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Flowers? Fine, But We Want Chocolate



Cupid's arrow is pulled back, poised to make a pointed statement about forever love on another Valentine's Day.

But c'mon. We know it's all about the chocolate.

Thank you, Richard Cadbury. The descendant of a British chocolate-making family and the official cocoa and chocolatier for Princess Victoria, he improved the chocolate production process at the company in the 1840s by extracting pure cocoa butter from whole beans to produce more varieties of "eating chocolate," according to history.com.

Cadbury seized on a marketing opportunity by selling the chocolates in beautifully decorated boxes. Though he is the widely acknowledged inventor of the chocolate box in 1868—when he decorated a candy box with a painting of his young daughter holding a kitten in her arms—he didn't think to patent it.

Cadbury also introduced the first Valentine's Day chocolate box, heart-shaped celebrations adorned with romantic symbols such as Cupid. They could be used to house romantic notes, items and the like after the chocolates were gobbled up.

This was the start of a sweet and forever tradition.

Sure, flowers are a beautiful and meaningful Valentine's offering, but the admittedly biased National Confectioners Association reports that men and women would rather get chocolate as a gift on February 14. It also says chocolate sales account for more than 75 percent of all Valentine's Day candy purchases.

If you want to increase your odds of giving your sweetie the chocolates he or she will love the most, the NCA says caramels are the most popular flavor in chocolate boxes. The runner-up is chocolate-covered nuts, followed by chocolate-filled pieces, cream-filled and coconut.

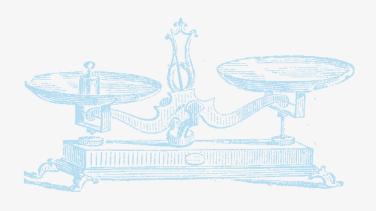
As for who invented Valentine's Day, that's not as clear. It is known that the occasion has been celebrated since the 1300s.

One theory holds that it derives from Lupercalia, an ancient Roman festival held every February 15. Another links it to Roman emperor Claudius II's decree that soldiers could not marry because single men made better soldiers. When Saint Valentine performed secret marriages, he was executed on February 14.

The history of Valentine's chocolate leaves a better taste.

-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



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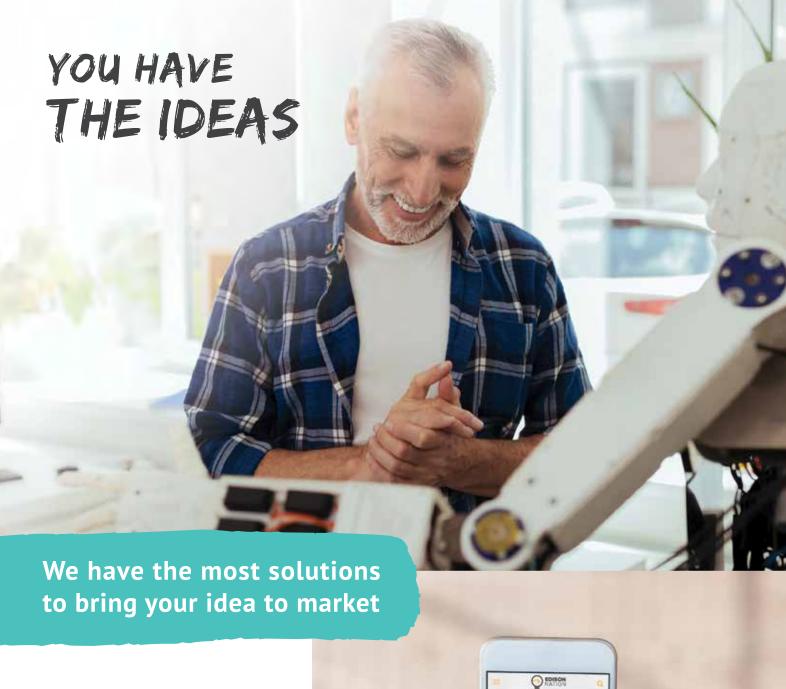
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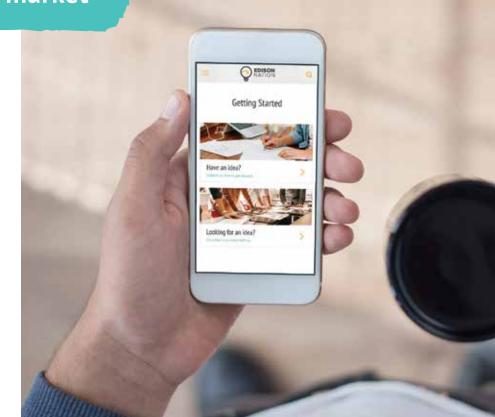


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CORRESPONDENCE

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

"Injection-molded Plastic: Parts That Fit Your Life" (October 2016):

It was interesting to read that the process of injection molding starts at the material hopper, where plastic pellets are heated until liquefied. It must be a really extensive process, and I imagine that it's important to get every step done correctly so that no errors are made. I wonder what kind of tools are necessary in order to successfully create different products using this method.

—MONICA CHAVEZ

From the story's author, Enventys Partners Director of Engineering Jeremy Losaw: "The primary tool is an injection molding press. These are large machines that have very strong hydraulics to squeeze the mold halves together and stay tight under the pressure needed to inject molten plastic throughout the mold.

Fortunately, it is a well-understood manufacturing method that is tightly controlled by computers and well-trained technicians. However, it can take many iterations and tuning of the molds and process to ensure the parts are being produced properly and as quickly as possible."



For 35 years, *Inventors Digest* has been an important resource for brand owners and inventors who have relied on the digest for timely and relevant information. The magazine has inspired and encouraged American creativity, removing barriers to innovation and providing tools and resources to bring ideas to fruition.

Thank you for your important contributions to the innovation culture.

—MARY BONEY DENISON, United States Patent and Trademark Office commissioner for trademarks, who retired on December 31



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



O, NO! HERE WE GO AGAIN

Ohio State University came up second in an epic Fiesta Bowl against Clemson in late December, but it's still the undisputed college No. 1 in intellectual property tiffs.

The university, which has received dubious national attention for trying to get the word "The" trademarked (see the October 2019 *Inventors Digest*), is also battling online sports network Overtime over the letter O.

On December 23, five days before the Buckeyes' loss in the big game, Overtime sued the university in federal court. The highlight-sharing platform sought a declaration to prevent Ohio State from restricting Overtime from using its own trademarked O.

In July, Ohio State's busy attorneys sent Overtime a letter that ordered the network to pull its trademark application for that O mark because it would cause confusion. When Overtime punted the demand, OSU filed formal written opposition with the United States Patent and Trademark Office's Trademark Trial and Appeal Board.

Both designs feature a big, block letter O. But that's where the similarities end.

Ohio State's letter is a red, block O with flat edges, on an octagon with an oval-ish shape in the middle. Overtime's patent-pending, black-and-white mark has rounded edges and a rectangle shape in the middle. Besides, there are many different large registered O marks in sports and elsewhere.

The block design is what Ohio State apparently wants to protect. Its attorneys claim that the vast majority of people recognize a block O as being unique to Ohio State, which has featured it since 1898.

Ohio State's total licensing revenue in 2018 was more than \$15 million, with total revenue since 1980 of more than \$200 million.

This isn't the first time Ohio State has gone to court to protect the block O. It did the same thing against the University of Oklahoma in September 2018.

We couldn't find any reports on whether the OSU-Oklahoma dispute was ever legally resolved, possibly due to a lack of public interest.

BRIGHTIDEAS

Luminook

INNER DOOR FRAME LED LIGHT STRIP luminook.com

Luminook provides floor-toceiling, shadow-free lighting for closets and storage spaces.

Clips tuck the LED light behind the door frame, out of sight, while tilting the LEDS inward to show the brightest light in the center of the space. With its trademarked Beyond Motion Detection, Luminook activates the light based on the door position (like a refrigerator). If there is no door, a hand gesture turns on the light.

The connected smartphone app lets you adjust color or brightness. Luminook for a single door is \$85 and \$100 for double doors, with delivery to crowdfunding Rewards backers planned for October.



In tech communities, we consider disruption the way to lead to innovation.

—AYANNA PRESSLEY

Human Headphones

WIRELESS DESIGN HEADPHONES

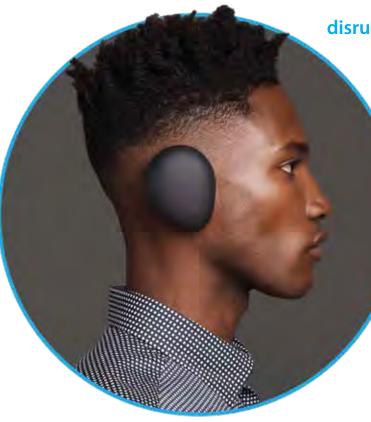
humanheadphones.com

These headphones combine the sound quality of headphones with the convenience of earbuds, and they include translation of up to 11 languages.

Human Headphones consist of a pair of earpieces that fit entirely over the ear, with no connecting piece between them. Each earpiece includes a two-way dynamic driver and digital signal processor, which deliver a broader range of frequencies than standard earbuds.

The headphones communicate with the paired device via Bluetooth. The touch-sensitive outer shell offers controls such as volume, taking calls and ambient noise amount.

The headphones retail for \$199.



Pedestal

ADJUSTABLE PLANT STAND wright.furniture

The Pedestal expands to fit plant pots from 7 inches to 11.75 inches in diameter. It can hold more than 200 lbs. of dirt-filled terracotta.

The stand is made from high-quality, Forest Stewardship Council Certified Baltic Birch plywood and features a non-toxic, water-resistant finish.

Its makers say it can be assembled in 30 seconds with no tools or instructions: Just overlap the two sets of legs, then slot them together at the notch. Adjust the width to fit most standard plant pots.

Retail pricing for the plant stand with side tabletop is unavailable, but that combination was offered to crowdfunding Rewards backers for \$85 with shipping planned for July.



BAN MUL dashw. Adver tradit versio

BANDO 2.0

MULTI-FUNCTIONAL SLIM WALLET dashwallets.com

Advertised as 50 percent slimmer when full than traditional wallets, BANDO 2.0 is an upgraded version of Dash's best-selling minimalist wallet.

2.0's three-compartment system features pull-tab storage, two quick-draw slots, new color options, a secret compart-

new color options, a secret compartment and a silicone-grip cash band.

Made from pressed saffiano leather canvas, it is radio-frequency identification integrated to protect security, more durable and weather resistant than real leather, ecofriendly and recyclable.

The BANDO 2.0 starts at \$18, with shipping to backers set for July.

Slow Path

31 YEARS OF PLANNING AND BUILDING LED TO THE FIRST SNOWBLOWER BY REID CREAGER

T WAS CHALLENGING enough, delivering milk to homes before snow invaded during frosty Canadian winters. But when the white stuff piled up several feet high in residents' yards and left snowbanks that remained for months, Arthur Sicard had to be a milkman and mountain climber.

He was a healthy young man in 1894—18 years old and working on the family dairy farm in Saint-Leonard-de-Port-Maurice, Quebec. But this challenge got old in a hurry, especially since the perishable nature of dairy products made on-time deliveries essential.

Sicard saw a treacher, a machine that harvests wheat, and was inspired to invent. It took 31 years of planning and constructing before he finalized his concept and became the generally acknowledged inventor of the first commercial snowblower in 1925.

Arthur Sicard sold his first commercial unit in 1927.



By this time, New York City had unveiled the first motorized dump truck or snowplow

(with tractor tires) in 1913, abandoning the traditional horse-drawn cart as the motorized era dawned. But this was of little practical help for clearing snow in and between yards-not to mention the still-frustrating obstacle of driveways "plowed in" by snowplows. Sicard also wanted to help farmers who needed an easy way to clear snow from their fields so their cows could feed.

