USPTO "doesn't collect the data that would help us understand where the gaps are, especially for minority patentees."

"New proposed legislation would empower the USPTO to collect demographic information, which along with more interagency cooperation and data sharing would go a long way with helping everyone understand the size and scope of the problem, and to track our progress toward greater diversity in patenting."

Nydia Velázquez, representative for New York's 7th Congressional District and chair of the House Small Business Committee, agrees.

"If you can't measure it, you cannot improve it. And this lack of research and reporting on patent applicant demographic data makes it difficult for policymakers to advance legislation that will foster inclusive innovation."

## Demographic conclusions

Qualcomm—which built a coalition that was instrumental in the passage of the SUCCESS Act—has commissioned research that provides congressional committees with information to champion this issue. Among that research was a 2016 study by the Institute for Women's Policy Research on women and patenting, which found that at the current rate of progress gender patent equity is more than 75 years away.

One of the few demographic conclusions in the October USPTO study was that most female inventors are found in tech-heavy states and those with a larger female workforce. But Self cautions against

Laurie Self, Qualcomm's senior vice president and counsel of government affairs, examines an Inventors Hall of Fame exhibit honoring Qualcomm's achievements and patents in wireless technology.

## DIVERSITY NUMBERS

Additional recent data collected from major patent-related institutions:

Minorities make up 8% of U.S.-born innovators. African Americans, despite comprising 13% of the native-born population, represent 1/2 percent of U.S.-born innovators.

Women hold less than 20% of U.S. jobs in technology—a prime source of patents—with only 5% in position of leadership at tech companies. African Americans hold less than 15% of tech positions, Latinos 14%.

Less than 3% of venture capital-backed founders are black or Latino.



# Qualcomm, instrumental in the SUCCESS Act, has commissioned research that provides Congress with information to enhance patent diversity.

making assumptions tied to a particular technology or discipline.

"Intellectual property is critical to a wide array of fields, including scientific and engineering disciplines such as health care, manufacturing, wireless technology, computer software, chemicals and countless others," she says. "Patents are also critical for protecting inventors who toil in their garages or at their kitchen counters.

"We should be encouraging inventors from every background to pursue patents. Some of the same principles for female inventors in tech apply to other potential patenting areas.

"For example, strong role models and informal networks help inventors in every field succeed. The federal government can also help by providing more grants to female and minority inventors, and ensuring those grants are widely distributed geographically. Where you live should not determine whether or not you get to be an inventor."

Another fact uncovered in the USPTO's February 2019 study is that there is a larger share of female patentees in coastal states such as New York, Massachusetts and California. Self says this information can be leveraged.

"Certain states have significant patenting activity due to a higher concentration of innovative R&D companies and universities. We can use these states as a good model—including the deep networks of

female scientists and potential inventors—for other states to follow.

"And there's hope for the future. (Economist) Alex Bell and his colleagues at Harvard have found that children who are exposed to innovation in their youth are more likely to become inventors later in life. Promoting innovation in many parts of the country can go a long way toward a more geographically distributed innovation base."

## Congressional cause

Qualcomm's efforts with the USPTO and Congress have provided important momentum in bridging the patent gap. Self notes that the company has made many recommendations to Congress and the USPTO about ways to incentivize women inventors.

"It all starts with ensuring we really understand the problem," she says. "We were encouraged by the latest recommendation coming out of the SUCCESS Act that called for more interagency cooperation and more research and data gathering related to diversity among patent holders.

"We also support the IDEA Act, bipartisan legislation that would require the USPTO to collect data from inventors voluntarily—when they apply for a patent. One of the recommendations coming out of the SUCCESS Act report is to have Congress specifically target funds to promote invention and entrepreneurship among underrepresented groups, including women. At Qualcomm, we think this would be an important step toward empowering more women inventor-patentees."

A lack of resources has played a major role in suppressing female inventing. The cost of filing a patent, often around \$10,000 or more, can be a major deterrent.

"Certainly, better access to patent lawyers, reduced USPTO filing fees and other resources would help reduce the barriers to applying for patents," Self says. "Moreover, venture capital funding and other investment are critical for inventor-patentees to bring patented ideas to market, but right now, only about 2 percent of venture capital funding goes to women-owned businesses."

"But it's important to remember that the idea of resources goes beyond just funding and other tools to help businesses. Many of these resource allocation challenges would improve if more women were seeking and obtaining patents in the first place."

## INDIA'S INITIATIVE

India's patent office recently announced that it will expedite examination if a patent application has at least one female inventor. But don't look for a similar initiative in the United States.

Qualcomm's Laurie Self, quoted extensively in the main story, says India has a "noble" idea. But "given our current politics, and the lack of research into the gender gap in patenting that we've discussed, I'm not optimistic that something similar could happen here."

However, she adds that empowering more female patent-inventors and providing more information about the enormous untapped potential of female inventors "could help encourage legislators and other policymakers to look into ways that smart policy changes could empower female inventors."



## **Structural issues**

"We need to address the structural causes of the gender gap and the sociocultural barriers to female patenting," Self says.

Andrea Ippolito, director of Cornell University's W.E. Cornell program, a guided entrepreneurship and leadership program for women in STEM, agrees. She says patent issues for women "are the same obstacles that women battle in the workplace at large—systemic gender discrimination and lack of access to institutional resources in mentoring in the right fields."

Ippolito was a witness at the House Committee on Small Business Hearing, "Enhancing Patent Diversity for America's Innovators," on January 15. She said the growing number of women in STEM fields hasn't translated into increases in female patent inventors. "The real gap comes from the rate of women involved in patent-intensive fields such as electrical and mechanical engineering. We also see far fewer women seeking patents in private industry than in the academic sector."

Self says the fact that colleges and universities have comparatively few female professors "really gets to the heart of the structural issues when it comes to female participation in STEM fields as well as pursuing patents.

"Women need role models that they can look up to and go to for guidance. They need to see people like them who have had similar experiences and overcome similar barriers in pursuing their dreams. With fewer female professors, more women lose out on those role models and that mentorship opportunity. Plus, it deprives women in the STEM fields of the kinds of networks that are important for growth within the field (through internships, jobs, etc.) and, if they want to pursue patents, are critical for inventor-patentees.