He sold his first commercial unit to the Town of Outremont on the island of Montreal in 1927. Basically, it was a truck with a scooper

and snow thrower chute with a separate motor to propel the snow.

Yet the description of Sicard's invention by Sicard™ Group SSI Inc.— the corporate descendant of the original Sicard company—provides detailed insight into his extensive planning and building.

The Sicard Snow Remover Snowblower consisted of a 4-by-4 carrier with its own motor and an auxiliary motor to power the blower head. The blower featured a chute that "provided pinpoint control," the company says, and was used for loading trucks. There was also an opening in the impeller housing through which snow could be thrown into a field.

The blower/thrower could power through both hard-packed and wet snow, throwing either at least 90 feet.

Earlier efforts

So the decades it took Sicard to complete his invention isn't surprising, especially in the context of several efforts by predecessors that either never got to market or had no impact:

The first patented show machine, in 1869 by Toronto dentist J.W. Elliot, was never produced.

According to the United States Patent and Trademark Office, Robert Carr Harris of Dalhousie, New Brunswick, got a patent for his motorized snow-clearing machine (the Railway Screw Snow Excavator) in 1870.

In 1884, Orange Jull from Orangeville, Ontario, hired some builders to construct his patented, self-powered snow machine. It was pushed by a locomotive and used two fans to break up snow and fire it out a chute. But there were problems with clogging, so it was trimmed to a single-fan model with impeller blades to throw the snow. Further refinements weren't effective, and only 11 were made.

And USPTO records reveal that in 1923, Robert E. Cole got a patent for a snowplow that operated by using cutters and a fan to blow snow from a surface.





Several other earlier invention efforts never gained traction in the marketplace.

Toro's role

So Sicard's distinction as the generally recognized inventor of the snowblower is largely due to the fact that his machine was the first patented one for practical use. Nonetheless, his snowblower was deemed much too expensive for all but large cities.

Besides, it was only a matter of time before his invention would be refined for common domestic use.

Toro made its first snowblower, the Snow Boy, in 1951. The industrial-grade machine—advertised to "take the place of 50 men" clearing streets by hand—was followed by the Toro Snow Hound the following year.

The company claims the walk-behind Snow Hound model as the "first homeowner snowblower," which does not seem to be in dispute. Toro introduced the Snow Pup, the first lightweight consumer snowblower, in 1962.

(Toro uses the terms "snow thrower" and "snowblower" interchangeably, which speaks to the technically incorrect use of the latter because these machines do not blow snow using air.)

Ariens, Gilson and others launched early snow thrower product lines, ultimately making the "snowblower" an affordable mainstay in homes. The first personal, two-stroke snowblowers emerged in the 1970s. These also became powerful: Some reached 8 horsepower before growing to 11hp in the 1980s and the uniform 13hp today.

Today's gadget-happy consumer wants accessories, so snowblowers now feature extras ranging from heated handles to battery-operated ignitions to headlights to being environmentally friendly—with more innovative mountains to climb. €

The Sicard Snow Remover Snowblower consisted of three sections; a four-wheel drive truck chassis and truck motor, the snow scooping section, and the snow blower.

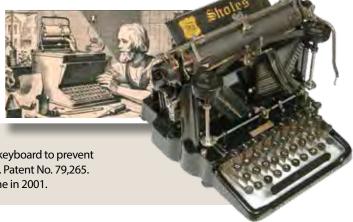
INVENTOR ARCHIVES: FEBRUARY

February 14, 1819: Christopher Sholes, the generally acknowledged inventor of the typewriter, was born.

A printer, editor, journalist and politician who lived in Wisconsin most of his life, Sholes introduced the QWERTY keyboard layout that is still in use. In his early experiments he realized that the levers in the type basket jammed when he

arranged the keys in alphabetical order, so he rearranged the keyboard to prevent this when frequently used keys were pressed. He received U.S. Patent No. 79,265.

Sholes was inducted into the National Inventors Hall of Fame in 2001.





The Origin of Invention

OUR EARLIEST TOOLS PROGRESSED WITH THE HELP OF HUMANS' EVOLVING BODIES AND BRAINS BY JACK LANDER

E KNOW for certain that the earliest humanlike species, Homo habilis, (handy human), altered stones to make crude tools.

Two shapes have been found by archeologists: pointed, like an arrowhead, probably used for killing and butchering animals; and an oblong or round shape, broken in a way that reveals a relatively blunt angle cutting edge. The cutting tool-known as a hand ax—was probably used to skin animals, chop branches and small limbs for firewood, and for protection if attacked by a predator. The Homo habilis time period ranges from about 2.4 to 1.7 million years ago.

Anthropologists speculate that Homo habilis also may have used the hand ax to sharpen sticks with which to spear animals. We know that present-day chimpanzees chew a point on the end of a stick and use it to kill galagos, also known as bush babies. These small primates, about half a pound, hunt at night. They sleep in trees during the day and are an easy target for the chimps.

We can only guess whether Homo habilis or the chimps were the original inventors of the spear, and when it was invented. Wooden tools from that period have long ago decomposed.

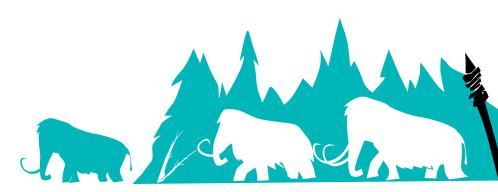
But it makes sense that a species which shaped stones to a point would also have invented a wooden version with a long handle. And a spear can be gripped with two hands, enabling a powerful thrust. No doubt the spear served as a defensive weapon against predators, as well as a hunting weapon.

Homo erectus gains

Homo habilis eventually gave way to Homo erectus, whose brain size increased to around 900 cubic centimeters—about 40 percent larger than Homo habilis. In addition, the Homo erectus body changed to be more like ours today.

During the Homo erectus time span, from 1.7 million years ago to 200,000 years ago, tools improved in shape. The early tools were made from flint, and their edges were not sharp like a steak knife.

But the discovery about 1.4 million years ago of obsidian, a black, glass-like stone, enabled the invention of extremely sharp tools that could serve as knives or hide scrapers. An obsidian stone is struck



in a certain way that results in the splitting off of a thin chip with an edge that is sharper than a scalpel. In fact, obsidian scalpels are preferred by today's surgeons for certain operations.

The stone-tipped spear was invented about 460,000 years ago. The javelin, a lighter version of the spear, used for throwing, was invented about 400,000 years ago.

The scarcity of samples of all very old tools makes it impossible to state exact dates for any kind of tool or process. Thus, it is possible that the javelin and spear were invented around the same time. It's hard to imagine a hunter not being tempted to throw a spear as well as stab with it, and making it lighter to increase its thrown range would have made sense.

Another invention was the two-sided cutting edge. Originally, the pointed tools were only sculpted on one side. But as techniques improved, the pointed tools became two-sided and thinner for easier penetration of an animal.

The hand ax was also improved. Rather than a crudely shaped tool, made without much thought for hand grip, the hand ax was formed with impressions for thumb and forefinger.

This enabled fine control for the butchering of meat and the scraping of hides for clothing, invented about 500,000 years ago. (This date is controversial due to the rarity of finding preserved hides, which, of course, decomposed easily. But the migrations of early hominins into Europe and Asia, possibly more than a million years ago, suggests that hides were fashioned into wraps or coats due to the need for warmth.)

The bow and arrow

As you can see in the span from 2.4 million years ago to 200,000 years ago, invention progressed very slowly. But at the end of the Homo erectus era, our brain had at least doubled in size from its start as Homo habilis to our present volume of about 1,350 cubic centimeters.

Homo erectus graduated to the brainy species we now call Homo sapiens (wise human). And tool and weapon inventing progressed at a much faster pace, although still very slowly compared with the industrial revolution of the past 260 years.

Perhaps the most remarkable invention of the early Homo sapiens was the bow and arrow. This weapon allowed the hunter to effectively take down a small- to medium-size animal at a maximum distance of about 100 feet, enabling hunters to more easily avoid detection and increasing their supply of meat. The bow and arrow was invented about 70,000 years ago.

Another remarkable invention was the atlatl, a javelin-throwing device created to extend the javelin's effective distance.

The atlatl is a stick somewhat shorter than the javelin. The stick has a hook on one end that connects onto the rear end of the javelin. The javelin throw begins in somewhat the same way as it would be without the atlatl—but at the instant of its release, the forward end of the atlatl is gripped and continues in a downward arc, using the leverage of the atlatl to propel and release the javelin. This added leverage results in much greater speed, improving the javelin's effective distance.

The advantage of the javelin over the bow and arrow is its ability to bring down larger animals. Evidence suggests that the atlatl was invented by Homo sapiens about 40,000 years ago.

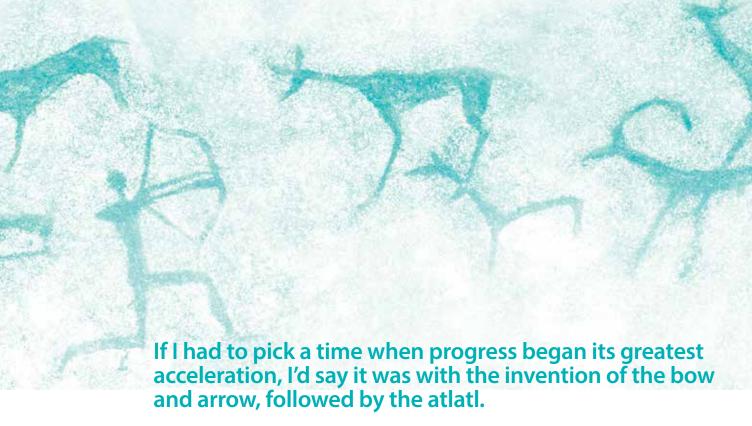
So, around this time the Homo sapiens species was on a roll, leaving the subsistence level, and enjoying time for art and crafts.

Cave paintings date back 44,000 years. More than 350 caves with paintings have been discovered so far. And basket weaving began as early as 29,000 years ago, an invention that made gathering more efficient.

The leisure that resulted from these various inventions dramatically increased the efficiency of hunting and gathering. And the calories derived from meat eating greatly reduced the amount of time required for gathering vegetables, fruits and nuts.

Farming's impact

Then, about 12,000 to 10,000 years ago, humans began farming. At first, the venture depended on continuing hunting. But as expertise in cultivating crops grew and means of storing during the offseason were developed, humans were able to settle in one location.



The discovery of copper about 9,000 years ago led to the casting of tools such as knives, axes and plowshares. Copper was not a hard metal, but such tools were superior to stone, and the age of metals had begun.

The invention and manufacture of pottery began about 8,000 years ago, which added to the ease of preparing food. Also, the ax handle was invented around this time. This greatly eased the cutting of firewood and preparation of framework for housing and barns.

Then, about 5,000 years ago, the alloying of copper with tin created an amazing new metal—bronze which was much harder and more durable than copper. Bronze was the transistor of its day for another 3,600 years until iron was discovered and displaced bronze as the most durable of metals—especially after the addition of carbon, thereby inventing steel.

Also about 5,000 years ago, farming had improved to the point that grain became not just food but currency. It was stored and traded. A system of counting and writing was needed, and cuneiform was invented by the Sumerians about 3,500 years ago.

Apparently, hunting was not altogether abandoned. Beautifully crafted spear and arrow point, known as Clovis points, were found in New Mexico about 13,000 years ago. Their edges are very sharp due to a method of precise chipping called knapping.

A proud Neanderthal

Thus, the origins of invention began 2.5 million years ago. The tools and weapons were crude, their use imprecise. Progress was painfully slow.

If I had to pick a time when progress began its greatest acceleration, I'd say it was with the invention of the bow and arrow, followed by the atlatl.

However, before we congratulate Homo sapiens as the originators of invention, we should take a closer look at our cousins. Homo neanderthalensis.

Neanderthals probably were the inventors of the bow and arrow, and maybe even the atlatl. They had migrated to Europe and Asia more than 300,000 years before the Homo sapiens. Neanderthals had the edge when it came to expertise regarding their environment, and inventing to fulfill their needs.

Neanderthals and Homo sapiens lived in the same territories, interbred to some degree, and each species learned from the other. Far from a knuckledragging brute, Neanderthals probably were more intelligent and sophisticated than Homo sapiens.

The Neanderthals buried their dead with great care—including artifacts, possibly for an afterlife. Their brain size when they became extinct 30,000 years ago was about 1,400 cubic centimeters, compared with 1,350 for us sapiens in the present time.

You may have sensed that I'm a bit prejudiced. My recent DNA analysis reveals that I'm 3 percent Neanderthal.

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 Sellina Your Invention. You can reach him at jack@Inventor-mentor.com.



Your Idea is Patented Elsewhere. Now What?



YOU HAVE OPTIONS—INCLUDING BUYING THE PRODUCT, LICENSING OR FORMING A JOINT VENTURE BY DON DEBELAK

NVENTORS know the disappointment of coming up with what they think is a novel, profitable idea—only to learn it has been patented.

But this may not be a deal-killer. First, look carefully at the patent and see whether it really describes the same thing your idea does. If not, or not exactly, consult a patent lawyer to see whether you can patent around this existing patent and still have reasonable protection.

What if someone patented your idea exactly?

Check to see whether the product is available. Check the internet and stores to see if you can find it.

If not, try to contact the names or company listed on the patent. Ask them if they are selling their product or if they have licensed their patent. More than 90 percent of patents never make any money, so there is a good chance they aren't selling or haven't licensed the product.

The fact these people are not selling the product doesn't mean the product is not a good idea.

The main reason most patents don't make money is, it is difficult to bring a product to market. Maybe the business behind the idea was run poorly, or the product wasn't formulated and packaged in a way that a would excite customers.

If the inventor or company listed in the patent says they aren't selling the product and no one else has licensed the idea, tell them that you may be interested in licensing the idea or forming a join venture with them. But before moving forward, Consider:

- Does the patent holder have the capability to manufacture the product? If he or she does, this is the best scenario for you: It cuts down your investment and you can just purchase the product from the patent holder and sell it on commission, often at 10 percent to 15 percent.
- Did the patent holder create a package? If so, was the package effective? If not, can you create a better package? Be sure to test your package

- with potential buyers and retailers to see if it really is an effective selling tool.
- If the patentee can't manufacture the product, you need to find a manufacturer who will, and determine what those costs will be.
- Decide where and how you can sell the product.
 Once you create a sales strategy, create a sales budget and ensure that you can fund that budget.
- Do some market testing with potential users and retailers to ensure they feel the product has potential.
- If possible, try to attend an industry trade show and meet some manufacturer's sales reps who might be able to help sell your product.

Contacting a patent holder has many benefits for a person looking to introduce a new idea. The cost, and effort to obtain a patent is already covered; the patent holder who has given up on his or her idea will be eager to make a deal, and in many cases will also help you fund the launch in return for a share of the business; the patent holder probably made several mistakes, and you can cut your learning by understanding what those mistakes were; and typically, the patent holder will be supportive of your efforts.

You have many ways to move forward. You can take on a license and arrange for all the manufacturing and sales yourself. You can cut your investments by forming a joint venture where the patent holder shares in the investment required to launch the business, or you can sell the product for a 10 percent to 15 percent commission. **②**

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

Product Launch Basics

FOLLOW THE POM PRINCIPLE TO HELP OVERCOME THE LOW ODDS OF GETTING TO MARKET BY ALYSON DUTCH

NVENTING SOMETHING IS JUST THE BEGINNING.

Getting your product to market, building operational systems and finding customers who will consistently buy your product is what needs to happen next.

During the past 30 years, I've worked with thousands of products and inventors. Many of them get stuck in that first phase.

Some remain inventors by choice, creating widget after widget and successfully selling them to companies that do the rest. A very small percentage either do the rest themselves or hire the right people to build out a spark of an idea into something that is needed by a customer—and eventually loved by a customer.

After launching products ranging from grocery store ice cream product extensions for Mrs. Fields Cookies to the first blue-labeled bubbly for champagne Mumm and setting up thinkThin nutrition bars to sell to Glanbia nutrition group for a whopping \$217 million, I've seen a lot.

Most of all, I've worked with many one-person companies—inventors who created bras that eliminate visible bra lines, basketball shoes that prevent ankle sprains, and wrinkle-releasing beauty serums that were born in kitchen sinks. Through it all, it's easy for me to identify the qualities and reasons products succeed and fail.

3 factors in success

The reasons are the same ones that attract or repel investment.

There are very specific qualities in inventors that I can identify quickly. Some products will get far enough down the field to pay the inventor's mortgage and get their kids through college, but many will not.

Only 2 percent to 10 percent of all patents make money—a daunting statistic but not insurmountable. The question is, are you willing to rabidly uncover the path to success? And when you do, will you execute on it and are you willing to fail, get up and do it again?

The success quality is rare but doesn't need to be intrinsic; it can be cultivated.

Anyone with enough desire to do what it takes to get out of his or her comfort zone can be wildly successful. It's self-evident, but whatever got you to where you are now will not be what's needed to get you where you want to go.

I've seen so many amazing products fail miserably. Ironically, most of them are incredibly innovative and helpful with obvious consumers who would love to buy them. As a matter of fact, I would say that a majority of the most interesting and useful of products are ones that never see the light of day or succumb to a very short life.

The first factor is the people. Even the greatest products and ideas will not succeed without the right people driving them to market.

The second thing is that success requires superhuman tenacity, people who refuse to take no for an answer. The most successful entrepreneurs are unbelievably resourceful; they will create their own PhD without a day in college.

Third, the successful ones are adaptable and never married to their ideas or things changing into something else entirely.

This stands true for inventors who just want to hand off their product to an entity that will develop it and bring it to market. They need to know how to make that happen in a way that pays them for their intellectual property in intelligent ways.

If they are not the one to take it to market, they must have the good sense to step out of the picture yet make a deal that is deserving of their creation while providing the freedom for life-giving breath.

The other kind of inventors create with the big picture in mind. They create a product for which there is a viable use, a company that supports scaling, and spend most of their time and money on marketing to keep finding customers who will buy it.

The winning framework

Three pivotal components of any business must be completed in order to get to the end of the rainbow.



Whatever got you to where you are now will not be what's needed to get you where you want to go. You need the right people, tenacity, and adaptability.

I call it the POM Principle. "P" stands for product, "O" for operations and "M" for marketing.

Your product could be an app, a food, a technology or a service. All of the POM Principle must be set forth if you are expecting your venture to succeed.

In subsequent months in this space, I will break down the POM Principle concept by concept so that you have the framework to get your invention out of your brain and onto a shelf.

For the moment, a basic outline:

• P for Product. This is all it requires to have a widget, a finished product or service ready for sale. It includes all of the sourcing, costing, prototypes, market research, competitive analysis and consumer demand for whatever you want to create.

Before you produce any product, however, you must do a profile of who you think will buy it. After all, if you have no customers, you have no business. Everything about the development of your product must be based on who that customer is and why he or she might want what you have to offer.

O for Operations. This starts with a distribution methodology, the way you intend to sell your product. Direct sales on the web? In a store? Through Amazon? Via direct response television or radio?

Is it an OEM product (original equipment manufactured), such as an Intel chip inside every Dell computer or B to B product? Is it a multi-level marketing concept? Will you wholesale only?

Operations are underpinned by money that allows you to, well, operate. How will you capitalize it? What systems can you create that will allow you to roll out, launch and support your customer base before you have a large staff to manage it? What people are needed to make it go? Human capital is key.

M for Marketing. Marketing is anything you do to get your product off the proverbial shelf and into the hands of someone who not only wants to buy it but will pull out his or her credit card quickly to have it.

Your marketing mix is a list of marketing activities that are chosen based on one thing only: your customer. If your consumer is younger than 15, chances are you might find him or her through school and might have to market to parents.

If your consumer rides buses, online ads will not be helpful—but buying bus bench ads will be the winning strategy. If your customer is a hardhitting young entrepreneur who commutes via airplane, it's possible you may advertise in airports or on airline apps.

So, there is a winning formula. If you need or want more, we'll explore the "P" of product in more detail next month. Meanwhile, here's to your success! €

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.



Feel the Love on Instagram

USE THESE 3 STEPS TO WOO AND KEEP FOLLOWERS, BOOSTING YOUR INVENTION'S RETURNS BY ELIZABETH BREEDLOVE

EBRUARY is the month of love, but is your Instagram account an exception? If you haven't been feeling the love of Training and Tra feeling the love on Instagram lately, this article is for you.

Those struggling to attract a quality Instagram audience should consider revamping your strategy a bit starting this month so you can grow your account—and ultimately, your business—using this three-step process.

Attract them.

Before you can begin to nurture new Instagram followers and convert them into customers, you must first attract them to your account where they can learn more about your business and product. There are quite a few strategies for this.

Perhaps the simplest tactic is strategic hashtag use. Consider your brand's niche or industry and which search terms a user would employ to find a company like yours.

If you've invented a tech product, you could use hashtags such as #tech, #technology, or #techy. If you've invented a product for parents of babies or young children, you can use a hashtag such as #parenthood or #parentinghacks. If you've created a new clothing brand, you could use hashtags such as #clothing or #fashion.

Take time to think about and research valuable hashtags, then start adding them to relevant posts whenever you post on Instagram.

Another simple tactic is to promote your Instagram account using your other marketing channels—such as email marketing, your website and other social media channels.

Look for opportunities to drive traffic to your Instagram profile. Keep in mind that the audience you'll be reaching with this method is already generally aware of your brand; these people won't be completely new followers. However, this is still valuable. Having an audience on multiple platforms provides more opportunities to nurture your followers and turn them into customers.

If you're looking to spend some of your marketing dollars on attracting new followers, you can utilize several different paid opportunities that include influencer marketing or paid advertising.

Influencer marketing has grown into a massive industry. Many influencers in a variety of niches are willing to talk about your company and invention to their Instagram followers.

To begin working with influencers, think about what sort of following your ideal influencer would have. More isn't always better; influencers with millions of followers are much more expensive and may have lower engagement rates.

Regardless, this is when you'll need to consider your budget. Then, think about what sort of niche where your ideal influencer fits. What do they post about? How does their audience respond? Do they get a lot of engagement? Do they interact with their followers often?

Once you've answered these questions, you should have a good idea of what type of influencers will be a good fit for your brand. At this point, you can start to identify specific influencers with which to connect. You can use Instagram to search for these influencers, or you can use a third-party tool to find them.

Once you identify them, you'll want to start working out a compensation deal. These deals vary widely. Consider factors such as whether you'd like to compensate them with product or cash, how often you'd like them to post about your company or product, and any other details about what the collaboration will look like.

If more traditional paid advertising sounds interesting to you, Instagram offers multiple advertising



Many influencers in a variety of niches are willing to talk about your company and invention to their Instagram followers.

options. Remember, the platform is owned by Facebook, so you'll use Facebook's Ads Manager to set up and manage your ads.

Interact with them. Now that you've grown your following, you need to interact with them and nurture them

into customers. If you're already following Instagram marketing best practices, this shouldn't be too difficult. As a refresher, some things to make sure you're doing:

- Post to Instagram regularly, at least a few times a week. Create a schedule if it will help you stick to it!
- Post stories regularly as well. Remember, these can be a bit more informal than your normal feed posts. Don't feel pressured to make these posts perfect. Casual, behind-the-scenes looks at your company are great!
- Use calls to action in your posts and your stories. Invite your followers to leave comments, like your posts, tag people in your posts, share your posts with someone, visit your website, purchase your product or something else entirely.
- Above all, stay true to your brand. Keeping things consistent and on-brand will help users quickly identify your posts as being by you, which is important when users are quickly scrolling through the platform.