"Moreover, female professors tend to patent less than their male counterparts, preferring instead to focus on teaching and publishing. Ensuring that patenting and commercialization activities are weighted more heavily in tenure and promotion decisions will help to ensure that women who are on the tenure track have the same opportunities as men to pursue innovative activities."

## **Minority gaps**

Congresswoman Velázquez, along with U.S. Rep. Steve Stivers (R-Ohio), Sen. Mazie Hirono (D-Hawaii) and Sen. Thom Tillis (R-N.C.), introduced the IDEA Act in Congress. In leading the House Small Business Committee hearing in January, she noted the potential financial benefits for small



firms and the national economy if the patent gap for women and minorities were narrowed.

"Applying for and obtaining a patent allows small firms to gain access to capital, find licensing deals and level the playing field with larger competitors—all of which lead to jobs and economic growth," she said. The severe underrepresentation of women and minorities in the patent process "not only hurts these groups but the economy as a whole."

"Reports show the U.S. GDP would grow by 4.6 percent if more women and minority inventors were included in the patent system. This is particularly troubling for low-income communities and rural America that are already suffering from being on the wrong side of the digital divide."

She cited findings from Michigan State University economist Lisa Cook that only six patents per million are attributed to African-American inventors. Additionally, children who are born to high-income families are 10 times more likely to get a patent than children from below-median income families.

Velázquez also called for better congressional support of STEM initiatives and the Small Business Administration's Small Business Innovation Research program to address the lack of diversity in the technology sector. She cited studies showing that 75 percent of girls who have participated in hands-on STEM activities are empowered to seek careers in technology, adding that government programs like SBIR have helped boost participation by women and minorities. ☐

**Nydia Velázquez**, representative for New York's 7th Congressional District and chair of the House Small Business Committee, noted the potential financial benefits for small firms and the national economy if the patent gap for women and minorities were narrowed.

# TRADEMARK<sup>TM</sup> BASICS

ANSWERING THE 3 MOST COMMON QUESTIONS  
FOR INVENTORS, ENTREPRENEURS AND SMALL BUSINESS OWNERS

**TODAY'S TECH-ENABLED WORLD OFFERS** unlimited potential for entrepreneurs, with people of all ages and backgrounds embracing business ownership. It's exciting to start a business, but even the most optimistic among us may find some aspects of it intimidating. Intellectual property and associated concepts, in particular, can be confusing for an entrepreneur or small business owner.

Here we will provide a basic overview of trademarks and answer the three most common questions on the topic.

## What can be trademarked?

A trademark, according to the United States Patent and Trademark Office, is a "word, phrase, symbol and/or design that identifies and distinguishes a source of a particular set of goods from another." Services also fall under trademarks, and the word, phrase or design that distinguishes the source of the service is called a service mark.

Some examples of famous trademarks include the McDonald's arches symbol, Nike's "swoosh" logo, and Apple's bitten apple logo. In addition, while it's rare, some colors can be trademarked; luxury jeweler Tiffany & Co.'s famous "Tiffany Blue" color is registered as a color trademark.

For the purpose of distinguishing what each protects, it's important to briefly mention copyrights and patents. A copyright protects original works of authorship, such as literary, musical and artistic works. A patent gives the holder the right to exclude others from making,

using or selling a particular invention without the inventor's consent.

## Should you trademark your product or service?

Business owners often wonder if there's a need to trademark their goods and services, particularly if they have incorporated a business or secured a website with the business name. Neither of these offers federal trademark protection.

There are usually some common law protections available at the state level without officially filing for a trademark. However, there are many benefits to filing federally.

This allows a business to sell its product freely and build its brand, which is often critical to success in the age of digital and social media. In addition, another business could come along and file a trademark for a similar product and name. This could affect the business owner who chose not to file the trademark, as the USPTO can deny a trademark based on "likelihood of confusion" with an existing mark.

Therefore, it's often to a business owner's advantage to file the federal trademark.

## How can you get started with trademark filing?

Suppose you come up with the perfect name for your new bakery business and want to trademark it. Before you order promotional items with your desired name and logo, it's a good idea to see if there's an existing business with the same name and similar products.

As discussed earlier, the USPTO can deny a trademark if it's likely to be confused with an existing mark. Filing fees aren't refundable, so it's best to minimize any reasons an application could be rejected by performing due diligence.

You can search the USPTO's database for existing marks and designs. The database allows users to search for specific names or word combinations in the basic query.

For users who want to do an expanded search, the system has the ability to search a wide range of fields. Try to search multiple combinations of a name. For example, if your bakery's name is "Deb's Delights," be sure to search "Debbie's Delights," as well as other variations of that name.

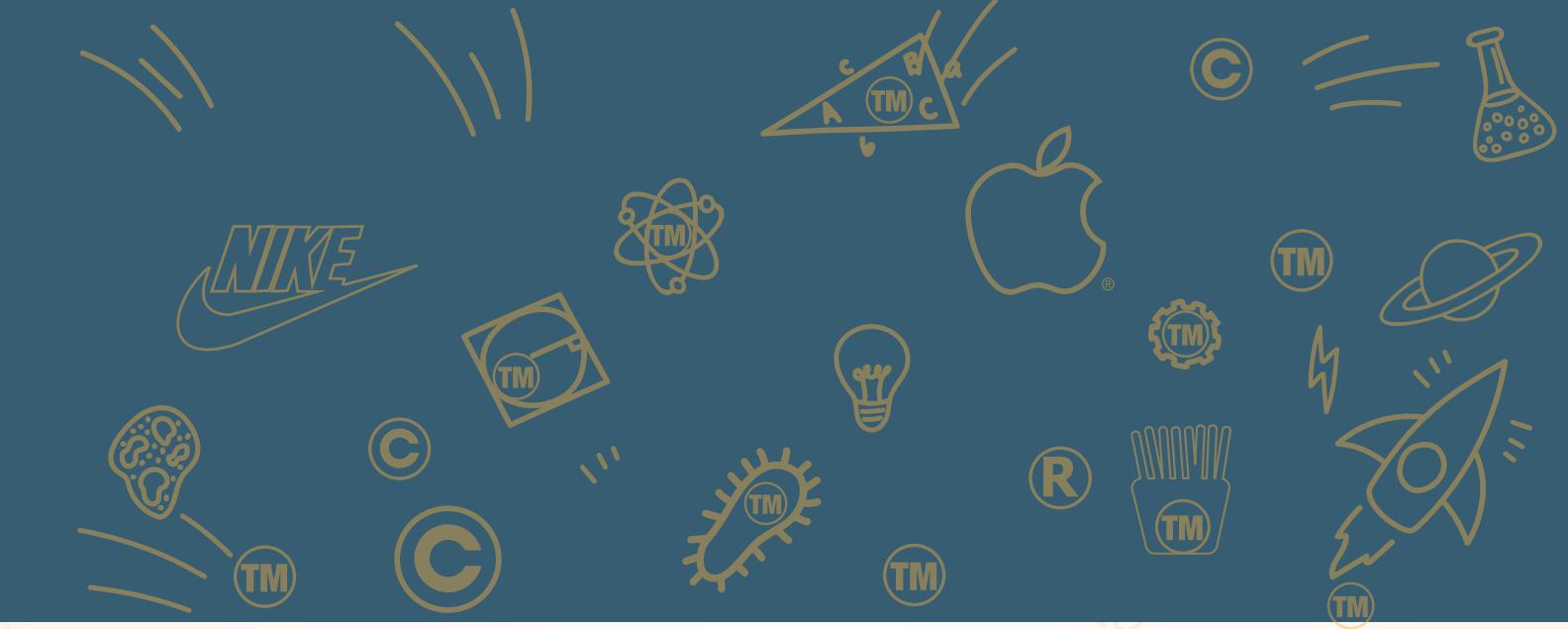
You should also search the internet for businesses with similar names. The goal is to avoid filing a trademark that will be rejected for being too similar to an existing mark. Some companies offer trademark search services.

It should be noted that the USPTO trademark filing does not apply to international trademark protections. This process is handled under a treaty known as the Madrid Protocol.

Once you've performed the search and decide to move forward with filing the trademark, you'll need to begin the process here: [uspto.gov/trademarks-application-process/filing-online/initial-application-forms](http://uspto.gov/trademarks-application-process/filing-online/initial-application-forms)

Next, here are three decision points for you on your trademark application.

- **Basis:** What is your basis for filing?  
Here, the USPTO is asking whether



the goods or services are currently “used in commerce,” or whether there is an “intent to use.”

If the goods or services are already being sold with your mark, you need to provide documentation of this fact but file as “use in commerce.” If you haven’t used the mark in the selling of your goods or services, the filing basis would be “intent to use.”

By filing in this manner, you’re indicating your intent to use the mark in commerce. Oftentimes a business has many of the components set up but isn’t quite 100 percent market ready. Note that the “intent to use” filing basis has additional fees and filings to convert the application to “use in commerce.”

- **Class:** Class is the way the USPTO identifies goods and services. There are 45 classes, with classes 1-34 for goods, and 35-45 for services. A listing of the classes can be found here: [uspto.gov/trademark/trademark-updates-and-announcements/nice-agreement-current-edition-version-general-remarks#class-headings-with-explanatory-notes](http://uspto.gov/trademark/trademark-updates-and-announcements/nice-agreement-current-edition-version-general-remarks#class-headings-with-explanatory-notes)

It’s important to identify the proper class of your goods or services, as the USPTO will generally examine whether a mark for similar goods already exists in a class. This is one of

## Not filing a federal trademark can result in the United States Patent and Trademark Office denying a trademark based on “likelihood of confusion” with an existing mark.

the primary reasons the USPTO denies an application, so it’s important to ensure your mark and class are unique or novel enough to pass scrutiny.

- **Identification of specific goods and services:** The USPTO requires you to be specific about the items you are currently selling or intend to sell using your mark. There’s an “ID Manual” that lists thousands of goods and services; you use this to help identify the specific items you’re selling in a class.

For example, if you’re selling coffee drinks, you would file using class 30 and would list “coffee drinks” in your description. If you also sell coffee beans, unroasted coffee and tea, you would list these items in your description as well.

Descriptions can be tricky. It may be possible to reduce the number of specific goods and services in a description if the USPTO has issues with your

application, but you’re not able to expand your listing. Any new goods and services would likely require a new application and separate fee.

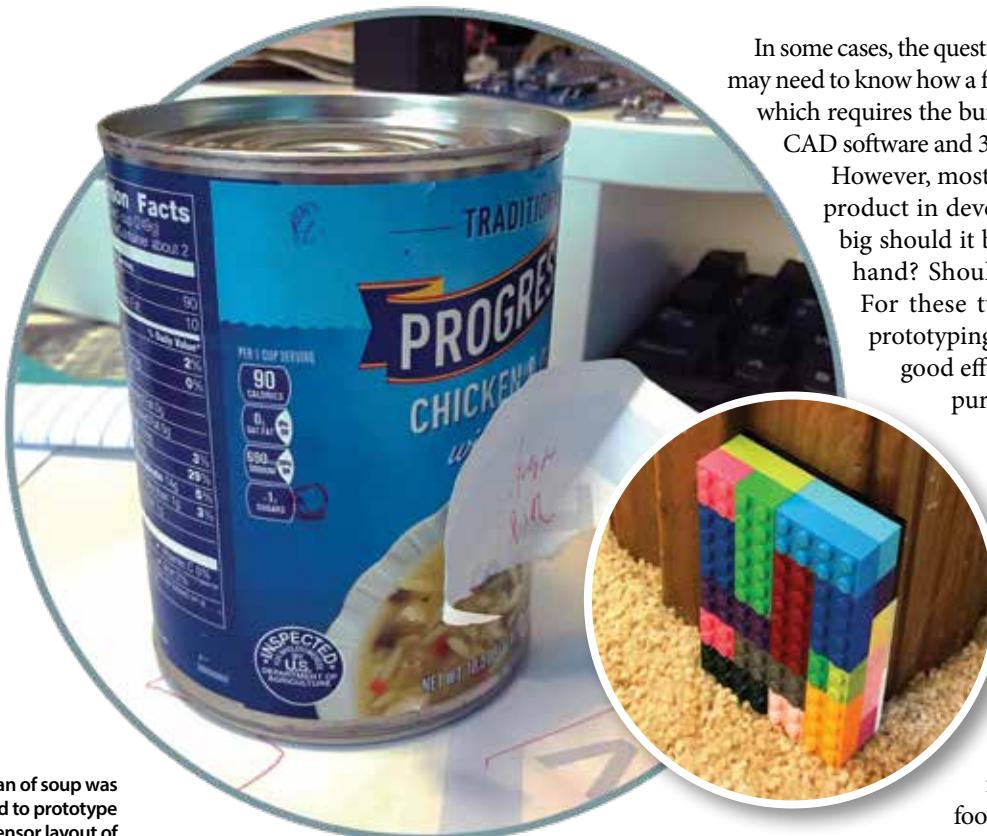
In summary, the process of filing a trademark can be daunting for inventors and small business owners. For more information on trademarks, check out Chapter 4 of the Michelson Institute for Intellectual Property’s free interactive ebook, “The Intangible Advantage,” and Sections 8 and 9 of its free online course “Intellectual Property: Inventors, Entrepreneurs, Creators.”