Convert them.

Now that you have a loyal audience who loves your brand, you can focus on converting them to customers.

What takes someone from Instagram follower to customer? The simplest answer is an attractive offer. Whether you're offering a free download in hopes of continuing to nurture your followers or you're offering a special discount code in hopes of convincing followers to purchase your product, it's important that what you offer is unique and valuable.

Consider creating an Instagram-specific landing page (or more than one!) that you send all traffic to from Instagram. This enables you to provide a unique offer specifically to your Instagram followers, and it will also help you track traffic to the page so you can measure how well your Instagram offers are converting and adjust accordingly.

After following these three steps, you should be well on your way to having more Instagram followers and more customers. Here's hoping this is the beginning of explosive growth for you on social media in 2020. €

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.



A Drone Under Control

FORMER STANFORD STUDENT CREATES HYBRID FOR BETTER PERFORMANCE IN HARSH CONDITIONS BY JEREMY LOSAW

RENT LUKACZYK saw some limitations in quadcopter design, then let his imagination and technical skills take wing.

During his work at Stanford from 2010 to 2015, Lukaczyk's studies were focused on aerodynamics. He did a lot of simulation work on aircraft, even taking a class that required him to build and fly his own radio-controlled plane.

At the same time, interest in drones was spiking—evolving from a nerdy toy to an essential tool for photographers, videographers and scientists. Drones routinely carry cameras and other sensors to monitor and analyze crops and traffic, and collect data on oceans.

However, the standard fixed rotor quad-copter design is not always ideal for scientific work. These aircraft can be difficult to fly in high wind; moving forward requires the whole airframe to pitch forward, which can distort sensitive measurements.

Lukaczyk, who interned at Lockheed Martin and Boeing, respectively, in 2010 and 2011, helped

form a student club focused on drones and unmanned aerial vehicles. The club

hosted drone experts and industry leaders, including the CEO of leading drone manufac-

turer DII.

His realization that the standard quadcopter design was lacking in many ways revealed a market for a better solution. In 2015 he cofounded a Los Angeles-area company, FlightWave Aerospace Systems. Its signature achievement is the Edge—a new drone that combines the best attributes of quadcopters and fixed-wing aircraft for better control in harsh conditions.

The Edge is a tri-copter (three-rotor), fixed-wing drone. It has one fixed rotor at the rear and two specially designed tilt-pod rotors at the front. This allows the Edge to take off vertically and hover like a helicopter and fly forward without pitching forward, like a plane.

The nose cone features an easily changeable payload system for switching between different camera or sensor systems. The aircraft comes with a touchscreen control system for flight planning and manual control.

The biggest challenge

Hearkening back to his Stanford days, Lukaczyk says: "(We wanted to) make some really long-endurance, really innovative aircraft ... that can fly where no human could ever, ever want to go."

From early in the development, he wanted to combine the best attributes from both fixed-wing and fixed-rotor drones. After some research, he realized that it would be ideal if the rotors could be pointed in any direction instead of being fixed to the airframe. This meant mounting the motors to a servo for them to tilt.

Building the tilt rotor mechanism was not that tricky, but developing the control system was a big challenge.

The control algorithms for fixed-rotor drones are well understood. However, driving rotors that can

"The reason the tilt pod concept is not around very much is because it is a very hard system to build in a robust way."

—TRENT LUKACZYK





tilt independently added a lot of complexity, as it difficult to transition from vertical takeoff to flying forward without crashing.

"The reason the tilt pod concept is not around very much is because it is a very hard system to build in a robust way," Lukaczyk says.

He spent weeks developing the control code. Because of the aerodynamic complexities, the only way to do it was via a system he dubbed "code, crash, repeat."

His prototype drone was literally held together with hot glue, but after two months he had a codebase that worked and controlled the system consistently.

Success and growth

Once Lukaczyk had a good handle on his technology, he was able to file for patent protection. He had familiarity with the patent process from working as a consultant; he says it was similar to writing a term paper.

It took about three years for the patents to file, but Lukaczyk believes it was worth the wait to have intellectual property in hand— especially as FlightWave is a hardware company.

Once the algorithms were developed enough to trust, it was relatively easy to build the drone physically. He used some inspiration and components from the drone racing community, and it only took a few months for the first design to be completed.

Lukaczyk leveraged 3D printing in both the prototypes as well as the production units, due to the speed of the part build and the freedom of design iteration. Word about the Edge drone spread quickly in the scientific community, and he was invited by the University of Porto in Portugal to demonstrate the drone at one of its ocean research missions.

The Edge did mapping flights for three weeks without any lost vehicles or issues in extreme conditions, proving it was a great fit for research applications in harsh conditions.

Now that the Edge design is complete, production is ramping up and it is being sold through FlightWave's e-commerce site. The company is still using 3D printing for many of the parts but transitioning to injection molding for parts that have been well tested and unlikely to change.

Lukaczyk and the FlightWave team are now switching their design focus to optimizing their other drone, the Jupiter, which will be used primarily for indoor data capture. 🕏

Details: flightwave.aero

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/.



Top: The Edge's three-rotor, fixedwing design lets it take off vertically and hover like a helicopter, flying forward without pitching forward as a plane does.

Above: The Jupiter, made by FlightWave, is a heavy lift multirotor with three high-performance fans/motors.

Mission: A Falling Number of Slips

DUO DEVELOPS PRODUCT TO DRY MESSES IN APPROXIMATELY 10 SECONDS BY EDITH G. TOLCHIN

■ **LEANUP ON AISLE 12!"** Or whichever number. It's a common announcement in supermarkets, often *after* an accident.

More than once I've slipped on an opened jar of some sort of goop while at the market. Many years ago, I filed a health-related claim with a big-box store to be reimbursed for medical treatment from a slipand-fall injury I sustained.

Now here's a product that big-box store could have used back then. Many stores, restaurants, factories and other businesses may be using it soon to clean up messes and prevent painful and costly damages.

"Slip-and-fall accidents are the second-largest insurance claim in the U.S."—ROBERT WYNE

Edith G. Tolchin (EGT): Please tell us about your background, and how KleenzDRIcame about.

Robert Wyne (RW): I've been in the restaurant business for over 30 years. As a hands-on restaurateur, I am always problem solving.

One of the biggest problems comes from mopping the floor that takes too long to dry. These wet floors are a huge issue. In fact, slip-and-fall accidents are the second-largest insurance claim in the U.S. In working with my other half, Rosemary Corbey, we set out to develop a product that would not only clean but dry in approximately 10 seconds.

EGT: What is the science behind KleenzDRI, and how does it work? What is it made from?

RW: We created and patented a unique, non-flammable, alcohol-based cleaner designed to lift oil, dirt, grease, soda and more—with the bonus that it dries in seconds. Since it's fast drying, it cleans and eliminates moisture—the same moisture that is a bacterial breeding ground.



It is derived from all-natural ingredients. No dyes, no parabens, no ammonia, no bleach, and no GMOs.

It's perfect for the restaurant industry, since fryers leave a light film throughout. This cleaner will cut through oil and grease, leaving no oily residue, no more wet tables, and no more slippery surfaces.

EGT: Tell us about your research process.

RW: The initial research began with walking through numerous hotel, motel and restaurant trade shows to see if any such product existed in the marketplace. We were looking for products engineered to lift food and liquid particles as well as dry in seconds.

I began working with a chemist to develop a formula, which we tested in our own restaurant On the Bay Seafood located in the resort town of Ocean City, Maryland. After approximately 15 different attempts, we finally developed the perfect formula to solve all the issues we sought to correct.

Further into our research, we realized that restaurants have one large cotton mop that is used for the entire restaurant: front house, back house and restrooms. The number of bacteria and crosscontamination is unfathomable and disgusting.

Not only is our cleaner a new and innovative product, we are trying to revolutionize the cleaning process. By that, we are using our product with a Bona or Swiffer tank mop with a dry disposable pad, thus eliminating the spread of contamination by disposing of the pad after each use in each area.

Bar towels have the same issue as mops. A bar towel being used to wipe off tables cross contaminates and spreads germs. You just don't know where that towel has been. It could have been dropped on the floor, picked back up, used to wipe off chairs and benches as well as menus, and then back onto the tabletop.

By using our cleaner with a disposable paper towel, you can wipe off tables and items on the tables first. Then, wipe off chairs and benches only to dispose of the paper towel. Only then does one truly have clean and dry tables and chairs for the customers.

EGT: What are the advantages over other, for example, industrial-strength cleaners for food service, residential and building industries?

RW: The product's ability to "lift" food particles both solid and liquid—and clean surfaces, as it's an alcohol-based formula. And most important, it dries in seconds.

It dries so quickly and thoroughly that there is no liquid residue left behind to create germ mutation. We set out to create just one product that can be universal to perform amazing results on all surfaces.

EGT: Is KleenzDRI product patented? If so, please share your experience.

RW: Yes. We were granted a worldwide utility patent on our cleaner. Our patent agent, QuickPatents founder Kevin Prince, has been working with us for years and has done a phenomenal job. He walked us through the entire process from A to Z and made the process a lot less painful.



KleenzDRI comes in a gallon size and quart spray bottle.

EGT: Now that you're selling KleenzDRI, how have you been giving it exposure? Where are you manufacturing?

RW: We debuted our product at the ISSA (International Sanitary Supply Association) trade show in Las Vegas in November 2019. There was great interest from a wide array of industries, and from many countries.

We are currently corresponding with a number of companies, from manufacturers to distributors that also stopped by our booth. We hope to have our product distributed into the marketplace by spring.

EGT: How is KleenzDRI packaged and sold?

RW: Our product is manufactured in a gallon size and a 32-oz. quart spray bottle. This is a ready-to-use product line. No water needs to be added.

EGT: Are there any product safety issues for this category of product, and what research have you done on this?

RW: As with any cleaner, it is not for human or pet consumption. Being derived from all-natural ingredients and having no harsh chemicals, we have found it to be one of the safest cleaners in the marketplace, especially in the commercial industry.

We have tested extensively in our restaurant over the past three years in our kitchen, the fountain drink machine area, countertops and floors, with

INVENTOR **SPOTLIGHT**

great results. We've also had testing performed by an independent lab with great results.

EGT: Have you done any crowdfunding? Will you be looking to license the product, or will you run the business by yourself for now?

RW: We have not done any crowdfunding. However, we have teamed with an excellent marketing team— Ryan Doerr and Laura Leszczynski—of the Spire Group, who have invested money and countless hours of their expertise to help guide us to the ISSA trade show and competition as well as much more

Our goal will be to multi-license the product in order to reach a broad spectrum of end users from residential to commercial.

EGT: Have you had any obstacles?

RW: So far, things have gone relatively smoothly. However, it has been an expensive, long, and slow process. We have had five years into this product before we were able to finally hand out 4-oz. samples at the ISSA trade show. Our biggest obstacle is our low volume of production, which drives the price of the product.

EGT: Based on your experience, what would you recommend to inventors looking to develop industrial cleaning products?

RW: You must have lots of patience, persistence, time and effort, and money that can be risked with possibly no return. Costs derive from the fact that we are currently in Maryland, we have our 4-oz. bottles that are made in Ohio, and the recent trade show was in Las Vegas.

In the end, you give out a bottle for free, say hello and shake a hand in hopes the product gains traction. It is nearly impossible for any small-time inventor to connect with a large company to disclose a new product. Therefore, we took the route of developing our product, protecting it and now will be debuting in front of a large audience in hopes of gaining attention.

Details: robandrose@pioneerconcepts.org

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.



Critical Steps to getting your NEW PRODUCT "out there"

7 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!

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)!