This information was provided by the Michelson Institute for Intellectual Property, an initiative of the Michelson 20MM Foundation that addresses critical gaps in intellectual property education to empower the next generation of inventors. Michelson 20MM was founded thanks to the generous support of renowned spinal surgeon Dr. Gary K. Michelson and Alya Michelson. To access more resources, please visit [MichelsonIP.com](http://MichelsonIP.com).

Nothing in this article shall be construed as legal advice, or as creating an attorney/client relationship.

# Can't Prototype? Sure, You Can.

CONSIDER THESE FOUND MATERIALS AND SIMPLE TOOLS  
TO DEVELOP IDEAS AND ANSWER KEY QUESTIONS **BY JEREMY LOSAW**



This can of soup was used to prototype the sensor layout of a device being developed at the Enventys Partners shop.

**Inset:** This LEGO prototype was built by Chris Stubbs, inventor of the Luminook closet lighting system, as a way to evaluate the size for the device before building more advanced prototypes.

**D**ESPITE having an engineering shop at Charlotte's Enventys Partners that is filled with the latest tools, I am not above using soup cans to build a prototype.

Prototyping is a technique to solve problems and learn about a product. It need not be a complicated process that takes special tools and skilled technicians.

Savvy developers know that it is important to iterate quickly, and often simple is best. Found materials and simple tools can often be used to answer a question in minutes instead of having to wait days or weeks for a 3D print or machined part.

Prototypes should be built to answer a question about the product being developed, and the nature of the question should drive the choice of how to prototype.

In some cases, the question can be very technical. We may need to know how a full assembly works together, which requires the build of complex geometry in CAD software and 3D-printed parts.

However, most questions we have about a product in development are simple: How big should it be? How does it fit in your hand? Should it be round or square?

For these types of issues, many fast prototyping techniques can be used to good effect. The key is to prototype purposefully.

There are plenty of tools available to the masses that are easy to use, even by the most inexperienced prototyper. Here are some prototyping tools and techniques that can be used to help develop ideas and answer key questions about a product—even for those who have never set foot inside a prototyping shop.

## LEGO

One of the first builder toys that GenX and younger people were exposed to were LEGOs. They are easy to build with and modify, are cheap, ubiquitous, and excellent for quick prototyping. The square bricks limit the fidelity of the surface that can be formed, but this frees our brains to focus on the macro, core questions instead of obsessing with micro details.

LEGOs can be used to build rough prototypes to evaluate size, form factor, or general layout of a product. Within minutes you can build multiple iterations of your concept and think through how users are going to interact with it. With the multitude of motion elements, hinges and special bricks, you may even be able to make rough models of the moving parts of a prototype too.



## Most questions we have about a product in development are simple: How big should it be? How does it fit in your hand? Should it be round or square?

### PVC

PVC tubes are great for quick prototyping, with no building skill required. Long lengths of tube are just a few dollars and fittings are usually less than a buck, so it is inexpensive to have a good inventory to play with. The tubes can be cut with PVC scissors or a hand saw, enabling you to build a structure or fluid circuit in minutes.

The obvious use for PVC is for fluid-based products, but it is just as useful for prototyping physical prototypes. The tubing can be used as a hand grip or assembled with fittings to make larger structures. Because it is so modular, it is easy to build and test multiple iterations in minutes.

### Found Items

Sometimes, the purpose of a prototype is to test a user flow. This can be an onboarding process, a logistics map or installation procedure.

Although these can all be flowcharted out or done digitally, manipulating physical objects to simulate the process helps our brains interpret the data differently—and often yields interesting results. Think of the old war room tables where generals move their fighting units around the battlefield to work out their strategy.

For this type of prototyping, parts need not be complicated. Game board pieces, soup cans, a deck of cards—anything fast and available that can be manipulated to simulate the process is key.

Found items can also help build functional prototypes. Old toys have lots of great parts that can be

harvested and repurposed, such as motors and gear trains. Products with grips or handles can be scavenged to create your own ergonomic interfaces. Duct taping found items can be a valuable way to explore the physicality of a product.

### Electronics

Moreso than physical prototypes, building electronic prototypes can spike our anxiety. Electricity is hard to visualize, and working with it can be very intimidating.

However, some microcontrollers can be used with block coding to build proof-of-concept electronic prototypes. Block coding is a graphical programming interface in which you drag and drop elements to build working code, without the need for typing anything or having to know any special syntax.

My favorite block coding program is called MakeCode. It is a free website from Microsoft that can be used with developer boards such as the Microbit, Adafruit Circuit Playground Express, or LEGO Mindstorms.

The site simulates the code for you before you upload your program to your board; there are lots of tutorials to teach you the basics. MakeCode is particularly powerful with the Circuit Playground Express as it has addressable LEDs, sensors and actuators that can be programmed with no circuit design or soldering required. ☀

Above: This shower head prototype was made primarily from PVC tubing. It was easy to fabricate and inexpensive.

Below: The MakeCode interface makes it easy to create custom code for the Circuit Playground Express to make use of buttons, temp sensors, speakers and other peripherals resident on the board.





# Going International

SHOULD YOU USE A CUSTOMS BROKER,  
OR A FREIGHT FORWARDER? **BY EDITH G. TOLCHIN**

**S**o, you have an invention and you have decided to go international.

Whether you manufacture your product in another country, arrange for it to be shipped from one country to another, or ship raw materials or components

that comprise your invention into a country that will assemble and/or manufacture your product, at one time or another you will employ the services of either a customs broker or a freight forwarder.

What is the difference between the two?

## Customs broker

A customs broker imports products on your behalf from a foreign country into the United States. But for Customs purposes, you are considered the “importer of record.” You initially provide the customs broker with a signed power of attorney form, which authorizes the brokerage firm to effect entry and clearance of your shipment on your behalf.

The customs brokerage firm can also provide many other services for the importer. These include filing special documents with Customs

in advance of shipment, as required by various government regulations; working with several government agencies such as the U.S. Food and Drug Administration, the U.S. Department of Agriculture and the Consumer Product Safety Commission, among others; and arranging your “binding ruling” requests—to determine, in advance, your (new) product classification and import duties. A binding ruling request is important so that there are no costly duty surprises when your shipment arrives at your chosen U.S. port.

A customs broker can also help you determine whether there are any special government programs that will enable you to import your products “duty-free”—such as the United States-Mexico-Canada Agreement (USMCA), the Central American Free Trade Agreement (CAFTA) and others. See the Office of the United States Trade Representative for further information regarding free trade agreements.

This is but a small taste of the myriad services a customs broker offers.

## Freight forwarder

Contrary to the customs broker who imports products on your behalf, a freight forwarder exports or arranges shipments from one country to another on behalf of either your foreign supplier or for you.

Say you landed a big sale of your new product to a customer in France. Before you enter into your sales

## KEY LINKS

Agencies that will assist you in importing or exporting your invention:

- **National Customs Brokers and Forwarders Association of America:** [ncbfaa.org](http://ncbfaa.org)
- **Office of the United States Trade Representative:** [ustr.gov](http://ustr.gov)
- **U.S. Customs and Border Protection:** [cbp.gov](http://cbp.gov)
- **U.S. Food and Drug Administration:** [fda.gov](http://fda.gov)
- **U.S. Department of Agriculture:** [usda.gov](http://usda.gov)
- **U.S. Consumer Product Safety Commission:** [cpsc.gov](http://cpsc.gov)
- **U.S. Bureau of Industry and Security:** [bis.doc.gov](http://bis.doc.gov)
- **U.S. Department of Commerce:** [commerce.gov](http://commerce.gov)

contract, you must work out your shipping terms with your overseas customer.

A freight forwarder can help you with this. Who will pay the ocean freight—you (the exporter), or your foreign buyer (the importer)? What are the laws of the government of the importing country that may pertain to your product? Do you need any special documentation? Are import licenses required in France?

It helps to surf the U.S. Bureau of Industry and Security website for export administration regulations information, or the U.S. Department of Commerce site. But a freight forwarder is an agency trained in knowing or finding out about rules and regulations of shipping to or exporting to another country.

A freight forwarder, exporting, must know regulations of all foreign countries into which he or she ships on behalf of clients. How many countries are there in this wonderful world? You get the picture: It's pretty complicated.

Freight forwarders also help you analyze shipping methods and make shipping arrangements to your customer in another country. For example, should you use ocean freight or air cargo?

They help you learn the proper shipping terms to include on the sales order you issue to your new international customer. They can assist you in legally shipping parts and components for your new invention from one country into another, say, for assembly there—and then can help you arrange to ship your finished product to yet another destination.

The worst thing to happen to a new business or a seasoned exporter would be to have your shipment stuck in foreign Customs without proper documentation! Again: Legally is the operative word here.

You thought international trade would be easy? Think again! ☺



Books by **Edie Tolchin** (egt@edietolchin.com) include "Fanny on Fire" (fannyonfire.com) and "Secrets of Successful Inventing." She has written for *Inventors Digest* since 2000. Edie has owned EGT Global Trading since 1997, assisting inventors with product safety issues and China manufacturing.



## 2 Critical Steps to getting your NEW PRODUCT "out there"

### 1 GET IT MADE

Contact Edie Tolchin – "The Sourcing Lady" (SM) for sourcing, China manufacturing, product safety issues, packaging assistance, quality control, production testing, final shipment inspections, freight arrangements, import services and delivery to your door!

[www.EGTglobaltrading.com](http://www.EGTglobaltrading.com)  
EGT@egtglobaltrading.com  
P.O. Box 5660 - Hillsborough, NJ 08844  
**845-321-2362**

### 2 GET A WEBSITE!

Contact Ken Robinson – While your order is being manufactured, you need to start working on your WEB PRESENCE! Get people talking about your product on Social Media (Facebook, Twitter, YouTube, Google+), get good search engine placement (SEO)!

[www.widgetsontheweb.com](http://www.widgetsontheweb.com)  
kenrbnsn@widgetsontheweb.com  
614 Van Liew Court - Hillsborough, NJ 08844  
**908-963-2447**

Get more BANG for your BUCK from two professionals with a combined total of over 60 years of experience!



# Trending Up

PATENTS SHOW MOSTLY ENCOURAGING SIGNS,  
BASED ON ACTIVITY DURING THE PAST YEAR **BY LOUIS CARBONNEAU**

**A**S WE NEAR the first spring of this new decade, how is the IP market behaving?

To answer this, and as I do from time to time, let's look at key indicators that tend to explain current and future market trends:

- Noticeable change in the supply-and-demand chain;
- New case law that may have long-lasting impact;
- Change in the regulatory environment;
- Recent large damage awards against infringers;
- Stock performance of publicly traded IP companies (PIPCOs).

All are susceptible, especially when taken together, to shifting the market one way or another. Therefore, this is more about trying to paint a macro picture of the marketplace rather than react to any single event.