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SPURRED BY WORRIES ABOUT LOOKING OLDER. TRINIDAD NATIVE HITS IT BIG WITH SKINCARE LINE BY ALYSON DUTCH

AYS BEFORE 2020 arrived, a front-page Wall Street Journal story examined the power of the "negativity effect" as a fundamental aspect of our psychology. The article said that our brains' "bad-news bias" is a built-in survival mechanism that evolved from our days as hunter-gatherers.

Though the story made resolution recommendations for a "low-bad diet," this news was very validating for inventors—who, despite every adversity, are often motivated by fear nipping at their heels.

Most inventors bring things to life to solve a personal problem—whether it's a fireman who needs a life-saving door wedge that doesn't melt or an aging actress who created a bra that smooths back fat. In the case of Andres Roban, his fear of aging sprouted a revolutionary skincare line called Ounce of Nature. His all-natural, essential oils serum ignited a wellspring of fandom in Brooklyn in late 2019.

Paying his dues

The beauty line wasn't his first stab at inventordom. Earlier, he brought to market a pillow that made breathing easier, a locker key/credit card-holding gym towel and a dating social site for Boomers. His wildly creative idea to attract people to his trade

show booth by spritzing irresistible fragrances grew into a fifth invention—an air freshener line.

"I've never seen limits to what I can achieve, because I grew up in a place where everyone from political leaders to bankers looked like me," the native Trinidadian entrepreneur explains. "So, when I got to New York and started bringing my ideas to life, it never occurred to me that I could be anything but successful."

Roban's immigration from the Caribbean to the largest, most competitive city in the United States was no cakewalk. Discouragement and even eviction from his home didn't keep him down.

In Los Angeles, it's no surprise that restaurant waitstaff are really budding actors in disguise holding down the fort with a steady job. Likewise, while bringing his dreams to reality in the Big Apple, Roban kept his bills paid for more than 20 years by working in the culinary industry.

This was more than a blessing for him: He met some of his most influential investors while on a restaurant floor. He learned the meaning of supreme tenacity and physical hard work, skills he uses every day now as a full-time entrepreneur.

"I can always right my wrongs," the cheery Roban explains, "get up, dust myself off and keep grinding."

Andres Roban noticed wrinkles starting to form on his face. He bought 12 anti-aging products and tried them all, with no results. He dumped them all into a beaker and forgot about it. "A month later, I dipped into the muck, put it on my forehead and almost jumped out of my skin with joy about the results"which became his Ounce of Nature antiaging serum.



From left, Ounce of **Nature CEO Andres** Roban, celebrity aesthetician Courtney Williams and Ounce of Nature assistant Raphael Matte showcase the product at a trade show at The Harvard Club in Manhattan.

True grit, and fortune

His greatest sensation is really the chart-topping skincare line, which he's now rolled all his attention toward as it moves into the national landscape.

As every inventor knows, serendipity is one's friend. Moreso than someone with a high-level education would understand, success rolls out precisely in the way it does.

Not many would have the audacity to consciously plan a move from a Caribbean island to one of the most sharky environments in the largest country in the world. It was a combination of a little luck and a lot of grit that spurred the young Roban to unpack his dreams in Brooklyn.

Now almost 40 (and looking younger, thanks to his skincare line), he runs his business with an open fist, accepting mind and kind heart. He admits that even today, scary things happen—from investors who have sudden changes of heart to his own heart palpitations about meeting payroll and rent obligations.

But it's times like late at night when he sits in his artisan batch clean room—ensuring that his serums, hydrators, masques and cleansers are packaged perfectly—that calmness overcomes him.

"Fear is momentary," he explains. "When it subsides and you realize that you're OK, your employees have shown up, the shipping has gone out and the bills are paid, the elation is worth it all."

Accidental formula

The inventor community knows the agony and the ecstasy of creation. Each member has muddled through personal journeys; the ones with the most tenacity, the ability to overcome obstacles, are often the ones who win.

Roban spent all those years toiling in a restaurant to make it happen, but it's that quality that makes learning possible. His own great story about his fears, which hatched his skincare line, should serve as an inspiration to future inventors.

"I noticed wrinkles starting to form on my face," he says with a laugh. "I went to the store and purchased 12 anti-aging products and tried them all. I followed the instructions. Nothing happened.

"Exasperated, I dumped them all into a beaker and forgot about it. A month later, I dipped into the muck, put it on my forehead and almost jumped out of my skin with joy about the results. It worked!

"I then went about the process of deconstructing all the natural ingredients in those products, which together numbered about 110. I sourced the best of each and put them together into my own formula.

"Quite by accident, I then came across a new blending technology that activated the mélange of essential oils to reduce the appearance of fine lines and wrinkles in only 30 minutes"—something that natural products usually don't do.

In addition to the anti-aging serum, the skincare line includes these products available at ounceofnature.com: the Antioxidant Hydrating Cleansing Mousse; Green Tea Facial Toner; Wildflower Honey, Aloe and Oatmeal Anti-aging Face Mask; Hyaluronic Acid Facial Hydrator with Retinol, and Activated Charcoal Bar Soap.

Customers flow in

Another fluke, and a seeming state of commonality among inventors: What began as a need for Roban to find a formulating, packaging and fulfillment center turned into an anti-aging spa.

"I never expected to be in the service business," he says with a shrug.

But when he went to sign lease papers, he discovered that the square footage and lease price included a street-level retail space that begged to be used. Today, he cannot stop the flow of Brooklyn beauty seekers at his door for treatments—and now his line of products.

Even more ironically, the spa attracted three famous hip-hop performers who sing the praises of his product. This started with a loitering patron in his foyer who turned out to be well connected in the entertainment business.

Roban says that "Once you're an entrepreneur, you're always an entrepreneur ... the drive never disappears. It's always there.

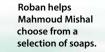
"When you go through real hardships, rock-bottom difficulties, any other troubles become insignificant. You realize you are unstoppable, and that any seeming calamity will be short-lived."

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.



Favorite book: "The One Minute Manager"
Favorite movie: "The Pursuit of Happyness"
Favorite saying: "Failure will never overtake me if my determination to succeed is

strong enough." — Og Mandino







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MAY EVENT WILL HONOR THEIR CONTRIBUTIONS TO SOCIETY



Lisa Lindahl. Hinda Miller and Polly Smith (left to right) invented the sports bra. **Stewart Adams** and John Nicholson invented ibuprofen. Consumer Electronics Show in Las Vegas on January 7. In partnership with the United States

Patent and Trademark Office, NIHF will honor them in Washington, D.C., May 6-7 at "The Greatest Celebration of American Innovation®."

Twenty-two honorees were announced at the

Fame announced its 2020 inductees.

andmark inventions that include ibuprofen, the hard hat and the sports bra were represented when the National Inventors Hall of

THE CLASS OF 2020

- R. Rox Anderson, laser dermatology: His treatments and procedures are now commonly used to remove birthmarks, scars and other skin lesions.
- Sylvia Blankenship and Edward Sisler (posthumous), 1-MCP for fruit, vegetable and flower freshness: Their compound has become essential in preventing food waste, and increasing accessibility to fresh fruits, vegetables and cut flowers.
- Dana Bookbinder, Ming-Jun Li and Pushkar Tandon, bend-ilnsensitive optical fiber: Because ClearCurve® can bend without significant signal loss, it has reached locations previously inaccessible to optical fiber and advanced data transmission.
- Lisa Lindahl, Hinda Miller and Polly Smith, sports bra: The revolutionary garment has enabled women's participation in athletic activities and advanced their health and well-being.
- James McEwen, automatic surgical tourniquet: Innovations in his first microprocessor-controlled automatic surgical tourniquet system ensure safer outcomes in nearly 20,000 surgeries daily.
- Mick Mountz, Peter Wurman and Raffaello D'Andrea, mobile robotic material handling for order fulfillment: The Kiva system uses mobile robots and control software to bring inventory shelves to workers.

- Margaret Wu, synthetic lubricants: She revolutionized the way automotive and industrial lubricants are designed and synthesized.
- · James Abercrombie and Harry Cameron, blowout preventer (posthumous): The world's first reliable BOP successfully contains catastrophic blowouts from oil and natural gas wells.
- · Stewart Adams and John Nicholson, ibuprofen (posthumous): Ibuprofen is used worldwide to safely and effectively treat pain, fever and inflammation.
- Evelyn Berezin, computer systems for business use (posthumous): She invented a computer reservations system for airlines and founded a company that developed the first computerized standalone word processor for business use.
- Edward W. Bullard, hard hat (posthumous): The hard hat was the first commercially available industrial head protection device.
- Floyd Smith, modern parachute (posthumous): His invention led to the creation of the parachute industry and provided safe landings across the world.
- Frank Zybach, center-pivot Irrigation (posthumous): This technology has revolutionized agricultural production throughout the world.

Details: invent.org

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Awards Season

END OF 2019 FEATURED A FLURRY OF RULINGS THAT BODE WELL FOR PATENTS BY LOUIS CARBONNEAU

■ HE CLOSE OF 2019 was marked by several large patent awards, a rarity these days and hopefully a harbinger of better things to come. Will they remain in place?

We also witnessed the introduction by the U.S. Congress of another patent-related bill, this time called the Inventor Rights Act, written by and with inventors in mind. But does it go too far?

Also, the United States is inching its way back to allowing for injunctive relief for patent owners, as long as the patents are standard essential ones.

On the legislative front

As mentioned, the big news in this space was the introduction by the U.S. Congress of the Inventor Rights Act, championed by patent activist Josh Malone. This new proposed bill takes the STRONGER Patent Act and pushes it even further, with several provisions aimed at benefiting inventors as opposed to patent owners—such as shielding inventors from any inter partes review challenges at the PTAB.

Although I am personally on record for supporting all legislation that would strengthen patent rights in the United States, I believe any provision is ill advised that seeks to treat a patent differently if the owner is the original inventor or someone who subsequently acquired the asset. It introduces a level of discrimination that might make patents even less transactable and thus less valuable than they are now.

Why should someone buy patents from an inventor if some of the privileges associated with owning that patent will disappear the minute the sale is completed? I think this one should go away, or even better, do away completely with the PTAB!

On the other hand, one important development that is going to change things in the short term is the new position by the Department of Justice (reversing its guidance since 2013) that it is now open to owners of Standard Essential Patents to be granted an injunction when they are trying to enforce such patents on FRAND terms. The USPTO just announced it supported such approach. This is a significant development that should benefit SEP patent owners.

Buyers and sellers

According to the latest sales data for the patentbrokered market, courtesy of Richardson Oliver Insights, about half of the sellers in 2019 were returning to the market after having sold assets in 2018. This is a sign they find value in working with intermediaries to monetize their IP assets.

Last summer, Intel put a large block of patents for sale (8,000 families), most that were later acquired by **Apple**—along with many more assets and people for \$1 billion. It now appears that about 80 families of these patents remained with Intel, and those went back on the market via a direct auction handled by D.C. law firm Sullivan & Cromwell. Meanwhile, Apple announced that it will license the newly acquired patents under FRAND terms (Editor's note: fair, reasonable and non-discriminatory). ...

Auctions might be back in fashion after all, as South Korean LED maker Seoul Semiconductor decided to auction its radio frequency (RF) semiconductor patent portfolio and its high-power LED package patent portfolio.

According to the company, this RF patent portfolio is the result of an investment of more than \$100 million in research and development by **Sensor Electronic Technology**. SETi was founded in 1999 at the Rensselaer Polytechnic Institute in New York but was acquired by Seoul Semiconductor affiliate Seoul Viosys in 2015. SETi is now focused on UV LED technologies. ...

UK-based **Nexeon**, a company engineering silicon materials for next-generation lithium-ion batteries, acquired three important sets of patents relating to the use of silicon in lithium ion battery anodes. The granted patents have global coverage and were previously owned by **Litarion GmbH**, and were acquired following that company's insolvency. ...

Goldpeak Innovations, a South Korean company created to monetize former Pantech patents, is back



on the transactions radar with an apparent sale to Samsung Electronics, according to IAM magazine.