But for those who need their daily dose of news, you can follow Tangible IP on either LinkedIn or Twitter, where we post regularly.

## Supply/demand

The second half of 2019 featured a continuation of a trend that started in 2018, when several large patent owners started to divest large chunks of their own portfolios. The goal is not necessarily to leverage the privateer model through direct or indirect assertion but to prune vast families of non-core, nonperforming assets through the brokered market.

Several more are considering the same move. In the meantime, Intellectual Ventures, one of the largest patent aggregators, shows no sign of slowing its offload of patents, selling large swaths to well-known non-practicing entities that will then monetize them through licensing and assertion activities. (*Editor's note:* A non-practicing entity, or NPE, is someone who holds a patent for a product or process but with no intention of developing it.)

On the other hand, we saw two related announcements in 2019 that substantially impeded the future marketability of very large portfolio—portfolios historically used actively by their owners to either assert or divest.

Microsoft and IBM recently joined the LOT Network, which means that each company's entire portfolio is now encumbered by the LOT license. This

indicates that well north of 100,000 patents in aggregate are now off-limits for traditional monetization to anyone who is not an operating company.

To oversimplify a bit, let's say that these patents will never be sold to a third party, or at least not for their full market value, as the LOT encumbrance is not one of interest for current patent buyers.

Another phenomenon that appears to be gaining traction is the specialized patent pool, such as Avanci (IoT space), whose success means more licensing and less litigation. We also saw a new entrant in the defensive aggregator space with VideoLabs. Those patents are not going to hit the market for sale, so in that sense they tend to decrease the supply.

In short, I would say that overall patent supply should probably continue to slowly decrease in 2020, although not in a very significant way. . . .

On the demand side, most large technology companies that used to acquire patents have continued to pare down that activity and, in some instances, dismantled their teams altogether. Those young unicorns (e.g. Uber) that were very active in acquiring patent assets pre-IPO are now relying primarily on in-house innovations to grow their portfolio organically and happy, relying on a few defensive patent-related aggregators to act as a clearing house on their behalf.

Also, the modus operandi of most large companies remains to rely on the "efficient infringement" model, which does not require them to acquire patents as a way to diminish their risk upfront. It is only efficient if you pay nothing after all.

Plus, one needs only short exposure to a large corporate IP law department (I was part of Microsoft's for 15 years) to appreciate that pre-litigation offers do not easily garner the same attention as a formal complaint. Remember, the way budgets are handled internally actually disincentivizes a business unit from spending money on licensing or acquiring patent rights—which would hit their own profit and loss account—as opposed to letting the litigators take care of the risk as part of the general corporate budget dedicated to fending off lawsuits.

So, while it may be completely rational and more economical for an infringer to buy a patent or take an

early license before litigation raises the asking price, it does not happen very often. Ironically, the fact that most large patent holders actually filed about 15 percent more patents in 2019 than the previous year indicates that they still consider patents (theirs, at least!) to be a valuable asset to own.

Finally, as we discussed several months ago, a number of new NPEs entered the market in 2019. Many are willing (or so is their pitch) to pay cash for good portfolios, which is a pattern we have seen since 2012.

It is also worth noting there is also more liquidity available to finance NPE-driven patent litigation, and at more competitive rates than before. Since I often say that NPEs are the canaries in the coal mine, this by itself tips the balance in my mind as to where things are actually heading—and the latest valuation data suggest an uptick in the market. **Net impact: Slight positive**

### Case law

The first half of 2019 was busy on the judicial front. Some cases were favorable to patentees, others not so much.

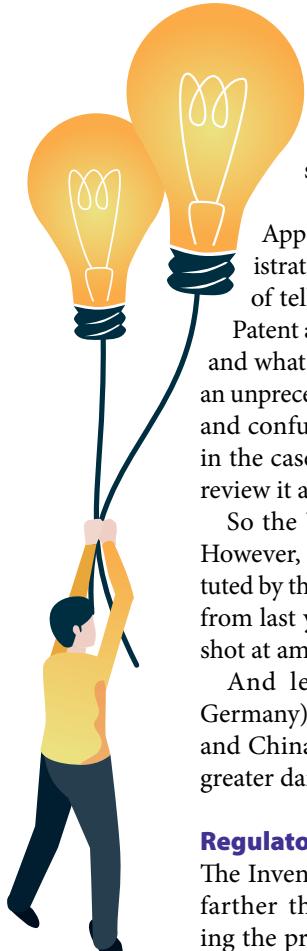
Sadly, we still have the same uncertainty over validity of U.S. patents—just more case law to digest. With decisions going in all directions, there is no consistent pattern emerging and your case is more likely to be determined by the district you sue in or ultimately by the appeal panel you get (usually the realm of much less-developed legal systems.)

While the U.S. Court of Appeals for the Federal Circuit has begged the Supreme Court to provide clarity post-*Alice*—SCOTUS's landmark 2014 ruling that set back software patent applications—the high court has systemically refused to take cases that would have allowed it to revisit its ubiquitous *Alice* doctrine now that it can clearly see the mess it made.

With nowhere else to turn to, responsibility sits squarely with Congress to take up the mantel and fix this situation permanently for patent holders. More on this below.

Meanwhile, with some judicious venue shopping (e.g. Western or Eastern District of Texas), most patent eligibility issues can be relegated to trial instead of being subject to a summary disposition. This gives a slight edge to patent holders in those jurisdictions.

**The slightly positive movement in many key areas points to a slowly but surely improving environment.**



Finally, the federal circuit issued a momentous 2019 ruling in *Arthrex v. Smith & Nephew* that still has everyone scratching their heads.

A panel ruled that the Patent Trial and Appeal Board appointment process of administrative judges is unconstitutional but fell short of telling lower courts (and the United States

Patent and Trademark Office) how to deal with it and what it means concretely for past decisions. In an unprecedented gesture illustrating the uncertainty and confusion the ruling has created, both parties in the case demand the full court has more judges review it and issue a better decision.

So the U.S. court system remains in shambles. However, the number of inter partes reviews instituted by the PTAB appear to be down by a decent rate from last year, and patent owners are given a fairer shot at amending their claims.

And let's not forget that Europe (UK and Germany) are still very appealing for patent owners, and China has recently changed rules to allow for greater damages. **Net impact: Slight positive**

### Regulatory environment

The Inventor Rights Act, introduced last fall, goes farther than any previous bill project in pushing the pro-inventor narrative. We also witnessed the re-introduction (for the fifth time!) of the STRONGER Patent Act sponsored by U.S. Sens. Thom Tillis (R-N.C.) and Chris Coons (D-Del).

Although these are encouraging if someone is trying to read the tea leaves as to who has Congress's ear these days, they are simply feel-good measures. No one "in the know" has any realistic hope that either bill will pass in this ever-divided Congress during a presidential election year.

On a positive note, we saw the Trump administration strengthen its position on enforcement of standard essential patents, and the recent Phase 1 of the China Trade Agreement is apparently addressing the perennial U.S. complaint of trade secrets misappropriation by Chinese companies (or the government itself). **Net impact: Slight positive**

### Damage awards

In contrast to a 2018 that had few damages awards in excess of \$100 million, many of which were overturned, 2019 had a steadier flow of lower but still significant damages and a smaller standard deviation between decisions. This indicates a more established approach in calculating actual damages.

This is a welcome improvement over past years, when it was very hard to predict the recoupable

damages amounts; the perennial "rule of thumb" for calculating a reasonable royalty on infringing devices was turned on its head. That said, most large infringers are still taking a "scorched-earth" approach to fending off patent assertions. **Net impact: Neutral**

### PIPCOs

Publicly traded patent licensing companies are non-practicing entities that chose the public offering financing path. For most, it has historically been a disaster, especially the smaller ones whose balance sheets are forced open for all to see. This enables any opponent to know when it will likely run out of cash.

This model has proven to be a failure, except for the largest ones where reporting a strong cash flow can have a positive effect.

Ip Close Up used to track an index of the main PIPCOs, but we have not seen any update since March 2019. I suspect the main reason is there are too few left, and there are a number of new entrants that fund their activities with private money. So they aren't subject to this kind of transparency.

This suggests that the public is not sold on their story going forward, although I am not sure institutional investors who do not dabble in patent monetization daily can fully appreciate this industry. **Net impact: Slight negative**

### Summary

Many of the factors above have a direct impact on business decisions made when confronted with a request to take a patent license. They point overall to a slowly but surely improving environment.

Remember, the easier it is for patent owners to access funding to assert against infringers, the more appealing pre-litigation settlements and licenses should become over time. This, in turn, will continue to push up valuations for patents offered on the market.

Therefore, in view of the above, we renew our previous guidance from last fall that patent valuations continue to inch their way up. This is pending any significant changes coming from Congress or the higher courts on subject-eligibility doctrine—in which case a favorable outcome could create an immediate surge. ☀

**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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# 2020 Patent Market: Bullish or Bearish?

6 IP EXPERTS OFFER THEIR PREDICTIONS—

AND THEIR UNANIMITY IS A PLEASANT SURPRISE

BY GENE QUINN

**W**HEN I RECENTLY asked a panel of experts whether they are bullish or bearish on the 2020 patent market, the answers were an interesting departure from recent years.

All who responded are bullish, after many years of insiders being bearish or at best cautiously optimistic. Although at least several people cited the uncertainty surrounding patent eligibility in the United States, there is real optimism because license deals are getting done and policy changes show evolutionary changes in the IP ecosystem.

It can be easy to become cynical about the state of patent eligibility when one focuses on the trees (i.e., each case) rather than the forest (i.e., system-wide developments). Although the Patent Trial and Appeal Board continues to do truly bizarre things in certain cases, the institution rates have decreased, and initiatives led by United States Patent and Trademark Office Director Andrei Iancu have made it much more difficult to bring harassing, serial and follow-on challenges.

## Panelist comments:

**Russell Binns, Allied Security Trust CEO and general counsel:** I am bullish. After many years of uncertainty and a bottoming out of the patent market, I think 2020 is going to provide more certainty around Section 101 (what is patent eligible) and other areas of the law—and possibly some reform—and a greater focus on quality over quantity.

If patent prosecution isn't treated as a commodity and more like the art it is, we will have a focus on patents that are easier to understand, prove infringement and avoid invalidity, which will make more valuable assets that are easier to transact.

**Michael Gulliford, founder, Soryn IP Group:** For the first time in a long time, I am confident that the IP ecosystem is heading in the right direction. The sounds of progress are certainly faint, but if you put your ear to the wall they can be heard.

The mainstream press, for example, has finally woken to the reality that inspired me to found Soryn in the first

place: The anti-patent troll movement has succeeded in putting some bad actors out of business. ...

And there's more. A host of administrative and judicial tweaks to the inter partes review system resulted in a measurable drop in IPR filings last year. The United States Court of Appeals for the Federal Circuit's *Berkheimer* decision has at least given software patent owners a chance at life in district court ...

And companies like Sonos have begun to tell lawmakers what we already know. For many of our most innovative companies, the day will come when business realities make it necessary to disclose delicate technical details to someone with significantly more market power. But as things currently stand, there is no way to do so without risking eventual ruin because patents are simply not respected.

It sounds depressing, but we should find comfort in the fact that because of companies like Sonos, the truth is finally getting out and folks are finally starting to pay attention. There can be no change without such acknowledgment.

**Daniel Papst, Papst Licensing GmbH & Co. co-owner and managing director:** Bullish but moderately, given a probable standstill on Section 101 legislation in the United States due to an election year. The IPR regime slowly keeps getting a more leveled playing field, thanks to the USPTO director.

The German Supreme Court will rule on the holdup challenge of the Unified Patent Court and give way to an efficient and streamlined court. Damages are on the rise and patents (also in the United States) will get closer to what they once were—a right to exclude!

**Kent Richardson, partner, Richardson Oliver Law Group:** I believe we have passed low tide for patent value and we are on the way up. We use our own data and surveys to help inform our opinions. Our data say that patent prices are stabilizing and that the market is becoming more predictable.