Winners and losers

Courts delivered a few significant awards recently, starting with pharmaceutical giant Bristol-Myers's \$752 million jury award in a patent case against competitor Gilead over a dispute relating to technology for treating cancer. There is a good chance this amount may be reduced by an appeals court, but this is still a gigantic exposure and a reminder that when you lose, a patent case can have pretty significant impact on the bottom line. ...

A few days apart, a federal jury awarded Meso Scale Diagnostics more than \$137 million in damages against Roche for infringing patents licensed by the Maryland-based company. This concludes a longrunning dispute over the detection technology used in Roche's cobas line of immunoassay analyzers. ...

And in the high-tech arena, a jury found unanimously in favor of the United Services Automobile Association and ordered Wells Fargo to pay USAA \$200 million over the infringement of patents related to mobile check deposits. ...

Conversely and to bolster the point above, VirnetX Holding Corp.'s \$503 million patent-infringement award against Apple was tossed by an appeals court that said it must be recalculated or a new trial held. This dispute has been going on for almost a decade now, and there are no signs of it abating.

I'll see you in court

In addition to the usual flow of new lawsuits, a few point to a more active docket between large technology companies that usually refrain from going after one another. As such, we saw a new complaint filed by SMTM Technology against, no big surprise, Apple over its "Do not Disturb" feature. ...

Semiconductor supplier Analog Devices filed a patent infringement lawsuit against Xilinx, charging that the company violated its patents relating to converter technology in at least two of Xilinx's High End Zynq UltraScale+ RFSoC products. Still in the semiconductor space, previously mentioned Seoul Semiconductor accused two companies, Healthe and VividGro, of infringing its patented semiconductor light-emitting device technology. ...

Publicly traded firm InterDigital announced that it filed a patent infringement action in the UK against Huawei. It seeks, among other things, a determination of fair, reasonable and non-discriminatory terms for a license to InterDigital's portfolio of 3G, 4G and 5G standards-essential patents (SEPs). ...

In the automotive space, Paice and nonprofit The Abell Foundation said BMW has infringed on their patents involving hybrid engines, according to a suit filed in the U.S. District Court in Maryland. ...

Finally, in what seems to be a new pattern, Apple and Intel recently joined forces to bring an antitrust lawsuit against Fortress Investment Group, a firm owned by SoftBank, on the basis that it engages in anti-competitive behavior to the extent that it accumulates patents as a means to extort other companies. Just as we thought we had finally moved on from the "Patent Troll" narrative of years past.



HANDSHAKES

It's not quite a full handshake yet. But it did not take very long for Nokia and Daimler to sit down and mediate over Nokia's recent assertion against the German car manufacturer that it infringed upon several of its patents. The Finnish telecoms equipment maker suspended legal action against Daimler in the hope that mediation will resolve their dispute over technology licensing fees. ...

Kodak Moments, a division of Kodak Alaris, settled a patent infringement lawsuit that it brought against Citizen Systems, DNP Imagingcomm and Dai Nippon Printing in the U.S. District Court for the District of Delaware. The suit alleged that certain printers sold or manufactured by these companies infringed Kodak Alaris' panoramic printing patents....

Italian-based Sisvel successfully licensed U.S. streaming giant Spotify. Both parties entered into a confidential patent license agreement whereby they resolved all pending and future disputes related to Sisvel's Recommendation Engine patents.

Spotify joins a growing list of companies around the world that have access to the portfolio of patents managed by Sisvel that are related to the Recommendation System Technology. IOT patent pool Avanci announced it has signed a patent license agreement with Volvo Cars, increasing the total number of auto brands licensed through the Avanci marketplace to 14.

From the bench

The IP community is still reeling from the recent decision by the United States Court of Appeals for the Federal Circuit in Arthrex v. Smith & Nephew, dealing with the invalid appointment of several administrative judges at the Patent Trial and Appeal Board.

Those hoping the ruling would mark the permanent demise of the PTAB have been disappointed so far by the stance that United States Patent and Trademark Office Director Andrei Iancu has taken to narrow the decision as much as possible and find a quick remedy to the uncertainty it created. ...

Pretty much everyone knows the U.S. Supreme Court hates taking patent cases. So it wasn't a big surprise that it refused to hear the appeal from the federal circuit decision that Charter Communications Inc. unit **Time Warner Cable** must pay \$140 million in damages for infringing five Sprint telecommunications patents. The justices declined to review a lower court ruling that upheld a 2017 jury verdict siding with Sprint in the dispute. ...

Finally, in the ever-confounding jurisprudence over the concept of "abstract ideas," one must now add to the column of invalid patents those directed at monitoring baggage delivery.

On the move

Long-time Microsoft veteran and chief IP counsel Erich Andersen (who succeeded Horacio Gutierrez, now general counsel at Spotify) is moving to another role for a yet-undisclosed employer outside of Seattle. He will be replaced by **Jennifer Yokoyama**, who was previously Microsoft's head of IP litigation but has only been with the software giant since June 2018. Before that, she was principal counsel for patent litigation at Apple. ...

Another former Microsoft patent attorney, John **Mulgrew** (until recently the chief patent counsel at Uber), will replace **Ira Blumberg** as Lenovo's top patent counsel. Blumberg is now senior VP of VideoLabs, a new defensive aggregator focused on video-related assets. 📦

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.







IPAS 2020

March 5 | San Francisco

BUILDING IP UNDERSTANDING

THIRD ANNUAL EVENT WILL ADDRESS
GROWING INTELLECTUAL PROPERTY CHALLENGES

U.S. leadership in science and technology, entertainment and brands is no longer assured—with a widening gap between intellectual property awareness and understanding a major factor.

This issue will be the main focus of the third annual Intellectual Property Awareness Summit on March 5, at The Faculty Club at UC Berkeley. Other topics will include global and domestic challenges to IP that include patent uncertainty, rampant counterfeits, content abuse, digital rights and trade secret theft.

Solutions-based themes will include establishing a standard for IP literacy, as well as how to help provide a context for making IP rights a more urgent issue for the public and acknowledge their weaknesses. The summit is a must-attend event for creators who include inventors and writers; businesses;

IP owners; organizations; educators; lawyers; investors; policymakers; students; licensors; entrepreneurs, and journalists.

"It's important for the community, for our leaders, for participants in the innovation and entrepreneurship ecosystems, to understand the importance of IP to the economy, the importance of IP to our national development, and to the development of the human condition across the world," said Andrei lancu, director of the United States Patent and Trademark Office.

The event is held by the Center for Intellectual Property Understanding, in conjunction with the UC Berkley-Haas School of Business and the Tusher Initiative for the Management of Intellectual Capital. For information about CIPU, an independent nonprofit dedicated to increasing awareness about the impact of IP, please visit www.understandingip.org.

SPEAKERS

An assemblage of more than two dozen leading intellectual property owners and experts from the United States, Europe and Asia will speak at IPAS 2020. Among them:



Dr. Gary K. Michelson, an American board-certified orthopedic spinal surgeon, inventor and philanthropist who holds 990 patents worldwide.



James Conley, an inventor who serves on the faculty of the Kellogg School of Management and the McCormick School of Engineering at Northwestern University.



Talal Shamoon, CEO of Intertrust, a digital rights management company that has done major licenses with most IT, consumer electronics and mobile manufacturers and service operators.

IPAS 2020

When: Thursday, March 5, 2020

Where: The Faculty Club at UC Berkeley

Time: Noon to 6 p.m.

Registration: ipawarenesssummit.com



Adam Mossoff, Professor of Law at Antonin Scalia Law School at George Mason University and founder and past executive director of the Center for the Protection of Intellectual Property, will be announced as the newest member of the CIPU board of directors.



TRAINING FOR AND FINISHING A MARATHON ARE MUCH LIKE THE PRODUCT DEVELOPMENT PROCESS BY JEREMY LOSAW

Marathon. Complete. It feels like how it looks.

019 WAS an immense year for human achievement. Perhaps one of the biggest milestones came in October when Kenyan Eliud Kipchoge became the first person to run a sub-2-hour marathon.

His accomplishment was the culmination of years of training and a carefully executed plan on race day. It was inspiring.

When I finished my first marathon in November, it was at a pace nearly three times slower. So I am careful to tell people that I "completed" a marathon and not that I "ran" it.

It took 4 hours and 52 minutes from when I started the race at the Charlotte Knights stadium to when I crossed the finish line one street over. I was desperate to be done and proud to have endured through the pain and mental hurdles of the race. Yeah, I walked a few miles during the race, but I still made it. I cannot imagine how anyone could go that far in less than 2 hours.

As my race unfolded, I realized that running a marathon has many parallels with the product development process. Each is an extraordinarily difficult journey that only a few try and in which fewer succeed. There are highs and lows—and hopefully, strangers offering you literal or figurative beer and donuts along the way with friends and family waiting at the finish line.

Training is crucial

It would be nearly impossible to have never run a mile and expect to finish a marathon. Training is the key to build stamina necessary for a successful race day. The miles burned in the early hours of the morning while your children sleep, sometimes enduring

wind, rain and snow to maintain your training schedule, are the backbone of success.

In product development, prototyping is the currency of training. Dutifully testing ideas through iterative prototypes is the key to unlocking the DNA of a product and the backbone of a successful launch.

Before my race, the longest training run I did was 17 miles. I thought that was "proof of concept" enough to do a full marathon. So it should have come as no shock that by Mile 17 in my race, I started having to walk.

Don't expect a good product to evolve from a non-rigorous prototyping schedule. You may end up trying to sell a product that is not feasible.

Go farther than others

The Charlotte marathon is a race that has multiple distances in the same event. The event included a full and half marathon, a 5k and 1-mile fun run.

The half and full ran the same course at the start of the race. Once the runners came back into the heart of the city, the half marathoners turned right to the finish line and a well-earned banana and slug of water. The rest of us wearing purple bibs veered left and headed around the celebration and up the hill for the second half of the journey.

Product development is the ultimate marathon. Each step of the journey brings you closer to bringing the product to market, but you can't stop halfway and expect great results.

Products that have not been rigorously tested by inventors are rarely successful in the market. You have to be willing to go the extra mile and fight through the difficult miles to have any chance at success.



In product development, prototyping is the currency of training.

Celebrate each milestone

Marathons and product development are long journeys that can push us to our mental limits. So it is important to recognize the depth of the task and celebrate the small milestones along the way to refresh and renew the spirit.

Each time I passed a mile marker during my race, I did a tiny fist pump for a mini celebration. When I was struggling in the second half, I would push myself to run to a visual point in the road ahead to have a micro milestone to celebrate. It helped pass the time and kept the mental demons at bay.

When deep in a development program, there are always small breakthroughs or moments of discovery or clarity that inch you closer to the finish. Celebrating these micro achievements along the way—whether with a pause for a beer or a snack or to share the milestone with friends and colleagues—can help mentally smooth the journey.

Learn from failure

I had wanted my first marathon to be in spring 2018. I started running shortly before New Year's and made a resolution to commit to a training program and be ready in a few months.

Six weeks in, I hurt my knee. I had to stop training and missed the spring marathon season. After some physical therapy, I learned how to treat my body better. I learned how to put in miles without overdoing it, and the knowledge from that first failure propelled me to be able to train well enough to try one this year.

It is painful for inventors to give up on an idea due to a lack of funding, lost interest, lack of consumer enthusiasm or other reasons. However, the skills gained from a defunct program often end up forming the bedrock of a successful future program.

Whether it be a specific technology, prototyping technique or marketing strategy, these insights can be the fuel for the next and better product.

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Patenting on a **Budget**

IT CAN BE SUCCESSFUL, IF YOU DO A LOT YOURSELF AND SPEND WISELY BY GENE QUINN

F YOU are an inventor who is new to the process, you may have begun researching how to patent an idea but have become bombarded with information from a variety of sources. If you don't know where to start and have a limited budget, read on.

The first step

The patent process can be complex. Before proceeding, ask yourself: Why do I want a patent?

The road to invention riches may or may not include obtaining a patent, although at least filing a provisional patent application can be and usually is a wise first step for a variety of reasons.

Inventor coach Stephen Key refers to the filing of a PPA as attaining "perceived ownership"—because if you follow the patent process to completion, you can own the invention you've described in the provisional application. Perceived ownership is generally very important, because with an application pending you can use the term "patent pending." Potential partners and licensees can evaluate what you claim your invention is as defined by a proper filing with the United States Patent and Trademark Office.

Find the funds, research

Inventing and patenting will take some financial resources. Unless you qualify for the pro bono assistance program through the USPTO, no patent attorney or patent agent will be able to help you if you have no funds. To qualify for the pro bono assistance program, you must have income of no more than three times the poverty line—and even then the pro bono program does not cover licensing assistance or trademark assistance, for example.

So, there is no way around the fact that the invention and patent processes require a financial investment, and it is virtually impossible to find anyone to invest in an idea or nascent invention prior to the filing of a patent application.

The typical independent inventor has little funding with which to pursue commercializing his or her invention. Inventors must realistically consider the size of the market to determine whether moving

forward with the investment of time, money and energy is warranted. If so, protect the invention typically via a patent application.

The more limited available funding is, the more inventors will need to do on their own. This means reading and becoming as familiar as possible with the patent process and legal requirements. I strongly recommend IPWatchdog's "Invention to Patent 101: Everything You Need to Know to Get Started."

Be realistic

Next, work on a realistic budget is an absolute necessity.

I have worked with independent inventors and small businesses during the past generation and have helped many with limited budgets make the most out of the money they have. If you follow inventor coach Key on LinkedIn or Facebook, you know it has worked for many of his students; the same is true for Trevor Lambert.

Starting the patent process on a limited budget means you are being responsible. Of course, you cannot expect highly qualified professionals to work on your behalf for free, and you must be willing to put in a lot of sweat equity. Invest a little. If it makes sense and you start making money, invest more.

Conserve resources in a responsible way, while laying the groundwork for obtaining the benefits and protections offered by the patent laws. The scenario you must avoid is spending too much on one invention that winds up going nowhere. Then you not only lose what you invested, you also potentially lose funds that could be used to pursue the next great idea you have.

Patent drawings essential

If you do not have the funds to hire an attorney or patent agent, you must work to create the best provisional patent application you can yourself. That should mean hiring a skilled patent illustrator who can draw your invention and the various parts and pieces.

Illustrators are generally very inexpensive, and patent drawings are the best and most economical way to expand any patent disclosure. Also consider

the Invent + Patent System, which guides you step by step through describing your invention.

Creative people rarely, if ever, create just once. So don't invest everything indiscriminately all at once! That is also why Key encourages his students to move on after they've filed a provisional patent application if there is no licensing interest. It is why many entrepreneurs talk about the benefits of "failing quick."

To search or not

Do you start with a patent search to see whether it makes sense to move forward, or do you start with a provisional patent application?

A lot of inventors do their own patent search first, and if they find no previous prior art they file a PPA. If you want to do this—which is a good idea—read IPWatchdog's "Patent Searching 101."

Inventors will never be able to find as much as a professional searcher or a patent practitioner, but trying to find what can be found is very helpful to the overall learning process. Reading patents to get a sense of the level of detail necessary can only help.

Ultimately, have a comprehensive patent search done by a professional searcher so you can understand the obstacles, and so you can describe your invention in a way that accentuates the positive differences to the greatest extent possible over the prior art (i.e., what is found in the patent search).

File first!

The United States is a first-to-file country, which means you must file your patent application first.

It is preferred to do the best job describing the invention that you can and file a provisional patent application as reasonably quickly as possible. Then on the road to filing a nonprovisional patent application, have a professional patent search done and reviewed by a patent attorney or patent agent who can help you understand the implications with respect to your invention.

Although it will cost an additional provisional patent application filing fee, there is nothing wrong with filing a second PPA. An advanced strategy is to file the best PPA possible and then do a search. Based on the patent search you will learn what the prior art contains, and your description of your invention will need to become more nuanced.

File a second PPA with that more nuanced description of your invention and subsequently file the



Illustrators are generally very inexpensive, and patent drawings are the best and most economical way to expand any patent disclosure.

nonprovisional patent application within 12-months of the first provisional patent application.

This strategy is explained more fully in "Provisional Patent Applications the Right Way, the Walmart Way." Walmart filed 39 PPAs on a single invention before filing a nonprovisional patent application claiming priority to all the previously filed PPAs. That is an extreme example, but it shows how you can and should protect your invention as you make important improvements along the way. €

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.



SCOTUS in the Dark

5 MORE PATENT-ELIGIBILITY CHALLENGES DENIED, LEAVING CONFUSION AND EXASPERATION BY GENE QUINN

in America. The United States Supreme Court denied certiorari— a writ or order by which a higher court

ANUARY 13 was a dark day for patent eligibility

reviews a decision of a lower court—in five more petitions relating to patent-eligibility challenges. Based on IPWatchdog's count, this brings the number of patent-eligibility petitions denied by the Supreme Court to at least 48 since the court issued its controversial, if not catastrophic, 2014 decision in Alice Corporation vs. CLS Bank.

Obviously, the Supreme Court is perfectly comfortable with the status quo as it pertains to the law of patent eligibility. This reality evokes myriad emotions, ranging from despair to outrage to resentment to cynicism to exasperation—and finally, to a begrudging acceptance.

Even with Associate Justice Neil Gorsuch hiring clerks with an intellectual property background—an extreme rarity at the Supreme Court—there seems to be no willingness to clean up the mess this court created when it ignored the doctrine of stare decisis (the legal principle of determining points in litigation according to precedent), several generations of well-established law, and the 1952 Patent Act itself. That law had been interpreted by the Supreme Court based on the explicit language of U.S. Code Chapter 35, Section 101 and the legislative history to make "anything under the sun that is made by man" patent eligible.

Opportunities wasted

There have now been at least four dozen opportunities to shed much-needed light on the meaning of "abstract idea," a term that the Supreme Court and the United States Court of Appeals for the Federal Circuit have left intentionally left undefined.

It is alarming that the term has remained undefined although it is central to the so-called Alice/ Mayo framework. (Editor's note: Under the Alice/ Mayo framework, courts continue to invalidate patents securing the fruits of inventive labors in medical diagnostic tests, medical treatment methods,

medical devices, and in high-tech inventions. Mayo Collaborative Services v. Prometheus Laboratories (2012) was another Supreme Court ruling against patent-eligible subject matter.)

Patent examiners and judges must determine whether a software patent claim is directed to an abstract idea. How can one know if a claim is directed to an abstract idea if the Supreme Court and federal circuit refuse to define the key term to the inquiry? Based on any logical interpretation of the law, the standard is hopelessly infirm due to ambiguity. Yet the Supreme Court is content.

The high court and federal circuit have also squandered at least four dozen opportunities to define the meaning of "significantly more," although it is also central to the *Alice/Mayo* framework because patent examiners and judges must determine whether a claim that is directed to a law of nature, natural phenomenon or abstract idea adds significantly more such that the claim is inventive.

To the credit of the United States Patent and Trademark Office, it has compiled a list of cases and attempted to define "significantly more" by examples, but the nature of innovation means each innovation is different. SCOTUS's not defining key terms to the decisional framework is a gross dereliction of duty.

Adding more confusion

This is just the beginning. The Supreme Court also refuses to define the difference between "law of nature" and "natural phenomenon," saying it doesn't need to make a distinction.

The Supreme Court has also usurped congressional authority in the Alice/Mayo framework by pulling both novelty and non-obviousness into the Section 101 analysis, which allows patent examiners and judges to determine inventiveness (i.e., both novelty and non-obviousness) without comparing the claimed invention to any prior art.

Further, the Supreme Court instructed inferior courts and decision-makers not to interpret its 101 decisions in a way that would swallow all of patent law—which is precisely what has happened.

And how can anyone know what a claim is directed to, and whether that claim contains significantly more such that it demonstrates an inventive concept, without doing a full claim construction?

The answer is simple: It is impossible to know what a claim covers in terms of inventive concept or is directed to in terms of subject matter without a thorough analysis of the claims, the specification, the prior art and any offered extrinsic evidence. None of that happens when patent claims are denied or invalided as lacking patent-eligible subject matter under Section 101.

Embracing incongruity

Despite everything, the Supreme Court will not admit it is wrong nor admit that its precedent is completely incongruous and inconsistent.

There is no way anyone can apply all Supreme Court precedent on matters of patent eligibility. Some precedent must be ignored in every decision, whether it is directly conflicting eligibility precedent, or precedent that says novelty and nonobvious is not to be conflated with patent eligibility.

In fact, both the requirement to conflate novelty and non-obviousness (e.g. Mayo) and the requirement that eligibility exclude matters of novelty and non-obviousness (e.g. Diehr) remain good law according to the Supreme Court. Obviously, statements that are completely inapposite cannot be both followed, but that is the mess the Supreme Court has made of patent eligibility specifically and patent law more generally.

Clearly, the Supreme Court wants Congress to fix the mess it created. Meanwhile, software suffers, with artificial intelligence and machine learning going overseas. And now we definitively know that medical diagnostics are not patentable in America.

These are dark days for patents on commercially relevant technology of consequence in America.

The Four Horsemen

One wonders whether the Supreme Court is capable of appreciating the chaos that has befallen the industry thanks to its apocalyptic series of patenteligibility cases.

Ironically, as Center for the Protection of Intellectual Property founder Adam Mossoff commented, four cases—Bilski, Myriad, Mayo and Alice—like the four horsemen of the Apocalypse, have brought destruction in their wake in America. Patent filings are down at the USPTO at a time when they are significantly up



This lost decade in America has and continues to set the stage for innovation dominance outside the United States. Well done, Supreme Court!

all across the world; not just in Europe and China, but in Africa and the Middle East.

This lost decade in America has and continues to set the stage for innovation dominance outside the United States. Well done, SCOTUS!

Although it has become cliché for the Supreme Court to deny further involvement in patent eligibility as if the law is clear, this latest round of denials by the Supreme Court is different. Continuing to allow medical diagnostics to remain patent ineligible in America is not just bad law—it is stupid.

You would expect a bunch of Ivy League-educated jurists to be smarter. Apparently not. €

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.



Missed Opportunity

USMCA DEAL OMITS EXPANDED PROTECTION FOR BIOLOGICS, A BLOW TO INNOVATION AND IP RIGHTS BY GENE QUINN

HE UNITED STATES-Mexico-Canada Agreement has been approved by both the U.S. House of Representatives and Senate, clearing the way to replace the defunct North American Free Trade Agreement of 1993. But not everyone was happy with the version of the USMCA agreed upon by the White House and Congress.

Although the U.S. Chamber of Commerce supported the overall agreement, it has great concerns about the provisions in the negotiated agreement between President Donald Trump and House Speaker Nancy Pelosi. The deal completely omitted expanded protection for biologic drugs.

Last summer, House Democrats vocally opposed granting 10 years of regulatory data protection for biologics inventions—an increase from 8 years in Canada and from 5 years in Mexico—arguing it would result in higher drug prices and delayed entry for biosimilars.

"We are seriously disappointed by the removal of certain intellectual property provisions, including but not limited to the biologics provision," said Thomas Donohue, CEO of the U.S. Chamber of Commerce. "The decision to remove key intellectual property protections was based on the false assumption that these provisions would raise U.S. drug prices."

Common misconception

Donohue is precisely correct.

Exclusive rights, whether in the form of data exclusivity or patent rights, do not raise drug prices. The belief to the contrary is a frequently held misconception that ignores the many years of research and development and the extraordinary financial investment required to innovate in the pharmaceutical and biologics areas.