Also, we surveyed about 15 IP executives and asked two questions. First, if you thought you had to take a



license, would you rather do it now or three years from now? The answer came back almost unanimously: "Now!" This means that potential licensees believe patents will strengthen over the next three years.

Second, we asked whether they thought over the next year the patent market would expand, contract, or stay the same. Well over half thought the market would expand or stay the same. So, I'm bullish.

**Jamie Underwood, Latham & Watkins partner and global IP strategist:** I am bullish on the 2020 patent market. The U.S. patent regime remains a stalwart leader in meaningful IP protections. Innovators from far and wide think so, too, if one believes that people vote with their feet.

In 2019, the USPTO issued the most patents ever granted in a single year in American history. Nearly half of the 333,530 patents awarded went to U.S.-based companies, but Japan, South Korea, China, and Germany also received a considerable number of those grants. The most recent International IP Index, once again, ranked the United States as the strongest overall IP system in the world and as the second strongest patent system (tied with Japan, South Korea and Switzerland).

Even in the midst of the polarized paradigm between owner and implementer, the United States is finding greater equilibrium in its patent enforcement. . . .

PTAB policy changes have brought institution rates and outcomes into greater balance as well, and the reduced threat of invalidation therefrom should prompt more patent holders to pursue suits in district court. For patent holders who still find success in district court elusive, the United States also offers an option replicated in no other country—the U.S. International Trade Commission, which can provide sweeping injunctive relief for the expedient redress from named infringers, or, in certain circumstances, from an entire U.S. market segment. These relative strengths will not falter in 2020.

## IPWATCHDOG CON2020

All of the panelists in this story will be among the more than 90 invitation-only speakers at this premier discussion and networking event, March 15-18 in Dallas at the Renaissance Richardson hotel. Major themes include the state of the U.S. patent system and the future of monetization.

**Details:** [con2020.ipwatchdog.com](http://con2020.ipwatchdog.com)

While stakeholders, no doubt, must grapple with complex challenges regarding Section 101, artificial intelligence and potential legislative reforms—to name a few—these challenges are reflective of the evolutionary potency of U.S. patent rights rather than their shortcomings.

**Annsely Merelle Ward, attorney, WilmerHale:** I am bullish. I expect 2020 to be very active for the patent market.

Some personal predictions: Pressing global environmental, health and equality challenges will invigorate and accelerate innovation and patent filings in 2020. Global patent battles in telecoms will continue to find jurisdictional footing as courts wrangle with forum arguments. There will be more industry collaborations—patent and know-how sharing platforms, patent pools and dispute resolution mechanisms to overcome perceived inefficiencies of traditional models of licensing and litigation. Companies (and countries) will continue to jostle for 5G/IoT market share. ☐

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



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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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## INVENTIVENESS

### IoT Corner

Arduino, the Italian company known for its maker-friendly ecosystem of microcontrollers, launched a new professional-grade development board for IoT.

The **Portenta H7** features a dual core processor, with an on-board graphics accelerator that allows users to connect it to an external monitor via the USB-C port. The Portenta H7, which supports WiFi and Bluetooth wireless protocols, has two 80-pin connectors on the bottom of the board to support additional I/O and other board features.

The dual processing feature makes it possible to run machine-learning algorithms and vision learning tools while having a core left for user input or other parallel processing. The boards are available for \$99 and will ship in March. —*Jeremy Losaw*



### Wunderkinds

Fourteen-year-old **Alaina Gassler** of West Grove, Pennsylvania, came up with a project for the Broadcom MASTERS competition to eliminate blind spots for drivers caused by the car frame. She won the \$25,000 Samueli Foundation Prize for overall STEM excellence.

Alaina built a prototype system with a webcam, projector and 3D-printed materials to fill in the space the car frame blocks from drivers.

She mounted the webcam outside the passenger side A-pillar on a car and then displayed the live video on the inside pillar from a projector attached to the sunroof above the driver's seat. She even printed a special part to help focus the projector at such close range.

### WHAT DO YOU KNOW?

**1** **True or false:** Thomas Jefferson invented the revolving book stand.

**2** Who said this? "Imagination is not only the uniquely human capacity to envision that which is not, and therefore the fount of all invention and innovation."

- A) J.K. Rowling
- B) Andrei Iancu
- C) Hedy Lamarr
- D) Francis Ford Coppola

**3** **True or false:** The number of women graduating in STEM core subjects continues to decline.



### What IS that?

It's a clock, of course. But the wheels tell you it's something very different: specifically, an alarm clock that runs away if you don't shut it off in time. You can snooze once, but after that **Clocky** jumps off the nightstand and runs around beeping. Guaranteed to amuse and annoy.

**4%**

The ratio of instances in which patent applications include a female inventor in German-speaking nations, according to the World Intellectual Property Organization. Patent gender disparity is rampant worldwide.



**4** The first visible LED bulb was invented in which decade: 1960s, 1970s or 1980s?

**5** Why did Benjamin Franklin create an odometer?

- A) To measure the distance from his home to the store
- B) To analyze the best routes for delivering mail
- C) To have a project to work on with his son
- D) To help police organize officers' routes

**ANSWERS:** 1. True. 2. A. 3. False. The number grew from 22,020 in 2015 to 24,000 in 2018 (most recent data). But more men are graduating in these subject areas than women. 4. Nick Holonyack, a consulting engineer for General Electric Co., invented the first visible light-emitting diodes, commonly found in applications ranging from traffic lights to consumer electronics, in 1962. 5.B.

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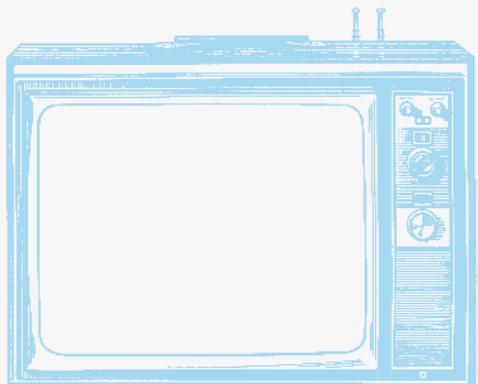
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