The belief that exclusive rights raise drug prices also ignores the many years and substantial cost it takes to navigate a byzantine Food and Drug Administration approval process.

Further, the myth that patents and data exclusivity raise drug prices ignores the unfortunate truth that the vast majority of drugs lose money or never make it to market in the first place. Only 10 percent of drugs achieve blockbuster status.

Although no one likes paying high prices for drugs, high prices don't just pay for the successful drugs but also for the rest of the drugs that lost money on the market and those that never made it to the marketplace.

Patents and exclusive rights, such as data protection, do not enable super-competitive prices, but they do allow prices to reflect true costs. The reason drugs are cheaper in other countries is because those other countries have price controls. If pharmaceutical and biotech companies want to sell into those countries, they have to charge those low prices.

It is the absence of exclusive rights that drives costs lower than a level that can justify the extraordinary cost of research, development and engaging with the FDA for efficacy and safety testing. The absence of exclusive rights enables free riders to take from innovators who invested substantial amounts of time, money and energy.

You don't get innovation when you allow free riders to take, before innovators have recouped investments plus a suitable return on that investment to make the risk undertaken worthwhile.

Though it may seem logical on the surface to believe that less data exclusivity and shorter patent protection is the answer, less protection does nothing to address the cost drivers associated with innovating in the first instance. Nor does it address the cost drivers associated with the FDA efficacy and safety testing.

Similarly, erosion of exclusivity similarly erodes the willingness of investors to undertake risk—which results in less innovation, not more innovation. Thus, had the USMCA continued to include strong data exclusivity for biologics, innovation would have been fostered.

"The original biologics provision would have resulted in more funding for innovative medical research with no additional cost to U.S. consumers," Donohue explained. "Now, the only beneficiaries will be foreign governments and consumers who will continue to free-ride on the benefits of American research into new cures without contributing to their development."



"The decision to remove key intellectual property protections was based on the false assumption that these provisions would raise U.S. drug prices."

— THOMAS DONOHUE, CEO, U.S. CHAMBER OF COMMERCE

Stigmatizing IP

The USMCA called for each country to provide at least 10 years of data exclusivity for biologics, which kicks in once the innovator submits the data to the government for approvals. This data would under any other circumstance be business proprietary information that was held secret but is being released to prove that the drug in question is efficacious and safe.

The deal offered a ratcheted-down provision relative to biologic exclusivity—whereby if Congress did decrease protections in the United States from the currently available 12 years of data exclusivity protection to the minimum 10 years under the agreement, Mexico and Canada could similarly ratchet down their data exclusivity protections under the agreement. For a time, this compromise seemed to be the likely solution but obviously in the end did not satisfy Speaker Pelosi and House Democrats.

Not only did the president and speaker fail to achieve a good agreement or reasonable compromise on data exclusivity for biologics, what they have achieved damages the political will around IP by stigmatizing protections for innovations in the United States and making them politically untenable. Data exclusivity in any real or responsible form is now a political hot potato-which, in an election year where campaign rhetoric can already be expected to

be imprecise, is likely to lead to such vilification of intellectual property that it will only make it harder for innovators in all areas of technology to succeed.

Aside from the USMCA's removal of data exclusivity being the wrong move to encourage medical innovation, it sends the wrong message both domestically and internationally relating to intellectual property rights. This is another example of death by a thousand cuts for innovators and intellectual property owners. It represents the further stigmatization of intellectual property rights in the public discourse.

The failure of the USMCA to deliver intellectual property protections for biologics is a missed opportunity to demand that our closest neighbors live up to higher standards. Negotiating with reluctant trade partners around the world will become more difficult.

IPWATCHDOG CON2020

More than 90 invitation-only speakers will be part of 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

Top 5 Patent Stories of the Decade

2011 CREATION OF PTAB IS NO. 1 FOR IMPACT BY GENE QUINN

ITH a month of a new decade already in the books, here are the top five patent stories of the 2010s—according to me!

Creation of the United States Patent and Trademark Office's Patent Trial and Appeal **Board (2011):** At 11:42 a.m. on Sept. 16, 2011, President Barack Obama signed the America Invents Act into law. U.S. patent laws dramatically changed forever.

There had been much debate and discussion about the U.S. moving from a first-to-invent system to a first-to-file system. Without a doubt, however, the biggest change to the U.S. patent system was the creation of the Patent Trial and Appeal Board and the simultaneous creation of three new opportunities for challengers to invalidate patent claims at the USPTO: Inter Partes Review, Covered Business Method Review and Post-Grant Review. Former United States Court of Appeals for the Federal Circuit Chief Judge Randall Rader referred to the PTAB as a "death squad."

The Supreme Court is poised to decide whether it is the PTAB's prerogative to institute challenges even after the statute of limitations has expired.

Alice vs. CLS Bank (2014): On June 19, 2014, the ✓ United States Supreme Court issued its decision in this case that significantly changed the way courts and patent examiners evaluated patent eligibility of computer-implemented innovation in the United States. The unanimous decision held that because the claims are drawn to a patent-ineligible abstract idea, they are not eligible for a patent under Section 101.

Almost immediately after *Alice*, patent examiners began issuing new subject-matter eligibility rejections for computer-implemented innovations using the abstract idea exception to the statutory categories of patent eligibility.

3 Kyle Bass challenging pharma patents (2015): In April 2015, the *Wall Street Journal* published an article explaining the novel strategy of Kyle Bass, leader of Hayman Capital Management, to make money by invalidating patents. Bass has filed several petitions at the USPTO asking the PTAB to invalidate patent claims covering drugs. He then either shorted the stock of the company owning the patent or bought

shares in companies that would be helped by the patent claims becoming invalidated.

The America Invents Act passed in large part because big pharma and big biotech companies relented and joined big tech. They were convinced they had nothing to worry from the PTAB because no one would ever challenge their patents with an inter partes review.

But once challenges started flying, pharmaceutical companies sought a carve-out that would exempt pharmaceutical patents. The saga provoked by Bass provided a rare glimpse into the underbelly of lawmaking and the extreme consequences paid for the miscalculation of pharma advisers with respect to passage of the AIA.

Sequenom v. Ariosa Diagnostics (2015): If a medical test that reduces risk from a potential catastrophic event to no chance of a catastrophic event is not patent eligible, something is significantly wrong. Surely the Supreme Court would step in and modify its decision in Mayo v. Prometheus. But the high court did not, and that was the outcome of Sequenom v. Ariosa.

In June 2016, SCOTUS denied certiorari (a writ or order by which a higher court reviews a decision of a lower court) to Sequenom Inc., which let stand a federal circuit decision that ruled a truly revolutionary medical test to be patent ineligible.

5 Examiner A submits fraudulent time sheets (2015) and commerce department uncovers patent examiner fraud (2016): On August 31, 2016, the inspector general of the United States Department of Commerce released a scathing report titled "Analysis of Patent Examiners' Time and Attendance," which detailed what appeared to be widespread patent examiner financial fraud at the USPTO.

The investigative report—prompted by interest in the infamous "Examiner A" who falsely claimed he worked 730 hours in fiscal year 2014—concluded that from August 10, 2014 through November 28, 2015, patent examiners submitted 288,479 hours that could not be supported or verified as being worked. These unsupported hours equated to \$18.3 million in overpayments.

To be fair, respected commentators have raised legitimate questions about the findings of the inspector general. However, there have been patent examiners who have commented on IPWatchdog.com and have admitted to fraud.

FEBRUARY 2020 TRADE SHOWS

Feb. 1-6: SPIE Photonics West

(Society of Photographic Instrumentation Engineers)

Biophotonics for brain research and health care; lasers: core optical components for consumer products Moscone Convention Center; San Francisco 888-504-8171; spie.org

Feb. 3-5: AHR (International Air-Conditioning, Heating and Refrigerating Expo)

Orange County Convention Center; Orlando, Fla. 203-221-9232; ahrexpo.com

Feb. 4-6: IPC APEX Expo

Printed board electronics manufacturing San Diego Convention Center 877-472-4724; ipcapexexpo.org

Feb. 4-6: International Roofing Expo

Kay Bailey Hutchinson Convention Center 972-536-6415; theroofingexpo.com

Feb. 4-6: Intersolar North America

San Diego Convention Center 508-743-8536; intersolar.us

Feb. 11-13: Medical Design & Manufacturing West (MD&M West)

Medical technology, from prototyping to full-scale manufacturina Anaheim (Calif.) Convention Center 310-445-4200; mdmwest.mddionline.com

Feb. 11-13: World AG Expo

International Agri-Center; Tulare, Calif. 800-999-9186; worldagexpo.com

Feb. 12-16: Developer Week 2020

Artificial intelliaence Oakland (Calif.) Convention Center Submit form online; developerweek.com

Feb. 13-17: Miami International Boat Show

Miami (Fla.) Marine Stadium Park & Basin 954-441-3220; miamiboatshow.com

Feb. 22-25: American International Toy Fair

Jacob K. Javits Convention Center New York City; 212-675-1141; toyfairny.com

Feb. 26-28: Global Pet Expo

Orange County Convention Center; Orlando, Fla. Submit form online; global petexpo.org

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Best wishes, Jack Lander

INVENTIVENESS

loT Corner

Eureka Park at the Consumer Electronics Show, known as a platform for tech innovation, reverberated with extra buzz last month with the "Smart Potato."

The gadget is more social commentary than a "must-have." **Nicholas Baldeck** from France built a smart home hub that runs off the electrolytes in a potato. The device, powered by what he calls a NeuraSpud antenna, features Bluetooth and has an app to allow any potato to become your next smart home personal assistant.

The project was more about generating awareness of the sheer volume of smart home and connected devices that have flooded the market in recent years. Reviews were mixed at the show, but the booth was very popular. The product is available for pre-order on Indiegogo. — Jeremy Losaw



Wunderkinds

All Hart Main wanted was to raise enough money to buy a \$1,200 bike to compete in triathlons. In 2010, at age 13, he teased his sister about candles she was selling for a school fundraiser as "too girly." So he started a company called ManCans that sold candles with masculine scents in a soup can. Now his product is made at Beaver Creek Candle Co. and

sold in more than 150 U.S. stores; the company has donated thousands of dollars to soup kitchens. Hart is now a student at Ohio State University's Moritz College of Law.



What IS that?

When it comes to spoiling your dog, this may be the topper. Oh, wait—it is! The **Petchup** nutritional dog food gravy topper variety pack claims to be the best gluten-free, high-protein, dry dog food topper with beef bone broth. You can even freeze your dog's favorite flavor in an ice tray.

The percentage of **female inventors** listed on life sciences-related patents even though women earn more than half of new PhDs in this field, according to Yale Insights.

WHAT DO YOU KNOW?

True or false: The term "intellectual property" was first used in the 19th century.

Which automaker ranked a surprising 10th in number of 2019 U.S. patents awarded, per start-up and research company Sqoop?

A) Chrysler B) Toyota C) General Motors D) Ford

True or false: An author can use characters from other writers, so long as his or her story is original.

In which decade was the electronics SIM card invented—1980s. 1990s or 2000s?

■ Who said this? "Leapfrog innovation—consistent, constant, ridiculous leapfrog innovation—only happens within a dictatorship."

A) Charlie Sheen

B) Kim Jong-un

C) Fidel Castro

Ashton Kutcher

ANSWERS: 1. True. But it did not become commonplace in most of the world's legal systems until the late 20th century. 2.D. 3. False. The making of "derivative works" belongs exclusively to the copyright owner. 4. The first SIM (subscriber identity module) card was developed in 1991 by Munich smart-card maker Giesecke & Devrient. It was roughly the size of a credit card. 5.D.



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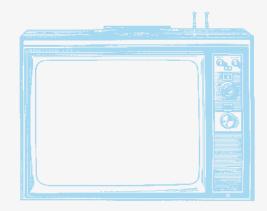
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